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

Townsend Road and Coolgardie-Esperance Highway
Material Pits

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December 2008

CONTENTS

1 INTRODUCTION

Main Roads Goldfields-Esperance region is currently carrying out preliminary works on a road realignment project at the intersection of Coolgardie Esperance Highway (CEH) and Tom Starcevich V.C. Rd. The realignment of CEH is required in order to provide sufficient stacking distance for 36.5m road trains to safely enter or exit the highway. An existing railway line which intersects Tom Starcevich V.C. Rd in close proximity to CEH is causing the stacking distance issue.

This Preliminary Environmental Impact Assessment will evaluate the potential impacts of excavating and stockpiling materials that are required for the road project. Suitable materials have been identified at two different sites located near the small town of Grasspatch in the Shire of Esperance.

2 PROJECT LOCATION

The location and boundaries of the material pits can be found in Figure 1 below.

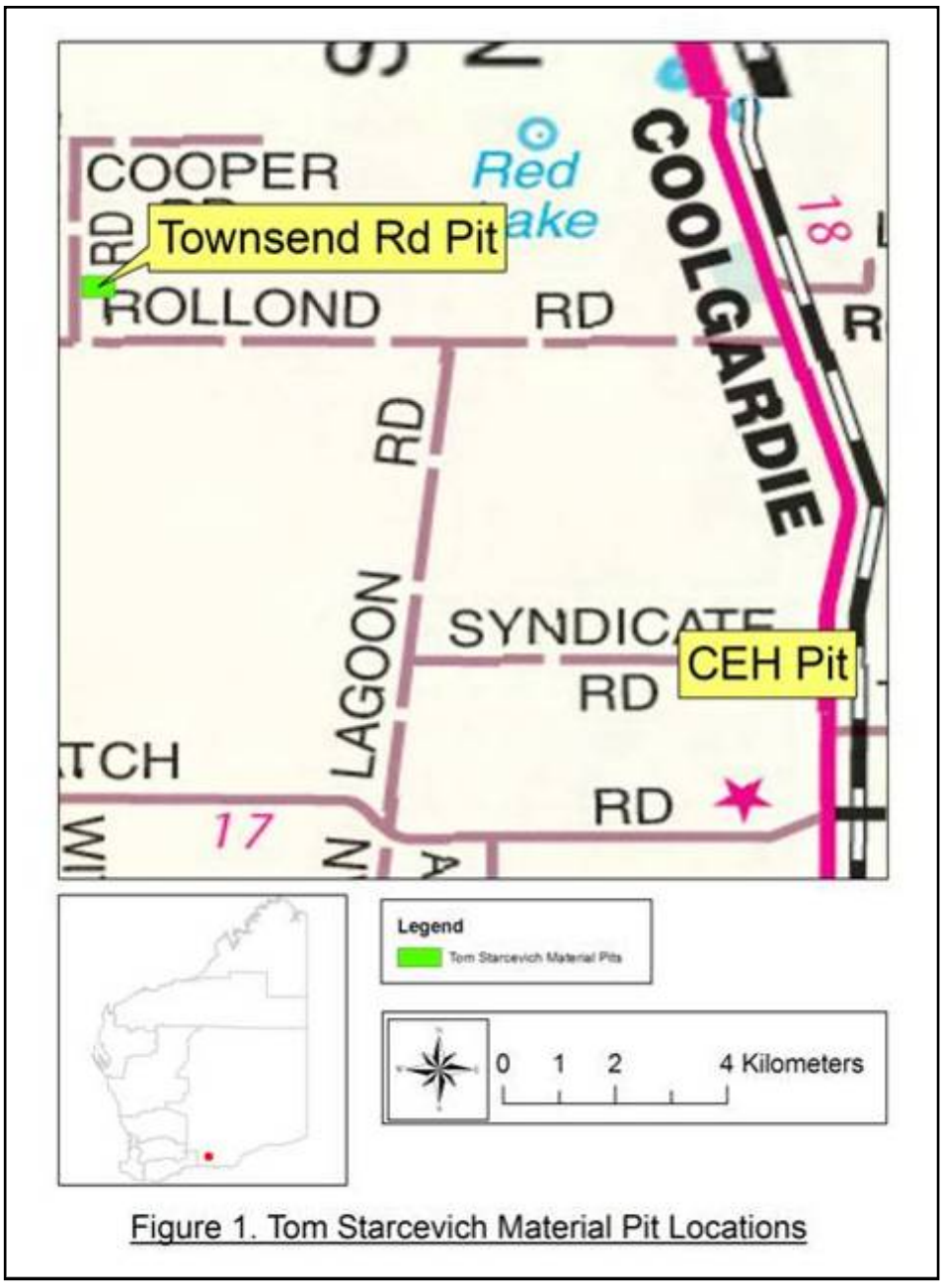


Figure 1. Tom Starcevich Material Pit Locations

3 METHODOLOGY

3.1 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 (see Appendix B) and consulting where necessary (see Appendix D).

3.1.1 Threatened Flora, Fauna and Communities

The Department of Environment and Conservation's (DEC) database was searched for known populations of threatened flora and fauna. The presence of Threatened and Priority Ecological Communities (TECs & PECs) was determined by examining Main Roads GIS data (data is supplied to Main Roads by DEC every 6 months).

3.1.2 ESAs and Conservation Reserves

DEC's Native Vegetation Map Viewer (http://www.dec.wa.gov.au/land/native-vegetation-conservation/data/native-vegetation-map-viewer.html) was used to determine the location of any ESAs. The location of any Conservation Reserves was determined by examining the Shared Land Information Platform (SLIP) Natural Resource Management (NRM) database (http://spatial.agric.wa.gov.au/slip/) and consulting with the local DEC office where necessary.

3.1.3 Vegetation Type, Extent and Status

Vegetation types and associations were determined by examining the SLIP NRM database. Vegetation extent and status data was sourced from the Main Roads file "Native Vegetation in Western Australia - Extent, Type and Status" located on the Main Roads Environment Intranet site (http://intranet/online/branches/environment/word/car_reserve_analysis_2006.xls).

3.1.4 Air Quality

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

3.1.5 Heritage

Non-indigenous heritage was examined utilising the Australian Heritage Places Inventory (http://www.heritage.gov.au), Heritage Council of Western Australia database (http://register.heritage.wa.gov.au/) and the Shire of Esperance Municipal Heritage Inventory where necessary.

3.1.6 Aboriginal Heritage

A Search of the Department of Indigenous Affairs' (DIA) database (http://www.dia.wa.gov.au/Heritage--Culture/Heritage-management/Register-of-Aboriginal-sites/) was undertaken to determine whether the project area contains any Aboriginal Heritage sites.

3.1.7 Wetlands

The location of wetlands within the project area was determined by examining the DEC's Geographic Data Atlas mapping tool (http://maps.dec.wa.gov.au/idelve/doedataext/) and/or the SLIP NRM database.

3.1.8 Sensitive Water Resources

The Department of Water's (DoW) Geographic Data Atlas was examined (http://portal.water.wa.gov.au/portal/page/portal/MapsDataAtlases/GeographicDataAtlas) to determine whether the project area supported, or was adjacent to, any significant lakes, rivers or wetlands or proclaimed areas (including public drinking water source areas).

3.1.9 Contaminated Sites

The presence of contaminated sites in the project area was determined by examining DEC's contaminated sites database (http://www.dec.wa.gov.au/pollution-prevention/contaminated-sites/contaminated-sites-act/database.html), and evaluating the surrounding land use history.

3.1.10 Acid Sulphate Soils

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

3.1.11 Weeds

Where relevant, consultation was undertaken with the Department of Agriculture and Food (DAFWA) to determine whether there are any known populations of declared plants or significant weeds in or adjacent to the project area.

3.1.12 Dieback

Dieback was only considered a potential issue for the project if both the mean annual rainfall of the area is >400mm and if the project area resides below the 26th parallel. Consultation with the DEC was carried out as necessary.

3.2 Statutory Referral

The decision whether to refer the project to the Commonwealth's Department of Environment, Water, Heritage and the Arts (DEWHA) was based upon whether the project would impact upon matters of national environmental significance (refer to Appendix B - DEWHA's EPBC Act Protected Matters Database search).

The decision whether to refer the project to the WA Environmental Protection Authority (EPA) was based upon whether the project would be a "significant proposal" as defined by the Environmental Protection Act 1986.

All potential environmental aspects relating to the project have therefore been examined for significance (see Assessment of Aspects and Impacts).

3.3 Site Investigation

An initial site visit was carried out by Barry McAuliffe (TOM) and Simon Weighell (GEnv) on the 3/11/08 to examine the general features of the area. Site photos were taken and are included in Appendix E.

4 EXISTING ENVIRONMENT

Information relating to the existing environments at both of the proposed pits is provided in the following table. This information has been compiled through both desktop assessments and site visits.

Table 1. Existing environment information.

Factor	Townsend Rd Pit	CEH Pit
Vegetation Association	486	519
Vegetation Description	Mosaic: Medium woodland; salmon gum & red mallee / Shrublands; mallee scrub Eucalyptus eremophila.	Shrublands; mallee scrub, *Eucalyptus eremophila.*
Current Extent (ha)	256 736	1 400 703
% Pre-European Extent Remaining	58.9	60.0
Soil type	Gravel.	Clay.
Topography	Hillside.	Flat.
Hydrology	Ponding in previously excavated areas, no watercourses, drainage lines or wetlands.	No watercourses, drainage lines or wetlands.
Climate - Closest Met Station - Avg. Annual rainfall - Avg. Max Temp ranges	 - Salmon Gums - 349.2mm - 16.0^{0}C (Jul) to 30.5^{0}C (Jan)	 - Salmon Gums - 349.2mm - 16.0^{0}C (Jul) to 30.5^{0}C (Jan)
Surrounding Land Use	Agriculture, gravel pit	Bushland, agriculture, town site, reserve.
Weed prevalence	Low.	Low (Note: an infestation does exist on a dumped gravel heap within the proposed pit boundaries).

5 ASSESSMENT OF ASPECTS AND IMPACTS

The following table provides a summary of environmental aspects for the project and their assessment for potential environmental impact.

Table 2: Aspects and Impacts – Tom Starcevich Material Pits

Aspect	Evaluation of Potential Impacts
Air quality	Not relevant to the proposed works.
Dust	Likely to be a minor issue during earthworks. No major sensitive receivers adjacent to the proposed works.
Fauna	Several threatened species and/or their habitat have been identified as potentially occurring within the project area (see Appendix B). With the small amount of clearing involved however, and the presence of other similar areas of bushland nearby, the impacts on native fauna and fauna habitat is not expected to be significant.
Vegetation – clearing	• Up to 6ha of native vegetation will be cleared for the proposed works. This clearing is comprised of up to 5ha of vegetation association 486 (likely to be a lot less than this though) and ~1ha of vegetation association 519. Neither association is under represented at any of the 3 regional scales (State, IBRA region and IBRA sub-region). The CEH pit is immediately adjacent to vegetation association 512 which has less than 30% of its pre-European extent remaining, but given the small amount of clearing involved for this pit (~1ha), no significant impact to its condition is expected. • The condition of the vegetation in the area can be described as degraded to excellent (as defined by the Keighery scale) with a low prevalence of weeds but areas of bare ground from previous clearing activities. • The native vegetation to be cleared does not occur within an ESA. • The native vegetation to be cleared will be done so using Main Roads state-wide Purpose permit (CPS 818/4).

Table 2: Aspects and Impacts – Tom Starcevich Material Pits

Aspect	Evaluation of Potential Impacts
Significant Flora / Ecological Communities	According to various database searches (see Appendix B and Figure 2), no TECs, PECs or Declared Rare Flora (DRF) are located in the proposed work areas. Furthermore, no TECs, PECs, or DRF were identified during any of the site visits to the area. As a result no significant impact upon these is expected. In regards to priority flora, a priority 4 species (*Grevillea aneura*) has been identified within the boundaries of the proposed Townsend Rd pit (see photos in Appendix E). Several individual specimens of the grevillea will need to be cleared for the extraction works but many will still remain within the greater pit area. The species actually seems to be experiencing more favourable conditions as a result of past clearing with most of the specimens currently existing in highly disturbed areas of the pit. Very few specimens have been found in remnant vegetation within the pit boundaries. As a result it is expected that the survival of this population will not be significantly impacted by the proposed works and that the species may actually respond positively to the disturbance.
Vegetation – weeds	Very few weed species (no declared weeds) were identified within the boundaries of the proposed pits or in the immediate vicinity of the pit areas during the site visits. As a result the risk of spreading weeds as part of the proposed works is considered to be low, but standard weed hygiene measures are to be applied for all earthworks in the area. This includes ensuring that plant and equipment brought on to the site are clean of soil.
Vegetation – dieback	Not considered an issue given the project area receives less than 400 mm of average annual rainfall (Nearest meteorological station is Salmon Gums which has an average annual rainfall of 349.2mm).
Reserves / Conservation areas	There are no conservation areas adjacent to the project area. A reserve vested in the Water Corporation does exist at the CEH pit site but no significant impacts to this reserve including to its current land use is expected.
Heritage (non-indigenous)	A search of the Heritage Council of Western Australia's on-line databases has indicated that there are no heritage listed sites present in the proposed work areas. Furthermore no items of significance were identified during the site visit.
Aboriginal heritage	A search of DIA's database identified no known sites of Aboriginal heritage significance within the immediate vicinity of the project areas. No impacts are expected.
Surface water/drainage	The proposed works will not likely disturb or interrupt any natural drainage or surface run-off patterns. There is the potential for pooling to occur in the excavated sites but given the low rainfall of the area, impacts are not expected to be significant. Landscaping will also be carried out in a way that decreases the likelihood of long term pooling.
Wetlands	Various Government Agency database searches have not revealed any wetlands within the immediate vicinity of the project areas. This was confirmed during the site visit.
Groundwater	No dewatering or significant drainage modifications are required, hence no likely change to groundwater level or quality.
Noise and vibration	No major sensitive local receivers. The works are not expected to significantly contribute to noise levels at the nearest sensitive receivers, provided works are limited to normal working hours. The requirements of the Shire of Esperance must be met in respect of noise management and construction working hours.
Visual amenity	The proposed works will only result in minor and short-term visual impacts.
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. No known previous land use activities on or adjacent to the project areas have had the potential to create contamination.
Salinity	Given the nature and scale of the works, salinity is not considered an issue.
Acid Sulphate Soils	The WAPC's self-assessment (Planning Bulletin 64) indicates that no further soil investigations are required for the project (see Appendix C). No dewatering or excavation below the water table is planned.

Table 2: Aspects and Impacts – Tom Starcevich Material Pits

Aspect	Evaluation of Potential Impacts
Environmentally Significant Landforms	There are no significant landforms in the vicinity of the project area.
Statutory Land Use Planning / Adjacent Land Use	No planning amendments are required as works are temporary and will not involve a change in land use. The works are also not expected to significantly impact upon any other surrounding land use.

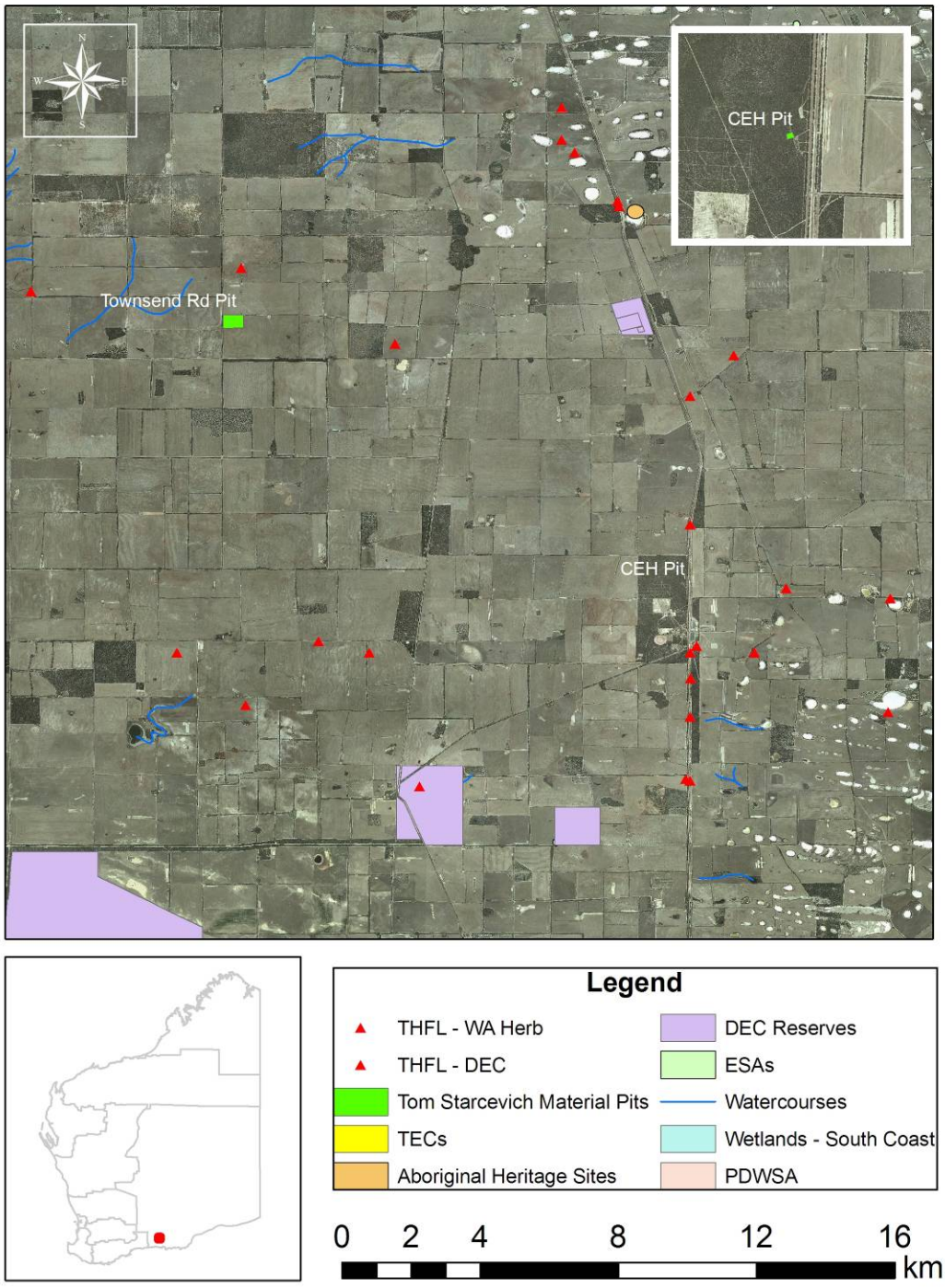


Figure 2. Tom Starcevich Material Pits Environmental Constraints Map

6 CLEARING OF NATIVE VEGETATION

Native vegetation for this project will be cleared using Main Roads State-wide Project Purpose Permit (CPS 818/4). 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.

Works for the project will involve temporary clearing and therefore a revegetation plan will be submitted to DEC prior to clearing as stipulated by the purpose permit.

6.1 Avoiding, minimising and reducing the impact of clearing

The following measures will be / have been taken in an effort to avoid, minimise and reduce the impact of clearing associated with the project:

- Sites chosen for the extraction of materials were identified as either being previously cleared or the subject of various degrading processes. This has meant that for the most part remnant vegetation has been avoided with most of the materials to be extracted from bare areas.
- Revegetation of the sites will be carried out with an aim of enhancing the environmental value of the surrounding area.

6.2 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 DEC's 10 clearing principles. This assessment has indicated that the project is not likely to be at variance with any of the 10 clearing principles.

Principle (a)	**Native vegetation should not be cleared if it comprises a high level of biological diversity.**
Assessment	The areas proposed for clearing cannot be considered to comprise a high level of biological diversity given their level of degradation and the fact that better condition and more diverse vegetation exists immediately nearby.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (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.**
Assessment	Given the small amount of clearing involved and the areas of vegetation that remain in close proximity to both sites, no significant impacts on native fauna or its habitat are expected.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (c)	**Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**
Assessment	No rare flora has been identified at either site as a result of desktop surveys or site visits to the area.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (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.**
Assessment	No TECs have been identified at either site as a result of desktop surveys or site visits to the area.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (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.**
Assessment	Neither site is currently considered underrepresented with the vegetation associations in question having >30% of their pre-European extent remaining.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (f)	**Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**
Assessment	No watercourses or wetlands are located within or in close proximity to either site.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (g)	**Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**
Assessment	Given the small amount of clearing involved, the clearing is not expected to cause appreciable land degradation.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (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.**
Assessment	Given the small amount of clearing involved and the lack of conservation areas adjacent to or nearby the project areas, no significant impacts are expected.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (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.**
Assessment	Given the small amount of clearing involved, the clearing is not expected to cause deterioration in the quality of surface or underground water.
Conclusion	*The proposal is not likely to be at variance to this principle.*

Principle (j)	**Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.**
Assessment	The sites are not considered to be in a flood prone area and given the small amount of disturbance involved, a significant impact is not expected.
Conclusion	*The proposal is not likely to be at variance to this principle.*

7 STAKEHOLDER CONSULTATION

A summary table of stakeholder consultation carried out for the project is provided below. Evidence of stakeholder consultation can be found in Appendix D.

Table 4. Summary of stakeholder consultation carried out for environmental aspects of the project.

Name	Agency	Date	Comments
Amy Mutton	DEC Species and Communities Branch	12/11/08	Threatened Fauna Search
Bridgitte Long	DEC Species and Communities Branch	10/11/08	Threatened Flora Search
Emma Adams	DEC Esperance	17/11/08	Identification of priority 4 species *Grevillea aneura*
Customer Centre	Water Corporation	17/11/08	Land use associated with the Water Corporation Reserve at the CEH pit. No response received as of yet.

8 ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan (EMP) has been developed for the project taking into account the assessments carried out above (see Appendix F). 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 any site-specific issues that were identified during the PEIA. The areas that require special management will be addressed in terms of:

- the timing of 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.

9 REVEGETATION AND MONITORING

After project completion, revegetation of the site will be carried out in accordance with a site specific Revegetation Plan. The project area will also be inspected every six months for the first two years after clearing to ensure that the revegetation is successful and that weed spread or establishment has not occurred.

10 AUDITING

Audits against the EMP are not required as the project is small in scale with environmental risk considered minimal. On-ground checking will be carried out by the Main Roads Goldfields-Esperance Environment Officer.

11 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 EPA or DEWHA.

Appendix A

Low Impact Environmental Screening Checklist

PROJECT NO.

FILE:

Form No. 6707/001/01

SLK: 289.95

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 COOLGARDIE - ESPERANCE HWY Grass Patch Tom Starcevich Vic Road Unk 18

ITEM NO.	ITEM	Y	N
1	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.	✓	
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.		✓

Completed By: Signature [signature] Date 12/2/08
Name Glenn Rowan Title Adm.

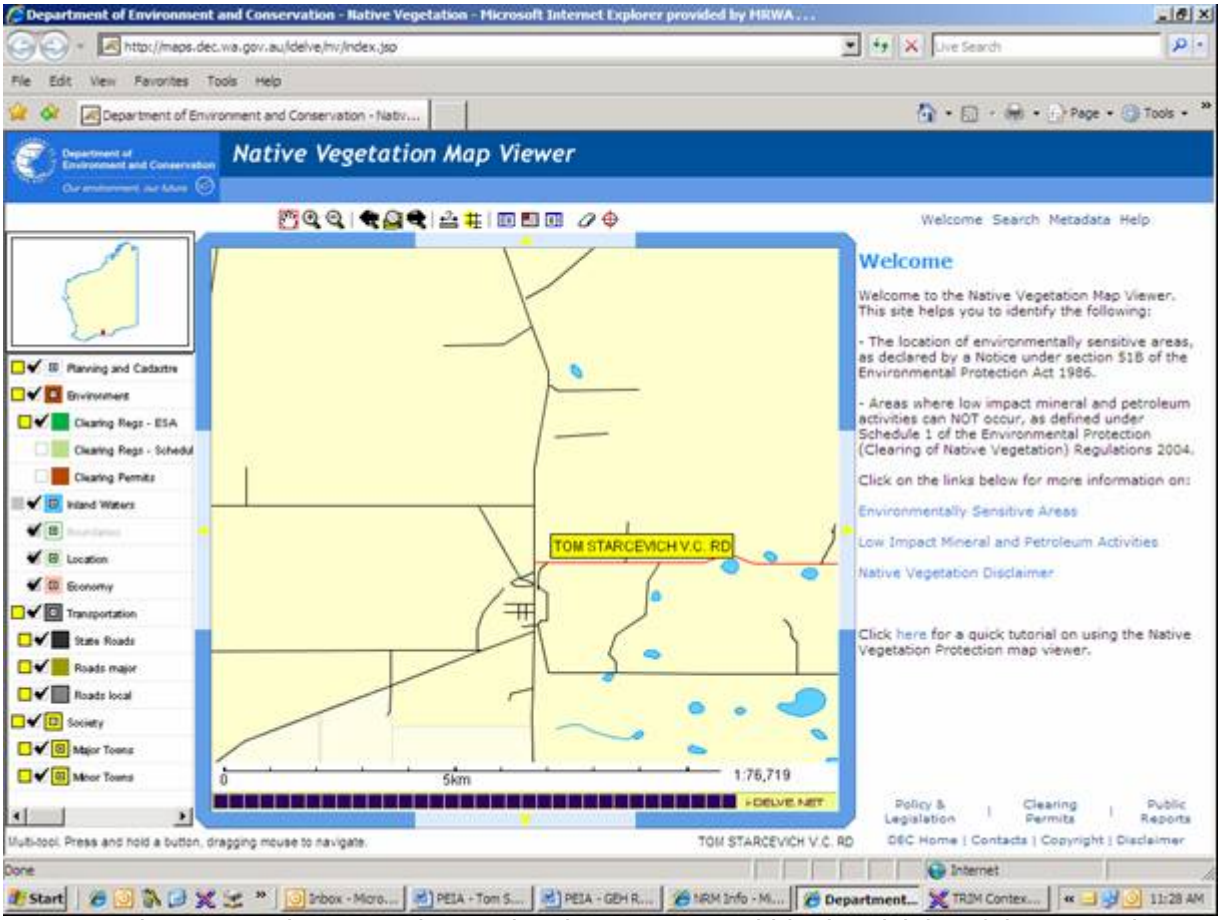
To be reviewed by a Main Roads Environment Officer: Signature [signature] Date 13/02/08
Name JOANNE JOHNSTON Title EO

Comments: _____

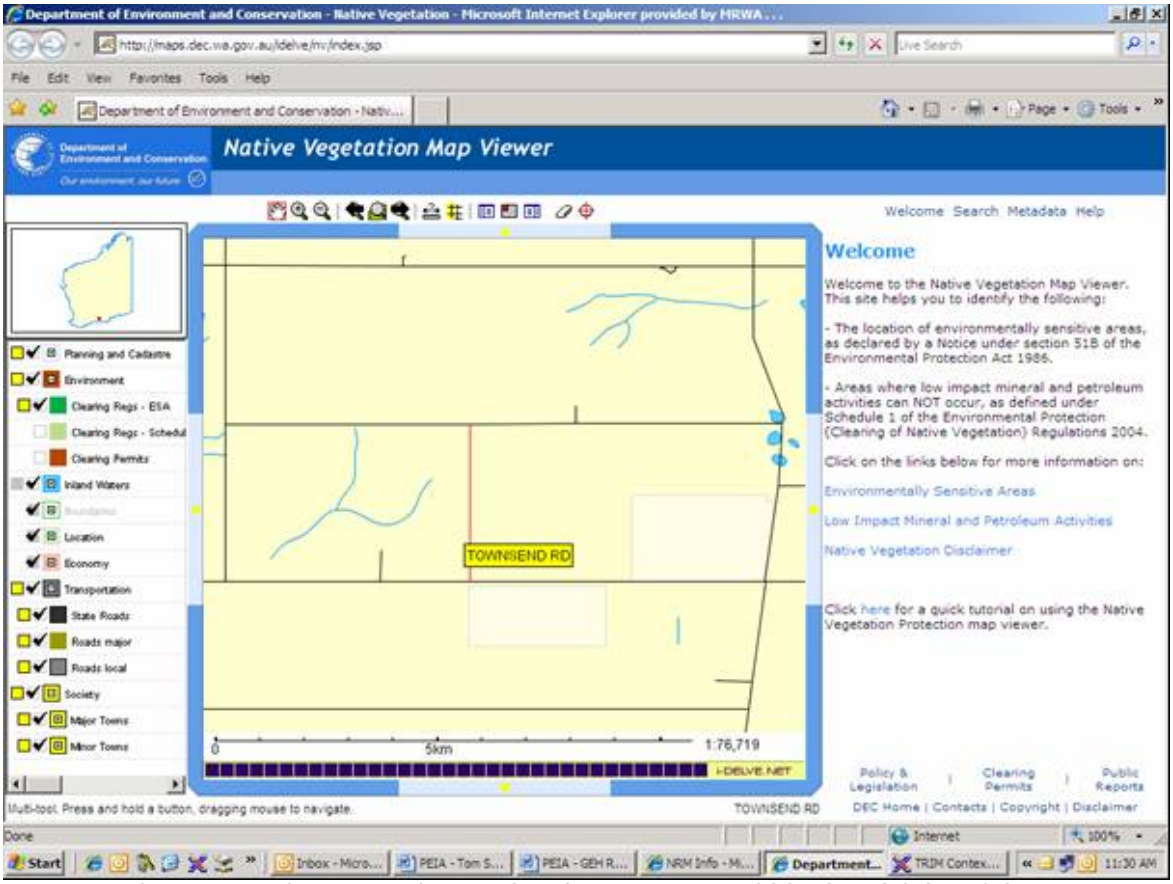
MAIN ROADS Western Australia
Form 6707/001 Screening Checklist Rev 2.doc 30/05/07

Appendix B

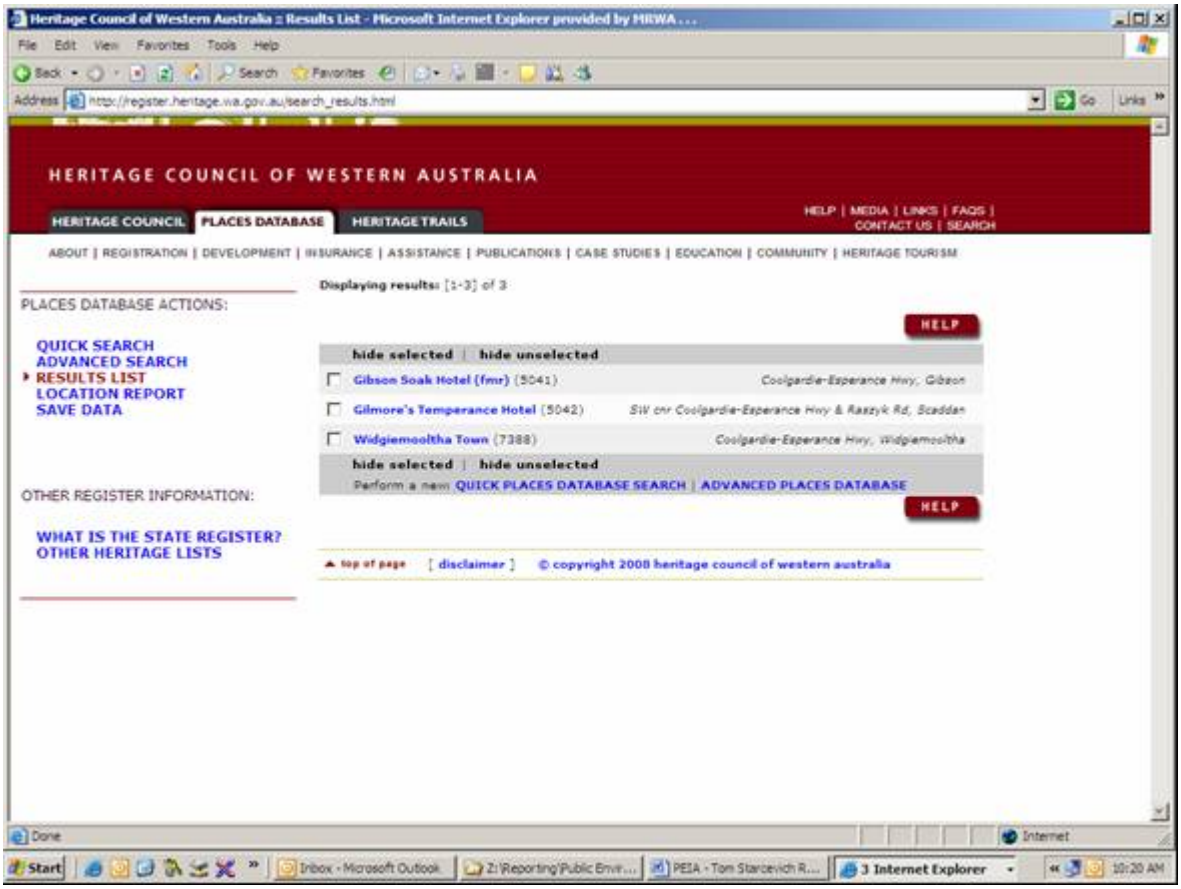
Relevant Government Agency Database Searches



DEC's Native Vegetation Map Viewer showing no ESAs within the vicinity of the CEH pit.

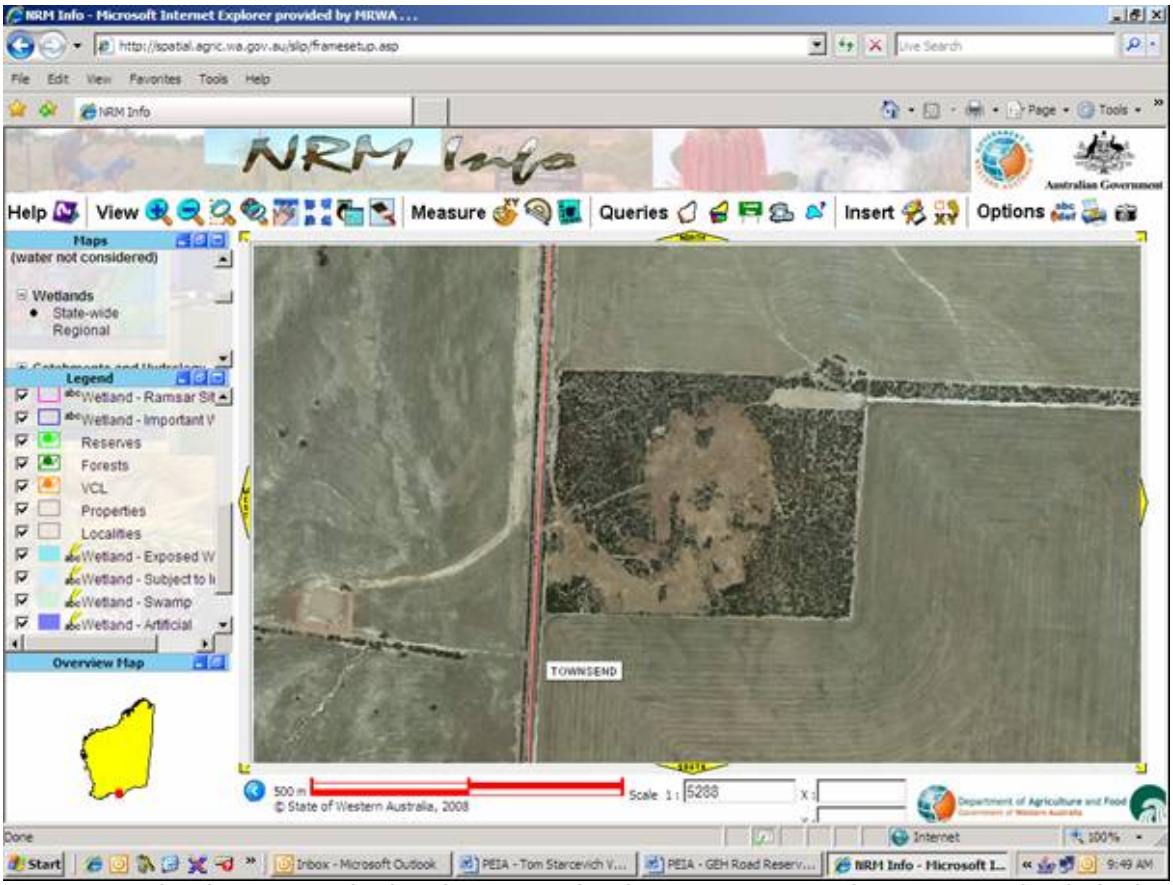


DEC's Native Vegetation Map Viewer showing no ESAs within the vicinity of the Townsend Rd pit.

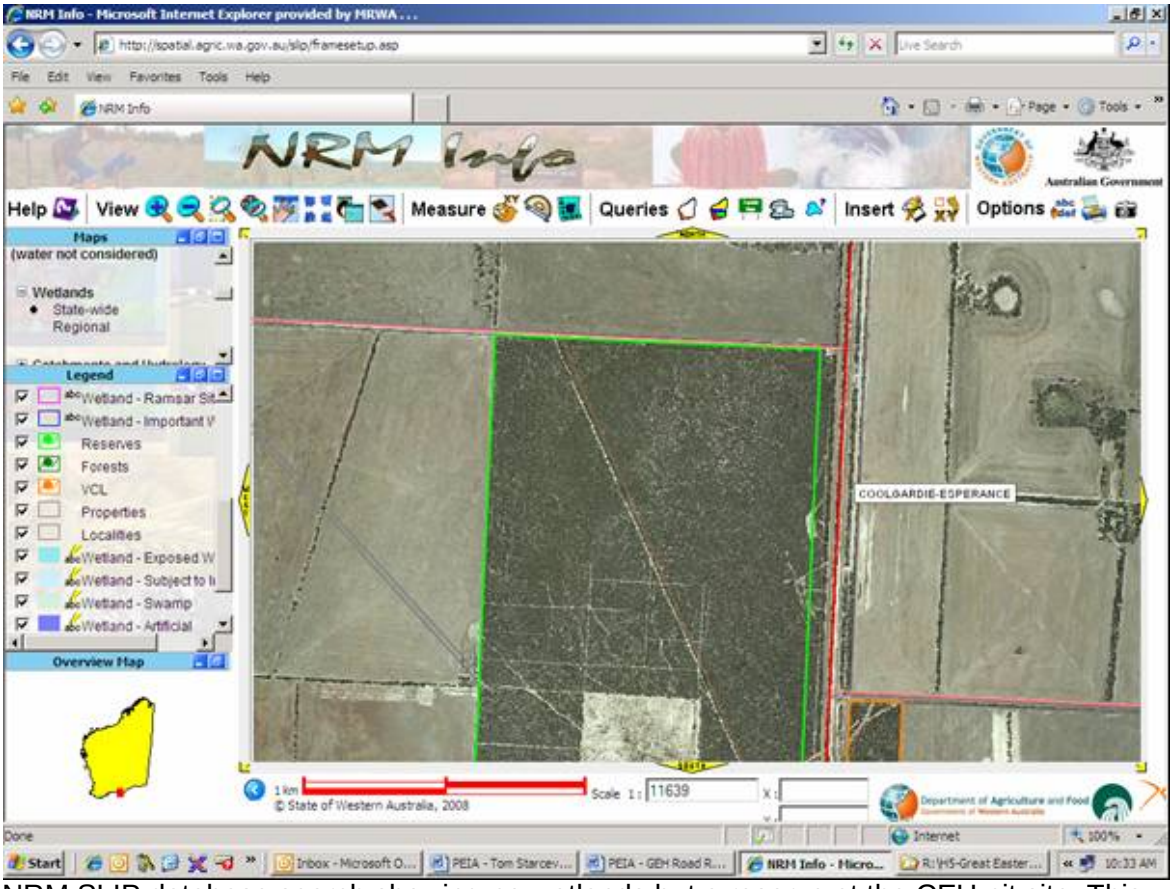


Heritage Council of WA database search for Coolgardie-Esperance Hwy. None of these sites shown are located near the project area.

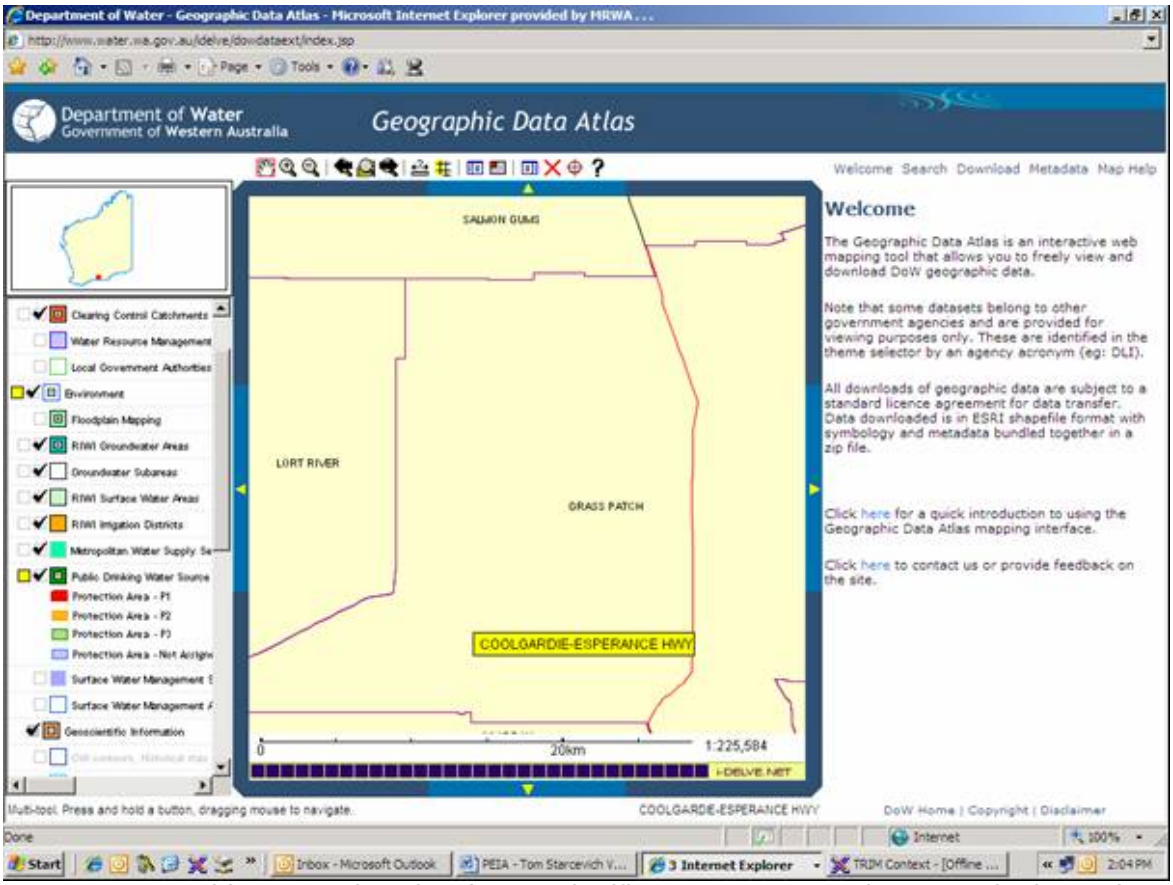
Heritage Council of WA database search for Townsend Rd - returned no results.



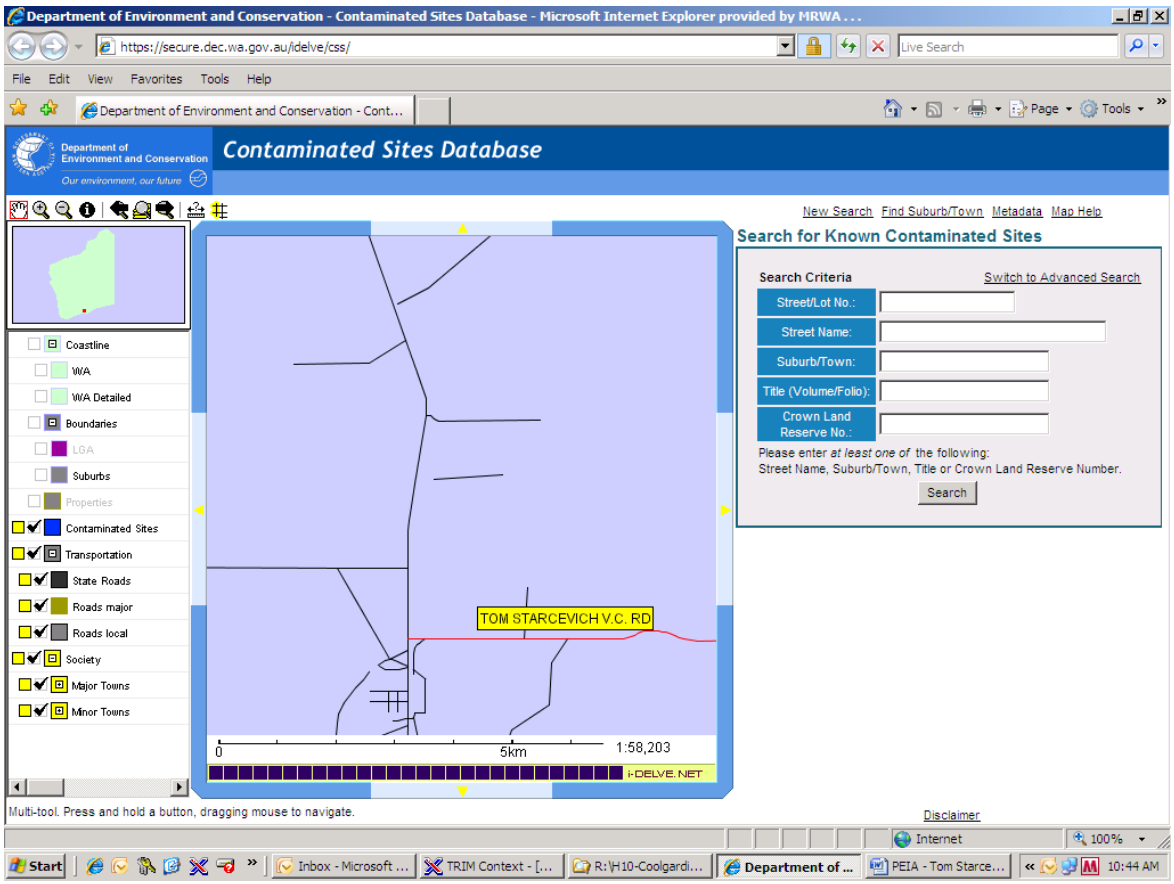
NRM SLIP database search showing no wetlands or reserves at the Townsend Rd pit site.



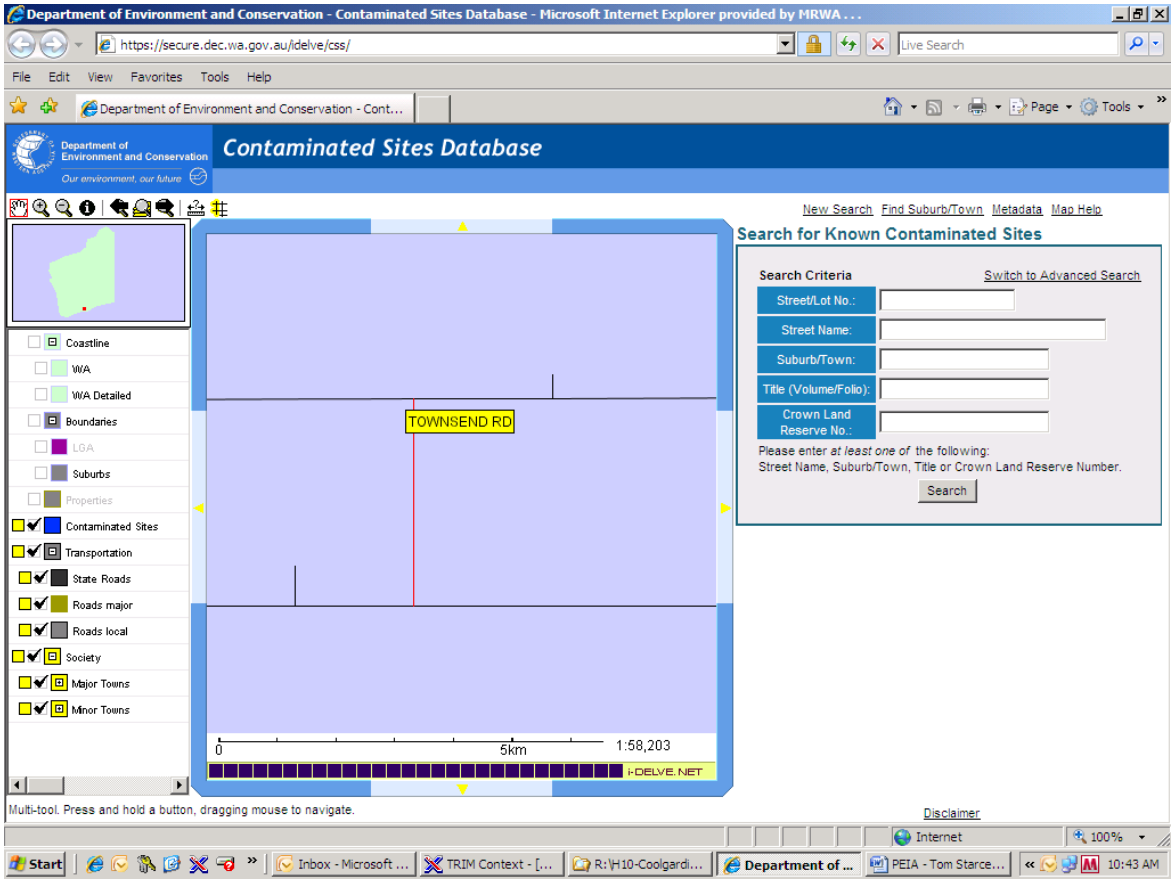
NRM SLIP database search showing no wetlands but a reserve at the CEH pit site. This reserve is vested in the Water Corporation.



DoW's Geographic Data Atlas showing no significant water protection areas in the project area.



DEC's contaminated sites database showing no contaminated sites within the vicinity of the CEH pit.



DEC's contaminated sites database showing no contaminated sites within the vicinity of the Townsend Rd pit.

DEC's Threatened Fauna database search results:

Threatened and Priority Fauna Database

32.8704°S 121.2744°E / 33.4835°S 122.0417°E Material sites, Grasspatch (plus ~30km buffer)

*	Date	Certainty	Seen	Location Name	Method
Schedule 1 - Fauna that is rare or is likely to become extinct					
Dasyurus geoffroii **Chuditch** *2 records*					
This carnivorous marsupial occupies large home ranges, is highly mobile and appears able to utilise bush remnants and corridors.					
	1998	1	1	Salmon Gums	Caught or trapped
	2008	1	1	Salmon Gums	Dead
Platycercus icterotis xanthogenys **Western Rosella (inland ssp)** *2 records*					
This subspecies of the Western Rosella occurs in eucalypt and casuarina woodlands and scrubs, especially of Salmon Gum and tall mallees.					
	1991	1	2	Red Lake Townsite Nature Reserve	Day sighting
	1991	1	1	Red Lake Townsite Nature Reserve	Day sighting
Schedule 4 - Other specially protected fauna					
Falco peregrinus **Peregrine Falcon** *1 records*					
This species is uncommon and prefers areas with rocky ledges, cliffs, watercourses, open woodland or margins with cleared land.					
	1985	1	1	Salmon Gums	Day sighting
Priority One: Taxa with few, poorly known populations on threatened lands					
Parasuta spectabilis bushi *1 records*					
This subspecies of Krefft's Snake occurs as an isolated population in the Esperance area and is known only from three specimens.					
	1986	1	4	Scaddan	Caught or trapped
Priority Four: Taxa in need of monitoring					
Pomatostomus superciliosus ashbyi **White-browed Babbler (western wheatbe** *1 records*					
This species of bird lives in eucalypt forests and woodlands, and forages on or near the ground for insects and seeds.					
	1991	2	0	Red Lake Townsite Nature Reserve	Definite signs

* Information relating to any records provided for listed species:-
Date: date of recorded observation
Certainty (of correct species identification): 1=Very certain; 2=Moderately certain; and 3=Not sure.
Seen: Number of individuals observed.
Location Name: Name of reserve or nearest locality where observation was made
Method: Method or type of observation

Wednesday, 12 November 2008 Department of Environment and Conservation

Aboriginal Heritage Inquiry System results for the project areas:

- The one site identified exists at Red Lake. This site is not in close proximity to either of the 2 material pits.

Department of Indigenous Affairs
Government of Western Australia

Aboriginal Heritage Inquiry System

Register of Aboriginal Sites

Search Criteria

1 sites in a search box. The box is formed by these diagonally opposed corner points:

MGA Zone 51	
Northing	Easting
6316338	360927
6344017	393983

Disclaimer

Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist. Consultation with Aboriginal communities is on-going to identify additional sites. The AHA protects all Aboriginal sites in Western Australia whether or not they are registered.

Copyright

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

Legend

Restriction

- **N** No restriction
- **M** Male access only
- **F** Female access

Access

- **C** Closed
- **O** Open
- **V** Vulnerable

Coordinate Accuracy

Accuracy is shown as a code in brackets following the site coordinates.

- **[Reliable]** The spatial information recorded in the site file is deemed to be reliable, due to methods of capture.
- **[Unreliable** The spatial information recorded in the site file is deemed to be unreliable due to errors of spatial data capture and/or quality of spatial information reported.

Status

- **L** Lodged
- **I** Insufficient information
- **P** Permanent register
- **S** Stored data
- **IR** Insufficient information (as assessed by Site Assessment Group)
- **PR** Permanent register (as assessed by Site Assessment Group)
- **SR** Stored data (as assessed by Site Assessment Group)

Site Assessment Group (SAG)

Sites lodged with the Department are assessed under the direction of the Registrar of Aboriginal Sites. These are not to be considered the final assessment.

Final assessment will be determined by the Aboriginal Cultural Material Committee (ACMC).

Spatial Accuracy

Index coordinates are indicative locations and may not necessarily represent the centre of sites, especially for sites with an access code "closed" or "vulnerable". Map coordinates (Lat/Long) and (Easting/Northing) are based on the GDA 94 datum. The Easting / Northing map grid can be across one or more zones. The zone is indicated for each Easting on the map, i.e. '5000000:Z50' means Easting=5000000, Zone=50.

Report created 06 Nov 2008 11:51:32. Identifier: 523884.

Page 1

Department of Indigenous Affairs
Government of Western Australia

Aboriginal Heritage Inquiry System

Register of Aboriginal Sites

Site ID	Status	Access	Restriction	Site Name	Site Type	Additional Info	Informants	Coordinates	Site No.
1459	P	O	N	Red Lake	Artefacts / Scatter			378937mE 6334806mN Zone 51 [Reliable]	W01742

Report created 06 Nov 2008 11:51:32. Identifier: 523884.

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Department of Indigenous Affairs
Government of Western Australia

Aboriginal Heritage Inquiry System

Register of Aboriginal Sites

Legend

- Highlighted Area
- Town
- Map Area
- Search Area

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Page 3

DEWHA's EPBC Act Protected Matters Report for the project areas:

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

Skip navigation links About us | Contact us | Publications | What's new

Protected Matters Search Tool

You are here: Environment Home > EPBC Act > Search

EPBC Act Protected Matters Report 6 November 2008 14:17

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

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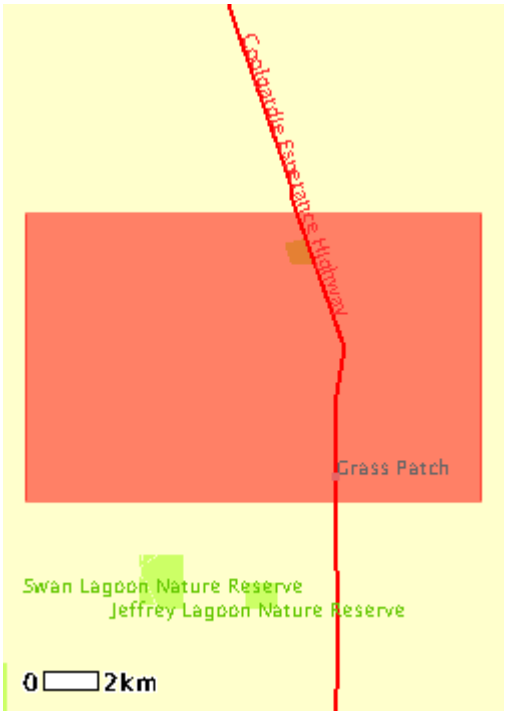


This map may contain data which are
© Commonwealth of Australia
(Geoscience Australia)
© 2007 MapData Sciences Pty Ltd, PSMA

Search Type: Area

Buffer: 0 km

Coordinates: -33.13124,121.59662, -33.24210,121.59662, -33.24210,121.77196, -33.13124,121.77196

Report Contents:

Summary
Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance: (Ramsar Sites)	2
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	None
Threatened Species:	4
Migratory Species:	8

Other Matters Protected by the EPBC Act

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

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these

aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage/index.html.

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

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

Commonwealth Lands:	1
Commonwealth Heritage Places:	None
Places on the RNE:	None
Listed Marine Species:	6
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:	1
Other Commonwealth Reserves:	None
Regional Forest Agreements:	None

Details
Matters of National Environmental Significance

Wetlands of International Significance [Dataset Information] (Ramsar Sites)	
LAKE GORE	Within same catchment as Ramsar site
LAKE WARDEN SYSTEM	Within same catchment as Ramsar site

Threatened Species [Dataset Information]	Status	Type of Presence
Birds		
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose	Vulnerable	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl	Vulnerable	Species or species habitat likely to occur within area

Plants		
Eucalyptus merrickiae Goblet Mallee	Vulnerable	Species or species habitat likely to occur within area
Ricinocarpos trichophorus Barrens Wedding Bush	Endangered	Species or species habitat likely to occur within area
Migratory Species [Dataset Information]	Status	Type of Presence
Migratory Terrestrial Species		
Birds		
Haliaeetus leucogaster White-bellied Sea-Eagle	Migratory	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl	Migratory	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater	Migratory	Species or species habitat may occur within area
Migratory Wetland Species		
Birds		
Ardea alba Great Egret, White Egret	Migratory	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Migratory	Species or species habitat may occur within area
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift	Migratory	Species or species habitat may occur within area
Ardea alba Great Egret, White Egret	Migratory	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Migratory	Species or species habitat may occur within area
Other Matters Protected by the EPBC Act		
Listed Marine Species [Dataset Information]	Status	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift	Listed - overfly marine area	Species or species habitat may occur within area
Ardea alba Great Egret, White Egret	Listed - overfly marine area	Species or species habitat may occur within area
Ardea ibis Cattle Egret	Listed - overfly marine area	Species or species habitat may occur within area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose	Listed - overfly marine area	Species or species habitat likely to occur within area

Haliaeetus leucogaster White-bellied Sea-Eagle	Listed	Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater	Listed - overfly marine area	Species or species habitat may occur within area

Commonwealth Lands [Dataset Information]

Unknown

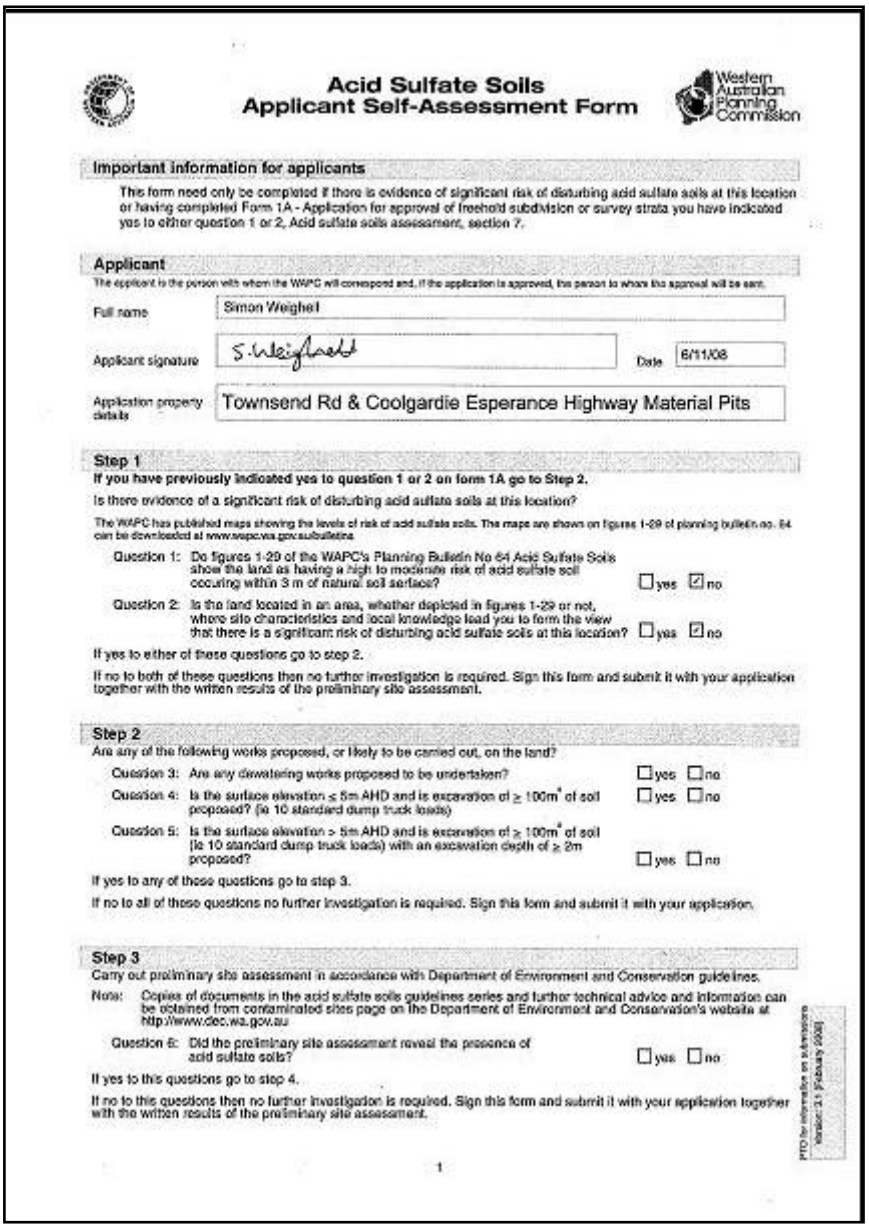
Extra Information

State and Territory Reserves [Dataset Information]

Red Lake Townsite Nature Reserve, WA

Appendix C

WAPC's Acid Sulphate Soils Self-Assessment Form



Acid Sulfate Soils Applicant Self-Assessment Form

Western Australian Planning Commission

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: Simon Weigheil

Applicant signature: S.Weigheil Date: 6/11/08

Application property details: Townsend Rd & Coolgardie Esperance Highway Material Pits

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 1-29 of planning bulletin no. 64 can be downloaded at www.wapc.wa.gov.au/bulletins

Question 1: Do figures 1-29 of the WAPC's Planning Bulletin No 64 Acid Sulfate Soils show the land as having a high to moderate risk of acid sulfate soil occuring within 3 m of natural soil surface? ☐ yes ☑ 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? ☐ 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 ≤ 5m AHD and is excavation of ≥ 100m³ of soil proposed? (ie 10 standard dump truck loads) ☐ yes ☐ no

Question 5: Is the surface elevation > 5m AHD and is excavation of ≥ 100m³ of soil (ie 10 standard dump truck loads) with an excavation depth of ≥ 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 (February 2008)

1

Appendix D

Consultation

From: Adams, Emma [mailto:Emma.Adams@dec.wa.gov.au]
Sent: Monday, 17 November 2008 4:32 PM
To: WEIGHELL Simon (GEnv)
Subject: RE: Grevillea aneura

Hi Simon

Sorry i missed your call earlier. From your photos it certainly looks like Grevillea aneura. It has a fairly wide distribution and many of the locations probably haven't been officially recorded. Are you familiar with the Rare Flora Report Forms? I have attached a copy of one. If you are able to fill out the blanks and attach a mud map, and send a copy to me then i can forward the record onto our head office to enter on Florabase (Alternatively you can send it to the address on the form yourself if you wish). I will also make an effort to take a look at the site next time I'm around the Grass Patch area.

I think your name popped up a while ago after I heard that Joann had left. During the last year Joann began to attend the Rare Flora Recovery Team meetings that are held in Esperance. Did she tell you about these? The Esperance District Threatened Flora Recovery Team (TFRT) provides an opportunity for representatives to provide guidance and information to be used in threatened species recovery planning and works programs. The Recovery Team will also provide an opportunity for members to improve their own knowledge of threatened species, to participate directly in some recovery operations, and to resolve operational problems associated with the presence of threatened flora. As you will no doubt have discovered already there are several DRF species on the MRWA reserves and last year some of the meetings last year involved the DRF sites on the Eyre Hwy near Norseman and road maintenance issues.

It would be great to have you involved in these meetings, so if you are interested please let me know and I will include you in on invites and agendas. There are normally two per year and around January and June.

Please don't hesitate to contact me should you have any queries

Cheers :o)
Emma

Emma Adams
Conservation Officer
Department of Environment and Conservation
Esperance WA 6450
Ph. 9083 2113 Mob. 0428 104 209
Email: Emma.Adams@dec.wa.gov.au

From: WEIGHELL Simon (GEnv) [mailto:simon.weighell@mainroads.wa.gov.au]
Sent: Mon 17/11/2008 2:12 PM

To: Adams, Emma
Subject: Grevillea aneura

Hi Emma

I called earlier but was told you were out to lunch. To introduce myself, I have recently moved out to Kalgoorlie as Joann Johnston's replacement for Main Roads Goldfields-Esperance region.

The reason I called was that I think I may have come across a priority 4 species (Grevillea aneura) on a farmer's property near Grasspatch. I came across it during a site visit as we are sourcing road building materials from the farmer's gravel pit. As a result I was wondering whether you could confirm whether I have identified the species correctly. I have attached a couple of photos that I took of it. Not sure whether they are sufficient for you to identify it. I don't believe it is currently a registered site as when I received the threatened flora search results from the Species and Communities branch, the nearest site was located east of Coolgardie Esperance Highway. This site is located west of CEH off Townsend rd with approximate GPS coordinates being 121.60046, -33.14893. If you would like to visit the site please let me know and I can arrange to meet you there?

Thanks
Simon

Simon Weighell
Graduate Environment (GEnv)
Goldfields-Esperance Region
Main Roads Western Australia
Ph: (08) 9080 1457

From: Mutton, Amy [mailto:Amy.Mutton@dec.wa.gov.au]
Sent: Wednesday, 12 November 2008 11:24 AM
To: WEIGHELL Simon (GEnv)
Subject: fauna search

Hi Simon

Please find attached the results for the Threatened and Priority Fauna Database search for the proposed materials sites on the Coolgardie Esperance Highway, near Grasspatch (plus ~30km buffer). Please note that there was only one species recorded within your original search area (Western Rosella, inland spp) so an additional buffer was added.

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 Mutton
Species and Communities Branch
Department of Environment and Conservation
Phone (08) 9219 8636
Fax (08) 9334 0278

From: Long, Bridgitte [mailto:Bridgitte.Long@dec.wa.gov.au]
Sent: Monday, 10 November 2008 3:31 PM
To: WEIGHELL Simon (GEnv)
Subject: RE: Threatened Flora and Fauna Searches

Hi Simon

Please find attached the results from the Threatened Flora Database and the WA Herbarium database (WAHerb) for the area of interest.

Please refer to the attached letter for the Conditions of Supply for this information.

The request for information reference number for this search is: 17-1108 (refer to Condition #8 for more information).

Regards

Bridgitte Long
Threatened Flora Database Officer
Species and Communities Branch
Department of Environment and Conservation
Ph (08) 9334 0123 Fax (08) 9334 0278
bridgitte.long@dec.wa.gov.au

Appendix E

Site Photos

Townsend Rd Pit:

Priority 4 species *Grevillea aneura*:

Coolgardie – Esperance Highway Pit:

Appendix F

Environmental Management Plan

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.	Record: - a copy of the PEIA & EMP (Minor projects), - a map showing the location where the clearing occurred, recorded in an ESRI Shapefile, - the size of the area cleared (in hectares), - the dates on which the clearing was done, - a copy of any revegetation plans provided to the DEC, - a map showing the location where any revegetation has occurred, recorded in an ESRI Shapefile, - a description of any revegetation activities undertaken, - the size of any revegetation (in hectares), and - a copy of any management plan prepared in relation to the control of weeds, dieback or other pathogens.	Project Manager	DEC
Pre-Construction	Induction / Start-up meeting	Create awareness in all construction personnel of the environmental aspects associated with the project.	All construction staff to be informed of the environmental aspects associated with the project and walked through the site prior to any works being undertaken.	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 Ensure the retention of as many habitat trees, shrubs and vegetated corridors for fauna as possible, particularly where associated with riparian zones.	Clearly mark clearing lines and any trees or shrubs to be kept.	Project Manager	Main Roads
			Any stockpiled vegetation from clearing works shall not be burnt. This vegetation shall be used during revegetation and rehabilitation works and either chipped or replaced according to the Project specific Revegetation Plan.	Contractor	Main Roads

ENVIRONMENTAL MANAGEMENT PLAN					
Timing	Topic	Objective	Action	Responsible Party	Advice
Pre-Construction	Surface Drainage	Maintain the current hydrological regime and quality of surface and underground water.	Contaminated runoff to be treated and disposed of appropriately.	Contractor	Main Roads
Construction	Noise, Vibration and Dust	Ensure that the construction of the proposal does not become a nuisance to the public.	Any complaints regarding dust, noise or vibration 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.	Contractor	Main Roads
			Watering, the use of hydromulch or other forms of mulching to protect loose surfaces shall be used as dust mitigation measures.	Contractor	Main Roads
Construction	Pollution and Litter	Ensure that the construction of the proposal is managed to a standard that minimises pollution or the risk of pollution occurring.	The designated servicing area will be bunded to contain any spills or leaks or will drain into a temporary sump and will not be located in an area adjacent to any drainage areas or watercourses.	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
			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
Construction	Site Management	Ensure that the site is managed in a way that will have minimal impact upon the surrounding environment.	Excavated material will only be located on previously disturbed/ designated areas.	Contractor	Main Roads

ENVIRONMENTAL MANAGEMENT PLAN					
Timing	Topic	Objective	Action	Responsible Party	Advice
Construction	Environmental Incidents	Ensure that any environmental incidents that occur during works do not have a significant or long term impact on the environment.	Implement corrective and preventive actions in liaison with an environmental specialist and Main Roads Manager Environment where necessary.	Contractor/Project Manager	Main Roads
		Record the details of any environmental incidents to fulfil corporate requirements.	Complete and submit environmental incident report forms in accordance with the Main Roads corporate procedure *6707/042 Environmental Incident Reporting and Investigation*.	Contractor/Project Manager	Main Roads
Post-Construction	Revegetation	Successfully revegetate designated areas.	See Project specific Revegetation Plan.	Project Manager	Main Roads / DEC
Post-Construction	Rehabilitation	Leave the project area free from debris.	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.	Contractor	Main Roads