



Environmental Management Procedure

QUDOS-101700

Purpose

Neil Mansell Group (NMG) is committed to ensuring a safe and healthy working environment within all areas of NMG operations. As this can be only achieved by a shared responsibility process and aim, the full commitment and involvement of the persons involved or who come into contact shall support and abide by this Procedure for all operations.

Scope

NMG has developed an Environmental Management System (EMS) that meets the international standard AS/NZS ISO 14001. In accordance with the EMS and Section 4.4.6 of AS/NZS ISO 14001, key operations and activities associated with significant environmental aspects must be controlled to:

- Minimise environmental risk;
- Comply with legal and other requirements; and
- Continually improve.

Referenced Documents

- A. AS/NZS ISO 14001 Standards
- B. Environmental Protection Act 1994
- C. Environmental Protection Regulation 2008
- D. NMG Environmental Protection SWP
- E. NMG Health, Safety and Environment Policy

Definitions

Environment	the social, economic, aesthetic and cultural conditions that are effected by a combination of ecosystems and their constituent parts, all natural and physical resources, as well as the qualities and characteristics of locations, places and areas that contribute to their biological diversity and integrity
Notifiable Event	an incident, no matter how minor (or whether accidental or deliberate) that has the potential to cause damage or harm to the environment due to contamination
Employee	An employee, contractor, subcontractor or agent of NMG (for simplicity will be referred to as an employee)
Administering Authority	Department of Environment and Heritage Protection



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1.0 Roles and Responsibilities

The following responsibilities apply to all personnel undertaking activities covered by this document.

Roles	Responsibilities
Directors	<ul style="list-style-type: none"> Overall accountability for activities and infrastructure within the group. Provide adequate resources to ensure this procedure is adhered to.
Senior Management	<ul style="list-style-type: none"> Ensure the environmental controls are implemented in accordance with this procedure; Ensure all environmental incidents are notified to the Directors as soon as practical (within 4 hrs.) to enable appropriate reporting to the regulator. Assist with incident investigations and identification and close out of any corrective and preventative actions; Ensure actions and non-conformances are closed out; Provide input into regular environmental Wells meetings to help drive environmental performance; Provide adequate resources to ensure this procedure is adhered to;
Supervisory Personnel	<ul style="list-style-type: none"> Ensure the environmental controls are implemented in accordance with this procedure; Ensure all environmental incidents are notified to Senior Management as soon as practical (within 4 hrs.) to enable appropriate reporting time frame. Assist with incident investigations and identification and close out of any corrective and preventative actions; Compile all approvals required for operations; Drive a culture of compliance.
HSEQ Manager	<ul style="list-style-type: none"> Notification of environmental incidents to the regulator, as required. Monitor and provide direction to Wells to ensure compliance with this procedure; Notification of potentially regulator notifiable incidents to the Directors; Assist with incident investigations and identify corrective and preventative actions; Assist with environmental complaints Provide direction and overview for NMG environmental performance; Support team with environmental advice and feedback; Provide environmental team resources to ensure requirements are adhered to. Ensure this procedure is incorporated into the EMS internal audit program.



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Role	Responsibilities
HSE Advisors	<ul style="list-style-type: none">• Communicate and provide suitable environmental awareness training programs to ensure all personnel are aware and understand the requirements of this procedure;• Keep up to date with scheduled works and progress• Proactively inspect works to identify and help rectify any potential non-compliances and always strive to minimise environmental impacts;• Undertake scheduled audits providing feedback and following up all actions until closed;• Enter all internal and external audit actions into the Wells Corrective Action Register<ul style="list-style-type: none">◦ (CAR) and follow up until closed.• Assist with incident investigations, and manage individual cases until corrective and preventative actions have been closed out;• Assist with environmental complaints• Review contractor's Environmental Management Plans and supporting documents;• Provide advice and help to achieve solutions on environmental issues;• Drive a culture of environmental performance and improvement through various mediums including Weekly Safety meetings, TBT and Training
Contractor	<ul style="list-style-type: none">• Adhere to all relevant requirements of this procedure;• Ensure suitable environmental training programs are implemented.
All Staff (employees and contractors)	<ul style="list-style-type: none">• Encourage all personnel to raise any environmental concerns, promote best practices, and drive continual improvement;• Follow procedures as outlined in this document to ensure the environmental impacts of their work are minimised;• Participate in any relevant training programs;• Seek advice and direction from the HSE team about environmental requirements and issues; and• Report environmental incidents and participate in incident investigations.



1.1 Background Information

Operating hours for all sites are to comply with the hours specified on the relevant environmental license, other than when special approval has been obtained.

A brief summary of operations carried out on the sites are follows:-

- (a) Winning material using an excavator or front end loader.
- (b) Stockpiling of product using a Front End Loader (F.E.L.)
- (c) Export of product (i.e., sand and gravel aggregates by truck and trailer configuration).

It must be noted that this document does not constitute in any way, or impact upon, safety instructions/issues. If any requirement of this IEMS contradicts safe working practice, this should be brought to the attention of the writer.

1.2 Report Structure

To address each activity that may have relevance to the environment, Section 2 of this report contains several elements that cover the specific issues. The specific elements are as follows:

<u>Element No.</u>	<u>Description</u>
OP1	Water quality
OP2	Air Quality/Dust Control
OP3	Noise
OP4	Waste Management
OP5	Hazardous Substances
OP6	Emergency Response – Spillage
OP7	Staff Training

Each element will generally be assessed by addressing the following criteria:

- **Policy:** The operation Policy that applies to the element;
- **Objectives:** The performance requirements for the element of the operation;
- **Management Strategy:** The strategies that will be implemented to achieve the objectives;
- **Monitoring:** The monitoring requirements that will measure actual performance of Management Strategies;



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- **Reporting:** The format, timing and responsibility for reporting and auditing of the results of monitoring; and
- **Corrective Action:** The action to be implement if the performance objectives are not reached and the person/organization responsible for that action.

1.3 Consultancy Team

This EMS was prepared by the NMG HSE Team in consultation with Management.

1.4 Glossary of Terms and Definitions

The following details the use of industry terms and states definitions in the context of this report:

- **EPAct** - Queensland Environmental Protection Act 1994
- **EPReg** -Queensland Environment Regulation 2008
- **EPA**- Environmental Protection Agency

In accordance with the EPAct 1994:

- Environment includes** -
- (a) ecosystems and their constituents parts, including people communities; and
 - (b) All natural and physical resources; and
 - (c) The qualities and characteristics of locations, and places and are however large or small, they contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest amenity, harmony and sense of community; and
 - (d) The social, economic, aesthetic and cultural conditions that affect or are affected by, things mentioned paragraphs (a) to (c).

- Contamination** - “Contamination” of the environment is the release (whether by act or omission) of a contaminant into the environment.

A contaminant can be:-

- (a) a gas, liquid or solid; or
- (b) an odour; or
- (c) an organism (whether alive or dead), including a virus or
- (d) energy, including noise, heat, radioactivity and electromagnetic radiation; or.



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- | | | |
|---------------------------------|---|--|
| Noise | - | “Noise” includes vibration of any frequency, whether emitted through air or another medium. |
| Waste | - | “Waste” includes any gas, liquid, solid or energy (or a combination of wastes) that is surplus to, or unwanted from, any industrial, commercial, domestic or other activity, whether or not of value. |
| Environmental Harm | - | <p>“Environmental Harm” is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value.</p> <p>“Environmental Harm” may be caused by an activity-</p> <ul style="list-style-type: none">(a) whether the harm is a direct or indirect result of the activity; or(b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors. |
| Environmental Nuisance - | - | <p>“Environmental Nuisance” is unreasonable interference or likely interference with an environmental value caused by-</p> <ul style="list-style-type: none">(a) noise, dust, odour, light; or(b) an unhealthy, offensive or unsightly condition because of contamination; or(c) another way prescribed by regulation |

1.5 Environmental Duties under the E.P.A.

The following is summarised from the EPA - 1994.

General Environmental Duty

A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm (the “**general environmental duty**”).

Duty to Notify Environmental Harm

As soon as reasonably practicable after becoming aware of the event involving the harm, the person must:



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if the person is carrying out the primary activity during the person's employment or engagement by, or as the agent of, someone else (the "employer")-

- (i) tell the employer of the event, its nature and the circumstances in which it happened; or
- (ii) if the employer cannot be contacted - give written notice to the administering authority of the event, its nature and the circumstances in which it happened.

NOTE: The EPA has provisions for the prosecution and penalisation of persons not adhering to the requirements of the EPA.

1.6 Review of this EMS

This IEMS is to be reviewed and periodically updated to reflect new knowledge gained during the course of operations and to reflect changed community standards (values). Changes to the Management system will be developed and implemented in consultation with the relevant authorities. It is recommended that such reviews be undertaken on a biennial time frame.

2. OPERATION PHASE ELEMENTS

2.1 Element OP1 – Water Quality

2.1.1 Policy

Water leaving the subject sites is not to adversely effect water quality of the receiving system.

2.1.2 Objectives

1. To minimise the transport of pollutants and sediment in stormwater.
2. To maximise the recycling/reuse of any process water
3. Maintain pH of sediment pond waters (at all times) between 6.5<pH<8.5 and other licence conditions.
4. Maintain all machinery and environmental infrastructure in good repair.

2.1.3 Management Strategies

Management Strategy for Objective 1

All fuel and oil storage on site must be bunded. Bunds must be covered, have drainage sump and be regularly maintained.



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Leakage or spills of machinery fluids or fuels will be dealt with immediately. They will be absorbed by suitable material (sand) and removed from site as dry waste in an appropriate manner. Sand and the required plant are permanently on hand. All spills shall be recorded on an incident report form.

Sealed roads and storage areas are to be kept clean of particulate build up. Where possible, vacuum or sweeping methods will be employed and particulates removed from site as dry waste.

Where applicable any sand/sediment collected in kerb and channels to be cleaned out with shovel/broom.

Management Strategies for Objective 2

All contaminated waters will be contained on site. During periods of high rainfall unavoidable discharge of waters may occur. Controlled discharges will comply with limits stated in the relevant Environmental Licence.

Management Strategies for Objective 3

Clean stormwater will be diverted off site using drainage control. Contaminated stormwater will be contained on site. Onsite monitoring of sediment pond waters will be conducted using a water quality meter both prior to any release of onsite waters and at intervals specified by the relevant Environmental Licence. This monitoring will be conducted by the Environment Officer.

Management Strategy for Objective 4

All machinery faults are to be reported to the appropriate supervisor and rectified as soon as possible. Pre start checks are to be completed on a daily basis.

2.1.4 Monitoring

Employees will be responsible for monitoring the serviceability of the machinery/infrastructure under their charge in accordance with daily check requirements.

Checking of sediment build up on sites will occur daily.

Daily checks of sand extraction area will occur visually by the relevant operator and be recorded on the appropriate form.

2.1.5 Reporting

Machinery faults are to be reported to the relevant supervisor immediately.



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Observations indicating adverse effects on water quality are to be reported to relevant supervisor immediately.

Where environmental harm is possible or has occurred, the company Environment Officer must be notified. It is the Environment Officers responsibility to notify the Environmental Protection Agency and the Local Authority where appropriate.

2.1.6 Corrective Action

If objectives with respect to water quality are not met, additional measures will be employed. Significant changes to management measures are to be reviewed by the writer, and if appropriate, an updated IEMS produced. Significant changes to management measures may require approval from the relevant authorities.

2.2 Element OP2 – Air Quality/Dust Control

2.2.1 Policy

The release of dust or particulate matter should not cause environmental nuisance at any dust sensitive place.

2.2.2 Objectives

Maintain air quality to a suitable standard outside the plant boundaries and not cause a nuisance to neighbours.

2.2.3 Management Strategies

Haul and Internal Roads are to be:

- Maintained in good conditions;
- Watered when necessary;
- Sealed where applicable.

2.2.4 Monitoring

The use of standard dust fall gauges is considered generally acceptable only for conducting an overall survey and is therefore not proposed. High-volume sampling is the preferred methodology but is relatively expensive to conduct on a regular basis. It is considered preferable to undertake a short survey using this more accurate equipment in the event of any complaints that can not be resolved by the Corrective Actions detailed below.



2.2.5 Reporting

Visual site inspections should be carried out daily and identify any areas which may require watering. If complaints are received a site inspection should be carried out immediately to determine the potential source of the problem.

2.2.6 Corrective Action

If complaints are received from more than one person, or for more than two days in a row, high-volume air sampling should be undertaken to determine the level of PM₁₀ (AS2724.3). Following completion of monitoring a report presenting results will be issued; compliance with the ambient guideline (currently 150 µg/m³ (24-hour average)) will be assessed. The complainant will be informed of monitoring results and actions taken to reduce the problem. If a breach of the guideline has occurred monitoring will continue. The potential source of the problem will be determined and strategies modified appropriately. If short-term (ie. less than 1 hour) dust nuisance is an issue video observations should be used to determine the source of the problem and modify strategies accordingly.

Upon receipt of complaints regarding dust visual inspection of the sites shall be conducted of all dust sources and all dust sources and all measure taken to stabilise and/or seal such areas.

2.3 *Element OP3 – Noise*

2.3.1 Policy

Noise created by the site must not exceed levels specified under the site Environmental Licence.

2.3.2 Objectives

1. Operations and deliveries must only occur between the hours of 6.00-18.00, unless otherwise authorised.
2. Noise levels at the nearest affected residence should not exceed background noise levels by more than _dB(A) Monday to Saturday and should not exceed background levels at all other times and public holidays.
3. Noise at a commercial place should not exceed background noise levels by _dB(A) Monday to Saturday and should not exceed _dB(A) all other times and public holidays.



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4. Notwithstanding the above, to comply with legislative and local authority requirements.

Compliance limit levels are measured as the average of the maximum A-weighted sound levels adjusted for noise character measured over a 15 minute time interval.

2.3.3 Management Strategies

All transport companies involved in the export of raw materials to be advised of the above performance requirements. Site management is to ensure that trucks attempting to make raw material deliveries/removals outside the designated hours are not permitted onto sites without prior approval.

Should works be required to occur outside the stated times the surrounding community must be notified and consulted. All delivery vehicles must be maintained in good condition and comply with relevant Australian Standards.

Continually monitor and ameliorate noise suppression techniques/infrastructure.

All plant, vehicles and machinery must be maintained in good condition and comply with relevant Australian Standards.

Complaints must be reported to the supervisor immediately.

2.3.4 Monitoring

Noise monitoring is to be complaint driven process. In the event that a complaint is received, the Mansell Premix Complaint Handling Procedure should be followed for ameliorating the complaint.

All complaints received or investigation requests must be investigated/undertaken within 48 hours.

2.3.5 Reporting

Reporting is a complaint driven process. In the event of a complaint and an investigation of the complaint, a report must be prepared detailing the results of the investigation and comparing the measured noise levels with the noise limits.

All monitoring, reporting, complaints or requests received and actions taken shall be documented, and such documentation shall be kept on site. The documentation shall be available to Council, or the Environmental Protection Agency upon request.



2.3.6 Corrective Action

If noise level measurements are conducted as a result of a complaint, and it is found that one or more of the performance requirements are exceeded, then corrective action must be implemented. This corrective action must reduce the noise levels to the noise limit, or less.

It should be noted that it is considered extremely unlikely that any of the performance requirements would be exceeded by the raw material delivery activities.

2.4 *Element OP4 - Waste Management*

2.4.1 Policy

All wastes generated from operations are to be managed in an environmentally responsible manner and recycled wherever possible.

2.4.2 Objectives

1. To responsibly dispose of and manage wastes generated from operations.
2. To recycle wastes wherever possible.

2.4.3 Management Strategies

Good housekeeping is an integral part of operations and staff shall operate in an appropriate manner.

All waste oil shall be disposed of by a registered waste transport company. All spills are to be cleaned up as per OP 6 of this IEMS.

Waste waters will be managed according to OP1 - Water Quality.

2.4.4 Monitoring

Internal monitoring of waste management performance will be undertaken daily by the Site Manager.

2.4.5 Reporting

The site manager must report any non-conformance to the General Manager.



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2.4.6 Corrective Action

Changes to operations will be implemented as required to maintain appropriate water management practices.

2.5 *Element OP5 - Hazardous Substances*

2.5.1 Policy

All hazardous substances are to be stored and utilised appropriately so as to ensure against spillage.

2.5.2 Objectives

1. To ensure that hazardous substances do not pose a risks to the environment during both storage and use.
2. Material safety data sheets to be available on site for all hazardous substances stored and used on site.

2.5.3 Management Strategies

All hazardous substances will be stored in an appropriately bunded and signed area.

Material safety data sheets will be available for all substances used on site.

A spill kit is to be available on site at all times and spills are to be cleaned up as per OP6 of this IEMS.

Staff will be trained in the use of hazardous substances, PPE and spill handling.

2.5.4 Monitoring

Monitoring of compliance will be undertaken by the site manager.

2.5.5 Reporting

The site manager must report any non-conformance to the EHSO.

2.5.6 Corrective Action

Changes to operations will be implemented as required to maintain appropriate hazardous substances management practices.

2.6 *Element OP6 - Emergency Response - Spillage*



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2.6.1 Policy

All spills are to be contained and cleaned up as soon as they occur.

2.6.2 Objectives

1. To ensure that spills are contained as soon as they occur.
3. To ensure that spills are cleaned up as soon as possible.
4. To ensure that appropriate equipment and training is provided to enable appropriate action to be undertaken.

2.6.3 Management Strategies

Substances shall be stored in bunded areas.

A spill kit will be available on site at all times.

2.6.4 Monitoring

Daily checks of operational areas are to be carried out to ensure no spillage as occurred has occurred.

2.6.5 Reporting

Spills are to be reported to the Site Manager as soon as they occur.

2.6.6 Corrective Action

Changes to operations will be implemented as required to manage spills and associated impacts.

2.7 *Element OP7 – Staff Training*

2.7.1 Policy

All staff are to receive training in the requirements of this IEMS and any site specific issues or licence conditions.

2.7.2 Objectives

Prior to commencement of operations all staff are to receive induction training in the requirements of this IEMS and any other site specific issues.

2.7.3 Management Strategies



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The site manager is responsible for providing induction training to all staff prior to commencement of operations at each site.

2.7.4 Recording

Records of all training provided are to be maintained.

3. *Closure*

The content of this Integrated Environmental Management System is to be reviewed on a two yearly time frame. During this review, particular attention should be given to changes in legislation, work operations or work practices, and should reflect new knowledge of relevant processes.

This IEMS is specific to extraction and processing operations undertaken by NMG. Further information on the above, if required, is available from: Qudos



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I have read / had read to me this procedure and advise accordingly that I agree with its contents and advice.

Name		Site:
Signature		Date:
Witness		
Signature		Date:

