
Liddell Coal Operations Pty Limited

**Liddell Colliery Environmental
Management Strategy**

January 2008

Liddell Coal Operations Environmental Management Strategy

Prepared by

Umwelt (Australia) Pty Limited

on behalf of

Liddell Coal Operations Pty Limited

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1 INTRODUCTION

Liddell Colliery is an open cut coal mine located approximately 25 kilometres north-west of Singleton, NSW. Liddell Colliery is operated by Liddell Coal Operations Pty Limited (Liddell Coal) on behalf of the Liddell Joint Venture between Xstrata Coal Australia Pty Ltd (67.5%) (Xstrata) and Mitsui Matsushima Australia Pty Ltd (32.5%) (Mitsui).

Liddell Coal was granted a modification to the 2002 development consent (DA 305-11-01) on 18 July 2007. The modification provides for Liddell Coal's continued operation until 2023 with a maximum annual production of 8 million tonnes of run of mine coal per annum. Open cut mining operations are undertaken by a contractor, currently Hunter Valley Earthmoving (HVE). Liddell Coal operates the coal handling and processing and rail loading facilities.

This Environmental Management Strategy (Strategy) has been developed to provide an overarching framework for the Environmental Management System (EMS) for Liddell Coal.

The purpose of the Strategy is to define the environmental management objectives for Liddell Coal, and provide a framework for effective environmental management of the activities, products and services of Liddell Coal in order to maintain and improve human and environmental health. The EMS applies to all employees, contractors, suppliers and service providers associated with the operations of Liddell Colliery.

This Strategy satisfies the requirements of condition Schedule 5, Condition 1 of Liddell Coal's development consent (DA 305-11-01), as outlined in **Section 1.4**.

1.1 Purpose and Scope

This Strategy provides the framework for environmental management during the construction and operation of Liddell Colliery to ensure compliance with development consent conditions and other legal requirements. The Strategy builds on the environmental management controls outlined in the Environmental Assessment (EA) (Umwelt, 2006) prepared for the project. The Strategy also provides the framework for ongoing community involvement in the project and identifies communication mechanisms between the project and the local and wider community.

The Strategy has been developed generally in accordance with ISO 14001, the international standard for environmental management systems and is consistent with the Xstrata Coal NSW Environmental Management Framework (Version dated 14/06/2006). The Strategy applies to all components of Liddell Coal's operations.

Implementation of this Strategy will assist in minimising the environmental impacts of Liddell Coal by facilitating continual improvement in environmental performance. The Strategy promotes proactive environmental management, which will facilitate ongoing compliance with environmental commitments and legislative requirements. It also identifies how Liddell Coal will seek to maintain and build on its good relationship with the local community and other key stakeholders.

The Strategy has been developed to assist the implementation of environmental management plans and procedures and to meet their environmental obligations. The XCN Environment Values, Vision and Policy (refer to **Appendix 1**) forms the basis for the Liddell Health, Safety, Environment and

Community Policy (refer to **Appendix 1**). The policies have the commitment and support of executive XC, XCN and site management and will be reviewed annually. The Strategy is also designed to assist in the implementation of Xstrata Plc Management Standards for Health Safety Environment and Community.

The relationship between Xstrata Plc principles, standards, visions and policies is shown in **Figure 1.1**.

1.2 Objectives of the Strategy

The objectives of the Strategy are to:

1. provide the overall framework for environmental management at the Liddell Colliery utilising the principles of ISO14001;
2. ensure compliance with the Liddell Colliery development consent, other project specific environmental licences and permits, the commitments in the Liddell Colliery EA (Umwelt, 2006) and other relevant legal requirements;
3. effectively integrate the requirements of the Xstrata Environmental Management Framework and relevant legal and other requirements into a site-specific document, detailing environmental management objectives and responsibilities at Liddell Colliery;
4. show the relationship and interactions between various operational and environmental components of the Liddell Colliery;
5. provide effective mechanisms for external communications, in particular development of an ongoing relationship with the local community; and
6. assist Liddell Colliery staff and contractors in better administering their responsibilities regarding environmental due diligence and management.

1.3 Authorisation, Revision and Distribution Control

The Strategy is subject to regular revision as described in the Liddell Coal procedure for *Review of EMS Documentation*. Revision shall be undertaken by the Environmental and Community Coordinator and approved by the Operations Manager. The revision status of the Environmental Management System (EMS) is shown in the footer of each EMS document. The control of documentation associated with the EMS is to be undertaken in accordance with *LEMS Procedure - Document Control*, which is generally consistent with *HSEC STD 1.01 Document Control*, as discussed further in **Section 4.5**.

1.4 Development Consent Conditions

The development and implementation of this Strategy is required by Condition 1, Schedule 5 of the Liddell Colliery Development Consent (DA 305-11-01). Details of development consent conditions

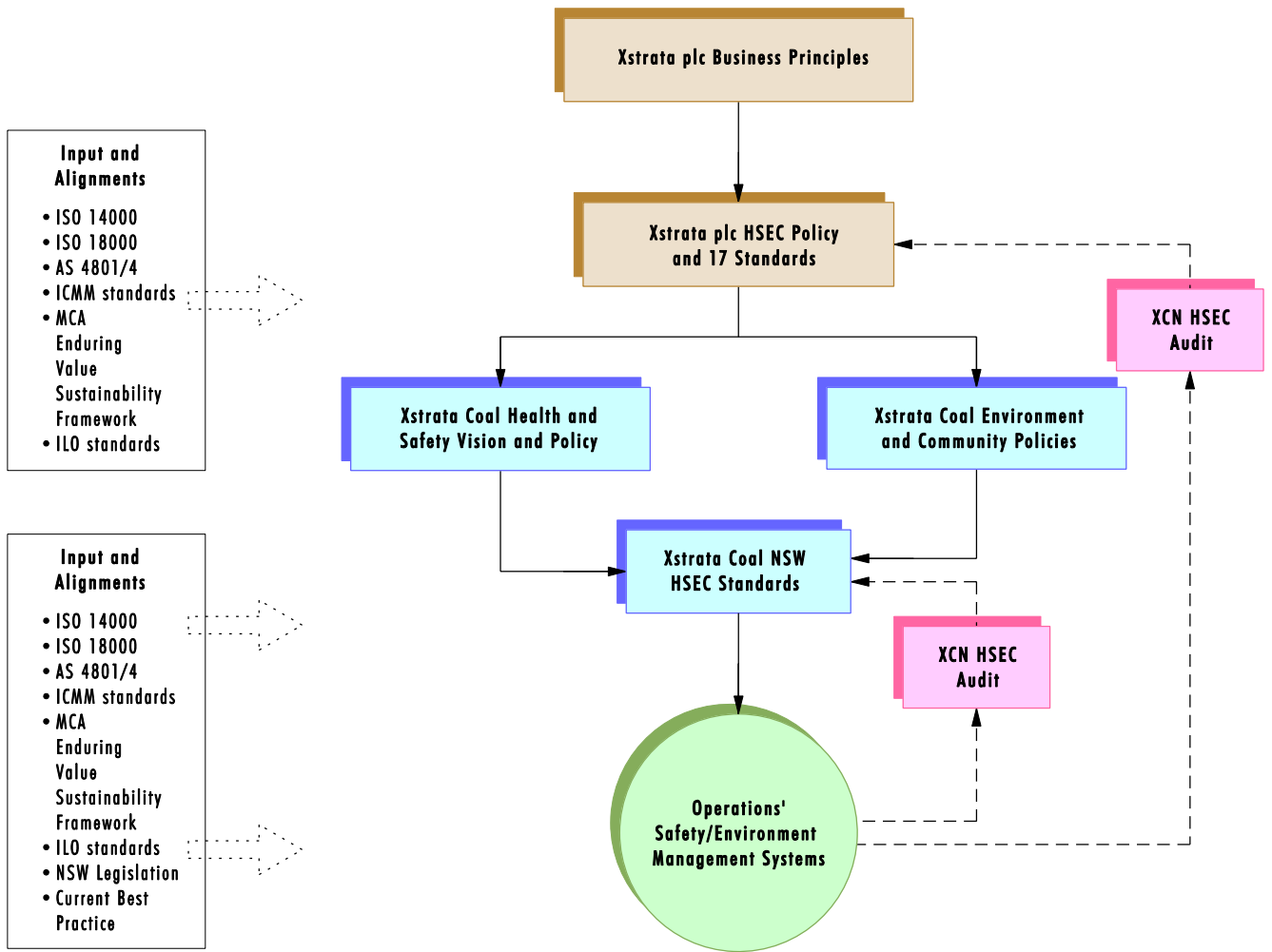


FIGURE 1.1
XCN HSEC Management Framework

specifically relating to the Strategy and where they are addressed within the document are provided in **Table 1.1**.

Table 1.1 - Development Consent Conditions Relating to the Strategy and Where They are Addressed in this Document

Development Consent Condition	Relevant Section
Schedule 5	
Environmental Management Strategy	
1. The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:	Entire document
a) provide the strategic context for environmental management of the development;	Section 2.0
b) identify the statutory requirements that apply to the development;	Section 3.2
c) describe in general how the environmental performance of the development would be monitored and managed;	Section 3.0, 4.0 and 5.0.
d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the development; • respond to any non-compliance; • manage cumulative impacts; and • respond to emergencies. 	Section 4.3 Section 4.4 Section 4.4 Section 5.3 Section 4.6 Section 4.7
e) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the development.	Section 4.1

2 ENVIRONMENTAL MANAGEMENT SYSTEM STRUCTURE AND POLICIES

2.1 Structure of the Strategy

This Strategy provides the strategic context for environmental management at Liddell Colliery. The Strategy outlines Liddell Coal’s commitment to proactive community and environmental management and demonstrates Liddell Coal’s commitment to reducing environmental and community impacts.

The structure of this Strategy is based generally on the structure of the international standard for environmental management systems ISO 14001, which follows the ‘Plan-Do-Check-Act’ process. A description of this process and how it relates to the Liddell Coal EMS is provided in **Table 1.2**.

Table 2.1 - Structure of the Liddell Coal Environmental Management Strategy

Feature	Requirements	Strategy Section Reference
Plan	Maintain register of legal and other requirements. Maintain register of environmental aspects and impacts. Set environmental objectives and targets. Develop environmental programs and management plans.	Section 3.0 Planning.
Do	Responsibilities for environmental management. Provision of environmental awareness training and assessment of competence. Internal communications and document control. External communications with regulators, members of the public and other stakeholders. Management of complaints. Operating procedures. Incident management. Emergency preparedness and response.	Section 4.0 Implementation and Operation.
Check	Annual review of compliance with environmental statutory requirements during preparation of the Annual Environmental Management Report. Environmental Monitoring Non-compliance and corrective/preventive action. Audits.	Section 5.0 Environmental Monitoring, Corrective Action and Audits.
Act	Periodic review and revision of the EMS by senior management. Non-compliance and corrective/preventive action.	Section 6.1 Management Review. Section 5.0 Environmental Monitoring, Corrective Action and Audits.

2.2 Vision, Values and Policy

Liddell Colliery operates under four environmental and community policies (refer to **Appendix 1**), these being:

- the Xstrata plc HSEC Policy, Business Principles, Beliefs;
- the XCN Environment Vision and Policy;
- the XCN Community Vision and Policy; and
- the Liddell Coal Operations Health, Safety, Environment and Community (HSEC) Policy.

All activities at Liddell Colliery will be undertaken in accordance with the principles of these four policies.

The Liddell Coal Operations Health, Safety, Environment and Community Policy has the support and commitment of senior management and will be reviewed every two years. The policy will be included in induction programs and made readily accessible to all employees, contractors and visitors by display in prominent locations at Liddell Colliery.

2.3 Environmental Management System

2.3.1 Xstrata Environmental Management System

XCN originally developed a corporate EMS in 2001, which is consistent with the five principles of ISO 14001, and specifically seeks to provide a practical and straightforward management tool for both corporate and site management. This document was revised as the Xstrata EMS in 2006 and is intended to provide for corporate environmental management and also serve as an umbrella document, with supporting functions, to assist and guide business units in development, implementation and maintenance of the site EMSs.

2.3.2 Liddell Coal Environmental Management System

To assist with the ongoing effective management of operations at Liddell Colliery, Liddell Coal have developed and implemented an EMS generally in accordance with ISO 14001.

In accordance with ISO 14001, the Liddell Coal EMS includes the following key components:

- HSEC policy and commitment;
- planning, including:
 - identification and management of legal and other requirements;
 - objectives and targets; and

- environmental and community programs aimed at achieving ongoing improvements in environmental performance;
- implementation and operation, including:
 - assigning responsibility for implementation of the EMS;
 - training and awareness;
 - communication including ongoing community consultation and a complaints management system; and
 - operational control; including preparation of management plans and operational procedures as appropriate, and incident and emergency response and reporting processes;
- measurement and evaluation, including:
 - environmental monitoring;
 - audits and implementation; and
- management review in order to ensure ongoing effective implementation of the EMS.

This Strategy forms part of the Liddell Coal EMS and provides an overview of the key strategies in place, to effectively manage environmental and community issues at Liddell Colliery. Compliance with the EMS will be ensured by training, inspections, audits and regular review, with the overall implementation objective being the continual improvement of Liddell Colliery's environmental performance.

2.4 Xstrata Coal and XCN HSEC Standards and Policies

As a division of Xstrata Coal, XCN is required to operate within the Business Principles, Health, Safety, Environment and Community (HSEC) Policy and Standards set by Xstrata plc. XCN has developed a comprehensive set of HSEC standards that have been developed to address the Xstrata plc standards as a minimum and provide guidance to operations on their effective implementation. The requirements of the XCN HSEC Standards and Policies have been incorporated into Liddell Colliery EMS documentation where relevant.

A list of relevant XCN HSEC Standards are included in **Appendix 2**.

2.5 Industry Codes of Practice

2.5.1 Enduring Value – the Australian Minerals Industry Framework for Sustainable Development

Xstrata Coal is a signatory to Enduring Value – the Australian Minerals Industry Framework for Sustainable Development. The commitment to Enduring Value has the following obligations:

- progressive implementation of the ICMM Principles and Elements;
- Public Reporting of site level performance, on a minimum annual basis, with reporting metrics self – selected from the Global Reporting Initiative (GRI), the GRI Mining and Metals Supplement or self-developed; and
- assessment of the systems used to manage key operations risks.

Liddell Coal maintains its commitment to the principles of Enduring Value through the collation and reporting of GRI information on a monthly basis which is reported directly to XCN through the sites XSD database. Information from Liddell Coal is used and publicly reported by Xstrata annually.

2.5.2 Greenhouse Challenge Plus

Xstrata Coal has signed onto the Australian Greenhouse Challenge Plus. XCN has a high-level of commitment to the abatement and management of greenhouse gas emissions, in tandem with their support for the continued development of coal as a clean source of energy.

Liddell Coal has the responsibility to record their site greenhouse data and report this information generally in accordance with *HSEC STD1.10 HSEC Measurement and Reporting*. Liddell Coal also has to identify possible greenhouse abatement programs in the HSEC Annual Plans and budgets.

3 PLANNING

3.1 Environmental Aspects and Impacts

The identification of environmental aspects is an ongoing process that determines the past, current and potential impact of an organisation's activities on the environment (AS/NZS ISO 14004:2004 Environmental Management Systems – General guidelines on principles, systems and supporting techniques).

Aspects and impacts associated with Liddell Coal's operations are identified in accordance with *LEMS Procedure - Environmental Risk Assessment* using a risk based process that is generally consistent with the *XCN STD 1.02 Risk Management*.

The XCN Risk Management standard ensures the planning process is focused upon aspects of relevance to the environmental and community performance of Liddell Coal's operations based upon a process which requires:

- identifying hazards/aspects and impacts;
- assessing the risk associated with those hazards/aspects and impacts; and
- identifying the controls necessary to eliminate or otherwise reduce, as far as is practicable, those risks in accordance with the establishment hierarchy of controls for HSEC purposes.

A register of key environmental aspects and impacts of Liddell Coal's existing operations is maintained by the Environment and Community Coordinator. A review of Liddell Coal's aspects and impacts is undertaken annually in accordance with *LEMS Procedure - Environmental Risk Assessment* to ensure that any new aspects or impacts are identified and added to the register.

Prior to undertaking any new activities or planning significant changes to the operation a risk assessment will be undertaken in accordance with *LEMS Procedure - Environmental Risk Assessment* to ensure that any new aspects and impacts are identified and added to the register.

The results of risk reviews are to be incorporated into the environmental objectives and targets (where appropriate), management programs and work procedures at the next review of the EMS.

3.1.1 Risk Assessments and Work Permits

Risk Assessments are also included in operational work permits which are completed daily for contractors completing works at Liddell Colliery. These permits ensure that all HSEC related risks are identified and controls are put in place minimise any potential impacts.

3.2 Legal and Other Requirements

Legal and other requirements at Liddell Coal are identified in accordance with *LEMS Procedure – Legal Requirements*. In order for Liddell Coal to maintain compliance with statutory requirements applying to Liddell Colliery, it is necessary that these requirements are identified and that performance against these requirements is regularly reviewed. The Environment and Community Coordinator will be responsible for maintaining a register containing a summary of all environmental statutory requirements, such that:

- all environmental legislative requirements are suitably identified and stored;
- all documents are easily located, retrieved and available when required; and
- all legislation is updated as required, with obsolete documents removed from service.

3.2.1 Regulatory Authorities and Requirements

The Liddell Coal HSEC policy stipulates that the activities of Liddell Coal will be undertaken in accordance with relevant legislation and the requirements of statutory authorities. The statutory authorities that are relevant to Liddell Coal include:

- Department of Primary Industries;
- Department of Planning;
- Muswellbrook Shire Council;
- Singleton Shire Council;
- Department of Environment and Climate Change;
- Department of Water and Energy;
- WorkCover New South Wales;
- Rail Infrastructure Corporation;
- Mine Subsidence Board;
- Energy Australia; and
- NSW Heritage Office.

A summary of the federal, state and local government legislation that applies to Liddell Coal is contained in **Appendix 3**.

It is the responsibility of the Environment and Community Coordinator to be aware of changes to relevant legislation, policy and guidelines, and to notify the Operations Manager and Xstrata Coal NSW Group Environment and Community Manager of changes that may significantly affect Liddell Coal operations. Means by which the Environment and Community Coordinator will keep up to date with changes in legislation, policy and guidelines include:

- reviewing information from the Xstrata Coal NSW Group Environment and Community Manager;
- review of NSW Minerals Council Environment Committee minutes;
- membership of and participation in the Hunter Coal Environment Group;
- review of *Environmental Manager* newsletter (Centre for Professional Development);
- liaison with government agencies;
- legal opinion, as required;
- advice from environmental consultants; and
- participation in professional development seminars.

A number of development consents, licences, permits and agreements relate to the Liddell Coal operations. These approvals and agreements are summarised in **Appendix 4**. This information includes the date of approval, date of renewal, reporting requirements, last reporting date and next reporting date for each approval held by Liddell Coal. It is the responsibility of the Environment and Community Coordinator to ensure that these approvals are renewed, as required, and that reporting requirements are met.

It is the responsibility of the Operations Manager to ensure that Liddell Coal meets its obligations under these approvals and the relevant legislation. It is the responsibility of the Environment and Community Coordinator to advise the Operations Manager of his/her obligations under these approvals, and to prepare the necessary documentation to demonstrate compliance with the requirements of regulatory authorities.

Communication with statutory authorities and communication of statutory requirements to Liddell Coal employees and contractors are to be conducted in accordance with *LEMS Procedure - Communication (Internal and External)* and *LEMS Procedure - Environmental Awareness Training*.

3.2.2 Other External Stakeholders

Other external stakeholders that have an interest in the operations of Liddell Coal include:

- surrounding residents and/or landowners;
- Aboriginal groups;
- Hunter-Central Rivers Catchment Management Authority;

- Minewatch;
- WorkCover;
- downstream water users;
- neighbouring mining and coal transportation operations, including Cumnock Colliery, Newdell Preparation Plant, Mt Owen Complex, Nardell Colliery, Ravensworth Coal Terminal and the Coal and Allied Hunter Coal Terminal;
- neighbouring power stations, including Liddell Power Station and Bayswater Power Station;
- coal handling and transportation industry, including Port Waratah Coal Receiving Facility, Freightcorp and shipping lines;
- suppliers; and
- customers.

Upon request, these stakeholders will be provided with access to public environmental reports. Relevant stakeholders will be consulted prior to commencement of significant new developments undertaken by Liddell Coal.

3.3 Environmental Objectives and Targets

The XCN Executive HSEC Management Committee set corporate Environmental objectives and targets on an annual basis generally in accordance with *HSEC STD 1.11 HSEC Planning*. The HSEC objectives and targets for XCN Corporate are contained in the XCN HSEC Strategy and Annual Plans. A copy of the XCN Corporate HSEC Strategy and Annual Plan is maintained on the Intranet.

Objectives and targets are set annually through the development of the sites HSEC annual planning process. The objectives and targets are set in consideration of:

- XCN Corporate objectives and targets set by the XCN Executive HSEC Committee;
- Xstrata Environment and Community Vision and Policies;
- Liddell Coal Operations Health, Safety, Environment and Community Policy;
- aspects and impacts;
- legal and other requirements;
- implementation of the EMS;
- training;

- progressive implementation of the Enduring Value – The Australian Minerals Industry Framework; and
- prevention of pollution in accordance with statutory requirements.

The targets are to be specific and measurable and achievement of some targets should be able to clearly demonstrate environmental improvement.

Progress in achieving objectives and targets is to be reviewed at least quarterly.

Liddell Coal's objectives and targets are to be progressively achieved through implementation of the sites annual HSEC Plan. In order to meet their objectives and targets Liddell Coal implements environmental programs through the action based reporting tool XstraSafe.

The performance of the operation against internal performance criteria is documented in the Liddell Coal Annual Environmental Management Report and is assessed in site quarterly reviews. Progress against the site HSEC annual plan is monitored through the sites action based reporting tool XstraSafe.

4 IMPLEMENTATION AND OPERATION

4.1 Structure and Responsibility

Operational control of the environmental aspects and impacts at Liddell Coal will be undertaken in accordance with Liddell Coal’s EMS, including environmental/work procedures and environmental management plans.

Environmental management at Liddell Colliery is the responsibility of all employees and contractors, with the Operations Manager having overall responsibility for environmental management of the site. Liddell Coal’s structure is shown in **Figure 4.1**.

Environmental responsibilities for key personnel at Liddell Colliery are outlined in **Appendix 5**, with additional responsibilities contained within the operations environmental management plans and procedures.

4.2 Management of Environmental Impacts

Environmental impacts from Liddell’s Coal Operations are managed and mitigated through the implementation of the site EMS, environmental procedures, environmental management plans and monitoring programs.

Liddell Coal’s Environmental management plans/procedures provide an overview of specific environmental aspects and impacts associated with the continued operations. These plans/procedures also outline the management measures that the site will undertake to minimise environmental impacts.

The Liddell Colliery development consent specifies a number of environmental management plans, monitoring programs and other requirements to be developed to assist Liddell Coal with managing impacts from its operation, including those contained in **Table 4.1**.

Table 4.1 – Liddell Coal Environmental Management Plans and Programs

Impact	Requirement of Development Consent (DA 305-11-01)	Additional EMS Controls
Air Quality	<ul style="list-style-type: none"> Air Quality Monitoring Program. Environmental Monitoring Program. 	<ul style="list-style-type: none"> Dust Management Procedure. Spontaneous Combustion Management Procedure.
Noise	<ul style="list-style-type: none"> Noise Monitoring Program. Environmental Monitoring Program. 	<ul style="list-style-type: none"> Noise Management Procedure.
Blasting	<ul style="list-style-type: none"> Environmental Monitoring Program. 24 hour Blasting Hotline to provide the community with up to date blast information. 	<ul style="list-style-type: none"> Blast and Vibration Management Procedure.

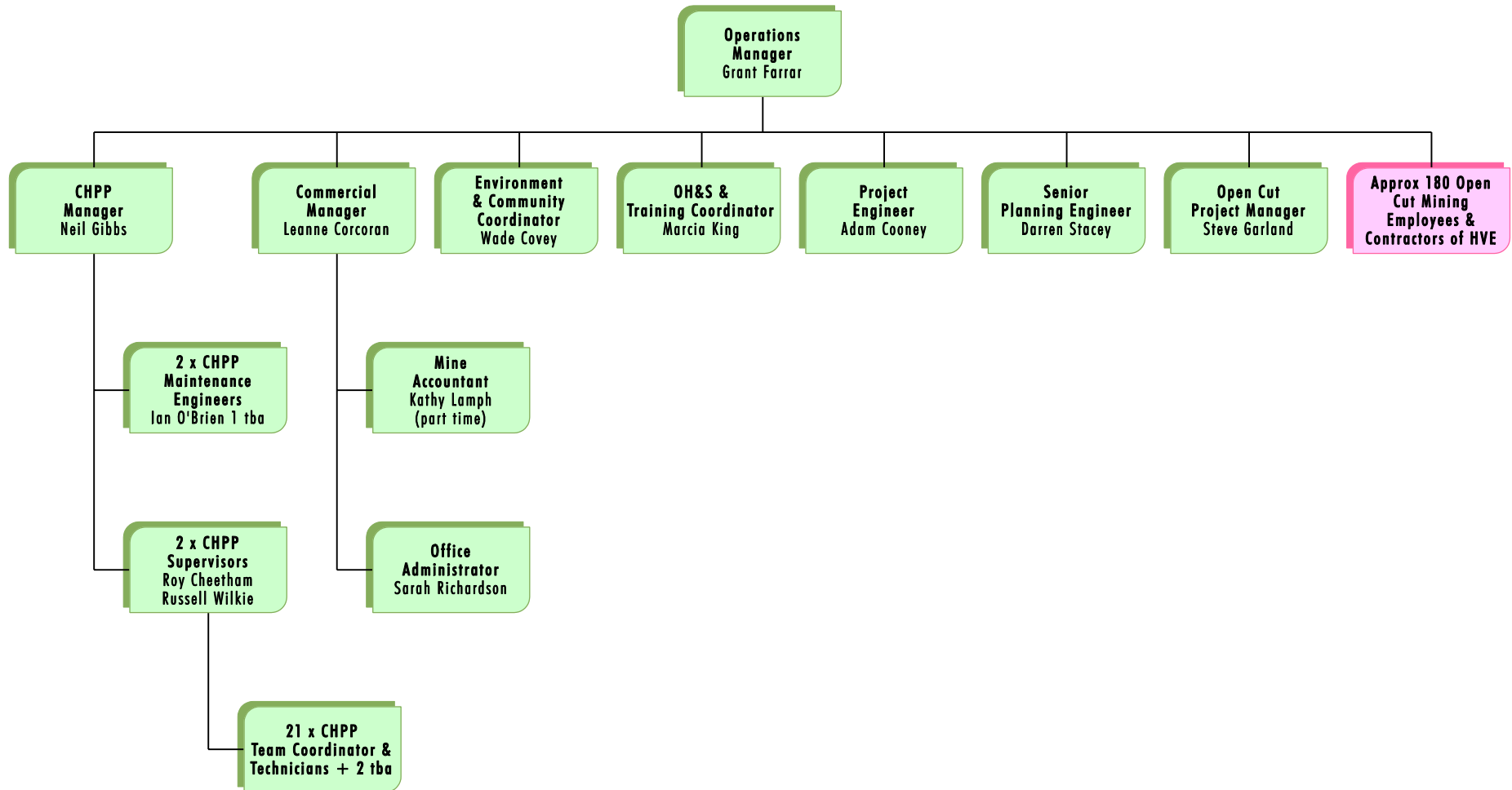


FIGURE 4.1

Liddell Coal Operations
Organisational Chart

Table 4.1 – Liddell Coal Environmental Management Plans and Programs (cont)

Impact	Requirement of Development Consent (DA 305-11-01)	Additional EMS Controls
Ecology	<ul style="list-style-type: none"> • Landscape Management Plan. • Environmental Monitoring Program. • Blue Billed Duck Management Strategy. 	<ul style="list-style-type: none"> • Site Clearing Procedure. • Permit to Commence Clearing Procedure.
Heritage	<ul style="list-style-type: none"> • Aboriginal Cultural Heritage Management Plan. 	<ul style="list-style-type: none"> • Site Clearing Procedure.
Water Resources	<ul style="list-style-type: none"> • Water Management Plan. • Environmental Monitoring Program. 	<ul style="list-style-type: none"> • Environmental Monitoring and Evaluation Procedure.
Traffic and Transport	<ul style="list-style-type: none"> • Construction Traffic Management Plan. 	
Lighting	<ul style="list-style-type: none"> • All external lighting in accordance with Australian Standard AS4282 (INT) 1995 – Control and Obtrusive Effects of Outdoor Lighting. 	
Socio Economic		<ul style="list-style-type: none"> • Social Involvement and Community Engagement Plan. • Communication (Internal and External) Procedure. • Community Complaints and Environmental Incident Report procedure.
Greenhouse Gas	<ul style="list-style-type: none"> • Energy Savings Action Plan. 	

The implementation of these management plans, monitoring programs and procedures will assist Liddell Coal to effectively manage environmental and community performance of Liddell Colliery and reduce cumulative environmental impacts. The implementation of these management plans will be the responsibility of all employees at Liddell Colliery and will be overseen by the Environment and Community Coordinator.

4.3 Environmental Awareness, Training and Competency

Liddell Coal will maintain a program to ensure that all personnel and contractors working in the site are adequately trained in regard to environmental management. The training packages are designed to ensure that personnel gain a sound understanding of relevant environmental issues and management strategies, environmental incident and emergency response procedures, and their role and responsibilities in developing, implementing and operating the EMS. Training packages relating to the EMS will cover the following components:

- the environmental and community context of the operation;
- relevant legal and other requirements;

- the function and importance of the EMS to Liddell Coal's operation;
- the consequences of non-compliance with the Liddell Coal Environmental Policy and EMS;
- environmental operating practices;
- the potential environmental impacts and associated controls for their work activities;
- incident and emergency response and reporting; and
- roles and responsibilities in achieving conformance with the environmental policy and the requirements of the EMS, including emergency preparedness and response requirements.

This will be facilitated through competency based induction and environmental awareness training in accordance with *LEMS Procedure - Environmental Awareness Training* which is generally consistent with *HSEC STD 1.07 Training and Induction* and other specific training requirements including hazard and incident management, emergency training generally in accordance with *HSEC STD 1.09 Hazard and Incident Management* and *HSEC STD 1.06 Emergency Management*.

Environmental awareness training will also include issue specific training undertaken as tool-box talks for relevant personnel. This type of awareness training will be undertaken on an as required basis.

Records will be maintained of all training undertaken at Liddell Colliery, including the results of competency assessments generally in accordance with *HSEC STD 1.07 Training and Inductions*.

4.3.1 Environmental Awareness Training

All personnel are to be inducted in relation to their responsibilities under the EMS, including familiarisation with the Liddell Coal HSEC policy, at the commencement of work at Liddell Colliery.

The identification of environmental training needs of personnel is undertaken in accordance with *LEMS Procedure - Environmental Awareness Training*. Environmental training objectives are to be periodically reviewed and updated when required. Typically this may occur as a result of changing mining conditions resulting in divergent environmental impacts or the implementation of significant changes to environmental legislation or licence requirements.

The Liddell Coal Environment and Community Coordinator is responsible for the co-ordination of environmental training at Liddell Colliery. This includes the development of training modules and toolbox talks for various aspects of Liddell Coal's operations that may potentially result in environmental impacts. Environmental training is to be incorporated into the broader training program for the site including health, safety and operational training.

Training module documentation and records of all training provided shall be maintained in the Liddell Coal Training Register. The effectiveness of training modules and sessions shall be periodically reviewed and the training modules updated as required.

4.3.2 Induction Course

Any induction course provided to employees and contractors shall include:

- overview of the Liddell Coal HSEC policy;

- legal and other requirements, including requirements to comply with requests of a DECC officer;
- overview of the EMS;
- emergency response procedures and contacts; and
- key environmental management considerations for relevant working area/vicinities.

4.3.3 Contractor Selection and Training

Selection of contractors shall take into account their competence, which is to include consideration of:

- the contractors past environmental performance, including any notices, fines or prosecutions;
- previous performance on other XCN or Xstrata Plc sites;
- qualifications and experience of relevant personnel; and
- the contractors' EMS.

Prior to the engagement of any contractor whose activities may result in significant environmental impact a review of the contractor's EMS, is to be conducted by the Environment and Community Coordinator.

This review is to determine whether the contractor's EMS is compatible with the Liddell Coal EMS and evaluate the environmental capabilities of the contractor. During this review the training needs of the contractor shall be identified. The Liddell Coal EMS shall prevail to the extent of any inconsistencies, unless otherwise specified.

A clause will be included in the contract documents informing the contractor of the requirement to work within Liddell Coal's EMS and to implement the environmental procedures as required. New work instructions, monitoring or audit procedures will be developed by the contractor, where required, to ensure that the contractor complies with the EMS, and that environmental compliance is verified.

Environmental training for contractors shall be undertaken and the effectiveness of the training shall be regularly reviewed and updated when required in accordance with the Liddell Coal procedure for Environmental Training Procedure. Documentation of training modules and records of training sessions conducted shall be maintained in accordance with the *LEMS Procedure - Document Control*.

4.4 Communication and Reporting

Effective communication between Liddell Coal management, employees and contractors and communication between Liddell Coal and external stakeholders is important for the successful operation of the Liddell Coal EMS. All communication and reporting is undertaken in accordance with *LEMS Procedure – Communication (Internal and External)*.

4.4.1 Internal Communication

Internal communication incorporates communication between Liddell Coal personnel (including contractors) and between Liddell Coal and the Xstrata group. Key internal communication mechanisms include email, internal newsletters, meetings and internal reporting. It will be the responsibility of the Environment and Community Coordinator to manage the communication of environmental and community issues. Mechanisms for receiving internal feedback on environment and community aspects of the operation involve site meetings. Environment and community issues will be a standard agenda item for regular internal meetings. Information regarding significant environmental aspects of the operation will be communicated internally through training and other mechanisms, as required.

Internal communication is to be conducted in accordance with *LEMS Procedures - Environmental Reporting* and *LEMS Procedure - Communication (Internal and External)*. These procedures are to be periodically reviewed and updated as required.

4.4.2 External Communication

4.4.2.1 External Stakeholders

All external communication of environment and community matters associated with Liddell Coal will be undertaken in accordance with *LEMS Procedure - Communication (Internal and External)*, *LEMS Procedure - Environmental Reporting* and the Liddell Coal Social Involvement and Community Engagement Plan (SICEP).

The Environment and Community Coordinator is to maintain the register of development consents, permits and licences which is to include the timeframe for communicating Liddell Coal environmental activities and performance to statutory authorities.

The other external stakeholders identified in **Section 3.2.2** are to be kept informed of activities at Liddell Coal that may affect them and provided with a copy of the Xstrata Coal (Australia) Corporate (Public) Environment Report. Communication with these stakeholders on environmental matters is to be undertaken in accordance with the Liddell Coal SICEP.

Liddell Colliery will endeavour to maintain open external communication channels throughout the life of the operations. Communication channels established include:

- Bi-annual community newsletters;
- Liddell Coal Operations website;
- CCC meetings; and
- Annual Environmental Management Reports.

4.4.2.2 Media Communication

Communication with the media is prohibited at Liddell Coal without approval from the Liddell Coal Operations Manager and the Xstrata Coal Corporate Affairs Manager.

4.4.2.3 Community Consultative Committee

Consultation with the local community will be continued through the Liddell Colliery Community Consultative Committee (CCC) in accordance with the development consent and *LEMS Procedures - Communication (Internal and External)*, *LEMS Procedure - Environmental Reporting* and *LEMS Procedure - Community Complaints and Environmental Incident Report*.

Liddell Coal is committed to establishing a process whereby it meets regularly with local community representatives. The CCC provides a mechanism through which Liddell Coal can provide information about the operation, including environmental performance and operational updates to the local community. The CCC also provides the local community with a mechanism to provide feedback, raise any concerns and to provide input about Liddell Coal's operations.

4.4.3 Reporting

All internal and external reporting is undertaken in accordance with *LEMS Procedure - Document Control*, *LEMS Procedure - Communication (Internal and External)* and *LEMS Procedure - Environmental Reporting*. Liddell Coal are required to periodically report on environmental management and compliance, including:

- an Annual Environmental Management Report;
- an Annual Environmental Protection Licence Return;
- HSEC Reporting; and
- Monthly Sustainability Reporting.

4.5 Complaints Management and Dispute Resolution

4.5.1 Complaints Management

Liddell Coal will maintain a community complaints system in accordance with *LEMS Procedure - Community Complaints* and *LEMS Procedure - Environmental Incident Reporting* and *LEMS Procedure - Communication (Internal and External)*.

Complaints relating to Liddell Colliery's operations are to be recorded on an incident/complaint reporting form, copies of which are located at all site offices, and forwarded to the Environment and Community Coordinator for action. All completed incident/complaint reporting forms are to be filed and retained for a period of at least four years.

The Environment and Community Coordinator is to investigate complaints, including contacting the complainant within 48 hours to discuss the complaint, and recommend corrective or preventative action. A review of the effectiveness of the corrective or preventative action is to be conducted, where required, and the relevant work procedures updated. Changes to work procedures are to be communicated to all relevant personnel.

A 24-hour complaint response line will be maintained to facilitate the procedure. All complaints will be documented and entered into Xstrata Coal's action based reporting tool XstraSafe. Documentation will include:

- the date of the complaint;
- the time of the complaint;
- the complainant's name;
- the complainant's contact phone number;
- who received the complaint;
- the initial response to the complaint;
- any necessary further response actions; and
- feedback from the complainant.

This process will be assisted by regular pro-active liaison with surrounding residents and the general community.

The complaints register will be reported to the Community Consultative Committee meetings showing complaint details and responses. The number and nature of complaints will also be reported regularly to senior mine management, and in the Annual Environmental Management Report (AEMR).

4.5.2 Dispute Resolution

In the event of a disagreement between Liddell Coal and a member of the community, the Environment and Community Coordinator, and as necessary the Operations Manager, will undertake the necessary liaison and communication to reach a resolution.

In relation to a dispute over impacts from the development or acquisition of a property, the matter is to be referred to the Director-General of Planning for resolution, in accordance with the development consent.

4.6 Document Control

Liddell Coal's environment and community records are to be maintained in accordance with the *LEMS Procedure - Document Control*, including.

- utilisation of the Liddell Coal Intranet for the maintenance of the EMS and its components. This also enables access to standards, forms, procedures, policies and audit results;

- utilisation of XtraSafe database for the recording of all incidents and complaints, approvals and compliance information as well as risk register templates;
- hard copies of the EMS and its components are maintained in the Environment and Community Coordinator's filing system, which are kept legible and filed for a minimum period of four years; and
- all letters, action plans and monitoring results relating to compliance must be scanned and kept on the Liddell Coal computer network drive. If viewing by other XCN employees is necessary, the document must be put on the Liddell Coal intranet.

All documents must be consistent with the XCN Intranet format using the XCN Group standards template and be approved by the Liddell Coal Operations Manager in accordance with the requirements of *HSEC STD 1.01 Document Control*

4.6.1 Liddell Coal Website

Liddell Coal will maintain a website to allow for access to information, including:

- Annual Environmental Management Reports;
- approved plans, strategies and programs; and
- monitoring data.

Control of information placed on the website will be undertaken in accordance with *LEMS Procedure - Document Control*, *LEMS Procedure - Communication (Internal and External)*, *LEMS Procedure - Environmental Monitoring and Evaluation* and *LEMS Procedure - Environmental Reporting*.

The Operations Manager and Environment and Community Coordinator will be responsible for authorising all information that is made publicly available on the Liddell Coal website.

4.7 Emergency Preparedness and Response

Liddell Coal maintains emergency response plans aligned to the XCN Crisis Management Plan and in consultation with external emergency agencies generally in accordance with *HSEC STD 1.06 Emergency Management*. Liddell Coal undertakes a Broad Brush Risk Assessment generally in accordance with *HSEC STD 1.02 Risk Management* to identify foreseeable site emergencies. This assessment shall be reviewed annually and reassessed at least every 5 years.

4.7.1 Emergencies

Emergency response actions and responsibilities are detailed in *LEMS Procedure - Emergency Response (Major Spill Containment)* and *LEMS Procedure - Environmental Red Flag List*. These procedures document the responsibilities of key Liddell Coal personnel in the event of an emergency and the contact details for appropriate emergency services.

The procedures outline the processes to be followed in the event of an emergency, as well as internal and external communication procedures to be followed.

The identification of potential emergency situations will be facilitated through the completion of site based risk assessments. If a potential emergency situation is identified, an appropriate emergency response will be determined and incorporated into the risk review. Following the risk review, all relevant emergency procedures will be updated with changes to the emergency procedure communicated to all relevant staff.

Key site personnel will be trained in emergency preparedness and response. The level of risk identified during the risk assessment process will determine the level of preparedness and training. Where required, Liddell Coal will undertake scenario based incident and emergency response training as part of an overall training and awareness strategy.

Any changes to emergency procedures are to be documented and communicated to all personnel.

4.7.2 Incidents

Environmental incidents at Liddell Coal are managed in accordance with *LEMS Procedure – Community Complaints and Environmental Incident Report*.

Incident recording forms are located at all site offices and completed forms are to be forwarded to the Environment and Community Coordinator for entry into XstraSafe. Any actions arising from incident investigations are assigned to key personnel for completion. Incident records are retained for a period of at least four years. The Environment and Community Coordinator is to conduct an investigation into each environmental incident, which shall include reporting requirements and recommendations for corrective or preventative action which will be assigned through the sites action based reporting tool XstraSafe.

All incidents will be documented and entered into Xstrata Coal's action based reporting tool XstraSafe.

A review of the effectiveness of the corrective or preventative action shall be undertaken and the relevant procedures shall be updated as required.

Any changes to procedures as a result of these reviews are to be documented and communicated to all personnel.

5 ENVIRONMENTAL MONITORING, CORRECTIVE ACTION AND AUDITS

5.1 Environmental Monitoring

Liddell Coal measures its environmental and community performance in accordance with *LEMS Procedure - Environmental Monitoring and Evaluation* which is generally consistent with *HSEC STD 1.10 HSEC Measurement and Reporting*. Amongst the parameters to be monitored include environmental performance, incidents, complaints and leading key performance indicators.

LEMS Procedure - Environmental Monitoring and Evaluation details site specific monitoring programs, as required by the development consent and EPL requirements and based on the nature of the impacts of the operation on the environment.

The procedure includes:

- documented procedures for monitoring programs;
- clear allocation of responsibilities;
- recording of information such that performance may be tracked;
- detailed relevant operational controls for undertaking monitoring;
- mechanisms to demonstrate conformance with environmental objectives and targets and compliance with relevant environmental legislation and regulations;
- mechanisms for maintaining records of equipment calibration and maintenance shall be retained; and
- processes for ongoing review of both monitoring results and the overall monitoring programs.

The purpose of monitoring is to provide a measure of the performance of the operation, which can be compared against the objectives, targets and performance criteria specified in the Liddell Coal EMS.

All monitoring is to be undertaken using monitoring techniques specified in the relevant standard and using calibrated equipment operated by trained personnel.

All monitoring results are to be maintained by the Environment and Community Coordinator for at least four years. Monitoring results are to be compared against development consent, licence and permit conditions and in the event of any non-conformance the Environment and Community Coordinator is to investigate the cause of the non-conformance and recommend corrective and/or preventative action. The effectiveness of the corrective and/or preventative action is to be assessed by analysis of the next available monitoring results and during the next monthly site inspection.

Any changes to work procedures as a result of the corrective or preventative action is to be documented and communicated to site personnel in the form of tool box talks or some other form of direct communication.

Calibration records will be kept of the monitoring equipment used. Calibration will be undertaken in accordance with the equipment manufacturer's recommendations.

5.2 Inspections

Regular environmental inspections including monthly site inspections of Liddell Coal operations are to be conducted in accordance with *LEMS Procedure - Environmental Monitoring and Evaluation*. These inspections are designed to identify and determine on-site compliance with the EMS, development consent, and other relevant approvals. Site inspections are to be conducted by the Environment and Community Coordinator or his/her delegate and the inspection results recorded on the inspection form.

Any non-conformances are to be recorded on the inspection form and the cause of the non-conformance investigated by the Environment and Community Coordinator. Corrective and/or preventative action is to be recommended by the Environment and Community Coordinator and the effectiveness of the corrective and/or preventative action assessed at the next monthly site inspection. Any actions arising from site inspections will be entered into the sites action based reporting tool XstraSafe.

The Environment and Community Coordinator will report any significant non-conformances to the Operations Manager arising from site inspections.

5.3 Audits

5.3.1 Internal Audits

Internal audits will be undertaken generally in accordance with *LEMS Procedure – Auditing* which is generally consistent with *HSEC STD 1.15 Auditing*. A monthly site inspection is also to be conducted by the Environment and Community Coordinator and reported in accordance with the *LEMS Procedure - Communication (Internal and External)*.

As the mining operation at Liddell Colliery is currently a contractor run operation, an annual audit of the contractor's compliance with the EMS shall be conducted in accordance with *LEMS Procedure - Auditing*.

Additional audits of Liddell Coal operations are to be conducted as required in the Xstrata EMS, or on an as required basis by the Environment and Community Coordinator. Actions and recommendations from internal audits undertaken on site will be entered into the sites action based reporting tool XstraSafe.

Actions and recommendations from internal audits will be communicated to senior management and employees in accordance with *LEMS Procedure - Communication (Internal and External)* and will be entered into the sites action based reporting tool XstraSafe.

5.3.2 External Audits

Independent environmental audits of the operation are to be conducted at least every three years in accordance with Condition 4, Schedule 5 of the development consent.

External auditors are to be selected on the basis of their understanding of environmental management principles and mining operations. External auditors shall be suitably qualified and experienced and be capable of impartially and objectively auditing Liddell Coal.

The selection of external auditors will be the responsibility of the Environment and Community Coordinator and the Operations Manager.

Actions and recommendations from external audits will be communicated to senior management and employees in accordance with *LEMS Procedure - Communication (Internal and External)* and will be entered into the sites action based reporting tool XstraSafe.

5.4 Non Conformity, Corrective Action and Preventative Action

Liddell Coal manages all non-conformances in accordance with *LEMS Procedure - Environmental Monitoring and Evaluation* and *LEMS Procedure - Environmental Reporting* which are generally consistent with *HSEC STD 1.08 Communication and Consultation*, *HSEC STD 1.09 Hazard and Incident Management* and *HSEC STD 1.10 HSEC Measurement and Evaluation*.

Any non-conformance encountered during monitoring and inspections at Liddell Coal are documented and the cause investigated by the Environment and Community Coordinator. The Environment and Community Coordinator will then recommend corrective and/or preventative actions. The effectiveness of the corrective and/or preventative actions will be assessed by analysis of the next monitoring results, site inspections or audit findings.

Any actions and recommendations from non-conformances will be assigned through the sites action based reporting tool XstraSafe.

5.5 EMS Records and Information Management

A master copy of the EMS including the Strategy, plans, procedures and supporting information is to be held in the office of the Environment and Community Coordinator.

All EMS records are to be maintained in the appropriate location, as detailed throughout this document, in a legible form for a minimum period of four years in accordance with *LEMS Procedure - Document Control*.

In addition to hard copies, the EMS, including this Strategy, will be made available on the Liddell Coal Intranet system.

The EMS is to be reviewed at least every five years and updated, as required.

6 REVIEW AND IMPROVEMENT

6.1 Management Review

The review and revision of the environmental management system is to be undertaken by senior management in accordance with *LEMS Procedure – Review of Environmental Management System*. The management review will include:

- review of audit findings;
- achievement of objectives and targets;
- relevance of objectives and targets to current and future conditions;
- information and concerns of stakeholders;
- review of aspects and impacts; and
- review of the HSEC policy;

The management review of the EMS will be undertaken annually prior to the Liddell Coal budget planning cycle to ensure adequate resources can be allocated to provide for continual improvement of the EMS.

The outcomes of the review are documented and incorporated into the EMS.

Regular management review of the EMS allows opportunities for improvement to be identified and implemented, achieving the overall aim of continual improvement in environmental management performance.

6.2 Strategic Review

This Strategy will be reviewed, and revised as necessary, within three months of the completion of each Independent Environmental Audit. If any significant changes are made to the Strategy as part of one of these reviews, the revised Strategy will be provided to the Department of Planning for approval.

7 DEFINITIONS

audit	A systematic examination against defined criteria to determine whether activities and related results conform to planned arrangements and commitments. In addition, whether these arrangements and commitments are implemented effectively and are suitably achieved in accordance with the organisation's policy.
continual improvement	Process of enhancing the environmental management system to achieve improvements in overall environmental performance that are consistent with environment and community policies of Liddell Coal.
community complaint	A complaint made by any person within the community regarding the activities of Liddell Coal.
controlled document	A document for which it is critical that only the latest revision is in use. In light of this, its existence, movement, availability and eventual withdrawal is monitored, controlled and documented in a standardised manner.
environment	Surroundings in which Liddell Coal operates, including air, water, noise, land, flora, fauna, natural resources, humans and their interaction.
environmental aspect	An element of Liddell Coal's activities, products or services that can interact with the environment.
environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from Liddell Coal's activities, products or services.
environmental incident	Includes pollution incidents (including near misses), non-conformance with statutory requirements.
environmental management plan	Documentation of environmental controls developed in order to minimise environmental pollution.
environmental management system audit	Systematic and documented verification process of obtaining and evaluating evidence to determine objectively whether Liddell Coal's environmental management system conforms to the environmental management system audit criteria set by Liddell Coal, and communication of the audit findings to senior management.
environmental objective	Overall environmental goal, arising from the environmental policy, that Liddell Coal aims to achieve, and which is quantified where practicable.

environmental performance	Measurable results of the environmental management system, related to Liddell Coal's control of its environmental aspects, based on environmental policy, objectives and targets.
environmental policy	Statement of Liddell Coal's intentions and principles in relation to overall environmental performance, which provides a framework for action and for setting of its environmental objectives and targets.
environmental target	Detailed performance requirement, quantified where practicable, applicable to Liddell Coal or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.
external stakeholder	Individual or group concerned with or affected by the environmental performance of Liddell Coal.
ISO 14001	International standard specifying the requirements of an environmental management system.
non-conformance	Where any statutory requirement has not been met.
personnel	All staff and contractors that perform work for Liddell Coal.
pollution incident	Any potential or actual harm to the health and safety of human beings or to ecosystems caused as a result of carrying out activities associated with the operation.
prevention of pollution	Use of process, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and materials substitution.
uncontrolled document	Any document which relates to the environmental management system which is not a controlled document.
site environmental procedure	A description of required processes in sufficient detail to facilitate the competent completion of the tasks with due consideration for the qualifications of the personnel completing the task.
EMS Procedure	A description of a system or operation that may have an effect on the environment, or that is required in order to manage environmental impacts or implement the EMS.

NB: definitions sourced from ISO14000 series, where available

8 REFERENCES

AS/NZS ISO 14004:2004 Environmental Management Systems – General guidelines on principles, systems and supporting techniques

Department of Environment and Conservation (2005) *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW*.

HSEC STD 1.01 Document Control

HSEC STD 1.02 Risk Management

HSEC STD 1.06 Emergency Management

HSEC STD 1.07 Training and Inductions

HSEC STD 1.08 Communication and Consultation

HSEC STD 1.09 Hazard and Incident Management

HSEC STD 1.10 HSEC Measurement and Evaluation

HSEC STD 1.11 HSEC Planning

HSEC STD 1.15 Auditing

LEMS Procedure – Auditing

LEMS Procedure – Communication (Internal and External)

LEMS Procedure – Community Complaints and Environmental Incident Reporting

LEMS Procedure – Document Control

LEMS Procedure – Emergency Response (Major Spill Containment)

LEMS Procedure – Environmental Awareness Training

LEMS Procedure – Environmental Monitoring and Evaluation

LEMS Procedure – Environmental Red Flag List

LEMS Procedure – Environmental Reporting

LEMS Procedure – Environmental Risk Assessment

LEMS Procedure – Legal Requirements

LEMS Procedure – Review of Environmental Management System

Umwelt (Australia) Pty Limited (2006) *Liddell Colliery Modification to Development Consent Environmental Assessment.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Air Quality Monitoring Program.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Noise Monitoring Program.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Aboriginal Cultural Management Program.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Water Management Plan.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Landscape Management Plan.*

Umwelt (Australia) Pty Limited (2008) *Liddell Colliery Environmental Monitoring Program*

9 APPENDICES

Appendix 1—XCN and Liddell Coal Environment and Community Policies

Appendix 2—XCN HSEC Standards

Appendix 3—Legislation Summary

Appendix 4—Approvals Register

Appendix 5—Accountabilities

APPENDIX 1

XCN and Liddell Coal Environment and Community Policies



Liddell Coal Operations

Health, Safety, Environment and Community Policy

2007

VISION

Liddell Coal Operations has a vision to eliminate work related injuries and occupational diseases from its operation, be recognised as a leader in health, safety and environmental management, and operate in a manner that is respected by our local community.

POLICY

Liddell Coal Operations is committed to providing and maintaining a healthy and safe environment for people at our site so they may leave work each day without injury having caused minimal impact to the environment and local community. The dedication and co-operation of each and every person associated with the operation is essential to achieve this.

Liddell Coal Operations and all its employees, contractors and visitors must comply with all occupational health and safety, environmental and other legislation relevant to its operations take personal responsibility to the Company, fellow employees, contractors, visitors, the community and to themselves to work safely and minimise the impact to the environment and community.

Liddell Coal Operations considers no task to be so important as to compromise health and safety, the environment and the community.

Liddell Coal Operations will contribute to sustainable development through environmental performance and stakeholder engagement.

In order to achieve our vision, Liddell Coal Operations has implemented a HSEC Management System that:

- Complies with occupational health and safety and environmental laws, regulations and other statutory obligations;
- Complies with relevant corporate standards;
- Identifies direct and underlying causes of incidents and takes appropriate steps to prevent recurrence;
- Requires consideration of hazards and implementation of safe, healthy and environmentally responsible work methods for each and every activity undertaken.
- Promotes active employee involvement and participation in developing, maintaining and improving systems of work;
- Clearly defines and sets HSEC performance goals and targets and measures performance using internal and external reviews;
- Schedules the preparation and review frequency of the HSEC Management Plan to continue to strive for best practice;
- Fosters open and effective communication with the community based on mutual respect;
- Identifies and manages environmental and community risks associated with the project throughout the life of the operation and at all stages of development;
- Minimises resource consumption and waste generation throughout the life of the operation;
- Facilitates progressive rehabilitation of disturbed land, provides sustainable post mine closure and encourages biodiversity conservation and sustainable development;
- Provides the management structure, personnel, resources and training necessary to implement effective health, safety, environmental and community management strategies;
- Incorporates measures to minimise the environmental impact of activities, products and services through the implementation of effective planning and management practices throughout the life of the operation and post mine closure;
- Documents and communicates this policy to all employees, contractors, suppliers and visitors to Liddell Coal Operations and the community as appropriate; and
- Respects the rights of the local communities and fosters an appreciation for the traditional rights and cultural heritage of the local indigenous peoples.


Grant Farrar

Liddell Coal Operations - Operations Manager

Date: 7 June 2007

This policy will be reviewed and reissued by July 2009



Community Policy

Vision

Our Vision is to foster open and honest two-way interaction with the communities in which we operate and to contribute to the sustainability of these communities.

Policy

We are committed to being a responsible corporate citizen and will implement appropriate communication strategies to promote positive and long-term relationships with our communities.

We will effectively manage all of our operations within the framework of this Policy and adopt a consistent approach towards community relations.

In order to achieve our Vision we will:

- Consider the needs of our communities during the planning, operational and decommissioning stages of each operation;
- Build open and honest relationships with the communities in which we operate;
- Provide information on our operations in a timely fashion and actively seek feedback;
- Ensure interaction with our communities is undertaken primarily by site personnel;
- Record and monitor community concerns and respond to them in a proactive, timely and professional manner;
- Support community initiatives that are aligned to our business principles;
- Encourage community awareness of and support for our operations; and
- Promote a responsible approach to community sustainability post mine-closure.

Peter Coates
Chief Executive

Peter Freyberg
Director of Operations

Mick Buffier
Chief Operating Officer
New South Wales

Ian Cribb
Chief Operating Officer
Queensland

Sam Coetzer
Chief Operating Officer
South Africa

Jeff Gerard
Chief Operating Officer
Americas



Environment Policy

Vision

Xstrata Coal's vision is to be recognised as a leader in environmental management.

Values and Beliefs

We believe:

- the impact of our operations on the environment can be minimised through environmental management;
- communicating with the community, key stakeholders and considering their concerns and expectations is integral to the success of our business;
- employees and contractors are accountable for their actions;
- environmental performance can always be improved; and
- environmental management will improve business performance.

Policy

Xstrata Coal is a major, internationally focused coal mining business. We will contribute to sustainable development through environmental performance and stakeholder engagement. Our environmental vision will be attained through the strong and visible commitment of Xstrata Coal and the involvement of our employees.

To this end we will:

- aim to achieve a level of performance that goes beyond that required for compliance with all applicable environmental laws and comply with company Policies and Standards;
- implement and maintain best practice environmental management systems;
- manage our environmental risks;
- provide awareness training for employees and contractors;
- promote and encourage active employee participation in the continuous improvement of our environmental management and performance;
- undertake progressive rehabilitation of disturbed land and provide sustainable post mine closure and encourage biodiversity conservation;
- use water and energy more efficiently;
- monitor, audit, review and report our performance against relevant standards;
- communicate with key stakeholders, including our shareholders, the communities in which we operate and government; and
- minimise waste generation, recycle where possible and dispose of wastes safely and with minimal impact.

Peter Coates
Chief Executive

Peter Freyberg
Director of Operations

Mick Buffier
Chief Operating Officer
New South Wales

Ian Cribb
Chief Operating Officer
Queensland

Sam Coetzer
Chief Operating Officer
South Africa

Jeff Gerard
Chief Operating Officer
Americas

APPENDIX 2

XCN HSEC Standards

Appendix 2 - XCN HSEC Standards

Health, Safety, Environment and Community

System	People	Work Place	Work Process	Work Environment
<ul style="list-style-type: none"> • Document Control • Risk Management • Management Plans, Approvals & Licences • Baseline Survey • Contractor Management • Emergency Management • Training and Education • Communication & Consultation • Incident Management • HSEC Measurement & Reporting • HSEC Planning • Change Management • Workplace Inspections • Behavioural Management • Auditing • Major Projects – Environmental Approvals 	<ul style="list-style-type: none"> • Roles & Accountabilities • Medicals • Fatigue Management • Drugs & Alcohol • Rehabilitation • Health & Hygiene • PPE 	<ul style="list-style-type: none"> • Critical Equipment • Machine Guarding • Demarcation & Colour Coding • Labelling, Notices and Signage • Electrical & Mechanical standards • Buildings and Mine Design • Equipment & Supplies Procurement 	<ul style="list-style-type: none"> • Energy Isolation • Work Permits • Hazardous Task Management • Safe Work Procedures • Stacking & Storage • Manual Handling • Exploration & Drilling 	<ul style="list-style-type: none"> • Housekeeping • Waste Management • Hazardous Substances • Workplace Environment Monitoring • Ergonomics • Lighting • Noise Control • Ventilation • Biodiversity and Land Management • Social Involvement • Land Acquisition and Compensation • Mine Closure • Closure Criteria Development and Rehabilitation Monitoring

APPENDIX 3

Legislation Summary

Appendix 3 - Legislation Summary

Commonwealth Environmental Legislation

Legislation	Application
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	Requires that the Commonwealth assess any development application that may have a significant impact on matters of National environmental significance including: World Heritage properties; National Heritage places; Ramsar Wetlands; cetaceans; migratory species; threatened species; critical habitats; or ecological communities listed in the EPBC Act; Commonwealth Land, marine areas or reserves; and nuclear actions.
<i>Native Title Act 1993</i>	Preserves native title to land on which native title was not extinguished prior to 1 January 1994. This includes Crown Land, however, in some cases native title may be extinguished due to past use of the land.
<i>National Environment Protection Council Act 1994</i>	Establishes a ministerial council with the power to set national environmental protection measures (NEPMs).

New South Wales Environmental Legislation

Legislation	Application
<i>Aboriginal Land Rights Act 1983</i>	Part 6 of the Act prescribes a mechanism for Lands Councils to claim Crown Land. Where a land Council owns land that is subject to a mining lease application, Part 7 of the Act requires that the consent of the Land Council be obtained prior to the granting of a new mining lease.
<i>Contaminated Land Management Act 1997</i>	There is a duty to report contamination that has a significant risk of harm (as defined by the Act) to the DEC. If it is intended to change land use (e.g. to rural land) than the risk may be different to that of an industrial land use. If a significant risk exists then remediation of the site is required.
<i>Crown Lands Act 1989</i>	Crown land may be sold, leased or exchanged once an assessment has been made under Part 3. A licence may be procured for extraction of certain minerals (s49).
<i>Dams Safety Act 1978</i>	This Act requires that the NSW Dams Safety Committee approve the design of large dams that may constitute a hazard to human life and property. These dams are known as prescribed dams and are listed in Schedule 1 of the Act. Any new prescribed dams are to be approved by the Dams Safety Committee.
<i>Environmental Planning and Assessment Act 1979</i>	Part 4 prescribes the development approval process as it relates to private developments. Part 5 relates to developments by government bodies and Part 3A prescribes the process for approval of Major Projects proposed by either private developers or government bodies.
<i>Environmental Planning and Assessment Amendment (Infrastructure and Other Planning Reform) Act 2005</i>	This Act introduced Part 3A into the EP&A Act as well as making changes to development contributions, local environment planning processes and strengthening enforcement powers.
<i>Environmental Planning and Assessment Regulation 2000</i>	Details procedures for lodging and advertising project applications (Part 3A) and development applications, amends the counting time for development applications, details relating to Commissions of Inquiry and Panel Hearings, changes the content of an EIS, updates Schedule 3 relating to the classification of a development, also details changes relating to planning certificates, Local Environment Plans, Section 94 contributions plans, and penalty notice offences.

New South Wales Environmental Legislation (cont)

Legislation	Application
<i>Environmentally Hazardous Chemicals Act 1985</i>	A licence must be procured under s28 to conduct any activity involving the use of chemicals subject to a control order or prescribed as chemical waste.
<i>Heritage Act 1977</i>	<p>Approvals under this act are not required for projects approved under Part 3A.</p> <p>A permit under Section 140 of the Act is required to damage or disturb any non-Aboriginal heritage item (items over 50 years old), excluding those listed on the State Heritage Register, for which a permit is required under Section 60 of the Act prior to disturbance.</p>
<i>Mining Act 1992</i>	Licences for exploration, assessment, mining and opal prospecting leases as well as mineral claims. Mining leases granted for coal reserves require preparation of a Mining Operations Plan for approval by the Department of Primary Industries prior to commencement of mining. Subsidence Management Plans are also required for Underground Coal mines prior to the commencement of mining that may result in subsidence (including for first workings that define later subsidence areas). An Annual Environmental Management Report is also required by the mining lease. The MOP and AEMR requirements are part of DPIs Mining, Rehabilitation and Environmental Management Process (MREP).
<i>National Parks and Wildlife Act 1974</i>	<p>This Act contains provisions relating to protection of both Aboriginal sites and native flora and fauna. Approval is not required under the Act for impacting on native flora or fauna where that activity is carried out in accordance with a development approval granted under the EP&A Act.</p> <p>Approvals for impacting on Aboriginal sites are not required for projects approved under Part 3A of the EP&A Act.</p> <p>For non Part 3A projects, a Consent to destroy under Section 90 of the Act is required prior to the disturbance or destruction of any Aboriginal sites. A permit is required under Section 87 to impact on a site for research purposes or to excavate for the purposes of identifying sites (i.e. to investigate an area of potential archaeological deposit).</p>
<i>Noxious Weeds Act 1993</i>	Required occupiers of Crown and private land to control weeds listed as noxious in accordance with the requirements of the various weed classes in the Act.
<i>Pesticides Act 1999</i>	The Act requires that pesticides are used according to instructions on the label or permit and that for each use actions are taken to ensure appropriate application. The Act also requires detailed record keeping procedures of chemicals used. Considerable penalties apply for breaches.
<i>Protection of the Environment Operations Act 1997</i>	Consolidated licences (Environmental Protection Licences) previously prescribed by Clean Waters Act, Clean Air Act, and Noise Control Act and issued under the Pollution Control Act. Sets offences and penalties for polluting activities, other than breaches of regional waste agreements and disclosure obligations under the Waste Minimisation & Management Act 1995. Establishes a 3-tier system of penalties for individuals and corporation that breach environmental legislation.
<i>Radiation Control Act 1990</i>	This Act requires those who use sell or give away any radioactive substances, ionising radiation apparatus or non-ionising apparatus to be licenced.

New South Wales Environmental Legislation

Legislation	Application
<i>Rivers and Foreshores Improvement Act 1948</i>	Approvals are not required under this Act for projects approved under Part 3A of the EP&A Act or for works within a surface mining lease granted under the Mining Act. Otherwise, permits are required under part 3A s22B for any development in a protected waterway or within 40 metres from the top bank of a protected waterway.
<i>Roads Act 1993</i>	This Act is administered by the RTA, local council or the Department of Lands; the RTA has jurisdiction over major roads, the local council over minor roads and the Department of Lands over road reserves. A consent under Section 138 of the roads Act is required to undertake works within a road reserve.
<i>Soil Conservation Act 1938</i>	A notice may be served under Part 4 s22 of actions required to mitigate or avoid soil erosion, siltation or land degradation associated with prescribed works (s19) and catchment areas (s20).
<i>Threatened Species Conservation Act 1995</i>	This Act contains provisions relating to protection of threatened species, populations and endangered ecological communities. Approval is not required under the Act for impacting on threatened species, populations and endangered ecological communities where that activity is carried out in accordance with a development approval granted under the EP&A Act.
<i>Water Act 1912</i>	Permits and licences are required under this Act to extract or discharge water and to divert surface flows. Permits are required except where the Water Management Act applies (see below).
<i>Water Management Act 2000</i>	Addresses water management planning, water rights and licencing. Repeals other water legislation including the Water Act and Rivers and Foreshores Improvement Act, However, the licencing provisions of these Acts remain in force until the licencing provision of the Water Management Act commence. The WMA licencing provisions commence in an area when the Water Sharing Plan for that area is gazetted. This Act is listed in Part 3A of the EP&A Act as not applying to projects approved under that part, however, current advice from DNR indicates that some approvals may still be required.

State Environmental Planning Policies

State Environmental Planning Policy	Application
State Environmental Planning Policy (Major Projects)	The SEPP identifies Major Projects which require approval under Part 3A of the EP&A Act and for which the Minister for Planning will be the consent authority. Coal Mining and bulk samples of coal are classed as Major Projects.
State Environment Planning Policy (Mining, Petroleum Production & Extractive Industries)	Prevails over all other instruments except SEPP (Major Projects). The Mining SEPP provides that development consent is not required to carry out mineral exploration and fossicking, rehabilitation by or on behalf of a public authority of an abandoned mine site and mining within a mineral claims district pursuant to a mineral claim under the Mining Act of 1992.

APPENDIX 4

Approvals Register

Appendix 4 – Approvals Register

Consents, Leases and Environment Protection Licence

Instrument	Authority	Approval/Expiry
DA 305-11-01	Department of Planning	Approved 20 November 2002 Modification to Development Consent 18 July 2007 Expires 31 December 2023
Mining Lease 1597	Department of Primary Industries	Expires 5 November 2028
Consolidated Coal Lease No. 708	Department of Primary Industries	30 December 2002 (Renewal submitted)
Mining Lease No. 1313	Department of Primary Industries	24 July 2008 (Renewal submitted)
Mining lease No. 1552	Department of Primary Industries	10 March 2008 (Renewal submitted)
Authorisation Area A394	Department of Primary Industries	18 December 2001 (Renewal submitted)
Environmental Protection Licence EPL 2094	Department of Environment and Climate Change	Anniversary Date: 30 June

Surface Water and Groundwater Licences

Licence Number	Locality	Use	Annual Allocation
Monitoring bore licence No. 20BL168066	Haz 6	Monitoring	N/A
Monitoring bore licence No. 20BL168065	Durham 3	Monitoring	N/A Redundant due to mine operations
Monitoring bore licence No. 20BL168064	LC1	Monitoring	N/A
Dewatering bore licence No. 20BL168063	Durham 1	Dewatering	6000 ML
Dewatering bore licence No. 20BL168062	8 South 1 & 2	Dewatering	6000 ML
Dewatering bore licence No. 20BL168061	Durham 2 & 4	Dewatering	
Dewatering bore licence No. 20BL168060	Haz 1 & 2	Dewatering	5500 ML
Monitoring bore licence No. 20BL168053	ALV1, ALV2, ALV3, ALV4, ALV7, ALV8	Monitoring	N/A
Irrigation bore licence No. 20BL020923	463 Hebden Road, Ravensworth	Irrigation	Conversion process
Monitoring bore licence No. 20BL171092	M49	Monitoring	N/A
Irrigation surface water licence No. 20SL034454	Bowmans Creek	Irrigation	50 ML
Industrial surface water licence No. 20SL038644	Bayswater Creek	Industrial	100 ML
Industrial surface water licence No. 20SL060514	Hunter River	Industrial	20 ML
Diversion surface water licence No. 20SL042837	Swamp Creek	Diversion	N/A

Surface Water and Groundwater Licences (cont)

Licence Number	Locality	Use	Annual Allocation
Industrial surface water licence No. 20SL060513	Hunter River via Macquarie Generation	Industrial	20 ML
Industrial surface water licence No. 20SL044239	356 Glennies Creek Road	Industrial	50 ML

Section 87/90 Consents and Approvals

Site Name	Site Number (AHIMS)	Site Type	Status
LID1	37-3-0454	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1443 granted 12 November 2002. Site salvaged 5 December 2002.
LID2	37-3-0453	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID3	37-3-0452	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID4	37-3-0451	Artefact scatter	<ul style="list-style-type: none"> Extant site. No disturbance currently planned.
LID5	37-3-0450	Isolated artefact	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID6	37-3-0449	Artefact scatter	<ul style="list-style-type: none"> Extant site.
LID7	37-3-0447	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.
LID8	37-3-0446	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.
LID9	37-3-0445	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.
LID10	37-3-0444	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.
LID11	37-3-0443	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted 26 March 2003. Site salvaged 14 May 2003.
LID12	37-3-0442	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.

Section 87/90 Consents and Approvals (cont)

Site Name	Site Number (AHIMS)	Site Type	Status
LID13	37-3-0441	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted 26 March 2003. Site salvaged 14 May 2003.
LID14	37-3-0440	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 15 May and 23 May 2003.
LID15	37-3-0439	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 14 May 2003.
LID16	37-3-0438	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 14 May and 23 May 2003.
LID17	37-3-0437	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. No salvage required.
LID18	37-3-0436	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. No salvage required.
LID19	37-3-0435	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #1301 granted 8 March 2002. Site salvaged 11-15 March 2002.
LID20	37-3-0434	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 14 May 2003.
LID21	37-3-0433	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 14 May 2003.
LID22	37-3-0432	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. Site salvaged on 14 May 2003.
LID23	37-3-0467	Isolated find	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID24	37-3-0465	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID25	37-3-0466	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
LID26	37-3-0431	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #1577 granted on 26 March 2003. No salvage required.
LID27	37-3-0430	Isolated artefact	<ul style="list-style-type: none"> Extant site.

Section 87/90 Consents and Approvals (cont)

Site Name	Site Number (AHIMS)	Site Type	Status
LID28	37-3-0429	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #2348 granted on 3 October 2006. No salvage required.
LID29	37-3-0427	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #2348 granted on 3 October 2006. Salvage undertaken 21-23 November 2006.
LID30	37-3-0426	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #2348 granted on 3 October 2006. Salvage undertaken 21-23 November 2006.
LID31	37-3-0428	Isolated artefact	<ul style="list-style-type: none"> Section 90 consent #2348 granted on 3 October 2006. Salvage undertaken 21-23 November 2006.
LID32	37-3-0464	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #2348 granted on 3 October 2006. Salvage undertaken 21-23 November 2006.
LID33	37-3-0463	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent #2741 granted on 7 August 2007. Salvage undertaken on 17 August 2007.
Davies Site 5	37-3-0193/ 37-3-0462	Artefact scatter	<ul style="list-style-type: none"> Extant site.
PL1	No site no. assigned	Artefact scatter	<ul style="list-style-type: none"> Extant site.
Brayshaw Site A	37-3-0055/ 37-3-0461	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent granted in 1983 but predicted impacts to the area did not occur. Extant site.
Brayshaw Site B	37-3-0052/ 37-3-0460	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent granted in 1983. Salvage undertaken in 1983 but additional artefacts (114) recorded by Umwelt (2001). Requires further Consent to Destroy and salvage prior to disturbance.
Brayshaw Site C	37-3-0053/ 37-3-0459	Artefact scatter	<ul style="list-style-type: none"> Section 90 consent granted in 1983 but predicted impacts to the area did not occur. Extant site.
Brayshaw Site D	37-3-0054/ 37-3-0458	Isolated artefact	<ul style="list-style-type: none"> Extant site.
SP1	37-3-0457	Isolated artefact	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
SP2	37-3-0456	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
SP3	37-3-0455	Isolated artefact	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.
Liddell Fines 1	Pending	Artefact scatter	<ul style="list-style-type: none"> Extant site. Requires Consent to Destroy and salvage prior to disturbance.

Radiation Gauge

Radionuclide	EPA Registration Number	Nominal Activity	Renewal Date
Cs-137	1258	2481 MBq	30 June
Am-241	1259	1100 MBq	30 June
Cs-137	1260	370 MBq	30 June
Cs-137	1262	2481 MBq	30 June
Cs-137	8235	631 MBq	31 March

APPENDIX 5

Accountabilities

Appendix 5 - Accountabilities

Role	Accountabilities for this Document
Operations Manager	<ul style="list-style-type: none"> • Allocate appropriate resources within delegated authority. • Have a working knowledge of this Strategy, the Liddell Coal HSEC Policy and the EMS. • Ensure all operations are undertaken in accordance with the Liddell Coal HSEC Policy and the EMS. • Monitor adherence to all legal and corporate requirements and the effectiveness of all relevant procedures and standards. • Ensure any potential or actual environment and community issues are reported in accordance with legal requirements and the corporate standard. • Liaise with the Environment and Community Coordinator regarding the preparation and implementation of site objectives and targets of annual environmental reports and their implementation. • Model leadership in relation to Environment and Community vision, values and issues.
Environment and Community Coordinator	<ul style="list-style-type: none"> • Implement and maintain the EMS, including the Environmental Management Strategy. • Liaise with the Operations Manager in the development, implementation, maintenance and monitoring of Operations including facilitating the commitments outlined in the HSEC Policy. • Be aware of the environmental legislative requirements associated with Liddell Colliery and take measures to ensure compliance. • Undertaking liaison with authorities and the community regarding routine matters. • Reviewing and endorsing all corrective actions arising from environmental incidents. • Communicate the Environment and Community strategy to workforce and relevant contractors. • Ensure appropriate training is provided to all employees and contractors regarding their environmental responsibilities under the EMS. • Participation in the Liddell Coal Operations Environment Meetings. • Ensure appropriate training is provided to all employees and contractors regarding their environmental responsibilities. • Model leadership in relation to Environment and Community vision, values and issues.
Supervisor	<ul style="list-style-type: none"> • Monitor that team members and contractors carry out work tasks safely while managing HSEC risks following documented procedures wherever they are applicable. • Ensure any potential or actual environmental and community issue is controlled, or otherwise isolated and reported in accordance with legal requirements and the corporate standard. • Report any HSEC related incidents to the Environment and Community Coordinator. • Model leadership in relation to HSEC issues.
All employees and contractors	<ul style="list-style-type: none"> • Be aware of the Environmental Management Strategy, the Liddell Coal HSEC policy and the EMS. • Undertake all work in accordance with the Environmental Management Strategy, the HSEC Policy and the EMS. • Undertake work activities in accordance with training, standards and procedures. • Identify HSEC hazards and control them if able, otherwise inform your Supervisor. • Report any HSEC incidents to supervisors.

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