SAFETY &
SUSTAINABLE
DEVELOPMENT

THE ANGLO AMERICAN ENVIRONMENT WAY

Volume 1: Management System Standard

AngloAmerican

Version 2 – March 2009 – Final

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INTRODUCTION

Anglo American plc owns and operates a range of businesses which, by virtue of their nature, scale and geographical locations, have significant environmental challenges.

Our divisions and managed operations are committed to Anglo American's "Good Citizenship: Our Business Principles". To help us meet our commitments to the protection and management of the environment, we have developed the Anglo American Environment Way.

The Anglo American plc Executive Committee has endorsed and committed to the implementation of the Anglo American Environment Way as the governing framework for the management of environmental impacts. The Board seeks assurance of compliance with the Anglo American Environment Way standards through regular self-assessments, peer review and third party audits.

The table below highlights the focus of Volume 1 (this volume), and summarises the coverage of the Environmental Management System (EMS) Standard:

LIFECYCLE STAGES			EMS STANDARD – VOL 1	VOLUME 2									
				S&EIA STANDARD	PERFORMANCE STANDARDS								
					Water	Air quality	Mineral waste	Non-mineral waste	Hazardous substances	Biodiversity	Rehabilitation	Mine closure
Opportunity Identification	Exploration/Prospecting		X	▪	X	▪	▪	▪	▪	X	▪	
Evaluation	Acquisitions – Due diligence		▪	▪	▪	▪	▪	▪	▪	▪	▪	▪
	Projects	Conceptual phase		X	▪	▪	X	▪	▪	▪	▪	▪
		Pre-feasibility phase		X	X	X	X	X	▪	X	X	X
		Feasibility phase		X	X	X	X	X	▪	X	X	▪
Project Implementation	Detailed design and procurement		X		X	▪	X	▪	▪	X	X	▪
	Construction and commissioning		X		X	▪	X	▪	▪	▪	X	
Operational			X		X	X	X	X	X	X	X	X
Closure	Decommissioning		X		X	▪	▪	▪	▪	▪	▪	X
	Post-closure		X		X	▪	▪	▪	▪	▪	▪	X

X = Contains specific requirements.

▪ = Indirectly covered by general requirements.

ENVIRONMENTAL MANAGEMENT IN ANGLO AMERICAN

OUR VISION

ZERO Harm

Our vision is to minimise harm to the environment by designing, operating and closing all of our operations in an environmentally responsible manner.

OUR PRINCIPLES

Underpinning the Vision are three fundamental Environmental Principles

ZERO Mindset

We shall apply the mitigation hierarchy of avoiding, minimising and mitigating environmental impacts arising from our activities, products and services.

NO Repeats

All necessary steps will be taken to learn from environmental impacts, incidents, audit findings and other non-conformances, to prevent their recurrence.

SIMPLE Non-negotiable Standards

Common, non-negotiable Environmental Management and Performance Standards and procedures shall be applied throughout the Group as a minimum requirement.

OUR POLICY

Mark Cutifani
Chief executive, Anglo American plc

We hold our leaders accountable for the environmental management of our activities.

We expect all our line managers and supervisors to provide effective leadership in environmental management whilst recognising that environmental management is the responsibility of all who work for us.

Management of every business or operation are responsible for the full implementation of the Anglo American Environmental Management Framework and participation in the Anglo Peer Review Programme. This requires:

- the allocation of appropriate resources and the provision of training, education, consultation and auditing to ensure compliance;
- the development, implementation and maintenance of environmental policies, programmes and procedures;
- effective environmental impact identification, assessment and control, designed to achieve proactive management of our activities, products and services.

We shall conserve and protect environmental resources through, amongst others, the effective use of energy and water, minimising waste and reducing pollution.

We shall demonstrate active stewardship of land, freshwater systems and biodiversity with which we interact.

We respect people's culture and heritage.

We shall comply with environmental legislation and other requirements to which we subscribe, and develop a culture of improvement.

We commit to open communication with employees, local communities, contractors, suppliers, investors, business partners and other interested parties to encourage an environmentally responsible culture that reflects the intent of this policy.

AngloAmerican

JULY 2014

These policies will be reviewed at appropriate intervals and revised where necessary to keep them current.

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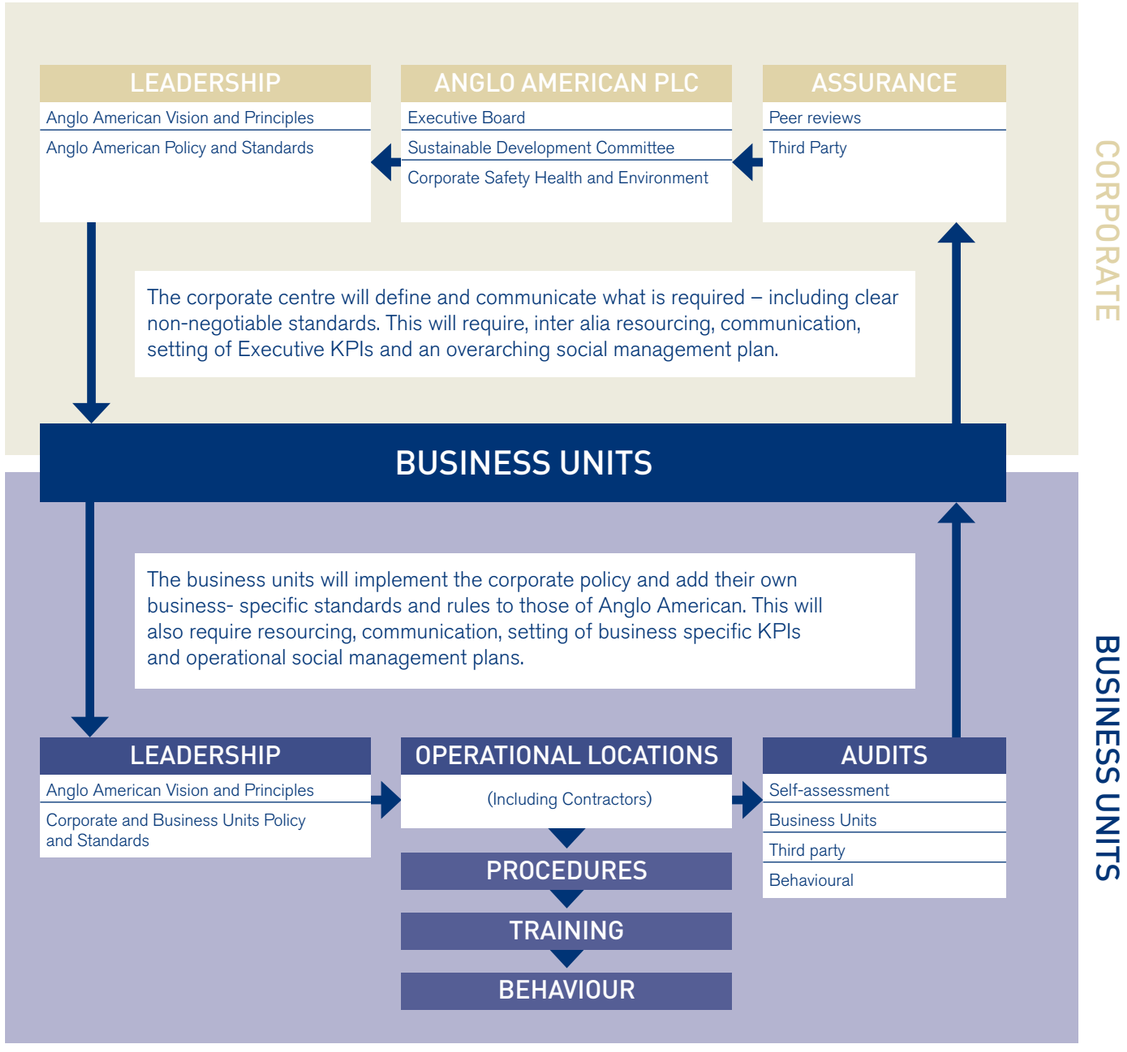
THE ANGLO AMERICAN ENVIRONMENTAL MANAGEMENT FRAMEWORK

The Anglo American Environmental Management Framework defines the roles and responsibilities of the corporate centre and Business Units. The corporate function defines, communicates, and reviews environmental management requirements in relation to the Vision, Leadership, Principles, Policy and Standards. The Business Units implement and incorporate the corporate requirements into business-specific programmes and working practices.



VISIBLE LEADERSHIP

All levels of management have a responsibility to abide by the Environmental Vision, Principles and Policy, which must be embraced and embedded into the organisation.

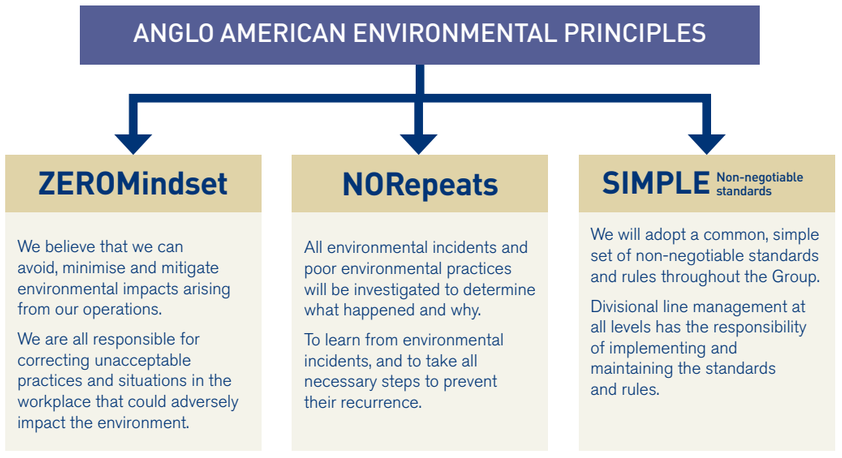
Executives and senior management are ultimately accountable for the management of environmental issues. They must lead by example and demonstrate the desired leadership behaviours that will drive continual improvement in environmental performance. Management must set non-negotiable, high standards for environmental management, and correct wrong behaviours or situations that could cause unplanned or increased adverse impacts on the environment. Particular emphasis is needed to ensure that adverse impacts are avoided or minimised, lessons are learned from incidents and all necessary actions are taken to prevent repeats.

Executives, managers and first-line supervisors must demonstrate through visibly felt leadership that environmental issues are given the same priority, throughout the lifecycle of a business, as other key business priorities. This shall include participating in environmental programmes, audits and reviews, and engaging with employees, contractors and other stakeholders.

CORPORATE ASSURANCE PROGRAMME

The Executive Committee seeks assurance of compliance with the Environment Way and its Standards, and with the process of continual improvement. The corporate assurance programmes have been developed as a means of ensuring that fundamentally sound, risk-based management systems are in place at all operations. Furthermore, the assurance programmes assist in building core competence and acts as a catalyst for learning and sharing across Anglo American.

OUR PRINCIPLES



DOCUMENT HIERARCHY

The Anglo American Environmental Management Framework consists of a set of hierarchical documents, with a mandatory requirement to implement the content of the high-level documentation, while the guidelines are advisory.

ANGLO AMERICAN "GOOD CITIZENSHIP BUSINESS PRINCIPLES"

ANGLO AMERICAN VALUES

ENVIRONMENTAL ISSUES MANAGEMENT IN ANGLO AMERICAN
- Vision
- Principles
- Policy

ANGLO AMERICAN MANAGEMENT SYSTEM STANDARD

ANGLO AMERICAN ENVIRONMENTAL PERFORMANCE STANDARDS

ANGLO AMERICAN ENVIRONMENTAL PROCEDURES

MANDATORY
to all managed businesses

ANGLO AMERICAN GUIDELINES AND TOOLBOXES

ADVISORY
to all managed businesses

BUSINESS UNITS SOCIAL POLICY

OPERATIONAL POLICY, PROCEDURES, ETC.

MANDATORY
to all sites and operations controlled by the relevant Business Unit

ENVIRONMENTAL STANDARDS

Anglo American has developed Principles and Policy, an Environmental Management System (EMS) Standard, a Social and Environmental Impact Assessment (S&EIA) Standard, and a number of Environmental Performance Standards that cover key management areas (e.g. water, air, biodiversity, etc.). These Standards are mandatory, high-level requirements set at corporate level. They support the Anglo American Environmental Vision, Principles and Policy, and outline the required approach to avoiding or minimising the potential adverse environmental impacts associated with our activities. The Standards are supported by detailed procedures and guidelines.

The objectives of the Standards are to:

- Support the realisation of the "Good Citizenship: Our Business Principles" and our Environmental Vision, Principles and Policy;
- Provide a risk/opportunity-based management strategy that is consistent with ISO 14001;
- Provide clear environmental performance criteria against which environmental management across the Group can be measured and audited; and
- Provide a uniform basis for the provision of assurance and from which to drive continual improvement across the Group.

Scope

The Anglo American Environment Way applies to all managed activities across the world, which includes:

- owned and/or operated sites/facilities;
- 'greenfields' and 'brownfields' projects;
- mergers and acquisitions – to assist in the identification of potential environmental risks and liabilities prior to them becoming part of Anglo American;
- divestments; and
- activities of contractors, suppliers, visitors on Anglo American sites or under Anglo American management.

Where Anglo American has an equity stake, or where significant group assets are involved, these Standards shall be made available to independently managed operations, via our representatives on the relevant Boards, and to joint ventures, to encourage their application and improvement in environmental management.

In relation to the above, the Standards apply to:

- all our activities that have the potential to positively or negatively impact the environment, and
- the entire life cycle of our operations from exploration through to project evaluation, design, operation, decommissioning, closure and post-closure.

Application

Anglo American is committed to managing its environmental aspects, impacts and risks through adherence to the internationally recognised ISO 14001:2004 EMS Standard. The Anglo American EMS Standard contains some additional requirements, which are designed to complement those contained in ISO 14001. The ISO 14001 clauses, to which the complementary requirements link, have been quoted in the EMS Standard so as to provide the context. ISO 14001 together with the Anglo American EMS Standard provide the basis for the development, enhancement and application of comprehensive, integrated EMSs throughout our operations.

The S&EIA Standard aims to ensure that all Anglo American projects proactively consider social and environmental matters in their planning and decision-making.

The Environmental Performance Standards contain additional requirements for key management areas, which apply over and above the Anglo American EMS and S&EIA Standards. **They prescribe the minimum level of performance that is expected to be achieved in these areas, where there is an environmental risk or opportunity. Where there is no risk or opportunity, this needs to be demonstrated through a documented risk assessment. The Environmental Performance Standards will then not apply.** In other words a risk-based approach is applied to the application of the environmental performance standards.

The Environmental Standards cover the following lifecycle stages:

Opportunity Identification	Exploration/Prospecting	
Evaluation	Acquisitions – Due diligence	
	Projects	Conceptual phase
		Pre-feasibility phase
		Feasibility phase
Project Implementation	Detailed design and procurement	
	Construction and commissioning	
Operational		
Closure	Decommissioning	
	Post-closure	

The Environmental Standards contain requirements relating to the following management topics:

Planning	Policy, leadership and commitment
	Administrative/Project management
	Stakeholder engagement
	Environmental aspects
	Identification and selection of alternatives
	Environmental characterisation/Description
	Legal and other requirements
	Scope
	Objectives and targets
	Risk/Impact assessment
	Plan/Design environmental programme(s) and operational controls
Implementation	Resources, roles, responsibility and authority
	Competence, training and awareness
	Communication and stakeholder engagement
	Implement environmental programme(s) and operational controls
	Maintenance and inspections
	Emergency preparedness and response
Checking	Monitoring and performance measurement
	Non-conformity, corrective action and prevention
	Records
	Reports
	Audits
	Reviews

Management review

The Environment Way and its Environmental Standards will be reviewed annually at corporate level to ensure that they remain current and valid, and will be revised and reissued as appropriate.

ENVIRONMENTAL MANAGEMENT SYSTEM STANDARD

PURPOSE

The purpose of this standard is to ensure that all Anglo American managed operations implement a formal Environmental Management System (EMS) to avoid or mitigate potential adverse impacts on the environment.

Scope and application

This standard and supporting documentation:

- Contains **additional requirements** for the operational stage to complement those prescribed by ISO 14001:2004.
- Contains the minimum EMS requirements for the exploration, implementation and closure stages. (The exploration stage requirements complement the Exploration SHEC-list.)
- Applies to all on-site activities and off-site, ancillary activities for which Anglo American managed operations have responsibility.

Definitions

The definitions in ISO 14001:2004 Clause 3 apply.

Also refer to the definitions in the S&EIA and Performance Standards.

GENERAL REQUIREMENTS

All Anglo American projects and managed operations shall:

Competence, training and awareness	Employ suitably qualified and experienced specialists to: ▪ interpret the legal, regulatory and other environmental requirements; ▪ undertake the necessary investigations and test work; and ▪ plan/design the environmental programmes and operational controls for facilities that could have significant adverse environmental impacts, products or services or are needed to prevent such impacts. Employ staff and contractors that are competent to perform their activities in an environmentally responsible manner.

OPPORTUNITY IDENTIFICATION STAGE: EXPLORATION/PROSPECTING

All prospecting/exploration activities under Anglo American management control shall:

Administrative/ Project management	Obtain the required environmental approvals prior to commencing with exploration.
Environmental aspects	Characterise/Classify the materials disturbed by the exploration activities to establish their pollution potential when exploration involves intrusive activities, such as drill testing, bulk sampling or trial mining.
Environmental characterisation/ description	Characterise, in general terms, the baseline environment within the area that could be impacted on by the planned exploration activities, by: ▪ noting and recording, possibly using photographs, the condition of the area prior to activities; and ▪ identifying land owners, users, overseers, and/or administrators. Undertake detailed baseline studies, as for projects {refer to S&EIA Standard}, when prospecting in sensitive areas and/or when the activities will result in extensive disturbance of (relatively) pristine land.
Legal and other requirements	Prior to mobilising, conduct a review to determine the legal and other requirements applicable to exploration.
Risk/Impact assessment	Prior to commencing with the exploration activities, use the Exploration SHEC-List (on the Source under Sustainable Development) to screen, rate the significance of and analyse issues of concern. Assess impacts, as for projects {refer to S&EIA Standard}, when prospecting in sensitive areas and/or when the activities will result in extensive disturbance of (relatively) pristine land.
Environmental programme(s) and operational controls	Use the Exploration SHEC-List to identify and record the management actions to be implemented to reduce the identified significant issues to acceptable levels or to enhance the positive effects. Implement the Management Action Plan developed using the Exploration SHEC-List.
Resources, roles, responsibility and authority	Use the Exploration SHEC-List to prepare an environmental management budget for the exploration activities.
Stakeholder engagement	Use the Exploration SHEC-List to: ▪ identify and analyse stakeholders who may be affected by, interested in, or able to influence the exploration activities; ▪ guide engagement on issues such as access to land, compensation and/or rehabilitation requirements for disturbed areas; and ▪ foster constructive relations with government, communities and other relevant stakeholders.
Monitoring, records, reports, audits and reviews	Undertake environmental monitoring, if required, until the site is officially handed over to the owners, users, overseers, and/or administrators.

EVALUATION STAGE: PROJECTS

(Refer to the S&EIA and Performance Standards.)

IMPLEMENTATION STAGE: DETAILED DESIGN , CONSTRUCTION AND COMMISSIONING

During the implementation stage all projects shall:

Administrative/ Project management	Commence with the implementation of an EMS, or integration into an existing EMS, focusing initially on the construction phase. Ensure that: ▪ any modifications to the design(s) are approved by the designers; ▪ facilities, that could have significant adverse impacts or are needed to prevent such impacts, are constructed by suitably qualified contractors and supervised by the designers to ensure that they are built according to the design, and not commissioned prematurely or incorrectly; ▪ major contractors compile Social and Environmental Management Plans (S&EMPs) that are applicable to all subcontractors and aligned with the project's S&EMPs {refer to the S&EIA Standard}; and ▪ the owner/operator receives from the project team/designers all quality control data, the as-built drawings, and the approved operating manuals, procedures and codes of practice.
Environmental aspects	If necessary, update the aspects register and inventory of inputs and outputs {refer to the S&EIA Standard}. Undertake any additional test work or modelling required to support the development of the environmental programme(s) and operational controls.
Characterise/Describe the environment	Undertake any additional baseline data collection that may be required {refer to the S&EIA Standard}.
Legal and other requirements	Update the register of legal and other requirements as new requirements are identified {refer to the S&EIA Standard}.
Risk/Impact assessment	Complete risk/impact assessments.
Plan/Design environmental programme(s) and operational controls	See Operational stage, opposite. Complete the detailed engineering taking into account feasibility peer review comments/ recommendations, any other independent peer review comments, and any further test work or fieldwork undertaken. Clearly state design objectives and operating philosophies in design reports. Develop commissioning plans, which also consider potential commissioning challenges, for facilities that could have significant adverse impacts or are needed to prevent such impacts and ensure that there are adequate resources to implement them.
Stakeholder engagement	See Operational stage, opposite.
Implement environmental programme(s) and operational controls	Ensure that facilities that could have significant adverse impacts or are needed to prevent such impacts are commissioned in strict accordance with designs and commissioning plans.
Monitor, record, report, review, audit	Initiate the environmental inspections and monitoring, as for the Operational stage (see opposite). Record and report environmental data as for the Operational stage (see opposite).

OPERATIONAL STAGE

All Anglo American managed operations shall:

Administrative/ Project management	Define and document the scope of an EMS. Develop, document, implement, maintain and review an EMS, which shall be certified to ISO 14001:2004 and reflect the Anglo American Environmental Vision, Principles and Policy.
Policy, leadership and commitment	**Apply ISO 14001 Clause 4.2 and A.2, including:** […] define the organisation's environmental policy and ensure that […] it is appropriate to the nature, scale and environmental impacts of its activities, products and services. Establish, implement and maintain a local environmental policy that is in line with the Corporate environmental policy.
Environmental aspects	**Apply ISO 14001 Clause 4.3.1 and A.3.1, including:** […] identify the environmental aspects of its activities, products and services […] that it can control and those that it can influence taking into account planned or new developments, or new or modified activities, products and services. […] determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects). […] document this information and keep it up-to-date. […] consider normal and abnormal operating conditions, shut-down and start-up conditions, as well as reasonably foreseeable emergency situations. […] identify the environmental aspects […] associated with its current and relevant-past activities, products and services, planned or new developments, or new or modified activities, products and services. Establish and maintain an up-to-date register of environmental aspects. Review and, if necessary, update the aspects register, including the inventory of inputs and outputs, at least annually, or more frequently if operational changes occur. Characterise/Classify the properties of and, where possible, quantify the inputs to (e.g. reagents, water and energy), outputs from (e.g. wastes, emissions and effluents), and materials to be disturbed by (e.g. excavations) aspects throughout the operation's lifecycle. As appropriate: ▪ conduct test work and/or modelling; ▪ classify using local regulatory criteria; ▪ determine whether or not they are hazardous; and ▪ establish the risks (e.g. pollution potential) that they pose to the environment and prioritise accordingly. Perform ongoing test work to characterise the inputs, outputs and/or materials disturbed by mining.
Characterise/ Describe the environment	Undertake any further detailed baseline data collection that may be required. Update baseline data for areas not yet disturbed by mining, using the results of ongoing environmental monitoring.

Legal and other requirements

Apply ISO 14001 Clause 4.3.2 and A.3.2, including:

[…] identify and have access to the applicable legal requirements and other requirements to which the organisation subscribes related to its environmental aspects, and […] determine how these requirements apply to its environmental aspects.

(The host-country legislation applies as a minimum requirement, and is only superseded by other requirements that are more stringent, and not in conflict with the host-country legislation.)

Establish and maintain an up-to-date register of the legal and other requirements.

Periodically – in line with anticipated rate of legislative changes – review the register of legal and other environmental requirements.

The Anglo American Environmental Performance Standards (Volume 2 of the AEW) are mandatory "other requirements".

Objectives and targets

Apply ISO 14001 Clause 4.3.3 and A.3.3, including:

[…] establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organisation.

The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organisation subscribes, and to continual improvement.

When establishing and reviewing its objectives and targets, […] take into account the legal requirements and other requirements to which the organisation subscribes, and its significant environmental aspects. It shall also consider its technological options, its financial, operational and business requirements, and the views of interested parties.

Update the objectives and targets to accommodate changes to the legal and other requirements and/or monitoring results.

Risk/Impact assessment

Establish and maintain an up-to-date register of environmental impacts.

Establish, implement and maintain a procedure whereby the impacts register is reviewed and updated at least annually, or more frequently if operational changes occur.

Reassess impacts/risks using real monitoring data to re-calibrate models, etc. The frequency of these reassessments shall reflect the significance of the potential impacts.

Plan/Design environmental programme(s) and operational controls

Apply ISO 14001 Clause 4.3.3, A.3.3, 4.4.6 and A.4.6, including:

[…] establish […] and maintain programme(s) for achieving its objectives and targets.

[…] identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions […].

[…] address planning, design, construction, commissioning, operation and, at the appropriate time determined by the organisation, decommissioning.

[…] evaluate those of its operations that are associated with its identified significant environmental aspects and ensure that they are conducted in a way that will control or reduce the adverse impacts associated with them, in order to fulfil the requirements of its environmental policy and meet its objectives and targets. This should include all parts of its operations, including maintenance activities.

Ensure that the programme(s) and operational controls:

- take cognisance of guidance provided in Anglo American Guidelines and Toolboxes;
- cover all the applicable lifecycle stages, including exploration and post-closure; and
- address both negative (avoidance or mitigation) and positive (enhancement) aspects/impacts.

Resources, roles, responsibility and authority

Apply ISO 14001 Clause 4.3.3, 4.4.1 and A.4.1, including:

Programme(s) shall include:

a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the organisation, and

b) the means and time-frame by which they are to be achieved.

[…] ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialised skills, organisational infrastructure, technology and financial resources.

Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.

Environmental roles and responsibilities therefore should not be seen as confined to the environmental management function, but can also cover other areas of an organisation, such as operational management or staff functions other than environmental.

[…] ensure that appropriate resources, such as organisational infrastructure, are provided to ensure that the environmental management system is established, implemented and maintained. Examples of organisational infrastructure include buildings, communication lines, underground tanks, drainage, etc.

Provide adequate financial resources in budgets for environmental management and monitoring.

Develop an organisational structure for environmental management.

Designate responsibility for achieving objectives and targets to all appropriate personnel, including senior management, line management, employees and contractors.

Ensure that executives, managers, employees and contractors understand their responsibility to refuse to allow work to be undertaken or continued where conflict exists between the potential for significant adverse environmental risks/impacts, and other business priorities.

Allocate roles and responsibilities for environmental management, including emergency preparedness and response, as part of the Performance Agreements (or site equivalent) of the environmental and other personnel.

Include the relevant Anglo American environmental performance requirements in all procurement contracts and other contractor and business partner arrangements.

Ensure that all on-site and transport contractors comply with all on- and off-site licensing, and permitting, and their EMSs reflect the ISO14001 requirements.

Performance incentives:

- Set as a priority for line managers the management of agreed environmental objectives and targets and include this as a Key Performance Area (KPA) in their performance contracts.
- Ensure that executives and managers develop a formal process to recognise, reinforce and reward desired environmental outcomes.

Competence, training and awareness

Apply ISO 14001 Clause 4.4.2 and A.4.2, including:

[…] ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organisation is (are) competent on the basis of appropriate education, training or experience, and shall retain associated records.

[…] identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.

The organisation shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of:

a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system,

b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance,

c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and

d) the potential consequences of departure from specified procedures.

Employ staff and contractors that are competent to perform their activities in an environmentally responsible manner.

Consider the results of the aspect identification and risk/impact assessments when establishing competence, training and awareness requirements.

Provide appropriate training, refresher training, and coaching to personnel with roles and responsibilities for environmental management.

Communication and stakeholder engagement

Apply ISO 14001 Clause A.4.1, 4.2, 4.4.3, A4.3 and 4.4.6, including:

It is also important that the key environmental management system roles and responsibilities are well defined and communicated to all persons working for or on behalf of the organisation.

[…] define the organisation's environmental policy and ensure that […] it is available to the public.

[…] establish, implement and maintain a procedure(s) for:

a) internal communication among the various levels and functions of the organisation,

b) receiving, documenting and responding to relevant communication from external interested parties.

[…] establish and implement a method(s) for […] external communication.

[… communicate] applicable procedures and requirements to suppliers, including contractors.

Implement a process for effective engagement (communication, consultation and/or participation) with the relevant stakeholders in matters relating to the environment, including lessons learnt, good practices and opportunities for improvement.

Communicate to all relevant personnel and contractors the:

- results of the aspect identification and risk/impact assessments;
- legal and other requirements;
- objectives and targets;
- requirement to report to management any inappropriate environmental practices or conditions; and
- environmental management measures, such as the formal management of change programme, and emergency preparedness and response procedures.

Proactively engage with stakeholders to ensure that:

- they are aware of matters relating to the environment and the potential impacts that could arise from the operations;
- their perceptions and opinions are considered;
- good relationships are fostered;
- they have the opportunity to contribute to the development of management measures; and
- the dissemination of monitoring results are open and transparent.

Establish and maintain an up-to-date register of stakeholders and record of communications.

Establish a Stakeholder/Community Engagement Plan(s), which elaborates on the ongoing engagement process, with the appropriate level of engagement applicable to the various stakeholder groups.

Maintain, expand or initiate partnerships, as required.

Implement environmental programme(s) and operational controls

Apply ISO 14001 Clause 4.3.3, A.3.3, 4.4.6 and A.4.6, including:

[…] implement […] programme(s) for achieving its objectives and targets.

[… implement] procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets […].

[… implement] procedures related to the identified significant environmental aspects […].

Implement the environmental programme(s) and operational controls, including emergency preparedness and response procedures, community engagement plan(s) and the formal management of change programme.

Ensure that any modifications to design(s) are approved by the design engineer.

Maintenance and inspections

Apply ISO 14001 Clause 4.5.1 and A.5.1, including:

[…] ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.

When necessary to ensure valid results, measuring equipment should be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards. If no such standards exist, the basis used for calibration should be recorded.

Periodically test, calibrate and obtain certification for abatement, control and monitoring equipment/devices, as determined by the manufacturers' requirements and/or national or international standards.

Document and retain records of the results of calibration and maintenance activities for appropriate periods.

Develop, document and implement formal site/area maintenance and inspection programmes. Record and report any deficiencies noted. Track and close out the measures to address the deficiencies.

Emergency preparedness and response

Apply ISO 14001 Clause 4.4.4 and A.4.7, including:

[…] establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them.

[…] respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts.

[…] periodically test [emergency preparedness and response] procedures, where practicable.

Monitoring

Apply ISO 14001 Clause 4.5.1 and A.5.1, including:

[…] establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact.

[… monitor] conformity with the organisation's environmental objectives and targets.

Prepare and implement a detailed environmental monitoring plan, which includes post-closure monitoring.

Set in place appropriate monitoring for the assessment of the operational aspects and impacts, to:

- confirm that facilities are being operated within the required parameters;
- confirm the effectiveness of the management measures;
- assess performance against the objectives and targets, which encompass the legal and other requirements; and
- ensure that risks/impacts are avoided or minimised, and there are no repeats of incidents.

Monitor the objectives and targets over defined time periods to confirm the effectiveness of the operational controls that have been implemented.

Non-conformity, corrective action and preventive action

Apply ISO 14001 Clause 4.5.3 and A.5.3, including:

[…] Establish, implement and maintain a procedure(s) for dealing with actual and potential non-conformity(ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for:

a) identifying and correcting non-conformity(ies) and taking action(s) to mitigate their environmental impacts,

b) investigating non-conformity(ies), determining their cause(s) and taking actions in order to avoid their recurrence,

c) evaluating the need for action(s) to prevent non-conformity(ies) and implementing appropriate actions designed to avoid their occurrence,

d) recording the results of corrective action(s) and preventive action(s) taken, and

e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken.

Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered.

Develop and implement formal systems for the reporting, investigation, close-out (including management sign-off) and communication of environmental non-conformances and incidents.

Formally review systems, procedures and work practices following an environmental legal non-conformance or significant incident (level II or III) to prevent a recurrence:

- analyse and report in accordance with the Anglo American Environmental Incident Procedure, all relevant information and data gathered during an investigation, to assist in identifying and assessing existing or proposed control measures;
- allocate additional resources, where necessary, to maintain compliance; and
- share the lessons learnt with other similar operations in the Group.

Review the proposed corrective and preventive actions prior to their implementation to understand the consequences in order to mitigate or prevent negative impacts and to enhance positive impacts.

Records

Apply ISO 14001 Clause 4.4.4, 4.5.2, 4.5.4, including:

[… establish and maintain] records, determined by the organisation to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.

[…] keep records of the results of the periodic evaluations [of legal compliance].

[…] establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and […] the results achieved.

[…] establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records.

Records shall be and remain legible, identifiable and traceable.

Records of the management reviews shall be retained.

Maintain records of environmental monitoring.

Ensure that environmental records have responsible custodians assigned and that legal confidentiality is protected.

Establish and maintain a register of archived documents and data retained for legal or other purposes.

Track all changes or updates to the key environmental documentation, e.g. risk/impact assessments.

Reports

Apply ISO 14001 Clause 4.4.1, including:

[… report] to top management on the performance of the environmental management system for review, including recommendations for improvement.

Establish a schedule and mechanisms for internal (quarterly) and external reporting on performance.

Report the relevant environmental indicators to the Anglo American SHE database.

Report non-conformances to the operational objectives and targets, which encompass legal and other requirements in accordance with the Anglo American Environmental Incident Procedure.

Report against Anglo American targets.

Reviews

Apply ISO 14001 Clause 4.6, including:

Top management shall review the organisation's environmental management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the environmental management system, including the environmental policy and environmental objectives and targets.

The outputs from management reviews shall include any decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the environmental management system, consistent with the commitment to continual improvement.

Perform a management review of the EMS at least annually. Input to management reviews shall include:

a. results of internal audits and evaluations of compliance with legal requirements and with other requirements to which the organisation subscribes,
b. communication(s) from external interested parties, including complaints,
c. the environmental performance of the organisation,
d. the extent to which objectives and targets have been met,
e. status of corrective and preventive actions,
f. follow-up actions from previous management reviews,
g. changing circumstances, including developments in legal and other requirements related to its environmental aspects, and
h. recommendations for improvement.

Reviews (continued)	Develop, document and maintain a formal management of change programme, which triggers the review and revision (where necessary) of environmental aspects, impacts and risks associated with planned or unplanned changes, including permanent, temporary or incremental change. Verify and update impact/risk assessments, the environmental programme(s), operational controls, based on monitoring results and to accommodate any changes in operation (e.g. production rate) and/or the characteristics of the inputs, outputs or materials disturbed by mining (e.g. ore type). Confirm that designs remain valid for any deviations in properties or behaviour not originally known at the design stage. Confirm the effectiveness of management against internally set objectives and targets, which encompass the legal and other requirements. Modify operational/closure plans in light of the following actual or anticipated changes: improved scientific knowledge, changed environmental factors, better technology, and/or new regulations relating to closure.
Audits	**Apply ISO 14001 Clause 4.5.5 and A.5.5, including:** […] ensure that internal audits of the environmental management system are conducted at planned intervals […]. Develop, implement, maintained, and communicate a programme of internal EMS audits (1st party on site audits and 2nd party peer reviews).

CLOSURE STAGE: DECOMMISSIONING AND POST-CLOSURE

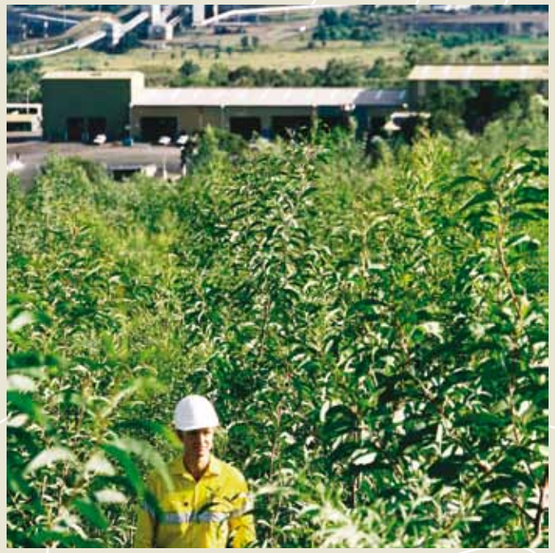
At and after closure all managed operations shall:

Monitoring, audits, reviews, records and reports	Continue ongoing monitoring and maintain the records/database/information system until the closure criteria have been met and, where legislated, a closure certificate is obtained. Conduct internal and external closure audits and reviews of monitoring data and information to verify compliance with regulatory requirements and the detailed mine closure plan. Comply with the Mine Closure Standard (Volume 2 of the Anglo American Environment Way).

SUPPORTING DOCUMENTATION

ISO 14001:2004; Environmental management systems – Requirements with guidance for use; International Organization for Standardization.

Anglo American; Exploration 'SHEC-list': An integrated approach to assessing impacts encountered during exploration; November 2004.



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