



Environmental Protection Authority

Referral of a Proposal by the Proponent to the Environmental Protection Authority under Section 38(1) of the *Environmental Protection Act 1986*.

EPA REFERRAL
FORM
PROPONENT

PURPOSE OF THIS FORM

Section 38(1) of the *Environmental Protection Act 1986* (EP Act) provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the EP Act. This form sets out the information requirements for the referral of a proposal by a proponent.

Proponents are encouraged to familiarise themselves with the EPA's *General Guide on Referral of Proposals* [see Environmental Impact Assessment/Referral of Proposals and Schemes] before completing this form.

A referral under section 38(1) of the EP Act by a proponent to the EPA must be made on this form. A request to the EPA for a declaration under section 39B (derived proposal) must be made on this form. This form will be treated as a referral provided all information required by Part A has been included and all information requested by Part B has been provided to the extent that it is pertinent to the proposal being referred. Referral documents are to be submitted in two formats – hard copy and electronic copy. The electronic copy of the referral will be provided for public comment for a period of 7 days, prior to the EPA making its decision on whether or not to assess the proposal.

CHECKLIST

Before you submit this form, please check that you have:

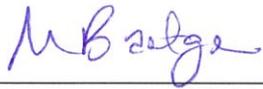
	Yes	No
Completed all the questions in Part A (essential).	✓	
Completed all applicable questions in Part B.	✓	
Included Attachment 1 – location maps.	✓	
Included Attachment 2 – additional document(s) the proponent wishes to provide (if applicable).	✓	
Included Attachment 3 – confidential information (if applicable).		✓
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping but excluding confidential information.	✓	

Following a review of the information presented in this form, please consider the following question (a response is optional).

Do you consider the proposal requires formal environmental impact assessment?		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Not sure
If yes, what level of assessment?		
<input type="checkbox"/> Assessment on Proponent Information	<input type="checkbox"/> Public Environmental Review	

PROPONENT DECLARATION (to be completed by the proponent)

I, ...Marni Baetge..., (*full name*) declare that I am authorised on behalf of...Main Roads Western Australia.... (being the person responsible for the proposal) to submit this form and further declare that the information contained in this form is true and not misleading.

Signature: 	Name (print): Marni Baetge
Position: Environment Officer	Company: Main Roads Western Australia
Date: 8 th August 2013	

PART A - PROPONENT AND PROPOSAL INFORMATION

(All fields of Part A must be completed for this document to be treated as a referral)

1 PROPONENT AND PROPOSAL INFORMATION

1.1 Proponent

Name	Main Roads WA
Joint Venture parties (if applicable)	N/A
Australian Company Number (if applicable)	ABN: 50 860 676 021
Postal Address (where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State)	Main Roads Western Australia Don Aitken Centre Waterloo Crescent East Perth Perth WA 6004
Key proponent contact for the proposal: <ul style="list-style-type: none">• name• address• phone• email	Marni Baetge PMB 959 Derby WA 6728 (08) 9158 4318 marni.baetge@mainroads.wa.gov.au
Consultant for the proposal (if applicable): <ul style="list-style-type: none">• name• address• phone• email	Drew Farrar GHD 239 Adelaide Terrace Perth WA 6004 Australia (61) 6222 8000 drew.farrar@ghd.com

1.2 Proposal

Title	Cape Leveque Road Upgrade
Description	The Cape Leveque Road is located within the Shire of Broome and runs from the Broome Highway, east of the Broome townsite, to the northern Dampier Peninsula for a length of approximately 200 kilometres (km). Various sections of the Cape Leveque Road have been upgraded to a sealed standard over the last ten years. The remaining 77.6 km of unsealed road (SLK 25 to 102.6) is to be constructed to a sealed standard over the next 3 to 4 years. Upgrade of the road is proposed to commence during 2014 if all required approvals are in place.
Extent (area) of proposed ground disturbance.	The Project area consists of a 77.6 km long x 200 m wide corridor between SLK 25 and SLK 102.6 on the Cape Leveque Road with some small deviations or alternative alignments.

	<p>The proposed Impact area (area to be cleared for road construction) will include:</p> <ul style="list-style-type: none"> • The main road alignment (approximately 77.6 km long x 20-30 m wide), proposed to be located generally parallel to the existing alignment, which covers a total area of 172.05 ha. This area includes an intersection and side road at SLK 58; approximately 2 km long x 20-30 m wide, totalling approximately 4 ha. • 36 borrow pits, which cover a total area of 60.95 ha. • Offshoot drains. Drains will be located approximately every 170 m. Each will cover an area of approximately 500 m², totalling approximately 22 ha. • Access tracks (10 m x 5000 m), a total of approximately 5 ha. • 20% contingency amount for any required additional works equalling 52 ha. <p>In total the proposed Impact area is 297 ha.</p>
<p>Timeframe in which the activity or development is proposed to occur (including start and finish dates where applicable).</p>	<p>The unsealed road (SLK 25 to 102.6) is to be constructed to a sealed standard over the next 3 to 4 years. Upgrade of the road is proposed to commence during 2014 dry season (May to October).</p>
<p>Details of any staging of the proposal.</p>	<p>It is proposed that the section between SLK 65 – 102.6 will be progressed initially, followed by the remainder of the alignment.</p>
<p>Is the proposal a strategic proposal?</p>	<p>No</p>
<p>Is the proponent requesting a declaration that the proposal is a derived proposal? If so, provide the following information on the strategic assessment within which the referred proposal was identified:</p> <ul style="list-style-type: none"> • title of the strategic assessment; and • Ministerial Statement number. 	<p>N/A</p>
<p>Please indicate whether, and in what way, the proposal is related to other proposals in the region.</p>	<p>Current road upgrades for the section of the Cape Leveque Road from SLK 12.7 to SLK 25 is under referral to</p>

	the Federal Government.
Does the proponent own the land on which the proposal is to be established? If not, what other arrangements have been established to access the land?	Cape Leveque Road is a Local Government road; however, Main Roads is responsible for the management of improvement works along this road. The Project area traverses a number of different land tenures including leasehold for pastoralism and road reserve.
What is the current land use on the property, and the extent (area in hectares) of the property?	<p>Current land uses in the region includes Indigenous uses, nature conservation and cattle grazing. It is expected that the road upgrade will have minimal effect on the current land use within the region.</p> <p>The Project area consists of a 77.6 km long x 200 m wide corridor with a total area of 1552 hectares.</p>

1.3 Location

Name of the Shire in which the proposal is located.	Broome Shire
<p>For urban areas:</p> <ul style="list-style-type: none"> • street address; • lot number; • suburb; and • nearest road intersection. 	N/A
<p>For remote localities:</p> <ul style="list-style-type: none"> • nearest town; and • distance and direction from that town to the proposal site. 	The Cape Leveque Road is located from the Broome Highway, east of the Broome townsite, to the northern Dampier Peninsula for a length of approximately 200 kilometres. The section of this road under consideration for this referral is the unsealed road between SLK 25 to 102.6.
<p>Electronic copy of spatial data - GIS or CAD, geo-referenced and conforming to the following parameters:</p> <ul style="list-style-type: none"> • GIS: polygons representing all activities and named; • CAD: simple closed polygons representing all activities and named; • datum: GDA94; • projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA); • format: Arcview shapefile, Arcinfo coverages, Microstation or AutoCAD. 	<p>Enclosed.</p> <p>Please note: The proposed impact area presented within the Project area represents the proposed main alignment and borrow pits only. The location of the offshoot drains and small access tracks are not mapped because their exact position cannot accurately be determined at this stage in the planning and design process.</p>

1.4 Confidential Information

Does the proponent wish to request the EPA to allow any part of the referral information to be treated as confidential?	No
If yes, is confidential information attached as a separate document in hard copy?	No

1.5 Government Approvals

Is rezoning of any land required before the proposal can be implemented? If yes, please provide details.		No	
Is approval required from any Commonwealth or State Government agency or Local Authority for any part of the proposal? If yes, please complete the table below.		Yes	
Agency/Authority	Approval required	Application lodged Yes / No	Agency/Local Authority contact(s) for proposal
Department of Environmental Regulation	Clearing Permit (if this Project is not assessed by the EPA and cannot be implemented under the Main Roads Purpose Permit (CPS 818/8))	No	
Department of Water	A Licence to Take Water and a Licence to Construct or Alter Well are already in effect for this Project.	Yes	Department of Water Karis Tingey (08) 9166 4124
Department of Sustainability, Environment, Water Population and Communities	The Project is currently being referred under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	Yes	

PART B - ENVIRONMENTAL IMPACTS AND PROPOSED MANAGEMENT

2. ENVIRONMENTAL IMPACTS

Describe the impacts of the proposal on the following elements of the environment, by answering the questions contained in Sections 2.1-2.11:

- 2.1 flora and vegetation;
- 2.2 fauna;
- 2.3 rivers, creeks, wetlands and estuaries;
- 2.4 significant areas and/ or land features;
- 2.5 coastal zone areas;
- 2.6 marine areas and biota;
- 2.7 water supply and drainage catchments;
- 2.8 pollution;
- 2.9 greenhouse gas emissions;
- 2.10 contamination; and
- 2.11 social surroundings.

These features should be shown on the site plan, where appropriate.

For all information, please indicate:

- (a) the source of the information; and
- (b) the currency of the information.

2.1 Flora and Vegetation

2.1.1 Do you propose to clear any native flora and vegetation as a part of this proposal?

[A proposal to clear native vegetation may require a clearing permit under Part V of the EP Act (Environmental Protection (Clearing of Native Vegetation) Regulations 2004)]. Please contact the Department of Environment and Conservation (DEC) for more information.

(please tick) Yes **If yes, complete the rest of this section.**

No **If no, go to the next section**

2.1.2 How much vegetation are you proposing to clear (in hectares)?

The proposed Impact area includes:

- The main road alignment (approximately 77.6 km long x 20-30 m wide), proposed to be located generally parallel to the existing alignment, which covers a total area of 172.05 ha. This area includes an intersection and side road at SLK 58; approximately 2 km long x 20-30 m wide, totalling approximately 4 ha.
- 36 borrow pits, which cover a total area of 60.95 ha.

- Offshoot drains. Drains will be located approximately every 170 m. Each will cover an area of approximately 500 m², totalling approximately 22 ha.
- Access tracks (10 m x 5000 m), a total of approximately 5 ha.
- 20% contingency amount for any required additional works equalling 52 ha.

The proposed Impact area is 297 ha, with approximately 15 ha of overlap between the road alignment and proposed borrow pits.

2.1.3 Have you submitted an application to clear native vegetation to the DEC (unless you are exempt from such a requirement)?

Yes No **If yes**, on what date and to which office was the application submitted of the DEC?

An application will be submitted and approval obtained prior to works if the Project is not formally assessed by the EPA and the regulator considers the Project to be seriously at variance to one or more of the 10 Clearing principles. Otherwise, Main Roads may use their State-wide Purpose Permit (CPS 818/8) granted under section 51E of the *Environmental Protection Act 1986*.

2.1.4 Are you aware of any recent flora surveys carried out over the area to be disturbed by this proposal?

Yes No **If yes**, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey(s).

If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.

A flora and vegetation report undertaken by GHD (July 2013) is attached. The field survey was conducted in March 2013.

2.1.5 Has a search of DEC records for known occurrences of rare or priority flora or threatened ecological communities been conducted for the site?

Yes No If you are proposing to clear native vegetation for any part of your proposal, a search of DEC records of known occurrences of rare or priority flora and threatened ecological communities will be required. Please contact DEC for more information.

A search for rare and priority flora and TECs were undertaken as part of the flora and vegetation assessment described above.

2.1.6 Are there any known occurrences of rare or priority flora or threatened ecological communities on the site?

Yes

No

If yes, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

No State or Federally listed threatened ecological communities (TECs) were identified during the GHD 2013 survey. Database searches identified one Threatened Ecological Community (TEC) potentially occurring within 10 km of the Project area. This TEC, the 'Roebuck Bay mudflats – Species-rich faunal community of the intertidal mudflats of Roebuck Bay' is listed as Vulnerable. There was no evidence of this TEC within the Project area.

Three DEC-listed Priority flora taxa were identified within and adjacent to the proposed Project area:

- *Glycine pindanica* (Priority 1).
- *Ipomoea* sp. A Kimberley Flora (L.J. Penn 84) (Priority 1).
- *Jacquemontia* sp. Broome (A.A. Mitchell 3028) (Priority 1).

Glycine pindanica

Glycine pindanica is a disturbance response taxon and was recorded growing in often large, continuous clumps along the edge of the existing Cape Leveque Road. This taxon was recorded from SLK 25.5 to 99.5, with the densest occurrences occurring from SLK 29.5 to 60.5 and SLK 70 to 72 along the existing Cape Leveque Road. During the 2013 GHD field survey *G. pindanica* was also recorded from two new locations outside of the proposed Project area including Mcquigan Road (approximately 6 km west from Cape Leveque Road) and Crab Creek Road (approximately 1.1 km from the Broome Highway). It is likely that *G. pindanica* is more common than FloraBase records indicate, especially in areas of recent or increased disturbance. Additionally, increased disturbance in areas where this taxon is already present is likely to increase its frequency and extent.

***Ipomoea* sp. A Kimberley Flora (L.J. Penn 84)**

Ipomoea sp. A Kimberley Flora (L.J. Penn 84) was recorded from approximately SLK 49 to 56, with a single record at SLK 67.5, during the March 2013 survey. A total of eight individuals were recorded within the proposed Impact area and 32 individuals outside, but adjacent to the proposed Impact area. Current records obtained from FloraBase indicate that *I. sp. A Kimberley Flora* (L.J. Penn 84) is only known from one location on the Dampier Peninsula, where one plant was recorded growing adjacent to the Beagle Bay track in Eucalypt woodland. The records of *I. sp. A Kimberley Flora* (L.J. Penn 84) from the Cape Leveque Road area represents a new locality and a significant increase in the number of individuals known in Western Australia.

***Jacquemontia* sp. Broome (A.A. Mitchell 3028)**

Jacquemontia sp. Broome (A.A. Mitchell 3028) was recorded from approximately SLK 28 to 83.5, where a total of five individuals were recorded within the proposed Impact area and six individuals outside, but generally adjacent to the proposed Impact area. It is expected that this taxon will be more widespread than currently recorded as it is often difficult to locate in the field due to its ability to 'blend in' with the surrounding vegetation. Current records obtained from FloraBase indicate that *J. sp. Broome* (A.A. Mitchell 3028) is only known from several locations on the Dampier Peninsula. The records of *J. sp. Broome* (A.A. Mitchell 3028) from the Cape Leveque Road area represents a significant increase in the number of individuals known in Western Australia.

2.1.7 If located within the Perth Metropolitan Region, is the proposed development within or adjacent to a listed Bush Forever Site? (You will need to contact the Bush Forever Office, at the Department for Planning and Infrastructure)

Yes

No

If yes, please indicate which Bush Forever Site is affected (site number and name of site where appropriate).

N/A The Project is not in the Perth Metropolitan Area.

2.1.8 What is the condition of the vegetation at the site?

Over 97 % of the vegetation within the proposed Impact area was rated as Excellent (2) in condition. The remainder of the proposed Impact area was rated as Completely Degraded (6); this included roads, tracks, culverts and existing cleared areas. This is representative of the broader Project area. Evidence of disturbance was generally restricted to roads, tracks and culverts. Small localised areas of disturbance occur at old borrow pits and dams.

A total of five weed species were recorded within the Project area, with two of these species occurring within the proposed Impact area. The two introduced taxa identified in the 2013 GHD survey were **Stylosanthes scabra* and **Hyptis suaveolens*. Both taxa were restricted to isolated occurrences adjacent to the existing road and in other disturbed areas such as drainage culverts. No Declared Plants or WoNS were recorded from the survey area.

2.2 Fauna

2.2.1 Do you expect that any fauna or fauna habitat will be impacted by the proposal?

(please tick)

Yes

If yes, complete the rest of this section.

No

If no, go to the next section.

2.2.2 Describe the nature and extent of the expected impact.

The Project involves clearing of up to 297 ha of vegetation which will impact fauna habitat. An assessment was conducted on the conservation significant species identified in the Naturemap search tool as potentially occurring in the Project area. Based on this likelihood of occurrence assessment, significant impacts to Greater Bilby habitat are expected. The other significant species identified via the desktop search were either considered unlikely to occur in the Project area or the Project area did not consist of significant habitat. An assessment of the significance of the impact of this Project on the Greater Bilby is included in Section 4 of the Greater Bilby Survey Report (GHD 2013) (attached).

2.2.3 Are you aware of any recent fauna surveys carried out over the area to be disturbed by this proposal?

- Yes No **If yes**, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey(s).
If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.

A fauna survey was undertaken in 2007 by GHD. More recently a targeted Gouldian Finch survey and Greater Bilby survey were undertaken by GHD in March 2013 and December 2012 respectively (attached).

2.2.4 Has a search of DEC records for known occurrences of Specially Protected (threatened) fauna been conducted for the site?

- Yes No (please tick)

2.2.5 Are there any known occurrences of Specially Protected (threatened) fauna on the site?

- Yes No **If yes**, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.

Greater Bilby (*Macrotis lagotis*)

The Greater Bilby is listed as Vulnerable under the Western Australian *Wildlife Conservation Act 1950* (WC Act). A targeted Bilby survey was undertaken by two experienced GHD ecologists in December 2012. This survey identified multiple records of Bilby use including diggings, burrows both active and old, and images of Bilby recorded on camera traps. As discussed by SKM (2012) Bilby habitat is considered highly variable. The field survey results concluded that there were no areas within the survey area that would not be suitable for Bilby habitat.

The targeted Greater Bilby Survey Report and the Greater Bilby Management Plan are both attached.

Gouldian Finch (*Erythrura gouldiae*)

The Gouldian Finch was reported to field staff during the 2012 field assessment as a recent discovery in the Dampier Peninsular. The birds were recorded approximately 15 km south of the Country Down Turnoff within the vicinity of the Project area. The flock consisted of 10 -15 birds drinking from the road side water body. The Gouldian Finch is listed as Priority 4 under DEC after being downgraded from Vulnerable in 2012. A Gouldian Finch Assessment was undertaken by two experienced GHD Ecologists in March 2013. No signs of Gouldian finches were recorded. Two areas were identified as having suitable habitat for Gouldian Finches. These areas are in between SLK 60 to 62 and SLK 73 to 78.

Australian Bustard (*Ardeotis australis*)

While not recorded in the desktop searches, the Australian Bustard (*Ardeotis australis*) which is listed as a Priority four by the DPAW was recorded in the Project area during the 2012 targeted Bilby survey. This species is widely distributed across Australia in a wide range of habitats that is known to migrate to suitable feeding areas dependent upon conditions. Given the availability of suitable habitat in the local area and surrounding region, the proposed project is unlikely to have a significant impact on this species.

2.3 Rivers, Creeks, Wetlands and Estuaries

2.3.1 Will the development occur within 200 metres of a river, creek, wetland or estuary?

- (please tick) Yes **If yes**, complete the rest of this section.
 No **If no**, go to the next section.

2.3.2 Will the development result in the clearing of vegetation within the 200 metre zone?

- Yes No **If yes**, please describe the extent of the expected impact.

2.3.3 Will the development result in the filling or excavation of a river, creek, wetland or estuary?

- Yes No **If yes**, please describe the extent of the expected impact.

2.3.4 Will the development result in the impoundment of a river, creek, wetland or estuary?

- Yes No **If yes**, please describe the extent of the expected impact.

2.3.5 Will the development result in draining to a river, creek, wetland or estuary?

Yes No **If yes**, please describe the extent of the expected impact.

2.3.6 Are you aware if the proposal will impact on a river, creek, wetland or estuary (or its buffer) within one of the following categories? (please tick)

Conservation Category Wetland	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure
Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure
Perth's Bush Forever site	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure
Environmental Protection (Swan & Canning Rivers) Policy 1998	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure
The management area as defined in s4(1) of the <i>Swan River Trust Act 1988</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure
Which is subject to an international agreement, because of the importance of the wetland for waterbirds and waterbird habitats (e.g. Ramsar, JAMBA, CAMBA)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Unsure

2.4 Significant Areas and/ or Land Features

2.4.1 Is the proposed development located within or adjacent to an existing or proposed National Park or Nature Reserve?

Yes No **If yes**, please provide details.

2.4.2 Are you aware of any Environmentally Sensitive Areas (as declared by the Minister under section 51B of the EP Act) that will be impacted by the proposed development?

Yes No **If yes**, please provide details.

A search of the DPaW Native Vegetation Viewer did identify a number of Environmentally Sensitive Areas (ESAs) within the vicinity of the Project area. The closest ESA is approximately 6 km south-west of the Project area and is associated with the Roebuck Bay mudflats TEC, which is listed as a Ramsar wetland and Vulnerable by the DPaW. The remaining ESAs are located west of the Project area, along the Dampier Peninsula and are associated with the 'Monsoon thickets – Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula' TEC. This TEC is listed as Endangered under the EPBC Act and Vulnerable by the DPaW. These are at a sufficient distance from the Project not to be impacted by the proposal.

2.4.3 Are you aware of any significant natural land features (e.g. caves, ranges etc) that will be impacted by the proposed development?

Yes No **If yes**, please provide details.

2.5 Coastal Zone Areas (Coastal Dunes and Beaches)

2.5.1 Will the development occur within 300metres of a coastal area?

(please tick) Yes **If yes**, complete the rest of this section.
 No **If no**, go to the next section.

2.5.2 What is the expected setback of the development from the high tide level and from the primary dune? N/A

2.5.3 Will the development impact on coastal areas with significant landforms including beach ridge plain, cusped headland, coastal dunes or karst?

Yes No **If yes**, please describe the extent of the expected impact.

2.5.4 Is the development likely to impact on mangroves?

Yes No **If yes**, please describe the extent of the expected impact.

2.6 Marine Areas and Biota

2.6.1 Is the development likely to impact on an area of sensitive benthic communities, such as seagrasses, coral reefs or mangroves?

Yes No **If yes**, please describe the extent of the expected impact.

2.6.2 Is the development likely to impact on marine conservation reserves or areas recommended for reservation (as described in *A Representative Marine Reserve System for Western Australia*, CALM, 1994)?

Yes No **If yes**, please describe the extent of the expected impact.

2.6.3 Is the development likely to impact on marine areas used extensively for recreation or for commercial fishing activities?

Yes

No

If yes, please describe the extent of the expected impact, and provide any written advice from relevant agencies (e.g. Fisheries WA).

2.7 Water Supply and Drainage Catchments

2.7.1 Are you in a proclaimed or proposed groundwater or surface water protection area?

(You may need to contact the Department of Water (DoW) for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)

Yes

No

If yes, please describe what category of area.

The project is in a Proclaimed groundwater area under the *Rights in Water and Irrigation Act 1914*. Main Roads has applied for and been issued a 26D Licence to construct a well and 5C Licence to take groundwater to support the construction of this Project from the Department of Water.

2.7.2 Are you in an existing or proposed Underground Water Supply and Pollution Control area?

(You may need to contact the DoW for more information on the requirements for your location, including the requirement for licences for water abstraction. Also, refer to the DoW website)

Yes

No

If yes, please describe what category of area.

2.7.3 Are you in a Public Drinking Water Supply Area (PDWSA)?

(You may need to contact the DoW for more information or refer to the DoW website. A proposal to clear vegetation within a PDWSA requires approval from DoW.)

Yes

No

If yes, please describe what category of area.

The DoW Geographic Data Atlas indicates that the road alignment is adjacent to the Broome Water Reserve. Broome's water supply is obtained from bores screened in the unconfined Broome Sandstone aquifer north east of town. The Broome Water Reserve covers the wellfield and groundwater recharge areas. The aquifer is directly recharged from rainfall, which makes it vulnerable to contamination from inappropriate land uses (DoW 2012).

In the Management Plan for the Broome Water Reserve it is specified that the reserve to the east of the Cape Leveque Road should be managed for Priority 1 source protection. The DoW (DoE 2004) indicates that 'major transport infrastructure (roads, railways)' are incompatible in P1 areas. However, the DoW policy is that existing approved land uses / activities can continue at their presently approved level, provided they operate lawfully.

The management plan for this reserve (DoW 2012) specifies that new regional roads should avoid the Water Reserve and design measures should be implemented for existing roads to direct stormwater away from production bores. While the Cape Leveque Road alignment runs close to or adjacent to

the Water Reserve for around 15 km, it is at sufficient distance from the existing production bores that the risk of adverse impact on the water source will be low. However, management actions will be incorporated to avoid or reduce the likelihood of contamination or pollution of the water reserve.

2.7.4 Is there sufficient water available for the proposal?

(Please consult with the DoW as to whether approvals are required to source water as you propose. Where necessary, please provide a letter of intent from the DoW)

Yes No (please tick)

2.7.5 Will the proposal require drainage of the land?

Yes No **If yes**, how is the site to be drained and will the drainage be connected to an existing Local Authority or Water Corporation drainage system? Please provide details.

2.7.6 Is there a water requirement for the construction and/ or operation of this proposal?

(please tick) Yes **If yes**, complete the rest of this section.
 No **If no**, go to the next section.

2.7.7 What is the water requirement for the construction and operation of this proposal, in kilolitres per year?

The 5C licence issued by DoW entitles Main Roads to take water, subject to certain terms, conditions and restrictions. It is estimated the annual water requirement will be approximately 8,000 Kilolitres (kL), whereas the approved limit on the 5C licence is 20,000 kL per annum.

2.7.8 What is the proposed source of water for the proposal? (e.g. dam, bore, surface water etc.)

Water will be obtained from bores located at approximately SLK 99.9 and SLK 60 along the existing Cape Leveque Road.

2.8 Pollution

2.8.1 Is there likely to be any discharge of pollutants from this development, such as noise, vibration, gaseous emissions, dust, liquid effluent, solid waste or other pollutants?

(please tick) Yes **If yes**, complete the rest of this section.
 No **If no**, go to the next section.

Noise, Vibration and Air Quality

There are no residents nearby or within close proximity of the proposed works that will be impacted by noise or vibration generated during the road

improvement works. Noise and vibration from traffic occurs at present, however; the volume of traffic is low and is not likely to change significantly as a result of the proposed works and air quality is not likely to change as a result of increased vehicles. Noise, vibration and air quality will be managed during construction through the Project Construction Environmental Management Plan (CEMP).

Dust

The sandy soils of the Project area may create dust during road improvement works, especially at the locations away from the road side, however; the surrounding area is not populated and it is therefore considered that dust generated is unlikely to create a significant social nuisance. Dust suppression will be undertaken to prevent environmental impacts resulting from excess dust during construction. Dust generation may be an issue for users of the existing highway and management measures will be implemented to address this potential issue.

Solid Waste

Solid wastes will be generated during construction and will be disposed of to an appropriate licenced facility.

2.8.2 Is the proposal a prescribed premise, under the Environmental Protection Regulations 1987?

(Refer to the EPA's *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* for more information)

Yes No **If yes**, please describe what category of prescribed premise.

2.8.3 Will the proposal result in gaseous emissions to air?

Yes No **If yes**, please briefly describe.

2.8.4 Have you done any modelling or analysis to demonstrate that air quality standards will be met, including consideration of cumulative impacts from other emission sources?

Yes No **If yes**, please briefly describe.

2.8.5 Will the proposal result in liquid effluent discharge?

Yes No **If yes**, please briefly describe the nature, concentrations and receiving environment.

There is a minor risk that the construction works could create temporary pollution as a result of fuel or chemical spills. This will be managed through the Project CEMP.

2.8.6 If there is likely to be discharges to a watercourse or marine environment, has any analysis been done to demonstrate that the State Water Quality Management Strategy or other appropriate standards will be able to be met?

Yes No **If yes**, please describe.

2.8.7 Will the proposal produce or result in solid wastes?

Yes No **If yes**, please briefly describe the nature, concentrations and disposal location/ method.

Construction works will result in construction wastes however these will be disposed of at an appropriate landfill location. Wastes on site will be management through the Project CEMP.

2.8.8 Will the proposal result in significant off-site noise emissions?

Yes No **If yes**, please briefly describe.

2.8.9 Will the development be subject to the Environmental Protection (Noise) Regulations 1997?

Yes No **If yes**, has any analysis been carried out to demonstrate that the proposal will comply with the Regulations?

Please attach the analysis.

Project construction will comply with the *Environmental Protection (Noise) Regulations 1997*.

2.8.10 Does the proposal have the potential to generate off-site, air quality impacts, dust, odour or another pollutant that may affect the amenity of residents and other “sensitive premises” such as schools and hospitals (proposals in this category may include intensive agriculture, aquaculture, marinas, mines and quarries etc.)?

Yes No **If yes**, please describe and provide the distance to residences and other “sensitive premises”.

There are no residents nearby or within close proximity of the proposed works.

2.8.11 If the proposal has a residential component or involves “sensitive premises”, is it located near a land use that may discharge a pollutant?

Yes No Not Applicable

If yes, please describe and provide the distance to the potential pollution source

2.9 Greenhouse Gas Emissions

2.9.1 Is this proposal likely to result in substantial greenhouse gas emissions (greater than 100 000 tonnes per annum of carbon dioxide equivalent emissions)?

Yes No

If yes, please provide an estimate of the annual gross emissions in absolute and in carbon dioxide equivalent figures.

2.9.2 Further, if yes, please describe proposed measures to minimise emissions, and any sink enhancement actions proposed to offset emissions.

2.10 Contamination

2.10.1 Has the property on which the proposal is to be located been used in the past for activities which may have caused soil or groundwater contamination?

Yes No Unsure **If yes**, please describe.

A search of the DEC's Contaminated Sites Database indicated that no recorded contaminated sites or potentially contaminated sites are within the Project area. The land has been predominantly used for low intensity farming and the likelihood of contamination from this land use is low.

2.10.2 Has any assessment been done for soil or groundwater contamination on the site?

Yes No **If yes**, please describe.

2.10.3 Has the site been registered as a contaminated site under the *Contaminated Sites Act 2003*? (on finalisation of the CS Regulations and proclamation of the CS Act)

Yes No **If yes**, please describe.

2.11 Social Surroundings

2.11.1 Is the proposal on a property which contains or is near a site of Aboriginal ethnographic or archaeological significance that may be disturbed?

Yes No Unsure **If yes**, please describe.

2.11.2 Is the proposal on a property which contains or is near a site of high public interest (e.g. a major recreation area or natural scenic feature)?

Yes No **If yes**, please describe.

2.11.3 Will the proposal result in or require substantial transport of goods, which may affect the amenity of the local area?

Yes

No

If **yes**, please describe.

3. PROPOSED MANAGEMENT

3.1 Principles of Environmental Protection

3.1.1 Have you considered how your project gives attention to the following Principles, as set out in section 4A of the EP Act? (For information on the Principles of Environmental Protection, please see EPA Position Statement No. 7, available on the EPA website)

- | | | |
|--|---|-----------------------------|
| 1. The precautionary principle. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2. The principle of intergenerational equity. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 3. The principle of the conservation of biological diversity and ecological integrity. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 4. Principles relating to improved valuation, pricing and incentive mechanisms. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| 5. The principle of waste minimisation. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

3.1.2 Is the proposal consistent with the EPA's Environmental Protection Bulletins/Position Statements and Environmental Assessment Guidelines/Guidance Statements (available on the EPA website)?

Yes

No

3.2 Consultation

3.2.1 Has public consultation taken place (such as with other government agencies, community groups or neighbours), or is it intended that consultation shall take place?

Yes

No

If **yes**, please list those consulted and attach comments or summarise response on a separate sheet.

Main Roads has undertaken extensive consultation with Aboriginal groups of the Dampier Peninsula. Main Roads presented the proposal to the Shire of Broome and met with the Shire a number of times to discuss the proposal. A Project Information Sheet was distributed to the public through the Shire of Broome. Details regarding the project were presented to the general public at the Broome Expo. Project Manager Michael Hickling has also been interviewed on the ABC radio station and provided information regarding further development activities required and anticipated construction dates.

References

Department of Environment (DoE) 2004, '*Land use compatibility in Public Drinking Water Source Areas*', Water Quality Protection Note, Perth, Department of Environment.

Department of Water (DoW) 2012, '*Broome Water Reserve, drinking water source protection plan*', Water resource protection series, Report No. 100, Perth, Department of Water.

SKM 2012, Browse Bilby Review, Consolidated Information Relating to the Occurrence of the Bilby (*Macrotis lagotis*) in the Vicinity of the Browse LNG Precinct and Broadly on the Dampier Peninsular.