20 November 2018

Industrial Licence
Department of Water and Environment Regulation
The Atrium, Level 4
168 St Georges Terrace
PERTH WA 6000

Dear Sir/Madam

Bow River Quarry: Works Approval Application

1. Background
Main Roads Western Australia is planning to commence a rock quarrying program at our Bow River Quarry, in the Shire of Wyndham East Kimberley.

The proposed works are expected to commence in April 2019. This letter serves to provide supporting information to our completed application form.

2. Land Tenure and Ownership
The Premises on which this application relates to is Lot 865 on Plan 27701, also listed as reserve (R) 46647.

R46647 is a Crown Reserve vested in the Commissioner of Main Roads for Gravel. The boundaries of Lot 865 are illustrated in Figure 1. Main Roads therefore does not need any planning approvals for the extraction of material from the Reserve, however will require relevant environmental approvals.

3. Description of Proposed Activities
The following works are to be conducted within the Bow River Quarry (Lot 865).

- Clearing of a 1.4 ha of native vegetation (regrowth) for an expansion of the existing pits during the site preparation phase; and

- Extraction, crushing and screening of approximately 400,000 tonnes of hard rock (granite) via conventional bulldozer/rock breakers as well as drill and blast during the commissioning and operating phases (to be undertaken in accordance with DMP requirements by a suitably qualified contractor)

Note that commissioning works will continue until a licence is granted by the Department. These works fall into the following categories of prescribed premises:

- **12** – Screening etc. of material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated
Table 1 below describes the specific activities that constitute categorisation into the above categories.

Table 1: Activity Descriptions

<table>
<thead>
<tr>
<th>Category</th>
<th>Activity Description</th>
<th>Approximate Volume/Tonnage</th>
<th>Duration of Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Drill and Blast followed by extraction, crushing and screening of material.</td>
<td>Up to 400,000 Tonnes</td>
<td>April 2019 – September 2019</td>
</tr>
</tbody>
</table>

4. Competency of the Operator

Extraction, crushing and screening of materials will be contracted out to a suitable operator with experience in similar sized and larger operations, and has held similar works approvals and licences. Main Roads will require the successful contractor to comply with requirements of our Environmental Management System, including a Crushing Environmental Management Plan (attached).

5. Public Health and Environmental Risks

Main Roads has identified the following as being the main concerns to public health and source of environmental impact risk. These have been identified from environmental assessment work as well as the DWER’s guidance documents (separation distances from industrial land uses).

- **Dust**
  Crushing and screening operations have the potential to cause dust emissions. The proposed crushing works are located 750m from the closest public place (Great Northern Highway). Historical works have not caused any known problems due to the separation distance.

- **Noise**
  Similar to dust, the operations do have the potential to cause substantial amounts of noise during machine hours. However, no sensitive receptors are located in close proximity to the works.

6. Siting and Location

Crushing and screening activities will only occur within the areas nominated as ‘Crushing and Stockpiling’ in the attached Figure 2.

**Separation Distances from Sensitive Receptors**

The closest sensitive receptor to the Bow River Quarry is the Bow River Aboriginal Community, located 13.8 km to the southwest. All sensitive receptors are significantly further than the 1000m recommended separation distances in the EPA’s Guidance Statement 3.

The location of sensitive receptors in relation to the Bow River Quarry is illustrated in Figure 3.

7. Management of Potential Impacts to Public Health and the Environment

As part of the management of impacts to the general environment that may be caused by the operation of this premise, Main Roads has prepared an Environmental Management Plans to support this application:
• Bow River Quarry Crushing Environmental Management Plan.
A copy of this Plan has been provided as an attachment to this document. The successful crushing contractor will be contractually bound to operate in accordance with the provisions of this Plan.
Main Roads and its contractors will operate under the requirements of the Plan for all stages of work, from mobilisation/site preparation as well as throughout the commissioning period.

We hope this meets your requirements at this time. If you require further information, please contact the undersigned at (08) 9158 4304 or via email, jj.rao@mainroads.wa.gov.au.

Yours sincerely

Jeevarayan (JJ) Rao
Environment Officer (Kimberley Region)

Attachments:
Figure 1: Proposed Prescribed Premise
Figure 2: Layout of Proposed Prescribed Premise
Figure 3: Separation Distances from Sensitive Receptors
Attachment 1: Bow River Quarry Crushing Environmental Management Plan
MAIN ROADS WESTERN AUSTRALIA
KIMBERLEY REGION

GREAT NORTHERN HIGHWAY: BOW RIVER QUARRY
WORKS APPROVAL APPLICATION

Figure 1
Premise Boundary

LEGEND
- Premise Boundary (Gravel Reserve R 46647)

SCALE @ A4 : 1:4,325
DATE : 15/08/2018
DRAWN: JJ RAO

CRS: GDA 1994 MGA Zone 52
DATA SOURCES
Imagery sourced Landgate, all other data MRWA

GREAT NORTHERN HIGHWAY

Landgate / SLIP
MAIN ROADS WESTERN AUSTRALIA
KIMBERLEY REGION

GREAT NORTHERN HIGHWAY: BOW RIVER QUARRY
WORKS APPROVAL APPLICATION

FIGURE 3
Separation Distances from Sensitive Land Uses

LEGEND
- Prescribed Premise (Gravel Reserve R 46647)
- Sensitive Receptors
- Great Northern Highway

Separation Distance
- 500 m
- 1000 m
- 2500 m
- 5000 m

SCALE @ A4: 1:50,000
DATE: 15/08/2018
DRAWN: JJ Rao

DATA SOURCES
Imagery sourced Landgate, all other data MRWA

Document Path: G:\4. MATERIALS\Great Northern Highway\Bow River Quarry\Works Approval and Licence\Attachment 2d - Sensitive Receptors.mxd
Bow River Quarry

Crushing

Environmental Management Plan

Great Northern Highway (H006)
SLK 3009.93

November 2018
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### Document Control

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<td>Kimberley Delivery Manager</td>
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<td>1/8/2018</td>
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<td>David D'Mello Regional Materials Manager</td>
<td>Rev0</td>
<td>8/8/2018</td>
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1 PURPOSE

This Crushing Environmental Management Plan (CEMP) contains Main Roads Western Australia’s requirements for environmental management for the extraction, crushing, screening, washing and stockpiling of hard rock located on Great Northern Highway Gravel Reserve R46647 (Bow River Quarry) which is required to ensure suitable quality and volumes of material to complete the Bow River Bridge Replacement Project and other projects in the area.

Main Roads proposes to develop a crushing and screening facility at an existing Main Roads gravel reserve (R46647) located approximately near SLK 3009.93 to facilitate the production of material suitable for the use as rock material for public road projects in the local area over the coming years. It is estimated that 400,000 tonnes (250,000m³) of material will be crushed and sized, and will be produced over approximately 6 months.

This CEMP is to be used as an on-site reference for Main Roads, people working on behalf of Main Roads (e.g. a Crushing Contractor), environmental regulators and other parties with an interest in understanding Main Roads approach to environmental management for crushing operations at the Bow River Quarry. It details the management of operations, specifying management actions, monitoring requirements and accountabilities.

Main Roads have prepared and are responsible for the implementation of this CEMP.
2 PROJECT CONTEXT

2.1 Project Description

This Management Plan encompasses the Environmental and Aboriginal Heritage Management Controls required for the establishment and operation of a hard rock quarry at the Bow River Gravel Reserve. These commitments are required to licence the facility under the Environmental Protection Act 1986.

Project Title:
Bow River Quarry (Reserve 46647 – Gravel Purposes)

Project location(s):
The project area is located on the Great Northern Highway at SLK 3009.93, Shire of Wyndham-East Kimberley (Figure 1).
- -16.789807° S, 128.288431° E

Project Purpose:
Main Roads is planning to extract, crush, screen, wash and stockpile rock material (granitic) from Reserve R46647 to supply the requirements for aggregates and other hard rock requirements for projects in the East Kimberley in the coming years.

Project Components:
The following works will be conducted within the gravel reserve by a suitably qualified Contractor:
- Clearing of Native Vegetation within a proposed Pit Expansion Area
- Extraction of material (via drill and blast; note environmental impacts from drill and blast activities are not covered under this plan, but will be a required component of a Contractor’s Blasting Plan);
- Load and haul operations;
- Crushing, Screening and Washing of blasted material (subject to grant of a Works Approval and Licence); and
- Stockpiling of material (both prior and after crushing to required sizes).

The volume of rock products anticipated to be produced is approximately 400 000 tonnes. It is expected that material will be crushed with the plant operating between the hours of 7am–5pm 12 days on and 2 days off. Crushing and screening is planned to commence May and to be completed by October.

The volume of requirement materials requires Main Roads to obtain a works approval and operating licence to begin operations. Main Roads is seeking a Works Approval and subsequently an Operating Licence from the Department of Water and Environment Regulation (DWER) to crush and screen gravel material from its Reserve.

Extraction, crushing and screening of materials will be contracted out to a suitably qualified and experienced contractor. There are numerous contractors in the East Kimberley region due to the relatively high density of mining operations in similar geological formations (Argyle Diamond Mine, Savannah Nickel mine, etc.).

The contractor will be responsible for develop a Blasting Plan and meeting associated requirements under Dangerous Goods legislation.

Plant required on site for the above works includes:
- Excavator to feed crusher;
- Loader for site preparation and clean-up;
- Grader for site preparation;
- Crusher with pre-screen;
- Track radial stacker;
- Water Truck and
- Service-truck.

A water truck will also be available to ensure stockpiles are watered and access roads are dampened to reduce dust emissions. Water for the quarry reserve will be taken from the Bow River. Main Roads has obtained a licence to take surface water from the Department of Water and Environment Regulation (DWER).

The site will be placed into Care and Maintenance once crushing activities are complete.

### 2.2 Pit Expansion

Main Roads proposes to expand the existing pit to the north in an area nominated by previous geotechnical reports (refer to Figure 3). Geotechnical assessments in 2008 identified the proposed pit expansion area as already being cleared from historic works. Main Roads will be obtaining environmental approvals to clear any regrowth in this area (Plate 1) and expand the pit.

![Plate 1. Proposed Pit Expansion Area.](image-url)
Plate 2. Proposed Pit Expansion Area.
Figure 2: Site Layout
Figure 3: Geotechnical Overview of Proposed Pit Expansion Area
3 LEADERSHIP

3.1 Leadership and Commitment

In this CEMP, ‘Top Management’ consists of:
- David D’Mello – Regional Materials Manager
- Andrew Murphy – Delivery Manager
- Gerry Zoetelief – Regional Manager.

Top Management is responsible for ensuring that the CEMP is resourced and implemented.

3.2 Environmental Policy

Main Roads’ Environmental Policy outlines Main Roads’ commitment to environmental management principles and objectives that provide the overall intentions and direction of the organisation. The Policy is located in Appendix A or under Environment on the Main Roads website http://www.mainroads.wa.gov.au.

All Main Roads staff and personnel working on behalf of Main Roads shall be aware of the Policy, its purpose and their role in achieving the commitments, including how their work can affect Main Roads’ ability to fulfil its compliance obligations.

3.3 Roles and Responsibilities

A description of the roles and responsibilities for this project is provided in Table 1.

Table 1. Roles and Responsibilities

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Officer</td>
<td>Implementation of CEMP</td>
</tr>
<tr>
<td>Delivery Manager</td>
<td>Resourced to implement CEMP</td>
</tr>
<tr>
<td>Regional Manager</td>
<td>Overview of Compliance of environment policies and procedures outline within this CEMP</td>
</tr>
<tr>
<td>Contractor</td>
<td>Obeying environment policies and procedures within this CEMP</td>
</tr>
<tr>
<td>Site Manager</td>
<td>Ensuring all personnel working under this CEMP</td>
</tr>
</tbody>
</table>
4 PLANNING

4.1 Planning Actions

This management plan has been informed by the following documents:

- Bow River Quarry Geotechnical Reports (D08#133273);
- Care and Maintenance – Environmental Notes on Mining (DMP 2009)
- Bow River Quarry – Solid Waste Depot Management Plan

These assessments identified environmental management measures and commitments, which have been collated in the Environmental Obligations Register provided in Appendix B. To ensure the compliance with these management measures and commitments, on-ground actions have been developed, which are detailed in Section 6 Operation (Table 2). Corrective actions have also been developed are detailed in Section 6 Operation (Table 3).

Additional significant environmental aspects, compliance obligations and commitments that were listed in the Risks and Opportunities Register shall be addressed through the mechanisms detailed in Section 6 Operation.

4.2 Risks and Opportunities

The following items were used to identify the Risk and Opportunities related to this CEMP:

- Environmental aspects;
- Compliance obligations;
- Environmental obligations;
- Potential project issues (internal and external);
- Needs and expectations of interested parties (internal and external).

Kimberley’s project risk register was used to identify any additional risks and incorporated in Table 2. This register is located at D15#512552.

The Risks and Opportunities identified were assessed for the likelihood and consequence of events occurring during the Contract period in accordance with Appendix 1 of this CEMP and are documented in Table 2. The risk treatment actions form part of the Environmental Operational Controls shown in Table 2.

Key Risks from the project are considered to be:

- Dust and Noise; and
- Dangerous and Hazardous Goods.
5 ENVIRONMENTAL SUPPORT

5.1 Resources
The Environment Officer for this project is JJ Rao and is responsible for the following:

- Reviewing the CEMP;
- Inspecting and authorising the approved clearing boundary before ground disturbance commences;
- Providing environmental training and advice;
- Ensuring that the CEMP forms part of the contractual requirements for contractors;
- Maintaining records as per Main Roads’ statutory and internal record keeping requirements.

5.2 Training and Competency
The successful crushing contractor will be responsible for ensuring contractors are trained and competent before commencing works. Assessment of tenders will take into account competency and experience of potential contractors.

A project specific induction will be conducted to ensure training and competency target achieved (See section 5.2.2).

5.2.1 Awareness
Personnel carrying out works under this CEMP will be aware of:

- Main Roads Environmental Policy;
- Significant Environmental Risks and potential impacts of their works under the Contract;
- How they contribute to the CEMP and the benefits of improving environmental performance; and
- The implications of not conforming to this CEMP and not fulfilling Main Roads compliance obligations.

5.2.2 Site Induction Training
The successful crushing contractor will develop a site induction that contains at a minimum, the following information:

- Project layout and surrounding environment
- Legislative and Main Roads policy requirements
- Contract specific requirements under relevant Main Roads Specifications
- Key management measures from this Crushing EMP

The Environment Officer/ Works Manager will conduct Site-specific Environmental induction training for all personnel, the Superintendent and its representatives, and all visitors not escorted on Site by inducted persons. The site induction training will include a written test to ensure that inductees have an understanding of the environmental requirements for the Contract.

5.3 Consultation and Communication

5.3.1 Consultation
Table 2 details the personnel who are to be consulted and communicated with during the planning and application of work activities associated with the works.

5.3.2 Internal Communication
Main Roads has the following procedures for ensuring internal communication of environmental information to personnel:

- Inductions
- Pre-start Meetings
- Toolbox Meetings
• Other meetings as required

5.3.3 External Communication
All communication to external regulators will be conducted by the Main Roads Environment Officer.

5.4 Documentation

5.4.1 General
All documents are managed in accordance with Main Roads Record Keeping Code of Practice.

5.4.2 Document and Data Control
Records retention and disposal requirements are described in the Main Roads Record Keeping Code of Practice. Electronic documents and records are managed through TRIM, an integrated electronic document and record management system.
6 OPERATION

6.1 Environmental Operational Controls
Main Roads will implement the Environmental Operational Controls (Table 2) throughout the period of the works. Main Roads will also implement the procedures and work practices to appropriately manage the risks and opportunities identified.

Table 2 was completed utilising the risk treatment management actions and Obligations Register in Appendix C.

The corrective actions shown in Table 3 will be implemented if the Operational Controls cannot be implemented and the management requirements achieved.

6.2 Inspection and Test Plans at Hold Points
Certain Operational Controls have Hold Points, which are to be entered into the Environmental Operational Controls (Table 3). The Project Manager and/or Environment Officer will confirm that the Contractor has demonstrated compliance to the Specification by reviewing supplied supporting conformance records through Inspection and Test Plans (ITP’s).

The Project Manager and/or Environment Officer are responsible for reviewing and releasing the Hold Points. They will advise the release of Hold Points and notify site staff.
### Table 2: Environmental Operational Controls

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity / Aspect</th>
<th>Risk</th>
<th>Environmental Management Actions, Controls</th>
<th>Corrective Actions/Contingencies</th>
<th>Who</th>
<th>When</th>
<th>Hold Points</th>
<th>Monitoring/Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of work</td>
<td>Aspect / Activity of works</td>
<td></td>
<td>Controls in place to manage risk and impact</td>
<td>Controls to be implemented if controls fail, and impact is realised</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td>Clearing / Regrowth</td>
<td>Low</td>
<td>All vegetation within the site is under 10 years of age and has been previously cleared.</td>
<td>Clearing works will stop on notification of unauthorised clearing.</td>
<td>SS CM EO</td>
<td>Weekly; or At end of clearing</td>
<td>Prior to commencing work</td>
<td>CPS 818 Annual Report Incident Report form (Appendix C) Contractor's Commissioning Report (Section 7.3)</td>
</tr>
<tr>
<td>Site Preparation</td>
<td>Mobilisation - Plant and People</td>
<td>Moderate</td>
<td>Improperly parked vehicles and plant may have adverse impacts on Environment. These locations will be consistently located on the layout plan provided in Figure 2.</td>
<td>MRWA will assess any consequential environmental damage and remediate where possible. MRWA will take steps to ensure that further harm is not caused.</td>
<td>CC RMM</td>
<td>Prior and During site establishment</td>
<td>Arrival onto site Following site establishment</td>
<td>As per Contract specifications Contractor's Commissioning Report (Section 7.3)</td>
</tr>
<tr>
<td>Site Building set up</td>
<td>Adverse impacts to Environment due to improper set up</td>
<td>Low</td>
<td>A layout plan shall be developed by the Crushing Contractor and will be subject to approval by MRWA based on locations nominated by MRWA.</td>
<td>MRWA will assess any consequential environmental damage and remediate where possible. MRWA will take steps to ensure that further harm is not caused.</td>
<td>CC RMM</td>
<td>Prior and During site establishment</td>
<td>Arrival onto site Following site establishment</td>
<td>As per Contract specifications Contractor's Commissioning Report (Section 7.3)</td>
</tr>
<tr>
<td>Training and Competency</td>
<td>Site Documents</td>
<td>Not accessible when needed</td>
<td>Low</td>
<td>A copy of this EMP and other relevant documents will be made available to prospective contractors. A hard copy of this EMP will always be kept in the Site Office in an accessible location.</td>
<td>MRWA will develop processes and procedures to improve training and competency</td>
<td>EO RMM CC/BC</td>
<td>Prior and During site establishment</td>
<td>Prior to arrival on site</td>
</tr>
<tr>
<td></td>
<td>Inductions</td>
<td>Poor competency and resulting incidents</td>
<td>Moderate</td>
<td>All personnel working on the project will be made aware of the requirements of this EMP and accompanying permits at an induction program.</td>
<td>MRWA will develop processes and procedures to improve training and competency</td>
<td>EO RMM CC/BC</td>
<td>Prior and During site establishment</td>
<td>Prior to arrival on site</td>
</tr>
</tbody>
</table>

**Drill and Blast (not Specifically Covered in this Plan)**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Activity / Aspect</th>
<th>Risk</th>
<th>Environmental Management Actions, Controls</th>
<th>Corrective Actions/Contingencies</th>
<th>Who</th>
<th>When</th>
<th>Hold Points</th>
<th>Monitoring/Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous Goods Storage</td>
<td>Unwanted release of dangerous goods into environment</td>
<td>Medium</td>
<td>The successful drill and blast contractor will be required to be suitably qualified and experienced. The contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including management of this aspect).</td>
<td>The successful contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including contingency plans).</td>
<td>BC</td>
<td>Following award of Drill/Blast Contract</td>
<td>TBC</td>
<td>As per DMP Guidelines &amp; Contractor's Blasting Plan</td>
</tr>
<tr>
<td>Noise</td>
<td>Nuisance to sensitive receptors</td>
<td>Low</td>
<td>The successful drill and blast contractor will be required to be suitably qualified and experienced. The contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including management of this aspect).</td>
<td>The successful contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including contingency plans).</td>
<td>BC</td>
<td>Following award of Drill/Blast Contract</td>
<td>TBC</td>
<td>As per DMP Guidelines &amp; Contractor's Blasting Plan</td>
</tr>
<tr>
<td>Vibration</td>
<td>Damage to significant sites</td>
<td>Low</td>
<td>The successful drill and blast contractor will be required to be suitably qualified and experienced. The contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including management of this aspect).</td>
<td>The successful contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including contingency plans).</td>
<td>BC</td>
<td>Following award of Drill/Blast Contract</td>
<td>TBC</td>
<td>As per DMP Guidelines &amp; Contractor's Blasting Plan</td>
</tr>
<tr>
<td>Air Blast and Overpressure</td>
<td>Damage to significant sites or human health</td>
<td>Low</td>
<td>The successful drill and blast contractor will be required to be suitably qualified and experienced. The contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including management of this aspect).</td>
<td>The successful contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including contingency plans).</td>
<td>BC</td>
<td>Following award of Drill/Blast Contract</td>
<td>TBC</td>
<td>As per DMP Guidelines &amp; Contractor's Blasting Plan</td>
</tr>
<tr>
<td>Flyrock</td>
<td>Damage to significant sites or environmental receptors</td>
<td>Medium</td>
<td>The successful drill and blast contractor will be required to be suitably qualified and experienced. The contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including management of this aspect).</td>
<td>The successful contractor must prepare a Blasting Plan that is compliant with DMP guidelines (including contingency plans).</td>
<td>BC</td>
<td>Following award of Drill/Blast Contract</td>
<td>TBC</td>
<td>As per DMP Guidelines &amp; Contractor's Blasting Plan</td>
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### CRUSHING ENVIRONMENTAL MANAGEMENT PLAN – GREAT NORTHERN HIGHWAY: BOW RIVER QUARRY

#### CRUSHING/SCREENING AND COMMISSIONING

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<th>Phase</th>
<th>Activity / Aspect</th>
<th>Risk / Impact</th>
<th>Risk</th>
<th>Environmental Management Actions, Controls</th>
<th>Corrective Actions/Contingencies</th>
<th>Who</th>
<th>When</th>
<th>Hold Points</th>
<th>Monitoring/Reporting</th>
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<td>Off work</td>
<td>Aspect / Activity of works</td>
<td>Potential impact to environment</td>
<td>Inherent risk</td>
<td>Controls in place to manage risk and impact</td>
<td>Controls to be implemented if controls fail, and impact is realised</td>
<td>Reponsability</td>
<td>Timing of controls</td>
<td>Instances requiring MRWA signoff</td>
<td>Recordkeeping, monitoring and reporting requirements</td>
</tr>
<tr>
<td><strong>Commissioning Period</strong></td>
<td>All Current and Future Works</td>
<td>Risk of not being granted an Operating Licence if conditions of Works Approval are not met</td>
<td>Medium</td>
<td>All works will operate under the conditions of the Works Approval until either a Licence to Operate has been granted, or a stop works order has been issued by Main Roads</td>
<td>Contractor to correct any non-conformances immediately</td>
<td>CC</td>
<td>All Current and Future Works</td>
<td>Contractor’s Commissioning Report (Section 7.3)</td>
<td></td>
</tr>
<tr>
<td>Contractors Commissioning Report</td>
<td>Risk of not being granted an Operating Licence if conditions of Works Approval are not met</td>
<td>Medium</td>
<td>The Contractor must prepare a Commissioning Report that addresses compliance with all sections of this Table with ‘Contractor’s Commissioning Report’ listed under the Reporting requirements (See Section 7.3 for further details)</td>
<td>Contractor to correct any non-conformances immediately</td>
<td>CC</td>
<td>Once commissioning has commenced</td>
<td>Receipt of Contractors Commissioning Report subject to MRWA review</td>
<td>Contractor’s Commissioning Report (Section 7.3)</td>
<td></td>
</tr>
</tbody>
</table>

#### CRUSHING & SCREENING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk / Impact</th>
<th>Environmental Management Actions, Controls</th>
<th>Corrective Actions/Contingencies</th>
<th>Who</th>
<th>When</th>
<th>Hold Points</th>
<th>Monitoring/Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise</td>
<td>Noise complaints or damage to human health from excessive noise</td>
<td>Low</td>
<td>Due to the location of the works, MRWA does not expect any complaints arising from noise to be received. Any noise at sensitive land uses is likely to conform to the requirements of the Noise Regulations 1997. MRWA will implement a complaints procedure to keep track and respond to complaints</td>
<td>Consider merit of any complaints and adjust machine hours if required</td>
<td>CC</td>
<td>During crushing works</td>
<td>Set up of crushing equipment</td>
</tr>
<tr>
<td>Dust</td>
<td>Dust complaints or damage to human health and environment from excessive noise</td>
<td>Low</td>
<td>Crushing units to be fitted with fixed dust suppression units to stop dust from reaching Great Northern Highway or haul roads</td>
<td>Consider merit of any complaints and adjust dust controls if required</td>
<td>CC</td>
<td>During crushing works</td>
<td>Set up of crushing equipment</td>
</tr>
</tbody>
</table>

#### WASHING

<table>
<thead>
<tr>
<th>Activity</th>
<th>Risk / Impact</th>
<th>Environmental Management Actions, Controls</th>
<th>Corrective Actions/Contingencies</th>
<th>Who</th>
<th>When</th>
<th>Hold Points</th>
<th>Monitoring/Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Sourcing</td>
<td>Water source incorrectly causes harm to water resources</td>
<td>Low</td>
<td>Minimise erosion of river banks Comply with conditions of surface water licence</td>
<td>Cease activity causing continued erosion/sedimentation Monitor sediment loads in water until it settles</td>
<td>CC</td>
<td>During water abstraction</td>
<td>Erosion of banks detected</td>
</tr>
<tr>
<td>Waste Water</td>
<td>Irresponsible waste water disposal causes water quality problems</td>
<td>Medium</td>
<td>Disposed wastewater will not be discharged into Bow River or any watercourse that drains into it All wastewater will be contained within the Premise boundary Wastewater may be used for dust suppression or concrete production</td>
<td>MRWA Environment Officer will assess any damage occurring from unauthorised discharge off the premises Where damage from wastewater is evident MRWA will take steps to remediate and prevent further damage</td>
<td>CC</td>
<td>At all times</td>
<td>Contractual Site Inspections</td>
</tr>
<tr>
<td>Phase</td>
<td>Activity / Aspect</td>
<td>Risk / Impact</td>
<td>Risk</td>
<td>Environmental Management Actions, Controls</td>
<td>Corrective Actions/Contingencies</td>
<td>Who</td>
<td>When</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>---------------</td>
<td>------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
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<td>------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Controls in place to manage risk and impact</td>
<td>Controls to be implemented if controls fail, and impact is realised</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental &amp; Occupational Hygiene</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpiling of Material</td>
<td>Insufficient stockpiling area</td>
<td>Low</td>
<td></td>
<td>The crushing and blasting contractor is responsible for implementing access restrictions that apply to the site.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access Restrictions</td>
<td>Unauthorised entry by public causing adverse impact to human health</td>
<td>Medium</td>
<td></td>
<td>It is possible that waste stockpiling activities may be occurring in other areas of the quarry. The crushing contractor is responsible for stockpiling material will adhere to access restrictions and the associated Blasting Plans during this time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Visual Amenity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpiling of Material</td>
<td>Stockpiles of material are visible from public areas, leading to complaints</td>
<td>Low</td>
<td></td>
<td>MRWA does not expect any impacts to visual amenity due to the existing land use as a quarry, the low traffic at receptor sites and general vastness of the surrounding landscape.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Erosion and Stability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpiling of Material</td>
<td>Collapse of stockpile causing impact to environment or human health</td>
<td>Low</td>
<td></td>
<td>Stockpiles will remain within designated areas and not spill out into the surrounding environment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpiling of Material</td>
<td>Noise related complaints received</td>
<td>Low</td>
<td></td>
<td>Due to the location of the depot, MRWA does not expect any complaints arising from noise to be received. Any noise at sensitive land uses is likely to conform to the requirements of the Noise Regulations 1997.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dust</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stockpiling of Wastes</td>
<td>Dust related complaints received</td>
<td>Low</td>
<td></td>
<td>Dust will be controlled via a water cart, from nearby project areas should dust present a safety concern for site personnel or the public.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contamination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phase</td>
<td>Activity / Aspect</td>
<td>Risk / Impact</td>
<td>Risk</td>
<td>Environmental Management Actions, Controls</td>
<td>Corrective Actions/Contingencies</td>
<td>Who</td>
<td>When</td>
</tr>
<tr>
<td>-------</td>
<td>------------------</td>
<td>--------------</td>
<td>------</td>
<td>------------------------------------------</td>
<td>----------------------------------</td>
<td>-----</td>
<td>------</td>
</tr>
</tbody>
</table>
| De-mobilisation and Removal of Site Office Facilities | Refuelling | Spills cause contamination of soils or waterways | Low | • Where possible refuelling will only occur within areas designated as Crushing/Stockpiling Areas, Laydown and within the Pit itself (where there is no surface water retention).  
• All fuel trucks will be fitted with spill kits to contain and clean up spills | • Contaminated material will be excavated and taken to a licenced waste facility (Kununurra area)  
• If spills occur on hard rock, spilled liquids will be absorbed via absorbent materials in spill kit, disposed of correctly, and rock surface washed and runoff disposed off (to minimise any surface water contamination during the wet season) | CC | As soon as possible | • Following clean-up of a spill | Annual Licence Report Contractor’s Commissioning Report (Section 7.3) |
| Waste Management | Wastes | Wastes that are left on site may cause environmental degradation | | • All wastes will be removed from the site and disposed of appropriately  
• Wastes that meet the definition of Inert – Type 1 under the Landfill Waste Classification and may be placed within the Solid Waste Depot located on the premise. | • MRWA or approved contractor will remove all non-inert wastes from the premise for disposal at a licenced facility | CC | As required | • Completion of materials being stockpiled in the Solid Waste Depot area  
• Following disposal at licenced facility | Annual Licence Report Waste Disposal evidence/dockets |
| Care and Maintenance | Controlled / Hazardous Wastes | Controlled wastes left on site cause contamination of the environment | | • All wastes will be removed from the site and disposed of appropriately | • MRWA or approved contractor will remove all wastes from the premise for disposal at a licenced facility | CC | As soon as possible | • Site handover back to MRWA | Annual Licence Report Waste Disposal evidence/dockets |
| Revegetation | Revegetation of unused area | A stable, self-sustaining native plant community is not established | Medium | Due to the age of the cleared area, and the bare soils, it is possible that the site may not be able to be revegetated to a standard relatable to surrounding unaltered vegetation. The site is likely to provide a long term value to Main Roads as hardstand.  
• Some areas of the site will be maintained as hardstand for future Main Roads use.  
• Areas that are no longer needed will be revegetated via natural regeneration | This option is beyond the scope of this Plan | EO | When required | • Once final land use option is determined | MRWA EMS |
| Weed Control | Stockpile presence | Establishment of weeds | Medium | It is expected that some weeds (predominantly grasses may grow over time on the stockpiles during care and maintenance periods.  
• No Declared Pests will be established on the stockpiles | • Declared weed infestations will be controlled where feasible | EO | Biannual Inspections | • Following inspections | Inspection Checklist (Appendix B) Incident Report form (Appendix C) |

**Key**
- **EO** - Environment Officer
- **BC** – Blasting Contractor
- **CC** – Crushing Contractor
- **RMM** – Regional Materials Manager
- **CSM** – Community and Stakeholder Manager
### Risk Consequence Descriptions

<table>
<thead>
<tr>
<th>CONSEQUENCE</th>
<th>CRITERIA</th>
</tr>
</thead>
</table>
| Insignificant | Low impact to isolated area  
Simple or no treatment required  
No lasting effect or significance |
| Minor | Contained low impact, able to be rectified with standard treatment  
Minor, local short term residual effects |
| Moderate | Uncontained impact, able to be rectified in short to medium term  
Significant medium term residual effects |
| Major | Extensive hazardous impact requiring long term rectification  
Major medium term residual effects |
| Catastrophic | Uncontained, hazardous impact requiring major long-term treatment and monitoring  
Major long term residual effects |

### Risk Likelihood Descriptions

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare</td>
<td>&gt;1 incident every 10 years</td>
</tr>
<tr>
<td>Unlikely</td>
<td>&gt;1 incident every 5 years</td>
</tr>
<tr>
<td>Possible</td>
<td>&gt;1 incident every 1 year</td>
</tr>
<tr>
<td>Likely</td>
<td>&gt;1 incident every 6 months</td>
</tr>
<tr>
<td>Almost Certain</td>
<td>&gt;1 incident every 1 month</td>
</tr>
</tbody>
</table>

### Risk Assessment Matrix

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>INSENSITIVE</th>
<th>MINOR</th>
<th>MODERATE</th>
<th>MAJOR</th>
<th>CATASTROPHIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost Certain</td>
<td>Medium 5</td>
<td>High 10</td>
<td>High 15</td>
<td>Very High 20</td>
<td>Very High 25</td>
</tr>
<tr>
<td>Likely</td>
<td>Low 4</td>
<td>Medium 8</td>
<td>High 12</td>
<td>Very High 16</td>
<td>Very High 20</td>
</tr>
<tr>
<td>Possible</td>
<td>Low 3</td>
<td>Medium 6</td>
<td>Medium 9</td>
<td>High 12</td>
<td>High 15</td>
</tr>
<tr>
<td>Unlikely</td>
<td>Low 2</td>
<td>Low 4</td>
<td>Medium 6</td>
<td>Medium 8</td>
<td>High 10</td>
</tr>
<tr>
<td>Rare</td>
<td>Low 1</td>
<td>Low 2</td>
<td>Low 3</td>
<td>Low 4</td>
<td>Medium 7</td>
</tr>
</tbody>
</table>

### Risk Level Descriptions

<table>
<thead>
<tr>
<th>RISK ACCEPTANCE CRITERIA</th>
<th>RISK RATING</th>
<th>LEVEL OF RISK</th>
<th>MANAGEMENT OVERSIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (1-6)</td>
<td>Risk is generally acceptable</td>
<td>Reviewed and accepted by Risk Owner</td>
<td></td>
</tr>
<tr>
<td>Medium (7-9)</td>
<td>Risk is acceptable with adequate controls. Treatment action plan required if consequence is Catastrophic.</td>
<td>Reviewed and accepted by Risk Owner and Manager</td>
<td></td>
</tr>
<tr>
<td>High (10-15)</td>
<td>Risk may be acceptable with adequate controls. Treatment action plan required to reduce risk level further where possible.</td>
<td>Reviewed by Risk Owner, Director/ Executive Director/ General Manager/ Manager and Office of DG or Executive Committee</td>
<td></td>
</tr>
<tr>
<td>Very High (16-25)</td>
<td>Risk is generally not acceptable. Treatment action plan required to reduce the risk.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.3 Emergency Preparedness and Response

The successful crushing contractor will be required to prepare an Emergency Preparedness and Response Plan.

The Emergency Response Plan has taken into account the following requirements:
- prepare to respond by planning actions to prevent or mitigate adverse environmental impacts from emergency situations;
- respond to actual emergency situations;
- take action to prevent or mitigate the consequences of emergency situations, appropriate to the magnitude of the emergency and the potential environmental impact;
- periodically test the planned response actions, where practicable;
- periodically review and revise the process(es) and planned response actions, in particular after the occurrence of emergency situations or tests; and,
- provide relevant information and training related to emergency preparedness and response, as appropriate, to relevant interested parties, including persons working under its control.

The Emergency Response Plan also provides a list of the:
- nominated key personnel for the associated emergency situation with their contact details;
- contact details of the emergency service providers;
- relevant Main Roads Organisation personnel; and,
- resources required to respond to environmental emergencies.

The Site Induction Program addresses the identified issues in the Emergency Response Plan to ensure that all site personnel are aware of procedures in the event of an incident or emergency occurring.

6.4 Register of Emergency Personnel

6.4.1 First Aid

In the event of an accident requiring first aid treatment, there will be a qualified first aid officer on site with an appropriate first aid kit. The first aid shall render to the followings:
- The Contractor’s employees;
- The sub-contractor’s employees;
- The Superintendent and the Superintendent’s staff;
- Main Roads’ employees and agents and
- Any other person on Site if needed.

Safety Data Sheets (SDS) relating to all hazardous substances at the Site shall be kept at the first aid kit station (all Main Roads vehicles).

FIRST AID OFFICER: To be nominated
LOCATION OF FIRST AID KIT: Site Office
Poison Centre WA: 13 11 26

All suitable first aid kit shall be stored and maintained in accordance with Workplace Kit.

6.4.2 Major Accident

In the event of an accident that will require a higher level of medical assistance, the patient should be taken to the nearest Medical Facility and if required an ambulance called. If the emergency requires evacuation personnel at the medical centre should be advised of severity of situation.

Location of Hospital: Warmun Medical Centre (29.8 km away)
Warmun, WA 6743.

Accident Emergency 24hrs: 9166 3800
Ambulance 24hrs: 000
Emergency service agency contacts to be advised of works and road disruptions:
Warmun Police: 9167 8451
            2 Interior Rd, Warmun WA 6743
SES (Kununurra): 9169 1003
DFES 9158 3200
Main Roads Derby Office: 9158 4333
Shire of Derby West Kimberley: 9191 0999
7 MEASUREMENT AND PERFORMANCE EVALUATION

7.1 Monitoring, Measurement, Analysis and Evaluation

7.1.1 General

The Environment Officer will ensure that the items listed as requiring monitoring in Table 2 are completed.

The following methods will be used for measuring, analysing and evaluating:

- Main Roads Inspection and Test Plan (D17#59437)
- Auditing Schedule (if deemed required);
- Material and Usage Report Form;
- Environmental Incident Report Form;
- Environmental Incidents Register;
- Monthly Environmental Performance Report; and

The Criteria to be used to evaluate the project environmental performance will be the:

- Number of environmental incidents;
- Number of Non Conformances and Improvement Actions;
- Amount of customer complaints.

This CEMP will be evaluated on its environmental performance and effectiveness. Environment Officer will submit a completed Environmental Performance Report (Refer to D17#59291) to the Principal and Environment Branch within first week of the end of each month.

7.2 Environmental Incident Investigation, Corrective and Preventative Action

7.2.1 Environmental Incident Reporting and Investigation

The Environment Officer will report and manage all environmental incidents in accordance with Main Roads Environment Incident Management Guideline and using Main Roads Environment Incident Report Form located in Appendix C or at: https://www.mainroads.wa.gov.au/BuildingRoads/Contracting/Pages/ReportingForms.aspx

7.2.2 Environmental Audit

The Environment Officer will develop, implement and maintain the Audit Schedule located at 14/4076. The Audit Schedule details the frequency, methods, responsibilities, planning requirements and reporting requirements. The audits are to be undertaken by the Environment Officer of the work under the Contract, including any subcontractors, for the duration of the Contract. For each audit conducted, a report will be produced and will detail the:

- scope of the audit;
- audit questions;
- audit findings

7.2.3 Corrective and Preventative Action

If there is non-compliance, the Main Roads corporate procedure, located at D14#291766 will be followed.

7.3 Contractors Commissioning Report

Works under this Plan are expected to commence under the conditions of a Works Approval from the DWER. In order to allow for a transition from a Works Approval to an Operating Licence, Main Roads will be required to submit a Works Certification Report along with a Licence application to the DWER, under new industrial regulations implemented in May 2018.

The Works Certification Report is intended to demonstrate compliance with the Works Approval
Conditions. The Contractor’s Compliance Report will be a major component of Main Roads’ Works Certification Report.

7.3.1 Evidence and Documentation Required
The Contractor is expected to demonstrate to Main Roads that it has met all the environmental management requirements during the set up and initial operation of the facility. Evidence of this may include:

- Photographs of key works
- A signed final site plan
- As constructed data from a surveyor
- A sign off from a Main Roads representative

If required, a Main Roads Environment Officer may be present to assist in the preparation of suitable evidence in an auditor capacity.

7.3.2 Timing for Submission of Commissioning Report
The Commissioning Report should be submitted to the Main Roads Representative / Contract Manager as soon as initial commissioning activities have been completed (to verify that all plant is working nominally).
8 MANAGEMENT REVIEW & CONTINUAL IMPROVEMENT

The Environment Officer will undertake a review of the effectiveness of the CEMP at the completion of the Project. The review will capture ongoing obligations, closeout of non-conformances, environmental incidents and will note any Opportunities for Improvement. If there are any Opportunities for the Direct Managed Works Construction Environmental Management Plan, this will be noted to the Environment Branch.
9  DEFINITIONS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Surrounds in which an organisation operates, including air, water, land, natural resources, flora, fauna and their relationships.</td>
</tr>
<tr>
<td>Environmental Aspect</td>
<td>Element of an organisation's activities or products or services that interacts or can interact with the environment. An Environmental Aspect can cause an Environmental Impact. A significant environmental aspect is one that has or can have one or more significant environmental impact.</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>Change to the Environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.</td>
</tr>
<tr>
<td>Project</td>
<td>Refers to only the construction activities associated with the Contract works</td>
</tr>
<tr>
<td>Risk</td>
<td>Effect of uncertainty. Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood (as defined in ISO Guide 73:2009, 3.6.1.1) of occurrence.</td>
</tr>
<tr>
<td>Risks and Opportunities</td>
<td>Potential adverse effects (threats) and potential beneficial effects (opportunities).</td>
</tr>
<tr>
<td>Top Management</td>
<td>A person or group of people who directs and controls the CEMP at the highest level.</td>
</tr>
</tbody>
</table>
## 10 REFERENCES AND RELATED DOCUMENTS

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Specification 204 Environment</td>
</tr>
</tbody>
</table>
## 11 APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix A</td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>Appendix B</td>
<td>Mobile Plant/Vehicle Hygiene Checklist</td>
</tr>
<tr>
<td>Appendix C</td>
<td>Environment Incident Report Form</td>
</tr>
</tbody>
</table>
APPENDIX A: ENVIRONMENTAL POLICY

Environmental Policy

We are committed to protecting and enhancing the natural environmental and social values in all of our activities.

Intent
All Main Roads staff and others working on Main Roads’ behalf will:

- Recognise the importance of the natural environmental and social values and the broader benefits that these values provide to the community
- Foster strategic relationships with community and other stakeholders to contribute to the management of environmental values
- Facilitate environmental governance of our activities to deliver broad community benefit through the inclusion of environmental requirements in planning, programming, construction and maintenance processes
- Communicate this policy and our environmental performance publicly

Objectives
To ensure we achieve this policy our objectives are to:

- Deliver our services in full compliance with the obligations of environmental legislation and policy as a minimum standard
- Manage the environmental impacts of our activities through the hierarchy of ‘avoid, minimise, rehabilitate and offset’
- Contribute to a sustainable transport system through the delivery of products and services that minimise environmental impacts, conserve natural resources and also achieve positive social and economic outcomes
- Implement, maintain and continually improve an effective environmental management system compliant with ISO 14001:2015 across Main Roads activities


Peter Woronzow
A/Managing Director of Main Roads

This policy is reviewed every two years or as required to ensure it complies and is relevant to legislative and business obligations.
# Appendix B: Mobile Plant/Vehicle Hygiene Checklist

## Mobile Plant/Vehicle Hygiene Checklist

<table>
<thead>
<tr>
<th>Date &amp; Time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of Inspection</td>
<td></td>
</tr>
<tr>
<td>Owner/Operator</td>
<td></td>
</tr>
<tr>
<td>Plant Type/Make/Model</td>
<td></td>
</tr>
<tr>
<td>Registration Number</td>
<td></td>
</tr>
<tr>
<td>Odometer/ Hour Meter Reading</td>
<td></td>
</tr>
</tbody>
</table>

### The Following Areas Have Been Inspected and Are Free of All Soil and Plant Material

<table>
<thead>
<tr>
<th>Area of Vehicle/Plant</th>
<th>Clean</th>
<th>Not Clean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside of the Cabin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Surrounds of the Cabin <em>eg vents, gutters, mirrors etc</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheels and steering Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracks Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underside of the vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under the Bonnet/Engine Bay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blades/Buckets/Drum &amp; Scrapers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights, Bumpers and Accessories <em>eg toolboxes, spare tyres.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydraulics and any attachments <em>eg Arms.booms, Tynes and Rippers, support frames, hydraulic hoses etc.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implements <em>e.g. Top, underside and recesses and crevices.</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other comments on hygiene of vehicle:**

*Is the Vehicle Permitted onsite?*  

☐ Yes  ☐ No

*If not what parts of the vehicle require further cleaning?*

____________________________________________________________________________________________________________________________________________________________

<table>
<thead>
<tr>
<th>Operator:</th>
<th>Signature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspector:</td>
<td>Signature:</td>
</tr>
</tbody>
</table>
APPENDIX C: ENVIRONMENT INCIDENT REPORT FORM

![Environment Incident Report Form](image_url)

This form is to be completed for all environmental incidents whether or not environmental impact has been sustained.

### 1. INCIDENT REPORTING DETAILS:

<table>
<thead>
<tr>
<th>1.1 Incident Reporter:</th>
<th>MRWA Employee □ Contractor □ Contractor Company □</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Incident Location:</td>
<td>Directorate: Choose an item Region: Choose an item Branch/Depot Name (if applicable):</td>
</tr>
<tr>
<td>1.3 Project Related to Road Project or Maintenance Works (if applicable):</td>
<td>Road Project □ Maintenance Works □ IDD Project □ Other / None</td>
</tr>
<tr>
<td></td>
<td>Project Name: □ Contract No: □ Incident Report No: □</td>
</tr>
<tr>
<td>1.4: Project Manager (PM) (if Applicable):</td>
<td>Name: □ PM Email: □</td>
</tr>
<tr>
<td>1.5 Location of the Incident: (Where applicable enter either facility / building details and/or road location details)</td>
<td>Facility or Building: □ DAC □ HYS □ MEB □ TDC □ Regional Office (Specify): □ Laboratory (Specify): □ Operational Depot (Specify): □ On Road Staff (Wardens/Inspectors): □ Other (Specify): □</td>
</tr>
<tr>
<td></td>
<td>Road Name: □ Road Number: □ SLK: □ GPS Location (GA04): □</td>
</tr>
<tr>
<td>1.6 Date of incident:</td>
<td>Click to enter a date. Time of incident: □ (please use 24hr format)</td>
</tr>
<tr>
<td>1.7 Incident Notification:</td>
<td>Click to enter a date. Time of incident: □ (please use 24hr format)</td>
</tr>
</tbody>
</table>

For moderate, major and catastrophic incidents, Manager Environment must be notified of the incident via email and telephone within 24hrs.

### 2. DESCRIPTION OF INCIDENT:

#### 2.1 Type of incident: (Check appropriate boxes, can be multiple selections)

- [ ] Disturbance/damage to indigenous heritage site
- [ ] Disturbance/damage to European heritage site
- [ ] Disturbance/removal of threatened plants or ecological communities
- [ ] Dust/air quality emission
- [ ] Erosion and sedimentation
- [ ] Fire
- [ ] Ground or surface water impact
- [ ] Native Title
- [ ] Noise/vibration/light emission
- [ ] Site Contamination
- [ ] Spill (includes fuel, oil, solvents, chemicals, polluting substances)
- [ ] Spread of weeds, pests or disease
- [ ] Unauthorised vegetation clearing
- [ ] Unauthorised waste disposal

Please clarify if required

#### 2.2 Outcome of the incident:

- [ ] Environmental Impact
- [ ] Potential Environmental Impact (Near Miss)
- [ ] Environmental Complaint

Complaint Details: Click here to enter text.

#### 2.3 Incident Description: (Step by step encounter of the incident) Add attachments: (Sketches, statements, photos, etc...)

Click here to enter text.

#### 2.4 What are the existing controls in place? (e.g. Spill kits, Bunding, Clearing area pegged, guarded)

Attachments: Yes □ No □
### 2.5 Remedial Actions undertaken / planned

<table>
<thead>
<tr>
<th>Action Description</th>
<th>Responsible Person and Role</th>
<th>Due Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control(s) put in place after the incident to Rectify, Contain or Remedy the situation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Immediate or Short Term Actions:**
- TRIM Ref:

**OR**

See Attached Report:

<table>
<thead>
<tr>
<th>Insignificant</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Catastrophic</th>
</tr>
</thead>
</table>

### 2.6 Initial Environmental Incident Classification (refer to Appendix A):

- Non-compliance with legislation, approval condition, permit or license requirements
- Non-compliance with a management plan requirement
- Non-compliance with corporate requirement / procedure (EMS, Environmental Assessment and Approval)
- Other (specify): Click here to enter text.

### 2.7 Non-Conformance (if applicable)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

(Further investigations mandatory for moderate, major and catastrophic Incidents)

### 3. ENVIRONMENTAL DETAILS:

3.1 Initial Investigation Findings (Why)

Click here to enter text.

What are the incident causes? Summarise witness information. Include any other relevant information which could not be included in the sections above.

3.2 Incident Caused by:

- MRWA Employee
- Contractor
- Member of Public

3.3 Final Environmental Incident Classification (REFER TO Appendix A):

<table>
<thead>
<tr>
<th>Insignificant</th>
<th>Minor</th>
<th>Moderate</th>
<th>Major</th>
<th>Catastrophic</th>
</tr>
</thead>
</table>

**Complete Incident Report Form**

**Complete Further Investigation (ICAM) & Report to ME**

### 3.4 Further Investigation required

- Yes
- No

### 4. FOLLOW UP CORRECTIVE AND PREVENTATIVE ACTIONS:

<table>
<thead>
<tr>
<th>Action Description</th>
<th>Responsible Person and Role</th>
<th>Due Date</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control(s) put in place to correct or eliminate the cause of the incident</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Long Term / Preventative Actions:**

- TRIM Ref:

**OR**

See Attached Report:

### 5. DETAILS OF PERSON COMPLETING THIS FORM, REVIEW AND SIGNOFF

5.1 Name of person completing this Form:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Role:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date:</th>
<th>Additional notes / comments:</th>
</tr>
</thead>
</table>

**Incident Review and Sign Off**

5.2 Regional Manager:

Name: 

Role: 

Signature: 

Date: Click for date

5.3 Manager Environment:

Name: 

Role: 

Signature: 

Date: Click for date

5.4 Executive Director (FTS):

Name: 

Role: 

Signature: 

Date: Click for date

5.5 Managing Director:

Name: 

Role: 

Signature: 

Date: Click for date

5.6 Additional notes / comments:

Once this form has been completed Email x TRIM copy to Manager Environment.
## Appendix A – Classification Matrix

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Health &amp; Safety</th>
<th>Equipment/Property Damage</th>
<th>Interruption of Network Operations</th>
<th>Reputation, Trust, Legal &amp; Compliance</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Catastrophic</strong></td>
<td>1 or more fatalities or severe permanent disabilities/illnesses.</td>
<td>&lt;25,000,000</td>
<td>- Significant or critical community infrastructure assets are unusable for multiple weeks&lt;br&gt;- More than 1 week</td>
<td>- Significant adverse community impact &amp; condemnation&lt;br&gt;- Extreme negative media attention&lt;br&gt;- Consistent ongoing community loss of confidence &amp; trust in MRAA and Contractor’s processes &amp; capability&lt;br&gt;- Relationships breakdown (legal intervention)&lt;br&gt;- Government intervention&lt;br&gt;- Significant prosecution and fines&lt;br&gt;- Major litigation involving class actions&lt;br&gt;- Major non-compliance with legislation</td>
<td>Where environmental impact is:&lt;br&gt;- Uncontained hazardous impact requiring major long-term treatment and monitoring&lt;br&gt;- Major long-term residual effect</td>
</tr>
<tr>
<td><strong>Major</strong></td>
<td>Chronic illness or disability</td>
<td>25,000,000 to 26,000,000</td>
<td>- Significant or critical assets are unusable for up to a week&lt;br&gt;- 24 hours to 1 week</td>
<td>- Considerable &amp; prolonged community impact &amp; dissatisfaction (publicly expressed)&lt;br&gt;- Consistent negative media attention&lt;br&gt;- Loss of confidence &amp; trust by community, stakeholders in MRAA and Contractor’s processes &amp; capability&lt;br&gt;- Relationships damaged (third party intervention)&lt;br&gt;- Ministerial intervention&lt;br&gt;- Major breach of regulations&lt;br&gt;- Major litigation and/or prosecution&lt;br&gt;- Major public liability claim</td>
<td>Where environmental impact is:&lt;br&gt;- Extensive hazardous impact requiring long term rectification&lt;br&gt;- Major medium-term residual effect</td>
</tr>
<tr>
<td><strong>Moderate</strong></td>
<td>Lost Time Injury</td>
<td>$50,000 to $55,000,000</td>
<td>- A range of assets, including some significant assets, are unusable for 24 hours&lt;br&gt;- 4 hours to 24 hours</td>
<td>- Sectoral community impacts &amp; concerns publicly expressed&lt;br&gt;- Increased negative media attention&lt;br&gt;- Loss of confidence &amp; trust by community, stakeholders in MRAA processes &amp; capability&lt;br&gt;- Any potential impact on Contractor’s integrity in question&lt;br&gt;- Relationships compromised (business)&lt;br&gt;- Ministerial concern&lt;br&gt;- Various incidents require investigation and legal representation to determine legal liability&lt;br&gt;- Non-compliance with regulation&lt;br&gt;- High level of legal prosecution</td>
<td>Where environmental impact is:&lt;br&gt;- Uncontained impact, able to be rectified in short to medium term&lt;br&gt;- Significant medium-term residual effect</td>
</tr>
<tr>
<td><strong>Minor</strong></td>
<td>Medical treatment required</td>
<td>&lt;50,000</td>
<td>- A number of assets unusable but can be replaced within acceptable timeframes&lt;br&gt;- 1 hour to 4 hours</td>
<td>- Local community impacts &amp; concerns&lt;br&gt;- Occasional one-off negative media attention&lt;br&gt;- Trust issues raised&lt;br&gt;- Complex legal issue to be addressed&lt;br&gt;- Likely level of legal prosecution&lt;br&gt;- Potential public liability claim</td>
<td>Where the environmental impact is:&lt;br&gt;- Contained low impact&lt;br&gt;- Standard treatment&lt;br&gt;- Minor local short-term residual effect</td>
</tr>
<tr>
<td><strong>Insignificant</strong></td>
<td>Nil to minor first aid</td>
<td>Nil to minor damage</td>
<td>- Assets receive minimal damage or are only temporarily unavailable&lt;br&gt;- Less than 1 hour</td>
<td>- Isolated local community or individual's issue-based concern&lt;br&gt;- Low profile media attention&lt;br&gt;- Legal issues managed by routine procedures&lt;br&gt;- Little to no level of legal prosecution</td>
<td>Where the environmental impact is:&lt;br&gt;- Low impact to isolated area&lt;br&gt;- Simple or no treatment required&lt;br&gt;- No lasting effect or significance</td>
</tr>
</tbody>
</table>