

Upgrade of Useless Loop Road, Shark Bay

Main Roads Western Australia

**Report and Recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
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1. Introduction

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to a proposal by Main Roads Western Australia (MRWA) to upgrade sections of the existing Useless Loop Road, Shark Bay.

The EPA was advised of the proposal to upgrade the existing Useless Loop Road in April 2000. MRWA (the proponent) was advised at that time of the EPA's expectation that proponents of development proposals in the Shark Bay World Heritage Property will consult with the Department of Conservation and Land Management (CALM), as the lead agency with respect to management of the Shark Bay World Heritage Property under the terms of an agreement between the Commonwealth and State Government. The EPA also encouraged MRWA to take advantage of the special expertise that exists on the area, particularly that within CALM, the Shark Bay World Heritage Property Scientific Advisory Committee and the Shark Bay World Heritage Property Community Consultative Committee.

MRWA has subsequently prepared an "*Environmental Assessment and Management Plan: Upgrade of Useless Loop Road, Gascoyne Region*" (EAMP) (ATA Environmental, 2000) which provides additional information on the level of consultation undertaken, the proposal as modified through the consultation process and the proposed management measures including the proponent's commitments. A limited number of copies of the document are available through the Department of Environmental Protection (DEP) library. Copies will also be available for viewing at the local Shark Bay library and in Perth at both the Battye Library of WA and the DEP library.

Based on the information provided in the EAMP and the comments of relevant agencies and committees, the EPA considered that while the proposal had the potential to have an effect on the environment, the proposal is capable of being implemented in an environmentally acceptable manner such that it is most unlikely that the EPA's environmental objectives would be compromised, provided the proposed commitments are legally binding. Consequently, the EPA set the level of assessment at EPA - initiated Environmental Protection Statement (EPS) in accordance with the *Environmental Impact Assessment Administrative Procedures Amendment 1999*.

Any person who disagrees with the EPA's decision on the level of assessment may lodge an appeal with the Minister for the Environment within 14 days of the date of the decision being placed in the public record, which was 8 December 2000.

A separate right of appeal exists for any person who disagrees with the content of, or any recommendations in this report, also within 14 days of release of the report, which was also 8 December 2000.

Further details of the proposal are presented in Section 2 of this report. Section 3 discusses the level of consultation undertaken and the outcomes of that consultation. The environmental factors relevant to the proposal are described in Section 4. The EPA's conclusions are presented in Section 5 and Section 6 presents the EPA's recommendations.

The report also includes the following appendices: Appendix 1 provides the references for the report, Appendix 2 contains the recommended environmental conditions and the proponent's commitments and Appendix 3 provides detail of the consultation undertaken by the proponent.

2. The proposal

Development proposals in Shark Bay World Heritage Property

The proposal is within the Shark Bay World Heritage Property. The EPA acknowledges that “while World Heritage listing does not prevent development, there is obviously an expectation that developments are carefully evaluated from an environmental point of view and only allowed to proceed if they can be implemented in a way which does not compromise the values for which the area was listed” (EPA 2000).

Road upgrade proposal

The proposal is described in detail in Section 3 of the EAMP. The proposal involves the upgrading of eight sections (each up to 1200m long) of the existing Useless Loop Road, in the Shire of Shark Bay (Figure 1). The road works, which extend over a distance of 67 km, include curve improvement, realignment and reconstruction of the sections. The proposal also includes the development and use of six borrow pits for extraction of suitable road construction materials. Of these six borrow pits, five are already existing and have been used for road construction material in the past. The works areas for both the road improvements and the borrow pits are shown in Schedule 1 of Appendix 2.

The key characteristics of the proposal are outlined in Schedule 1 of Appendix 2 of this Bulletin.

3. Consultation

The EPA considers that adequate consultation can be demonstrated by the proponent when stakeholders:

- are kept informed about the potential and actual environmental impacts of the proposal;
- are included in the consultation process and are able to make their concerns, in regard to environmental impacts, known to the proponent;
- receive well informed responses to concerns raised; and
- are able to have meaningful input into the proponent’s management of environmental impacts.

During the preparation of the EAMP, the proponent has undertaken consultation with government agencies and individuals with a direct interest in the project.

The Department of Conservation and Land Management is the lead agency with respect to the management of the Shark Bay World Heritage Property. In accordance with the EPA’s Guidance Statement for Assessment of Development Proposals in Shark Bay World Heritage Property (EPA 2000), the EPA considered the proponent should primarily consult with CALM and seek its approval of the EAMP and the proposed commitments prior to the EPA accepting the EAMP document. The advice of both the Shark Bay World Heritage Property Community Consultative Committee (CCC) and the Shark Bay World Heritage Property Scientific Advisory Committee (SAC) was also sought. The proposal was discussed at the August 2000 meetings of both of the CCC and the SAC, where CALM’s Regional Manager of the Midwest region provided a briefing on the proposal to the committees. The EPA has received notification from CALM that the environmental commitments made by MRWA, included as Schedule 2 of Appendix 2 in this report, will enable the impacts of the proposed works to be adequately managed. The EPA is therefore satisfied that sufficient consultation has occurred.

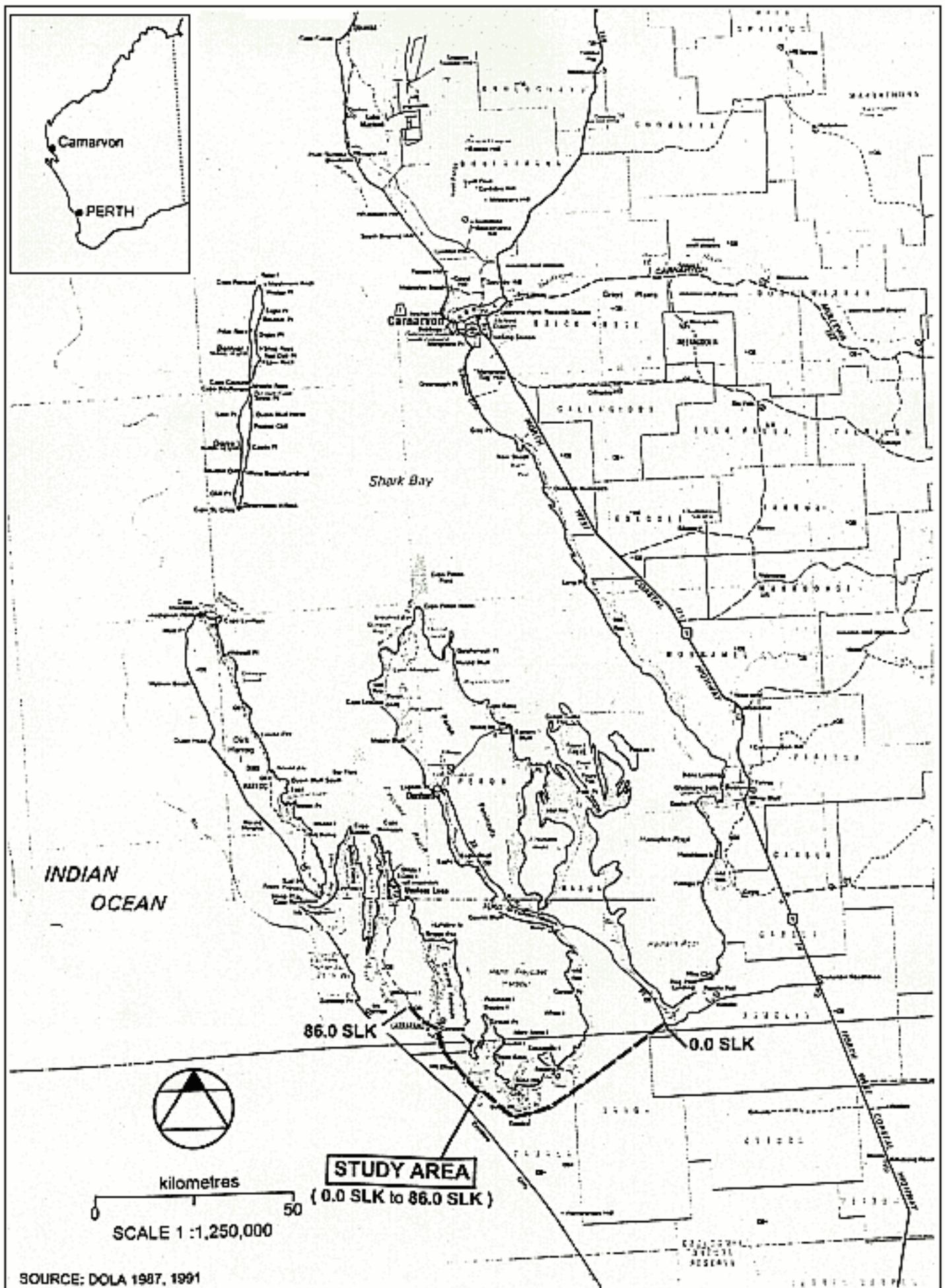


Figure 1. Gascoyne Region, Useless Loop Road, Regional Location.

The primary focus of consultation was to ensure that the World Heritage values of the areas within which roadworks are proposed would not be compromised. The primary issues raised during consultation included minimisation of: vegetation clearing; impact on priority flora species; impact on visual amenity; potential for erosion; management of weeds and impact on landform characteristics, such as the evaporative clay/ salt pans known as birridas.

The most significant outcome of the consultation phase for this proposal is the reduction in the area and number of borrow pits required to source material for road upgrades. The original proposal identified an area of approximately 760 hectares from which road materials could potentially be sourced. A number of the initially proposed borrow pit sites were in pristine birridas, in areas with potential for high visual impact or in areas with priority flora species. As a result of consultation, the locations of borrow pit sites have been more accurately defined and the number of sites has been reduced from twelve to six. The re-evaluation of borrow pit sites ensures that no pristine birridas are impacted by this proposal, visual impact is minimised and the area of vegetation clearing is substantially reduced, to approximately 4 hectares.

The proponent has addressed other issues, such as the potential for erosion and the management of weeds, in its commitment to management practices that will be applied in the implementation of the proposal.

The organisations consulted and a summary of comments received are included in Section 2.16 of the EAMP and are attached as Appendix 3 of this report.

4. Relevant environmental factors

In the EPA's opinion the following are the environmental factors relevant to the proposal:

- a) Vegetation – effects of vegetation clearing for the upgrade of Useless Loop Road on the local and regional vegetation, including priority flora species;
- b) Landform – effects of landform changes, particularly as a result of construction of borrow pits and the potential for impact on evaporative clay/ salt pans known as birridas.

These are two of the World Heritage values for which Shark Bay was inscribed on the World Heritage List in 1991. These are the only World Heritage values that would be affected by the construction and operation of this proposed road upgrade.

4.1 Vegetation

The proposed road upgrade will require the removal of approximately 12 hectares of native vegetation, with a further 4 hectares of clearing required for the proposed borrow pits. In the flora surveys commissioned by the proponent (Landcare Services, 1998 – Appendix 1 of the EAMP), no Declared Rare Flora were identified in the study area, however, nine priority flora species were located. Resource extraction will not affect any priority species however, proposed road works will affect a number of individual plants of the nine priority flora species as described in Section 3.4 of the EAMP. A follow up flora survey, conducted in September 2000 (Landcare Services, 2000) to determine the potential impact of the proposed road works on priority flora species, established that the majority of the priority taxa previously identified were quite common in the area surveyed. The proponent has included a commitment to continue to consult with CALM to develop a management plan that includes measures to limit the impacts of the proposal on priority flora during the implementation of the project. No threatened vegetation communities were identified in the area of proposed works.

Taking into account both modifications to the proposal to limit the amount of vegetation affected by the proposal and the proponent's commitments to prepare and implement management plans in consultation with CALM, particularly with regard to managing the impacts on priority flora

species, the EPA considers that this proposal is capable of being managed to meet the EPA's objective for vegetation.

4.2 Landform

Shark Bay has distinctive evaporative clay/ salt pans which are known as birridas. No pristine birridas will be affected by this proposal. However, it is proposed to source road construction materials from two borrow pits within birridas, both of which have previously been used for obtaining road construction material. The remaining borrow pits are located outside birridas. In addition to reducing the number and area of birridas affected by the proposal, the proponent has consulted with CALM with regard to developing management measures that will be applied by MRWA during the implementation of the project. MRWA has committed to the preparation of a Rehabilitation Plan in consultation with CALM that will provide more detail of the rehabilitation of areas affected by the proposal particularly with regard to re-establishing landforms consistent with the surrounds.

Taking into account the modifications to the proposal to substantially reduce the impacts on birridas, the proponent's commitments to rehabilitation and to continued consultation with CALM during the implementation of the proposal, the EPA considers that this proposal is capable of being managed meet the EPA's objective for landform.

5. Conclusions

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and on the conditions and procedures to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

The EPA has concluded that the proposal to upgrade the existing Useless Loop Road is capable of being managed in an environmentally acceptable manner such that the EPA's objectives would not be compromised, provided there is satisfactory implementation of the proponent's commitments and the proposed Ministerial Conditions. The management plans to be developed as part of the proponent's commitments will also ensure that the World Heritage values of the Shark Bay World Heritage Property are unlikely to be compromised.

Furthermore, the EPA has recommended that the proposal should be subject to the preparation and implementation of an Environmental Management System.

6. Recommendations

The EPA considers that the proponent has demonstrated, in the *Environmental Assessment and Management Plan – Upgrade of Useless Loop Road*, that the proposal can be managed in an environmentally acceptable manner and provides the following recommendations to the Minister for the Environment:

1. That the Minister notes that this report follows a decision by the EPA to set a level of assessment as EPA - initiated Environmental Protection Statement because:
 - The proposal by Main Roads WA was for an upgrade of an existing road;
 - The commitments in relation to the environmental factors identified needed to be made legally binding through the environmental conditions set in accordance with Part IV of the *Environmental Protection Act 1986*; and
 - The proposal is not of the magnitude to warrant a more expanded environmental impact assessment under Part IV of the *Environmental Protection Act 1986*.

2. That the Minister considers the report on the relevant environmental factors as set out in Section 4.
3. That the Minister notes that the EPA has concluded that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions and proponent commitments as set out in Appendix 2, including the provision for implementation of an environmental management system.
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

ATA Environmental (2000) *Environmental Assessment and Management Plan – Upgrade of Useless Loop Road*, (final December 2000).

Environmental Protection Authority (2000) *Final Guidance No 49. Guidance Statement for Assessment of Development Proposals in Shark Bay World Heritage Property*, (November 2000).

Landcare Services Pty Ltd (1998) *Gascoyne (North-west Coastal Highway and Useless loop Road) Vegetation and Flora Survey*. Report prepared for Alan Tingay and Associates (September 1998).

Landcare Services Pty Ltd (2000) *Priority Species Populations Investigations Useless Loop Road Realignment*. Report prepared for Main Roads Western Australia (September 2000).

Appendix 2

Recommended Environmental Conditions and Proponent's Commitments

RECOMMENDED ENVIRONMENTAL CONDITIONS

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

UPGRADE OF USELESS LOOP ROAD, SHARK BAY

Proposal: This proposal is for the upgrading of eight sections (each up to 1200 metres long) of the existing Useless Loop Road, in the Shire of Shark Bay. The road works, which extend over approximately 67 kilometres of road, include curve improvement, realignment and reconstruction. The proposal also includes the development and use of six borrow pits for extraction of suitable road construction materials, as documented in schedule 1 of this statement.

Proponent: Main Roads Western Australia

Proponent Address: PO Box 480, CARNARVON WA 6701

Assessment Number: 1364

Report of the Environmental Protection Authority: Bulletin 1003

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following environmental conditions and procedures:

Procedures

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.
- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.
- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.

5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Conditions

6 Environmental Management System

6-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to ground-disturbing activity, the proponent shall demonstrate to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection and Department of Conservation and Land Management that there is in place an environmental management system which includes the following elements:

- 1 An environmental policy and corporate commitment to it;
- 2 Mechanisms and processes to ensure:
 - (1) planning to meet environmental requirements;
 - (2) implementation and operation of actions to meet environmental requirements;
 - (3) measurement and evaluation of environmental performance; and
- 3 Review and improvement of environmental outcomes.

6-2 The proponent shall implement the environmental management system referred to in condition 6-1.

CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

Schedule 1

The Proposal

This proposal involves the upgrading of eight sections (each up to 1200 metres long) of the existing Useless Loop Road, in the Shire of Shark Bay. The road works, which extend over a distance of approximately 67 kilometres of road, include curve improvement, realignment and reconstruction of the sections. The proposal also includes the development and use of six borrow pits for extraction of suitable road construction materials. Of these six borrow pits, five are already existing and have been used for road construction material in the past.

Key Characteristics Table

Element	Quantities/Description	
Period of construction	Approximately 8 months	
Project purpose	To improve traffic safety and serviceability	
Locality	Project area is within the Shire of Shark Bay. The first section of proposed works on Useless Loop Road starts at 16.7 straight line kilometres (SLK) and the last section starts at 82.7 SLK.	
Major Components Proposed Road Improvements	16.7 to 17.9 SLK	Improve right hand curve, 500 metre realignment, improve left hand curve, 400 metre realignment
	37.2 to 37.6 SLK	Minor curve realignment
	54.2 to 54.8 SLK	Improve left hand curve, 600 metre realignment
	56.73 to 57.52 SLK	800 metre construction (raising of tidal section)
	58.60 to 60.40 SLK	1800 metre realignment
	62.4 to 63.1 SLK	Improve right hand curve, 700 metre realignment
	77.6 to 78.5 SLK	Improve right hand curve, 600 metre realignment
	82.7 to 83.6 SLK	Improve reverse curve, 700 metre realignment
		See Figure 1 (of this schedule) for works areas
Major Components Proposed Borrow Pits	Area 1A (existing pit)	Accessed from 16.25 SLK
	Area 1 (existing pit)	Accessed from 28.90 SLK
	Area 2 (existing pit)	Accessed from 37.30 SLK
	Area 3 (existing pit)	Accessed from 54.94 SLK
	Area 6 (new pit)	Accessed from 60.60 SLK
	Area 9A (existing pit)	Accessed from 74.91 SLK
	See Figure 1 (of this schedule) for borrow pit locations	
Area of disturbance	Approximately 12 hectares of disturbance for road realignments Approximately 4 hectares of disturbance for borrow pits	
Area of vegetation clearing	Approximately 12 hectares of vegetation clearing for road realignments Approximately 4 hectares of vegetation clearing for borrow pits	
Rehabilitation and revegetation	All areas of disturbance within the work areas shall be rehabilitated at the completion of construction works, including recontouring of disturbed areas and re-spreading of topsoil. All cleared land within the work areas shall be revegetated utilising local native species.	

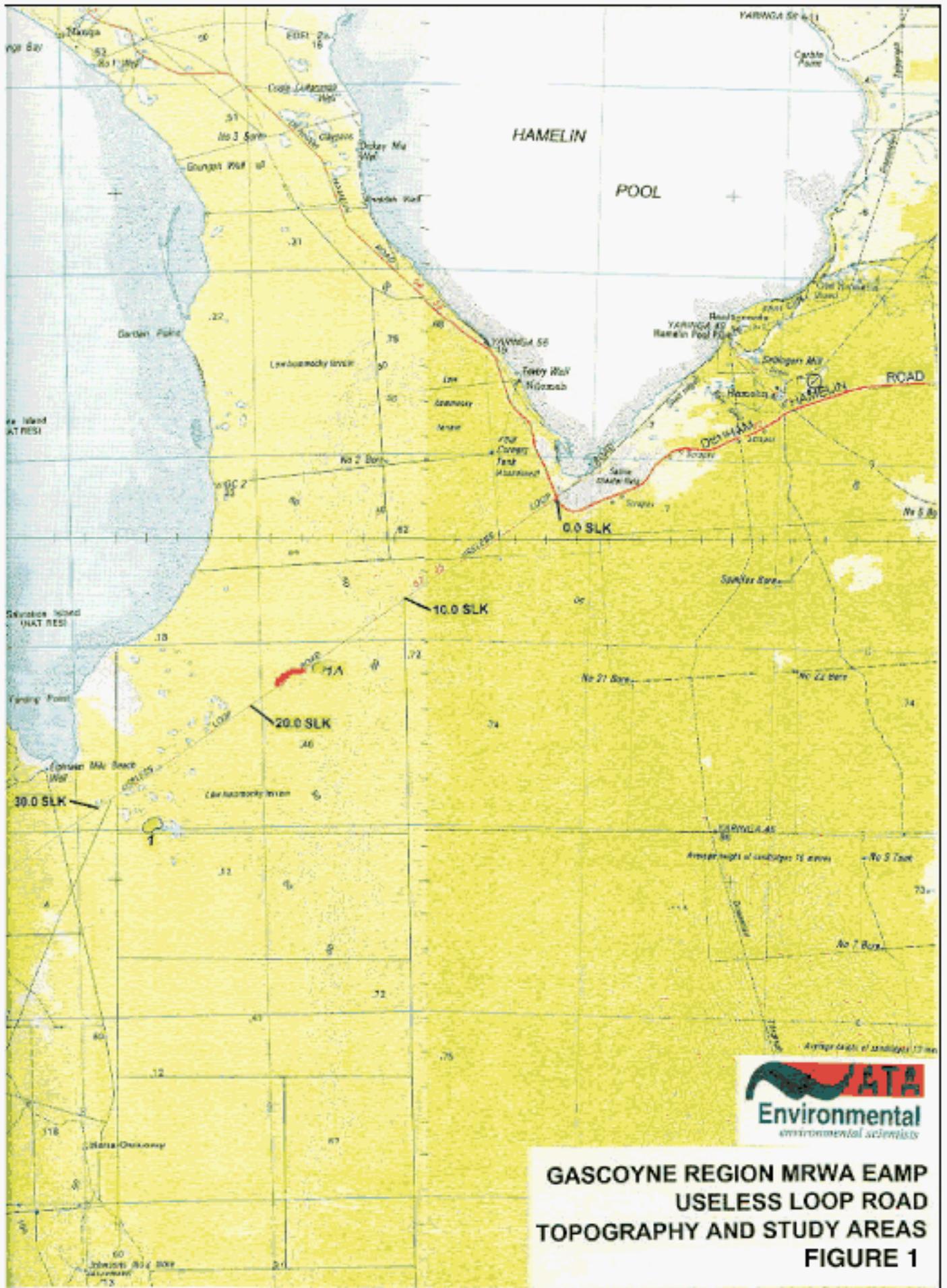


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LEGEND

Borrow Pits		5
Road Realignments		
Principal road; National route marker		10
Secondary road; Distance in kilometres		7.5
Minor road; Road bridge		5
Road		
Vehicle track		
Airfield; Landing ground		
Radar base; Tower		
Mine; Quarry or open cut mine		
Buildings; Homestead in sparsely settled area		
Trig station; Spot height		283
Contour with value; Depression contour		500
Sandridge; Sand		
Forest or scrub; Scattered vegetation; Mangrove		
Pine plantation; Orchard; plantation or vineyard		
Perennial lake; Perennial watercourse		
Intermittent lake; Intermittent watercourse		
Mainly dry lake; Mainly dry watercourse		
Swamp; Land subject to inundation		
Bore or well; Spring; Tank or small dam		

SOURCE: NATMAP 1984



**GASCOYNE REGION MRWA EAMP
USELESS LOOP ROAD
TOPOGRAPHY AND STUDY AREAS
FIGURE 1**

**Proponent's Consolidated Environmental Management
Commitments**

December 2000

**UPGRADE OF USELESS LOOP ROAD, SHARK BAY
(ASSESSMENT NUMBER 1364)**

MAIN ROADS WESTERN AUSTRALIA

Schedule 2: Proponent's environmental management commitments – Upgrade of Useless Loop Road, Shark Bay.

Main Roads Western Australia makes the following commitments to ensure appropriate environmental management of the proposed road works. The following management plan actions are first to be addressed in the specifications and/or drawings during the design phase, prior to being undertaken by the Contractor or responsible officer.

	Topic	Objective/s	Action	Timing	Advice
1	Consultation	To ensure that the potential environmental impacts of the proposal can be managed.	Main Roads WA will continue to liaise with the Department of Conservation and Land Management (CALM) on the implementation and management of this development.	Pre-construction Operation, Post-construction	CALM
2	Vegetation	To minimise and manage impact on native vegetation both within and outside the development areas.	Develop and implement a Vegetation Management Plan, relevant to the size and scope of the project, which addresses or provides for the following: <ul style="list-style-type: none"> • Develop a map which identifies the locations of priority flora along the route. • Instigate measures to minimise the amount of vegetation clearing, including limiting vegetation clearing to the edge of the earthworks and causing no damage to vegetation, landforms, or faunal habitat outside the work areas (as defined in the road design plans and pegged on the ground). • Continue to liaise with CALM in relation to native flora, particularly priority flora species, identified within the proposed works areas and management actions for such flora. 	Develop at Pre-construction phase. Implement during operation	CALM
3	Rehabilitation	To rehabilitate the site and minimise long term impact, including erosion at the site.	Develop and implement a Rehabilitation Management Plan, relevant to the size and scope of the project, which addresses or provides for the following: <ul style="list-style-type: none"> • All areas of disturbance arising from road work activity will be rehabilitated. • All cleared areas within the work areas will be revegetated. • Local native species will be used for revegetation. • Wherever possible, cleared vegetation will be used for rehabilitation and to minimise erosion. • Disturbed areas will be re-contoured to blend in with the surrounding environment. • Define the proposed monitoring of rehabilitation and erosion including, timing, threshold levels for mitigating action, and contingency plans for when those threshold levels are exceeded. • Define criteria for undertaking supplementary planting and seeding and erosion control measures. 	Develop at Pre-construction phase. Implement during operation	CALM

	Topic	Objective/s	Action	Timing	Advice
4	Topsoil	To ensure that topsoil is managed in a way to maximise its value in rehabilitation of disturbed areas.	<p>Develop and implement a Topsoil Management Plan, relevant to the size and scope of the project, which addresses or provides for the following:</p> <ul style="list-style-type: none"> • Equate volume of topsoil removed with the amount respread within work areas. • Topsoil will be removed from the work areas, stockpiled and stored to prevent degrading activities, such as flooding. • Develop a map of the proposed movement of topsoil. • Topsoil will not be transported between work areas. Topsoil, once stockpiled, will not be used except to be re-spread. • Define where topsoil will be re-spread, including on batter slopes, verges and rehabilitation areas. • Topsoil will be re-spread to appropriately reflect topography. • Topsoil will be re-spread to similar depths to which it was removed. • Topsoil will not be re-spread on birrida borrow pit areas. 	<p>Develop at Pre-construction phase.</p> <p>Implement during operation</p>	CALM
5	Drainage	To maintain natural drainage patterns at the development site, in particular at development areas which intercept significant drainage lines such as Brown Inlet and Depuch Loop.	<p>Develop and implement a Drainage Management Plan, relevant to the size and scope of the project, which addresses or provides for the following:</p> <ul style="list-style-type: none"> • Provide a map of natural drainage patterns. • Appropriately design drainage control structures will be installed to manage stormwater from all works areas, including road re-alignments and borrow pits. • Particular attention will be paid to maintaining natural drainage patterns and flows at development areas which intercept significant drainage lines such as Brown Inlet and Depuch Loop. • Appropriately designed culverts will be installed at drainage lines to ensure that surface water flow is not significantly obstructed. 	<p>Develop at Pre-construction phase.</p> <p>Implement during operation</p>	<p>Water and Rivers Commission</p> <p>Shire of Shark Bay</p>
6	Weeds	To minimise the transport of weeds.	<p>Develop and implement a Weed Management Plan, in line with the Main Roads WA standard specifications and relevant to the size and scope of the project, which addresses or provides for the following:</p> <ul style="list-style-type: none"> • Detail vehicle, plant and equipment hygiene (including wash down) procedures. • Monitoring for weeds within the upgraded sections of the road reserve shall be undertaken once per year (in spring). • Detail monitoring methodology. • Define threshold level of weed invasion that will instigate weed control measures. 	<p>Develop at Pre-construction phase.</p> <p>Implement during operation</p>	CALM
7	Dust and noise	To minimise potential impacts of dust and noise from the construction and operation of the road upgrade.	<p>Develop and implement a Dust and Noise Management Plan, relevant to the size and scope of the project, which addresses or provides for the following:</p> <ul style="list-style-type: none"> • Acceptable hours of operation will be detailed specifically. • Dust control measures, including spraying with water, shall be undertaken on cleared and exposed areas associated with road construction activity. Impacts of use of saline water for dust suppression will be managed. • Operations will comply with the Environmental Protection (Noise) Regulations 1997. 	<p>Develop at Pre-construction phase.</p> <p>Implement during operation</p>	CALM DEP

	Topic	Objective/s	Action	Timing	Advice
8	Visual Amenity	Minimise visual impact of proposed works.	<ul style="list-style-type: none"> Retain vegetation buffer between Useless Loop Road and borrow pits. Limit clearing of native vegetation and rehabilitate all disturbed areas. 	Construction	CALM
9	Rubbish	Minimise environmental impact from rubbish disposal.	<ul style="list-style-type: none"> All rubbish items shall be disposed of at the nearest waste disposal site. No rubbish shall be burned or buried on site. 	All development phases	Shire of Shark Bay
10	Fuel and Oils	Minimise environmental impact from fuel and oils.	<ul style="list-style-type: none"> Adhere to the Main Roads WA standard specifications for management of fuel and oil. 	All development phases	
11	Fire	Prevention of fire	<ul style="list-style-type: none"> Water tanks, equipment and personnel will be provided to fight any fires that commence in the work areas until the construction contract is concluded. 	All development phases	Shire of Shark Bay, CALM

CALM: Department of Conservation and Land Management, DEP: Department of Environmental Protection

The above management plans will be developed from the Main Roads WA standard specifications, to a level relevant to the size and scale of the project.

Main Roads WA have indicated that the contractor will be given responsibility for implementing Main Roads WA's commitments, except for ongoing monitoring arrangements which will be the responsibility of the Main Roads WA Project Manager. The Main Roads WA Asset Manager will be responsible for the preparation of compliance reports. Management plans and details may be incorporated into contractual arrangements for the protection of the environment.

Appendix 3

Details of Proponent Consultation

(from Section 2.16 of ATA Environmental (2000) *Environmental Assessment and Management Plan – Upgrade of Useless Loop Road*, (final December 2000))

2.16 Consultation

Various agencies and individuals were consulted to seek their views on the proposed road improvements and to identify any issues of concern. The following is a summary of the discussions held with the agencies and individuals.

CALM

Discussions have been held with Mr Brad Barton, District Operations Officer of the CALM, (Denham Office) and Mr Kelly Gillen Regional Manager CALM (Geraldton Office). CALM advised that the Useless Loop Road is situated within the Shark Bay World Heritage Area. Maintaining the visual character of the area was identified as a priority, as the visual character of the area is one of the World Heritage environmental attributes. The World Heritage issues related primarily to maintaining the visual character. CALM provided advice on the draft EAMP in June 2000, requesting further information be provided on the impacts on world heritage values, borrow pits, priority flora impacts and rehabilitation techniques. The draft EAMP was also submitted to the Scientific Advisory Committee and the Community Consultative Committee who both endorsed the comments made by CALM.

Extensive discussions, including site inspections, have been held between CALM and MRWA in relation to the presence of significant flora and the impacts of the work on World Heritage values.

It was noted that the sandhill frog (*Arenophryne rotunda*) can be found in sand dune habitat and that the proposed road improvements will affect some sand dunes. The proposed road improvements may therefore affect habitat for the sandhill frog. It is noted that the sandhill frog is not on the schedule fauna list issued by CALM (December 1999) and is therefore not regarded as threatened and 'in need of special protection'.

Rehabilitation and re-stabilisation will be necessary for dunes affected by the road improvements. The visual impact of borrow pits and stockpiles was identified as a concern due to the potential to significantly disrupt the visual character of the landscape. CALM requested that the location of borrow pits and stockpiles should be located to be as visually unobtrusive as possible and that borrow pits and stockpile areas should be rehabilitated using standard rehabilitation techniques used by MRWA. Use of new borrow pits for resource extraction should generally be avoided.

Shire of Shark Bay

Mr Alan Biggs, Shire Clerk of the Shire of Shark Bay, noted that information on Aboriginal sites may be available from Sandra Boulder, Murdoch University, who previously undertook an Aboriginal heritage assessment in the Shark Bay area.

Water and Rivers Commission

Mr Kevin Firth, Senior Water Resources Officer of the Water and Rivers Commission (Gascoyne District, Carnarvon) advised that the proposed road improvements are not likely to impact on groundwater resources in the area.

Agriculture Western Australia

Mr Terry Donnelly, District Agricultural Protection Officer of Agriculture Western Australia (Carnarvon Office) proposed that information on potential weed species (Agriculture WA information sheets) be supplied to construction workers to assist in identification of weed species. Earth moving equipment and construction plant should be cleaned prior to entry, to avoid the introduction of weed species and pathogens.

Carrarang Station

Mr Tony Millar of Carrarang Station advised that stock shearing would be in progress on the Station between April and May. During this time, fencelines must not be affected by any site works. Mr Millar advised that the portion of Useless Loop Road west of Brown Inlet was particularly susceptible to wind erosion, due to strong southerly winds in summer. Elevated land immediately to the west of Brown Inlet (coinciding with the proposed borrow pit area #11) had previously been grazed by cattle (in the early 1990s) which has led to erosion. Regeneration of the vegetation has been limited. It was also noted that there is an erosion risk in the vicinity of the False Entrance turnoff (near proposed borrow pit 12) due to the sandy soil.

Tamala Station

Mr Ian King, manager of Tamala Station has advised that future wind erosion of any disturbed areas is of concern and that adequate measures must be taken to either revegetate or compact susceptible areas with suitable material.