

**PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND  
ENVIRONMENTAL MANAGEMENT PLAN (MINOR PROJECTS)  
Geraldton Mt Magnet Material Source SLK 153.4  
October 2011**



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**October 2011**

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# **PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN (MINOR PROJECTS)**

## **GERALDTON MOUNT MAGNET ROAD MATERIAL SOURCE SLK 153.4**

### **1 PROJECT DESCRIPTION**

The proposed works involve the expansion of a current material source located at SLK 153.4 within the Shire of Mullewa. The current material source area was stockpiled in 1995, however more material is required due to the proposed works on the Geraldton Mount Magnet Road.

### **2 BACKGROUND**

The Geraldton Mt Magnet Road is an important heavy vehicle haulage route for triple road trains carrying payloads of 100 tonnes each servicing iron ore deposits in the Murchison area east of Cue and copper and zinc concentrates transported from mines south of Yalgoo.

This heavy road use and regular flooding is causing significant damage to the road structure and as such needs to be repaired in several locations.

As per Main Roads' Environmental Assessment and Approval process, the Low Impact Environmental Screening Checklist has been completed for the proposal, refer to Appendix A. As the proposed works involves requires clearing outside of the maintenance zone, the preparation of a project specific Preliminary Environmental Impact Assessment (PEIA) and Environmental Management Plan (EMP) are required. This report fulfils this requirement.

### **3 DESCRIPTION OF THE PROJECT**

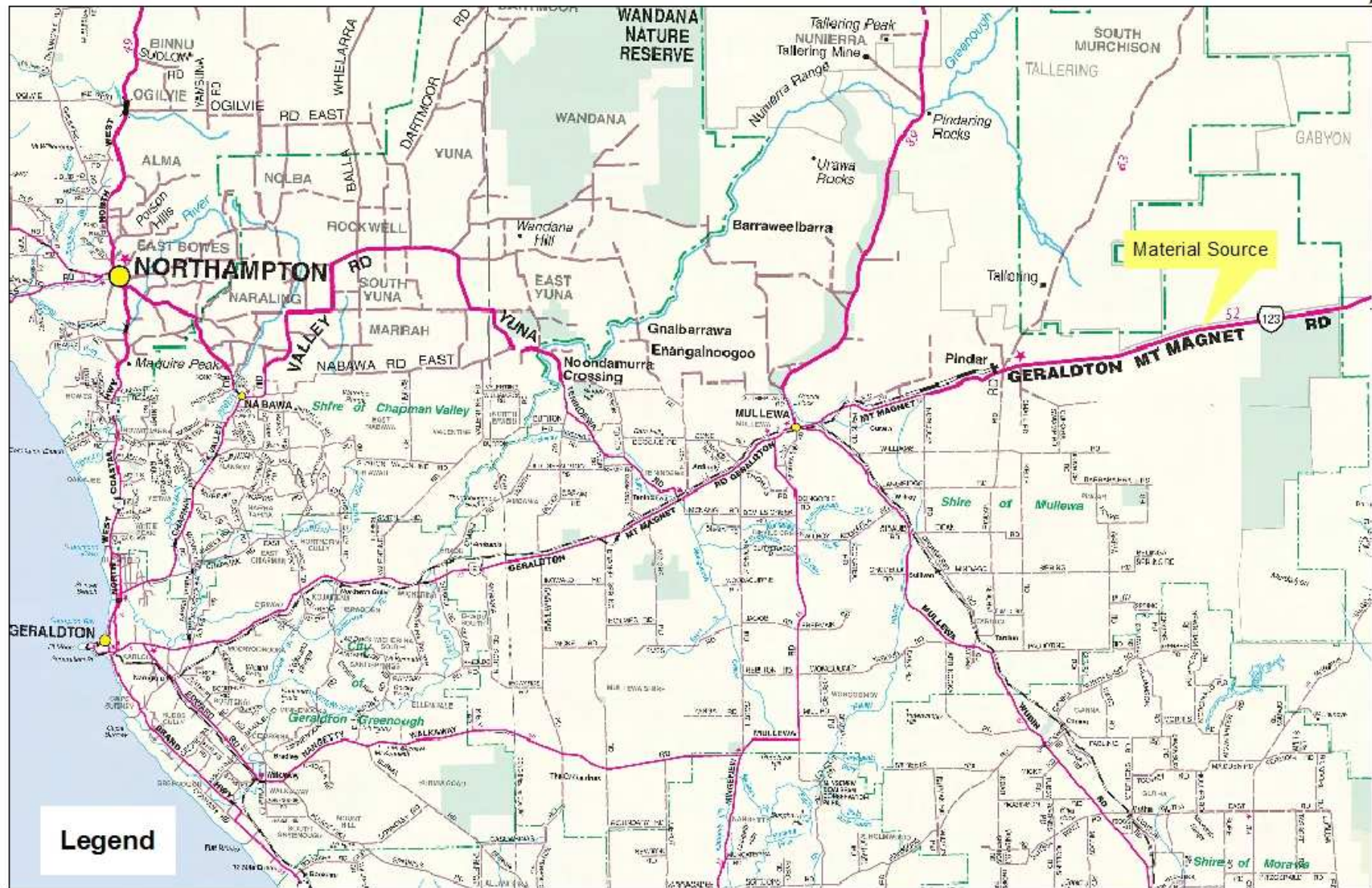
- The proposed works involve:
  - The re-stockpiling of current stockpiles, to remove regrowth currently on the stockpiles;
  - Clearing of vegetation for the expansion of the material source area;
  - Stockpiling of material for proposed works;
  - Herbicide control of vegetation growing on stockpile areas; and
  - Rehabilitation of disturbed areas (existing and current).

#### **3.1 Project Location**

The location and boundaries of the study area are shown on Figures 1-3 and include the following features:



# Geraldton Mount Magnet Material Source SLK 153.4



0 5 10 20 Kilometers

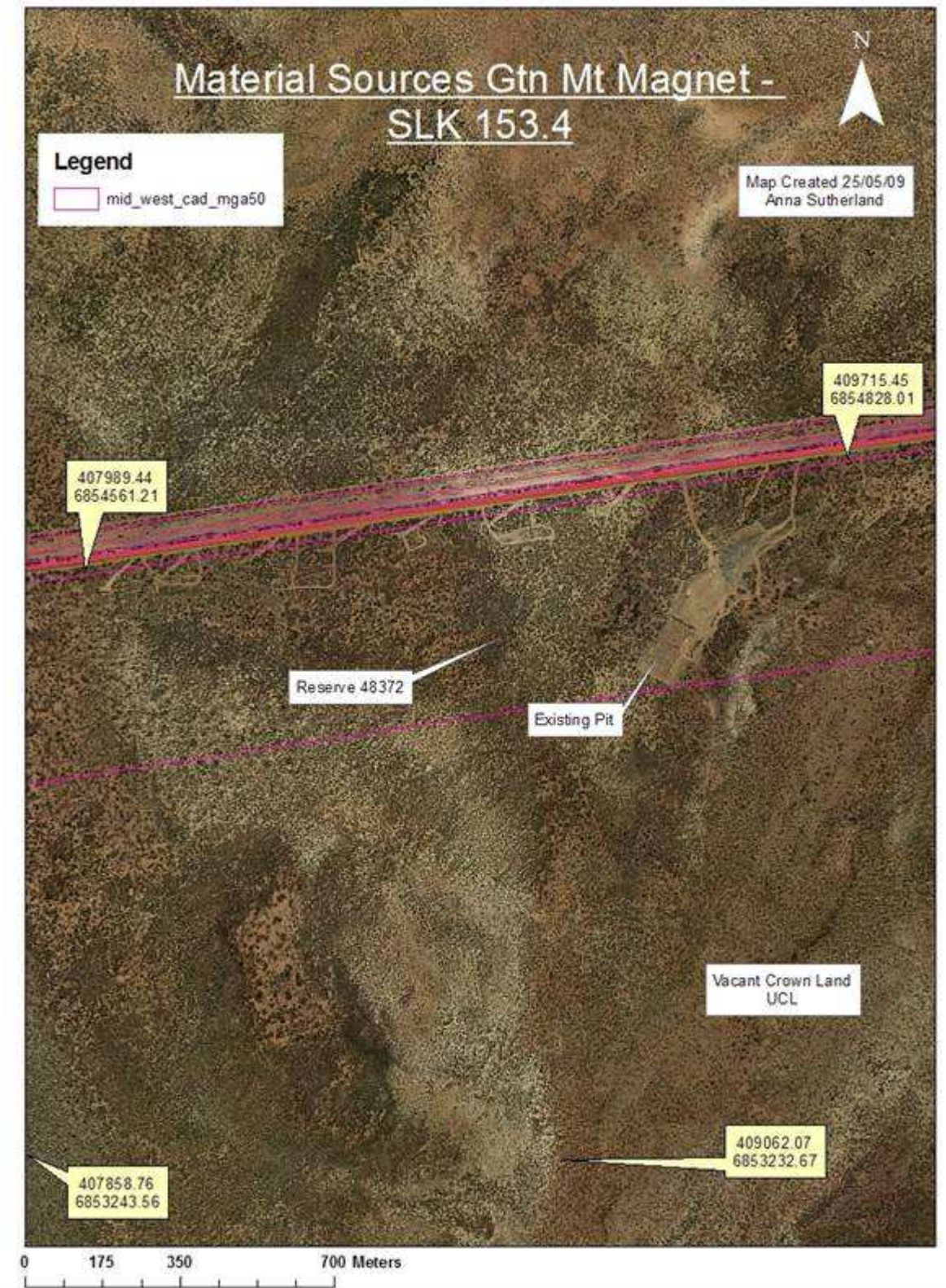


# Geraldton Mount Magnet Material Source SLK 153.4



0 5 10 20 Kilometers





## 4 METHODOLOGY

### 4.1 Preliminary Desktop Study

A preliminary assessment of the project area and its potential constraints was undertaken by reviewing a number of government agency managed databases (and consulting where necessary).

#### 4.1.1 Wetlands

The locations of wetlands within the project area was determined using the Commonwealth Department of the Environmental and Heritage (DEH) mapping tool, Department of Environment and Conservation (DEC) Geographic Data Atlas mapping tool.

#### 4.1.2 Threatened Flora, Fauna and Communities, Conservation Reserves and ESAs

DEC's database was searched for known populations of threatened flora, fauna and Threatened Ecological Communities (TECs) and conservation reserves, refer to Appendix B. A Biological Survey was also conducted by GHD (D10#50868)

#### 4.1.3 Air Quality

The need for a local air quality assessment was determined using the criteria outlined in the MRWA environmental guideline, Air Quality.

#### 4.1.4 Heritage

Non-indigenous heritage was examined utilising the Australian Heritage Places Inventory (<http://www.heritage.gov.au>), Heritage Council of Western Australia (<http://register.heritage.wa.gov.au/>) and the Shire/Town/City of <Name>'s Municipal Heritage Inventory, refer to Appendix C.

#### 4.1.5 Aboriginal Heritage

A Search of the Department of Indigenous Affairs' (DIA's) (<http://www.dia.wa.gov.au/Heritage/SitesSurveysSearch.aspx>) database was undertaken to determine whether the project area contains any sites of Aboriginal heritage, refer to Appendix D.

#### 4.1.6 Sensitive Water Resources

The Department of Water's website was utilised to determine whether the project area supported, or was adjacent to, any significant lakes, rivers or wetlands or proclaimed areas, refer to Appendix E.

#### 4.1.7 Contaminated Sites

The DEC Contaminated Sites website was utilised to determine if the site has been listed as contaminated.

#### 4.1.8 Acid Sulfate Soils

The CSRIO's Australian Soil Resource Information System website was used to determine the level of ASS risk.

#### 4.1.9 Weeds

A Biological Survey was conducted by GHD which listed the weeds present at the site.

#### 4.1.10 Dieback

Project receives <400 mm of rain so determined not to be an issue.

## 4.2 Commonwealth Referral

The decision whether to refer the project to the Commonwealth's DEH was based upon whether the project would impact upon matters of national significance, e.g. World Heritage properties, protected wetlands and migratory species, Commonwealth marine areas, threatened species or communities or nuclear actions (refer to the Commonwealth webpage

[www.deh.gov.au/epbc/assessmentsapprovals/index.html](http://www.deh.gov.au/epbc/assessmentsapprovals/index.html) for further information and the search tool page at <http://www.deh.gov.au/erin/ert/epbc/imap/map.html>), refer to Appendix I.

## 4.3 Site Investigation

A site visit was carried out by GHD on 31/8/2009 to examine the general features of the area. The broad vegetation types in the vicinity of the project area were identified. Other issues that were considered included topography, the impacts on creek lines, property access and the potential for noise and vibration impacts (dilapidation).

Site photos were taken and are included in Appendix J.

# 5 EXISTING ENVIRONMENT

## 5.1 Description

The GHD Biological Survey Report describes the following:

- The vegetation types classified during the field survey were extrapolated and found matched with the following vegetation associations:
  - Vegetation Association 364: Shrublands; bowgada scrub with scattered *Eucalypts* and cypress pine; and
  - Vegetation Association 419: Shrublands; bowgada, jam and *Melaleuca uncinata* thicket;
- These vegetation types are considered *Least Concern*, with at least 96% of the preEuropean extents considered to be remaining in the Yalgoo Biogeographic Regionalisation for Australia (IBRA) region (Shepherd, 2005).

## 5.2 Site Investigation

Site Investigation	Description/Comment
Total area (ha) of <u>native vegetation</u> to be cleared	10
Total area (ha) of other vegetation, including regrowth, landscape areas, to be cleared	0
Weeds present	A total of 9 weed species were identified during the field survey. No weed species, recorded in the Project Area are classified as Weeds Of National Significance (WONS) or listed as a Declared Plant under the <i>Agriculture and Related Resources Act (1976)</i> ;
Drainage areas or wetlands present	Nil
Adjacent land uses	Pastoral



## 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 Main Roads clearing will be undertaken using its Statewide Project Purpose Permit.

### 6.1 Assessment against Clearing Principles

In assessing whether the project is likely to have a significant impact on the environment, the project has been assessed against the DEC's 10 principles of clearing, refer to Appendix K.

The project will maybe at variance with the DEC's 10 clearing principles. Clearing of native vegetation in the Project Area is considered likely to be at variance with principle 'b'.

### 6.2 Environmentally Sensitive Area (ESA)

Clearing within an Environmentally Sensitive Area (ESA)	Yes/ No	Comments
Does the area to be cleared occur within an ESA where the vegetation is in good or better condition?	N	

## 7 ASSESSMENT OF ASPECTS AND IMPACTS

**Table 1: Aspects and Impacts – Wubin Mullewa Material Source SLK 153.4**

Aspect	Evaluation of Potential Impacts
Air quality	Not relevant to the proposed works. 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 15,000 vehicles per day in rural areas; and</li> <li>residential and other sensitive receptors are not within 200 meters of the road centre;</li> </ul>
Dust	Likely to be a minor issue during earthworks. No major sensitive receivers adjacent to the proposed works, but excessive dust could impact vegetation. Activities will need to be subject to dust suppression to control short-term dust generation. Likely to be easily managed by standard construction dust management techniques.
Fauna	No significant fauna issues associated with any of the proposed upgrade works. With the generally degraded and exposed nature of the works areas, no significant impacts would be expected on native fauna generally as a result of the proposed works. Recommendations to minimise clearing (see below) will also serve to reduce impacts to fauna and remnant fauna habitat at the sites.  Disused mallee fowl nest has been located within the project area and is to be avoided. If a new malle fowl nest is located works are to cease around this area and area is not be further touched.
Vegetation – clearing	<ul style="list-style-type: none"> <li>10 ha of native vegetation will be cleared.</li> <li>A majority of the Project Area was relatively unaltered and rated Condition 12 (Pristine to Excellent). The northern edge was rated Condition 3 (Very Good), and a small area in the north east corner was rated Condition 56 (Degraded and Completely Degraded);</li> <li>The native vegetation will be cleared is well represented regionally (i.e. it possesses more/less than 30% of its pre-European extent).</li> <li>The native vegetation to be cleared does not occur within an ESA.</li> <li>The native vegetation to be cleared will be done so using the purpose permit.</li> </ul>
Vegetation – TECs/DRF	Biological Survey confirms that not DRF of Priority Species exist within the project area. Biological Survey also confirms that no TEC's exist with the project area.
Vegetation – weeds	Numerous common weed species occur throughout the proposed works areas. These species are likely to be widespread within the reserve and general area. The risk of spreading these weeds species as part of the proposed work should be minimised. Standard weed hygiene measures should be applied for all earthworks in the area, including ensuring that plant and equipment brought on to the site are clean of soil.
Vegetation – dieback	Not an issue given the project area receives less than 400 mm of average annual rainfall.
Reserves / Conservation areas	There are no conservation areas or reserves adjacent to the project area.
Heritage (non-indigenous)	A search of the Australian Heritage Places Inventory, Heritage Council of Western Australia and the Shire of Mullewa's Municipal Heritage Inventory on-line databases has indicated that there are no heritage significance listed sites present in the currently proposed works areas.  No Matters of National Environmental Significance will be impacted.
Aboriginal heritage	A search of DIA database identified no known sites of Aboriginal heritage significance within the vicinity of the project area. An Aboriginal Heritage Survey was also conducted on the proposed area and no sites were identified.
Surface water/drainage	There are not surface water locations within the proposed project area.
Wetlands	There are not wetlands within the proposed project area.
Groundwater	No dewatering nor drainage modifications are required, hence no change to groundwater level or quality.
Noise and vibration	No major sensitive local receivers.



**Table 1: Aspects and Impacts – Wubin Mullewa Material Source SLK 153.4**

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 Main Roads standards is employed, none of the proposed works present any significant hazards to public safety.
Hazardous substances	Not relevant to the proposed works.
Contamination	Given the relatively superficial nature of the required earthworks, there appears to be a low risk of any significant contamination issues.  The works is within pastoral reserve and no known previous land use activities on or adjacent to the project area have had the potential to create contamination, e.g. petrol station.
Salinity	Given the nature and scale of the project the impact is not relevant.  There were no visual signs of salinity observed in the project area.
Acid Sulfate Soils	The CSRIO Australian Soil Resource Information System indicates that the site is 'Extremely Low Probability'. that no further soil investigation is required for the project.  No further investigations are necessary as there is no dewatering or excavation below the water table is planned.
Statutory Land Use Planning	The proposed works are within a pastoral lease and no changes with regards to landuse is required.  Once the site is finished with as a material source, the area will be rehabilitated and returned to its pastoral use.

## 8 DECISION TO REFER

Given 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 or the Commonwealth Department of the Environment and Heritage.

## 9 STAKEHOLDER CONSULTATION

Name	Agency	Date	Comments
Josh Foster	GHD	September 2009	Refer to Biological Survey Report D10#50868

## 10 ENVIRONMENTAL MANAGEMENT PLAN

This section of the report (the EMP) has been developed for the project area following the completion of the above sections. The main aim of this EMP is to provide a management plan to assist in minimising the environmental impacts of the activities associated with the proposed works and identify who is responsible for the implementation of the management strategies.

This EMP will only address the actions already listed as well as any site-specific issues that were identified during the PEIA. The project specific management measures identified within this EMP are in addition to the standard specifications used for Category 2 projects. The environmental management measures/conditions in Main Road's Specifications 203, 204, 301, 302 and 304 are still to be followed where applicable.

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.

### 10.1 Communication Plan

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

Method	Frequency	Participants	Reference	Record
Project Site				
Induction	Prior to Work	All personnel and subcontractors	EMP and Contractor Environmental Policy	Induction Meeting
Toolbox Meetings	Weekly	Project Personnel	Contractor Safety Plan	Minutes of Meeting

#### 10.1.1 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.



ENVIRONMENTAL MANAGEMENT PLAN					
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 (Minor projects) 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
Pre-Construction	Vegetation - Clearing	Ensure that the overall objectives of 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.	Selection of designs/locations that minimise adverse impacts on the biological environment.	Project Manager	Main Roads
			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.	Project Manager	Main Roads
			Control/spray weeds species within the project area prior to construction to limit the amount of propagative material that may be spread during disturbance.	Contractor	Main Roads
			Any stockpiled vegetation from clearing works shall not be burnt. This vegetation shall be used during any rehabilitation works and either chipped or replaced according to the EMP.	Contractor	Main Roads
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
			Works associated with the construction of the development should not prevent public access along the adjacent reserve. Public access should be maintained along the reserve at all times.	Contractor	Main Roads
			Any complaints regarding dust will be attended to as soon as possible.	Contractor/Project Manager	Main Roads

ENVIRONMENTAL MANAGEMENT PLAN					
Timing	Topic	Objective	Action	Responsible Party	Advice
Construction	Pollution and Litter	Ensure that the construction of the proposal is managed to a standard that minimises any adverse impacts on the environment.	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
			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
			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 approved site. The contractor shall ensure appropriate equipment is available at all times and shall notify the Superintendent's Representative of a spill.	Contractor	Main Roads
			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
			Dumping or temporary storage of bitumen, asphalt, concrete or aggregate should only occur at designated depots or controlled hardstands.	Contractor	Main Roads
Construction	Fire	Ensure that the fire risk associated with the construction of the proposal is minimised.	The project areas, including hardstand areas, will be kept in a tidy manner at all times.	Contractor	Main Roads
			No fires shall be lit within the project area.	Contractor	Main Roads
			Machinery will be fitted with approved spark arresting mufflers.	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.	A water tanker will be on site at all times.	Contractor	Main Roads
			Site office and materials storage areas will be located on previously disturbed/ designated area.	Contractor	Main Roads
Post-Construction	Rehabilitation	Leave the project area free from debris; and Rehabilitate the project area so that the revegetated area provides a net increase in area of native vegetation at the site.	Replace the cleared trees with locally occurring natives.	Project Manager	Main Roads
			All waste materials from the development are to be completely removed from the site upon completion of the development. Final clean-up shall be to the satisfaction of the Project Manager and the Site Superintendent.	Contractor	Main Roads



## **11 MONITORING**

After project completion, revegetated areas will be inspected every six months for the first two years to ensure weed spread or establishment has not occurred and to measure the effectiveness of revegetation works.

A Revegetation Plan with a Monitoring Schedule will be developed.

## **12 CONTINGENCY MEASURES**

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

## **13 AUDITING**

Given the scale and nature of the project, there is no requirement for auditing the implementation of the EMP as the environmental risks are small.

## **Appendix A**

### **Low Impact Environmental Screening Checklist**

## Checklist - Low Impact Screening Checklist

The Low Impact Screening Checklist is part of the environmental assessment and approval process, refer to in Figure 2 in the Main Roads environmental guideline Environment Assessment and Approvals. 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.

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.

Project Name Geraldton Mt Magna Pt Expansion @ 153.7 <sup>SLK</sup>

ITEM NO.	ITEM	Y	N
1	New road or road reserve to be created or expansion of existing road reserve.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Works require clearing of native vegetation outside the maintenance zone.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Works require clearing of native vegetation that is older than 10 years old within the maintenance zone.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Works to occur outside normal working hours.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Passes over, adjoins or drains directly into a wetland or sensitive watercourse.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Local natural drainage regime / hydrology will be changed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Dewatering, or a new water bore required.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Known potential source of hazardous materials within or adjoining project area. e.g. Acid Sulphate Soils, existing petrol station, industrial site or waste disposal site (landfill)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	Buildings will require demolition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed By: Signature Nasima Date 21/10/2011

Name NASIMA ALTER Title PM

To be reviewed by Signature Anna Sutherland Date 21/10/11

n Main Roads Environment Officer Name Anna Sutherland Title Environment Officer

Comments: PEIA Required - Biological a.d.m.

## **Appendix B**

### **DEC's Threatened Flora and Fauna Database Searches**





Department of Environment and Conservation - Native Vegetation - Microsoft Internet Explorer provided by MRWA . . .

http://maps.dec.wa.gov.au/idelve/nv/index.jsp

File Edit View Favorites Tools Help

Department of Environment and Conservation - Nativ...

Home Feeds (1) Print Page Tools

## Native Vegetation Map Viewer

Department of Environment and Conservation  
Our environment, our future.

Welcome Search Metadata Help

**Measure Tool**

Select Mode: [Distance mode](#) | [Area mode](#)

**Perform Measure**

The measure tool allows you to measure distances between any number of points. Left clicking on the map puts a point onto the screen. Right clicking will remove all points. To see the distances between points already plotted click on 'Perform Measure'

0 20km 1:122,794

Multi-tool. Press and hold a button, dragging mouse to navigate.

Error on page.

start

Calendar - Microsoft ... HP TRIM - [Records - ... PEIA Geraldton Mt M... Project Environmenta... G:\Environment\Gln ... Gravel Pits Gln Mt Ma... Department of Enviro...

Internet 100%

9:22 AM

Source: <http://maps.dec.wa.gov.au/idelve/nv/index.jsp> (21/10/11)

## **Appendix C**

### **Australian Heritage Places Inventory, Heritage Council of Western Australia and the Municipal Heritage Inventory Database Searches**

Heritage places in Western Australia map - Microsoft Internet Explorer provided by MRWA ...

http://www.environment.gov.au/heritage/places/wa/index.html

File Edit View Favorites Tools Help

Heritage places in Western Australia map

Home Feeds (1) Print Page Tools

Skip to content Change text size

**Australian Government**  
Department of Sustainability, Environment,  
Water, Population and Communities

**Heritage**  
Heritage places

Type keywords here search

Environment home  
Heritage  
About heritage  
Heritage places  
Heritage in Western Australia  
Full heritage list  
Education  
Movable cultural heritage  
Historic shipwrecks  
International projects  
Heritage organisations  
Grants and funding  
Nominating a heritage place  
Managing a heritage place  
Laws and notices  
Publications and resources

About us Contact us

You are here: [Environment home](#) > [Heritage](#) > [Heritage places](#) > [Heritage in Western Australia](#)

## Heritage places in WA

Australian heritage places are included on different heritage lists. On this page you can use a map to find places on the World and National heritage lists; or you can search for places on World, National, State & Territory lists.

### Map: World and National heritage places

The map below shows places in WA that are on the World and National heritage lists. If you can't use the interactive map below, see the [list of world and national heritage places in WA](#).

-- Zoom to a Heritage place on the map --

Map data ©2011 Google, Whereis(R), Sensis Pty Ltd - [Terms of Use](#)

Search for heritage in Western Australia

Done

start

Inbox - Microsoft ... HP TRIM - [Recor... PEIA Geraldton M... Project Environme... G:\Environment\ASS Gravel Pits Gtn Mt... D10#50868 Biolo... Heritage places in ... 10:46 AM

Source: <http://www.environment.gov.au/heritage/places/wa/index.html> (21/10/11)




Heritage Council of WA - Places Database : Search Results - Microsoft Internet Explorer provided by MRWA . . .

http://register.heritage.wa.gov.au/search\_results.html


File Edit View Favorites Tools Help

Heritage Council of WA - Places Database : Search Re...

Home Feeds (1) Print Page Tools

 Heritage Council of WA Home  
Quick Search  
Advanced Search  
Results List  
Location Report  
Save Data

What Is The State Register?  
Other Heritage Lists

 Site Map | Contact Us | Accessibility  
Search here  
Search WA Government

Home » Places Database » Search Results

Places Database

Displaying results: [1-1] of 1

hide selected hide unselected

<input type="checkbox"/>	Concrete Road Bridge over Murchison River (3400)	Carnarvon - Mullewa Rd, Billabalong
--------------------------	--	-------------------------------------

hide selected hide unselected

Perform a new: [QUICK PLACES DATABASE SEARCH](#) | [ADVANCED PLACES DATABASE](#)

Help

wa.gov.au

Home | Site Map | Privacy | Disclaimer | Copyright | FAQs | Links | Contact Us | Places Database  
Copyright © 2011 All contents copyright Government of Western Australia. All Rights Reserved.  
Last updated: 19/01/2010

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Inbox - Microsoft ... HP TRIM - [Recor... PEIA Geraldton M... Project Environme... G:\Environment\ASS Gravel Pits Gtn Mt... D10#50868 Biolo... Heritage Council o... 11:22 AM

Source: [http://register.heritage.wa.gov.au/search\\_results.html](http://register.heritage.wa.gov.au/search_results.html) (21/10/11)

## **Appendix D**

### **Department of Indigenous Affairs Database Search**

Sites in a search box - Aboriginal Heritage Inquiry System - Microsoft Internet Explorer provided by MRWA . . .

http://www.dia.wa.gov.au/AHIS/default.aspx

File Edit View Favorites Tools Help

Sites in a search box - Aboriginal Heritage Inquiry Sys...

Home Feeds (1) Print Page Tools

show legend

next map

01 03 04 05 06 07 08 09 10 11 12 13 15 16

6860000

MURCHISON

6850000

300

7#

6850000

405000 Z50

410000 Z50

415000 Z50

326

343

332

334

344

336

340

371

369

370

366

333

341

61

60

59

58

57

56

55

54

53

52

51

50

49

48

MOULT gravel pit

GERALDTON MULLEWA

next map

Street zoom in zoom out State

Sites in a search box

0 results

Clear Results

Printable - All results (with map)

0 Registered Aboriginal Sites  
No results

0 Other Heritage Places  
No results

start

Deleted Items - M... HP TRIM - [Recor... PEIA Geraldton M... Project Environ... G:\Environment\... Gravel Pits Gtn M... D10#50868 Biol... Sites in a search ... 10:34 AM

Source: <http://www.dia.wa.gov.au/AHIS/default.aspx> (21/10/11)

## **Appendix E**

### **DEC's Sensitive Water Resources Database Search**



Department of Water - Geographic Data Atlas - Microsoft Internet Explorer provided by MRWA . . .

http://www.water.wa.gov.au/idelve/dowdataext/index.jsp

File Edit View Favorites Tools Help

Department of Water - Geographic Data Atlas

Home Feeds (1) Print Page Tools

Government of Western Australia  
Department of Water

## Geographic Data Atlas

Welcome Search Download Metadata Map Help

### 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.

Multi-tool. Press and hold a button, dragging mouse to navigate.

Done

Internet 100%

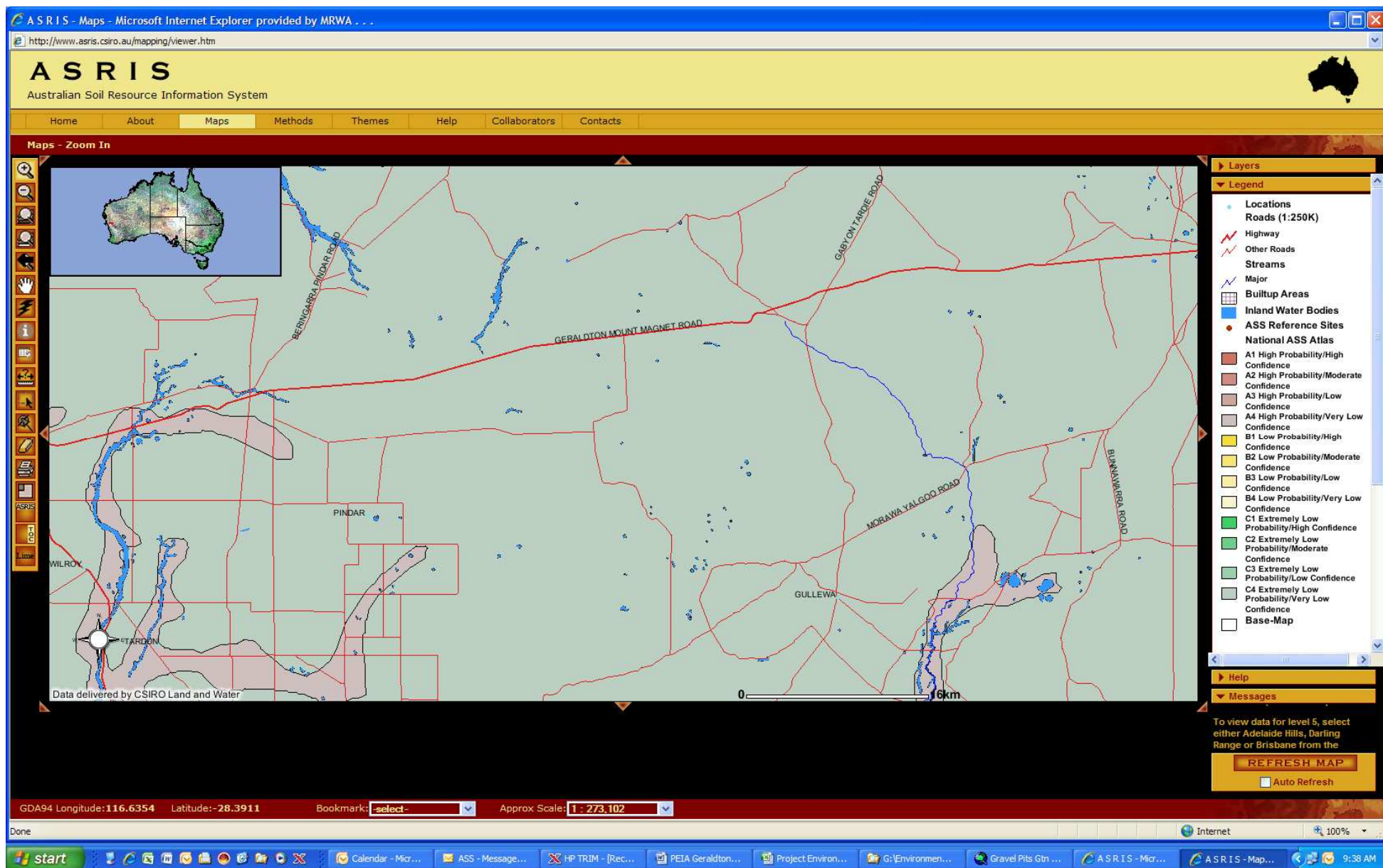
start

Calendar - Microsoft ... HP TRIM - [Records - ... PEIA Geraldton Mt M... Project Environmen... G:\Environment\Gln ... Gravel Pits Gln Mt Ma... Department of Water ...

Source: <http://www.water.wa.gov.au/idelve/dowdataext/index.jsp> (21/10/11)

## **Appendix F**

### **Acid Sulfate Soils Mapping**



Source: <http://www.asris.csiro.au/mapping/viewer.htm> (21/10/11)

## **Appendix G**

### **Contaminated Sites Database**



Department of Environment and Conservation - Contaminated Sites Database - Microsoft Internet Explorer provided by MRWA . . .

https://secure.dec.wa.gov.au/idelve/css/

File Edit View Favorites Tools Help

Department of Environment and Conservation - Cont...

Home Feeds (1) Print Page Tools

Department of Environment and Conservation  
Our environment, our future.

### Contaminated Sites Database

New Search Find Suburb/Town Metadata Map Help

#### Search for Known Contaminated Sites

Search Criteria [Switch to Advanced Search](#)

Street/Lot 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.

Zoom in tool. Click and drag a rectangle.

Done

start

Deleted Items - Micro... HP TRIM - [Records - ... PEIA Geraldton Mt M... Project Environmenta... G:\Environment\ASS Gravel Pits Gtn Mt Ma... Department of Enviro...

Internet 100%

9:54 AM

Source: <https://secure.dec.wa.gov.au/idelve/css/> (21/10/11)

## **Appendix H**

### **Department of the Environment and Heritage Database Search**



## 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: 21/10/11 13:28:22

### [Summary](#)

### [Details](#)

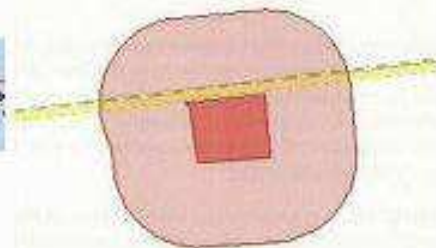
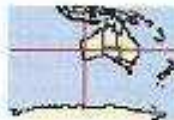
[Matters of NES](#)

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

[Extra Information](#)

### [Caveat](#)

### [Acknowledgements](#)



0 1  
Kms

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

[Coordinates](#)

Buffer: 1.0Km

## 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>.

<u>World Heritage Properties:</u>	None
<u>National Heritage Places:</u>	None
<u>Wetlands of International Significance (Ramsar Wetlands):</u>	None
<u>Great Barrier Reef Marine Park:</u>	None
<u>Commonwealth Marine Areas:</u>	None
<u>Threatened Ecological Communities:</u>	None
<u>Threatened Species:</u>	4
<u>Migratory Species:</u>	6

### 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>.

<u>Commonwealth Lands:</u>	None
<u>Commonwealth Heritage Places:</u>	None
<u>Listed Marine Species:</u>	4
<u>Whales and Other Cetaceans:</u>	None



<u>Critical Habitats:</u>	None
<u>Commonwealth Reserves:</u>	None

## Report Summary for Extra Information

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

<u>Place on the RNE:</u>	None
<u>State and Territory Reserves:</u>	None
<u>Regional Forest Agreements:</u>	None
<u>Invasive Species:</u>	5
<u>Nationally Important Wetlands:</u>	None

## Details

### Matters of National Environmental Significance

#### Threatened Species [ Resource Information ]

Name	Status	Type of Presence
<b>BIRDS</b>		
<u><i>Acanthiza lineolata lineolata</i></u> Slender-billed Thornbill (western) [25967]	Vulnerable	Species or species habitat likely to occur within area

#### PLANTS

<u><i>Eremophila viscida</i></u> Varnish Bush [2394]	Endangered	Species or species habitat may occur within area
<u><i>Gyrostemon reticulatus</i></u> Net-veined Gyrostemon [8491]	Critically Endangered	Species or species habitat likely to occur within area
<u><i>Pityrodia axillaris</i></u> Native Foxglove, Woolly Foxglove [17376]	Critically Endangered	Species or species habitat may occur within area

#### Migratory Species [ Resource Information ]

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

#### Migratory Terrestrial Species

<u><i>Megascops ornatus</i></u> Rainbow Bee-eater [670]		Species or species habitat may occur within area
--	--	--

#### Migratory Wetlands Species

*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

## Other Matters Protected by the EPBC Act

### Listed Marine Species [ Resource Information ]

Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Agus 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
<a href="#">Merops ornatus</a>		
Rainbow Bee-eater [670]		Species or species habitat may occur within area

### Extra Information

### 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="#">Capra hircus</a>		
Goat [2]		Species or species habitat likely to occur within area
<a href="#">Felis catus</a>		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<a href="#">Oryctolagus cuniculus</a>		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<a href="#">Vulpes vulpes</a>		
Red Fox, Fox [18]		Species or species habitat likely to occur within area

### Plants

<a href="#">Cenchrus ciliaris</a>		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may 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

# **Appendix I**

## **Site Photos**

## Photos taken 22/05/2009















# **Appendix J**

## **Vegetation Clearing Assessment Report**

**Refer to D10#50868 (pages 75-82)**