

**PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND
ENVIRONMENTAL MANAGEMENT PLAN (MINOR PROJECTS)
MARRILLA STATION FENCING**



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Gascoyne Region
May 2007

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

MARRILLA STATION FENCING

1 BACKGROUND

Main Roads Gascoyne Region over a number of years has progressively been fencing the Road Reserves along various roads in conjunction with Pastoralists via a cost sharing arrangement. The outcome of this fencing produces various positives for both Main Roads and the Pastoralist, being the removal of stock from the road reserve, better stock control and reduced losses from vehicular conflicts, together with the removal of stock grids from the road carriageway.

Main Roads Gascoyne Region proposes to fence Marrilla Station, which is located approximately 250 kilometres north of Carnarvon.

2 PROJECT DESCRIPTION

It is planned to fence sections of North West Coastal Highway, within Marrilla Station, between 723.81 – 749.14 SLK and a small section of Burkett Road between 0.00-2.53 SLK. The sections between 728.80-761.06 SLK on the left hand side and 749.14 – 761.06 SLK on the right hand side do not require fencing as the pastoralist has stated that these areas are not viable for grazing due to paddock sizes and availability of water.

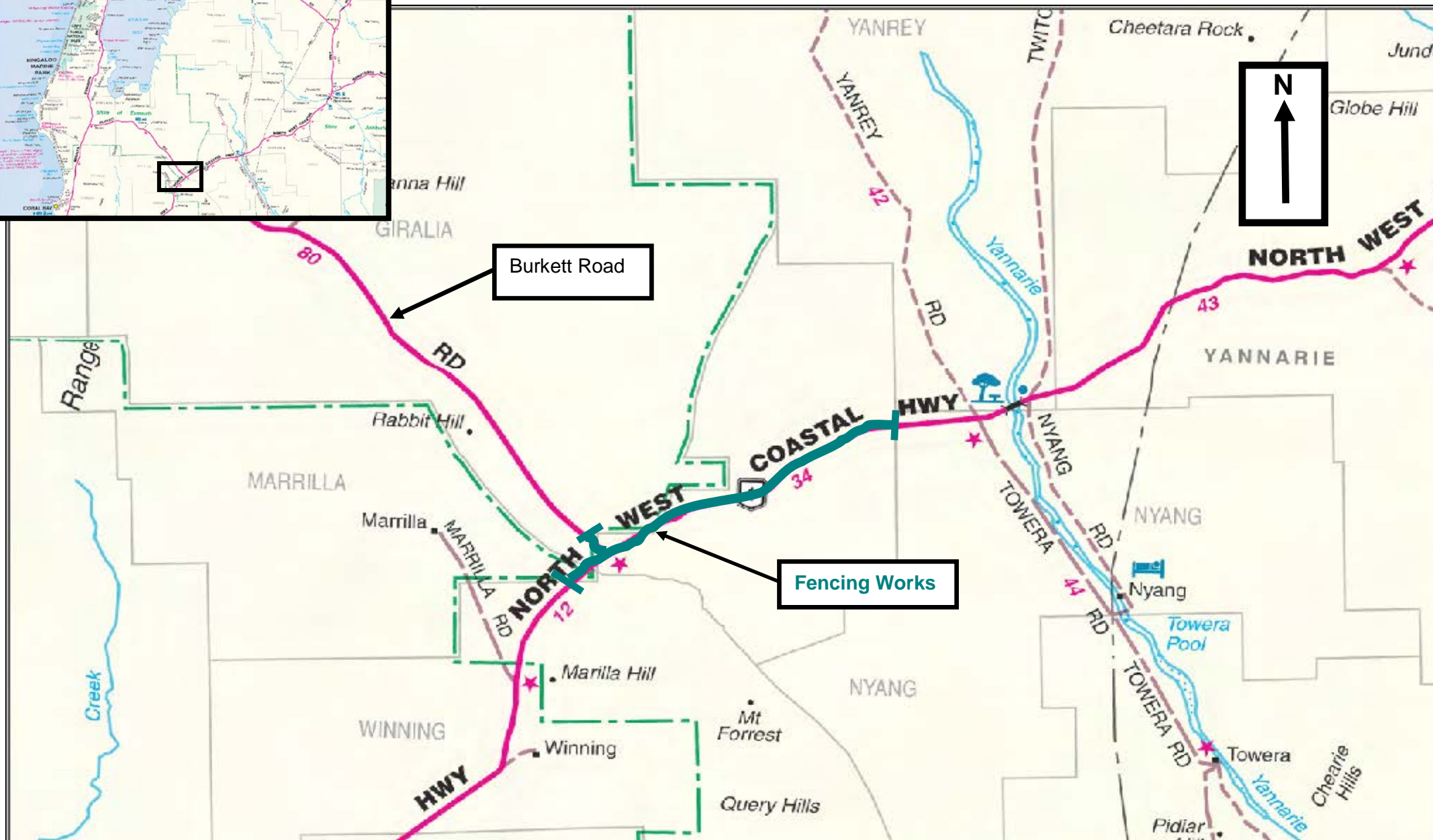
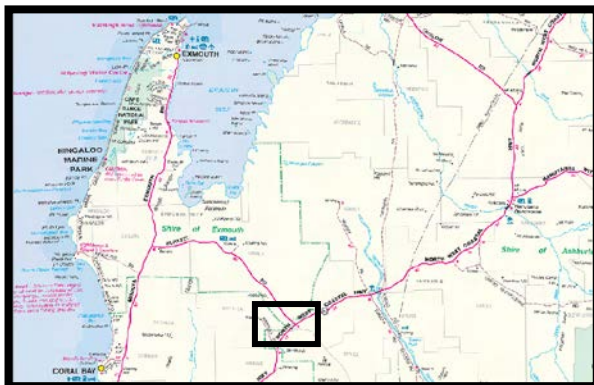
The construction of the fencing will occur 100 meters from the centreline of the highway.

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 of native vegetation, the preparation of a project specific Preliminary Environmental Impact Assessment (PEIA) and Environmental Management Plan (EMP) are required. This report fulfils this requirement.

2.1 Project Location

The location and boundaries of the study area are shown on Figure 1.

FIGURE 1 LOCATION MAP OF MARRILLA FENCING



3 METHODOLOGY

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).

3.1 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) and Geographic Data Atlas mapping tool.

3.2 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.

3.3 Air Quality

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

3.4 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 Exmouth's Municipal Heritage Inventory, refer to Appendix C.

3.5 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.

3.6 Sensitive Water Resources

The locations of sensitive water resources within the project area was determined using the Commonwealth Department of the Environmental and Heritage (DEH) mapping tool, Department of Environment and Conservation (DEC) and Geographic Data Atlas mapping tool, plus conducting a site visit.

3.7 Contaminated Sites

The reserve has been in Main Roads continual control, therefore no further work will be necessary/required.

3.8 Acid Sulfate Soils

The Western Australian Planning Commission's (WAPC's) 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.

3.9 Weeds

Site visit was conducted with David Bauer (consultant from Arid landscapes) to determine whether there are any known populations of declared plants or significant weeds in or adjacent to the project area, refer to Appendix G.

3.10 Dieback

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

4 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.

4.1 Site Investigation

A site visit was carried out by Paul Hoare (PM), Matt Oswald (GEO) and Dave Bauer (Consultant) on 12/02/07 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

According to the Native Vegetation Association Data (DEC & DAF) the fencing works occurs within vegetation association 2675 which is described as 'Hummock grasslands, low tree & shrub steppe; scattered eucalypts, kanji over *Triodia pungens* & *T. basedowii*.' This vegetation association is well represented in the region with 100% remaining. The condition of the vegetation is somewhat degraded due to cattle and goat grazing.

No mature trees will be cleared for the works.

No drainage regimes or values will be changed or impacted upon.

A complete list of species observed in the project area can be viewed in Appendix B. No rare or endanger species were identified.

Site Investigation	Description/Comment
Total area (ha) of <u>native vegetation</u> to be cleared	32.85km X 5m = 16.425 (ha)
Total area (ha) of other vegetation, including regrowth, landscape areas, to be cleared	0
Weeds present	None
Drainage areas or wetlands present	None
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 not be 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?	No	

7 ASSESSMENT OF ASPECTS AND IMPACTS

Table 1: Aspects and Impacts – Marilla Station Fencing

Aspect	Evaluation of Potential Impacts
Air quality	Not relevant to the proposed works. Local air quality assessment is not required for the project since residential and other sensitive receptors are not within 200 meters of the road centre
Dust	Likely to be a minor issue during earthworks.
Fauna	<p>No significant fauna issues associated with any of the proposed fencing works. Fauna species identified in the DEC search were Mulgara, Bilby, Night Parrot, <i>Lerista planiventralis maryani</i>, Lakeland Downs Mouse and Australian Bustard. Due to the nature of the works having a small clearing footprint and the highly mobile nature of all species, no impacts are expected. Recommendations to minimise clearing will also serve to reduce impacts to fauna and remnant fauna habitat at the sites.</p> <p>No Matters of National Environmental Significance as protected under EPBC Act (1999) will be impacted. The Mulgara was identified in the search, but being a highly mobile species, no impact is expected.</p>
Vegetation – clearing	<p>16.425 ha of native vegetation will be cleared.</p> <p>The condition of the native vegetation to be cleared is Good but somewhat degraded in places due to cattle grazing.</p> <p>The native vegetation will be cleared is well represented regionally. According to Native Vegetation Association Data (DEC and DAF), 100% of that vegetation type is still remaining.</p> <p>The native vegetation to be cleared /does not occur within an ESA.</p> <p>The native vegetation to be cleared will be done so using the purpose permit.</p>
Vegetation – TECs/DRF	Consultation with DEC confirms that the proposal is not going to have a significant impact upon any DRF or TECs. <i>Owenis acidula</i> was identified in the DEC search, but an onsite investigation did not identify this species.
Vegetation – weeds	Based upon a site visit, there are no declared plants in the project area.
Vegetation – dieback	Not an issue given the project area receives less than 400 mm of average annual rainfall or is above the 26° parallel.
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 Exmouth's Municipal Heritage Inventory on-line databases has indicated that there are no heritage significance listed sites present in the currently proposed works areas.
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	The proposed works will not disturb or interrupt any natural drainage and surface run-off patterns.
Wetlands	There are 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.
Noise and vibration	No major sensitive local receivers within proximity of works. No impacts expected.

Table 1: Aspects and Impacts – Marilla Station Fencing

Aspect	Evaluation of Potential Impacts
Visual amenity	The proposed works will not impact on the visual amenity of the area. Works are well off the road network.
Public safety and risk	The proposed works will serve to enhance 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.
Salinity	Given the nature and scale of the project the impact is not relevant.
Acid Sulfate Soils	The WAPC's self-assessment (Planning Bulletin 64) indicates that no further soil investigation is required for the project.
Statutory Land Use Planning	As the proposed works are entirely within the existing road reserve, no further 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
Ben Lulfitz (Flora) Kellie Mantle (Fauna)	DEC DEC	14/03/07 14/03/07	

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 follow:

Method	Frequency	Participants	Reference	Record
Project Site				
Induction	Prior to Work	All personnel and subcontractors	EMP and Contractor Environmental Policy	Induction 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: <ul style="list-style-type: none"> 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
			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
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
Construction	Site Management	Ensure that the site is managed to ensure that construction of the proposal will have minimal impact upon the surrounding environment.	Materials storage areas will be located on previously disturbed/ designated area.	Contractor	Main Roads
			All waste materials from the development are to be completely removed from the site upon completion of the development.	Contractor	Main Roads

11 CONTINGENCY MEASURES

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

12 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.

13 REFERENCES

Mitchell, A. A. and Wilcox, D. G. (1994) *Arid Shrubland Plants of Western Australia*, Second and Enlarged Edition. University of Western Australia Press, Nedlands, Western Australia. ISBN 1-874460-22-X.

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, explained in Figure 2 and in the 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 MARRILLA STATION FENCING

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 ground disturbance or clearing of native vegetation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	New, or expansion of existing, pits or quarries. (non-commercial sources)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Adjoining sensitive land use. eg residential or hospital or education centre	<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	Within/immediately adjacent to surface/underground Public Drinking Water Source Area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	Dewatering, or a new water bore.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Buildings will require demolition.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Completed By:

Signature

P. Hoare

Date

19/2/07

Name

P. HOARE

Title

Project Manager

To be reviewed by

Signature

Matthew Oswald

Date

19/2/07

a Main Roads

Name

Matthew Oswald

Title

g/EO

Environment Officer

Comments:

Appendix B

DEC's Threatened Flora and Fauna Database Searches and David Bauer's Species List

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT
DECLARED RARE AND PRIORITY FLORA LIST
21 December 2006

SPECIES / TAXON	CONS CODE	CALM REGION	DISTRIBUTION	FLOWER PERIOD
Owenia acidula	3	P,*	Mardie Stn, Millstream, Collier Range, Winning Stn., Minilya Stn, Boolathana Stn, Qld, NSW	Aug

Threatened and Priority Fauna Database

Page 1 of 2

Grid: 50 205044 mE 7510019 mN / 328466 mE 7409657 mN

Marilla Station (plus~40km buffer)

* Date Certainty Seen Location Name

Method

Schedule 1 - Fauna that is rare or is likely to become extinct

Dasymercus cristicauda

Mulgara

1 records

This small carnivorous marsupial lives in burrows and occurs in arid sandy regions from the eastern Pilbara to central Australia.

Date	Certainty	Seen	Location Name	Method
2006	1	1	Yannarie	Caught or trapped

Macrotis lagotis

Bilby

1 records

This species shelters in burrows and occupies a range of habitats from grassland on clayey and stony soils or sandplains to mulga scrub and woodlands on red earths. It has suffered a large decline and contraction in distribution.

Date	Certainty	Seen	Location Name
1972	3		Exmouth Gulf

Pezoporus occidentalis

Night Parrot

2 records

This nocturnal species is known to inhabit treeless or sparsely wooded spinifex (*Triodia* spp) near water.

Date	Certainty	Seen	Location Name
1967	2	5	Giralia
1967	2	5	Yanrey

Priority One: Taxa with few, poorly known populations on threatened lands

*Lerista planiventralis maryani**Lerista planiventralis maryani*

1 records

Date	Certainty	Seen	Location Name	Method
1990	1	1	Yanry	Caught or trapped

Priority Four: Taxa in need of monitoring

Leggadina lakedownensis

Lakeland Downs Mouse (Kerakenga)

16 records

This secretive species is known to occur in the Pilbara and the Kimberley. Its populations rise and fall dramatically, probably in response to climatic fluctuations and availability of seeds.

Date	Certainty	Seen	Location Name	Method
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped
2006	1	1	Yannarie	Caught or trapped

Ardeotis australis

Australian Bustard

1 records

This species is uncommon and may occur in open or lightly wooded grasslands.

Thursday, 15 March 2007

Department of
Environment and Conservation

Threatened and Priority Fauna Database

Page 2 of 2

Grid: 50 205044 mE 7510019 mN / 328466 mE 7409657 mN

Marilla Station (plus~40km buffer)

<i>* Date</i>	<i>Certainty</i>	<i>Seen</i>	<i>Location Name</i>	<i>Method</i>
1979	1	1	Mia Mia	Day sighting

* Information relating to any records provided for listed species:-

Date: date of recorded observation

Certainty (of correct species identification): 1=Very certain; 2=Moderately certain; and 3=Not sure.

Seen: Number of individuals observed.

Location Name: Name of reserve or nearest locality where observation was made

Method: Method or type of observation

Thursday, 15 March 2007

Department of
Environment and Conservation

Mat Oswald
Environmental Officer / Gascoyne Region Carnarvon 6701
12th February 2007 **FLORA SURVEY 724 SLK FENCE ALIGNMENTS**

Acacia ancistrocarpa
Acacia bivenosa
Acacia citrinoviridis
Acacia inaequilatera
Acacia ligulata
Acacia pruinocarpa
Acacia sclerosperma
Acacia translucens
Acacia tetragonophylla
Acacia victoriae
Acacia xiphophylla
Aristida contorta
Eremophila cuneifolia
Eragrostis eriopoda
Eragrostis setifolia
Eriachne helmsii
Corchorus walcottii
Corchorus elanocarpus
Condonocarpus continiflorus
Eucalyptus aspera
Eucalyptus setosa
Eucalyptus centralis
Eucalyptus microtheca
Eremophila longifolius
Grevillea stenobotrya
Hakea suberea
Hakea preisii
Owenia reticulata
Plectrachne shinzii
Pityrodia sp.
Solanum lasiophyllum
Senna olygophylla
Senna helmsii
Stemodia grossa
Stylobassium spathulatum
Triodia pungens + *sp. basedowii*?

Comments :

There were no annuals or weeds identified or visible in the very dry conditions.
Many of the perennials were in poor condition, lack of rain and fire affected.
There were no rare or endangered species identified on any of the proposed fencing alignments that could be assessed in the given conditions.

Dave Bauer Manager
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Appendix C

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

AUSTRALIAN HERITAGE PLACES INVENTORY

[New Search]

- | | |
|--|---|
| 1. Cape Range and Adjacent Coastal Plain
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 2. Cape Range Geological Site
Learmonth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 3. Cape Range National Park and Surrounds
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 4. Fairy Queen Shipwreck
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 5. Islands Exmouth Gulf and Rowley Shelf
Exmouth Gulf via Onslow, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 6. Learmonth Air Weapons Range Facility
Learmonth, WA | LGA: Exmouth Shire (Current)
Source: Commonwealth Heritage List |
| 7. Learmonth Air Weapons Range Facility
Learmonth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 8. Lighthouse Keepers Quarters
Yardie Creek Rd, Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 9. Muiron Islands and Adjacent Marine Area
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 10. Naval Communication Station Harold E Holt (Area A)
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Commonwealth Heritage List |
| 11. Naval Communication Station Harold E Holt (Area A)
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 12. Naval Communication Station Harold E Holt (Area B)
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Commonwealth Heritage List |
| 13. Naval Communication Station Harold E Holt (Area B)
Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 14. Naval Communication Station Harold E Holt (Area C)
Exmouth Rd, Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Commonwealth Heritage List |
| 15. Naval Communication Station Harold E Holt (Area C)
Exmouth Rd, Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |
| 16. Vlamingh Head Lighthouse
Yardie Creek Rd, Exmouth, WA | LGA: Exmouth Shire (Current)
Source: Register of the National Estate |

17. **Yardie Creek Station Homestead**
Yardie Creek Rd, Exmouth, WA

LGA: Exmouth Shire (Current)
Source: Register of the National
Estate

Query matched 17 records.

Report produced : 27/3/2007

AHPI URL : <http://www.heritage.gov.au/ahpi/search.html>

HERITAGE COUNCIL OF WESTERN AUSTRALIA

HERITAGE COUNCIL PLACES DATABASE HERITAGE TRAILS

HELP | MEDIA | NEWS HIGHLIGHTS | LINKS | FAQs |
CONTACT US | SEARCH

ABOUT | REGISTRATION | DEVELOPMENT | INSURANCE | ASSISTANCE | PUBLICATIONS | CASE STUDIES | EDUCATION | COMMUNITY | HERITAGE TOURISM

PLACES DATABASE ACTIONS:

QUICK SEARCH
ADVANCED SEARCH
▶ RESULTS LIST
LOCATION REPORT
SAVE DATA

OTHER REGISTER INFORMATION:

WHAT IS THE STATE REGISTER?
OTHER HERITAGE LISTS

Displaying results: [1-30] of 30

HELP

hide selected hide unselected	
<input type="checkbox"/> Bundegi-Cape Well (10615)	Exmouth
<input type="checkbox"/> Cape Range & Adjacent Coastal Plain (4451)	20km from, Exmouth
<input type="checkbox"/> Cape Range No. 1 Oil Well (10617)	Shothole Canyon, Cape Range National Pk, Exmouth
<input type="checkbox"/> Cape Range No. 2 Oil Well (10619)	Charles Knife Rd, Cape Range National Pk, Exmouth
<input type="checkbox"/> Charles Knife Road (10620)	Lyndon Location 164
<input type="checkbox"/> Community Hall (3053)	Cnr Maidstone Cres & Learmonth St, Exmouth
<input type="checkbox"/> Exmouth Fire Station (14506)	Payne Street, Exmouth
<input type="checkbox"/> Exmouth Police Station & Lockup (17339)	Maidstone Crescent, Exmouth
<input type="checkbox"/> Exmouth War Memorial (12290)	Maidstone Cres, Exmouth
<input type="checkbox"/> F J Reddy's Grave (10624)	Yardie Creek Rd, Exmouth
<input type="checkbox"/> First Trees planted in Exmouth (10622)	Maidstone Cres, Exmouth
<input type="checkbox"/> Giralia Station (10625)	Burkett Rd, Lyndon Location
<input type="checkbox"/> Naval Communications Station (Harold E Holt) (261)	Exmouth
<input type="checkbox"/> Norwegian Bay Whaling Station (4231)	Norwegian Bay N of Point Cloates, Ningaloo  [REG]  [ASSESS]
<input type="checkbox"/> Operation Potshot - Site (10626)	Lyndon
<input type="checkbox"/> Pier - Pt Murat (10629)	Pt Murat, Lyndon
<input type="checkbox"/> Point Cloates Lighthouse & Quarters (ruins) (5491)	160km South of North West Cape  [REG]  [ASSESS]

- ☐ RAAF Base Learmonth (4288) *Learmonth-Manilya Rd, Learmonth*
- ☐ Rough Range No. 1 Oil Well (10630) *Rough Range*
- ☐ Shire Library (10632) *Maidstone Cres, Exmouth*
- ☐ Shothole Canyon and Road (10636) *Lyndon Location*
- ☐ Staff House (10637) *Cnr Bennett/Fyfe Sts, Exmouth*
- ☐ Tantabiddi Well (10638) *Cape Range National Park*
- ☐ Transit House (10639) *Lot 263 Christie St, Exmouth*
- ☐ VLF Towers, Harold E Holt Naval Communication Stn (10641) *14km N of, Exmouth*
- ☐ Vlaming Head Lighthouse Group (837) *Yardie Creek Rd via, Exmouth*  [REG]
- ☐ Vlaming Head Radar (10640) *Exmouth*
- ☐ WAPET Jetty (ruin) (10642) *Learmonth*
- ☐ Yardie Creek (10643) *Cape Range National Park*
- ☐ Yardie Creek Homestead (839) *Exmouth*

hide selected | **hide unselected**

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

HELP

[▲ top of page](#)

[\[disclaimer \]](#)

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Appendix D

Department of Indigenous Affairs Database Search



Search Criteria

0 sites in a search polygon. The polygon is formed by these points (in order):

MGA Zone 50	
Northing	Easting
7453687	249637
7465996	270695
7463515	273311
7452558	251260

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

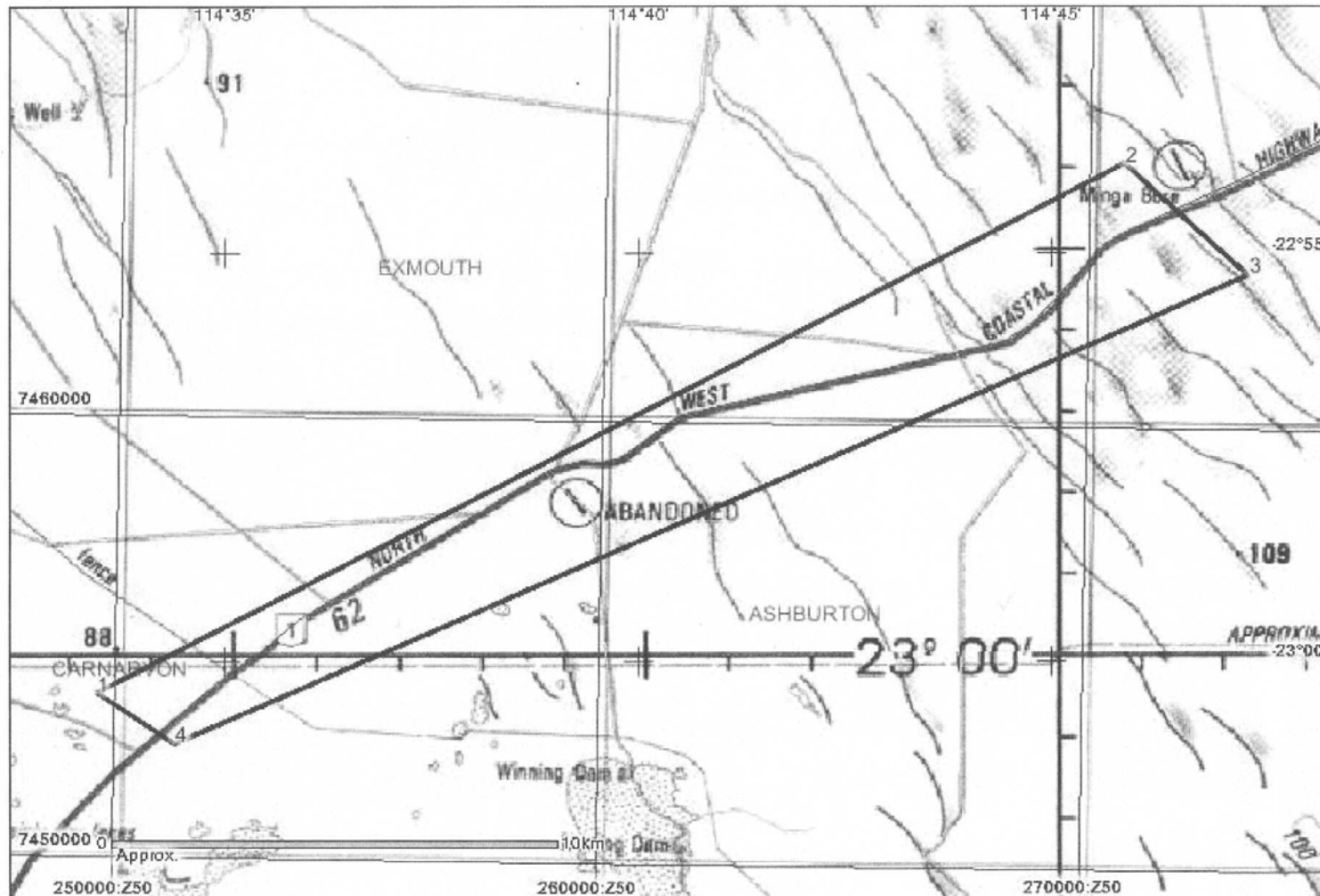
Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register of Aboriginal Sites established and maintained under the Aboriginal Heritage Act 1972 (AHA).

Legend

Restriction		Access		Status		Coordinate Accuracy	
N	No restriction	C	Closed	I	Interim register	Accuracy is shown as a code in brackets following the site coordinates.	
M	Male access only	O	Open	P	Permanent register	[Reliable]	The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
F	Female access	V	Vulnerable	S	Stored data	[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.

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.



Legend

- Highlighted Area
- Town
- Map Area
- Search Area

Copyright for base map information shall at all times remain the property of the Commonwealth of Australia, Geoscience Australia - National Mapping Division. All rights reserved.

Copyright for Native Title Land Claim, Local Government Authority, Mining Tenement boundaries shall at all times remain the property of the State of Western Australia. All rights reserved.

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.aspx>

Appendix E

DEC's Sensitive Water Resources Database Search

Appendix F

WAPC's Acid Sulfate Soils Mapping



Acid Sulfate Soils Applicant Self-Assessment Form



Important information for applicants

This form need only be completed if there is evidence of significant risk of disturbing acid sulfate soils at this location or having completed Form 1A - Application for approval of freehold subdivision or survey strata you have indicated yes to either question 1 or 2, Acid sulfate soils assessment, section 7.

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.

Full name

Applicant signature

Date

Application property details

FENCING - MARRILLA STATION

Step 1

If you have previously indicated yes to question 1 or 2 on Form 1A go to Step 2.

Is there evidence of a significant risk of disturbing acid sulfate soils at this location?

The WAPC has published maps showing the levels of risk of acid sulfate soils. The maps are shown on figures 1-11 of planning bulletin no. 64 can be downloaded at www.wapc.wa.gov.au/Publications/213.aspx

Question 1: Is the land depicted in figures 1-11 of the WAPC's Planning Bulletin No 64 Acid Sulfate Soils as having a high risk of actual acid sulfate soil and potential acid sulfate soil <3m from the surface?

☐ yes ☒ no

Question 2: Is the land located in an area, whether depicted in figures 1-11 or not, where site characteristics and local knowledge lead you to form the view that there is a significant risk of disturbing acid sulfate soils at this location?

☐ yes ☒ no

If yes to either of these questions go to Step 2.

If no to both of these questions then no further investigation is required. Sign this form and submit it with your application together with the written results of the preliminary site assessment.

Step 2

Are any of the following works proposed, or likely to be carried out, on the land?

Question 3: Are any dewatering works proposed to be undertaken?

☐ yes ☐ no

Question 4: Is the surface elevation $\leq 5\text{m AHD}$ and is excavation of $\geq 100\text{m}^3$ of soil (ie 10 standard dump truck loads) with an excavation depth of $\geq 2\text{m}$ proposed?

☐ yes ☐ no

Question 5: Is the surface elevation $> 5\text{m AHD}$ and is excavation of $\geq 100\text{m}^3$ of soil (ie 10 standard dump truck loads) with an excavation depth of $\geq 2\text{m}$ proposed?

☐ yes ☐ no

If yes to any of these questions go to step 3.

If no to all of these questions no further investigation is required. Sign this form and submit it with your application.

Step 3

Carry out preliminary site assessment in accordance with Department of Environment and Conservation guidelines.

Note: Copies of documents in the acid sulfate soils guidelines series and further technical advice and information can be obtained from contaminated sites page on the Department of Environment and Conservation's website at <http://www.dec.wa.gov.au>

Question 6: Did the preliminary site assessment reveal the presence of acid sulfate soils?

☐ yes ☐ no

If yes to this questions go to step 4.

If no to this questions then no further investigation is required. Sign this form and submit it with your application together with the written results of the preliminary site assessment.

Appendix G

Department of the Environment and Heritage Database Search



Protected Matters Search Tool

You are here: [Environment Home](#) > [EPBC Act](#) > [Search](#)

27 March 2007 11:39

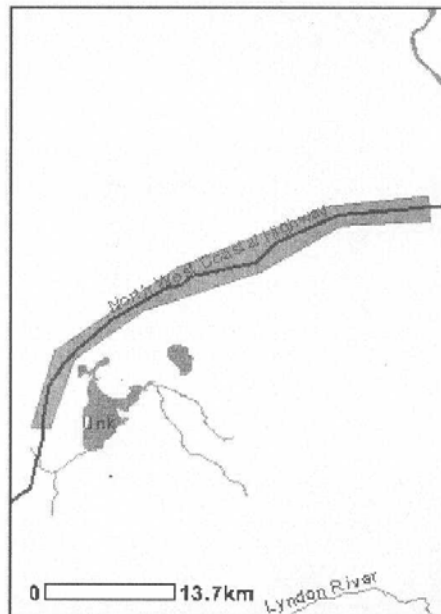
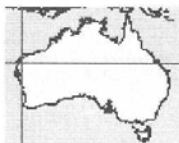
EPBC Act Protected Matters Report

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.

You may wish to print this report for reference before moving to other pages or websites.

The Australian Natural Resources Atlas at <http://www.environment.gov.au/atlas> may provide further environmental information relevant to your selected area. 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>

Search Type: Area
Buffer: 0 km
Coordinates: -23.1061,114.5132, -23.0273,114.5366, -
22.9412,114.6620, -22.8770,114.8167, -
22.8668,114.9173, -22.8931,114.9188, -
22.8975,114.8284, -22.9456,114.7467, -
22.9865,114.6270, -23.0361,114.5570, -
23.1076,114.5322, -23.107,114.5191



Report Contents: [Summary](#)
[Details](#)

- [Matters of NES](#)
- [Other matters protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgments](#)

This map may contain data which are
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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>.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	None
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
Threatened Species:	1
Migratory Species:	11

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>.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Places on the RNE:	None
Listed Marine Species:	9
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

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

State and Territory Reserves:	None
Other Commonwealth Reserves:	None
Regional Forest Agreements:	None

Details

Matters of National Environmental Significance

Threatened Species [Dataset Information]	Status	Type of Presence
Mammals		
<i>Dasyercus cristicauda</i> * Mulgara	Vulnerable	Species or species habitat likely to occur within area
Migratory Species [Dataset Information]	Status	Type of Presence
Migratory Terrestrial Species		
Birds		
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
<i>Hirundo rustica</i> Barn Swallow	Migratory	Species or species habitat may occur within area
<i>Merops ornatus</i> * Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
Migratory Wetland Species		
Birds		
<i>Ardea alba</i> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Migratory	Species or species habitat may occur within area
<i>Charadrius veredus</i> Oriental Plover, Oriental Dotterel	Migratory	Species or species habitat may occur within area
<i>Glareola maldivarum</i> Oriental Pratincole	Migratory	Species or species habitat may occur within area
<i>Numenius minutus</i> Little Curlew, Little Whimbrel	Migratory	Species or species habitat may occur within area
Migratory Marine Birds		
<i>Apus pacificus</i> Fork-tailed Swift	Migratory	Species or species habitat may occur within area
<i>Ardea alba</i> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<i>Ardea ibis</i> Cattle Egret	Migratory	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Dataset Information]	Status	Type of Presence
Birds		
<i>Apus pacificus</i> Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
<i>Ardea alba</i> Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area

<i>Ardea ibis</i> Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
<i>Charadrius veredus</i> Oriental Plover, Oriental Dotterel	Listed - overfly marine area	Species or species habitat may occur within area
<i>Glareola maldivarum</i> Oriental Pratincole	Listed - overfly marine area	Species or species habitat may occur within area
<i>Haliaeetus leucogaster</i> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<i>Hirundo rustica</i> Barn Swallow	Listed - overfly marine area	Species or species habitat may occur within area
<i>Merops ornatus</i> * Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area
<i>Numenius minutus</i> Little Curlew, Little Whimbrel	Listed - overfly marine area	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 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 migratory and marine provisions of the Act have been mapped.

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.

Acknowledgments

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

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

Last updated:

Department of the Environment and Water Resources
GPO Box 787 Canberra ACT 2601 Australia



Photograph 1: Proposed Fencing Line.
724.0 SLK North West Coastal Highway
Left Hand Side .North View



Photograph 2: Proposed Fencing Line
726.7 SLK North West Coastal Highway
Right Hand Side. North View



Photograph 3: Proposed Fencing Line
1.0 SLK Burkett Road
Left Hand Side. North West View



Photograph 4: Proposed Fencing Line
749.0 SLK North West Coastal Highway
Right Hand Side. South View

Appendix I

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:

Main Roads Western Australia

Contacts:

Name: Matthew Oswald

Phone: 08 9941 0713

Fax: 08 9941 0701

Email: matthew.oswald@mainroads.wa.gov.au

Property details

Property:

Marrilla Station – North West Coastal Highway

Colloquial name:

Area under assessment

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:	Site Plan Attached
16.425	0	Mechanical	Fence Construction	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

BACKGROUND

Existing environment and information

Description of the native vegetation under application

Vegetation Description

Hummock grasslands, low tree & shrub steppe; scattered eucalypts, kanji over *Triodia pungens* & *T. basedowii*.

This vegetation association is well represented in the region with 100% remaining

Clearing Description

The proposal includes clearing of vegetation for the purpose of fence construction. The proposed area is 18.03 hectares. The vegetation under application mainly consists of grasses with few scattered shrubs.

Vegetation Condition

Fairly Good but has been somewhat degraded due to cattle grazing

Comment

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

Vegetation Complex	Clearing Description	Vegetation Condition	Comment
662	Mechanical	Fair	

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

The area under application predominantly consists of grasses and a few scattered shrubs. The condition of the vegetation is somewhat degraded and does not represent a high level of biodiversity. This proposal is therefore not at variance with this Principle.

Methodology

Site visit (12/02/07)

GIS Databases:

- Interim Biogeographic Regionalisation of Australia – 28/03/07.

(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 under application predominantly consists of grasses and a few scattered shrubs. The condition of the vegetation is somewhat degraded and does not represent a significant habitat for fauna. The EPBC Protected Matters Report found that the Mulgara is likely to occur within area. Due to the small clearing footprint necessary for the fencing construction, habitat of the Mulgara will not be depleted. This proposal is therefore not at variance with this Principle.
Methodology	Site visit (12/02/07) DEC advice – 16/02/07

(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 DEC Threatened Flora Database search was conducted and <i>Owenia acidula</i> was identified as occurring within the area. Based upon a site visit with David Bauer (Consultant), this species was not identified with the works area, and is not expected to be impacted upon. It is therefore unlikely that the vegetation under application is necessary for significant flora. This proposal is therefore not at variance with this Principle.
Methodology	Site visit (12/02/07) GIS Databases: - Declared Rare and Priority Flora list – DEC 22/03/07

(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 There are no records of Threatened Ecological Communities (TEC'S) for the area under application. This proposal is therefore not at variance with this Principle.
Methodology	GIS Databases: - Threatened Ecological Communities – DEC 22/03/07

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

Comments	Proposal is not at variance to this Principle The vegetation under application is representative of Beard Vegetation Association 2675 (Hopkins et al. 2001) of which there is 100% of the pre-European extent remaining (Shepherd et al. 2001). In addition the application falls within the Carnarvon IBRA Bioregion which has 100% of the pre-European extent remaining (Shepherd et al. 2001). Beard Vegetation Association 2675 and the Carnarvon IBRA Bioregion are therefore both of 'least concern' for biodiversity conservation. This proposal is therefore not at variance with this Principle.
Methodology	GIS Databases: - Interim Biogeographic Regionalisation of Australia – 28/03/07 - Pre-European Vegetation

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

Comments	Proposal is not at variance to this Principle The area under application does not consist of a watercourse or wetland . This proposal is therefore not at variance with this Principle.
Methodology	Site visit (12/02/07) DEC's web based Geographic Data Atlas mapping tool GIS Databases: - Hydrography, linear - Hydrographic Catchments – Catchments

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

Comments	Proposal is not likely to be at variance to this Principle The area under application consists of heavy red clays with dune sands. Given the small clearing footprint and that the vegetation consists mainly of grasses and a few scattered shrubs, the proposal is not at variance with this principle.
Methodology	Site visit (12/02/07) GIS Databases:

(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**

The proposed project is not near any conservation areas and therefore is not at variance with this Principle.

Methodology Site Visit (12/02/07)
DEC's web based Geographic Data Atlas mapping tool

(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**

The area under application only receives approximately 300mm of annual rainfall. Due to the low rainfall rate, this proposal will not cause deterioration in the quality of surface or under ground water and therefore not a variance to this Principle.

Methodology Site Visit (12/02/07)
DEC's web based Geographic Data Atlas mapping tool

(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**

The soil consists of heavy red clays with dune sands. In addition the area under application only receives approximately 300mm of annual rainfall. Due to the nature of the soil and the low rainfall rate, his proposal will not exacerbate the incidence of flooding and therefore is not at variance with this Principle.

Methodology Site Visit (12/02/07)
GIS Databases:
- Rainfall, Mean Annual – BOM 28/03/07

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

Comments

There is no further requirement for a RIWI Act Licence, Works Approval or EP Act Licence for the area under application.

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

OFFICER PREPARING REPORT

Matthew Oswald (Graduate Environment Officer)
Gascoyne Regional Office MRWA
Phone 08 9941 0713

Date 29/03/0