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Macmahon environmental management manual

Environmental Management Manual

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Pty Ltd.
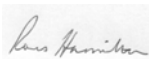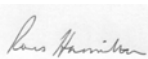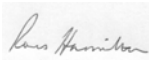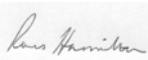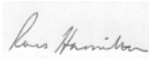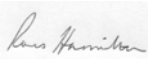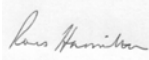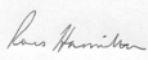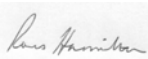
Distribution and Revision

All copies are distributed in accordance with the distribution table below. Draft copies of this document are identified by revision A, B, C etc. Documents issued for use commence at revision 0, 1, 2, etc. On receipt of a revision, the copyholder is to incorporate the revised pages into this document.

The document may be subject to reissue after a practical number of changes.

Distribution	Copy No
Macmahon Business System (Intranet)	Original

Revision History

Rev	Date	Description	Originator	Reviewer	Approver
A	24-Feb-05	Issued for internal review	R Hamilton	J Ward	
0	31-Mar-05	Issued for use	R Hamilton	J Ward	R Hamilton
1	30-Sep-05	Section 2.2 modified and Section 6.6 added to satisfy requirements of AS/NZS ISO 14001:2004.	R Hamilton	J Ward	R Hamilton
2	12-Oct-05	Section 2.2 further clarified following third party audit findings	R Hamilton	J Ward	R Hamilton
3	04-Aug-06	Updated Appendix 1 based on AS/NZS ISO 14001. Minor terminology updates	R Hamilton	J Nelson	R Hamilton
4	12-Oct-06	Revised	J Nelson	J Dickie	R Hamilton

Contents

Appendix

1. PURPOSE

This manual is the overview document for the Macmahon Environmental Management System (EMS). The manual describes the application and key features of the management system through which Macmahon establishes and assesses its commitment, objectives, plans and procedures, achieves compliance with its obligations, and demonstrates improved performance.

The effectiveness of the EMS depends on commitment from all levels and functions within the organization.

2. ABOUT MACMAHON

Macmahon Holdings Limited is a major Australian contracting company servicing the mining and civil construction sectors.

The Construction Division undertakes major infrastructure projects such as roads, bridges, railroads, ports and dams.

The Mining Division conducts open cut and underground operations, managing mines for major customers in Australia New Zealand and Malaysia.

Services includes the Allplant business which provides plant hire and mechanical maintenance service to both Macmahon and external customers.

Macmahon Holdings Limited is based in Perth, Western Australia, Macmahon also has offices in Queensland, Northern Territory, New South Wales and Malaysia.

2.1 Structure and Capabilities

The diagram overleaf illustrates the core business areas and the services provided.

2.2 Operating Environment

Macmahon works in a diverse range of environments and social settings. To work effectively in these situations, it is imperative that we integrate environmental and social considerations with how we do business. Accordingly, 'Value the Environment and Secure our Future' forms an important part of our business philosophy.

UNDERGROUND MNING

- Mine Development
- Mine Production
- Production Drilling
- Ground Support

ALLPLANT

- Plant Hire
- Maintenance

MACMAHON

OPEN CUT MINING

- Open Cut Mining
- Drill & Blast
- Crushing

ALICE SPRINGS TO DARWIN RAILWAY

- Construction
- Part Ownership

CIVIL CONTRACTING

- Roadworks
- Railways
- Ports
- Dams
- Mine Development
- Maintenance
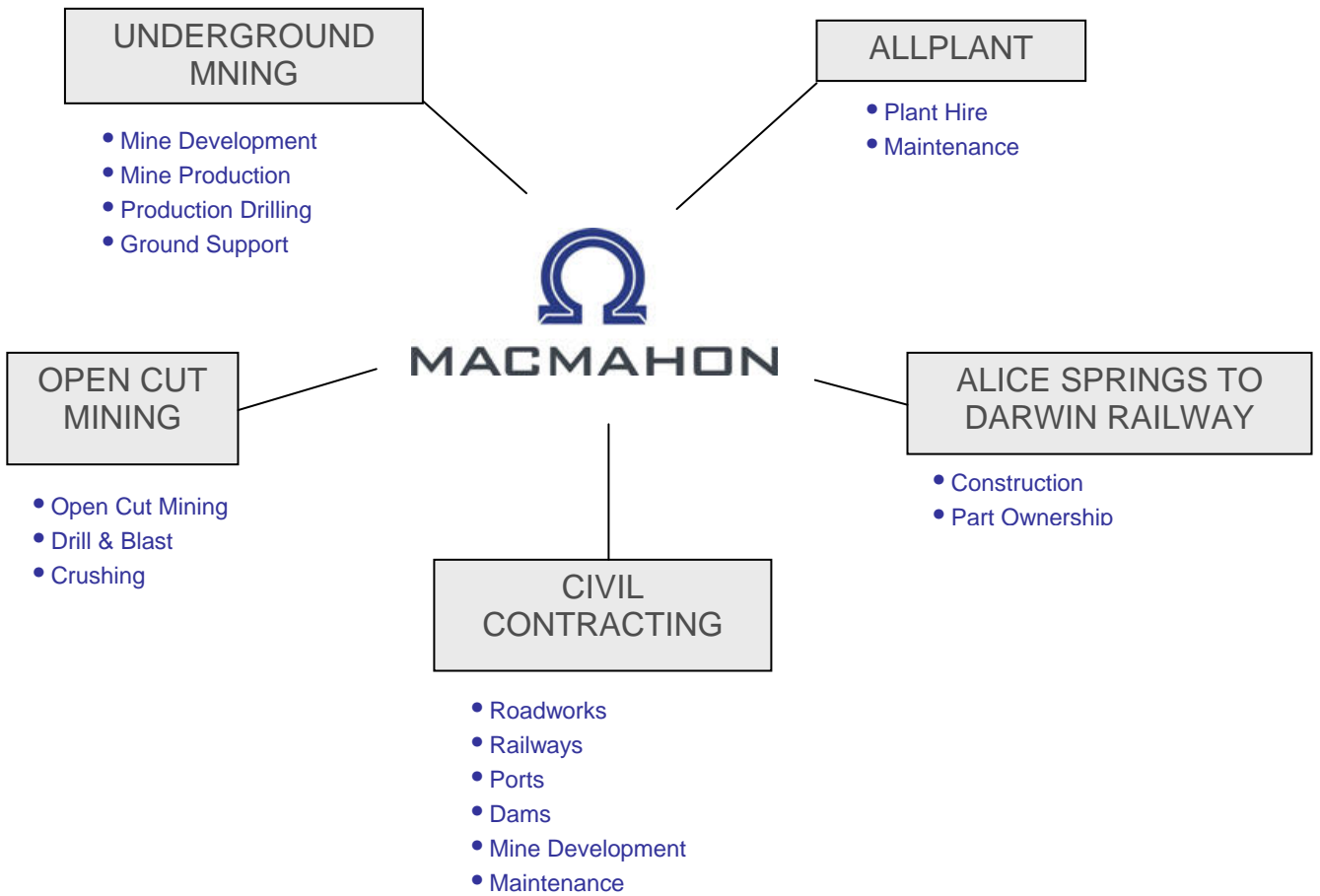
3. OUR SYSTEMS

Macmahon is a proud supporter of ISO 14001 and recognises the value that is associated with the implementation of an environmental management system. In fact, Macmahon and was one of the first contractors in Australia to achieve third party certification to AS/NZS ISO 14001 back in 1997.

Although our current management system addresses the requirements of AS/NZS ISO 14001:2004, Macmahon has taken a more holistic view of the business and integrated all other key business areas such as Commercial, Quality, Finance, Human Resources, Information Technology, Maintenance, Occupational Health and Safety, Tendering and Risk Management. Our integrated system is known as the Macmahon Business System (MBS).

The emphasis in using an 'integrated' system is to convey to employees the objectives behind the various activities that are being implemented, and to give an overview of how company activities are interlinked. In this way, all employees will be able to perform their activities equipped with a clear understanding of their role in the processes of the company which will reduce the associated risks. Furthermore, an integrated system means that environmental requirements are considered during all phases of the business process from business planning and the tendering of projects to project decommissioning.

Our environmental, quality, and safety management systems have been independently certified by NATA Certification Services International (third party certification body) as meeting the requirements of the following management system standards:

- AS/NZS ISO 14001:2004 - Environmental management systems

- AS/NZS ISO 9001:2000 - Quality management systems

- AS/NZS 4801:2001 - Occupational health and safety management systems

This certification includes our core business areas of civil engineering, open cut and underground mining across Australia.

The MBS has also been developed to meet the requirements of AS/NZS 4360:2004 - Risk management.

3.1 Environmental Management System (EMS) Overview

The EMS is illustrated in the flowchart overleaf. The flowchart identifies, by reference, the documented procedures established for the environmental management system, and the interaction between the processes of the system.

A table cross-referencing the relevant elements of AS/NZS ISO 14001 (SDTB01) is included as Appendix 1 to assist auditors in determining how the requirements of the standard have been met within the system.

3.2 Environmental Management System Scope

The scope of the EMS, as detailed on the Macmahon Business System, covers all operational activities in Australia (excluding plant and labour hire).

The scope of certification is identified on the AS/NZS ISO 14001:2004 certificates of approval from NATA Certification Services International (refer images below).

Macmahon Contractors Pty Ltd

Macmahon Underground Pty Ltd

Scope of Certification

Support Services

Environmental Management System Flowchart – SSFC06b

PROCESS OWNER: *Quality and Environmental Manager Ross Hamilton ph: (08) 9365 1109 email: RHamilton@macmahon.com.au*

Responsibilities
CEO – Chief Executive Officer
QEM/QEC/QEO – Quality & Environmental Manager/Coordinator/Officer
PM – Project Manager
PEMR – Project Environmental Management Representative
LA – Lead Auditor

Objective		Activities
"To demonstrate management commitment and communicate policy and objectives to stakeholders."	**CEO** — Policy	Environmental Policy, CPPS06
"To identify, assess and document the methodology to control risks and ensure legal requirements are understood and communicated."	**QEM/QEC/QEO/PM** — Planning	Project launch, PPPC02 Correspondence & Filing, PPPC04 Project Planning, PPPC03 Risk Management, PPPC05 Evaluation of Subcontractors, PPPC06 Legal & Other Requirements, SSPC38 & Project Plan
"To execute planned arrangements and strive to achieve the highest levels of quality and environmental service performance to meet or exceed customer requirements."	**PEMR/PM** — Implementation	Toolbox Meetings, PEPC19 Document Control, PEPC03 Electronic Data Back-up, SSPC37 Emergency Preparedness & Response, PEPC22 Evaluation of Subcontractors, PPPC06 Hazardous Substances, PEPC28 Hydrocarbon Management, PEPC35 Plant Washdown, PEGL04 Induction, SSPC02 Purchasing, SSPC33 Responsibilities & Authorities SDPC01 Monitoring and Measurement, PEPC38 Waste Management, PEPC34
"To determine the measure of compliance with planned arrangements; evaluate the effectiveness of systems implemented; and to identify opportunities for improvement."	**PEMR/PM/LA** — Measurement and Evaluation	Accident Reporting, SSPC34 Auditing, SSPC35 Monitoring & Measurement, PEPC38 Nonconformance, Corrective & Preventative Action, PEPC39 Project Reporting, PEPC37 Archiving of Records, COPC02
"To review the Management System to determine its continuing suitability, adequacy and effectiveness; and to identify opportunities for improvement."	**QEM/QEC/QEO** — Review and Improve	Customer Satisfaction, PEPC40 Toolbox Meetings, PEPC19 Continual Improvement, SSPC36

Continual Improvement

Rev 1

4. ENVIRONMENTAL POLICY

ENVIRONMENTAL POLICY

To work effectively in a diverse range of environments and social settings, Macmahon recognises the importance of integrating environmental management into how we do business. Our environmental policy objective is to minimise the adverse impact on the environment as a result of our business activities.

To achieve this objective we will:

Ω Establish and maintain an Environmental Management System in accordance with AS/NZS ISO 14001.

Ω Comply with contract conditions, relevant legislation and other criteria to which the company subscribes.

Ω Regularly review business operations, identify and implement opportunities for improvement.

Ω Educate our workforce of key environmental issues, management controls and associated responsibilities.

Ω Establish defined environmental objectives and targets to measure our performance and identify opportunities for improvement.

Ω Strive to prevent pollution, reduce waste and commit to recovery and recycling where feasible.

Nick Bowen
Chief Executive Officer
September 2005

Note: Macmahon performance versus environmental policy objectives is recorded in the Macmahon Annual Safety, Health, Environment and Community Report.

5. PLANNING

5.1 Environmental Aspects

Environmental aspects are identified for each project and documented using an environmental risk register.

For each environmental aspect within the risk register, there is a stated:

- Legal or other obligation - including legislation, standards and contractual requirements;

- Environmental impact :

- Risk analysis (inherent risk) - the likelihood and consequence of an environmental hazard/impact occurring in the absence of any control measures;

- Objective and targets to be achieved;

- Control measures *(with assigned responsibility)* - to be implemented to meet management objectives;

- Monitoring *(with assigned responsibility)* - includes relevant equipment, location of monitors, parameters, baseline monitoring, frequency of monitoring/inspections, recording of complaints, and reporting of results (format/frequency); and

- Level of residual risk - the likelihood and consequence of an environmental hazard occurring following the implementation of control measures.

The level of risk associated with each environmental factor is determined using procedure **PPPC05 'Risk Management'**.

For any subcontracted works, the nominated Subcontractor is expected to implement the stated environmental controls and undertake monitoring in accordance with contract requirements.

5.2 Legal & other requirements

The Macmahon approach to identifying and communicating legal and other requirements to which we subscribe is promoted via:

- The Legal and Other Requirements procedure (on MBS);

- An environmental legislation register (detailing legislation for each Australian state and territory associated with environmental aspects); and

- Project Environmental Management Plan (project specific legal and other requirements).

5.3 Objectives, targets and programme(s)

Environmental objectives and targets are established at both corporate and project levels. Objectives and targets consider the Macmahon Environmental Policy, legal and other requirements, significant environmental aspects, and

contractual requirements.

Environmental objectives and targets consistent with the Macmahon Environmental Policy objectives are documented within:

- Business Plans;

- Annual Public Environmental Report;

- Project Environmental Management Plans;

- Corporate and Project Environmental Risk Registers; and

- Management System Review Meeting Minutes.

5.4 Project Environmental Management Plans

The Project Environmental Management Plan (PEMP) is written so as to include corporate, contractual, statutory, and AS/NZS ISO 14001:2004 management system requirements.

The primary purpose of the PEMP is to provide information in a suitable framework to ensure environmental impacts associated with project activities are minimised. The plan describes management responsibilities and authorities with respect to environmental procedures and controls that apply to each contract.

Generic project environmental management plan templates (e.g. covering Aboriginal heritage, community relations, dieback/dust/noise/water management) are also available via the Macmahon Business System (intranet) to provide further guidance to projects in managing key environmental issues/aspects.

6. IMPLEMENTATION & OPERATION

6.1 *Environmental Organisational Structure*

Corporate Support

Macmahon has centralised its corporate activities and operates from its head office located in Perth. The General Managers (Civil, Allplant Services, Mining) report to the Chief Executive Officer of Macmahon Holdings Limited.

At Group level, the Quality and Environmental Manager (QEM) has overall responsibility for Quality and Environment, is independent of the projects, and reports to the General Manager - Strategic Development.

Project

At operational level, the assigned Project Environmental Management Representative (PEMR) has a line responsibility to the Project Manager, and a reporting function to the Quality and Environmental Manager.

6.2 *Responsibilities & Authorities*

Quality & Environmental Manager / Coordinator

- Development of the Project Environmental Management Plans;
- Auditing the Environmental Management System;
- Providing support to the PEMR for the duration of the project;
- Maintenance of the company's third party certification to ISO 14001; and
- Facilitate improvements to the Macmahon business system, which incorporates the Macmahon environmental management system.

Project Environmental Management Representative (PEMR)

The PEMR has a functional reporting link to the Quality and Environmental Manager and is responsible for the following:

- Monitoring and reporting on environmental system performance;
- Ensuring data collected/reported and associated records maintained (e.g. delivery/waste dockets) to meet the requirements of the Greenhouse Challenge Plus Program;
- Consulting with the Project Manager on environmental matters;
- Assisting with site inspections and audits;
- Liaising with employees on environmental matters;
- Facilitate the implementation of environmental

improvements and initiatives where practicable;

- Ensuring the PEMP and associated plans are implemented to meet the requirements for the project;
- Assigning project staff to perform verification duties;
- Ensuring nonconformances and environmental incidents are identified, reported and suitable corrective actions are determined and completed;
- Reviewing inspection reports and ensuring any actions required are executed;
- Ensuring subcontractors fulfil their environmental obligations;
- Attending meetings to discuss environmental issues;
- Assisting with identification of measures to improve energy efficiency and reduce greenhouse emissions;
- Assisting with the updating of Project Plans; and
- Liaising with environmental representatives from customer, government authorities and community groups.

All Employees

It is the responsibility of all employees to comply with the EMS, including:

- Understanding the environmental risks and obligations associated with all work to be undertaken;
- Understanding and applying procedures, work instructions and controls (eg. JSEA's) to meet environmental obligations;
- Reporting any environmental hazards and incidents (potential and actual); and
- Understanding, promoting and assisting in the implementation of the EMS.

The responsibilities and authorities of Macmahon personnel are defined in position descriptions, refer procedure **SDPC01 'Responsibilities and Authorities'.** The inter-relationships and responsibilities of staff are also documented under various flowcharts, procedures and guidelines in the MBS.

6.3   Environmental Inductions
It is the policy of Macmahon to ensure adequate training and instruction is provided to personnel to allow them to perform their duties whilst ensuring the environmental impacts associated with the Project are minimal.

The Project Manager is to ensure all Macmahon and Subcontractor personnel attend a Macmahon induction, prior to commencement of work, in accordance with Procedure **SSPC02 'Induction'** which includes but will not be limited to the following environmental topics:

- Awareness of Environmental Policy;
- Overview of key environmental issues and personnel

responsibilities;

- Promoting awareness of significant environmental issues and personnel responsibilities;
- Reporting of environmental incidents – which will include the type of events to be reported, how an event is reported and to whom the event is reported;
- Emergency procedures - which will cover the procedure for an emergency and for evacuation of the site in the event of a catastrophic situation arising; and
- Contingency Plans - e.g. for Hydrocarbon/Chemical Spills and the Discovery of Previously Unidentified Aboriginal Heritage Sites.

6.4 Environmental Awareness Training & Presentations

A set of toolbox topics have been developed as training tool for presentation at toolbox meetings to raise awareness of environmental aspects and issues associated with the project. Each package consists of a five minute PowerPoint presentation, discussion session, and information poster. Topics covered include dust, waste management, hydrocarbons, flora/fauna, and any other project-specific issues.

The Project Environmental Management Representative and other key personnel (e.g. Supervisors) also undergo training in the Macmahon Project Environmental Management Representative Training Package (PEMR).

6.5 Communication

Internal communication of environmental matters occurs through:

- Site inductions;
- PEMR environmental training package;
- Environmental Advisor Flyer;
- Internal newsletters and bulletins;
- MBS (Intranet);
- Management meetings including the Management System Review;
- Project meetings;
- Business Plans;
- Monthly and annual reporting;
- General daily communications;
- Audits and inspections; and
- Toolbox meetings.

6.6 Document Control

The following documents, as a minimum, are subject to control as detailed in procedure **PEPC03 'Document Control'.**

- Group Procedures & Forms;
- Project Specific Procedures and Forms;
- Standards/Codes/Acts/Regulations;
- Project Plans; and

- Drawings.

Where changes are required to project documentation, the Project Manager or delegate shall coordinate all amendments/revisions to the documents and implement the necessary changes required.

Unless otherwise specified by the Project Manager, contract/shop drawings are transmitted to external parties using a Document Transmittal. All other documents are transmitted using suitable correspondence. Transmittal records are maintained.

6.7 Operational Control

6.7.1 Risk Register (Environment)

The environmental risk register (generally Appendix 2 of the PEMP) outlines minimum environmental operational controls to be implemented for each environmental aspect.

Also refer to section 4.1 of this Manual.

6.7.2 Environmental Procedures & Guidelines

Corporate environmental procedures that have been developed as part of the Macmahon Environmental Management System and are relevant to the project include:

- Design, Construction and Operation of Plant/Equipment Wash-down Facilities (PEGL04);
- Hydrocarbon Management (PEPC35);
- Control of Hazardous Substances (PEPC28);
- Hydrocarbon/Chemical Spill Response (PEFC13);
- Weed/Dieback Management (PEFC12);
- Management of Unrecorded Aboriginal Heritage Sites (SSFC06c);
- Waste Management (PEPC34); and
- Erosion/Sediment Control Failure Response Flowchart (PEFC14).

These guidelines and procedures have been developed to cover and/or align with relevant requirements, standards, legislation and/or best practice.

Project specific environmental procedures and guidelines are developed for each project where required.

6.7.3 Hydrocarbon Management

For all Macmahon projects, hydrocarbons (i.e. diesel, oils, hydraulic fluids and lubricants) will be stored within impervious or lined bunded enclosures in accordance with *Australian Standard (AS) 1940-2004: The storage and handling of flammable and combustible liquids* and procedure **PEPC35 'Hydrocarbon Management'.**

Containment vessels for waste hydrocarbons, coolants and the like will be located in separate impervious or lined bunded compartments to diesel storage tanks to prevent potential cross contamination of materials. New and in-use products will be stored separately from waste vessels. All vessels containing waste materials will be appropriately labelled (with contents and dates) and correctly stored.

Prior to the commissioning of Hydrocarbon Storage Facilities, the **Fuel and Oil Storage Checklist (PECL03)** will be completed by the Maintenance Supervisor or Project Engineer to ensure all of the general requirements of AS 1940 have been satisfactorily addressed.

In the event of a hydrocarbon or chemical spill/leak, the Macmahon spill response process is to be adhered to (PEFC13). All project personnel will be trained in the spill response process (see overleaf) and the spill response flowchart prominently displayed in key areas such as workshops and spill response equipment stations.

6.7.4 Hazardous Substances

All substances/chemicals to be utilised on the works shall be checked using the Chemwatch system and Material Safety Data Sheet (MSDS) obtained prior to use on the project. The Project Supervisor shall ensure that a register and file of MSDS records are maintained for all hazardous products used.

All other aspects of hazardous substance management shall be in accordance with procedure **PEPC28 'Control of Hazardous Substances'** and State and Federal Legislation.

6.7.5 Evaluation of Subcontractors

Subcontractors are evaluated in accordance with procedure **PPPC06 'Evaluation of Subcontractors'.** Only Subcontractors who have been evaluated by Macmahon will be engaged to perform subcontract works.

Where a subcontractor is unable to provide Macmahon with an acceptable quality management system, the Project Manager or nominated representative ensures that the Subcontractor undertakes the works in accordance with the Macmahon management system requirements.

A Subcontractors Database is maintained by the Quality & Environmental Manager capturing details of subcontractors evaluated and is accessible from the MBS.

6.8 *Emergency Preparedness and Response*

The Safety Representative, in consultation with the PEMR, is to establish suitable emergency procedures for each project to ensure effective response in the event of an emergency (including environmental emergencies such as fire and large fuel/chemical spills) in accordance with procedure **PEPC22 *'Emergency Preparedness and Response'***.

Contingency Plans for the management of environmental emergencies may also be developed as part of the Project Environmental Management Plan. Examples of environmental contingency plans include, but are not limited to:

- The Hydrocarbon/Chemical Spill Response Process (PEFC13);
- Management of Unrecorded Aboriginal Heritage Sites (SSFC06c);
- Dust Management; and
- Erosion and Sediment Control Failure Management (PEFC14).

An Emergency Procedure (Flipchart) is to be completed and posted at specific work areas, specifying the steps to be taken and the parties/persons to contact in the event of an emergency.

The Emergency Procedure shall be tested at on a six (6) monthly basis. Records are to be maintained of all site emergencies and results of any emergency practice drills conducted. At least one environmental emergency drill shall be conducted per annum.

A list of environmental emergency contact details will also be displayed in key locations (eg. crib room) at the site.

7. CHECKING AND CORRECTIVE ACTION

7.1 Monitoring

Monitoring of each key environmental aspect is as described in the Environmental Risk Register (Appendix 2) of the PEMP.

Furthermore, a 'Project Environmental Inspection Checklist' (PECL02) for surface operations and 'Safety & Environmental Inspection Checklist' (PECL01) for underground operations will be completed by the PEMR on a monthly basis (as a minimum).

7.2 Measurement

Any inspection, measuring and testing equipment (including newly acquired test equipment) used for measuring purposes, whether owned by Macmahon or Subcontractor, shall be controlled and calibrated. For Macmahon equipment, a register is to be maintained in accordance with procedure **PEPC38 'Monitoring and Measurement'.**

Only equipment capable of measuring or testing to the necessary accuracy and precision for the intended application (in accordance with Contract and manufacturer specifications) will be used.

All testing undertaken shall be in accordance with contract requirements, and the equipment used for calibration and test results must be traceable to national standards. Calibration and test records shall be reviewed and initialled by Macmahon representative to signify review and acceptance.

7.3 Nonconformance, Corrective and Preventative Action

Any nonconformance is reported in accordance with procedure **PEPC39 'Nonconformance and Corrective Action'**.

Concessions or waivers are sought from the Customer for the proposed corrective action for any nonconformance which varies the requirements of the Specification or Contract. The action taken is to the degree appropriate to mitigate any impacts caused and risks encountered.

A '**Nonconformance Register' (PEFM43**) is maintained to monitor the status of nonconformance raised.

Complaints from any source (e.g. Customer, public, government authority) are registered, the complaint investigated, and action taken to enable timely and satisfactory closeout.

7.4 Control of Records

Project records, including pertinent subcontractor project records, are maintained to provide evidence of conformity to Customer requirements and of the effective operation of the quality management system in accordance with **PPPC04 'Project Correspondence & Filing'.**

Such records include, but are not limited to:

- Correspondence to/from Customer and interested parties;

- Permits, licenses and approvals;
- Induction training Records;
- Inspection and testing documentation;
- Measuring and testing equipment calibration records;
- Nonconformance & corrective action / complaints;
- Incident reports; and
- Audits.

Records must remain legible, readily identifiable and retrievable.

Project records are archived for a minimum period of 7 years in accordance with procedure **COPC02 'Archiving of Records'**.

7.5 Internal Environmental Audits	Through the experience of implementing our management system, we have identified that for a process to be effective there needs to be regular monitoring, reviewing and upgrading. The use of internal environmental audits on all aspects of the environmental system has helped to ensure that our processes remain effective.
	Internal audits aimed at evaluating the conformance of the system, process or product (as appropriate) are executed as detailed in procedure **SSPC35 'Audits'** by the Quality & Environmental Manager / Coordinator / Officer, who are independent of the project.
	The Quality & Environmental Manager establishes an Internal Audit Plan, posted on the MBS. Internal audits are generally completed within the first three months of start-up, and every 12 months thereafter (as a minimum). An audit report is issued to relevant Macmahon personnel and the Customer Representative within two weeks of audit completion.
	Any nonconformance identified during the audit shall be actioned in accordance with procedure **PEPC39 'Nonconformance and Corrective Action'.** The management personnel responsible for the area shall take timely corrective action on the deficiencies found.
7.6 Evaluation of legal compliance	In accordance with AS/NZS ISO 14001:2004 (Section 4.5.2) and procedure **SSPC38 'Legal and Other Requirements'**, compliance with applicable environmental legal requirements will be evaluated through internal environmental audits. The resultant environmental audit report will detail the scope and findings of the legal compliance review undertaken. Trends and outcomes of legal compliance evaluations will also be reviewed periodically at group level during management system review meetings.

8. CONTINUAL IMPROVEMENT

The following mechanisms are implemented to review performance and to identify opportunities for improvement.

8.1 Toolbox Meetings

Toolbox meetings will include 'Environment' as an agenda item. Issues raised are to be recorded, and responsibilities assigned to ensure satisfactory close-out of issues raised.

8.2 Customer Satisfaction

In accordance with procedure **PEPC40 'Customer Satisfaction',** Quality & Environmental Manager / Coordinator /Officer arrange to contact the Customer Representative during the project to gather formal feedback on Macmahon's project performance, using the **'Customer Feedback Questionnaire' (PEFM17)** form.

Following receipt of completed feedback, any category rated 'average' or below is treated as an opportunity for improvement and necessary corrective action taken.

8.3 Group Management System Review

In accordance with procedure **PEPC36 'Continual Improvement',** the Quality & Environmental Manager organises a meeting with General Managers and other key personnel on a 12-monthly basis (as a minimum) to review the management systems continuing suitability, adequacy and effectiveness, and to identify and assess opportunities for improvement.

Group Management System Review reports and meeting minutes are accessible to Macmahon employees via the MBS.

Appendix 1 –

Table cross-referencing the elements
of AS/NZS ISO 14001:2004 to Macmahon Business
System

Cross Reference Table of AS/NZS ISO 14001:2004 to Macmahon Business System documents

AS/NZS ISO 14001 Section	ISO14001 System Requirements Heading	MBS Reference	Document Title	MBS Form Reference	MBS Form Title
4	**Environmental Management System Requirements**				
4.1	General requirements	SSFC06b	Environmental Management System Flowchart		
		SSPC36	Continual Improvement Procedure		
4.2	Environmental policy	CPPS06	Environmental Policy		
4.3	Planning	PPPC03	Project Planning Procedure		
4.3.1	Environmental aspects	PPPC05	Risk Management Procedure	PPFM03 PPFM13	Risk Register – Environment Job Safety and Environment Analysis
4.3.2	Legal and other requirements	SSPC38	Legal & Other Requirements	SSFM116a SSFM116b SSFM116c SSFM116d SSFM116e SSFM116f SSFM116i	Legal & Other Requirements – Western Australia Legal & Other Requirements – Queensland Legal & Other Requirements – Northern Territory Legal & Other Requirements – New South Wales Legal & Other Requirements – Victoria Legal & Other Requirements – South Australia Legal & Other Requirements – New Zealand
			Project Environmental Management Plans		
4.3.3	Objectives, targets and programmes		Business Plan Annual Public Reports Project Environmental Management Plan		
4.4	Implementation and operation		Organisation structure for Corporate and Project sites		

Cross Reference Table of AS/NZS ISO 14001:2004 to Macmahon Business System documents

AS/NZS ISO 14001 Section	ISO14001 System Requirements Heading	MBS Reference	Document Title	MBS Form Reference	MBS Form Title
4.4.1	Resources, roles, responsibility and authority	SDPC01	Responsibilities and Authorities Procedure	SDFM01	Position Description
		SSPC02	Induction Procedure		
		SSCF02	Human Resource Management		
		TPPC01	Tendering Procedure		
		PPPC02	Project Launch Procedure	PPFM01	Project Launch Checklist
4.4.2	Competence, training and awareness	SSPC02	Induction Procedure		
			Toolbox Topic Packages PEMR Training Package Generic Induction Packages		
		SSPC09	Training & Development (Staff & Wages)	SSFM54 SSFM55	Training Request Form Training Record Form
		PPPC06	Evaluation of Subcontractors Procedure	PPFM04 PPFM05 PPFM06 PPFM07	Subcontractor Evaluation Questionnaire Form Subcontractor Evaluation/Inspection Visit Subcontractor Employee Questionnaire Form Subcontractor Performance Feedback Form
4.4.3	Communication	PEPC19	Consultation, Communication & Interface Procedure	SSFM35 SSFM36	Attendance Record Meeting Record
4.4.4	Documentation	SDGL01	MBS Description		
		-	Environmental Manual		
		SDTB01	Cross Reference Table for AS/NZS ISO 9001, AS/NZS ISO 14001 & AS/NZS 4801		

Cross Reference Table of AS/NZS ISO 14001:2004 to Macmahon Business System documents

AS/NZS ISO 14001 Section	ISO14001 System Requirements Heading	MBS Reference	Document Title	MBS Form Reference	MBS Form Title
4.4.5	Control of documents	PEPC03	Document Control Procedure	PEFM21	Document Control Register
				PEFM23	Document Transmittal
		PPPC04	Project Correspondence and Filing Procedure	PPFM12	Project Filing Index
				PPFM11	Correspondence Registers
4.4.6	Operational control	SSPC33	Purchasing Procedure	SSFM41	Purchase Order Requisition
				SSFM08	Capital Expenditure Request
				SSFM42	Purchase Authority Approval
				SSFM68	Request New Supplier
		PEPC01	Recruitment Procedure	SSFM49	Site Vacancy Form
				SSFM117	Reference Check Form (Staff)
				SSFM118	Reference Check Form (Wages)
				SSFM05	Application for Employment
				SSFM04	Application for Apprenticeship
		PPPC06	Evaluation of Subcontractors Procedure	PPFM04	Subcontractor Evaluation Questionnaire Form
				PPFM05	Subcontractor Evaluation /Inspection Visit
				PPFM06	Subcontractor Employee Questionnaire Form
				PPFM07	Subcontractor Performance Feedback Form
		SSPC21	Capital Expenditure/ Asset Disposal Procedure	SSFM08	Capital Expenditure Request
		PEPC01	Design Management Procedure		
		PEFC12	Weed / Dieback Hygiene Flowchart	PEFM47	Weed / Dieback Hygiene Certificate
				PEFM10	Weed / Dieback Hygiene Register
		PEFC13	Hydrocarbon / Chemical Spill Response Flowchart		
		PEFC14	Erosion/Sediment Control Failure Response Flowchart		

Cross Reference Table of AS/NZS ISO 14001:2004 to Macmahon Business System documents

AS/NZS ISO 14001 Section	ISO14001 System Requirements Heading	MBS Reference	Document Title	MBS Form Reference	MBS Form Title
		PEGL04	Design, Construction and Operation of Plant/Equipment Wash-down Facilities	PECL03	AS1940 Fuel & Oil Storage Checklist
		PEPC28	Control of Hazardous Substances Procedure	PEFM32	Hazardous Substance Register
		PEPC34	Waste Management Procedure		
		PEPC35	Hydrocarbon Management Procedure		
4.4.7	Emergency preparedness and response	PEPC22	Emergency Preparedness and Response Procedure		
			Project Specific Crisis Management Plans		
		SSPC39	Perth Office Evacuation Procedure		
		SSPC40	Perth Workshop Evacuation Procedure		
4.5	Checking				
4.5.1	Monitoring and measurement	PEPC38	Monitoring and Measurement Procedure	PECL02 PECL01	Environmental Inspection Checklist Safety & Environmental Inspection Checklist
		PEPC37	Project Reporting Procedure	PEFM58	Project Quality & Environment Statistics Monthly
		PEPC40	Customer Satisfaction Procedure	PEFM17	Customer Satisfaction
4.5.2	Evaluation of compliance	SSPC38	Legal & Other Requirements Procedure		
		SSFM116	Environmental Legislation Registers		

Cross Reference Table of AS/NZS ISO 14001:2004 to Macmahon Business System documents

AS/NZS ISO 14001 Section	ISO14001 System Requirements Heading	MBS Reference	Document Title	MBS Form Reference	MBS Form Title
4.5.3	Nonconformity, corrective action and preventative action	PEPC39	Nonconformance & Corrective Action Procedure	PEFM43 PEFM44 PEFM11 PEFM12	Nonconformance Register Nonconformance Report Complaints Register Complaint Reports
		SSPC34	Accident Investigation and Reporting Procedure	SSFM01 SSFM02	Accident Report Accident Statement Report
4.5.4	Control of records	SSPC37	Electronic Data Backup Procedure		
		COPC02	Archiving of Records Procedure	COFM03 COTB01	Archiving of Records Form Table of Authorised Signatories
4.5.5	Internal audit	SSPC35	Auditing Procedure	PEFM44 SSFM07 PEFM15 PEFM61	Nonconformance Report Audit Report Corrective Action Report Surveillance Inspection Report
4.6	Management review	SSPC36	Continual Improvement Procedure	SSFM36	Meeting Record
		SSPC36	Management System Review Procedure	SSFM36	Meeting Record