

## PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN

## **REID HIGHWAY / ALEXANDER DRIVE INTERCHANGE**

Prepared by: Fred Ballast March 2008

## CONTENTS

1 PROJECT DESCRIPTION	.4
2 BACKGROUND	.4
3 DESCRIPTION OF THE PROJECT	.5
3 PROJECT LOCATION	.5
4 EXISTING ENVIRONMENT	.6
<ul><li>4.1 SITE INVESTIGATION</li><li>4.2 DESCRIPTION</li></ul>	
5 METHODOLOGY	.6
<ul><li>5.1 PRELIMINARY DESKTOP STUDY</li><li>5.2 COMMONWEALTH AND STATE REFERRAL</li></ul>	
6 CLEARING OF NATIVE VEGETATION	.8
<ul> <li>6.1 ASSESSMENT AGAINST CLEARING PRINCIPLES</li> <li>6.2 ENVIRONMENTALLY SENSITIVE AREA (ESA)</li> </ul>	
7 ASSESSMENT OF ASPECTS AND IMPACTS	.9
8 DECISION TO REFER1	0
9 STAKEHOLDER CONSULTATION1	0
10 ENVIRONMENTAL MANAGEMENT PLAN1	1
10.1 COMMUNICATION PLAN1	11
11 MONITORING1	4
12 CONTINGENCY MEASURES1	14
13 AUDITING1	14
APPENDIX A – LOW IMPACT SCREENING CHECKLIST1	15
APPENDIX B – SITE FEATURES1	6
APPENDIX C - VEGETATION AREAS1	17
APPENDIX D – SITE PHOTOS1	8
APPENDIX E – DEPARTMENT OF ENVIRONMENT AND CONSERVATION	21
APPENDIX F – HERITAGE LISTINGS	23
APPENDIX G – DEPARTMENT OF INDIGENOUS AFFAIRS DATABASE SEARCH2	26
APPENDIX H – DEPARTMENT OF WATER	27
APPENDIX I - ACID SULFATE SOILS MAPPING	28
APPENDIX J – DEPARTMENT OF AGRICULTURE AND FOOD	31

APPENDIX K – CALM DIEBACK ASSESSMENT 2005	32
APPENDIX L – DEPARTMENT OF ENVIRONMENT, WATER, HERITAGE AND THE ARTS	33
APPENDIX M – VEGETATION CLEARING ASSESSMENT REPORT	38

## PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PLAN REID HIGHWAY / ALEXANDER DRIVE INTERCHANGE

## **1 PROJECT DESCRIPTION**

Main Roads is proposing to improve traffic management by constructing an interchange at the Reid Highway / Alexander Drive intersection. The intersection is located in the Mirrabooka/Noranda suburbs and is within the municipalities of the City of Stirling and the City of Swan.

Currently, the intersection of Reid Highway and Alexander Drive consists of an 'at grade' intersection channelised to provide dedicated left and right turn lanes. Both Reid Highway and Alexander Drive consist of four lane divided roads with 3.5 metre lane widths. Traffic volumes moving through the intersection, particularly during peak periods, are considered high and regularly reach saturated levels. Traffic analyst software suggests the intersection is often operating above its capacity during peak periods. The proposed interchange is intended to reduce traffic delays and lower the accident risk for the future. It will involve the construction of two bridges, one for each carriageway of Reid Highway over Alexander Drive.

As per Main Roads' Environmental Assessment and Approval process, a Low Impact Environmental Screening Checklist has been completed for the proposal (Appendix A). Because the proposed works involve clearing of vegetation 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.

## 2 BACKGROUND

The increasing traffic flow on Alexander Drive and future plans for bus lanes means that the Reid Hwy/Alexander Dve intersection upgrade is critical. In comparison to other intersections along Reid Highway, Alexander Drive has the highest accident ratings; therefore the proposal for an interchange here has been given priority funding.

The ultimate design for Reid Highway was complete when it was initially built in 1991. The ultimate design included interchanges at all intersections and three traffic lanes in both directions along Reid Highway. Due to the lack of funding at that time, dual lanes in both directions and standard intersections were adopted as the preferred option. However, the alignment of Reid Highway was designed for the incorporation of future construction benefits.

Therefore the majority of the proposed construction works are to occur to the south of the original Reid Highway alignment. The current east bound carriageway of Reid Highway was designed to be part of the east-west on and off ramps for the proposed interchange. Also, some of the original earthworks included building up the abutments to accommodate the proposed Reid Highway bridges over Alexander Drive.

As part of the project development, Main Roads has undertaken an environmental desktop investigation which has identified Bush Forever Site No. 385, albeit Environmentally Sensitive Area (ESA) 3366, adjacent to the project area to the north of Reid Highway. However, as mentioned above, all major construction works will occur to the south of the Reid Highway alignment and therefore will not impact on either of these

sites (Appendix B). Only minor works involving realignment of the current corners to ramp standards will be undertaken on Alexander Drive north of Reid Highway. However, all works will occur within the road reserve and will be suitably managed by the EMP.

## **3 DESCRIPTION OF THE PROJECT**

The design for the interchange will incorporate two pre-cast tee-beam bridges carrying Reid Highway over Alexander Drive. The bridges are to be two spans supported with a middle pier in the Alexander Drive median. The abutments will be pre-cast concrete panels with reinforced earth backfill. Being a diamond interchange, dual carriage way ramps will give access to vehicles travelling on and off Reid Highway onto Alexander Drive. Traffic signals will be installed on Alexander Drive for vehicles entering and exiting Reid Highway. A shared pedestrian path is proposed for both sides of Alexander Drive within the road reserve.

The majority of the work will be occurring south of Reid Highway with only minor amendments being made to the existing northern carriageway of Alexander Drive to accommodate the new on and off ramps. There is expected to be only limited earth disturbance as most of the construction is infill. The proposed design for the drainage is for kerbing and piped discharge to compensation basins.

## **3 PROJECT LOCATION**

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

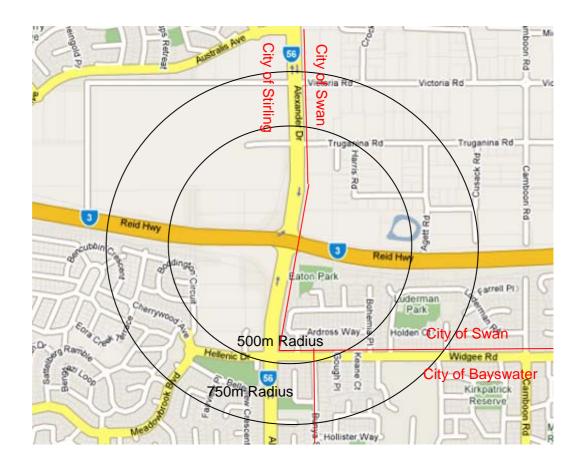


Figure 1

## **4 EXISTING ENVIRONMENT**

## 4.1 Site Investigation

A site visit was carried out by PM Ballast on 6 February 2008 and additionally with PEO Swanson on 2 April 2008 to examine the general features of the area. The location and extent of the broad vegetation types within the project area were identified. Additional considerations including topography, access, fences and the potential for noise and vibration impacts were also taken into account.

## 4.2 Description

The area proposed to be cleared to the south of Reid Highway where the majority of the works are to occur consists of sections that were cleared for the original construction and others that contain remnant native vegetation. The aerial photo in Appendix J displays the location and extent of each of these vegetation forms.

The sections that were previously cleared (approximately 2.28ha) are generally over the embankments and ramps of the built up abutments for the proposed bridges over Alexander Drive. The vegetation is made up of typical native landscape species historically and regularly used by Main Roads and consists of low to medium shrubs.

The areas of remnant vegetation proposed to be cleared for this project (approximately 2.1ha) have predominantly mixed Banksia Woodland consisting of a dominant understorey of grasses and low to medium shrubs. The sparse over storey consists of *Allocasuarina fraseriana* and several *Banksia* species. There is the occasional *Eucalyptus marginata* (Jarrah) specimen with some prominent stands of Melaleuca nesophila throughout. The overall condition is relatively good with limited weed invasion beyond the fringe and little evidence of human intervention (Appendix D: Photos 1-12).

The area north of Reid Highway that will be impacted by minor modifications to the existing alignment will be totally within the road reserve. A sturdy fence exists that clearly demarcates the reserve boundary. The fence on both sides of Alexander Drive is set back more than sufficiently from the carriageway to undertake the proposed works without impact to the adjacent Bush Forever site (Appendix D: Photos 13-16).

## 5 METHODOLOGY

## 5.1 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).

## 5.1.1 Wetlands

The locations of wetlands within the project area were determined using the Department of Environmental and Conservation (DEC) Geographic Atlas mapping tool (Appendix E). (http://maps.dec.wa.gov.au/idelve/doedataext/)

# 5.1.2 **Threatened Flora and Communities, Conservation Reserves and Environmentally Sensitive Areas (SEAs)**

DEC's Native Vegetation Map Viewer was searched for known populations of threatened flora, fauna and Threatened Ecological Communities (TECs), SEAs and conservation reserves (Appendix E).

http://portal.environment.wa.gov.au/portal/page? pageid=53,2569721& dad=portal& sch ema=PORTAL.

## 5.1.3 Air Quality

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

## 5.1.4 Heritage

Non-indigenous heritage was examined utilising the Australian Heritage Places Inventory (<u>http://www.heritage.gov.au</u>), and the Heritage Council of Western Australia. (<u>http://register.heritage.wa.gov.au/</u>). The Heritage Inventory for the City of Swan and Stirling were also accessed. (Findings in Appendix F)

## 5.1.5 Aboriginal Heritage

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

## 5.1.6 Sensitive Water Resources

The Department of Water's Groundwater Atlas was used to determine whether the project area supported, or was adjacent to, any significant lakes, rivers or wetlands or proclaimed areas. (Appendix H) (<u>www.apostle.water.wa.gov.au</u>)

## 5.1.7 Contaminated Sites

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

## 5.1.8 Acid Sulphate Soils

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

## 5.1.9 Weeds

Consultation was undertaken with the Department of Agriculture and Food to determine whether there are any known populations of declared plants or significant weeds in or adjacent to the project area (Appendix J).

## 5.1.10 Dieback

The Dieback Desktop Assessment prepared for Main Roads by CALM in 2005 was used to consider the risk of dieback being in the project site (Appendix K).

## 5.2 Commonwealth and State Referral

The decision whether to refer the project to the Commonwealth's Department of Environment, Water, Heritage and the Arts (DWEHA) was based upon whether the project would impact upon matters of national significance as protected under *EPBC Act (1999)*, e.g. World Heritage properties, protected wetlands and migratory species, Commonwealth marine areas, threatened species or communities or nuclear actions. The report generated as part of the investigation is in Appendix L.

Site Investigation	Description/Comment
Total area (ha) of <u>native vegetation</u> to be	2.1 ha of remnant Banksia woodland
cleared	
Total area (ha) of other vegetation,	2.28 ha of landscaped vegetation
including regrowth, landscape areas, to	Mostly shrubs and groundcover specimens,
be cleared	no large trees.

Weeds present	Roadside weeds along the margins No Declared Weeds (Refer Appendix J)
Drainage areas or wetlands present	None
Adjacent land uses	Bush Forever site to the north and residential to the south.

## 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 Clearing Principles (Appendix M).

The project has been assessed as not being 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	Works and future maintenance zones will not be in an ESA.

## 7 ASSESSMENT OF ASPECTS AND IMPACTS

#### Table 1: Aspects and Impacts – Reid Highway/Alexander Drive Interchange

Aspect Air quality	Evaluation of Potential Impacts           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. 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. The City of Swan should be consulted regarding the proposed dust control measures.
Fauna	No significant fauna issues are associated with any of the proposed works. The generally degraded and exposed nature of the works areas and being bounded by a major highway and nearby residential and industrial areas indicates that it is unlikely that the vegetation provides habitat for a significant number of native fauna.
Vegetation – clearing	<ul> <li>2.1 ha of native vegetation is proposed to be cleared.</li> <li>The project will involve temporary clearing and so will require revegetation i.e. batters, verges and medians will be landscaped on completion of the project</li> <li>The condition of the native vegetation to be cleared is reasonably degraded.</li> <li>The native vegetation to be cleared is Banksia Mixed Woodland vegetation type that has 26.5% represention of its pre-European extent.</li> <li>The native vegetation to be cleared does not occur within an ESA.</li> <li>The native vegetation is proposed to be cleared using Main Roads purpose permit.</li> </ul>
Vegetation – TECs/DRF	No threatened communities or plant species have been identified within the road reserve in the vicinity of the proposed works area. Areas outside of the road reserve will not be disturbed as part of the proposed works. 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 area and general area. The risk of spreading these weeds species as part of the proposed work will be minimised by standard weed management measures during earthworks for the project. Consultation with the Department of Agriculture and Food confirms that there are no declared plants in the project area.
Vegetation – dieback	Dieback management at the project site has been prescribed by CALM as medium. However, Banksia and other dieback sensitive flora species within the works areas do not show any prevalence of ill health. There is expected to be only limited earth disturbance as most of the construction is infill, however Main Roads' and DEC's hygiene management guidelines will be complied with during earthworks for the project.
Reserves / Conservation areas	Bush Forever Site (No. 385) has been identified to the north of Reid Highway. However, the majority of vegetation clearing will be to the south of Reid Highway. Only minimal works are proposed to the north and all within the road reserve therefore there will be no impact to the Bush Forever site.
Heritage (non- indigenous)	A search of the Australian Heritage Places Inventory and Heritage Council of Western Australia on-line databases has indicated that there are no heritage significant sites listed in the vicinity of the proposed works area. Local government Heritage Inventories also have no sites in the vicinity of the proposed works.
Aboriginal heritage	A search of DIA database identified no known sites of Aboriginal heritage significance within the vicinity of the proposed works area.
Surface water/drainage	The site inspection determined that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns. Drainage designs for stormwater from the proposed kerbed sections north of Reid Highway are to be collected and piped into compensation basins.
Wetlands	DEC database indicated that 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	There are no major sensitive local receivers in the vicinity. Construction works are not expected to significantly contribute to current noise levels, provided works are limited to normal working hours. Residential areas to the south of the project area will notified by letter box drop prior to works commencing.
Visual amenity	The proposed works will result in minor and short-term visual impacts during construction. Suitable site completion treatments, including landscape planting, will ultimately result in an improvement in local visual amenity.

Table 1: Aspects and Impacts – Reid Highway/Alexander Drive Interchange

Aspect	Evaluation of Potential Impacts
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	The site has been long term under Main Roads without any record of contamination. The works require minimal excavation therefore there is a low risk of any significant contamination issues.
Salinity	The impact is not relevant given the nature and scale of the project.
Acid Sulfate Soils	The Western Australian Planning Commission's (WAPC'c) acid sulfate soils maps indicate that the risk level of the project area is medium. However, because there will be minimal ground disturbance, the WAPC's self-assessment (Planning Bulletin 64) indicates that no further ASS 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 Environment, Water, Heritage and the Arts.

## 9 STAKEHOLDER CONSULTATION

Name	Agency	Date	Comments
Cate Gustavsson	Department of Planning and Infrastructure	18 Feb 2008	
Saint Rooks	Department of Planning and Infrastructure	18 Feb 2008	
Sandy Lloyd	Department of Agriculture	26 Feb 2008	
Paul Manera	Department of Agriculture	26 Feb 2008	

## **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				
Contract Meetings	XXX	Main Roads' Project Manager and Contractor Project Manager	EMP	Minutes of Meeting				
Authority Consultation								
Department of Planning & Infrastructure (Bush Forever branch: Strategic Biodiversity Planning)	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						
Timing All phases of	Vegetation	All projects should maintain the	Clearing:	Responsible Party Project Manager	DEC	
Construction	Clearing - Record-keeping	required records relating to clearing native vegetation under the purpose permit.	<ul> <li>a copy of the PEIA &amp; EMP (Minor projects) for small projects;</li> <li><u>a map showing the location where the clearing occurred,</u> recorded in an ESRI Shapefile;</li> </ul>			
			<ul> <li>the size of the actual area cleared (in hectares); and</li> <li>the dates on which the clearing was done.</li> </ul>			
			Revegetation and rehabilitation of areas:	Project Manager	DEC	
			<ul> <li>a copy of the Revegetation Plan;</li> <li>a map showing the location of any area revegetated and rehabilitated recorded in an ESRI Shapefile;</li> </ul>			
			<ul> <li>a description of the revegetation and rehabilitation activities undertaken; and</li> <li>the size of the area revegetated and rehabilitated (in hectares).</li> </ul>			
Pre-Construction	Vegetation - Clearing	Ensure that the overall objectives of the alignment and construction works	Selection of designs/locations that minimise adverse impacts on the biological environment.	Project Manager	Main Roads	
		are compatible with maintaining and, where possible, enhancing the biological integrity of the surrounding environment and minimising	Clear demarcation of all areas to be cleared to avoid any unintentional clearing	Project Manager	Main Roads	
			Induction of all site workers regarding avoidance of impacting adjacent conservation areas	Project Manager	Main Roads	
vege Ensu habi corri parti	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.	Construction works to be undertaken in summer to reduce the potential for soil erosion and drainage line siltation due to vegetation removal and heavy rains.	Project Manager	Main Roads		
		Control/spray weeds species within the project area prior to construction to limit the amount of propagative material that may be spread during disturbance.	Contractor	Main Roads		
			Any stockpiled vegetation from clearing works shall not be burnt. This vegetation shall be used during any rehabilitation works and either chipped or replaced according to the EMP.	Contractor	Main Roads	
Pre-Construction	Surface Drainage	Maintain the hydrological regime that exists prior to the construction of the proposal.	Stormwater drainage shall be directed and disposed of in accordance with DEC requirements.	Project Manager	DEC	
Pre-Construction	Noise	Maintain community relations	Residential areas to the south of the project area will notified by letter box drop prior to works commencing.	Project Manager		
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	

Timing	Topic	Objective	biective Action				
			Any complaints regarding dust will be attended to as soon as possible.	Responsible Party Contractor/Project Manager	Advice 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		
	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	No fires shall be lit within the project area.	Contractor	Main Roads		
		with the construction of the proposal	Machinery will be fitted with approved spark arresting mufflers.	Contractor	Main Roads		
		is minimised.	A water tanker will be on site at all times.	Contractor	Main Roads		
Construction	Site Management	Ensure that the site is managed so that construction will have minimal impact upon the surrounding environment.	Ensure all machinery is free of dirt on entering and leaving the site. 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	All waste material from the development is 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		
		Rehabilitate the project area.	Undertake site preparation & weed management Replant temporarily cleared areas with locally occurring natives species.	Contractor/Project Manager	Main Roads		

## 11 MONITORING

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

Monitoring of the weeds identified in the project area will comprise the use of input criteria listed below.

Criterion	Target	After three months	After one year	After three years
Mean weed foliage cover (%).	<20	<20	<20	<20

## **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 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 REID ALEXANDER INTERCHANGE

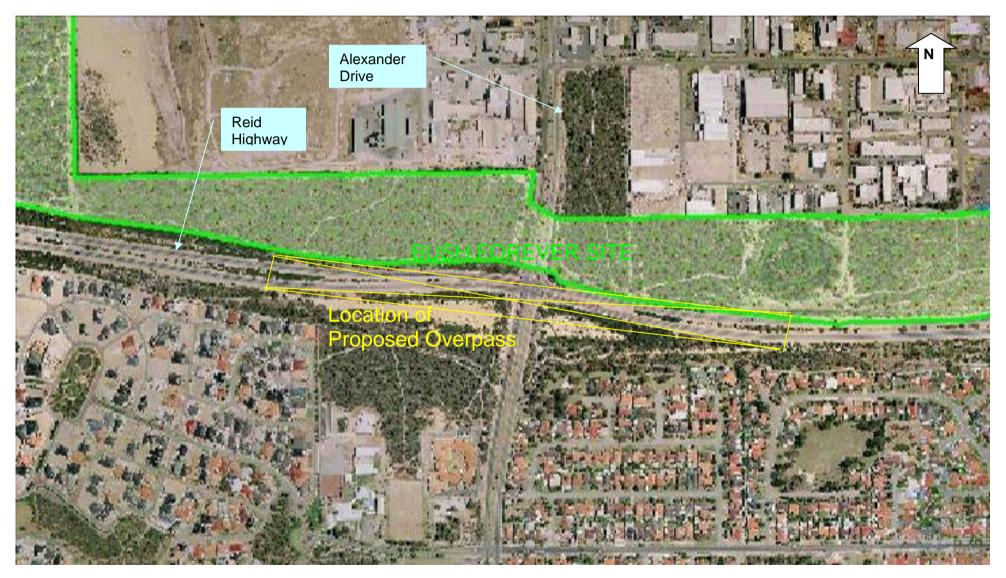
ITEM		
NO.	ITEM	Y N
I	New road or road reserve to be created or expansion of existing road reserve.	
2	Works require clearing of native vegetation outside the maintenance zone.	$\checkmark$
3	Works require clearing of native vegetation that is older than 10 years old within the maintenance zone.	
4	Works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

Completed By:	Signature	Bather	Date	07/02/08
	Name	FRED BALLAST	Title	GE
To be reviewed by	Signature	- Am	Date	07/02/08
a Main Roads Environment Officer	Name	Reter Swanson	Title	PEO.
Comments:	tive veget	ation to be cleared	is ide	ntified as remnant
ive reactation	and 4th	erefere a Preliminar	in Environ	mental Impact Assessment
will need to be	undertake	n to douelop an	DRivine	mental Management Ren.
				0
	,			

MAIN ROADS Western Australia Form 670700101 Screening Checklist Rev 3.doc

30/05/07

**APPENDIX B – SITE FEATURES** 



**APPENDIX C - VEGETATION AREAS** 



## **APPENDIX D – SITE PHOTOS**





Photo 1

Photo 2



Photo 3 Photo 4 Photos 1-4: Remnant vegetation on the east abutment area



Photo 5: Landscape vegetation to the right of the track

Photo 6



Photo 5: Note - Landscaped vegetation in the foreground Photos 5-8: Remnant vegetation on the west abutment area



Photo 9: Melaleuca nesophila

Photo 10: Tracks through the woodland



Photo 11: Fence to the south looking east of Alexander Drive Photo 12: Fence to the south looking west of Alexander Drive



Photo 13 & 14: NE quadrant: east along Reid Hwy east & north along Alexander Drive

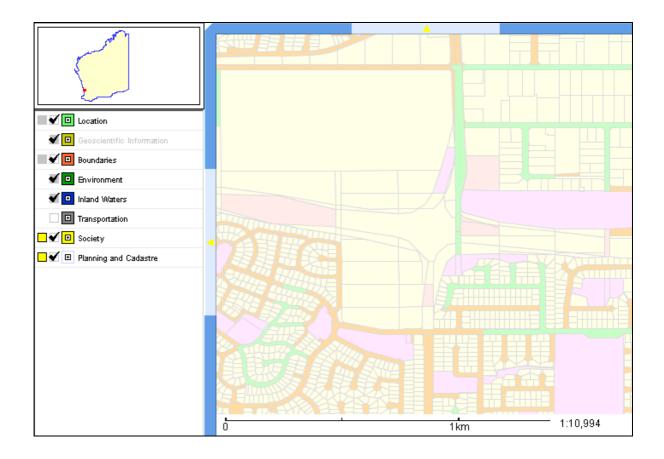


Photo 15 & 16: NW quadrant: west along Reid Hwy & north along Alexander Drive

## APPENDIX E – DEPARTMENT OF ENVIRONMENT AND CONSERVATION

# **GEOGRAPHIC DATA ATLAS**

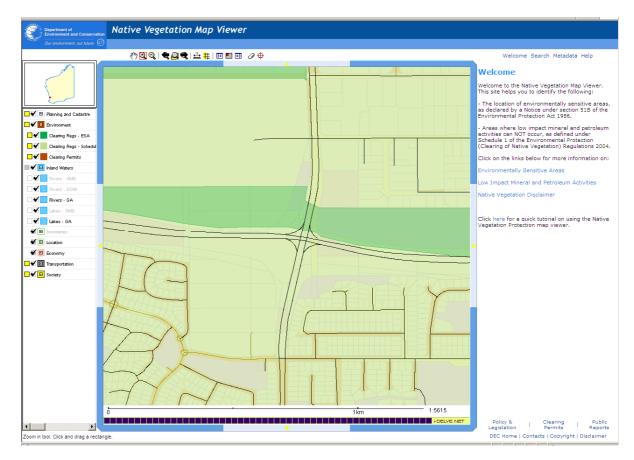
http://maps.dec.wa.gov.au/idelve/doedataext/



## Wetlands

# NATIVE VEGETATION MAP VIEWER

# http://portal.environment.wa.gov.au/portal/page?\_pageid=53,2569721&\_dad=portal &\_schema=PORTAL



Threatened Flora and Communities, Conservation Reserves and Environmentally Sensitive Areas

# **APPENDIX F – HERITAGE LISTINGS**



## NATIONAL HERITAGE SEARCH

National Heritage Listings:

- Site 13 refers to Fremantle Prison
- Site 39 refers to Stirling Range National Park.

Neither of these sites will impact the proposed works site.

# STATE HERITAGE SEARCH

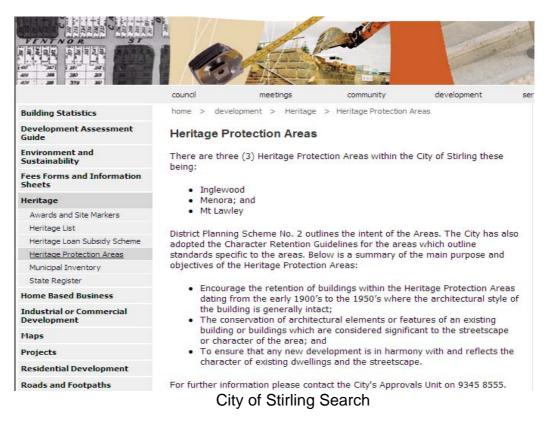
	SEARCH HELP
Search In: C	🖯 State Register of Heritage Places 🛛 🏵 Entire Database
Place No:	
Name Contains:	
Street:	Reid Highway 💌
Suburb/Town:	Mirrabooka, Noranda
Local Govt:	Any
Search logic:	Match ALL criteria (AND)
	SEARCH HELP
top of page [disclaimer]	© copyright 2008 heritage council of western australia

## Search Criteria

HERITAGE COUNCIL OF WESTERN AUSTRALIA					
HERITAGE COUNCIL PLACES DAT	TABASE HERITAGE TOURISM HELP   MEDIA   LINKS   FAOS   CONTACT US   SEARCH				
ABOUT   REGISTRATION   DEVELOPMENT   INSURANCE   ASSISTANCE   PUBLICATIONS   CASE STUDIES   EDUCATION   COMMUNITY   HERITAGE TOURISM					
	There are no Places matching your search criteria.				
PLACES DATABASE ACTIONS:	If you'd like to perform a new search, please select a new Places database search, from the menu on the left-hand side.				
QUICK SEARCH					
ADVANCED SEARCH • RESULTS LIST	▲ top of page [disclaimer] © copyright 2008 heritage council of western australia				
LOCATION REPORT SAVE DATA					

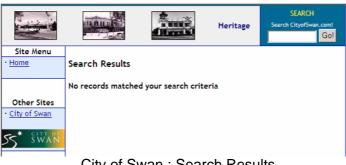
Search Results

## LOCAL GOVERNMENT HERITAGE SEARCH





#### City of Swan : Search Criteria



## City of Swan : Search Results

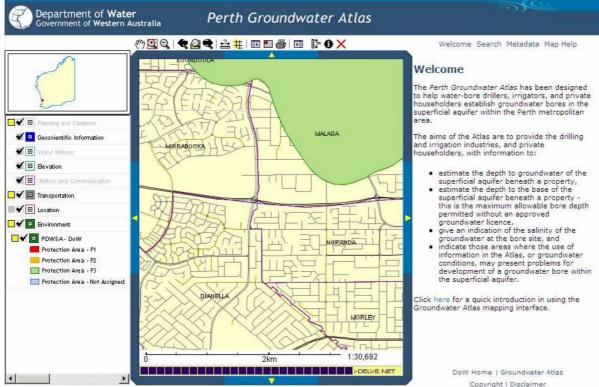
## APPENDIX G – DEPARTMENT OF INDIGENOUS AFFAIRS Database Search

http://www.dia.wa.gov.au/Heritage/SitesSurveysSearch.aspx



## **APPENDIX H – DEPARTMENT OF WATER**

## **Ground Water Atlas**



#### http://portal.water.wa.gov.au/portal/page/portal/MapsDataAtlases/GeographicDataAtlas

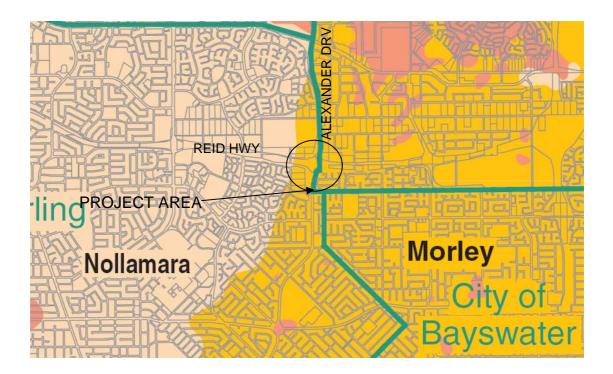
Zoom in tool. Click and drag a rectangle.

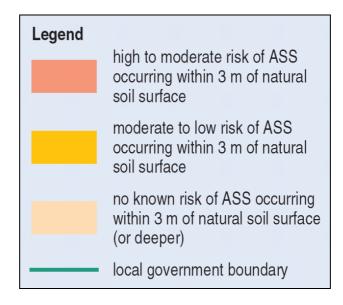
Copyright | Disclaimer

# **APPENDIX I - ACID SULFATE SOILS MAPPING**

# Western Australian Planning Commission

http://www.wapc.wa.gov.au/Publications/213.aspx







## Acid Sulfate Soils Applicant Self-Assessment Form



This form ne or having co	ormation for ap eed only be complet ompleted Form 1A - r question 1 or 2, Ac	ed if there is Application f	or approval	of freehold	subdivision or surv			
Applicant		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	97 - 97 1 100 - 97 1 100				-
The applicant is the p	person with whom the WA	APC will corresp	ond and, if the	application is	approved, the person to	o whom the a	pproval will b	e sent.
Full name	HREDER	RICK	BALI	_AST				
Applicant signatu	re TBa	thes				Date	21/2	08
Application prope details	INTERSECT	tion of	REID	HWY/	ALEXANDER	DRV	(PERH	w <del>n</del> )
Step 1								
If you have prev	viously indicated y	es to questi	on 1 or 2 o	n form 1A	go to Step 2.			
Is there evidence	e of a significant risk	of disturbin	g acid sulfat	e soils at th	nis location?			
	blished maps showing th at www.wapc.wa.gov.a		of acid sulfat	e soils. The r	naps are shown on fig	ures 1-29 o	i planning bu	lletin no. 64
	Do figures 1-29 of t show the land as ha occuring within 3 m	aving a high	to moderate	lletin No 64 risk of aci	Acid Sulfate Soils d sulfate soil		s 🗹 no	
Question 2: Is the land located in an area, whether depicted in figures 1-29 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?								
	these questions go					,,		
together with the Step 2	nese questions then written results of th	e preliminar	y site asses	sment.		d submit it	with your a	application
Are any of the fo	llowing works propo	sed, or likely	to be carrie	ed out, on t	he land?			AN AND PERSONNEL AND AND AND AN
Question 3:	Are any dewatering	works propo	sed to be u	ndertaken?		🗌 yes	s 🗌 no	
Question 4:	Is the surface eleva proposed? (ie 10 sta	tion ≤ 5m A⊦ andard dump	ID and is ex truck loads	cavation of	$\ge 100 \text{m}^3 \text{ of soil}$	🗌 yes	s 🗌 no	
	is the surface eleva (ie 10 standard dum proposed?	tion > 5m Ał np truck load	ID and is ex s) with an ex	cavation of xcavation d	$i \ge 100 \text{m}^3$ of soil epth of $\ge 2 \text{m}$	🗌 ve	s 🗍 no	
If yes to any of th	nese questions go to	o step 3.						
	se questions no furti		tion is requi	red. Sign th	iis form and submi	t it with yo	ur applicat	ion.
Step 3								
+ -	nary site assessmer			•				
Note: Copies o be obtain http://ww	of documents in the ned from contamina w.dec.wa.gov.au	acid sulfate ted sites pag	soils guideling ge on the De	nes series epartment o	and further technic f Environment and	al advice I Conserva	and inform ation's web	ation can site at
Question 6:	Did the preliminary a acid sulfate soils?	site assessm	ient reveal t	he presend	e of	🗌 yes	s 🗌 no	
If yes to this que	stions go to step 4.					-		ion of
If no to this ques with the written re	tions then no further esults of the prelimin	r investigatio nary site ass	n is required essment.	l. Sign this	form and submit it	with your	applicatior	site at
			1					CTG

#### Step 4

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

Question 7: Did the detailed site assessment reveal the presence of acid sulfate soils? Uyes no

If yes to this questions you should consider modifying the design of the proposal to ensure that there is no disturbance to acid sulfate soils at this location. Regardless of whether you modify the design or not, sign this form and submit it with your application together with the written results of the preliminary and detailed site assessments.

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

Tick box for attachments as appropriate:

Preliminary site assessment results.

Detailed site assessment results.

The proposal has been designed to avoid disturbance of acid sulfate soils at this location.

Bunbury

#### Submission of application to WAPC through DPI offices

Perth (All posted applications): Perth (Lodgement in person):

PO Box J747 Perth WA 6001 469 Wellington Street Perth WA 6000 telephone: 9264 7777 facsimile: 9264 7566

TTY: 9264 7535

Mandurah

#### Albany

#### 178 Stirling Terrace PO Box 1108 Albany WA 6332 telephone: 9892 7333 facsimile: 9841 8304

#### Shop 2B 11-13 Pinjarra Road Mandurah WA 6210 telephone: 9586 4600 facsimile: 9581 5491

#### 6th Floor Bunbury Tower 61 Victoria Street Bunbury WA 6230 telephone: 9791 0577 facsimile: 9791 0576

#### Geraldton

65 Chapman Road PO Box 68 Geraldton WA 6531 telephone: 9956 0122 facsimile: 9956 0132

Version: 3.1 (February 2008)

## **APPENDIX J – DEPARTMENT OF AGRICULTURE AND** FOOD

## **Advice On Declared Weeds**

#### BALLAST Fred (GE)

From:	Manera, Paul [PManera@agric.wa.gov.au]
Sent:	Tuesday, 26 February 2008 9:04 AM
To:	BALLAST Fred (GE)
Cc:	Atkins, David; Patterson, Terrie
Subject	: Alexander and Reid Hwy
Fred	
• N ir	oted an extensive inspection of this site last Friday 22-02-08. o Skeleton Weed present at this intersection at present. Our closest ifestation is further North along Alexander Dve at the intersection of andsdale rd.
If you h	nave any other queries please do not hesitate in contacting me.
Cheers	
Goomalli Activity Regional Activity	rity Officer
+	291120 29 203 327

This e-mail and files transmitted with it are privileged and confidential information intended for the use of the addressee. The confidentiality and/or privilege in this e-mail is not waived, lost or destroyed if it has been transmitted to you in error. If you received this e-mail in error you must

(a) not disseminate, copy or take any action in reliance on it;

(b) please notify the Department of Agriculture and Food, WA immediately by return e-mail to the sender;

(c) please delete the original e-mail.

This email has been successfully scanned by McAfee Anti-Virus software. Department of Agriculture and Food WA



## Appendix K – CALM Dieback Assessment 2005

## APPENDIX L – DEPARTMENT OF ENVIRONMENT, WATER, HERITAGE AND THE ARTS

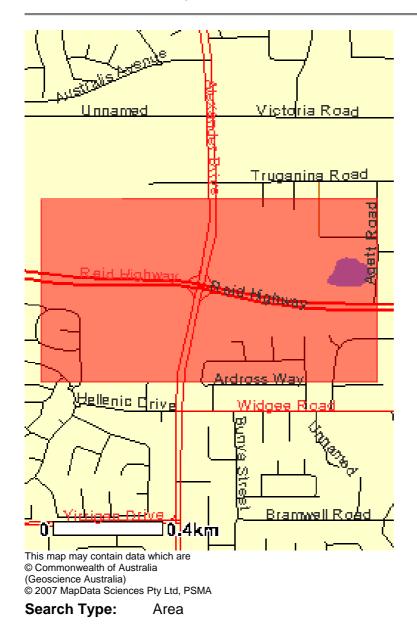
EPBC Act Protected Matters Report

26 March 2008 16:44

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 <u>caveat</u> 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 <u>http://www.environment.gov.au/atlas</u> 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



Buffer:

Coordinates:

-31.864466,115.872731, -31.870839,115.872731, -31.870839,115.884406, -31.86446,115.884406



## Report Contents: Summary

**Details** 

0 km

- Matters of NES
- Other matters protected by the EPBC Act
- Extra Information
- <u>Caveat</u>

**Acknowledgments** 

#### 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
<u>Wetlands of International Significance:</u> (Ramsar Sites)	1
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
6	NONC
Threatened Species:	5

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 <a href="http://www.environment.gov.au/heritage/index.html">http://www.environment.gov.au/heritage/index.html</a>.

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 <a href="http://www.environment.gov.au/epbc/permits/index.html">http://www.environment.gov.au/epbc/permits/index.html</a>.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Places on the RNE:	None
Listed Marine Species:	5
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 Wetlands of International Significance [ <u>Dataset Information</u> ] (Ramsar Sites)

FORRESTDALE & THOMSONS LAKES		Vithin same catchment as Ramsar ite
Threatened Species [ Dataset Information ]	Status	Type of Presence
Birds		
<u>Calyptorhynchus baudinii</u> * Baudin's Black-Cockatoo, Long-billed Black-Cockatoo	Vulnerable	Species or species habitat likely to occur within area
<u>Calyptorhynchus latirostris</u> * Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo	Endangered	Species or species habitat likely to occur within area
Mammals		
<u>Dasyurus geoffroii</u> * Chuditch, Western Quoll	Vulnerable	Species or species habitat likely to occur within area
Plants		
<u>Epiblema grandiflorum var. cyaneum</u> * Baby Blue Orchid, Blue Babe-in-the- cradle Orchid	Endangered	Species or species habitat likely to occur within area
<u>Lepidosperma rostratum</u> * Beaked Lepidosperma	Endangered	Species or species habitat likely to occur within area
Migratory Species [ Dataset Information ]	Status	Type of Presence
Migratory Terrestrial Species		
Birds		
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
<u>Merops ornatus</u> * Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
Migratory Wetland Species		
Birds		
<u>Ardea alba</u> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<u>Ardea ibis</u> Cattle Egret	Migratory	Species or species habitat may occur within area
Migratory Marine Birds		
<u>Apus pacificus</u> Fork-tailed Swift	Migratory	Species or species habitat may occur within area
<u>Ardea alba</u> Great Egret, White Egret	Migratory	Species or species habitat may occur within area
<u>Ardea ibis</u> Cattle Egret Other Matters Protected by the EPBC Act	Migratory	Species or species habitat may occur within area
Listed Marine Species [ Dataset Informatic ]	n Status T	ype of Presence
Birds		

### Birds

<u>Apus pacificus</u> Fork-tailed Swift		Species or species habitat may occur within area
<u>Ardea alba</u> Great Egret, White Egret		Species or species habitat may occur within area
<u>Ardea ibis</u> Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
<u>Merops ornatus</u> * Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area

## **APPENDIX M – 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**

Prop Con

Proponent's name:	MRWA			
Contacts:	Name:	Fred Ballast		
	Phone:	(08) 9323 4408		
	Fax:	(08) 9323 4583		
	Email:	fred.ballast@mainroads.wa.gov.au		
Property details				
Property:	Intersection of Reid Highway and Alexander Drive			
Colloquial name:				

#### Area under assessment

Clearing Area (ha)	No. Trees
2.1 ha	-

Method of Clearing Mechanical & hand For the purpose of: Interchange Development

Site Plan Attached MYes □ No

### Avoidance/Minimise clearing

How have the clearing impacts been minimised?

Areas to be cleared are marked by fences so surrounding areas will not be impacted. All personnel coming onto the site will require an induction and be made aware of the ESA (Bush Forever site) to the north of the project.

### BACKGROUND

### **Existing environment and information**

Description of the native vegetation under application

26.5 %			ery sparse woodland; jarrah, with land; banksia & casuarina	asonable	
Vegetation Complex		Clearing Description		getation Condition	Comment
Site Photos Attached	☐ Yes	🗆 No	Other Relevant References Attached		🗌 No
Site Report Attached	Yes	🗆 No	Fauna / Flora Survey Repor Attached	t Ves	□ No
Site Visit Undertaken	☐ Yes	🗌 No	Fauna / Flora Survey Under	taken 🗌 Yes	🗌 No

## ASSESSMENT OF APPLICATION AGAINST CLEARING PRINCIPLES

## (a) Native vegetation should not be cleared if it comprises a high level of biological

diversity.

#### Proposal not likely to be at variance to this Principle Comments

The vegetation to be cleared is reasonably degraded and contains species that are quite common on the St Coastal Plain. The vegetation does not have higher diversity of indigenous terrestrial plant or fauna species than the remaining native vegetation of that ecological community in the local area. Removal of this vegetation is likely to be insignificant on a local or bioregional level due to the reletavily sma area concerned.

Methodology Department of Agriculture and Food NRM database, Site Visit (2008)

# (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 is bounded by residential, industrial and transport corridor land uses. There are no trees of a significant size that could offer nesting hollows. Given that the area of vegetation to be removed is relatively small and very dry, it is not considered a significant habitat for fauna indigenous to WA.

Methodology Site Visit (2008)

# (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 No rare flora has been noted on the site.
- Methodology Main Roads database search, Site visit (2008)

# (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

No threatened ecological communities were identified in the vicinity of the site.

Methodology Main Roads database search

# (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared. Comments Proposal is not likely to be at variance to this Principle

The vegetation to be cleared is of Vegetation Association number 1001 "medium very sparse woodland; jarr with low woodland; banksia & casuarina".

The pre-European distribution of this association was 57413ha. The current distribution is 15241ha. This gives a percentage remaining of 26.5%. While this is below the threshold of 30%; the area to be cleared (2.1ha.) is only 0.15% of the remaining extent of this vegetation association. Therefore the vegetation to be cleared would not be regarded as significant as a remnant of native vegetation and the proposal is not likely be at variance to this principle.

Methodology Department of Agriculture and Food NRM database

(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

No water courses or wetlands are associated with the native vegetation proposed to be cleared. There is a small lake 500m to the north east of the project but the clearing will not impact it.

Methodology DEC database

# (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation. nments Proposal is not at variance to this Principle

## Comments

The area to be cleared is relatively small and it is unlikely that there will be any land degradation due to the small scale of the project and surrounding vegetation.

Methodology Site visit (2008)

#### Native vegetation should not be cleared if the clearing of the vegetation is (h) likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Proposal is not likely to be at variance to this Principle Comments Bush Forever site (385) has been identified to the north of Reid Hwy. However, all of the road amendments that will occur in this area are minor and will be within the road reserve and will not impact on areas outside the reserve fence.

Methodology Site visit (2008)

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

Proposal is not at variance to this Principle Comments The proposed clearing will not cause deterioration in the quality of surface or groundwater due to the small scale of the area. All stormwater runoff from newly established asphalt and kerbed areas will be directed by pipe into compensation basins.

Methodology Site visit (2008)

#### (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding. Proposal is not at variance to this Principle Comments

Given the small scale nature of the proposed clearing and the topographical location of the project site there no likelihood of the clearing influencing flooding.

Methodology Site visit (2008)

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

N/A Comments Methodology

## SUBMISSIONS

If required have subn	nissions been re	equested and addre	ssed
Submission Requested from	Request Sent (Date)	Submission Received (Date)	Issues Raised / Comments Made
ASSESSOR'S REC	OMMENDATIO	NS	
List of Principles seriously			ommendation

variance

Revegetate temporarily cleared areas upon completion of prewith native plant species.

### OFFICER PREPARING REPORT

Fred Ballast

Position: **Title: Graduate Engineer** DAC Office (618) MRWA (08) 9323 4408

29/02/2008