PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN (MINOR PROJECTS)
Geraldton Mt Magnet Heavy Vehicle Rest Area SLK 128
December 2010

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

GERALDTON MOUNT MAGNET HEAVY VEHICLE REST AREA SLK 128

1 PROJECT DESCRIPTION

The projects involve construction of a new heavy vehicle rest area on Geraldton Mt Magnet Road approximately at SLK 128.85 on the right hand side of the road.

The objective of this project is to provide a safe environment for heavy vehicle to stop and take a mandatory rest break. The proposed location is within the Shire of Mullewa.

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.

There is an existing bay at SLK 128.85 LHS, the proposed bay is to be constructed and sealed opposite to this existing bay on the RHS. The new bay will mean that westbound heavy vehicles will avoid crossing the road to parking on the stopping on the LHS bay.

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 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 length and width of the rest area will be 300m and 10m respectively. The project will require vegetation clearing of approximately 3m wide. The project will also include possible land acquisition and fencing.

The source of gravel for constructing this rest area is not confirmed yet.

3.1 Project Location

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

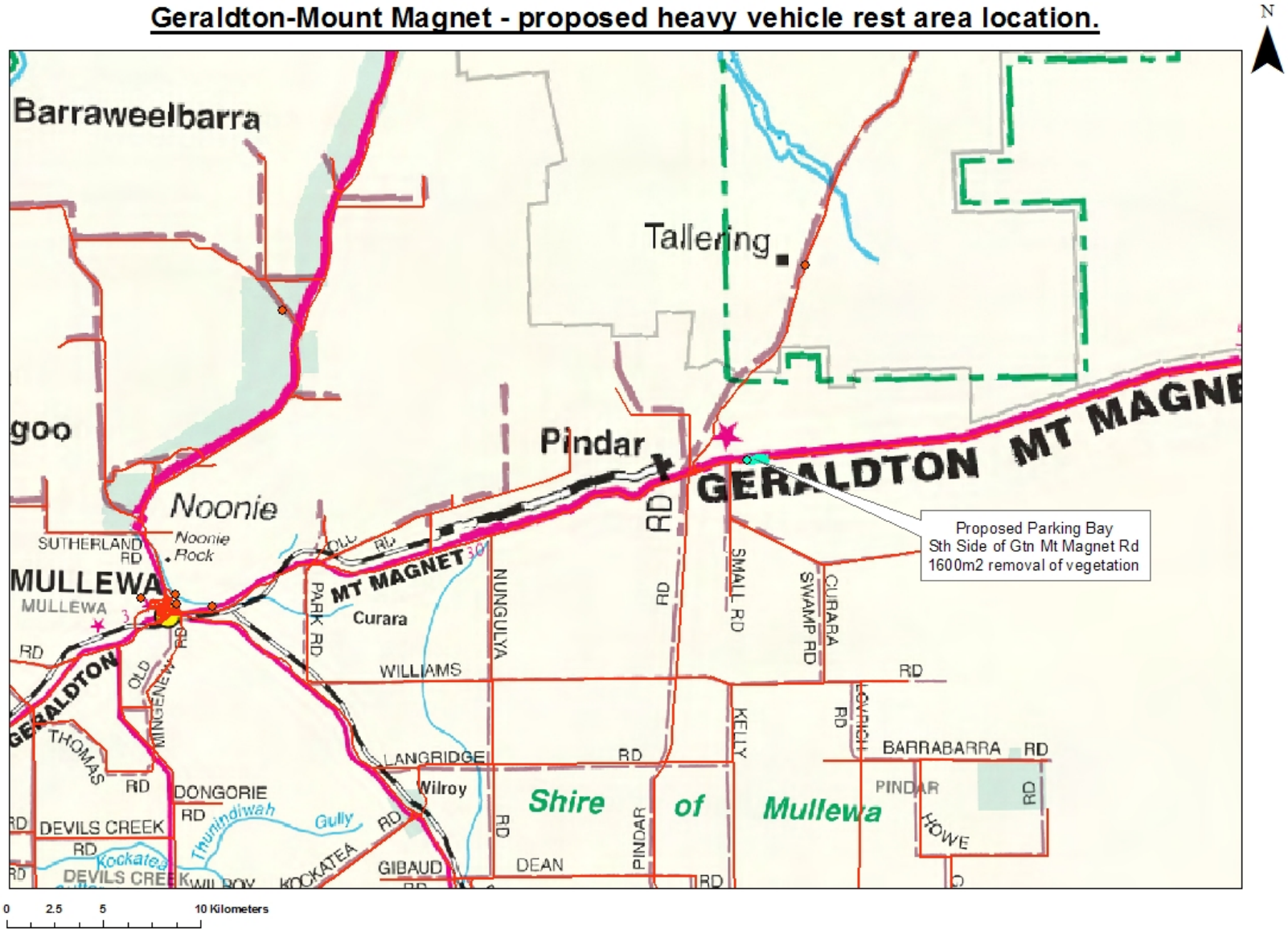


Figure 1: Location of proposed works

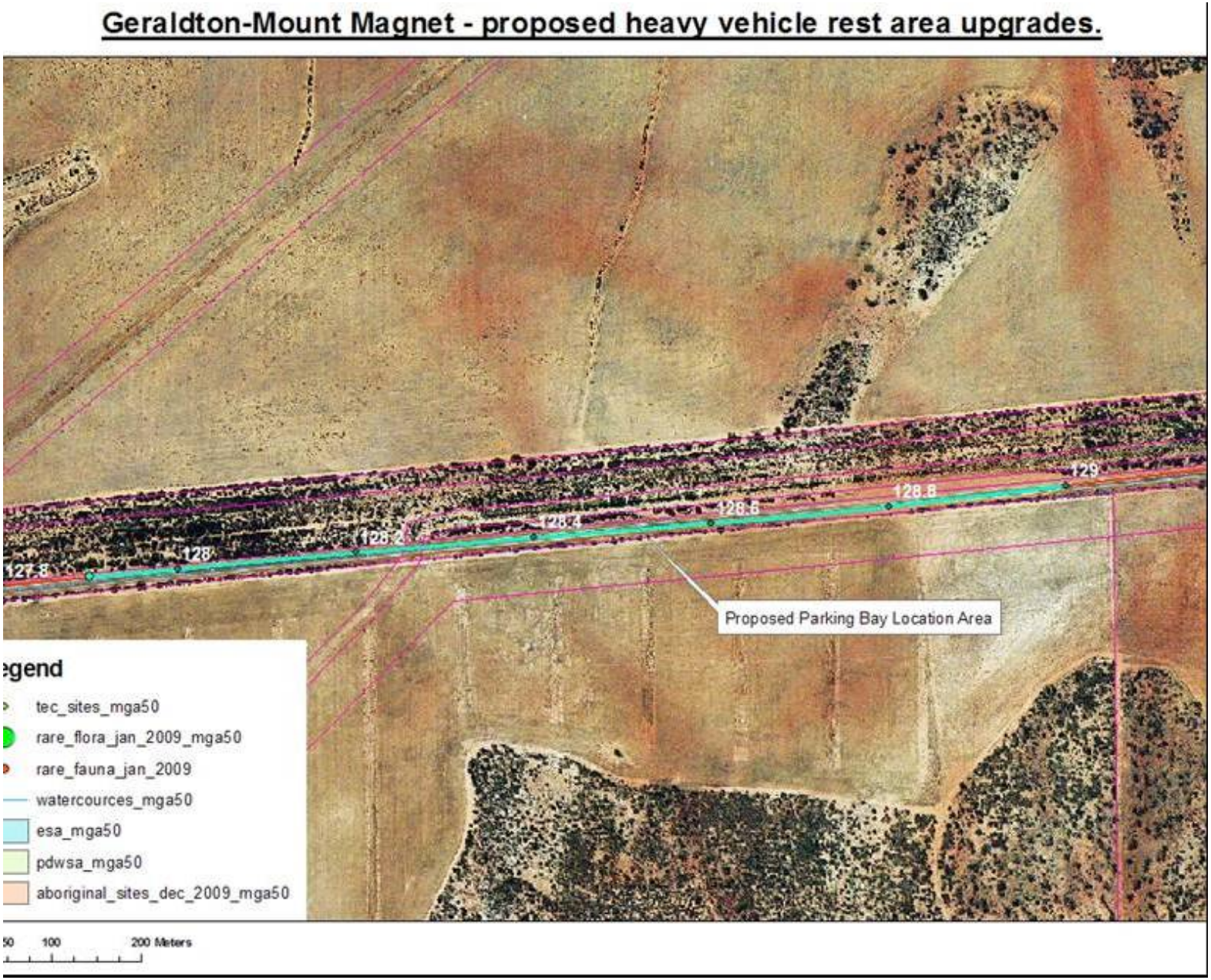


Figure 2: Location of proposed works

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 and by seeking advice from the regional DEC officer.

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

DEC's database (DEC will need to contacted directly in this case) was searched for known populations of threatened flora, fauna and Threatened Ecological Communities (TECs) and conservation reserves, refer to Appendix B.

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 of Mullewa'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 Water Information Officer of the Department of Water's regional office was consulted on sensitive water resources (including Public Drinking Water Source Areas) 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 reserve has been in Main Roads continual control, therefore no further work will be necessary/required.

4.1.8 Acid Sulfate Soils

The Western Australian Planning Commission's (WAPC'c) acid sulfate soils maps were reviewed and the self assessment done (http://www.wapc.wa.gov.au/Publications/213.aspx) to determine what level of risk the project area is exposed to, refer to Appendix F.

4.1.9 Weeds

A site visit was conducted to determine whether there are any known populations of declared plants or significant weeds in or adjacent to the project area.

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 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 Anna Sutherland on 2/12/2010 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 vegetation association in the project area contains the following:

- *676 – Succulent steppe / samphire (94.9% remaining);*
- *420 – Shrublands, bowgada and jam shrub (96.5% remaining)*

The following information is from Alanna Chant (DEC flora officer – Geraldton Office):

> I can confirm that no conservation significant flora were found during the inspection.
>
> Prior to the inspection I carried out a desktop search for an area within a 10km radius of the proposed clearing area and the following conservation significant flora have been recorded within this area:
>
> Acacia lineolata subsp multilineata (P1) Angianthus micropodioides (P3) Banksia benthamiana (P4) Darwinia sp. Morawa (P3) Enekbatus dualis (P1) Eremophila viscida (DRF) Grevillea tenuiloba (P3) Prostanthera pedicellata (P1) Psammomoya implexa (P3) Stylidium pendulum (P1) Verticordia chrysostachys var. pallida (P3)
>
> A search was carried out by traversing the area on foot and recording the plants present and searching for the flora listed above in the proposed clearing area from 28 28' 18.3" 115 49' 54.6" on the south side of the road reserve to 28 28' 21.6" 115 49' 13.7".
>
> Several of the flora recorded in the desktop search are annuals and may have been difficult to detect this late in the season, however based on habitat preference and the disturbed nature of the road verge these annuals are not likely to occur at this location.
>
> The survey area was found to be a very narrow (>3m) corridor of vegetation in a degraded condition, consisting of mixed Acacia tall scrub and the flora recorded are listed below:
>
> - *Acacia tetragonaphylla*
> - *Senna sp.*
> - *Chenopodium gaudicaudianum*
> - *Ptilotus obovatus*
> - *Maireana planifolia*
> - *Waitzia acuminata*

- *Solanum lasiophyllum*
- *Grevillea obliquistigma*
- *Acacia acuminata*
- *Ricinocarpos velutinus*
- *Rhodanthe sp.*
- *Scaevola spinescens*
- *Acacia sclerosperma subsp. sclerosperma*
- *Enchylaena tomentosa*
- *Eremophila clarkei*
- *Hakea recurva*
- *Acacia congesta*
- *Solanum orbiculatum*
- *Cassytha aurea*
- *Acacia ramulosa*
- *Keraudrenia integrifolia*
- *Monochather paradoxus*
- *Mirbelia spinosa*
- *Allocasuarina acutivalvix*
- *Melaleuca filifolia*
- *Eucalyptus horistes*
- *Dampiera incana*
- *Dianella revolute*
- *Acacia acuaria*
- *Melaleuca eleuterostachya*

5.2 Site Investigation

Site Investigation	Description/Comment
Total area (ha) of native vegetation to be cleared	900m2 (300 x 3)
Total area (ha) of other vegetation, including regrowth, landscape areas, to be cleared	0
Weeds present	Wild oats
Drainage areas or wetlands present	Nil
Adjacent land uses	Agricultural

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 not at variance with the DEC's 10 clearing principles.

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 – Geraldton Mt Magnet Heavy Vehicle Rest Area

Aspect	Evaluation of Potential Impacts
Air quality	Not relevant to the proposed works. Local air quality assessment is not required for the project since: • the predicted traffic flow is less than 10,000 vehicles per day (in urban areas) or 15,000 vehicles per day in rural areas.
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. No Matters of National Environmental Significance as protected under EPBC Act (1999) will be impacted.
Vegetation – clearing	• 900m2 (320 x 3) m2 of native vegetation will be cleared. • The condition of the native vegetation to be cleared is Degraded. • The native vegetation will be cleared is well represented regionally (i.e. it possesses more/less than 30% of its pre-European extent). • The native vegetation to be cleared does not occur within an ESA. • The native vegetation to be cleared will be done so using the purpose permit.
Vegetation – TECs/DRF	None present in the proposed works areas. No significant vegetation types or threatened flora have been recorded within in road reserve. Areas outside the project area must not be disturbed as part of the proposed works. Consultation with DEC confirms that the proposal is not going to have a significant impact upon any DRF or TECs. No Matters of National Environmental Significance as protected under EPBC Act (1999) will be impacted.
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	No dieback sensitive flora species are present within the works areas. Advice from DEC indicates that the area should be treated as dieback uninterpretable.
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.
Surface water/drainage	A site visit by the environmental officer has confirmed that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns.
Wetlands	DEC website indicate that no wetlands within the vicinity of the project area.
Groundwater	No dewatering nor drainage modifications are required, hence no change to groundwater level or quality.

Table 1: Aspects and Impacts – Geraldton Mt Magnet Heavy Vehicle Rest Area

Aspect	Evaluation of Potential Impacts
Noise and vibration	No major sensitive local receivers. Construction works is not be expected to significantly contribute to noise levels at the nearest sensitive receivers, provided works are limited to normal working hours.
Visual amenity	The proposed works will result in minor and short-term visual impacts during construction. Suitable site completion treatments, including landscape planting, could result in an improvement in local visual amenity.
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. The proposed works will serve to enhance public safety by improving local road and pedestrian conditions.
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 the road 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 WAPC's self-assessment (Planning Bulletin 64) indicates 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 will not required amendments would be required to the Local Government Planning Scheme or Region Scheme.

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
Alanna Chant	DEC	29/11/2010	D10#280672

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
Authority Consultation				
Department of Environment and Conservation	As required	Main Roads' Project Manager and Contractor Project Manager	-	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: • a copy of the PEIA & EMP (Minor projects) for small projects; • a map showing the location where the clearing occurred, recorded in an ESRI Shapefile; • the size of the area cleared (in hectares); and • the dates on which the clearing was done.	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
			Weed topsoil will be disposed of at an approved disposal site as agreed with project manager.	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
Pre-Construction	Surface Drainage	Maintain the hydrological regime that exists prior to the construction of the proposal.	Culverts will be left free of debris..	Project Manager	DEC
Pre-Construction	Visual Amenity	Ensure that the road blends in with the surrounding environment.	Ensure that the road blends in with the surrounding environment.	Project Manager	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
			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

ENVIRONMENTAL MANAGEMENT PLAN					
Timing	**Topic**	**Objective**	**Action**	**Responsible Party**	**Advice**
			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
			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 will be on site at all times.	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
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.	Contractor	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

Not used

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

Form No. 6707/001/01

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 Construction of Heavy Vehicle Rest Area MOSO SLK 128.85 RHS

ITEM NO.	ITEM	Y	N
1	New road or road reserve to be created or expansion of existing road reserve.	X	
2	Works require clearing of native vegetation outside the maintenance zone.	X	
3	Works require clearing of native vegetation that is older than 10 years old within the maintenance zone.		X
4	Works to occur outside normal working hours.		X
5	Passes over, adjoins or drains directly into a wetland or sensitive watercourse.		X
6	Local natural drainage regime / hydrology will be changed.		X
7	Dewatering, or a new water bore required.		X
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)		X
9	Buildings will require demolition.		X

Completed By: *Signature* [signature] *Date* 13/10/2010
Name NASIMA AKTER *Title* PROJECT MANAGER

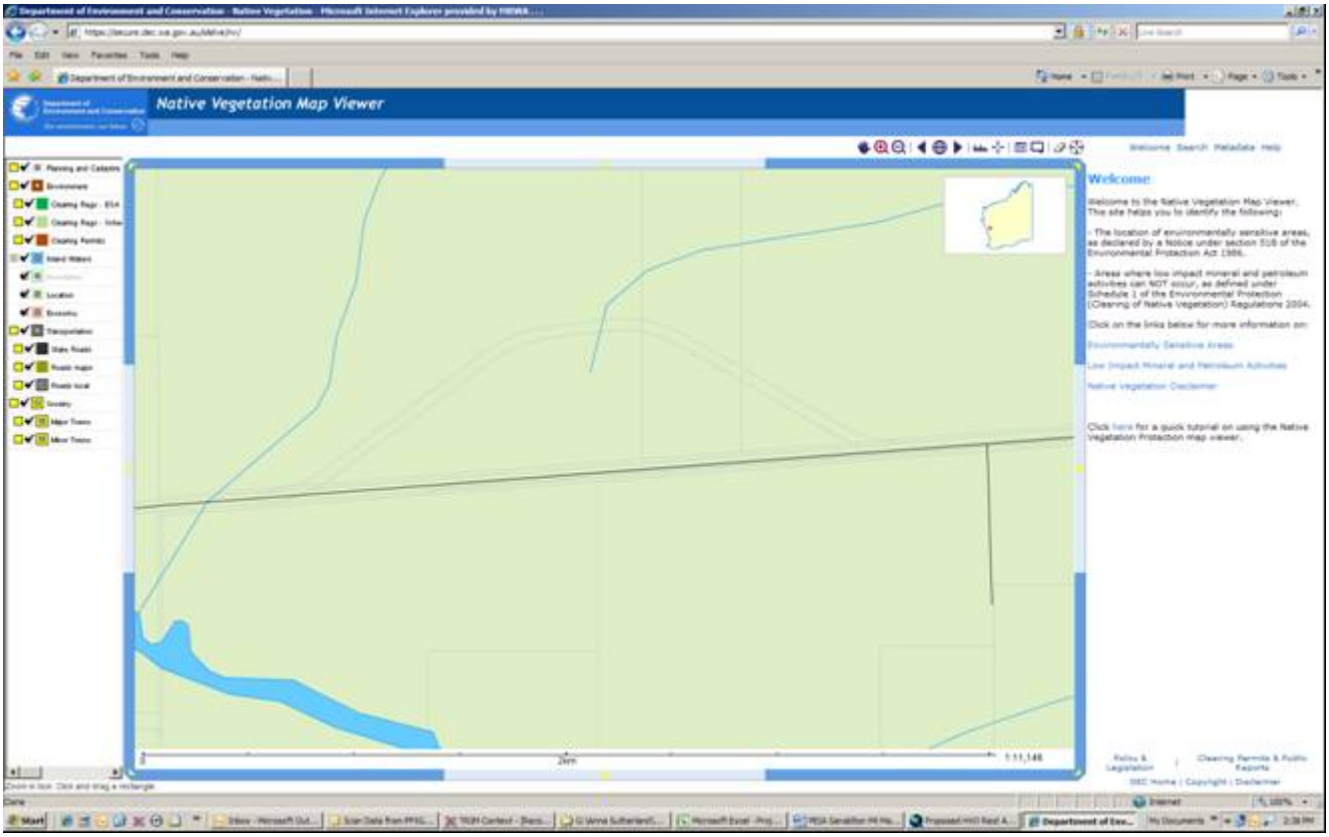
To be reviewed by a Main Roads Environment Officer: *Signature* [signature] *Date* 18/10/2010
Name Anna Somerford *Title* Environment officer

Comments: PEIA Required.

MAIN ROADS Western Australia
Form 6707/001 Screening Checklist Rev 3.doc 30/05/07

Appendix B

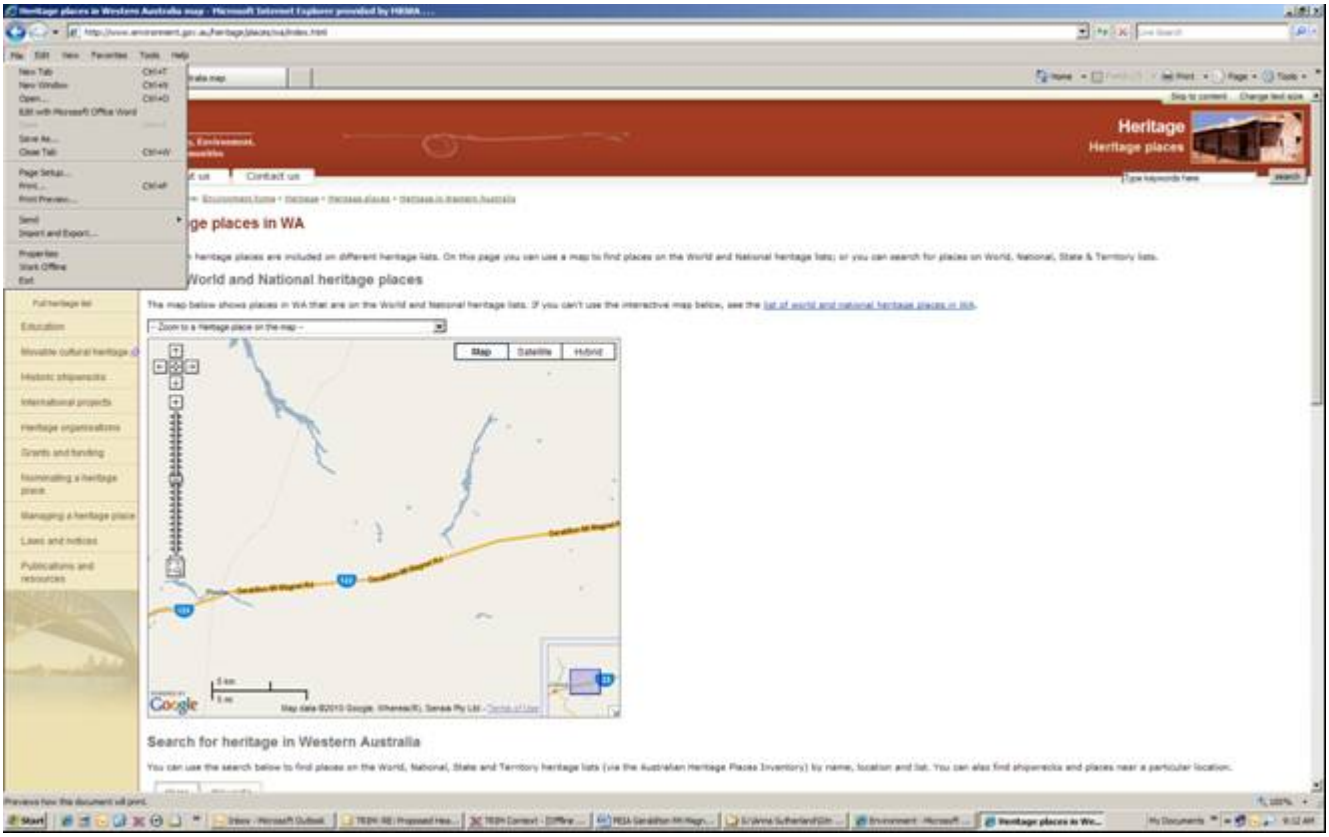
DEC's Threatened Flora and Fauna Database Searches



Source: https://secure.dec.wa.gov.au/idelve/nv/ (29/11/2010)

Appendix C

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



Source: http://www.environment.gov.au/heritage/places/wa/index.html (03/12/10)

Heritage Council of WA - Places Database : Search Results Page 2 of 3

- What Is The State Register?
- Other Heritage Lists

A A A
Displaying results: [1-38] of 38

Help

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Bank of New South Wales (1660)	55 Jose St, Mullewa	
Billabalong Station (1697)	Off Mullewa-Murchison Rd approx 144k N of, Mullewa	
Bindoo Springs, S bank Greenough River (4478)	39 k from, Mullewa	
Bowdell Buildings (5108)	Cnr Maitland Rd & Stock St, Mullewa	
Bullardoo Station (1701)	Mullewa	
Byro Station (10075)	West side of Carnarvon-Mullewa Road, Mullewa	
Church of Our Lady of Mount Carmel & Holy Apostles St. Peter & St. Paul, & Priest (1656)	Cnr Bowes & Doney Sts, Mullewa	[REG] [ASSESS]
Club Hotel (5105)	Maitland Rd, Mullewa	
Country Women's Association (1663)	45 Jose() St cnr Moloney St, Mullewa	
De Grey - Mullewa Stock Route No. 9701 (5113)	Through Woolgorong & Tallering Peak N from, Mullewa	
Golf Club (5104)	Mullewa-Mingenew Rd, Mullewa	
Infant Health Centre (6110)	Jose St SE cnr Moloney St, Mullewa	
Kurrajong Building (6109)	Jose St, Mullewa	
Masonic Lodge, Mullewa (1662)	43 Jose St, Mullewa	
Mass Rock (18409)	Mullewa	
Mt Narryer (4481)	Mullewa	
Mt. Narryer Station (1700)	off Carnarvon-Mullewa Rd, Mullewa	
Mullewa District High School (6112)	Jose St (East side), Mullewa	
Mullewa District Hospital & Quarters (3658)	Elder St Cnr Burges St, Mullewa	
Mullewa Fire Station (14812)	Padbury St, Mullewa	
Mullewa Police Station (17376)	Main Street, Mullewa	
Mullewa Police Station and Court House (6107)	Mills St, Mullewa	
Mullewa Post Office (fmr) (1661)	Cnr Jose & Maitland Sts, Mullewa	
Mullewa Railway Station Group (6105)	Maley St, Mullewa	[REG] [ASSESS]
Mullewa Swimming Pool (6111)	Jose St (East side), Mullewa	
Mullewa Town Hall & Shire Offices (1664)	1 Maitland Rd Cnr Jose St, Mullewa	
Pinegrove Homestead (1705)	New Forest-Yallalong Rd, Mullewa	
Pioneer Cemetery (5102)	Mullewa-Carnarvon Rd, Mullewa	
Presentation Convent (fmr) (5112)	Doney St, Mullewa	
Priest House (1657)	Bowes St, Mullewa	
Railway Hotel (1659)	Cnr Grey & Jose Sts, Mullewa	
Recreation Ground and Buildings (5103)	Main Rd, Mullewa	
St Andrew's Anglican Church & Rectory, Mullewa (1658)	Padbury St Cnr Keefe St, Mullewa	
Tallering Station (1707)	Mullewa	
Tardun Railway Crane & Siding (18770)	40km South of Mullewa	
Uniting Church - Site (1665)	Mills St, Mullewa	
Wells between Mullewa and Pindar (5110)	Mullewa Rd, Mullewa to Pindar	
Woolgorong Station (1709)	Mullewa	

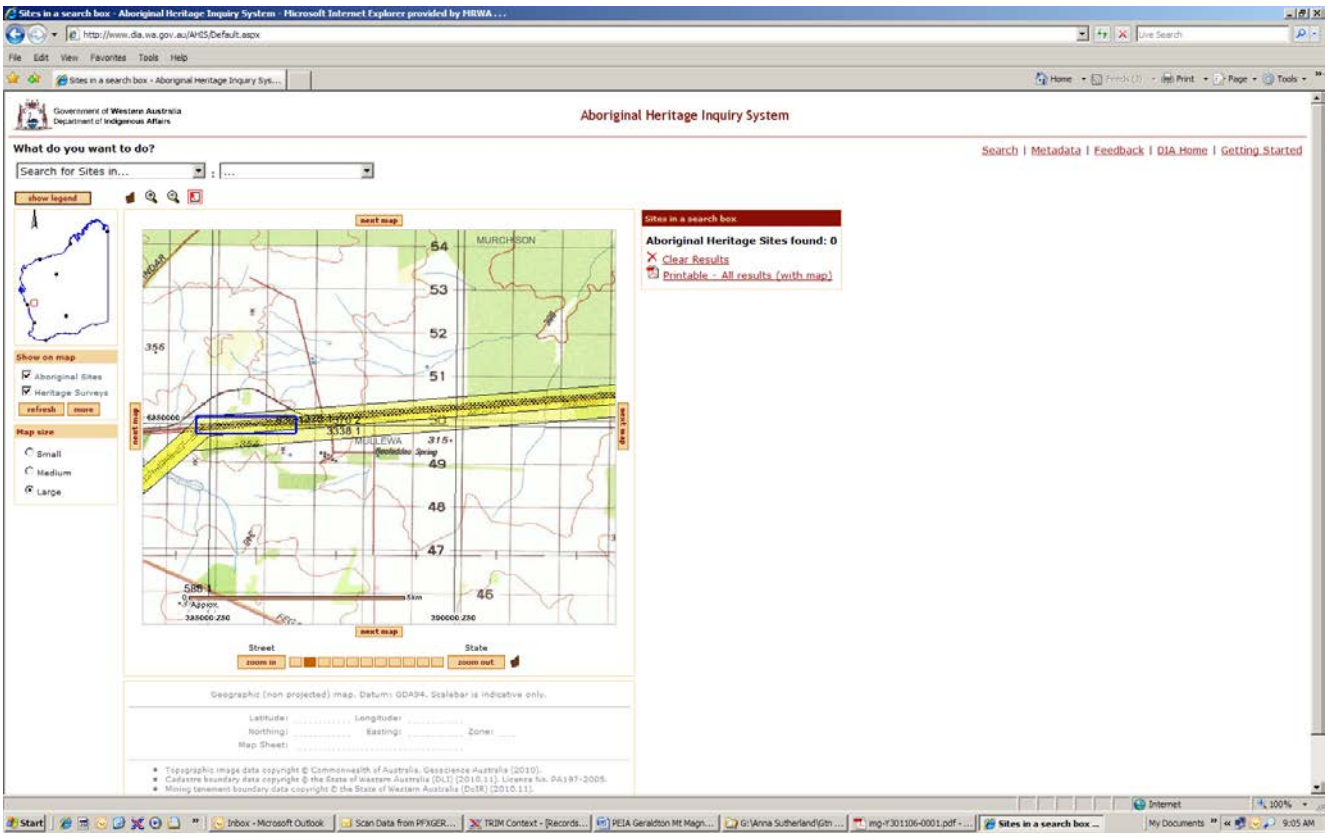
hide selected | hide unselected

http://register.heritage.wa.gov.au/search_results.html 3/12/2010

Source: register.heritage.wa.gov.au/search_results.html (3/12/10)

Appendix D

Department of Indigenous Affairs Database Search



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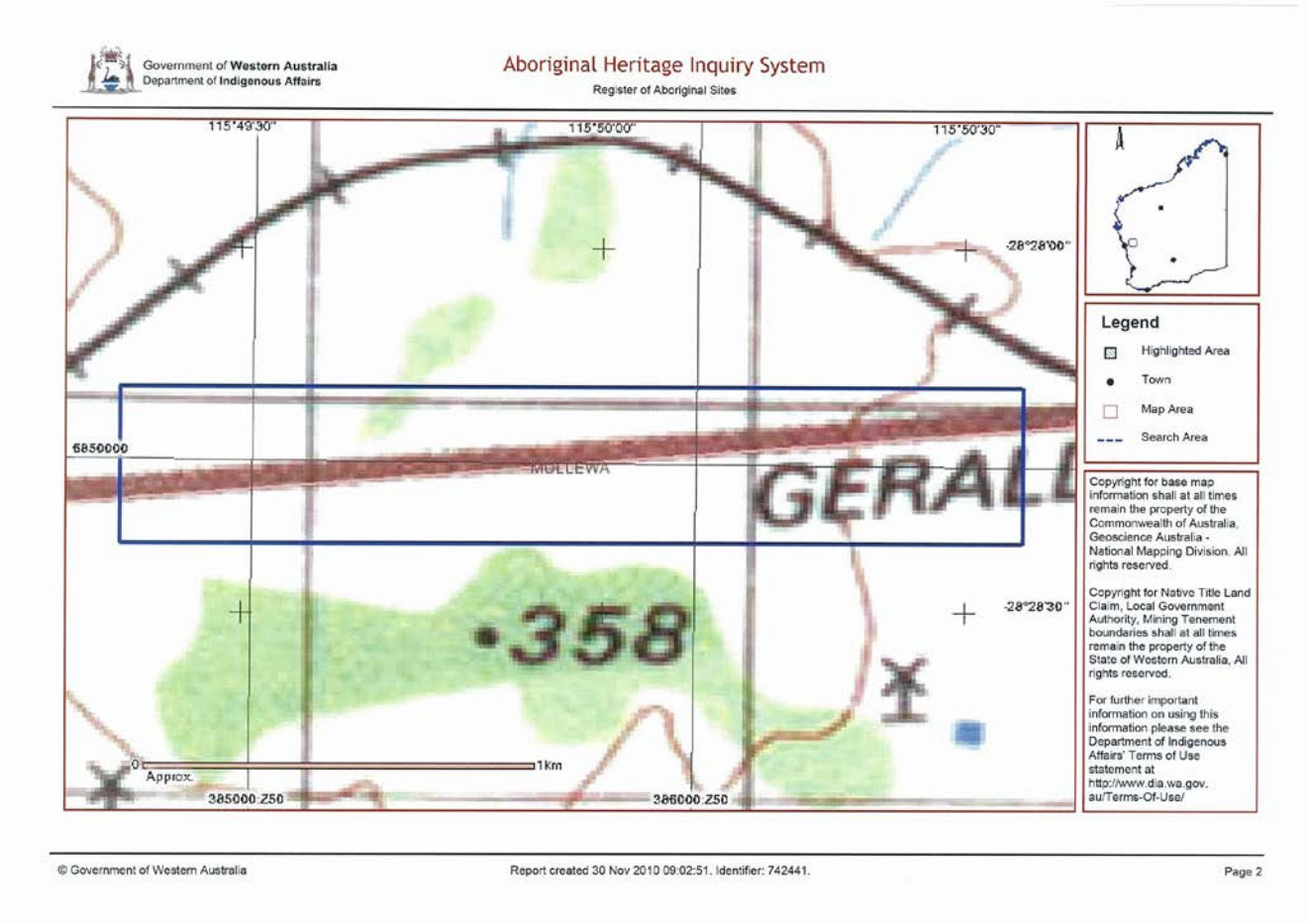
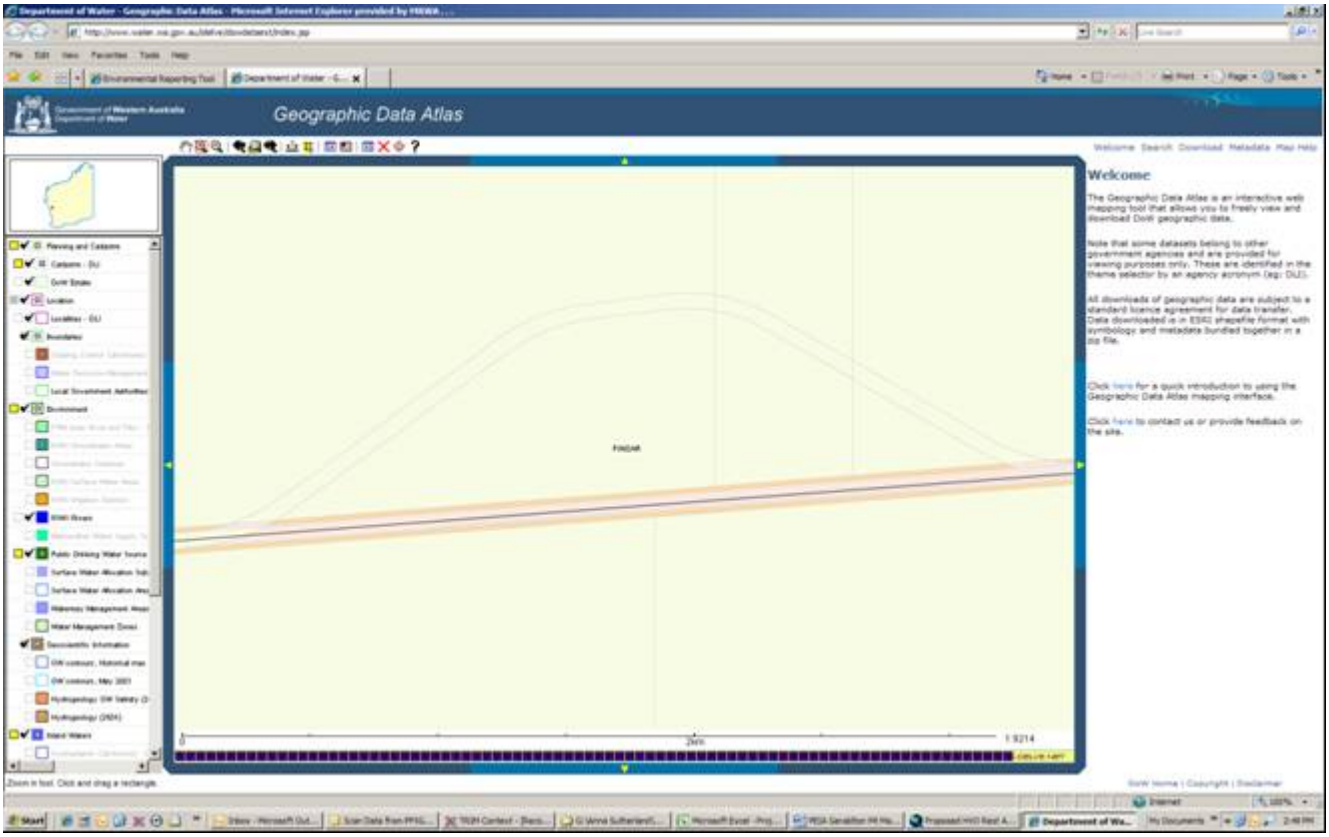


Source: http://www.dia.wa.gov.au/AHIS/default.aspx (30/11/2010)

Appendix E

DEC's Sensitive Water Resources Database Search



http://www.water.wa.gov.au/idelve/dowdataext/index.jsp (29/11/10)

Appendix F

Department of the Environment and Heritage Database Search

Australian Government
Department of the Environment, Water, Heritage and the Arts

Environmental Reporting Tool

You are here: Environment Home > ERIN > ERT

30 November 2010 11:17

Database Report

This report includes places of national environmental significance that are registered in the Department of the Environment and Water Resources' databases, for the selected area. The information presented here has been provided by a range of groups across Australia, and the accuracy and resolution varies.

Search Type: Area

Buffer: 0 km

Coordinates: -28.471023,115.821806, -28.474252,115.822000, -28.471153,115.857125, -28.468834,115.855769

Report Contents: Summary >> Details >> Caveat >> Acknowledgment

Biodiversity

Threatened Species:	6
Migratory Species:	6
Listed Marine Species:	4
Invasive Species:	8
Whales and Other Cetaceans:	None
Threatened Ecological Communities:	None

Heritage

World Heritage Properties:	None
Australian Heritage Sites:	None

Wetlands

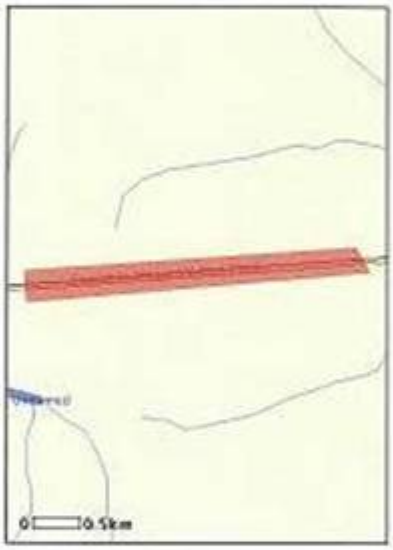
Ramsar sites: (Internationally important)	None
Nationally Important Wetlands:	None

National Pollutant Inventory

Reporting Facilities:	None
Airsheds:	None
Catchments:	None

Protected Areas

Reserves and Conservation Areas:	None
Regional Forest Agreements:	None



This map may contain data which are
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Biodiversity

Threatened Species [Dataset Information]	Status	Comments
Birds		
Acanthiza iredalei iredalei Slender-billed Thornbill (western)	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Egernia stokesii badia Western Spiny-tailed Skink	Endangered	Species or species habitat likely to occur within area
Plants		

Eremophila viscida Varnish Bush	Endangered	Species or species habitat may occur within area
Gyrostemon reticulatus Net-veined Gyrostemon	Critically Endangered	Species or species habitat likely to occur within area
Pityrodia axillaris Native Foxglove, Woolly Foxglove	Critically Endangered	Species or species habitat may occur within area
Royceа pycnophylloides Saltmat	Endangered	Species or species habitat likely to occur within area
Migratory Species [Dataset Information]	Status	Comments
Migratory Terrestrial Species		
Birds		
Merops ornatus Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
Migratory Wetland Species		
Birds		
Ardea alba Great Egret, White Egret	Migratory	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Migratory	Species or species habitat may occur within area
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift	Migratory	Species or species habitat may occur within area
Ardea alba Great Egret, White Egret	Migratory	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Migratory	Species or species habitat may occur within area
Listed Marine Species [Dataset Information]	Status	Comments
Birds		
Apus pacificus Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
Ardea alba Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area
Invasive Species [Dataset Information]	Status	Comments
Selected Invasive Species: 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 Resouces Audit, 2001.		
Mammals		
Capra hircus Goat	Feral	Species or species habitat may occur within area
Felis catus Cat, House Cat, Domestic Cat	Feral	Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit	Feral	Species or species habitat likely to occur within area

Vulpes vulpes Red Fox, Fox	Feral	Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus	WoNS	Species or species habitat may occur within area
Carrichtera annua Ward's Weed	Invasive	Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass	Invasive	Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed	WoNS	Species or species habitat may occur within area

Caveat

The information presented here has been drawn from a range of sources, compiled for a variety of purposes. Details of the coverage of each dataset are included in the metadata [Dataset Information] links above.

Acknowledgment

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

- New South Wales National Parks and Wildlife Service
- Department of Sustainability and Environment, Victoria
- Department of Primary Industries, Water and Environment, Tasmania
- Department of Environment and Heritage, South Australia Planning SA
- Parks and Wildlife Commission of the Northern Territory
- Environmental Protection Agency, Queensland
- Birds Australia
- Australian Bird and Bat Banding Scheme
- Australian National Wildlife Collection
- Natural history museums of Australia
- 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
- Other groups and individuals

ANUCIM Version 1.8, Centre for Resource and Environmental Studies, Australian National University was used extensively for the production of draft maps of species distribution. The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Appendix G

Site Photos

Photo 1: Proposed Survey Area looking west

Photo 2: Proposed Survey Area looking west

Photo 3: Proposed Survey Area looking west

Photo 4: Proposed Survey Area looking south

Photo 5: Proposed Survey Area looking west

Photo 6: Proposed Survey Area looking west

Appendix H

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 818/3.

For guidance on how to complete the form, refer to DEC completed reports (active permits) at http://203.20.251.100/cps_reports/.

AREA UNDER ASSESSMENT DETAILS

Proponent details

Proponent's name: **MRWA**

Contacts:

Name:	Anna Sutherland
Phone:	99 56 1207
Fax:	99 56 1240
Email:	anna.sutherland@mainroads.wa.gov.au

Property details

Property: Geraldton Mount Magnet Road SLK 128

Colloquial name:

Area under assessment

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:	Site Plan Attached
900m2 (0.09ha)		Mechnical	Heavy Vehicle Rest Area	☐ Yes

Avoidance/Minimise clearing

How have the clearing impacts been minimised?
Mechanical clearing

BACKGROUND

Existing environment and information

(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	☐ Yes	**Fauna / Flora Survey Undertaken**	☐ Yeso
Site Report Attached	☐ Yes	**Fauna / Flora Survey Report Attached**	☐ No
Site Photos Attached	☐ Yes	**Other Relevant References Attached**	☐ Yes

Vegetation Complex	Clearing Description	Vegetation Condition	Comment
• *676 – Succulent steppe / samphire (94.9% remaining);* • *420 – Shrublands, bowgada and jam shrub (96.5% remaining)*	Mechanical	Degraded	

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 at variance to this Principle**

Methodology Site vist with DEC (02/12/10) noted the following:
"The survey area was found to be a very narrow (>3m) corridor of vegetation in a degraded condition, consisting of mixed Acacia tall scrub."
No priority species was located within the existing project area.

(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 at variance to this Principle**

The area to be cleared is only 3m wide, and in some cases once shrub wide. The vegetation on the adjacent side of the road would serve as a significant habitat for fauna due to its area.

Methodology Site visit with DEC 02/12/2010

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments **Proposal is not at variance to this Principle**

Methodology Site visit with DEC flora officer (02/12/10)

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments **Proposal is not at variance to this Principle**

Methodology

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

Comments **Proposal is not at variance to this Principle**

Methodology Site visit with DEC officer (02/12/10) and database search (DAFWA)

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments **Proposal is not at variance to this Principle**

Methodology Site visit with DEC officer (02/12/2010)

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments **Proposal is not at variance to this Principle**

Methodology Area (300m2) to be cleared is linear and will not cause appreciable land degradation.

(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 at variance to this Principle**

Methodology Site visit with DEC officer 02/12/10

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments **Proposal is not at variance to this Principle**

Methodology Site visit with DEC officer 02/12/10

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposal is not at variance to this Principle**

Methodology Area (300m2) to be cleared is linear, is not within a flooding area or water course area.

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

Comments Not applicable

Methodology

SUBMISSIONS

If required have submissions been requested and addressed

Submission Requested from	Request Sent (Date)	Submission Received (Date)	Issues Raised / Comments Made

ASSESSOR'S RECOMMENDATIONS

List of Principles seriously at variance, at variance or maybe at variance
0

Recommendation: PEIA / EMP

References

OFFICER PREPARING REPORT

Anna Sutherland_____
Position: Environmental Officer
Mid West Regional Office
MRWA
Phone: 08 99 56 1207

Date: 03/12/10

For each Clearing Principle, please choose a statement from one of the five provided:

CLEARING NOT AT VARIANCE:

– **Proposal is not at variance to this Principle non-biological data where we are sure** e.g. there are NO wetlands or watercourses & where vegetation complexes are clearly well represented, etc.

– **Proposal is not likely to be at variance to this Principle biological data where there is always an element of uncertainty** e.g. surveys have not indicated DRF, TEC, protected fauna, but the surveys may not be fully comprehensive.

INSUFFICIENT INFORMATION TO ASSESS WHETHER CLEARING IS AT VARIANCE

– **Proposal may be at variance to this Principle where there could be an effect but we don't have the tools or information to adequately address the issue** e.g. DRF or priority fauna are known from the local area but not necessarily in the same vegetation type.

CLEARING AT VARIANCE:

– **Proposal is at variance to this Principle where the balance of probability is that there will be an effect** e.g. Consultant advise that there is a high risk and likelihood of land degradation through erosion and eutrophication, or flora surveys identified DRF in the area under application .

– **Proposal is seriously at variance to this Principle where we are sure that there will be a substantial effect. Please consider the scale and cumulative effect of the proposed clearing**.

and then state why

Where we are not 100% sure, we use the PRECAUTIONARY PRINCIPLE in determining potential effects of the clearing.

Directions Associated with Assessor's Recommendations

Revegetation and Rehabilitation

- The permit holder must *revegetate* and *rehabilitate* the following areas once those areas are no longer required for the following purpose for which they were cleared under this Permit:
  - (i) *temporary works*;
  - (ii) *extraction sites*;
  - (iii) *camps*;
  - (iv) *project surveys*;
  - (v) *pre-construction activities*; or
  - (vi) other *project activities* where part or all of the area cleared is no longer required to be used for the purpose for which it was cleared.

  The permit holder need not *revegetate* and *rehabilitate* an area specified above if the permit holder intends to use that cleared area for another *project activity* within 12 months of that area no longer being required for the purpose for which it was originally cleared under the Permit.

  The *revegetation* and *rehabilitation* of an area must be carried out as soon as possible once the permit holder no longer requires that area for a *project activity* and must be undertaken according to a *Revegetation Plan*

- Any area of *native vegetation* that does not form part of the area to be cleared for the *project activity* and that has been damaged as a result of the *clearing* by the permit holder must be *revegetated* and *rehabilitated*.

- The permit holder is not required to *revegetated* and *rehabilitated* if the area is:
  - (ii) less than 0.5 hectares;
  - (iii) not located in an *ESA*; and
  - (iv) an area where the proposed clearing that triggers the obligation to *revegetate* and *rehabilitate* is not at variance with one or more of the *clearing principles*.

Environmental Management Plan

- Where the results of the *EIA* indicate that *clearing* for the *project activity* will have impacts the permit holder must prepare, implement and adhere to an *EMP* to address the *impacts* of the clearing

New Application Required

- Where the results of the *EIA* indicate that *clearing* for the *project activity* may be seriously at variance with the *clearing principles*, the permit holder must apply to the *CEO* for a *clearing permit* in respect of that *clearing*.

Offset

- The permit holder must determine whether all or part of the *native vegetation* in an area to be cleared is in *good or better condition* and whether part or all of the area to be cleared is:
  (i) a *World Heritage property*;
  (ii) a *Bush Forever site*;
  (iii) a *defined wetland*, or within 50 metres of a *defined wetland*;
  (iv) an area covered by the *Environmental Protection (Gnangara Mound Crown Land) Policy 1992* or the *Environmental Protection (Western Swamp Tortoise) Policy 2002*;
  (v) an area covered by the lakes to which the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992* applies;
  (vi) a protected wetland as defined in the *Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998*;
  (vii) an area of fringing *native vegetation* in the policy area as defined in the *Environmental Protection (Swan and Canning Rivers) Policy 1998*; or
  (viii) An area that is included on the Register of the National Estate because of its natural heritage value, under the *Australian Heritage Council Act 2003*; and the *clearing* is likely to have an adverse impact on one or more of the natural heritage values for which the area is included on the Register of the National Estate.

  If part or all of the *native vegetation* in an area to be cleared is described in the list above, the permit holder must implement an *offset* with respect to that *native vegetation*.

  Note: Good or better condition means that the vegetation is in either pristine, excellent, very good or good condition according to *Keighery scale*, being the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia.

- If part or all of the *clearing* to be done is or is likely to be at variance with one or more of the *clearing principles*, then the permit holder must implement an offset proposal.

Management Strategy

- If part or all of the clearing to be done is or is likely to be at variance with *clearing principle (g)*, *(i)* or *(j)*, the permit holder must implement a *management strategy.*