

**PRELIMINARY ENVIRONMENTAL IMPACT ASSESSMENT AND
ENVIRONMENTAL MANAGEMENT PLAN (MINOR PROJECTS)**
SAFER ROADS PROJECT
Albany Highway Narrakine Road to Beaufort River
142.66slk-215.65slk



A typical Offset area planted in 1992 on Albany Highway near the Narrakine Road.

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

Safer Roads Project Albany Highway [Establishment of Clear zones] 142.66SLK-215.65SLK

1 PROJECT DESCRIPTION

The project is to establish clear zone by selective removal of that vegetation that is or has potential to grow larger than 150mm in diameter. The clear zone is the area that commences at the edge of traffic lane and is available for emergency use by errant vehicles; the distance that clear zone extends from the carriage edge is dependent on the design speed and geometry of the road.

It is proposed to establish clear zone of 6.5m on straights and inside of curves, and up to 15m on outside of curves on Albany Highway between Narrakine Road and Beaufort River Bridge.

2 BACKGROUND

Road traffic safety aims to reduce the harm (deaths, injuries, and property damage) resulting from crashes of road vehicles. Harm from road traffic crashes is greater than that of all transportation modes (air, sea, etc,) combined

Albany Highway has been identified for clear zone establishment based on accident statistics and the general proximity of vegetation in relation to the carriageway.

Funding has been made available though the Safer Roads Project.

It is anticipated that the establishment of clear zones will help reduce roadside fatalities.

Main Roads WBS Network Management team have researched the non environmental aspects of the project, establishing proposed clearing widths of vegetation using the Austroads Guidelines as a working basis. Albany Highway is a high volume and impact route, one of tourism and heavy transport forming a major link between the City of Albany and the City of Perth.

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

2 DESCRIPTION OF THE PROJECT

The Project entails the removal of selected larger than 150mm in diameter and trees/shrubs likely to exceed 150mm in diameter, within the maintenance zone [6.5metres from edge line of sealed surface] and proposed clear zone [up to 15m from edge line]

The removal of vegetation will take place on straight sections of highway and the outside of curves.

Only selected vegetation is to be removed; under storey, and all other vegetation is to be retained.

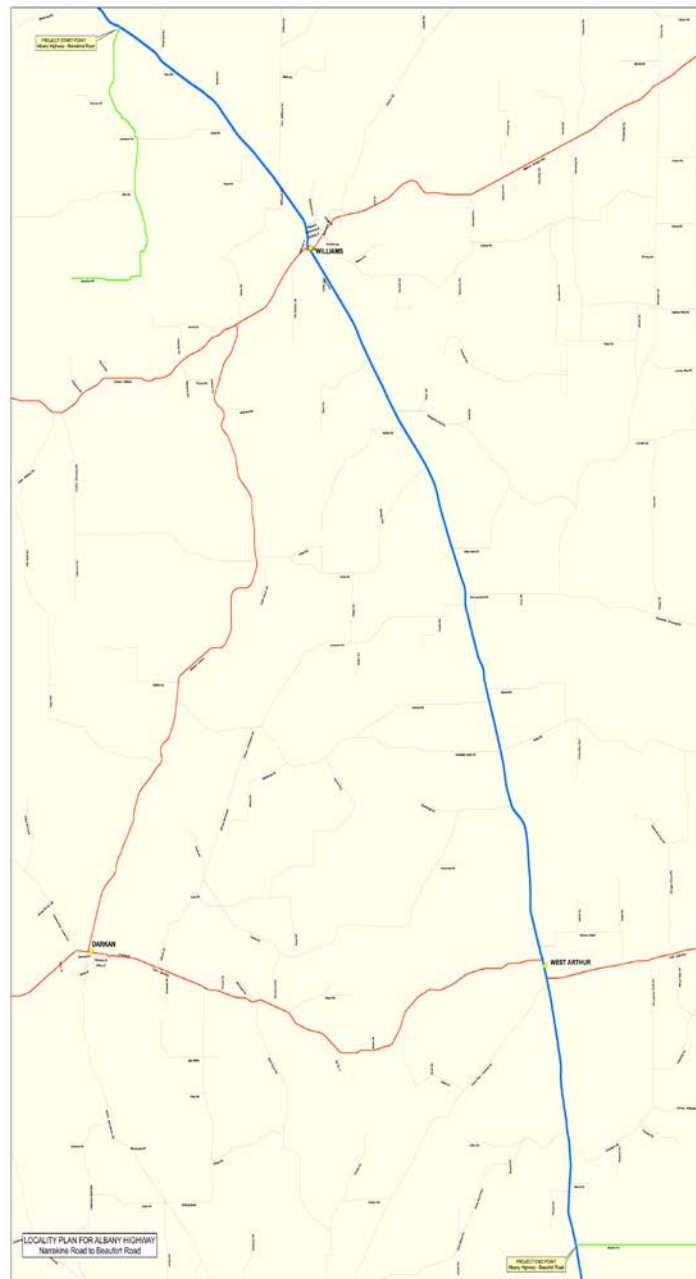
All vegetative material is to be retained and not burnt. All material 200mm in diameter and less is to be mulched with the resulting material being dispersed in to the adjacent road reserve. All material 200mm in diameter and more shall be cut into manageable lengths and placed into the adjacent road reserve as habitat and stockpiled in a common area to

be mulched for future rehabilitation works, such as identified offset revegetation areas within the project boundary.

3.1 Project Location

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

Figure 1; Locality Map of Project Area



Methodology

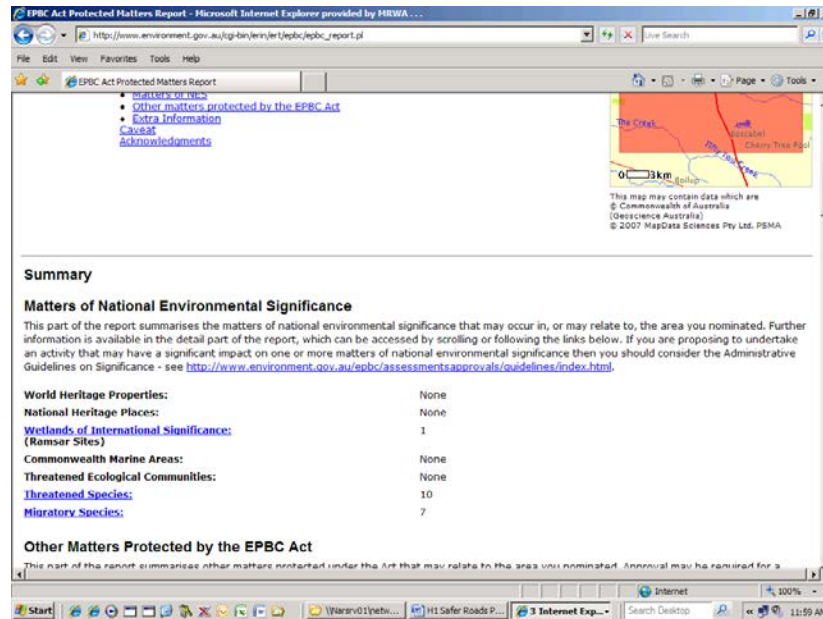
4.1 Preliminary Desktop Study

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

4.1.1 Wetlands

The locations of wetlands within the project area was determined using the Department of Environment and Conservation (DEC) Geographic Data Atlas mapping tool on website <http://www.environment.gov.au/>. Within and near the project area [Beaufort River] are Wetlands of significance, housing 10 threatened species and 7 migratory species.

Therefore it is recommended that all works cease at the 214slk.



4.1.2 Threatened Flora, Fauna Communities, Conservation Reserves and ESAs

A search of DEC database was conducted.

There was 1 ESA identified. Namely #5220, at the Beaufort River crossover on Albany Hwy. [214slk-215.19slk] Within this site there is one DRF species, *Hemigenea ramosissima* and two known Priority species, namely *Schoenus Sp. Beaufort* [P1] and *Schoenus natans*[P4] As the vegetation within this section is low and of a soft nature, there will not be a requirement to clear within the section.

Threatened Fauna Survey.

A search was carried out DEC Threatened Species and Communities Branch. [Refer Appendix B]

Narrogin DEC Office was contacted and discussions took place with the Fauna Officer in reference to items such as DRF and Threatened Fauna, and whether to conduct on site surveys.

4.1.3 Air Quality

The need for a local air quality assessment was determined using the criteria outlined in the MRWA environmental guideline, Air Quality. This factor applies mainly to urban areas, a project of this nature will not affect air quality.

4.1.4 Heritage

Non-indigenous EPBC heritage was examined utilising the Australian Heritage Places Inventory, Heritage Council of Western Australia, and Municipal Heritage Inventory, and no sites were located within the project area.[refer to Appendix C].

4.1.5 Aboriginal Heritage

A Search of the Department of Indigenous Affairs' (DIA's) (<http://www.dia.wa.gov.au/AHIS/>) database was undertaken to determine whether the project area contains any sites of Aboriginal heritage, refer to Appendix D. There were no sites identified within the project area.

4.1.6 Sensitive Water Resources

The Water Information Officer of the Department of Water's regional office was consulted on sensitive water resources (including Public Drinking Water Source Areas) to determine whether the project area supported, or was adjacent to, any significant lakes, rivers or wetlands or proclaimed areas. There are no catchment areas within the project supporting town dam or other water supplies for human consumption or other domestic use. Refer to Appendix E.

http://portal.water.wa.gov.au/portal/page?_pageid=1318,5446647&_dad=portal&_schema=PORTAL

4.1.7 Contaminated Sites

The reserve has been in Main Roads continual control therefore no further work will be necessary/required. However all environmental recommendations and work procedures outlined in the EMP must be adhered to prevent accidental work place pollution occurring.

4.1.8 Acid Sulfate Soils

The Western Australian Planning Commission's (WAPC's) acid sulfate soils maps were reviewed and the self assessment done.

In view of the low soil impact nature of the works acid sulphate soils: removal of, disturbance or relocating of was deemed not an issue. Refer Appendix F.

4.1.9 Weeds

Consultation was undertaken with the Department of Agriculture and Food [Williams Field Officer] to determine whether there are any known populations of declared plants or significant weeds in or adjacent to the project area. Advice received refer to Appendix G.

4.1.10 Dieback

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

As the project area receives >400 mm of average annual rainfall, advice regarding the broad dieback status of the project area was sought from the District Manager at the regional office of DEC or by contacting the Department's Phytophthora Coordinator, refer to Appendix H.

4.3 Commonwealth Referral

The decision not 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.

4.4 Site Investigation

A site visit was carried out by the Environment Officer on 7th July 2009 to examine the general features of the area. The broad vegetation types in the vicinity of the project area were identified. Other issues that were considered included topography, the impacts on creek lines, property access and the potential for noise and vibration impacts.

Site photos were taken and are included in Appendix J.

During the site investigation, the Project Manager should:

- photograph the areas to be impacted;
- identify the vegetation to be cleared, e.g. remnant/landscaped, completely degraded/degraded/good/very good/excellent/pristine, types and number of trees to be cleared (tall, medium or short), types and number of shrubs to be cleared, types of herbs present, etc;
- determine the total ha of native vegetation and the total ha of other vegetation, including regrowth, landscape areas, to be cleared.
- identify whether there are weeds present;
- identify whether there are any drainage areas or wetlands present;
- identify what the adjacent land use is; and

5 EXISTING ENVIRONMENT

5.1 Description

The existing environment is compiled of a mixed vegetation type, consisting of old remnant non native plantings, extensive roadside plantings of local native species and old remnant trees remaining from early land clearing and roadwork. There are areas of feral weed infestations amidst small areas of remnant native vegetation. The majority of large remnant trees to be removed are within the maintenance zone. The trees provide hollows for habitat. Approximately 10% of the project area consists of old remnant vegetation.

5.2 Site Investigation

| Site Investigation | Description/Comment |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <i>Total area (ha) of <u>native vegetation</u> to be cleared</i> | 5.8ha |
| <i>Total area (ha) of other vegetation, including regrowth, landscape areas, to be cleared</i> | 1.0ha consisting of some feral and ornamental trees, non local native species |
| <i>Weeds present</i> | Local weeds, namely wild oats, turnip and broum grass. There are no declared weeds within the project boundary. |
| <i>Drainage areas or wetlands present</i> | No. |
| <i>Adjacent land uses</i> | Agricultural Farming Use |

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) | 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 – Safer Roads Project Albany hwy 142.66slk-215.65slk

| Aspect | Evaluation of Potential Impacts |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air quality | <p>Not relevant to the proposed works. Local air quality assessment is not required for the project since:</p> <ul style="list-style-type: none"> • the predicted traffic flow is less than 10,000 vehicles per day (in urban areas) or 15,000 vehicles per day in rural areas; • residential and other sensitive receptors are not within 200 meters of the road centre; and • background air quality (measured by the nearest DEC fixed monitoring site) does not exceed 25% of the NEPM for ambient air quality and has remained below this level for the 12 months ending at the time of the assessment. |
| Dust | <p>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.</p> |
| Fauna | <p>No significant fauna issues are associated with any of the proposed upgrade works. With the generally degraded and exposed nature of the environment, native fauna generally will be affected to a minimum by the proposed works. Recommendations to minimise clearing (see below) 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. This could become an issue if nesting hollows of the Western Rosella [inland Subs Spcs] are identified, and hollow habitats of the Carpet Python and Red Tailed Phascogale are found to occur.</p> <p>Action: Consult with local DEC Branch and conduct site visits.</p> |
| Vegetation – clearing | <ul style="list-style-type: none"> • There is vegetation to be cleared. • 5.8 ha of native vegetation will be cleared. • The project will involve temporary clearing and so will require revegetation (if temporary clearing is ≥ 0.5ha, a revegetation plan will need to be submitted to the DEC). • The condition of the native vegetation is from degraded to good. • The native vegetation to be cleared isn't well represented regionally (i.e. it possesses less than 30% of its pre-European extent). • The native vegetation to be cleared does not occur within an ESA. • The native vegetation to be cleared will be done so using the purpose permit. <p>The vegetation to be cleared compiles a 35% portion of planted vegetation, including non local native species. The balance to be cleared comprises old remnants [10%], and natural regeneration of native species.</p> |
| Vegetation – TEC/DRF | <p>None present in the proposed works areas. No significant vegetation types or threatened flora have been recorded within in road reserve. Areas outside the project area must not be disturbed as part of the proposed works.</p> <p>Consultation with DEC confirms that the proposal is not going to have a significant impact upon any DRF or TECs.</p> <p>No Matters of National Environmental Significance as protected under EPBC Act (1999) will be impacted.</p> |
| Vegetation – weeds | <p>Numerous common weed species and two declared weed species occur throughout the proposed work area. These species are unlikely to be spread within the reserve and general area. The risk of spreading these weeds species as part of the proposed work will be minimised. Standard weed hygiene measures will be applied for all earthworks in the area, including ensuring that plant and equipment brought on to the site are clean of soil and clean on departure from site.</p> <p>Consultation with the Department of Agriculture and Food confirms that there are two declared plants in the project area.</p> <p>Action; Ensure hygiene methods of control are included in the EMP.</p> |

Table 1: Aspects and Impacts – Safer Roads Project Albany hwy 142.66slk-215.65slk

| Aspect | Evaluation of Potential Impacts |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vegetation – dieback | Some dieback sensitive flora species are present within the works areas. The large proportion of species are dieback unaffected. Not an issue given the project area in our current climate now receives less than 400 mm of average annual rainfall and the works will be carried out in Summer months with no soil transference. |
| Reserves / Conservation areas | There is one conservation area or reserve adjacent/within the project area. Beaufort River Nature Reserve. This section will not be included in the project area due to it's sensitive nature <i>Action; Ensure area is excluded from works.</i> |
| Heritage (non-indigenous) | A search of the Australian Heritage Places Inventory, Heritage Council of Western Australia and the Shire of Williams and Arthur River Municipal Heritage Inventory on-line databases has indicated that there are no heritage significance listed sites present in the currently proposed works areas. No Matters of National Environmental Significance will be impacted. |
| Aboriginal heritage | A search of DIA database identified no known sites of Aboriginal heritage significance within the vicinity of the project area. |
| Surface water/drainage | Consultation with Department of Water has confirmed that the proposed works will not disturb or interrupt any natural drainage and surface run-off patterns or drinking water for human consumption. |
| Wetlands | DEC has advised 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 | No major sensitive local receivers. Construction works is not be expected to significantly contribute to noise levels at the nearest sensitive receivers, provided works are limited to normal working hours. |
| Visual amenity | The proposed works will result in minor and short-term visual impacts during construction. Suitable site completion treatments, including landscape planting, could result in an improvement in local visual amenity. |
| Public safety and risk | Provided traffic management and signage to Main Roads standards is employed, none of the proposed works present any significant hazards to public safety. The proposed works will serve to enhance public safety by improving sight distance and clear zones. |
| Hazardous substances | Not relevant to the proposed works. |
| Contamination | Given the relatively superficial nature of the required earthworks, there appears to be a low risk of any significant contamination issues. The works is within the road reserve and no known previous land use activities on or adjacent to the project area have had the potential to create contamination, e.g. petrol station. |
| Salinity | Given the nature and scale of the project the impact is not relevant. Vegetation will be replaced by offset plantings greater than that removed. There were no obvious signs of increased salinity observed within the project area. |
| Acid Sulfate Soils | The WAPC's self-assessment (Planning Bulletin 64) indicates that no further soil investigation is required for the project. No further investigations are necessary as there is no dewatering or excavation below the water table is planned. |

Table 1: Aspects and Impacts – Safer Roads Project Albany hwy 142.66slk-215.65slk

| Aspect | Evaluation of Potential Impacts |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
|-----------------|--------|---------|----------|
| Cressida Wilson | RCC | 1-10-09 | |

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.

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

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

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

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 | Weekly | MRWA Project Manager Environmental Officer | EMP | Minutes of Meeting |
| Authority Consultation | | | | |
| Department of Environment and Conservation | As required | Main Roads' Project Manager Environmental Officer | - | 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; the size of the area cleared (in hectares); and the dates on which the clearing was done. | Project Manager | DEC |
| | | | Revegetation and rehabilitation of areas: <ul style="list-style-type: none"> a copy of each Revegetation Plan; a map showing the location of any area revegetated a description of the revegetation and rehabilitation activities undertaken; and the size of the area revegetated and rehabilitated (in hectares). | Project Manager Environmental Officer | DEC |
| | | | Each offset implemented: <ul style="list-style-type: none"> a copy of each offset proposal; a map showing the location of any offset implemented a description of the offset implemented; and the size of the area of the offset (in hectares). | Project Manager Environmental Officer | DEC |
| | | | Each management strategy implemented: <ul style="list-style-type: none"> a map showing the location of any area to which a management strategy has been applied a description of the management strategy implemented; and the size of the area to which the management strategy was applied (in hectares). | Project Manager | DEC |
| All phases of Construction | Vegetation Clearing - Record-keeping | All projects should maintain the required records relating to clearing native vegetation under the purpose permit. | Control of weeds, dieback and other pathogens: <ul style="list-style-type: none"> a copy of any management plan prepared; and for any pathogen other than dieback, the appropriate steps taken. | Project Manager | Main Roads |
| 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 | Work within scope of works to minimise adverse impacts on the biological environment. Construction works to be undertaken in early summer to reduce the potential for soil erosion, lessen impact on nesting fauna, minimise drainage line siltation, and prevent the spread of dieback. | Project Manager | Main Roads |
| | | | | Project Manager | Main Roads |

ENVIRONMENTAL MANAGEMENT PLAN

| Timing | Topic | Objective | Action | Responsible Party | Advice |
|------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------|
| | | Ensure the retention of as many habitat trees, shrubs and vegetated corridors for fauna as possible, particularly where associated with riparian zones. | No vegetation from clearing works shall be burnt. All vegetation removed [under 200mm in diameter] shall be mulched and dispersed into adjacent road reserve. All logs to be cut into 3m lengths and stacked within road reserve to retain habitat [where opportunity exists]; and stockpiled at a suitable site; mulched for use in rehabilitation works such as project offsets. All trees removed within the clear zone, shall be processed as above; where deemed necessary to avoid further damage to non target vegetation, the stumps are to remain in the ground, cut off at ground level and "cut stumped" to stop re sprouting. All works are to take place with minimum soil disturbance and damage to non target vegetation. | Project Manager Contractor Environmental Officer | Main Roads |
| Pre-Construction | Surface Drainage | Maintain the hydrological regime that exists prior to the construction of the proposal. | Stormwater drainage shall be treated and disposed of in accordance with DEC requirements. | Project Manager | DEC |
| Pre-Construction | Visual Amenity | Ensure that the road blends in with the surrounding environment. | Ensure that the road blends in with the surrounding environment. | Project Manager | Main Roads |
| | | | | | |
| Construction | Noise, Vibration and Dust | Ensure that the construction of the proposal does not become a nuisance to the public. | Access to private property and appropriate traffic management measures should be planned and implemented prior to the construction of works. | Contractor | Main Roads |
| | | | Works associated with the construction of the development should not prevent public access along the adjacent reserve. Public access should be maintained along the reserve at all times. | Contractor | Main Roads |
| | | | Any complaints regarding dust will be attended to as soon as possible. | Contractor/Project Manager | Main Roads |
| | | | Where it is found that trucks leaving the site are carrying excessive material onto sealed surfaces, these areas will be swept to reduce dust generation and maintain traffic safety. | Contractor | Main Roads |
| | | | | | |
| 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 |

ENVIRONMENTAL MANAGEMENT PLAN

| Timing | Topic | Objective | Action | Responsible Party | Advice |
|-------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------|
| | | | All waste oil will be collected for recycling and any empty fuel/oil containers, used filters and waste hydraulic parts to be collected and stored in an allocated area then removed to an approved site. | Contractor | Main Roads |
| | | | Dumping or temporary storage of bitumen, asphalt, concrete or aggregate should only occur at designated depots or controlled hardstands. | Contractor | Main Roads |
| | | | The project areas, including hardstand areas, will be kept in a tidy manner at all times. | Contractor | Main Roads |
| Construction | Fire | Ensure that the fire risk associated with the construction of the proposal is minimised. | No fires shall be lit within the project area. | Contractor | Main Roads |
| | | | Machinery will be fitted with approved spark arresting mufflers. | Contractor | Main Roads |
| | | | A water tanker will be on site at all times. | Contractor | Main Roads |
| Construction | Site Management | Ensure that the site is managed to ensure that construction of the proposal will have minimal impact upon the surrounding environment. | Site office and materials storage areas will be located on previously disturbed/ designated area. | Contractor | Main Roads |
| | | | | | |
| Post-Construction | Rehabilitation | Leave the project area free from debris; and Rehabilitate the project area so that the revegetated area provides a net increase in area of native vegetation at the site. | Replace the cleared trees with locally occurring natives. | Environmental Officer | Main Roads |
| | | | All waste materials from the development are to be completely removed from the site upon completion of the development. Final clean-up shall be to the satisfaction of the Project Manager and the Site Superintendent. | Contractor | Main Roads |
| | | | | | |

11 MONITORING

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

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 less than %. | <20 | <15 | <10 | <5 |

12 CONTINGENCY MEASURES

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

13 AUDITING

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

Appendix A

Low Impact Environmental Screening Checklist

Checklist - Low Impact Screening Checklist

The Low Impact Screening Checklist is part of the environmental assessment and approval process, refer to in Figure 2 in the Main Roads environmental guideline Environment Assessment and Approvals. It should be noted that the checklist does not address Aboriginal heritage issues. Please refer to Main Roads guideline *Aboriginal Heritage* for the heritage assessment process.

All projects are to be screened to identify those that are Low Impact.

Projects that have “No” to **all** items are classed as Low Impact and should be implemented using standard contract clauses in the Tender Document Process.

Projects that have “Yes” to **any** item will require further environmental assessment and will be implemented using an Environmental Management Plan.

Tick “Yes” or “No” for every item.

Project NameAlbany Highway.

Removal of Vegetation within Maintenance and Clear Zone 142.66SLK-215.65slk [Various sections].....

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

Completed By: *Signature* _____ *Date* 13-03-2009

Name P.Denton _____ *Title* _____

To be reviewed by *Signature* _____ *Date* 13-03-2009

Name P.Denton E.O.[A] _____ *Title* _____

a Main Roads Environment Officer _____

Appendix B

DEC's Threatened Flora and Fauna Database Searches

Hi Peter

Please find attached the results for the Threatened and Priority Fauna Database search for the vicinity of the Albany Highway; from Narrakine Road ~20km North of Williams to Beaufort Bridge Nature Reserve, Beaufort River (plus ~10km buffer).

If you require information on Threatened Ecological Communities (TEC's) please request a search from Monica Hunter monica.hunter@dec.wa.gov.au

Threatened Flora searches can be requested from Bridgitte Long bridgitte.long@dec.wa.gov.au

Please refer to the attached letter for the conditions relating to the supplied data.

Let me know if you have any questions regarding the information supplied.

Regards,

Amy [Amy Mutton DEC Threatened Fauna Section]

| COMMON_NAME | SCIENTIFIC_NAME | DECLIST |
|------------------------------------------|-----------------------------------|---------------------------|
| Southern Death Adder | Acanthophis antarcticus | PRIORITY FAUNA |
| Forest Red-tailed Black-Cockatoo | Calyptorhynchus banksii naso | DECLARED THREATENED FAUNA |
| Forest Red-tailed Black-Cockatoo | Calyptorhynchus banksii naso | DECLARED THREATENED FAUNA |
| Chuditch | Dasyurus geoffroii | DECLARED THREATENED FAUNA |
| Western Brush Wallaby | Macropus irma | PRIORITY FAUNA |
| Carpet Python | Morelia spilota imbricata | PRIORITY FAUNA |
| Carpet Python | Morelia spilota imbricata | |
| Red-tailed Phascogale, Kenngoor | Phascogale calura | DECLARED THREATENED FAUNA |
| Red-tailed Phascogale, Kenngoor | Phascogale calura | DECLARED THREATENED FAUNA |
| Western Rosella (inland ssp) | Platycercus icterotis xanthogenys | DECLARED THREATENED FAUNA |
| Western Rosella (inland ssp) | Platycercus icterotis xanthogenys | DECLARED THREATENED FAUNA |
| White-browed Babbler (western wheatbelt) | Pomatostomus superciliosus ashbyi | PRIORITY FAUNA |

STATUS_EXPANDED

Priority Three: Taxa with several, poorly known populations, some on conservation lands

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

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

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

Priority Four: Taxa in need of monitoring

Priority Four: Taxa in need of monitoring

Schedule 4 - Other specially protected fauna

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

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

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

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



Government of **Western Australia**
Department of **Environment and Conservation**

Your ref:
Our ref: 2009/000355-1 #2704
Enquiries: Amy Mutton
Phone: (08) 9219 8636
Fax: (08) 9334 0278
Email: amy.mutton@dec.wa.gov.au

Peter Denton
Wheatbelt South Region
Main Roads WA

Dear Peter

REQUEST FOR THREATENED FAUNA INFORMATION

I refer to your request of 11th June for information on threatened fauna occurring in the vicinity of the Albany Highway; between Narrakine Road, ~20km north of Williams to Beaufort Bridge Nature Reserve, Beaufort River.

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

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

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

If you require any further details, or wish to discuss threatened fauna management, please contact my Principal Zoologist, Dr Peter Mawson on 08 93340421.

Yours sincerely

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

19th June, 2009

Species and Communities Branch
17 Dick Perry Avenue, Technology Park, Kensington
Phone: (08) 9334 0455 Fax: (08) 9334 0278 Teletype: (08) 9334 0546
Postal Address: Locked Bag 104, Bentley Delivery Centre, Western Australia 6983
www.dec.wa.gov.au

2008/11

**DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DECLARED RARE AND PRIORITY FLORA LIST
6 October 2008**

| SPECIES / TAXON REGION CODE PERIOD | CONS | DEC | DISTRIBUTION |
|----------------------------------------------------------------------------------------------------------------------------|-------|---------|----------------------------------|
| Acacia brachyphylla var. recurvata Kukerin, Pingrup, Highbury | 3 | WB,SC | Jerramungup, Nyabing, |
| Acacia gemina 2 Reserve, Aug-Oct Saddleback, Hyden, Cuballing, Yilliminning, Wandering | | SW,WB | Narrogin, Boyagin Rock |
| Acacia grisea 4 Kojonup, Jun-Aug Woodanilling, Wagin, Ravensthorpe | | WB,SC | Nyabing, Peringillup, Kukerin, |
| Acacia insolita subsp. recurva | R | WB | East Yornaning NR, Narrogin |
| Acacia kingiana X | WB | Wagin | Sep |
| Andersonia carinata | 2 | WB | Wagin, Pingelly, Dongolocking, |
| Baeckea sp. Narrogin (R Hnatiuk 780011) | 2 | WB | Narrogin, Yilliminning, Toolibin |
| Banksia cynaroides Dumbleyung, Harrismith, Dryandra, Birdwhistle | 4 | WB | Brookton, Williams, |
| Banksia oligantha Gully Oct-Nov N.R. | R | WB | Wagin, Harrismith, Wangeling |
| Banksia rufistylis Nyabing, Jul-Aug Wagin | 2 | WB | Tarin Rock, Woodanilling, |
| Caladenia caesarea subsp. transiens Sep Bowelling | 2 | WB,SR | Williams, Newdegate, Augusta, |
| Caladenia triangularis x Highbury, Aug-Oct W,WB,W Boyup Brook A | 4 | SC,SR,S | Darkan, Clackline, Pingelly, |
| Calandrinia sp. Piawaning (A.C.Beauglehole 12257) | 1 | WB | Piawaning, Arthur River |
| Conostylis drummondii Bokal Oct-Nov | R | WB | Arthur River- Wagin, Kojonup, |
| Cryptandra beverleyensis Kellerberrin, Aug-Sep Goomalling, Beaufort River, Bokal | 3 | WB | Beverley, Narrogin, |
| Darwinia carnea R | WB,MW | | Narrogin, Mogumber |
| Darwinia sp. Williamson (GJ Keighery Range) Oct, Dec 12717) [aff. apiculata] | R | SR | Williamson (below Whicher |
| Eucalyptus latens Highbury, Mar-Jun York, Kulin, Wagin, Dingerlin NR, Nyabing, Cramphorne, Pingrup, Lake Bryde | 4 | WB,SW | North Bannister, Dryandra, |
| Eucalyptus loxophleba x wandoo Highbury, - Katanning | 4 | WB,SW | Clackline, Mundaring, |
| Gastrolobium ovalifolium Williams Aug-Oct | 4 | WB | Boddington, Narrogin, Kojonup, |
| Gastrolobium rotundifolium SW Meenaar, Miling, Bindi Bindi | 3 | MW,WB, | Mingenew, Watheroo, Wagin, |

| | | | |
|----------------------------------------------------------|---|----|------------------------------|
| Gastrolobium stipulare Highbury, Narrogin | 4 | WB | Brookton, Boyagin, Dryandra, |
| Gastrolobium tomentosum (near Sep-Oct Boyup Brook) | 4 | WB | Darkan-Williams, Dinninup |
| Hemigenia rigida | 1 | WB | Wagin |
| Hypoxis sp. Beaufort (V. Crowley DKN629) | 1 | WB | Arthur River |

25/06/2009 **DEPARTMENT OF ENVIRONMENT AND CONSERVATION**
DECLARED RARE AND PRIORITY FLORA LIST
6 October 2008

| SPECIES / TAXON REGION CODE PERIOD | CONS | DEC DISTRIBUTION | |
|---------------------------------------------------------------------------------------------------------------|-------------|-----------------------------|--------------------------------|
| Jacksonia velveta ms Narrogin - | R | SR,WB | Collie Basin, Woodanilling, |
| Leucopogon florulentus Cordering, Apr-Jul Wagin, Bannister, Jerramungup, Lake Magenta Nature Reserve | 3 | SC,WB,SW | Ongerup, Esperance, |
| Lysiosepalum aromaticum | 2 | WB | Highbury SF |
| Montia australasica Oct-Nov WA,* Bangalup, E States | 2 | WB,SR, | Lake Muir NR, Ludlow, Darkan, |
| Polianthion biloculare Highbury Oct-Apr | 4 | WB | Dongolocking, Tutanning, |
| Pultenaea indira subsp. pudoides Corrigin | 2 | WB | Arthur River, Yilliminning, |
| Pultenaea pauciflora Boddington Oct-Nov | R | WB,SW | Narrogin, Lupton Block, |
| Stylidium expeditionis Highbury Sep-Oct | 4 | WB | Tutanning, Highbury, east of |
| Stylidium lepidum Barker Sep-Nov | 3 | WB,SC | Wagin, Albany, Kojonup, Mt |
| Stylidium longitubum Bunbury, Nov Midland, Busselton, Arthur River, Jandakot, Mundijong, Karnup | 3 | SW,WB,SR | Upper Swan, Bullsbrook, |
| Stylidium rhipidium Lake Oct-Nov WB,SC Muir, Hyden, Cranbrook, Glenelg Hills | 3 | SR,WA, | Rocky Gully, Williams, Collie, |
| Stylidium rubicalyx | 1 | WB | Williams, Arthur River |
| Stylidium tylosum Youngs Oct-Nov Siding, Narrogin | 1 | SC,SR,WB | Woogenilup, Moodiarrup, |
| Synaphea brachyceras | 3 | WB | Arthur River, Highbury |
| Synaphea drummondii Dumbleyung, Corrigin | 3 | WB | Wagin, Narrogin, Yealering, |
| Templetonia drummondii Glen - Forest | 4 | WB,SW | Boddington, Williams, Midland, |
| Tetratecha fasciculata | X | WB | Lake Wagin |
| Thomasia sp. Arthur River (HF & M Broadbent 1409) | 1 | WB | Arthur River |
| Thysanotus tenuis Pingelly, Sep Toolibin NR | 3 | WB,SW | Northam, Wagin, Tincurrin, |
| Tribonanthes purpurea Dale, Albany Aug | R | WB,SW,SC | Pingaring, Hillman T/S, Mt |
| Triglochin stowardii Mollerin, Sep | 3 | MW,WB | Moora, Watheroo, Highbury, |

| | | | |
|----------------------------------------------|---|---------|--------------------------|
| Piesseville, Meckering | | | |
| Verticordia fimbriolepis subsp. fimbriolepis | R | WB,SW | Woodanilling, Katanning, |
| Narrogin, Nov-Dec | | | |
| Aldersyde, Kojonup, Gibbs SF | | | |
| Verticordia huegelii var. tridens | 3 | SC,WB,M | N of Porongurups, Wongan |
| Hills, Oct | | | |
| W,SWWilliams, Wansborough, Barberton, | | | |
| Cunderdin, Calingiri, Cranbrook, | | | |
| Toodyay | | | |
| Wurmbea drummondii | 4 | MW,WB, | Moora-Narrogin, Toodyay, |
| Kokeby May-Jul | | | |
| SW | | | |
| Xanthorrhoea brevistyla | 4 | WB,SC | Narrogin, Albany |

Main Roads WA

Wheatbelt South Region
 Attention: Peter Denton
 Dear Mr Denton

REQUEST FOR RARE FLORA INFORMATION

I REFER TO YOUR REQUEST OF 11TH JUNE 2009 FOR INFORMATION ON RARE FLORA IN THE WILLIAMS AREA. THE SEARCH CO-ORDINATES USED WERE 32⁰ 56' - 33⁰ 31' S AND 116⁰ 44' - 117⁰ 05' E (GDA94).

A search was undertaken for this area of **(1)** the Department's *Threatened (Declared Rare) Flora* database (for results, *if any*, see "DEFL" – coordinates are GDA94), **(2)** the *Western Australian Herbarium Specimen* database for priority species opportunistically collected in the area of interest (for results, *if any*, see "WAHERB"- coordinates are GDA94 – see condition number 9 in the attached 'Conditions in Respect of Supply' and **(3)**, the Department's *Declared Rare and Priority Flora List* [this list is searched using 'place names'. This list which may also be used as a species target list, contains species that are declared rare (Conservation Code R or X for those presumed to be extinct), poorly known (Conservation Codes 1, 2 or 3), or require monitoring (Conservation Code 4) – for results, *if any*, see "DP List"]. The results are attached electronically to this email.
 Attached also are the conditions under which this information has been supplied. Your attention is specifically drawn to the seventh point, which refers to the requirement to undertake field investigations for the accurate determination of rare flora occurrence at a site. *The information supplied should be regarded as an indication only of the rare flora that may be present and may be used as a target list in any surveys undertaken.*

The information provided does not preclude you from obtaining and complying with, where necessary, land clearing approvals from other agencies.
 It would be appreciated if any populations of rare flora encountered by you in the area could be reported to this Department to ensure their ongoing management.
 If you require any further details, or wish to discuss rare flora management, please contact Dr Ken Atkins, Manager, Species and Communities Branch, on (08) 9334 0455.

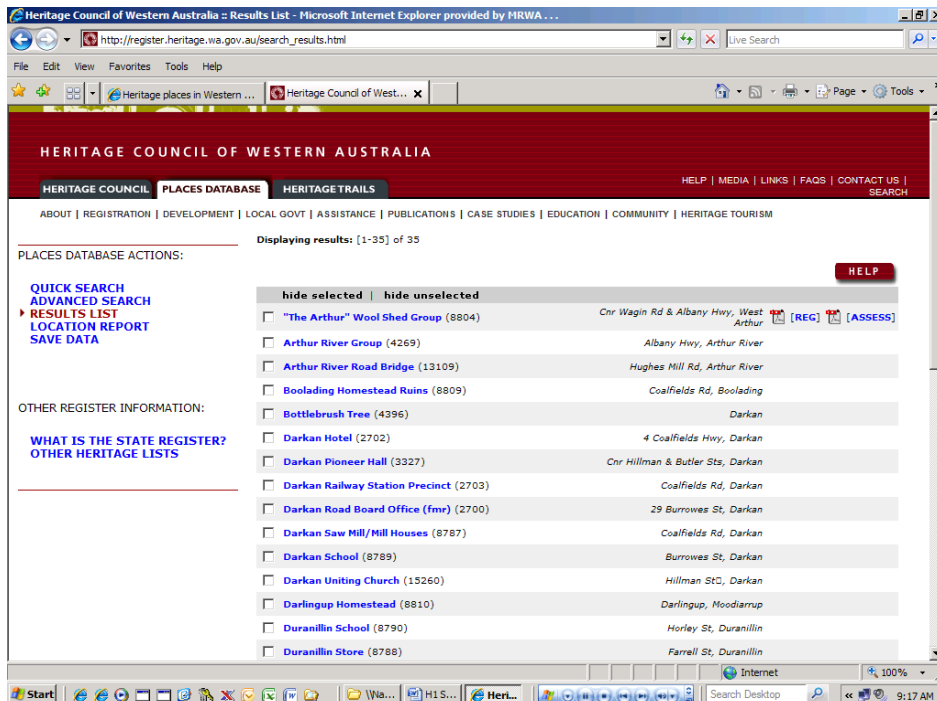
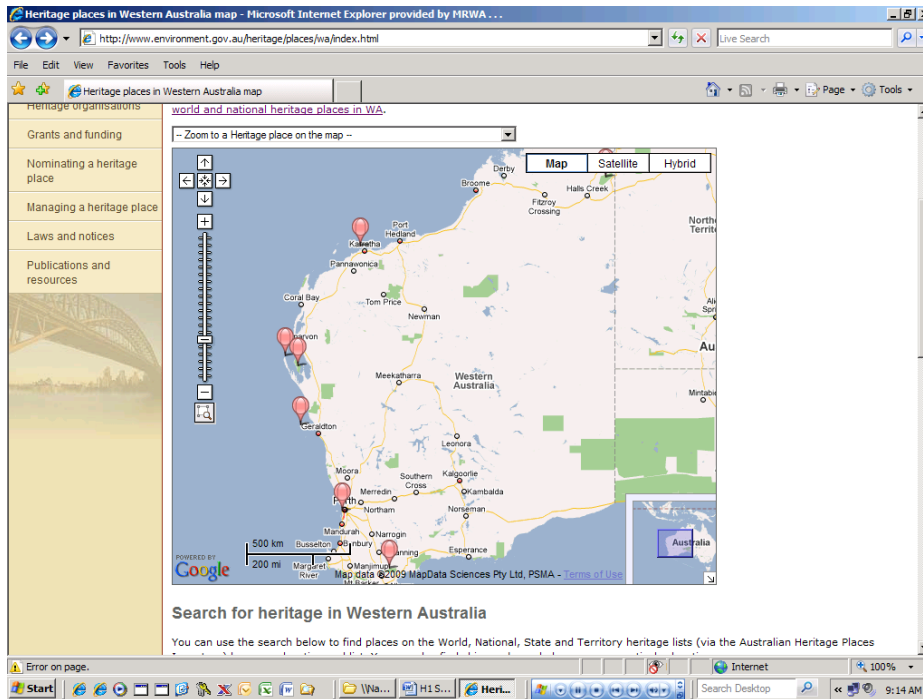
Yours faithfully

B. Long

.....
 for Keiran McNamara
 DIRECTOR GENERAL
 25th June, 2009

Appendix C

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



Appendix D

Department of Indigenous Affairs Database Search

Aboriginal Heritage Inquiry System

Department of Indigenous Affairs

What do you want to do?

Sites in... : ...

Search | Metadata | Feedback | DIA Home | Getting Started

Sites in a search box

Aboriginal Heritage Sites found: 31

[Clear Results](#)

[Printable - All results \(with map\)](#)

[Related Survey Reports](#)

| ID | Name | Status | Type |
|------|-------------------------|--------|--------------------------------------------------------------------|
| 500 | Axle Grease Reserve. | P O N | Mythological, Sk material/Burial, Modified Tree, Artefacts / Scatt |
| 4422 | Narrogin Reserve 15566. | I O N | |
| 4424 | Williams Reserve 18042. | I O N | |
| 4609 | Arthur River Inn | P O N | Artefacts / Scatt |
| 4612 | Neymyrup Road | I O N | Artefacts / Scatt |
| 4664 | Marrbank Settlement. | P O N | Historical |
| 5690 | Arthur River | I O N | Modified Tree |
| 5691 | Dellyanine Siding. | I O N | |
| 5692 | Dead Mans | I O N | |

Appendix E
DEC Sensitive Water Source Search

Refer to Item 4.1.6

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

PETER DENTON

Applicant signature

Date

12.06.09

Application property details

ALBANY HWY RD RESERVE 142.66 - 215.65 SLK

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 5m AHD and is excavation of \geq 100m³ of soil (ie 10 standard dump truck loads) with an excavation depth of \geq 2m proposed? yes no

Question 5: Is the surface elevation > 5m AHD and is excavation of \geq 100m³ of soil (ie 10 standard dump truck loads) with an excavation depth of \geq 2m 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.

PTO for information on submissions
Version: 2.1 (October 2006)

Appendix G

Department of Agriculture and Food Advice on Declared Weeds

There are some minor outbreaks of Pattersons Curse along the Highway from the York Williams Intersection heading South on the LHS to Macco Feeds grain storage area. This is not deemed a problem, as soil will not be moved during operations and the weeds will be sprayed by normal control operations prior to works commencing. There are small isolated stands of Cape Tulip along the highway, but are not situated within the project area.

Appendix H

DEC Advice on Dieback

With the lower rainfall Dieback is not considered an issue within the Project Area. The area contains a small amount of indicator species, such as *Dryandra sessilis*, *Banksia sphaerocarpa* and *Xanthorrhoea preissii* of which none are showing signs of decline. The woodlands are dominated by *Eucalyptus wandoo* and *Corymbia calophylla* which are not affected by *Phytophthora cinnamomi*.

All works will take place largely within the drain profiles and no materials will be removed from site. The works will also take place during the Summer months.

Appendix I

Department of the Environment and Heritage Database Search

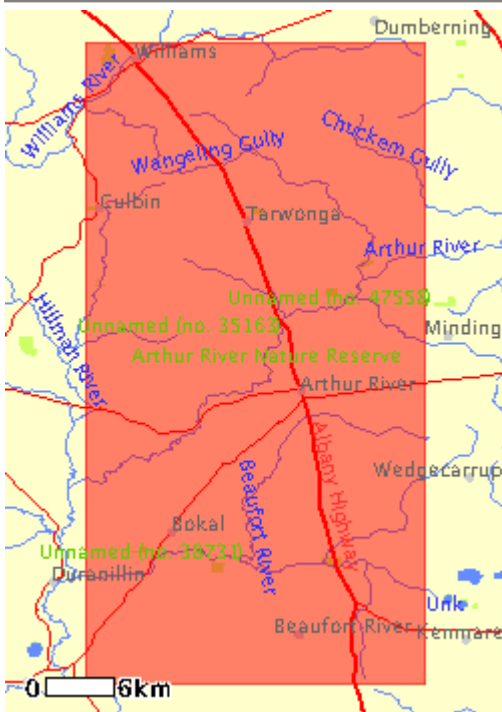
EPBC ACT PROTECTED MATTERS REPORT

19 June 2009 15:24

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>



This map may contain data which are
© Commonwealth of Australia
(Geoscience Australia)
© 2007 MapData Sciences Pty Ltd, PSMA

Search Type: Area
Buffer: 0 km
Coordinates: -33.0124,116.8328, -33.6141,116.8328, -33.6141,117.1515, -33.0124,117.1515



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) | 4 |
| Commonwealth Marine Areas: | None |
| Threatened Ecological Communities: | None |
| <u>Threatened Species:</u> | 12 |
| <u>Migratory Species:</u> | 7 |

Other Matters Protected by the EPBC Act

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

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

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

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

| | |
|--------------------------------------|------|
| <u>Commonwealth Lands:</u> | 1 |
| Commonwealth Heritage Places: | None |
| <u>Places on the RNE:</u> | 1 |
| <u>Listed Marine Species:</u> | 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: 8

Other Commonwealth Reserves: None

Regional Forest Agreements: None

Details

Matters of National Environmental Significance

Wetlands of International Significance [[Dataset Information](#)]
(Ramsar Sites)

| | |
|-------------------------------------------------|--------------------------------------|
| BECHER POINT WETLANDS | Within same catchment as Ramsar site |
| FORRESDALE & THOMSONS LAKES | Within same catchment as Ramsar site |
| PEEL-YALGORUP SYSTEM | Within same catchment as Ramsar site |
| TOOLIBIN LAKE | Within same catchment as Ramsar site |

Threatened Species [[Dataset Information](#)]

Status Type of Presence

Birds

| | | |
|------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------|
| Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo | Vulnerable | Species or species habitat may occur within area |
| Calyptorhynchus baudinii Baudin's Black-Cockatoo, Long-billed Black-Cockatoo | Vulnerable | Species or species habitat likely to occur within area |
| Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo | Endangered | Species or species habitat likely to occur within area |

Mammals

| | | |
|---------------------------------------------------------------|------------|--------------------------------------------------------|
| Dasyurus geoffroii Chuditch, Western Quoll | Vulnerable | Species or species habitat likely to occur within area |
| Phascogale calura Red-tailed Phascogale | Endangered | Species or species habitat may occur within area |

Plants

| | | |
|---------------------------------------------------------------------------|------------|--------------------------------------------------------|
| Banksia cuneata Matchstick Banksia, Quairading Banksia | Endangered | Species or species habitat likely to occur within area |
| Banksia oligantha Wagin Banksia | Endangered | Species or species habitat likely to occur within area |
| Caladenia dorrienii Cossack Spider-orchid | Endangered | Species or species habitat likely to occur within area |
| Conostylis drummondii Drummond's Conostylis | Endangered | Species or species habitat likely to occur within area |

| | | |
|---------------------------------------------------------------------------------------|------------|--------------------------------------------------------|
| <u>Eucalyptus olivacea Brooker & Hopper ms.</u> Granite Mallee | Vulnerable | Species or species habitat likely to occur within area |
| <u>Roycea pycnophylloides</u> Saltmat | Endangered | Species or species habitat likely to occur within area |
| <u>Verticordia fimbrileps subsp. fimbrileps</u> Shy Featherflower | 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 | 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

| | | |
|--------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|
| <u>Apus pacificus</u> Fork-tailed Swift | Listed - overfly marine area | Species or species habitat may occur within area |
| <u>Ardea alba</u> Great Egret, White Egret | Listed - overfly marine area | 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 | Species or species habitat may occur within area |

Commonwealth Lands [[Dataset Information](#)]

Unknown

Places on the RNE [[Dataset Information](#)]

Note that not all Indigenous sites may be listed.

Historic

[Woagin Farm Outbuildings WA](#)

Extra Information

State and Territory Reserves [[Dataset Information](#)]

Arthur River Nature Reserve, WA

Culbin Nature Reserve, WA

Dead Mans Swamp Nature Reserve, WA

Un-named (No. 30394) Nature Reserve, WA

Un-named (No. 35163) Nature Reserve, WA

Un-named (No. 38731) Nature Reserve, WA

Wangeling Gully Nature Reserve, WA

Williams Nature Reserve, WA

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:

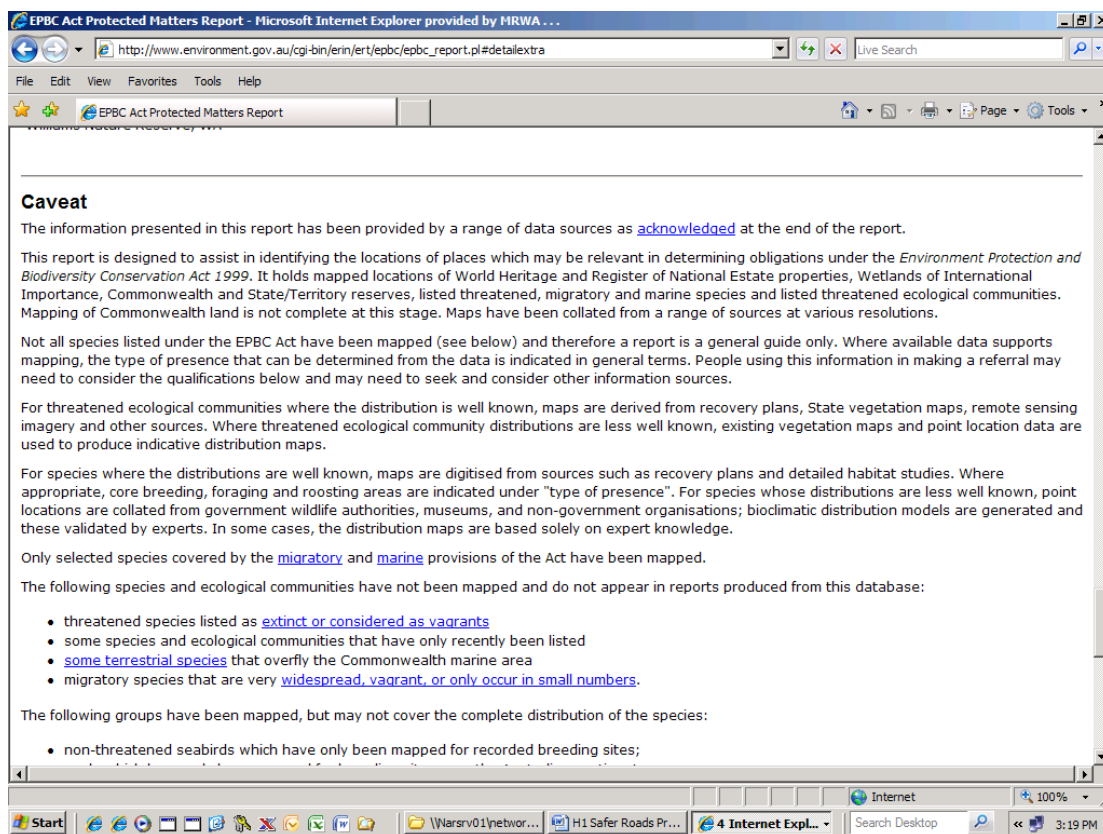
- threatened species listed as [extinct or considered as vagrants](#)
- some species and ecological communities that have only recently been listed
- [some terrestrial species](#) that overfly the Commonwealth marine area
- migratory species that are very [widespread, vagrant, or only occur in small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

-



Appendix Pre project Site Photos



H1 143.44slk rhs July09



H1 145slk rhs July09



H1 152.2slk lhs July 09



H1 161.3slk rhs July09



H1 180.5slk lhs July 09



Oconnor Rd area Imported Blue Gum



H1 Oconnor Rd area "Soft Verge"



"Soft Verge" Planted 1992



Trees within Maintenance Zone



H1 TEC area Beaufort River July09

Appendix K

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.

AREA UNDER ASSESSMENT DETAILS

Proponent details

| | | |
|-------------------|-------------|------------------------------------|
| Proponent's name: | MRWA | Wheatbelt South Region |
| Contacts: | Name: | Peter Denton [Environment Officer] |
| | Phone: | 0427 990 125 |
| | Fax: | 98 810503 |
| | Email: | peter.denton@mainroads.wa.gov.au |

Property details

| | |
|------------------|-----------------------------------------|
| Property: | |
| Colloquial name: | Albany Highway Road Reserve Clear zone. |

Area under assessment

| | | | | |
|--------------------|-----------|-----------------------|---------------------|------------------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: | Site Plan Attached |
| 5.8 Hectares | | Individual extraction | Clear zones. | <input type="checkbox"/> Yes |

Avoidance/Minimise clearing

How have the clearing impacts been minimised?

Work to take place only within designated scope of works. Removal of only selected trees, understorey all to remain. Works to take place in early summer months to avoid nesting times and flowering times.

BACKGROUND

Existing environment and information

Description of the native vegetation under application

| | | | |
|-----------------------|------------------------------|--------------------------------------|------------------------------|
| Site Visit Undertaken | <input type="checkbox"/> Yes | Fauna / Flora Survey Undertaken | <input type="checkbox"/> Yes |
| Site Report Attached | <input type="checkbox"/> Yes | Fauna / Flora Survey Report Attached | <input type="checkbox"/> Yes |
| Site Photos Attached | <input type="checkbox"/> Yes | Other Relevant References Attached | <input type="checkbox"/> Yes |

| | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------|--------------------------------------------------------------------------|
| Vegetation Complex | Clearing Description | Vegetation Condition | Comment |
| Wandoo, York Gum remnants Regenerated and planted Casuarina, Jam thicket. Planted areas of non local River Gum and Tasmanian Blue Gum | Selective removal of larger trees | Various stages of decline, 45%-95% Degraded. | All large trees removed to be retained within corridor as habitat. |

ASSESSMENT OF APPLICATION AGAINST CLEARING PRINCIPLES

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

Comments **Proposal may be at variance to this Principle**

Methodology Site visit.
The works will take place largely within the maintenance corridor; in some areas this will extend to 2-5 metres beyond. The roadside corridor width for the length of the project, has been extended by 20 metres on both sides over a 25 year period and revegetated extensively with native species. A very small proportion of the roadside contains original vegetation along with some exotic species; having been cleared since settlement by past agricultural and road building practices.

(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 may be at variance to this Principle

Methodology The project will entail the removal of selected trees from the maintenance and clear zone areas. All material less than 200mm in diameter will be mulched, with resulting material including seed and other bio mass will be dispersed into the existing adjacent revegetated corridor. All remaining logs will be placed within the adjacent corridor to retain habitat.

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

Comments Proposal is unlikely to be at variance to this Principle

Methodology Site visit, Main Roads Data Base and DEC advice. [Refer Appendix B]

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

Comments Proposal is not at variance to this Principle

Methodology Site Visit. The project will cease 5 kms from the Beaufort River ESA. [Refer items 4.1.1 and 4.1.2 of this document.

(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 may be at variance to this Principle

Methodology
Site visit.

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

Comments Proposal is not at variance to this Principle

Methodology Site visit

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

Comments Proposal is not at variance to this Principle

Methodology Site visit

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

Comments Proposal is not at variance to this Principle

Methodology Site visit

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

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

Methodology Site visit

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

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

Methodology

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

Comments

Methodology

SUBMISSIONS

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

ASSESSOR'S RECOMMENDATIONS

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

The project may be at variance with Items A, B and E.

Recommendations

*An offset revegetation proposal is to be compiled and approved by the DEC prior to works commencing[clearing] under CPS 818.

*An onsite visit/site inspection with the local DEC Branch or a consultant is to be undertaken to establish whether any threatened Fauna occurs within specified sections of the project area.

References

OFFICER PREPARING REPORT

Peter Denton.

Position:

Environmental Officer [A]
Wheatbelt South Region
MRWA
Narrogin

Phone 0427 990 125

Date; 22-06-2009

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

CLEARING NOT AT VARIANCE:

- **Proposal is not at variance to this Principle non-biological data where we are sure** e.g. there are NO wetlands or watercourses & where vegetation complexes are clearly well represented, etc.
- **Proposal is not likely to be at variance to this Principle biological data where there is always an element of uncertainty** e.g. surveys have not indicated DRF, TEC, protected fauna, but the surveys may not be fully comprehensive.

INSUFFICIENT INFORMATION TO ASSESS WHETHER CLEARING IS AT VARIANCE

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

CLEARING AT VARIANCE:

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

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

and then state why

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

Directions Associated with Assessor's Recommendations

Revegetation and Rehabilitation

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

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

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

- Any area of *native vegetation* that does not form part of the area to be cleared for the *project activity* and that has been damaged as a result of the *clearing* by the permit holder must be *revegetated* and *rehabilitated*.
- The permit holder is not required to *revegetated* and *rehabilitated* if the area is:
 - (ii) less than 0.5 hectares;
 - (iii) not located in an *ESA*; and
 - (iv) an area where the proposed clearing that triggers the obligation to *revegetate* and *rehabilitate* is not at variance with one or more of the *clearing principles*.

Environmental Management Plan

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

New Application Required

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

Offset

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

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

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

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

Management Strategy

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