Independent Environmental Audit

Werris Creek Coal

Independent Environmental Audit

Werris Creek Coal

60221211

Prepared for

Werris Creek Coal

Prepared by

AECOM Australia Pty Ltd
17 Warabrook Boulevarde, Warabrook NSW 2304, PO Box 73, Hunter Region MC NSW 2310, Australia
T +61 2 4911 4900 F +61 2 4911 4999 www.aecom.com
ABN 20 093 846 925

13 September 2011

60221211

AECOM in Australia and New Zealand is certified to the latest version of ISO9001 and ISO14001.

Quality Information

Document Independent Environmental Audit

Ref 60221211

Date 13 September 2011

Prepared by Peter Horn (assisted by Jessica Miller)

Reviewed by Graham Taylor

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	9-Sep-2011	Draft for client review	Graham Taylor Technical Director/National Practice Leader	
B	13-Sep-2011	Final	Graham Taylor Technical Director/National Practice Leader	

This page has been left blank intentionally.

Table of Contents

List of Tables

This page has been left blank intentionally.

Executive Summary

AECOM Australia Pty Limited has been commissioned by Werris Creek Coal Pty Limited (WCC) to conduct the Independent Environmental Audit for the Werris Creek Coal Mine (also WCC) operated by Whitehaven Coal Limited (WCL) in accordance with the *Development Consent DA-172-7-2004* (as modified).

This Audit was undertaken generally in accordance with *AS/NZS ISO 19011:2003 – Guidelines for quality and/or environmental management systems auditing*.

This audit covers the period between August 2008 and July 2011, and includes:

- Comments on WCC's compliance against the conditions of DA-172-7-2004 (as modified), its EPL 12290, and other environmental approvals and management plans (Section 3.0);
- An assessment of WCC's environmental management and performance (Section 4.0) and the adequacy of the management strategy and monitoring programme (Section 5.0); and
- A list of recommendations flowing from the findings of this audit (Section 6.0).

This audit was conducted by Peter Horn and Rochelle Lawson (assisted by Jessica Miller) and consisted of a detailed desktop review of documentation, interviews with key WCC staff and a site visit of Werris Creek mine. Additional desktop reviews were conducted prior to and following the site inspection. A peer review of the IEA was conducted by Graham Taylor.

Under Condition 42, Schedule 4 of DA-172-7-2004 (as modified) a separate independent audit of the Biodiversity Offset Management Plan (BOMP) is also required. This audit of the BOMP was completed in parallel with the current audit and the findings from that audit are contained in a separate report.

WCC has in place an Environmental Management System which relies upon an overriding Environmental Management Strategy, a series of management plans and monitoring programs. The Environmental Management System forms the basis of the observed rigorous and consistent environmental management at the site. Due to time constraints on the audit team, not all of the environmental approvals and management plans were able to be audited (refer Table 1 and Section 3.0). Where applicable, these commitments have been highlighted so that they may be prioritised for investigation in future audits.

Positive site observations during the audit included:

- Biodiversity offset management.
- Community consultation and complaints handling.
- Aboriginal Cultural Heritage Management.

This audit has identified seven non compliances against conditions of DA-172-7-2004 (as modified), and six non compliances against conditions of the EPL 12290. Furthermore, the following environmental assessments and management plans were found to have non compliances against their commitments:

- *Statement of Environmental Effects* (R.W. Corkery & Co Pty Limited, 2009) – one non compliance.
- *Archaeology and Cultural Heritage Plan* (WCL, 2007) – one non compliance.
- *Bushfire Management Plan for Werris Creek Coal Mine* (WCL, 2007) – one non compliance.
- *Werris Creek Coal Air Quality Monitoring Program* (WCL, 2009) – one non compliance.
- *Site Water Management Plan Werris Creek Coal Mine* (WCL, 2009) – three non compliances.
- *Waste Management Plan for the Werris Creek Coal Mine* (WCL, 2009) – one non compliance.

It should be acknowledged that many of these non compliances relate to the same or similar issues. A consolidated list of recommendations stemming from these non compliances can be found in Table 30. Individual non compliances are outlined in more detail in Section 3.0. At the time of the audit, WCC staff were made aware of many of these identified non compliances against conditions of DA-172-7-2004 (as modified) and the EPL 12290.

Overall, WCC has well documented systems and sound procedures for record keeping relating to environmental activity. A high level of resources is devoted to environmental matters through a competent and well led environmental and operations team. It was observed that a good standard of environmental management was being applied to the operation of WCC at the time of the audit, as indicated by the field inspections.

1.0 Introduction

1.1 Background

AECOM Australia Pty Ltd (AECOM) was commissioned by Whitehaven Coal Limited (WCL) to undertake an Independent Environmental Audit (IEA) for the Werris Creek Coal Mine (WCC) in accordance with Condition 6, Schedule 6 of the *Development Consent DA-172-7-2004* (as modified). WCC is a wholly-owned subsidiary of Whitehaven Coal Limited (WCL).

The Audit was undertaken consistent with the relevant planning approval conditions for WCC and focused on verification of the site's compliance against key licences, approvals and supporting documents. This Audit covers the period August 2008 to July 2011.

Under Condition 42, Schedule 4 of DA-172-7-2004 (as modified), a separate independent audit of the Biodiversity Offset Management Plan (BOMP) is also required. This audit of the BOMP was completed in parallel with the current audit and the findings from that audit are contained in a separate report.

1.2 Site Description

WCC operates the Werris Creek Coal Mine located approximately 4 km south of Werris Creek and 11 km north-northwest of Quirindi in central northern New South Wales. Mining commenced at the WCC in 2005, and WCL acquired a 100% interest in the WCC in December 2007. WCC is located in a predominately rural agricultural area. It lies within a 679 ha area covered by Mining Lease 1563 which incorporates the "Narrawolga" property and parts of the "Eurunderee" and "Cintra" properties.

WCC is mined using a conventional haulback system with truck and excavator operations. The mining sequence generally moves in a northerly direction with the emplacement of overburden subsequently occurring into the mined out strips or within the adjacent out of pit overburden emplacement area. The Mine produces approximately 1.5 million tonnes of raw coal per annum for sale in the domestic and export markets. The coal is transported directly by rail from WCC from where it is sold to markets via the Port of Newcastle with a small portion supplied to local industry by road transport.

In 2009, a Statement of Environmental Effects for a Modification to the Mining Area and Related Activities at the WCC was submitted to the Department of Planning and Infrastructure (DP&I). This was subsequently approved on 6 October 2009, permitting the expansion of mining activities subsequent to that which was originally approved in the 2004 *Development Consent*.

In 2010, an Environmental Assessment for WCC Life of Mine Project was submitted to DP&I. If approved, this would allow the life of mine to be extended for another 20 years, and would expand on the current hours of operations at WCC. A determination on this submission is currently pending from DP&I.

In total, the 2004 *Development Consent* has been modified five times to date:

- On 18 October 2005 to extend the construction period for the mine access road.
- On 6 March 2007 to remove the site of Aboriginal heritage from within the mining area footprint.
- On 17 September 2008 to vary the Mine's water management system, to increase coal transportation by road (up to 50,000 tonnes per annum), and an increase in the stockpile capacity and height of the Rail Load-out Facility.
- On 15 April 2009 to establish a precursor storage facility (prill and emulsion) within the Mining Licence 1563 and an alternative biodiversity offset strategy.
- In September 2009 to extend the limit of mining, dewatering and storage of water from the former underground workings, as well as a further addition to the biodiversity offset area. The modified open cut layout was also planned to assist in the development of the proposed Life of Mine Project Application.

1.3 Scope of Work

This IEA and subsequent report has been prepared pursuant to Condition 6, Schedule 6 of DA-172-7-2004 (as modified). Table 1 lists the requirements of this condition and indicates where each has been addressed in this IEA report.

Table 1 Auditing Conditions and where each is addressed in this report

Condition	Commitment	Where Addressed in this Report
6	At the end of Year 3 of the development, and every 3 years thereafter, unless the Director-General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:	This Report
6(a)	Be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General.	Appendix A
6(b)	Be consistent with *ISO 19011:2003 – Guidelines for Quality and/or Environmental Systems Auditing*, or equivalent updated versions of these guidelines.	Section 1.4
6(c)	Assess the environmental performance of the development, and its effects on the surrounding environment.	Section 4.0
6(d)	Assess whether the development is complying with the relevant standards, performance measures, and statutory requirements.	Section 3.0
6(e)	Review the adequacy of the Applicant's Environmental Management Strategy and Environmental Monitoring Program.	Section 5.0
6(f)	If necessary, recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.	Section 6.0

The first IEA for WCC was undertaken in October 2008 by URS Australia Pty Ltd. The current IEA has been carried out at Year six of development, and covers the period between August 2008 and July 2011 (the 'audit period').

1.4 Audit Approach

This IEA was undertaken generally in accordance with *AS/NZS ISO 19011:2003 – Guidelines for quality and/or environmental management systems auditing* by the following AECOM staff:

- Peter Horn (Associate Director Environment) – Lead Auditor
- Rochelle Lawson (Senior Ecologist) – Auditor
- Jessica Miller (Graduate Environmental Professional) – Assistant Auditor
- Graham Taylor (Technical Director/National Practice Leader) – Peer Reviewer.

This IEA consisted of a detailed desktop review of documentation, interviews with key WCC staff and a site visit of WCC on 1, 2 and 3 August 2011. Attendees at interviews included:

- Andrew Wright – Environmental Officer
- Michael Post – Project Manager
- Robert George – Mine Superintendent
- Scott Tuckey – Workshop Supervisor
- Anthony Green – Orica Blasting Contractor
- Peter Easey – Coal Processing Manager
- Des George – Manager Mining Engineering

- Danny Young - WHC Group Environmental Manager.

Agendas for the site meetings and itinerary for the site inspection components of the IEA (both inclusive of attendees) are shown in Appendix B.

An inspection of the biodiversity offset area was undertaken on 1 August from approximately 12:30pm to 2:00pm. Weather at the time of the field inspection was warm and sunny, with no cloud cover and a cool breeze. A general site inspection was undertaken on 2 August from approximately 9:00am to 11:00am. The workshop, coal processing and rail load-out facility were inspected on 3 August from approximately 11:00am to 11:30am.

1.4.1 Limitations of the Audit

The AECOM audit team received complete cooperation from all staff during the IEA. However, the following issues arose during the IEA, which limited to some extent, its findings:

- Due to time restraints on the auditing team, not all commitments made in the environmental assessment and management plans were able to be audited. Where applicable, these commitments have been highlighted so that they may be prioritised for investigation in future audits.
- Opinions presented in this report apply to the site's conditions and features as they existed at the time of AECOM's site visit in August 2011 and those reasonably foreseeable. They necessarily cannot apply to conditions and features which AECOM is unaware of and has not had the opportunity to evaluate.
- The conclusions presented in this report are professional opinions based solely on AECOM's visual observations of the site and the immediate vicinity, and upon AECOM's interpretations of the documentation reviewed, interviews and conversations with personnel knowledgeable about the site and other available information, as referenced in this report. These conclusions are intended exclusively for the purpose stated herein, at the site listed, and for the project indicated.
- This report does not, and does not purport to, give legal advice on the actual or potential environmental liabilities of any individual or organisation, or to draw conclusions as to whether any particular circumstances constitute a breach of relevant legislation.

1.5 Report Structure

This report is structured generally in accordance with Condition 6, Schedule 6 of DA-172-7-2004 (as modified) as follows:

Section 1.0 provides an introduction, background, description and layout of WCC, describes the requirements for the IEA and provides a guide to the structure of the report.

Section 2.0 lists the planning approvals in place at WCC, provides a description of each and confirms those which have been the subject of this IEA.

Section 3.0 provides a discussion of non compliances against the project approvals and other licences and management plans.

Section 4.0 describes the effectiveness of environmental management at WCC.

Section 5.0 describes the effectiveness of the environmental management strategy and management programs at WCC.

Section 6.0 provides recommendations for measures or actions to improve the environmental performance of WCC.

This page has been left blank intentionally.

2.0 Documents Reviewed

Condition 6, Schedule 6 of the *Development Consent DA-172-7-2004* (as modified) requires the IEA to:

"(d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements."

Condition 2, Schedule 3 of *Development Consent DA-172-7-2004* (as modified) lists the documents that WCC has to carry out its operations in accordance with. Table 2 lists this condition and indicates where each requirement has been addressed in this report. Due to time constraints on the audit team, not all commitments in the environmental approvals and management plans were able to be audited. Where this is the case, it has been highlighted and a recommendation made that these commitments be prioritised for investigation in future IEAs.

Table 2 WCC documents used to assess compliance and where each is addressed in this report

Condition		Where addressed in this report
a)	DA-172-7-2004	Section 3.2
b)	EIS titled *Environmental Impact Statement for the Proposed Werris Creek Coal Mine, and Specialist Consultant Studies Compendium*, dated August 2004, and prepared by R.W. Corkery & Co. Pty. Limited.	Section 3.3
c)	Letter from the Applicant, dated 31 December 2004, including the relocated position of the mine access entrance and road.	Due to time constraints on the audit team, this was unable to be audited.
d)	Document titled, *Application to Modify Conditions 4(48) and 4(51) of Development Consent DA-172-7-2004*, dated October 2005, prepared by Werris Creek Coal Pty Ltd.	Due to time constraints on the audit team, this was unable to be audited.
e)	Document titled, *Application to Modify Condition 44 of Development Consent DA-172-7-2004*, dated 11 December 2006, prepared by Werris Creek Coal Pty Ltd.	Due to time constraints on the audit team, this was unable to be audited.
f)	The Statement of Environmental Effects titled *Statement of Environmental Effects for Minor Modifications to Werris Creek Coal Mine prepared by Werris Creek Coal Pty Limited* and dated June 2008 (the SEE).	Due to time constraints on the audit team, this was unable to be audited.
g)	The Response to Submissions *titled Werris Creek Coal Pty Ltd Response to Public and Government Agency Submissions Modification Application to DA-172-7-2004 (MOD 3)* prepared by Werris Creek Coal Pty Limited and dated July 2008.	Due to time constraints on the audit team, this was unable to be audited.
h)	The Statement of Environmental Effects titled *Statement of Environmental Effects – Precursor Storage Facility at Werris Creek Coal Mine & Alternative Biodiversity Offset Area for Werris Creek Coal Mine* prepared by Werris Creek Coal Pty Limited and dated November 2008.	Due to time constraints on the audit team, this was unable to be audited.
i)	*Statement of Environmental Effects for a modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* prepared by RW Corkery & Co Pty Limited, dated March 2009.	Section 3.4
j)	*Response to Submissions for the Statement of Environmental Effects for a Modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* prepared by RM Corkery & Co Pty Limited, dated July and August 2009.	Due to time constraints on the audit team, this was unable to be audited.
k)	The conditions of this consent.	Section 3.2

Additionally, the following documents have also been reviewed as part of this IEA:

- *Environmental Protection Licence 12290* (EPL 12290) (refer Section 3.5 and Appendix F).

- *Landscape Management Plan – Werris Creek Coal Mine* (AECOM, 2010) (refer Section 3.6 and Appendix G).
- *Archaeology and Cultural Heritage Plan* (WCL, 2007) (refer Section 3.7 and Appendix G).
- *Rail Spur Management Plan* (WCL, 2005) (refer Section 3.8 and Appendix G).
- *Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine* (WCL, 2010) (refer Section 3.9 and Appendix G).
- *Bushfire Management Plan for Werris Creek Coal Mine* (WCL, 2007) (refer Section 3.10 and Appendix G).
- *Werris Creek Coal Air Quality Monitoring Program* (WCL, 2009) (refer Section 3.11 and Appendix G).
- *Werris Creek Coal Blasting Monitoring Program* (WCL, 2010) (refer Section 3.12and Appendix G).
- *Site Water Management Plan Werris Creek Coal Mine* (WCL, 2009) (refer Section 3.13 and Appendix G).
- *Groundwater Contingency Plan for the Werris Creek Coal Mine* (WCL, 2005) (refer Section 3.14 and Appendix G).
- *Waste Management Plan for the Werris Creek Coal Mine* (WCL, 2009) (refer Section 3.15 and Appendix G).
- *Werris Creek Coal – Energy Savings Action Plan* (WCL, 2010) (refer Section 3.16 and Appendix G).
- *Mine Closure Plan Werris Creek Coal* (AECOM, 2010) (refer Section 3.17 and Appendix G).

Table 3 lists the approvals, licences and permits currently held for WCC and provides an indication of the status of each.

Table 3 Summary of WCC's current Approvals, Licences and Permits

Approval Type	Detail	Authority	Expiry
Project Approval	*Development Consent DA-172-7-2004*	Department of Planning and Infrastructure (DP&I)	7 April 2020
	Modification MOD1	DP&I	7 April 2020
	Modification MOD2	DP&I	7 April 2020
	Modification MOD3	DP&I	7 April 2010
	Modification MOD4	DP&I	7 April 2020
	Modification MOD5	DP&I	7 April 2020
Environmental Protection Licence	Environmental Protection Licence EPL 12290	Office of Environmental and Heritage (OEH) and Environmental Protection Authority (EPA)	Anniversary date 1 April. Review date 14 April 2013.
	Radiation Licence RL41800	OEH/EPA	8 February 2013
Mining Tenements	Exploration Licence EL 5993	Department of Primary Industries (DPI)	17 September 2013
	Mining Licence ML 1563	DPI	23 March 2026
	Mining Operations Plan	DPI	31 December 2011
	Exploration Licence EL 7422	DPI	25 November 2011
Water Licences	Water Licences: 90BL252588 90BL253367 90BL253363 90BL253360 90BL252589 90BL252590	NSW Office of Water	 14 October 2013 Perpetuity Expired Expired Perpetuity Perpetuity

Approval Type	Detail	Authority	Expiry
	90BL253361 90BL253503 90BL252587 90BL251769 90BL254903 90BL254902 90BL254901 90BL254899 90BL254900		Expired
Dangerous Goods Notification	Dangerous Goods Notification 35/037966	WorkCover	5 June 2011 Renewed for 4 June 2012
On-Site Sewerage Management Systems	On-Site Sewerage Systems 04/06 05/06	Liverpool Plains Shire Council	NA

This page has been left blank intentionally.

3.0 Environmental Compliance

Assessments of compliance with the documents listed in the Terms of Consent in Condition 2(a)-(k), Schedule 3 of *Development Consent DA-172-7-2004* (as modified) were assessed through the document's Statement of Commitments (SoC) and other commitments made within the documents.

In the assessments of compliance, the status of each condition is described as "Complies" or "Not Compliant." Where conditions have not yet been activated (due to activities not being commenced or requests not being made for example), the term "Not Triggered" has been applied.

A summary of the non compliances that were found against conditions and commitments in the environmental approval and management documents is outlined in Table 4.

Table 4 Summary of Non Compliances Found and Recommendations Made

Document	Reference	Non Compliances	Recommendations Made
DA-172-7-2004 (as modified	Section 3.2	7 - Table 5	Yes - Table 6
Environmental Impact Statement (R.W. Corkery & Co Pty Limited, 2004)	Section 3.3	0	Yes - Table 7
Statement of Environmental Effects (R.W. Corkery & Co Pty Limited, 2009)	Section 3.4	1 - Table 9	Yes – Table 10
EPL 12290	Section 3.5	6 – Table 12	Yes – Table 12
Landscape Management Plan (AECOM, 2010)	Section 3.6	0	Yes – Table 13
Archaeology and Cultural Heritage Plan (WCL, 2007)	Section 3.7	1 – Table 15	Yes – Table 16
Rail Spur Management Plan (WCL, 2005)	Section 3.8	0	No
Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (WCL, 2010)	Section 3.9	0	Yes – Table 18
Bushfire Management Plan for Werris Creek Coal Mine (WCL, 2007)	Section 3.10	1 – Table 19	Yes – Table 19
Werris Creek Coal Air Quality Monitoring Program (WCL, 2009)	Section 3.11	1 – Table 21	No
Werris Creek Coal Blasting Monitoring Program (WCL, 2010)	Section 3.12	0	No
Site Water Management Plan Werris Creek Coal Mine (WCL, 2009)	Section 3.13	3 – Table 23	Yes – Table 24
Groundwater Contingency Plan for the Werris Creek Coal Mine (WCL, 2005)	Section 3.14	0	No
Waste Management Plan for the Werris Creek Coal Mine (WCL, 2009)	Section 3.15	1 – Table 26	Yes – Table 27
Werris Creek Coal – Energy Savings Action Plan (WCL, 2010)	Section 3.16	0	No
Mine Closure Plan Werris Creek Coal (AECOM, 2010)	Section 3.17	0	No

3.1 Environmental Approvals Not Able to be Audited

Due to time constraints on the auditing team, the commitments contained in the following environmental approval documents were not able to be audited.

- Letter from the Applicant, dated 31 December 2004, including the relocated position of the mine access entrance and road.
- Document titled, *Application to Modify Conditions 4(48) and 4(51) of Development Consent DA-172-7-2004*, dated October 2005, prepared by Werris Creek Coal Pty Ltd.
- Document titled, *Application to Modify Condition 44 of Development Consent DA-172-7-2004*, dated 11 December 2006, prepared by Werris Creek Coal Pty Ltd.
- The Statement of Environmental Effects titled *Statement of Environmental Effects for Minor Modifications to Werris Creek Coal Mine prepared by Werris Creek Coal Pty Limited* and dated June 2008 (the SEE).
- The Response to Submissions *titled Werris Creek Coal Pty Ltd Response to Public and Government Agency Submissions Modification Application to DA-172-7-2004 (MOD 3)* prepared by Werris Creek Coal Pty Limited and dated July 2008.
- The Statement of Environmental Effects titled *Statement of Environmental Effects – Precursor Storage Facility at Werris Creek Coal Mine & Alternative Biodiversity Offset Area for Werris Creek Coal Mine* prepared by Werris Creek Coal Pty Limited and dated November 2008.
- *Response to Submissions for the Statement of Environmental Effects for a Modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* prepared by RM Corkery & Co Pty Limited, dated July and August 2009.

It is recommended that the commitments contained within these environmental approvals be prioritised for investigation in future IEAs.

3.2 Development Consent

Table 5 shows the seven conditions that were found non compliant with the *Development Consent DA-172-7-2004* (as modified). Three of these non compliances relate to exceedances of relevant criteria. A more detailed explanation of each condition and comments can be found in Appendix C. Table 6 contains recommendations to improve compliance with the DA-172-7-2004 (as modified).

Table 5 Non Compliances against *Development Consent DA-172-7-2004* (as modified)

Schedule	Condition	Commitment	Audit Finding
Development Consent DA-172-7-2004 (as modified)			
4	7	Ensure noise generated does not exceed criteria at any residence on privately-owned land.	On 27 October 2010, one exceedance of noise limits occurred at the private property 'Glenara' due to a significant change in weather conditions. DP&I, OEH and property owners notified of exceedance. No complaints were received. Two monitored exceedances occurred during the 2008-2009 reporting period. These are as follows: - 44 dB(A) at Cintra property on 30 June 2008 at 3:29 pm; and - 36dB(A) at Mountain View property on 15 September 2008 at 10:05 pm. One monitored exceedance occurred on 15 October 2009 at the Marengo property. This exceedance occurred at 8:02 am and the noise emanating from WCC was measured to be 40 $dB(A)_{LAeq(15minute)}$, whereas the criteria in Condition 7 specifies $_{35LAeq\ (15minute)}$. Cintra was subsequently purchased by WCC on 31 March 2010, and Marengo on 17 May 2010.

Schedule	Condition	Commitment	Audit Finding
4	28	Except under EPL, shall comply with s120 POEO Act (note: s120 makes it an offence to pollute any waters).	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria, resulting in a contravention of Section 120 *Protection of the Environment Operations Act 1997*. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.
4	29	Except under EPL, ensure discharges from licensed discharge points comply with limits in Table 13.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.
4	39	Before 30 June 2010, must implement suitable arrangements for long term security of the offsets in the BOS to D-G's satisfaction (either through Deed of Agreement with Minister, rezoning land under LEP, caveats on title under *Conveyancing Act 1919*).	Long term security of the Biodiversity Offset Areas has not been finalised. On 18 June 2010, WCC did submit a proposed caveat to DP&I (the due date for the security to be finalised being 30 June 2010). However, this proposed caveat was rejected by DP&I. WCC are still engaged in negotiations with DP&I to finalise the security of this land. WCC have shown best endeavours to achieve this timeframe in relation to the long term security issue.
6	1(f)	Environmental Management Strategy (EMS) must be updated following each Independent Environmental Audit under Cl 6.	WCC's Environmental Management Strategy (EMS) has not been updated subsequent to the last IEA undertaken in 2008.
6	2	Three months after completing Independent Environmental Audit, must review and revise (if necessary) the EMS to D-G's satisfaction.	WCC's Environmental Management Strategy (EMS) has not been reviewed subsequent to the last IEA undertaken in 2008.

Schedule	Condition	Commitment	Audit Finding
6	7(c)	The Community Consultative Committee shall meet at least four times/year, or as determined by D-G.	During the 2009-2010 reporting period, only three Community Consultative Committee meetings were held, whereas the required number is four per annum.

Table 6 Recommendations for Improving DA-172-7-2004 (as modified) Performance

Schedule	Condition	Commitment	Recommendation
4	Condition 7 Not Compliant as per Table 5	Ensure noise generated does not exceed criteria in at any residence on privately-owned land.	The results of noise monitoring should be closely monitored and operations adjusted as required to reduce impacts.
4	Conditions 28 and 29 Not Compliant as per Table 5	Except under EPL, shall comply with s120 POEO Act (note: s120 makes it an offence to pollute any waters). Except under EPL, ensure discharges from licensed discharge points comply with limits in Table 13.	The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.
4	39 Not Compliant as per Table 5	Before 30 June 2010, must implement suitable arrangements for long term security of the offsets in the BOS to D-G's satisfaction (either through Deed of Agreement with Minister, rezoning land under LEP, caveats on title under *Conveyancing Act 1919*.	It is recommended that WCC follows up with DP&I to bring these negotiations to a close.
4	59(a) Compliant	Shall monitor amount of waste generated by the development.	It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.
6	Conditions 1(f) and 2 Not Compliant as per Table 5	Environmental Management Strategy (EMS) must be updated following each Independent Environmental Audit under Cl 6. Three months after completing Independent Environmental Audit, must review and revise (if necessary) the EMS to D-G's satisfaction.	It is recommended that WCC ensures this review and update (if required) of the EMS is actually undertaken following the current audit.

3.3 Environmental Impact Statement (2004)

An assessment of compliance with the commitments stated in the *Environmental Impact Statement for the Proposed Werris Creek Coal Mine, and Specialist Consultant Studies Compendium* (EIS))(R.W. Corkery & Co. Pty Limited, 2004) (EIS) is detailed in Appendix D. All commitments within the EIS were found to be compliant, or were not able to be verified due to timing constraints on the auditing team. Table 7 provides a summary of the recommendation that has been made in relation to the EIS. Those commitments that were not able to be verified are outlined in Table 8. It is recommended that these commitments be prioritised for investigation in future IEAs.

Table 7 Recommendation for Improving *Environmental Impact Statement* Performance

Reference	Commitment	Recommendation
Sections 2-22 and 2-58-62 Complies	The Proponent intends to maintain an inventory of these soils, i.e. the volumes of soils stripped, respread and/or stockpiled would be surveyed and recorded throughout the life of the proposal.	It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.

Table 8 *Environmental Impact Statement* Commitments Not Able to be Audited

Reference	Commitment
2-52-53	Installation of bunds along the margins of all internal haul roads to a height of half the height of the largest mobile equipment's wheels.
2-52-53	Ensure all size reduction and screening equipment at all times complies with all relevant requirements and standards.
4-86	The Proponent's blasting contractor would be required to use aggregates for blasthole stemming and to use NONEL-type delay or electronic detonators to initiate charges.
4-94	Earthmoving equipment and on-site vehicles would be fitted with exhaust controls which satisfy the NSW OEH emission requirements. The Proponent would ensure that all equipment is properly maintained to ensure no unacceptable exhaust emissions occur and commit to the removal of any vehicle or item of mobile equipment from on-site activities which is observed not to comply with NSW OEH guidelines. The exhausts of all equipment would be directed upwards or to the side so as not to impinge on the ground and cause dust lift-off.

3.4 Statement of Environmental Effects (2009)

An assessment of compliance with the commitments stated in the *Statement of Environmental Effects for a modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* (RW Corkery & Co Pty Limited, 2009) (SEE) is detailed in Appendix E. Table 9 shows the commitment in the SEE that was found to be non compliant. Table 10 provides a summary of the recommendations that have been made in relation to the SEE. Those commitments that were not able to be verified are outlined in Table 11. It is recommended that these commitments be prioritised for investigation in future IEAs.

Table 9 Non Compliance against *Statement of Environmental Effects*

Reference	Commitment	Audit Finding
2.11.7	The biodiversity offset would be secured in the long term by notation on title, and the offset areas managed in accordance with a management plan to be developed in consultation with the OEH and DP&I.	Long term security of the Biodiversity Offset Areas has not been finalised. On 18 June 2010, WCC did submit a proposed caveat to DP&I (the due date for the security to be finalised being 30 June 2010). However, this proposed caveat was rejected by DP&I. WCC are still engaged in negotiations with DP&I to finalise the security of this land. WCC have shown best endeavours to achieve this timeframe in relation to the long term security issue.

Table 10 Recommendations for Improving *Statement of Environmental Effects* Performance

Reference	Commitment	Recommendation
2.11.7 Not Compliant as per Table 9	The biodiversity offset would be secured in the long term by notation on title, and the offset areas managed in accordance with a management plan to be developed in consultation with the OEH and DP&I.	It is recommended that WCC follows up with DP&I to bring these negotiations to a close.
Sections 2.5.4.4, 2.11.6 and 4.9.5 Complies	The stockpile would then be identified by soil type and located in positions to avoid surface water flows.	It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.
	The inventory of soil resources on the mine site would be expanded and regularly reconciled with rehabilitation requirements.	
	An inventory of soils is maintained at the mine to ensure that adequate soil resources remain available for the selective use of the soil resources	
	An inventory of soil resources present on the mine site, both in stockpiles and awaiting stripping, would continue to be maintained and regularly reconciled with rehabilitation requirements.	
Section 4.2.4.1 Complies	All of the mining fleet would be refuelled within designated surface facilities area. With the exception of some maintenance activities on mobile equipment, all maintenance works requiring the use of oils, greases and lubricants would be undertaken within designated surface facilities areas, i.e. maintenance workshop.	It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water separators and containment areas.
	All water from wash-down areas and workshops would be directed to oil/water separators and containment systems.	

Table 11 *Statement of Environmental Effects* Commitments Not Able to be Audited

Reference	Commitment
1.6.4	Enclosure of fixed items of plant, e.g. Generators.
1.6.4	Construction of earth bunds adjacent to noise sources to create a barrier for the propagation path.
1.6.5	The blast face, where practical, is oriented away from or at an oblique angle to nearby residences.
1.6.6	All earthmoving equipment is fitted with exhaust controls which satisfy NSW OEH emission requirements.
1.6.6	The following factors contributing to non-ideal detonation behaviour and higher emission (principally NO_2) concentrations are avoided whenever possible: - weak overburden which reduces the necessary explosive confinement, this will be ripped in preference to blasting; - water infiltration; - long explosive columns; and - explosive pre-compression, caused by hole-to-hole shock propagation due to wet overburden and clay veins.
1.6.6	The placement of overburden into the in-pit overburden emplacement is undertaken preferentially during periods of high wind.

Reference	Commitment
1.7	The modified operations would then become the focus of all future Annual Environmental Management Reports (AEMRs), also prepared in accordance with the MREMP.
1.7	Both documents would be prepared in accordance with DPI–MR's document entitled "Guidelines to the Mining, Rehabilitation and Environmental Management Process" version 3, dated January 2006, but with the AEMR also including those additional aspects identified in DA-172-7-2004 (as amended).
1.7	As has been the case with similar documentation for the existing mine, each document would be accompanied by relevant plans, photographs and appendices.
2.1.3	In addition to the proposed modification to DA-172-7-2004, an aquifer interference licence under the Water Management Act 2000 (WM Act) will be required to enable the full dewatering of the underground workings.
2.5.4.3	The Applicant would continue to routinely liaise with Soil Services and other specialist consultants with respect to the water management system performance and the achievement of its objectives, with modifications or additional structures installed as necessary, subject to relevant approval processes.
2.5.4.3	All water management structures would continue to be inspected and ongoing maintenance, such as channel slope stabilisation, sediment removal and erosion protection carried out, as required.
2.5.4.4	The Applicant would continue to strip, stockpile and respread soil using the same methods and employing the same following general principles as are currently implemented at the mine.
2.5.4.4	Sediment fencing would be erected immediately down-slope of the stockpiles until a stable vegetation cover is established.
2.5.4.4	Vehicle access on the soil stockpiles would be prohibited.
2.5.5.4	Where practicable, throw blasting and/or carry dozing would continue to augment haulback placement of overburden and interburden materials in the mined-out areas of the open cut mine.
4.1.4.2.6	The following management practices would continue to be adopted to ensure water emanating or flowing from wash-down areas, workshops, and hydrocarbon storage and refuelling areas is not contaminated by hydrocarbons or is treated appropriately, if contaminated.
4.2.4.2	Replacement and/or compensatory measures would be developed in consultation with the affected land owner but may include: a) deepening of the affected bore to increase the available saturated thickness; b) drilling and installation of a replacement bore outside the area of drawdown impact; c) construction of surface water capture and containment structures such as dams or rainwater tanks to supplement reduced groundwater source; or d) transfer of groundwater drawn from Applicant-owned bores or the void itself.
4.2.6	Each lift of the overburden emplacement would continue to be constructed using the same controls as currently approved. That is: a) the initial overburden emplacement would form a 15m high acoustic bund around the outside of the emplacement lift, with all subsequent overburden placement for that lift undertaken behind this 15m high bund; b) the 15m high bund would only be constructed during the day time when inversion conditions or winds from the north-western quadrant do not prevail; and c) overburden emplacement during the evening and night time, as well as when inversion conditions or winds from the north-western quadrant prevail, would be undertaken within the mine void or behind the 15m high acoustic bund.
4.2.6	As far as practicable, mining operations would be scheduled such that when land preparation or overburden removal activities occur at or within 10m of surface, overburden placement would be undertaken below surface level, i.e. within the completed section of the open cut.
4.4.4.1	The blasting contractor would be required to use aggregates for blasthole stemming and to use NONEL delay-type or electronic detonators to initiate charges.
4.5.8	The monitoring would continue to be undertaken in accordance with the OEH document "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales", 2001 and with Australian Standards AS2922-1987 and AS3580.10.1-1991.

Reference	Commitment
4.6.3.2.1	The single occurrence of the Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions Ecological Community would not be affected by the modified open cut mine area although a buffer of 50m is proposed between the edge of the open cut mine and the community.
4.8.4	The increasing height of the overburden emplacement would be mitigated by the progressive rehabilitation program of the Applicant. That is, the overburden emplacement would be raised in 10m “lifts”, with each lift topsoiled and seeded with a cover crop following completion to convert the earth structure to a more natural grass covered slope.
4.8.4	Where the use of floodlights is required in the open cut, on the overburden emplacements or within the coal handling and processing area, they would be directed downwards and towards the west.
5.3.2	The framework for ongoing environmental management, operational performance and rehabilitation of the mine site would continue to be managed in accordance with the DPI-MR Mining, Rehabilitation and Environmental Management Process (MREMP), both of which would involve the input from relevant State and local government agencies.
5.3.2	All on-site procedures would be regularly reviewed, particularly in light of monitoring results.

3.5 Environmental Protection Licence

An assessment of compliance with EPL 12290 is addressed in Appendix F. Table 12 provides a summary of the non compliances with the EPL 12290. Six conditions of the EPL were found to be non compliant. The breaches of four of these conditions relating to water quality resulted from the same three isolated incidents: one of a water quality pH parameter exceedance on 16 November 2010, and two wet weather discharge events during the 2008-2009 reporting period that exceeded the Total Suspended Solids criteria.

Table 12 Non Compliances against the EPL 12290

Condition	Commitment	Audit Finding	Recommendation
L1.1	Must comply with s120 POEO Act in relation to pollution of waters except as otherwise provided for in the EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria, resulting in a contravention of Section 120 *Protection of the Environment Operations Act 1997*. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.	The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.
L3.1	Must not exceed concentrations of discharged pollutants at monitoring/discharge points specified in Tables of EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek.	

Condition	Commitment	Audit Finding	Recommendation
		Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.	
L3.2	Specified percentage of pH samples must be within the specified ranges in Table of EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek.	
L3.4	Total Suspended Solids concentration limits specified for Points 10, 12 and 14 may be exceeded for water discharged from sediment basins provided that: Discharge occurs solely as a result of rainfall measured at the premises exceeding 39.2mm over five consecutive days prior to discharge. All practical measures implemented to dewater sediment dams within 5 days of this rainfall so that they have sufficient capacity to store run off from a 39.2mm, 5 day rainfall event.	Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.	
L6.1	Noise from premises not exceed: An LA1(1minute) noise emission criterion of 45 dB(A) at night. At all other times (including the night), an L_{Aeq}(15minute) noise emission criterion of 35 dB(A), except as expressly provided by this licence.	On 27 October 2010, one exceedance of noise limits occurred at the private property 'Glenara' due to a significant change in weather conditions. DP&I, OEH and property owners notified of exceedance. No complaints were received. Two monitored exceedances occurred during the 2008-2009 reporting period. These are as follows: 44 dB(A) at Cintra property on 30 June 2008 at 3:29 pm; and 36dB(A) at Mountain View property on 15 September 2008 at 10:05 pm. One monitored exceedance occurred on 15 October 2009 at the Marengo	The results of noise monitoring should be closely monitored and operations adjusted as required to reduce impacts.

Condition	Commitment	Audit Finding	Recommendation
		property. This exceedance occurred at 8:02 am and the noise emanating from WCC was measured to be 40 dB(A)$_{LAeq(15minute)}$, whereas the criteria in Condition 7 specifies $_{35LAeq(15minute)}$. Cintra was subsequently purchased by WCC on 31 March 2010, and Marengo on 17 May 2010.	
M2.1	For each monitoring/discharge point or utilisation area on Page 19 EPL, must monitor concentration of each pollutant specified, in manner specified.	During the 2009-2010 reporting period, not all monitoring for PM_{10}, water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time. During the 2008-2009 reporting period, surface water discharged from monitoring point 12 and was contained within the project related property of 'Eurunderee.' Sampling for Special Frequency 2 was not followed for monitoring points 23, 24, 25 and 26 as discharge did not leave the Eurunderee property. Also during the 2008-2009 period, monitoring for point 16 was only carried out three times out of the required four times for the reporting period.	NA

3.6 Landscape Management Plan (2010)

An assessment of compliance with the *Landscape Management Plan: Werris Creek Coal Mine* (AECOM, 2010) is addressed in Appendix G. All commitments in the *Landscape Management Plan* (LMP) were found to be compliant or were not able to be audited. A recommendation for improvement was made for one commitment in the LMP as identified in Table 13. The commitments in the LMP that were unable to be audited are contained in Table 14. It is recommended that these unaudited commitments be prioritised for investigation in future IEAs.

Table 13 Recommendation for improving *Landscape Management Plan Performance*

Reference	Commitment	Recommendation
5.1.3 Complies	Following requirements adhered to: a) stockpiles located away from mining, traffic areas and watercourses on level/gently sloping areas with each SMU stockpiled separately; b) soil stockpiles no higher than 3m and slightly roughened surface to minimise erosion; c) soil stockpiles seeded with non-persistent cover crop (or mulch) to reduce erosion as soon as possible after completion of stockpiling; d) Soil Stockpile Register and Plan is maintained, documenting the SMU, location and volume of each stockpile; and e) Soil stockpile inspections undertaken biannually to monitor soil condition, erosion and identify any weed infestation requiring control.	It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.

Table 14 Landscape Management Plan Commitments Not Able to be Audited

Reference	Commitment
Table 1	WCC Open Cut Personnel and Contractors implement LMP/associated procedures where relevant.
8.5	Monitoring of areas that will have a final agricultural land use will assess the health of the land by: a) determining soil nutrient status and pasture quality; b) assessment of land capability (using Rural Land Capability mapping system) and agricultural suitability; c) evaluate pasture composition and required grazing regime. Experienced agronomist will undertake biennial agricultural assessment of the Class III rehabilitation areas.

3.7 Archaeology and Cultural Heritage Plan (2007)

An assessment of compliance with the Archaeology and Cultural Heritage Plan (2007) (A&CHP) is addressed in Appendix G. Table 15 provides a summary of the commitment in the A&CHP that was found to be non compliant. Table 16 outlines those commitments for which a recommendation has been made. The commitments in the A&CHP that were not able to be verified are contained in Table 17. It is recommended that these commitments are prioritised for investigation in future IEAs.

Table 15 Non Compliance against *Archaeology and Cultural Heritage Plan*

Reference	Commitment	Audit Finding
Section 3.4	Poster identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions / responses has been prepared by WCC's consultant archaeologist. Copies are exhibited within employee lunch rooms.	These posters are not currently displayed.

Table 16 Recommendations for Improving *Archaeology and Cultural Heritage Plan* Performance

Reference	Commitment	Recommendation
2.5 Complies	WCC Manager wait for expert's report on suitability of planting Wollemi Pines in proximity to grinding groove site. If expert recommends species wouldn't thrive there, WCC Manager consult further with Taylor Family to select another plant species.	It is recommended that WCC follow up on this request from the Taylor family regarding the Wollemi Pines.
3.4 Not Compliant as per Table 15	Poster identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions / responses has been prepared by WCC's consultant archaeologist. Copies are exhibited within employee lunch rooms	It is recommended that posters identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions/responses or similar be displayed in staff lunchrooms.

Table 17 Archaeology and Cultural Heritage Plan Commitments Not Able to be Audited

Reference	Commitment
3.2	Following consultation procedures: a) Mine Manager will advise chairperson of LALC of planned commencement of activities; b) Mine Manager contact LALC chairperson monthly to advise mine's progress/programme for ensuing period. All consultation diarised; c) Before topsoil stripping, WCC Manager notify LALC Chairperson or nominated Sites Officer of extent, location, timing and expected duration of the planned campaign, inviting representative to monitor topsoil stripping; d) if Chairperson/Site Monitor requests, WCC Manager attend community meetings at LALC office or arrange site visits for interested LALC personnel/members; e) if archaeological sites are identified in the absence of Site Monitor, WCC Manager notify Chairperson and/or Site Monitor following the initiation of the procedures identified in Section 3.5 A&CMP.
3.4	All operators engaged in soil disturbing / soil stripping activities will be given additional training in the recognition of Aboriginal sites by experienced personnel in this field.

3.8 Rail Spur Management Plan (2005)

An assessment of compliance with the Rail Spur Management Plan (WCL, 2005) (RSMP) is addressed in Appendix G. All of the commitments in the RSMP were found to be compliant.

3.9 Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (2010)

An assessment of compliance with the *Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (2010)* is addressed in Appendix G. All of the commitments in this *Noise Protocol* were found to be compliant. However, a recommendation to improve compliance has been made, as outlined in Table 18.

Table 18 Recommendation for Improving *Noise Management Protocol and Noise Monitoring Program*

Reference	Commitment	Recommendation
Pg12-14 Complies	All noise investigations will be carried out in accordance with INP, Environmental Noise Control Manual and applicable Aus Standards.	It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at
	Noise levels will be measured in 1/3 octave bands using an instrument with IEC Type 1 characteristics as defined in AS 1259-1900 "Sound Level Meters."The instrument will have current calibration as per manufacturer's instructions and field calibration will be confirmed before and after measurements with a sound level calibrator.	

Reference	Commitment	Recommendation
	Noise levels will be measured in 1/3 octave bands using an instrument with IEC Type 1 characteristics as defined in AS 1259-1900 "Sound Level Meters."The instrument will have current calibration as per manufacturer's instructions and field calibration will be confirmed before and after measurements with a sound level calibrator.	WCC.
	The instrument will be set to A-weighting "fast" response and measurements of L_{Aeq}(15 minute) will be taken at each location in Table 2 NMP. Each measurement will be stored at a sampling rate of no greater than 5 seconds for further analysis.	
	Attended surveys will be conducted within a 24-hour period with at least three measurements taken at each location in Table 2 NMP so that measurements will be obtained for each of the day, evening and night time periods of operations.	
	Field notes will be taken during each measurement recording the time/duration of noise events, noise sources, instantaneous noise levels and frequency range of identified site noise sources.	
	Extraneous noise sources will be filtered from the measured signal using Buel & Kjaer Evaluator Software and the L_{Aeq}(15 minute) level attributable to WCC activities will be identified and compared with the relevant criterion.	
	Details regarding plant configuration, survey interval, weather conditions, extraneous noise sources, monitoring locations and times of measurements will be recorded for inclusion in the noise monitoring report.	

3.10 Bushfire Management Plan for Werris Creek Coal Mine (2007)

An assessment of compliance with the *Bushfire Management Plan for Werris Creek Coal Mine* (2007) is addressed in Appendix G. Table 19 provides a summary of the commitment in the *Bushfire Management Plan* that was found to be non compliant, and a recommendation in relation to this commitment. The commitments of the *Bushfire Management Plan* that were not able to be verified are contained in Table 20. It is recommended that these commitments be prioritised for investigation in future IEAs.

Table 19 Non Compliance against *Bushfire Management Plan*

Reference	Commitment	Audit Finding	Recommendation
2.5 Not Compliant	This Plan will be reviewed annually with any substantial amendments to procedures agreed with the Rural Fire Service and Liverpool Plains Shire Council prior to implementation.	During the auditing period, the Bushfire Management Plan was not reviewed.	It is recommended that the Plan be reviewed sometime in the near future.

Table 20 *Bushfire Management Plan* Commitments Not Able to be Audited

Reference	Commitment
2.1	A Fire Officer will be appointed by the Mine Manager as required by Clause 21(2)(c) of the Coal Mines (General) Regulation 1999 (note: this Regulation has been repealed and replaced with the Coal Mine Health and Safety Regulation 2006). The Fire Officer's responsibilities will include: a) compliance with the Bushfire Management Plan; b) maintenance and inspection of fire fighting equipment is carried out by Chubb; and c) reporting and replacement of damaged fire equipment. The Fire Officer will report directly to the Mine Manager and will be required to complete periodic reports of his inspections.

Reference	Commitment
2.2	(a) All blasting operations will be carried out and confined to the face area of the mine; (b) All flammable material will be removed by pre-stripping the topsoil prior to any drilling and blasting operations taking place; and (c) All blasting will be carried out in accordance with the Guideline as set out by the Department of Mineral Resources and Clause 25 of the Coal Mines (Open Cut) Regulation 1999.

3.11 Werris Creek Coal Air Quality Monitoring Program (2009)

An assessment of compliance with the *Werris Creek Coal Air Quality Monitoring Program* (WCL, 2009) is addressed in Appendix G. Table 21 provides a summary of the commitment in the *Air Quality Monitoring Program* that was found to be non compliant. The commitments in the *Air Quality Monitoring Program* that were not able to be verified are contained in Table 22.

Table 21 Non Compliance against *Air Quality Monitoring Program*

Reference	Commitment	Audit Finding
2.0	Will determine compliance with limitations set out in Conditions of Consent, DA-172-7-2004 and maintain monitoring requirements of the EPL-12290.	During the 2009-2010 reporting period, not all monitoring for PM_{10}, was undertaken as per EPL 12290 Condition M2.1. This was due to the facts that there was a dispute with a property owner, an Environmental Officer was not employed at the site for approximately three months, and there was a change of consultants undertaking the monitoring at this time.

Table 22 *Air Quality Monitoring Program* Commitments Not Able to be Audited

Reference	Commitment
3.2	Deposited dust gauges mounted above ground level on a star picket or similar support which is sufficiently sturdy as to prevent noticeable sway and funnel is horizontal.
3.2	Site identifier, e.g. WCA1 and the name of the property will be marked on the PCV sample bottle holder and pre-marked on each bottle using a permanent marker.
3.3	Sites for deposited dust gauges are to be selected to avoid restricted airflows, such that the funnel has a minimum clear sky angle of 120^{o} and to avoid localised sources of pollution, e.g. unsealed roads. Also positioned to avoid interference by stock.
3.4	Sample collection, changeover and analysis performed by specialist contractor and involves following steps: i) Wash deposited matter adhering to inside of funnel into the deposit gauge; ii) Remove funnel and seal bottle with a lid. Identify the date/time of removal on bottle on field sheet; iii) Insert clean funnel into a fresh bottle containing algaecide, mark date and time on the bottle and insert bottle into the holder for the next sampling period. Ensure the funnel aperture is horizontal; iv) Following collection of the bottles from all sites, return the bottles removed from the holders to the laboratory for analysis following completion of all relevant details on the field sheet which is dated and signed.
3.4	During storage prior to transport, bottles are kept on cool, dark environment to prevent growth of algae, etc.
3.4	Laboratories used for deposited dust analysis are to be NATA accredited for the tests performed.
3.5	Collection/changeover of sample bottles occurs on first day of each month or as near as possible.
4.2	PM_{10} and TSP sampling will be undertaken using a PM_{10} size-selective inlet or TSP inlet respectively, fitted to an ECOTECH 3000 or equivalent high volume air sampling unit which complies with Australian and OEH standards including: i) Automatic volumetric flow control to maintain a constant flow rate; ii) Programmable sampling periods to enable multiple daily, weekly, 6 day or 1 in 'x' days sampling sequences.

Reference	Commitment
4.3	High volume samplers will be sited with the base affixed to a concrete slab on ground, i.e. such that the filter would be positioned within the breathing zone (1-2m above ground level) and sited in accordance with AS 2922-1287.
4.3	The site identifier, e.g. WCHV1, will be clearly identified on the sampling unit.
4.4	Sample collection, changeover and analysis are undertaken by a specialist contractor, Sampler set up, operation and filter installation/change out are undertaken in accordance with AS 3580.9.6.2003 as described below.
4.4.1	Initial set up i) Conducted by sampler in accordance with manufacturer's instructions, by supplier; ii) Ensure filter holder and surrounding area are clean before installing filter; iii) Remove pre-weighted (tared) filter from its container and place in filter holder, ensuring filter identification number is face down on the holder. Clamp down carefully; iv) Replace size-selective inlet; v) Set sampler flow rate, operate sampler until stable air flow occurs and record "start flow rate" from sampler flow rate indicator on field sheet.
4.4.2	Return to collect the exposed filter as soon as practicable after the sampling period is complete. Then: i) Before removing the filter, operate the sampler until stable air flow occurs and record final flow rate on field sheet. If final flow rate differs from initial flow rate by more than 10%, discard sample; ii) Record all relevant details on field sheet for each site including: date taken/collected, filter paper number, site identification number, total run time, verification that sampler time is correct to within 15 minutes of actual time, verification that high volume sampler check that time was in correct sample sequence, operator identification, relevant comments, e.g. meteorological conditions/local activities/fires/dust/storms which may affect PM_{10} or TSP; iii) Remove filter from holder touching outer edges only. Reject sample if evidence is misalignment, blockage or breakthrough; iv) Remove large debris or insects carefully using clean tweezers; v) Fold filter so that only surfaces with collected particular matter are in contact; vi) Place filters in labelled dust proof container; vii) Install a new filter in accordance with procedure identified in 4.4.1; viii) Return removed filter to laboratory for analysis, together with completed field sheet.
4.4.2	Avoid changing filters during windy or rainy conditions. If unavoidable, remove filter holder to protected location first.
4.4.2	Laboratories used for PM_{10} and TSP analysis must be NATA accredited for the tests performed.
4.4.2	Prior to returning samples to laboratory, do not expose to extremes of temperature which could result in loss of semi-volatiles.
4.5.1	Each sampler and inlet shall be maintained in accordance with the program identified in Table 3.
4.5.2	High volume sampler units are to be calibrated each two months by the external specialist contractor, with a record of calibration retained for each sampler unit.
5.0	On receipt of deposited dust, PM_{10} or TSP results from the laboratory, the data will be examined, any questions raised with laboratory, and results transferred to Excel spreadsheet.
5.0	Any exceedances will be reported to OEH and DP&I. Investigate cause if required and provide written response on the non compliance according to DA-172-7-2004 to OEH. Will also notify affected landowners/tenants/, community consultative committee members, and provide results in AEMR.

3.12 Werris Creek Coal Blasting Monitoring Program (2010)

An assessment of compliance with the *Werris Creek Coal Blasting Monitoring Program* (2010) is addressed in Appendix G. All of the commitments in the *Blasting Monitoring Program* were found to be compliant during the auditing period.

3.13 Site Water Management Plan Werris Creek Coal Mine (2009)

An assessment of compliance with the *Site Water Management Plan Werris Creek Coal Mine* (2009) (SWMP) is addressed in Appendix G. Table 23 provides a summary of the three commitments in the SWMP that were found to be non compliant. Table 24 outlines the commitment for which a recommendation has been made. The commitments of the SWMP that were not able to be verified are contained in Table 25. It is recommended that these commitments be prioritised for investigation in future IEAs.

Table 23 Non Compliances against *Site Water Management Plan*

Reference	Commitment	Audit Finding
7.2.2	All monitoring results are compared to baseline monitoring data which was obtained at the commencement of operations. Groundwater levels will be assessed to the nearest 0.01m and all monitoring locations surveyed to AHD so relative levels can be determined.	Not all groundwater monitoring was undertaken at MW3 and MW5 (as is required by Table 13 in the SWMP) during the 2009-2010 reporting period, as the site was without an Environmental Officer for approximately three months, there was a dispute with a property owner, and a change of monitoring consultants also took place at this time.
7.2.2	Table 13 SWMP identifies the monitoring point locations, frequency and the parameters of monitoring. Table 14 SWMP describes the unit of measure and sampling method for each parameter listed.	These are the procedures followed as per the monitoring results contained in Appendix 4 of AEMR 2008-2009, 2009-2010 and 2010-2011. During the 2009-2010 reporting period, not all monitoring for water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time.
9.0	The Environmental Officer at Werris Creek Coal Mine is responsible for the implementation of this SWMP. When the Environmental Officer is absent, WCC would nominate alternative personnel.	The Environmental Officer is generally responsible for this. During the audit period, there was a period of three months when the WCC site did not have an Environmental Manager. During this time the Project Manager was responsible for implementing the SWMP. During the 2009-2010 reporting period, not all monitoring for water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time.

Table 24 Recommendation for Improving *Site Water Management Plan* Performance

Reference	Commitment	Recommendation
6.3 Complies	Recorded values for pH, Total Suspended Solids (TSS) and Grease and Oil will be compared against the criteria presented in Table 12 SWMP. The recorded values for all other parameters will be plotted to identify any trends over time. OEH will be notified in the event of increasing levels of any parameter or exceedance of the assessment criteria.	References are made to baseline data being collected, and to trigger values being established, however the baseline data is not clearly compared against new monitoring data. It is recommended that this comparison to baseline data is clarified.

Table 25 ***Site Water Management Plan*** **Commitments Not Able to be Audited**

Reference	Commitment
3.3	In Addition to the above, Werris Creek Coal will also utilise the following methods for the management of captured surface waters within the "middle area" as per the above mentioned requirements of the Mines and Quarries Guidelines, specifically the 5 day, 90th percentile management requirements: (a) Farm Dam 6 (FD6) will be used as a storage point for farm dams 2 and 3 (FD2, FD3). FD2 and FD3 will be pumped into FD6 for treatment through flocculation processes if necessary. Once sampling confirms water quality parameters meet licence requirements (see Controlled Discharge of Surface Waters below), FD6 will be discharged off the mine lease via an irrigation pipe and volume pump. FD6 will discharge at the licence discharge point and spill way of SB9; (b) Dust suppression water carts can also access FD6 and in cases where after treatment water retained in FD6 does not meet requirements, water can be drawn from this point to be utilised around the site; (c) Werris Creek Coal can also utilise VWD2 as an alternate means of storage and disposal of surface water captured in the middle area farm dams when there is sufficient storage in this dam. Water stored in VWD2 is readily used around the mine site for general dust suppression, in operations at the screening plant and will be linked to a 15m high sprinkler system to control dust at the rail load-out pad; and (d) FD4 and FD5 will be pumped out after rain events and will flow through heavy vegetation to SB9 where it will be treated if necessary, drawn off for dust suppression or controlled discharged off site.
5.3(c)	When bare topsoil stockpiles are not wholly contained within the mining area and associated "dirty" water management system, temporary sediment control measures such as sand bags and silt fences will be used to prevent sediment from leaving the stockpile area.
5.3(d)	ESC structures will be numbered and inspected monthly/after a rainfall event of >25mm/24hr, to assess success in preventing erosion, identify signs of potential erosion and determine the retained capacity, especially within the sediment basins.
5.3(e)	ESC structures will be cleaned of accumulated sediment material (or extended or replaced) as soon as 20% capacity is lost due to the accumulated material such that the specified capacities are maintained.
5.3(f)	To maintain capacity within the sediment basins, water will be pumped out as soon as practicable after rainfall events, once water quality is within the limits of the EPL, to maintain the following water levels: i) sediment basins that are licensed discharged points (i.e. SB2, SB9 & SB10) are to be maintained in a dry condition where possible to provide full capacity to store dirty water during rainfall events; and ii) all other sediment basins are to be kept below 50% capacity where possible to provide capacity to store dirty water during rainfall events.
5.3(i)	Water falling on the shaped and topsoiled overburden emplacement will be directed by contour banks to stable water disposal areas. Rock flumes may eventually be constructed, where necessary, to convey runoff to drainage conduits leading to the site's sediment control dam system.
5.3(j)	Following heavy rain, erosion is identified on the rehabilitated landform or in operational areas, it will be remediated quickly using one or a combination of the following: i) Filling the erosion channels; ii) Cross-ripping (along the contour) to assist infiltration; iii) Installation of additional controls, e.g. banks sown with a non-persistent cover crop.
5.3(k)	Areas previously identified as exhibiting and treated to prevent further erosion will be monitored on at minimum a monthly basis or following a rainfall event of >25mm/24hr.

3.14 Groundwater Contingency Plan for the Werris Creek Coal Mine (2005)

The commitments of the *Groundwater Contingency Plan for the Werris Creek Coal Mine* (2005) were found to not have been triggered during this auditing period. An outline of these commitments is contained in Appendix G.

3.15 Waste Management Plan for the Werris Creek Coal Mine

An assessment of compliance with the *Waste Management Plan for the Werris Creek Coal Mine* (WMP) is addressed in Appendix G. Table 26 provides a summary of the commitment in the WMP that was found to be non compliant. Table 27 outlines those commitments for which a recommendation has been made. The commitments of the WMP that were not able to be verified are contained in Table 28. It is recommended that these commitments are prioritised for investigation in future IEAs.

Table 26 Non Compliance against *Waste Management Plan*

Reference	Commitment	Audit Finding
6.0	Waste management data has been documented and is reported in each Annual Environmental Management Report (AEMR). The information includes the quantities and type of waste removed off site for recycling or disposal, the contractor engaged to remove the wastes, and the final destination for all waste products. Details will also be provided on the success of the WMP implemented and any areas that require improvements, included and highlighted.	Waste management data has been reported in Sections 2.6 of AEMRs 2008-2009, 2009-2010, and 2010-2011. However, this information does not contain quantities and types of waste removed offsite for recycling or disposal, and the final destination for all waste products.

Table 27 Recommendations for Improving *Waste Management Plan* Performance

Reference	Commitment	Recommendation
5.1 Complies	The following actions/strategies have been put into practice to minimise the accumulation/generation of waste on site and disposal to landfill: (a) all personnel working on the mine site undergo a site induction. The site induction includes the waste management practices on the mine site; (b) all waste areas have been clearly identified as waste storage areas. This includes bins and other receptacles for domestic and recycling waste, which are marked according to the type of waste accepted, e.g. scrap metal, oil filters and oily rags, other recyclables, general waste, etc; (c) clear written instructions have been erected at appropriate locations detailing recycling and waste separation information; (d) with the exception of mined overburden / interburden materials and solid waste generated in the wash-bay sump (all production wastes), there is no long term storage of any waste materials on the mine site. Notably, small quantities of the mined rock have been utilised in the construction of rock lined water ways, rock bunds and other items of mine site infrastructure such as the ROM coal and product stockpile areas.	It is recommended that clearer written instructions be erected onsite to provide guidance on how wastes are separated and recycled.
5.3 Complies	WCC's senior staff members undertake regular inspections of the all waste storage locations to ensure that the appropriate separation and collection of waste is being managed appropriately. As far as practical, WCC maintains a register of recycled material at the mine site.	It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.

Reference	Commitment	Recommendation
5.5 Complies	Due to the nature of the material left in the wash-bay sump there is little opportunity for this product to be recycled or reused on site. After consultation with the OEH, it was noted that if the residual material contained in the sump was tested for hydrocarbon contaminates and concentration levels were under the General Solid Waste threshold, the waste material could be disposed of in pit. The following details the process for disposal of solid waste material residing in the wash bay sump: (a) after the wash bay is used and the sump contains water, the oil / water separator is engaged, removing all hydrocarbons floating on the surface of the liquid. Oils and grease captured in this process are stored for removal and recycling as previously mentioned; (b) all residual solid waste is dried, aerated and exposed to UV radiation. This process helps in the breakdown and removal of any residual hydrocarbons; (c) a minimum of four core samples are randomly taken from the solid waste product and mixed for consistent results. Soil Samples are sent to a NATA accredited laboratory for analysis; and (d) after testing for hydrocarbon levels, if hydrocarbon levels are under the General Solid Waste threshold (C6-C9 petroleum hydrocarbons <650mg/kg and C10 –C36 petroleum hydrocarbons <10,000mg/kg) this material is disposed of in pit. If hydrocarbon contaminants are above this threshold then treatment of the solid waste will continue until hydrocarbon concentrations are within the desired limits.	It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water separators and containment areas.
5.5 Complies	Included in Appendix 2 of WMP is a schedule of wastes that are generated on the mine site during the establishment, development and operation of the mine. The quantities of these wastes are regularly monitored by WCC's staff and reported as required.	It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.
6.0 Not Compliant as per Table 26	Waste management data has been documented and is reported in each Annual Environmental Management Report (AEMR). The information includes the quantities and type of waste removed off site for recycling or disposal, the contractor engaged to remove the wastes, and the final destination for all waste products. Details will also be provided on the success of the WMP implemented and any areas that require improvements, included and highlighted.	It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.

Table 28 *Waste Management Plan* Commitments Not Able to be Audited

Reference	Commitment
5.2	The following methods have been utilised to minimise waste production onsite: ordering specifications of material quantities for the workshop and contractors are as accurate as possible to avoid the over-ordering of materials and the potential for excess waste; (b) the use of degreasers is regulated in the workshop areas to ensure the efficiency of the oil-water separator; (c) all waste items suitable for reuse or recycling are utilised in such a way.
7.0	Project Manager, Manager of Mining and Engineering, Workshop Supervisor, Manager of Coal Processing and Environmental Officer are responsible for the following activities: (a) implementing the activities contained in this WMP, including recording sources and destinations of recyclable wastes; (b) ensuring that all on-site waste contractors are inducted; (c) ensuring that all waste contractors are appropriately licensed; (d) ensuring that all waste materials are separated and

Reference	Commitment
	recycled appropriately; (e) maintaining a database that records the quantities and types of waste removed from the site; and (f) conducting regular audits around the mine site to inspect waste management practices.
7.0	Contractors engaged by WCC to operate at the mine are responsible for: (a) ensuring that all wastes are placed into the appropriate storage areas or receptacles; (b) ensuring they comply with all on-site regulations; (c) ensuring they engage in safe work practices; and (d) undertaking work practices that comply with this WMP.

3.16 Werris Creek Coal – Energy Savings Action Plan (WCL, 2010)

The commitments of the *Energy Savings Action Plan* (WCL, 2010) were unable to be audited due to time constraints on the auditing team. An outline of these commitments is contained in Appendix G. It is recommended that these unaudited commitments be prioritised for investigation in future IEAs.

3.17 Mine Closure Plan Werris Creek Coal (2010)

The majority of the commitments contained in the *Mine Closure Plan Werris Creek Coal* (2010) were found to not have been triggered during the auditing period. One commitment was triggered. However, due to time constraints on the auditing team, compliance with this commitment was not able to be verified (refer Table 29). It is recommended that this commitment be prioritised for investigation in future IEAs.

Table 29 *Mine Closure Plan* Commitment Not Able to be Audited

Reference	Commitment	Audit Finding
16.0	An internal review and update of this MCP will be undertaken annually by the Environmental Officer. In addition, an independent review of the plan will be undertaken every three years and will be undertaken every three years and will include a review of the design and adequacy of assumptions used in the plan, with selected site verification.	This annual review should have been undertaken around the date of 13 April 2011 when the report reached its first anniversary. Due to time constraints on the auditing team, compliance with this commitment was not able to be verified.

4.0 Environmental Management Performance

This Section provides an assessment of the environmental performance of the development and its effects on the surrounding environment, as required by Schedule 6, Condition 6(c) (refer to Table 1). It also briefly outlines the procedures and management measures in place at WCC to monitor and mitigate these impacts.

4.1 Ecology

4.1.1 Management

The Environmental Officer is responsible for managing the Biodiversity Offset Areas and rehabilitation areas on the site. The Environmental Officer is trialling the use of felled trees emplaced into rehabilitation areas to provide habitat structure on the site. The Environmental Officer is also considering conducting personal research into the revegetation processes of the White Box grassy woodland of the Nandewar and Brigalow Belt South Bioregions community so as to improve the rehabilitation performance of the site.

Annual monitoring reporting is undertaken by a consulting ecologist, which is bolstered by quarterly ecological inspection forms completed by the Environmental Officer. The Environmental Officer is also responsible for managing weeds on the site.

4.1.2 Performance

An assessment of WCC's environmental performance with regards to flora and fauna has been undertaken and provided in the BOMP Audit which was prepared in parallel with this IEA. Site inspections for the IEA and the BOMP Audit were undertaken at the same time. The Biodiversity Offset Areas appeared to be maintained in good condition. Weed management at the site appeared to be adequate to deal with the main weed species present, namely St John's Wort. The rehabilitation of disturbed areas is only in its fledgling stages, and the audit team observed the use of sterile crops to stabilise soil banks and stockpile areas. The main recommendations stemming from the BOMP Audit relate to the implementation of feral animal management strategies through, for instance, the collection of baseline feral population data.

4.2 Air Quality

4.2.1 Management

WCC operates a system of air quality monitoring as per its Werris Creek Coal Air Quality Monitoring Program (WCL, 2009). This monitoring is carried out in accordance with *AS/NZS 3580.10.1:2003 Methods for Sampling and Analysis of Ambient Air – Determination of particular matter – Deposited Dust – Gravimetric Method*, *AS 2922-1987 Ambient Air – Guide for the Sitting of Sampling Units*; *AS/NZS 3580.9.6.2003 Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – PM_{10} high volume sampler with size-selective inlet-Gravimetric Method*; AS 27243 – 1984 Ambient Air – Particulate Matter – Determination of Particulates (TSP) – High Volume Sampler Gravimetric Method.

Air quality control procedures used at WCC, as reported in the Annual Environmental Management Reports (AEMRs) and confirmed in the audit interviews and site inspection, include:

- Using water carts as the principle method to minimise air quality impacts at active mining operations areas, at coal processing and stockpile areas and along coal haul roads.
- Overburden, coal and soil loading activities are not undertaken during periods of high winds or dry conditions causing significant dust lift-off. If these activities cannot be adequately managed, they will be suspended until conditions improve.
- Automatic water sprays are used on the coal feed hopper, crusher and at all conveyor transfer and discharge points.
- The extent of disturbed areas (e.g. for pre-strip clearing and rehabilitation) are kept to the minimum required for mining operations. Revegetation activities are undertaken as soon as practicable once areas are no longer needed.
- Where possible all vehicles must be driven to the conditions to minimise trafficable dust generation and utilise existing tracks onsite.

- Topsoil stripping is confined to periods when there is sufficient moisture contained in the soil to minimise dust generation, where practicable.

The WCC air quality monitoring program involves the monitoring of dust deposition, Total Suspended Particulate (TSP) and PM_{10} levels and meteorological conditions according to relevant Australian Standards. The monitoring network currently consists of eight depositional dust gauges, with two of these being located on neighbouring private property. WCC also operates five High Volume Air Samplers (HAS), with four of them being fitted to measure PM_{10}, and one fitted to measure TSP.

4.2.2 Performance

Air quality monitoring results are reported annually in the AEMR. During the 2008-2009 reporting period, there were two exceedances of the prescribed deposited dust criteria set out in Schedule 4 Condition 1 of DA-172-2-2004 (as modified) that were attributable to WCC operations. Also, during the 2009-2010 reporting period, not all monitoring for PM_{10}, as required by Condition M2.1 of EPL 12290, was carried out. This was reported to the EPA in the 2009-2010 EPL Annual Return, and was attributed to the facts that there was a dispute with a neighbouring property owner, and that the site was without an Environmental Officer for approximately three months.

Eight complaints relating to dust and air quality were received during the audit period.

During the IEA site inspections on 1, 2 and 3 August 2011, air quality management was inspected. A small plume of dust was observed in the morning of 1 August, the first day of the IEA. However this dissipated by the afternoon of the same day. Overall, the audit team observed air quality management to be effective, with haul roads being generally damp and water carts being observed mobilising throughout the site watering operational and transportation areas.

4.3 Noise

4.3.1 Management

Mitigation measures to address noise related issues are detailed in *Noise Management Protocol & Noise Management Program* for the Werris Creek Coal Mine (WCL, 2010). Noise control measures used at WCC, as reported in the AEMRs and confirmed in the audit interviews include:

- Specific mining activities are only undertaken within the allowed Stage 2 operating hours as outlined in Schedule 4 Condition 15 of DA-172-7-2004 (as modified) and EPL 12290.
- Regular and preventative maintenance scheduling of mining equipment to ensure that sound power levels specified in the *Noise Management Protocol* are achieved.
- Bunding or other physical barriers close to noise sources to create obstructions to the noise propagation towards receivers (i.e. earthen bund at rail load out facility, excavators working adjacent to highwalls in pit on night shift where possible).
- Implementation of a mobile continuous monitoring system that can be set up at neighbouring properties to monitor operational noise levels and provide real time feedback to operations personnel through SMS and 2 way radio alarms so that when necessary modifications to the mining operations can occur.
- Monitoring of adverse weather conditions (source to receiver winds or temperature inversions) between the onsite weather station at RL445m and mobile continuous noise monitoring system at RL360m.
- Truck operator trained in lowering engine noise (revolutions per minute) to minimise unnecessary noise emissions from truck haulage.
- Rail spur noise mitigation includes train speeds restricted to 15 kph on the rail spur, minimising coal drop heights into wagons and maintaining coal within the loading bin at all times.

The *Noise Management Protocol & Noise Management Program* details the procedures to manage noise emissions from the operations and determine noise compliance with the noise criteria established in DA-172-7-2004 (as modified). A revised Noise Monitoring Program was approved by DP&I and OEH in December 2010 for amended monitoring locations following property acquisitions and procedures for continuous noise monitoring and truck operation noise mitigation.

Routine noise monitoring is conducted on a monthly basis by Spectrum Acoustics Pty Limited. This includes three 15 minutes noise measurements corresponding to the day, evening and night time periods at six properties. Monitoring is carried out according to the *NSW OEH's Industrial Noise Policy 2000*.

4.3.2 Performance

Noise surveys are conducted monthly by Spectrum Acoustics Pty Limited. An analysis and summary of noise monitoring results is reported annually in the AEMR. During the audit period, five exceedances of operational noise monitoring were recorded. This can be compared to the previous auditing period. For example, during the 2007-2008 reporting period there were 23 operational noise exceedances recorded. Overall, these results indicate WCC's noise mitigation strategies have resulted in operational improvements.

Twenty-six complaints related to noise were received during the auditing period.

4.4 Blasting and Vibration

4.4.1 Management

Mitigation measures to minimise the impact of blasting operations are detailed in Werris Creek Coal Blasting Monitoring Program (WCL, 2010).

Blasts are designed to minimise noise, overpressure and vibration, and to limit the environmental impacts associated with blasting such as proximity to roads and wet conditions which may cause fume. WCC operates a real-time meteorological station which provides data used to assess weather conditions prior to blasting. Blasting is not carried out if weather conditions are not within certain limits.

A notice board is maintained at the mine site entrance advising if blasting is occurring that day.

The *Blasting Monitoring Program* involves the monitoring of Airblast Overpressure and Vibration in accordance with *AS2187.2-2006 – Explosives – Storage and Use*. There are seven blasting monitoring locations, one of which is permanently monitored during each blast. An additional three locations are chosen to be monitored for each blast, depending on the blasting location. Therefore, a total of four locations are monitored during each blast, including the one permanent monitoring location.

A revised Blast Monitoring Program was approved by DP&I and OEH in August 2010 which modified the blast monitoring locations following property acquisitions over the previous 12 months made by WCC.

4.4.2 Performance

An analysis and summary of blast monitoring results are reported annually in the AEMR. Performance during the audit period was excellent, with no exceedances of blasting criteria.

Thirty-two complaints were received during the audit period in relation to blasting.

4.5 Water Quality

4.5.1 Surface Water Management

Mitigation measures for the effects of the development on surface water are detailed in *Site Water Management Plan Werris Creek Coal Mine* (WCL, 2009).

Surface water management procedures used at WCC, as reported in the AEMRs and confirmed during the audit interviews, include:

- The segregation of water streams with all water from clean, dirty or void water catchments retained onsite for dust suppression.
- Sediment Basins (SB) within the dirty water systems are used to slow water flow and aid detention time to encourage settlement of solids.
- Three SBs are licensed discharge points (as per EPL 12290) designed to retain up to 39.2mm rainfall events over five day periods before spilling (wet weather discharge) and are to be maintained in a drawn down state.
- Flocculants are used where necessary to clarify water quality prior to undertaking controlled discharges.
- Annual site water balance prepared by specialist consultant.

- Separating classes of water for different uses, such as ‘void,’ ‘dirty’ and ‘clean’ water.
- Preferentially using void water for coal preparation and dust suppression.
- Minimising bore water extraction where possible.

WCC maintains licences for three discharge points according to its EPL 12290. These discharge points consist of three dams, two of which discharge into the Quipolly Creek, and one which discharges into Werris Creek. Under its EPL 12290 conditions, WCC is able to discharge when the water quality is within EPL criteria, however the TSS limit does not apply after a five day rainfall event of greater than 39.2mm.

Surface water quality is monitored at 14 locations according to the requirements of the *Site Water Management Plan* and EPL 12290. Surface water is sampled on the following basis:

- Dirty water dams licensed discharge points – quarterly and after overflow occurs offsite.
- Receiving waters – quarterly and within 12 hours after overflow offsite.
- Clean and void water dams – quarterly.
- Contaminated water – quarterly.

Surface water quality is evaluated by assessment of TSP, oil and grease, pH, electrical conductivity, total phosphorus, total nitrogen and nitrate oxygen. The prescribed monitoring methodology is outlined in *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW* (OEH 2004).

The *Site Water Management Plan* was last updated in March 2009.

4.5.2 Surface Water Management Performance

An analysis and summary of surface water quality monitoring results are reported annually in the AEMR. During the audit period, there were three occasions when surface water quality criteria were exceeded. During the 2009-2010 reporting period, not all monitoring for water quality following overflow was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time. During the 2008-2009 period, surface water discharged from monitoring point 12 and was contained within the project related property of ‘Eurunderee.’ Sampling for Special Frequency 2 was not followed for monitoring points 23, 24, 25 and 26 as discharge did not leave the Eurunderee property. Also during the 2008-2009 period, monitoring for point 16 was only carried out three times out of the required four times for the reporting period. All of these non compliances were reported to the EPA as per the EPL 12290 Annual Return reporting requirements.

No complaints relating to surface water were received during the audit period.

4.5.3 Groundwater Management

Groundwater quality is monitored on and surrounding the mine site in accordance with the *Site Water Management Plan*. WCC currently monitor groundwater in 37 bores and piezometers onsite and at neighbouring properties to measure potential impacts on aquifer groundwater quality and availability. The parameters monitored include standing water level, total nitrogen, nitrate nitrogen, total phosphorus, reactive phosphorus, electrical conductivity and pH. The *ANZECC 2000 Guidelines for Fresh and Marine Water Quality* (irrigation and livestock guidelines) are used as trigger levels, and results are compared to the predictions made in the Statement of Environmental Effects for a Modification to the Mining Area and Related Activities at the Werris Creek Coal Mine (R.W. Corkery & Co Pty Limited, 2009).

4.5.4 Groundwater Management Performance

An analysis and summary of groundwater monitoring results are reported in the AEMR. During the auditing period, a number of bores associated with agricultural land uses recorded Total Phosphorus and Total Nitrogen levels above ANZECC Guideline triggers for Agricultural Irrigation Short and Long Term. However, these levels have been consistent since monitoring commenced in 2005 and are attributed to the agricultural use of surrounding lands rather than to mining inputs. During the 2009-2010 reporting period, not all monitoring for groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time.

During the audit period, two complaints were received in relation to groundwater.

4.5.5 Erosion and Sediment Control Management

Mitigation measures to address erosion and sedimentation are detailed in the *Site Water Management Plan Werris Creek Coal Mine* (WCL, 2009). Erosion and sediment management procedures used at WCC, as reported in the AEMRs and confirmed during the audit interviews, include:

- Using water carts and automatic spray fittings at mining operations areas, coal processing and stockpile areas, and along coal haul roads.
- Revegetation of soil stockpiles, areas shaped to their final landform and areas no longer required for mining-related purposes.
- Installation of upslope protective earthworks such as contour banks or straw bale protection.
- Installation of contour banks and lined waterways on the final landform following soil application.
- Topsoil stripping is confined to periods when there is sufficient moisture contained in the soil to minimise dust generation, where practicable.

4.5.6 Erosion and Sediment Control Management Performance

Generally, appropriate erosion and sedimentation systems and procedures were observed during the IEA site inspection. No complaints relating to erosion and sediment control were received during the audit period.

4.6 Cultural Heritage

4.6.1 Aboriginal Heritage Management

4.6.1.1 Relations with the Local Aboriginal Community

The Nungaroo Local Aboriginal Land Council (LALC) was consulted throughout the planning and commissioning stages of the development. Their input was received in relation to the salvage, relocation and ongoing management of the Narrawolga axe grinding groove site. WCC maintains this relationship with the LALC, and members are welcome to visit the Narrawolga site by contacting the Environmental Officer to arrange a time.

WCC also contracts with the Quirindi Aboriginal Corporation for the removal and recycling of waste paper from the site.

4.6.1.2 Archaeological and Cultural Heritage Management

Mitigation measures to address Cultural Heritage are detailed in the *Archaeology and Cultural Heritage Plan for the Werris Creek Coal Mine*. Progress reports on the status of the Narrawolga axe grinding grooves, which have been relocated, are contained in the AEMR for each reporting period.

4.6.2 Aboriginal Cultural Heritage Management Performance

The relocated Narrawolga axe-grinding groove site was visited by the audit team during the site inspection and appeared to be maintained in good condition. There were no complaints received during the auditing period relating to archaeology and cultural heritage management.

4.7 Waste

4.7.1 Waste Management

The management of non hazardous waste generated on the WCC site is undertaken according to the *Waste Management Plan for the Werris Creek Coal Mine* (WCL, 2009). General waste is collected fortnightly from the site by a licensed contractor. The Quirindi Aboriginal Corporation is engaged to remove, sort and recycle waste paper generated at the WCC site. Waste oils and grease stored in the bunded area at the workshop building are collected for recycling by Northern Lubequip – Tamworth. Waste batteries are disposed of by Gunnedah Windscreens and Batteries, and waste tyres are disposed of by Browns Tyre Service.

WCC maintains a biocycle sewage treatment system approved by Liverpool Plains Shire Council that is serviced by a licensed waste collection and disposal contractor as required.

No mineral wastes are produced from processing the ROM coal mined at WCC.

4.7.2 Waste Performance

During the IEA it was found that WCC is not maintaining an adequate waste management register containing quantities and types of wastes. A recommendation has been made that this be addressed.

During the site inspection, it was observed that the site waste skips were overfull. Site personnel advised that a twice weekly pick-up was being arranged but not yet in place.

4.8 Visual Amenity

4.8.1 Visual Amenity Management

Visual impacts are mitigated through the screening of the development from external viewers and through minimisation of stray light.

Visual amenity management procedures used at WCC, as reported in the AEMRs and confirmed during the audit interviews, include:

- Tree screen plantings along the south-east margin of ML 1563 and the eastern and southern margins of the train load-out area.
- Undertaking activities in accordance with the various management plans applicable to the mine, all of which incorporate safeguards which indirectly reduce visual impact.
- Minimising the extent of land disturbance/clearing in advance of mining.
- Progressive rehabilitation of disturbed areas.
- Sympathetic positioning and direction of lights to avoid them impacting on local residences.
- Acquisition of a number of properties to the east, north and west of operations.
- Restricting locomotive headlights to low beam when on the rail siding.
- Installation of lighting at the train loading facility in accordance with AS 1680.2.4.1997 and their use only when the facility is in operation.

The Environmental Officer also operates a monitoring system whereby photographic data of site operations (as viewed from the southern end of Werris Creek town) is recorded throughout the day and night. This data is checked by the Environmental Officer on a regular basis to identify anomalies, particularly in relation to excessive lighting emissions during the night. This allows WCC to respond to any community complaints in relation to light emissions by being able to determine what lights were visible during a specific time.

4.8.2 Visual Amenity Performance

During the auditing period, all neighbouring properties with direct views into the pit were acquired. Eleven complaints relating to visual amenity were received during the auditing period. More recently WCC has completed the installation and stabilisation of tree screens and visual bunds along Werris Creek Road.

4.9 Hazard Management

4.9.1 Spontaneous Combustion Management

Measures to manage and control spontaneous combustion onsite at WCC that were observed during the site visit include:

- Maintaining coal stockpiles open and exposed to prevailing winds at all times.
- Water carts are available onsite at all times and are fitted with fire fighting equipment.

4.9.2 Spontaneous Combustion Performance

There were no reported instances of spontaneous combustion onsite during the auditing period.

4.9.3 Dangerous Goods Management

As detailed in Table 3, WCC has continuously held valid Dangerous Goods and Radiation Licences throughout the reporting period (licences were renewed as required).

4.9.4 Dangerous Goods Performance

As detailed in the AEMR, WCC has maintained a Dangerous Goods Notification and a Radiation Licence throughout the auditing period.

4.9.5 Hydrocarbon Management

Measures to manage and control spontaneous combustion onsite at WCC that are reported in the AEMR include:

- All bulk hydrocarbons (including fuel, oils, grease – new and waste) are retained at the mine contained within bunded areas (or self bunded tanks) within the contaminated water management system.
- All fixed or portable equipment (pumps etc) incorporate self-contained bunding.
- Hydrocarbon-contaminated materials as a consequence of any spillages will be disposed of appropriately.
- Minor spillages are cleaned up and the contaminated soil either bio-remediated or transferred off-site to an appropriately licensed waste disposal area.
- Liquid from the truck wash area is currently captured in a sump and pumped through an oil separator where hydrocarbons are drawn out of suspension and taken off site for disposal.
- WCC test the residual materials in the sump of the wash bay quarterly for hydrocarbons. If the results are low then the remaining solids are classed as general solids waste and can be buried within the pit. If the solids are above the threshold for general solid waste classification, bioremediation of this waste product may be required before onsite disposal.
- A concrete apron has been installed in front of the diesel bowsers onsite. This bunded area contains spills around the fill point draining back to the wash bay sump.
- The concrete bunded area for bulk oil storage was installed in May 2010 containing spills within the wash bay sump.
- WCC regularly reviews hydrocarbon storage and bunded areas.

4.9.6 Hydrocarbon Management Performance

No specific hydrocarbon management issues were identified during the site IEA inspection.

During the audit period, there was one incident involving a hydrocarbon spill. In 2008 two contract scrapers collided causing the diesel tank of one vehicle to rupture. Approximately 25 litres of diesel was spilt. The remaining fuel in the ruptured tank was pumped into a mobile service truck. Fuel on the ground was directed with hand dug trenches to a catch point and soaked up with gravel material and absorption products from spill kits. All fuel spilt was contained within the immediate area, with no contamination of nearby waterways. The soil from the area was then excavated and removed to a washbay sump for remediation. WCC consulted with OEH in relation to the incident and the response from the Department indicated that they were pleased by the manner in which WCC handled the incident.

4.9.7 Bushfire Management

Bushfire management response procedures are outlined in the *Bushfire Management Plan for the Werris Creek Coal Mine* (WCL, 2007). Measures to minimise the risk of bushfires and control outbreaks that were confirmed during the IEA include:

- Water carts are maintained onsite at all times as standby fire fighting equipment if necessary. Water carts are fitted with fire fighting equipment, including hoses that can be pressurised if needed. Additional water is also stored onsite.
- Dozers and graders are also available onsite to cut fire breaks if needed.
- Hot work permits are used onsite to prevent personnel working in un-mowed areas without bushfire equipment.
- Coal stored in the ROM and stockpile areas is open and exposed to prevailing winds at all times.

4.9.8 Bushfire Management Performance

No bushfires occurred at WCC during the auditing period.

4.10 Rehabilitation

4.10.1 Rehabilitation Management

Rehabilitation at WCC is carried out according to the *Biodiversity Offset Management Plan* (Eco Logical, 2010). Rehabilitation at the site is in its fledgling stages, with most rehabilitation works yet to commence.

4.10.2 Rehabilitation Performance

Rehabilitation at the site is still in the early stages, with most works yet to commence. Rehabilitation that has been completed has been to a high standard with generally good ground cover, erection of stags, and the use of sub-soil under topsoil and relocation of timber into the rehabilitation area as habitat. The approach to the site from the Werris Creek side appears to be progressing well with good vegetative cover and at the time of the audit, a green grass cover. Recently planted tubestock from local provenance species were observed onsite, however due to time constraints on the audit team, an assessment of their progress to date including success rates was not able to be made.

It should be noted that rehabilitation to date has been on a basalt soil substrate and that further into the project, the basalt based soils will run out and carbonaceous sedimentary based soils (that are lower in productivity) will have to be used. To date the more productive basalt based soils have been used in appropriate locations (e.g. within the public viewshed).

5.0 Adequacy of Management Strategy and Management Program

This Section addresses Schedule 6 Condition 6(e) of DA-172-7-2004 (as modified), which requires this Audit to review the adequacy of WCC's Environmental Management Strategy (EMS) and Environmental Monitoring Program (EMP).

In this Section, the adequacy of the EMS and EMP has been assessed by reference to their acceptance and approval by the relevant government authority. A brief summary of each strategy, plan or program is provided below.

5.1.1 Environmental Management Strategy

Schedule 6 Condition 6(e) of DA-172-7-2004 (as modified) requires the preparation and implementation of an Environmental Management Strategy.

The *Environmental Management Strategy for the Werris Creek Coal Mine* (WCL, 2005) was approved by DP&I in a letter dated 7 April 2005. DA-172-7-2004 (as modified) also requires that the EMS be revised and updated following each IEA. However, WCC's EMS was not updated following the last IEA performed by URS in 2008.

The WCC EMS addresses the requirements of DA-172-7-2004 (as modified) with regard to content. The strategy provides the strategic context for Environmental Management Plans and Programs prepared for WCC.

In general, the strategy adequately addresses the requirements prescribed in DA-172-7-2004 (as modified). A recommendation has been made that this EMS be reviewed and updated subsequent to the current audit (refer Table 6 and Table 30) in order to comply with DA-172-7-2004 Schedule 6, Condition 1(f).

5.1.2 Environmental Monitoring Program

The *Environmental Monitoring Program* was approved by DP&I on 18 October 2005. The implementation of the *Environmental Monitoring Program* is analysed each year in the Annual Environmental Management Report. The *Environmental Monitoring Program* comprises the following sub-management plans, which were all considered as part of this IEA:

- *Air Quality Monitoring Program*
- *Archaeology and Cultural Heritage Management Plan*
- *Biodiversity Offset Management Plan* (this was considered separately in the Biodiversity Offset Management Plan Audit run in parallel with this IEA)
- *Blasting Monitoring Program*
- *Bushfire Management Plan*
- *Energy Savings Action Plan*
- *Noise Management Protocol*
- *Rail Spur Management Plan*
- *Site Water Management Plan*
- *Waste Management Plan.*

Since the acceptance of WCC's *Environment Monitoring Program* in 2005, many of these sub-plans referred to above have undergone review and revision in consultation with the relevant government departments. Refer Appendix G for further details on WCC's compliance with these individual programs.

This page has been left blank intentionally.

6.0 Recommendations

This Section addresses Schedule 6 Condition 6(f) of DA-172-7-2004 (as modified) which requires this IEA to recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.

Various good practices were noted during the IEA, particularly in relation to biodiversity offset management, community consultation and complaints handling, and Aboriginal cultural heritage management.

This IEA has identified ten non compliances against conditions of DA-172-7-2004 and six against conditions of the EPL 12290. The IEA also discovered further non compliances against several commitments made in the environmental assessments and management plans (refer Section 3.0). These non compliances and any recommendations relating to them have been outlined for each consent document and management plan separately in Section 3.0. However, it is acknowledged that many of these non compliances relate to the same or similar issues. The recommendations stemming from these non compliances have therefore been consolidated in Table 30.

Table 30 presents the key recommendations stemming from this IEA in relation to all non compliances with approvals and management plans. WCC should work to resolve non compliances identified in Section 3.0 as far as is practical. Table 30 is intended to provide guidance for WCC in resolving these non compliances.

Table 30 Consolidated Audit Recommendations

Reference	Recommendation
Monitoring	
DA-172-7-2004 (as modified) Schedule 4, Conditions 28 and 29 EPL 12290 L1.1, L3.1, 3.2, and 3.4	The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.
DA-172-7-2004 (as modified) Schedule 4, Condition 7 EPL 12290 L6.1	The results of noise monitoring should be closely monitored and operations adjusted as required to reduce impacts.
DA-172-7-2004 (as modified) Schedule 4 Condition 59(a) *Waste Management Plan* Sections 5.3, 5.5 and 6.0	It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.
Environmental Impact Statement Sections 2-22 and 2-58-62 *Statement of Environmental Effects* Sections 2.5.4.4, 2.11.6 and 4.9.5 *Landscape Management Plan* Section 5.1.3	It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.
Site Water Management Plan Section 6.3	References are made to baseline data being collected, and to trigger values being established, however the baseline data is not clearly compared against new monitoring data. It is recommended that this comparison to baseline data is clarified.
Documentation	
DA-172-7-2004 (as modified) Schedule 4, Condition 39 *Statement of Environmental Effects* Section 2.11.7	It is recommended that WCC follows up with DP&I to bring the negotiations to a close in regards to securing the long term title of the offset lands.

Reference	Recommendation
DA-172-7-2004 (as modified) Schedule 6 Conditions 1(f) and 2	It is recommended that WCC ensures this review and update (if required) of the EMS is actually undertaken following the current audit.
Noise Management Protocol and Noise Management Program Pages 12-14	It is recommended that in future, the Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.
Bushfire Management Plan Section 2.5	It is recommended that this Plan be reviewed sometime in the near future.
Other Actions	
Statement of Environmental Effects Section 4.2.4.1 *Waste Management Plan* Section 5.5	It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water separators and containment areas.
Archaeology and Cultural Heritage Plan Section 2.5	It is recommended that WCC follow up on this request from the Taylor family regarding the Wollemi Pines.
Archaeology and Cultural Heritage Plan Section 3.4	It is recommended that posters identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions/responses or similar be displayed in staff lunchrooms.
Waste Management Plan Section 5.1	It is recommended that clearer written instructions be erected onsite to provide guidance on how wastes are separated and recycled.

Appendix A

Audit Team Curricula Vitae

Appendix A Audit Team Curricula Vitae

Peter Horn
Associate Director - Environment

Qualifications
Master of Applied Science (Environmental Management and Restoration)

Bachelor Applied Science (Environmental Science)

Affiliations
Insert MEIANZ (Environmental Institute of Australia and New Zealand)

MCASANZ (Clean Air Society of Australia and New Zealand)

Career History
Peter has 16 years experience providing professional environmental services to industry and a further 15 years industry experience. Peter has extensive experience as a Director, Project Manager and Team Member for a range of clients in the management of environmental controls and issues including environmental assessment, strategic environmental advice, EMS implementation and auditing, application of ESD principles, contaminated land management and Legal compliance. His project direction experience includes numerous multi-disciplinary projects with deliverables from a broad range of skill sets.

Peter has developed skills in all aspects of environmental management and a good general overview of the project development process. These skills include Project Management, Environmental Assessment, Environmental Constraints Analysis, Air Quality and Noise, Stakeholder Consultation, Site Investigation and Remediation, Ecologically Sustainable Development, Environmental Management Systems, Energy and Climate Change, Water and Waste Water, Community Consultation, Approvals Management, Ecological Rehabilitation, Management of Contractors and Consultants and Communication with key Stakeholders including Regulatory Authorities.

As the Environmental Officer for Ashton Coal Mine, Peter managed all facets of environment and planning for the site including site compliance and compliance of the construction of the underground mine and associated facilities, coordinating with the Site General Manager and Development Manager.

Peter has audited environmental compliance, Environmental Management Systems, NSW Planning approval conditions, Environment Protection License compliance, construction compliance and general environmental performance since completing an ISO 14000 based auditing course in 1997. He has been accepted by NSW Planning as a lead auditor on 6 audits to date.

Detailed Experience

Auditing

Peter is a trained lead auditor for EMS and compliance and has conducted numerous audits. Audits have included gap analysis, EMS compliance, Department of Planning Independent Environmental Auditing, compliance audits and due diligence audits.

Recent projects include:

- Compliance Audits of Hunter Valley Operations, Warkworth, Mount Thorley mines for Coal and Allied.
- Compliance audit of Eraring Energy's Eraring Power Station and six Hydro-electric generation sites.
- Independent Environmental Audits of Warkworth Mine, Muswellbrook Coal, Drayton Mine, Integra Mine, Bengalla Mine, Hydro Aluminium as an approved Lead Auditor (DoP).
- EMS audits for University of Western Sydney and Colongra Power Station.
- Due diligence audit for AGL pre-joint venture with ACTEW.
- EPL compliance for CSA Mine (Cobar), Ashton Coal Mines.

Environmental Impact Assessment

Peter has been involved in a number of Environmental Impact Assessments since joining AECOM in 2006.

Recent projects include:

- EIS for Stingray Creek Bridge, Port Macquarie Hastings Council.
- SEE for Amp Increase Project, Tomago Aluminium.
- EA under Part 3A for Chain Valley Mine, LDO Coal Pty Ltd.
- EA under Part 3A for Baal Bone Colliery, Xstrata Coal.
- EIS for Demolition of Catherine Hill Bay Jetty, Peabody Energy.
- Various small REFs, NSW RTA.

Environmental Management

Peter has extensive experience in the development and review of environmental management documentation including EMPs, EMSs, Environmental Strategies, Subsidence Management Plans, Extraction Plans, MOPs and Environmental Reporting.

Recent projects include:

- CEMPs for Ravensworth North open cut coal mine and the Diversion of Bowmans Creek for Ashton Coal.
- EMPs for Open-cut, Underground mines, Ashton Coal, Delta Electricity's Colongra Power Station, Hydro Aluminium.
- EMS's for the University of Western Sydney, New England Trading, Delta Electricity's Colongra Power Station, Central Queensland Power.
- Environmental Strategy for Ashton Coal Mines.
- Subsidence Management Plans for Ashton Coal Mines.
- MOP and MOP revisions for Ashton Coal Mines.
- Environmental reporting including AEMRs, NPI, EPL returns and corporate environmental reporting.

Training

Train the Trainer, AECOM 2008

Senior First Aid, 2006

Two Day Project Manager Training, PSMJ for AECOM Australia, 2007

World Class Consultant Training, ERM 2005

NSCA Course in OHS Consultation, 2002

Project Manager Training, Parsons Brinckerhoff, 2000

Environmental Management Systems Auditor Training – 1999

Professional History

2006 to Current
AECOM Australia Pty Limited
Associate Director – Environment

2005 to 2006
Carbon Based Environmental
Ashton Coal Mine, Environmental Officer

2004 to 2005
Environmental Resources Management
Senior Environmental Scientist

1999 to 2004
Parsons Brinckerhoff
Senior Environmental Scientist

1995 to 1999
ACIRL
Senior Environmental Scientist/ Environmental Scientist/ Environmental Technician

Graham Taylor
National Service Line Leader/Senior Principal, Air Quality

Qualifications
Bachelor of Engineering (Chemical Engineering) Honours Class II Div.(1), Newcastle University, 1974

Affiliations
Member of Hunter Environmental Institute

Member of the Clean Air Society of Australia and New Zealand

Member Institute of Engineers of Australia

Career History
Graham has over 36 years experience in environmental legislative requirements and controls; pollution control equipment specification, design evaluation commissioning and ongoing operational monitoring and control; air, water and noise monitoring, evaluation and impact assessment; waste minimisation and disposal; and occupational health, hygiene and safety monitoring management.

He has worked as a Pollution Control Engineer with the NSW EPA, as the Environment and Laboratory Manager for a greenfield aluminium smelter and with AECOM undertaking various roles including Regional Operations Manager.

He is experienced in the evaluation of regulatory requirements, assessing environmental impacts over a wide range of industrial, mining and agricultural activities as well as the occupational health, hygiene and safety management aspects associated with these activities.

He is currently Practice Leader and Technical Director for the Air Quality Practice and the EHS Practice for both the AECOM ANZ Environment Business Line.

Detailed Experience

Air Emissions Monitoring and Impact Assessments

Graham has extensive experience in air emissions monitoring and impact assessment across most areas of manufacturing, mining and industry. Areas of particular expertise include non-ferrous smelting, coal mining and processing and transport related emissions. Projects have required the selection of suitable monitoring locations, selection of equipment including static and real time monitoring units, installation of meteorological stations, running of the equipment remotely for extended time frames with high data recovery and data manipulation and presentation. Client presentations have generally been required together with EPA negotiations and community consultation.

Environmental Health and Safety

Graham has managed the EHS program for a major industrial facility (aluminium smelter) with over 1200 employees and is experienced in the need to provide a safe workplace ensuring complying with legislative requirements. More recently he has managed the EHS Practice which involves Hazmat survey monitoring and management occupational hygiene consulting and safety and risk evaluation and control.

Environmental Legislative Requirements and Controls

Graham has provided strategic advice on environment legislative requirements and control options across a number of areas including mining, waste management and emplacement, ferrous and non-ferrous smelting, power generation and the chemicals industry. Graham's extensive time period with the environmental field has generated a wide range of contacts with which to facilitate discussions at all levels within control agencies. Graham has successfully appears as an expert witness for various clients.

Due Diligence and Environmental Audits

Graham has undertaken a number of due diligence, approval compliance and environmental audits across the power generation, metal manufacturing, non-ferrous smelting, ferrous smelting and chemical manufacturing fields. The 36 years experience within government, industry and consulting has ensured the development of environmental impact evaluation and awareness well suited to the environmental audit process. Audit outcomes have been well received and utilised by clients to upgrade and improve environmental performances as well as understanding potential environmental aspects associated with facility acquisitions.

Environmental Management Plans

Graham's 36 years of environmental management experience with government, private industry and consulting has ensured that the EMP's developed over comprehensive and practical, well able to contribute to the environmental management of numerous clients.

Contaminated Site Assessments/Audits and Remediation

Graham has undertaken and/or project managed a number of contaminated site audit assessments and remediation's involving manufacturing facilities, chemicals industry, fuel storage, galvanising plants, coal mining and related activities, waste emplacements and road and rail transport corridors.

Environmental Impact Statements

Graham has undertaken a number of Environmental Planning and Impact Assessments for a range of projects including coal mining, power generation, ferrous metal processing, non-ferrous metal smelting, chemical manufacturing and waste processing and emplacement. Investigations have been carried out across a wide range of areas including land use planning, land management, soil erosion and rehabilitation, landscape and visual assessment, water quality assessment, hydrology and groundwater, public utility services, air quality impact assessment, noise impact assessment, flora and fauna, archaeology, infrastructure requirements and economic impacts. These studies have involved both internal and external consultants. Some of the projects were highly sensitive requiring comprehensive consultation with local and state governments, various agencies and community representatives.

Rochelle Lawson
Senior Professional Scientist

Qualifications
Master of Science (Biology), University of Ottawa, Canada, 1997.

Bachelor of Science (Honours, Biology), University of Ottawa, Canada, 1995.

Affiliations
Member, Environment Institute of Australia and New Zealand, since 2005.

Certified Environmental Practitioner, current.

Published and Technical Papers
Eraring Energy Sustainability Report 2009.

Walker, B., and Lawson, R. 2006. Case Studies in Resilience: Fifteen Social-Ecological Systems across Continents and Societies. pp 177 – 197 in Walker, B.H., Anderies, A.P., Kinzig, A.P., and Ryan, P. Exploring Resilience in Social-Ecological Systems, CSIRO Publishing.

Tait, J. and Lawson, R. 2003. Bioregional Frameworks for Assessment of Freshwater Biodiversity in Australia. 2002 World Congress on Aquatic Protected Areas Proceedings.

Creighton, C., and Lawson, R. 2002. Australian Estuary Condition. Waves (9)1:1-2.

National Land and Water Resources Audit. 2002. Tracking changes – Australian Collaborative Rangeland Information System.

National Land and Water Resources Audit. 2002. Catchment, River and Estuary Assessment 2001.

National Land and Water Resources Audit. 2003. Australian Terrestrial Biodiversity Assessment 2002.

Tait, J., Cresswell, I.D., Lawson, R., and Creighton, C. 2000. How are we managing? Auditing the Health of Australia's Ecosystems. Ecosystem Health (6)2:149-163.

Career History
Rochelle Lawson has over fourteen years experience managing natural resource management projects, including ecosystem condition assessment and monitoring, impact assessment, biodiversity assessment and rangeland monitoring. She has ecological research experience, particularly on biodiversity issues from both Canada and Australia. Her recent experience is with ecological survey and monitoring, land management planning, biobanking, sustainability reporting, constraints analyses, assessments of significance for development impacts, and large scale environmental reviews and impact studies.

Detailed Experience
Environmental Assessment and reporting projects include:

- Flora and Fauna Assessments (58) for North Coast Rail Curve Easings, Australian Rail Track Corporation, 2010/11.
- Flora and Fauna Assessment for Tighes Hill Zone Substation, Energy2U Alliance, 2010.
- Eraring Energy Sustainability Reporting (2009, 2010).
- Hydro Aluminium Property Management Plan, 2010.
- BER School Program Ecological Studies
- REF for New England Highway, Roads and Traffic Authority, 2009.
- REF for George Booth Drive, Roads and Traffic Authority, 2009.
- Landscape Plan, Bushfire Management Plan and Flora and Fauna Assessment for Tomago Zone substation development, Energy2U Alliance, 2009.
- M2 Upgrade Flora and Fauna Assessment, 2009.

Environmental Assessment in the Mining Industry experience includes:

- Mangoola Coal ecological preclearance inspections and advice, 2010.
- Bulga Coal Ecological Constraints Analysis, 2009.
- Advice on presence of White Box community at Mt Arthur Coal, 2009.
- Ecological Assessment for facility upgrade at Orica Technology Park, 2009.
- Bulga Coal CHPP dam upgrade, 2009.

Local Government experience includes:

- North Rothbury Persoonia Review of Ecological Assessment and Advice to Cessnock City Council, 2009.
- Ecological Assessment for road upgrade at Owens Gap, Upper Hunter Shire Council, 2009.
- Ecological Assessment for John Renshaw Drive upgrade, Roads and Traffic Authority, 2009.

Rochelle has worked on large scale Defence environmental assessments, including preparation of documents such as:

- HMAS Harman Infrastructure Project - Environmental Scoping Study and Environmental Management Plan, 2008.
- LAND 144 Countermine Capability - Initial Environmental Review, 2008.
- HMAS Creswell Redevelopment Project - Initial Environmental Review, 2006/07.
- Replacement Abrams Main Battle Tank and Support Vehicles - Initial Environmental Review and Public Environment Report, 2006.
- United States Pacific Air Forces Strategic Bomber Training Program - Environmental Impact Assessment, 2006.
- Urban Operations Training Facility, Mt Bundey - Public Environment Report, 2005.

Data Management
Rochelle successfully incorporated best practice management of research data and information into the contract management processes for both Land & Water Australia and the Fisheries Research and Development Corporation. The entire project life cycle is analysed and modified to include specification, collection, storage, licensing, custodianship and dissemination of research data through distributed on-line systems.

- Data Management Review and Strategy, Fisheries Research and Development Corporation, 2005.
- Stakeholder Information Workshops, Fisheries Research and Development Corporation, 2006.
- National Biosecurity Threats Database detailing the priority weed and pest threats to over 40 properties, Department of Defence, 2008.

Ecological Survey
Rochelle undertakes flora and fauna surveys for proposed agricultural, industrial and residential development, focusing on potential impacts to threatened species and communities. Her Master of Science thesis specialised in terrestrial biodiversity indicators. Recent projects include:

- Creeping Pear removal experiment in Warkworth Sands Woodland, Mt Thorley Mine, 2010.
- Threatened species monitoring at Majura Training Area, ACT, Department of Defence, 2010.
- Small mammal trapping for fluoride toxicity testing, Hydro Aluminium, 2010.
- Nest box monitoring, Hydro Aluminium, 2010.
- Vegetation surveys for proposed underground mine, Chain Valley Bay, 2010.
- Bulga Coal and Beltana Highwall Annual Ecological Monitoring, 2009.
- Flora and fauna surveys for Environmental Assessment, BHP Caroona Project, 2009.

- Jerrabombera vacant block assessment (Box-Gum Woodland), Land Development Agency, 2008.
- Sustainable Equestrian use of the Malabar Headland, Department of Finance and Deregulation, 2008.
- HMAS Harman flora survey (Natural Temperate Grasslands), 2008.
- Threatened flora monitoring on Defence land in the ACT, 2008.
- Development applications for installation of fibre optic cable through nature reserves in the ACT, 2007.
- Kangaroo management planning, Majura Training Area and Belconnen Naval Transmitting Station, 2007.
- Gungahlin residential development, Canberra, 2006.
- Grafton railbridge repairs, ArupSustainability, 2006.
- Sheep Creek bridge works, ArupSustainability, 2006.
- Review of Ecological Assessment of development on Cumberland Plain Woodland, Huntingwood, Macquarie Goodman, 2006.
- Landfill EIS Ecological Assessment, Bega Valley Shire Council, 2006.
- Belconnen Naval Transmitting Station grasslands and *Lepidium ginninderrense* survey, Department of Defence, 2006, 2007, 2008.
- Albion Park Rail Flora and Fauna Survey, Belmorgan Property Development Pty Ltd, 2006.
- Moira Station Cattle Feedlot Flora and Fauna Survey, Agricultural Equity Investments Pty Ltd, Moira, 2005.
- Kangaroo Impact Monitoring, Majura Training Area, Department of Defence, 2005, 2006, 2008, 2011.
- Buckenderra Holiday Village Flora and Fauna Survey, Asquith & de Witt Pty Ltd, 2005.
- Erskine Park Flora and Fauna Survey, CSR limited, 2005 and 2006.
- Review of EPBC Protected Matters at Gungahlin, ACT, 2005.

Natural Resource Assessment
In over four years with the National Land & Water Resources Audit, Rochelle managed 35 Australia-wide rangelands monitoring, river condition assessment, estuary condition assessment and terrestrial biodiversity assessment contracts ($6M total) from initiation to completion. She oversaw the production of three Audit final reports and developed content for the rangelands, rivers, estuaries and terrestrial biodiversity components of the Australian Natural Resources Atlas (www.environment.gov.au/atlas).

She mapped the governance arrangements across Australia in relation to implementation of the *Environment Protection and Biodiversity Conservation Act 1999* for the Department of the Environment, Water, Heritage and the Arts.

Rochelle undertook the community consultations for the Murrumbidgee Catchment Management Authority, which involved a survey and six community forums to determine the community's NRM priorities.

Training
- Identifying Eucalypts of the Sydney Region, 2010.
- Biobanking Assessors Course, 2010.
- PSMJ Project Management, 2010.
- Senior First Aid, 2010.
- Working Safely at Heights, 2009.
- Identifying plants of grassy ecosystems of the ACT region, 2007.
- Conservation and management of grassy ecosystems of ACT, 2006.
- Natural Sequence Farming, 2006.
- Translocation of Threatened Plants, 2006.
- MapInfo Professional Level 1, 2006.
- Four Wheel Driver and Recovery Training, 2005.
- Sustainable Building Design, University of Canberra, 2004.

Jessica Miller
Graduate Environmental Planner

Qualifications
Bachelor of Laws

Advanced Diploma of Applied Environmental Management

Bachelor of Arts

Awards
College Dux, St Francis Xavier's College, Hamilton, in Years 11 and 12

Bronze and Silver levels of the Duke of Edinburgh's Award

UAI 98.00

Career History
Jessica commenced employment with AECOM in November 2010 as a Graduate Environmental Planner, having recently completing a Bachelor of Laws and an Advanced Diploma of Applied Environmental Management.

In her time working at AECOM, Jessica has been involved in the preparation of environmental assessment reports for various project approvals, and in the preparation of post approvals documentation. She has also produced update reports on environmental and occupational health and safety law amendments.

Jessica's personal attributes and qualifications in law and environmental management are well suited to environmental auditing. Since joining AECOM, she has also prepared an audit protocol for the Ravensworth North Project to assist with internal compliance.

.

Detailed Experience
Worked on delivering reports to key clients including Reviews of Environmental Factors and law update reports. This has involved desktop environmental research, collating specialist information, and undertaking legal research.

Conferences
Attended AECOM's Graduate Induction conference in Brisbane, March 2011

Training
WorkCover NSW Construction Induction

Communication for Success – EQ

Delivering Successful Presentations

Safety for Life

Languages
French and Spanish – Intermediate language skills

Professional History
2010- Present
AECOM
Graduate Environmental Planner

This page has been left blank intentionally.

Appendix B

Audit Meeting Agenda

Appendix B Audit Meeting Agenda

AECOM Australia Pty Ltd
17 Warabrook Boulevarde
Warabrook NSW 2304
PO Box 73
Hunter Region MC NSW 2310
Australia
www.aecom.com

+61 2 4911 4900 tel
+61 2 4911 4999 fax
ABN 20 093 846 925

Agenda of Meeting

Werris Creek IEA

Subject	Agenda for Independant environmental and Offsets Audits	Page	1
Venue	Werris Creek Mine	Time	
Participants	Andrew Wright, Peter Horn, Rochelle Lawson and Jessica Miller Interviewees will Michael Post (Project Manager), Robert George (Mine Superintendent), Peter Easey (Coal Processing Manager), Scott Tuckey (Workshop Supervisor), Des George (Manager Mining Engineering), Danny Young (WHC Group Environmental Manager)		
File/Ref No.		Date	1st, 2nd and 3rd of August 2011
Distribution	As above		

AECOM PPE

Staff will wear full length pants and shirts, safety glasses, steel capped boots and will have safety hats.

Day 1 – Monday 1st August 2011

Location: TBA

Attendees:

Peter Horn – AECOM

Rochelle Lawson – AECOM

Jessica Miller - AECOM

Andrew Wright –Environment Officer – Werris Creek Coal

Interviewee	Time Start	Duration
Administration Andrew Wright	10.00	30 mins
Overview of Conditions and Documentation AECOM	10:30	45 mins
Overview of Werris Creek Operations Andrew Wright	11:15am	15 mins
Review Structure of offset areas and discuss offset strategy Andrew Wright	11.30am	30mins
Lunch	12:00noon	30 min
Werris Creek Offset Site Tour Andrew Wright PH RL and JM.	12:30pm	2.0 hours
Offset Conditions and Documentation AECOM and Andrew Wright	14:30pm	2.5 hours

Finish day 1	17.00pm	

Day 2 – Tuesday 2nd August 2011

Location: TBA

Attendees:

Peter Horn – AECOM

Rochelle Lawson – AECOM

Jessica Miller – AECOM

Andrew Wright –Environment Officer – Werris Creek Coal

Interviewee	Time Start	Duration
Administration	8:30am	30 mins
Werris Creek Mine Tour Andrew Wright	9:00am	2 hours
Consent Conditions, EPL, other approvals Andrew Wright • Traffic & transport • Visual impact • Flora & Fauna	11.00am	1 hour
Lunch	12:00 noon	30 min
Environmental Monitoring Andrew Wright	12:30pm	1 hour
Mine Planning, Blasting and Water Management Project Manager, Mine Superintendent, Drill & Blast Supervisor, Orica Representatives	13:30pm	1 hour
Environmental Management, Audits and Reporting Andrew Wright	14.30pm	1 hour
Fill, extra questions re Offsets or other information to date Andrew Wright	15.30pm	1 hour float
Finish Day 2	16.30pm	

Day 3 – Wednesday 3rd August 2011

Location: TBA

Attendees:

Peter Horn – AECOM

Rochelle Lawson – AECOM

Jessica Miller - AECOM

Andrew Wright –Environment Officer – Werris Creek Coal

Interviewee	Time Start	Duration
Administration	8:30am	30 mins
Consent Conditions, EPL, other approvals Andrew Wright • Air Quality • Noise • Aboriginal Cultural Heritage • Land & Property • Bushfire • Waste • Training	9:00am	2.0 hours
Workshop Workshop Supervisor	11.00am	15 mins
Coal Processing & Rail Load-out Facility Coal Processing Manager	11.15am	15 mins
Rehabilitation Andrew Wright	11.30am	30 mins
Lunch	12:00	30 min
Rehabilitation Andrew Wright	12:30pm	1 hour
Float time for final tidy up AECOM	13:30pm	1 hour
Close out Meeting – Potential Non-Compliances and Recommendations AECOM	14:30pm	45 mins
Finish Day 3	15.15pm	

This page has been left blank intentionally.

Appendix C

Audit Protocol DA-172-7-2004 (as modified)

Appendix C Audit Protocol DA-172-7-2004 (as modified)

Condition	Requirement	Evidence	Audit Finding
SCHEDULE 3 – ADMINISTRATIVE CONDITIONS			
Obligation to Minimise Harm to the Environment			
1	Implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.	This audit has found that WCC is fulfilling the majority of its environmental conditions and commitments by carrying out well organised monitoring systems and applying best practice principles in maintaining offset biodiversity.	Compliant
Terms of Approval			
2	Carry out development generally in accordance with the:		
2(a)	DA 172-7-2004	This document.	
2(b)	EIS titled *Environmental Impact Statement for the Proposed Werris Creek Coal Mine, and Specialist Consultant Studies Compendium*, dated August 2004, and prepared by R.W. Corkery & Co. Pty. Limited.	See **Appendix D**.	See Comments
2(c)	Letter from the Applicant, dated 31 December 2004, including the relocated position of the mine access entrance and road.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(d)	Document titled, *Application to Modify Conditions 4(48) and 4(51) of Development Consent DA-172-7-2004*, dated October 2005, prepared by Werris Creek Coal Pty Ltd.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(e)	Document titled, *Application to Modify Condition 44 of Development Consent DA-172-7-2004*, dated 11 December 2006, prepared by Werris Creek Coal Pty Ltd.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(f)	The Statement of Environmental Effects titled *Statement of Environmental Effects for Minor Modifications to Werris Creek Coal Mine prepared by Werris Creek Coal Pty Limited* and dated June 2008 (the SEE).	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(g)	The Response to Submissions *titled Werris Creek Coal Pty Ltd Response to Public and Government Agency Submissions Modification Application to DA-172-7-2004 (MOD 3)* prepared by Werris Creek Coal Pty Limited and dated July 2008.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify

Condition	Requirement	Evidence	Audit Finding
2(h)	The Statement of Environmental Effects titled *Statement of Environmental Effects – Precursor Storage Facility at Werris Creek Coal Mine & Alternative Biodiversity Offset Area for Werris Creek Coal Mine* prepared by Werris Creek Coal Pty Limited and dated November 2008.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(i)	*Statement of Environmental Effects for a modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* prepared by RW Corkery & Co Pty Limited, dated March 2009.	See **Appendix E**.	Not Able to Verify
2(j)	*Response to Submissions for the Statement of Environmental Effects for a Modification to the Mining Area and Related Activities at the Werris Creek Coal Mine* prepared by RM Corkery & Co Pty Limited, dated July and August 2009.	Due to time constraints on the audit team, this was unable to be audited.	Not Able to Verify
2(k)	The conditions of this consent.	In general the site is being conducted in accordance with this DA. Refer to this document and Table 5 of the IEA report for a list of the non compliances that were found against DA-172-7-2004.	Complies
3	If there is any inconsistency with the above documents, the latter document shall prevail over the former to the extent of the inconsistency. However, the conditions of this consent shall prevail over all other documents to the extent of any inconsistency.	This condition is not relevant to the audit.	Not Triggered
4	Shall comply with any reasonable requirements of the Director-General arising from DP&I's assessment of:	This condition is not relevant to the audit.	Not Triggered
4(a)	Any reports, plans or correspondence that are submitted in accordance with this consent	This condition is not relevant to the audit.	Not Triggered
4(b)	The implementation of any actions or measures contained in these reports, plans or correspondence	This condition is not relevant to the audit.	Not Triggered
4A	Shall prepare revisions of any strategies, plans or programs required under this consent if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.	All strategies required to be prepared have been prepared.	Complies

Condition	Requirement	Evidence	Audit Finding
Limits on Approval			
5	This consent lapses 15 years after the date it commences.	This is not relevant to the current auditing period.	Not Triggered
6	Not extract more than 2 million tonnes of ROM coal/year.	AEMR 2008-2009 states that during that reporting period, 958,935 tonnes of ROM coal were produced. AEMR 2009-2010 states that during that reporting period, 1,220,910 tonnes of ROM coal were produced. AEMR 2010-2011 states that during that reporting period, the WCC produced 1,323,205 t of ROM coal (AEMR Section 2.4).	Complies
7	Not transport more than 50,000 tonnes of saleable coal a year from the mine by public road.	Since the 2008 URS audit, a system has been implemented to ensure compliance with this amount. A spreadsheet recording system was sighted by the auditors demonstrating this compliance.	Complies
7A(a)	Ensure rail load-out coal stockpile does not exceed 15 m in height.	The Environmental Officer conducts end of month surveys to verify this. A system is in place to monitor this compliance using contour lines on an aerial figure. This was sighted by the auditors. Dozer drivers also visually check this.	Complies
7A(b)	Ensure rail load-out stockpile does not contain more than 100,000 tonnes of coal.	The Environmental Officer conducts end of month surveys to verify this. A system is in place to monitor this compliance using contour lines on an aerial figure. This was sighted by the auditors. Dozer drivers also visually check this regularly.	Complies
Structural Adequacy			
8	Ensure all new buildings/structures are constructed according to relevant BCA requirements. Note: (a) Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works. (b) Part 8 of the EP&A Regulation sets out the requirements for the certification of development.	There was a recommendation from the 2008 URS Audit stating that WCC needed to obtain copies of construction/occupation certificates from Liverpool Plains Shire Council relating to site office erection. These certificates were sighted during this audit.	Complies

Condition	Requirement	Evidence	Audit Finding
Demolition			
9	Ensure any demolition work is carried out according to *AS 2601-2001: The Demolition of Structures*.	An interview with the Environmental Officer confirmed that no demolitions have occurred during this audit period.	Complies
Operation of Plant and Equipment			
10(a)	Ensure plant/equipment used onsite, or to transport coal offsite are maintained in proper/efficient condition.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. Before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
10(b)	Ensure plant/equipment used onsite, or to transport coal offsite are not operated in proper/efficient manner.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. Before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
11	Before carrying out development (or as otherwise agreed by Council) shall pay Council (a) $20,000 for Werris Creek Rail Museum and (b) $15,000 for youth facilities for Werris Creek.	These conditions were met at the time of the 2008 URS audit and are not required to be addressed again.	Not Triggered
12	Before 31 December 2008, enter road maintenance agreement with Council for public roads maintained with Council funds used for transport of saleable coal from the development, to D-G's satisfaction.	A document containing the relevant Road Maintenance Agreement between WCC and LPSC made on 20/07/2009 was sighted during the audit.	Complies

Condition	Requirement	Evidence	Audit Finding
SCHEDULE 4 – SPECIFIC ENVIRONMENTAL CONDITIONS			
1	Ensure dust emissions generated by development don't exceed air quality criteria in Tables 1, 2 and 3 at any residence or on more than 25% of any privately owned land.	Section 3.1.3 (Table 3.3) of AEMR 2010-2011 advises that mean dust deposited monitoring results complies with Table 3 of DA-172-7-2004 (as modified) (≤3.6gm/m^2 per month). Table 3.4 of AEMR 2010-2011 indicates that Southern Boundary property (WC6) had exceedances of this average annual limit between 2005 and 2009. However, since the 2009-2010 reporting period it has been compliant. Section 3.1.4 AEMR 2010-2011 explains how during the reporting period, none of the criteria in Table 1 were exceeded. Table 3.6 of AEMR 2010-2011 shows how WCC has remained compliant with these conditions since 2005.	Complies
2	If dust generated exceeds criteria in Tables 4, 5 and 6 at any residence, or on more than 25% of any privately owned land, and then receives written request from landowner, must initiate independent review and if required, acquire land according to conditions in the DA.	An interview with the Environmental Officer confirmed that WCC has never received such a request from a landowner.	Not Triggered
Operating Conditions			
3	Carry out development in a way that prevents/minimises pollution generation.	An interview with the Environmental Officer confirmed that the WCC site is being managed in a way that minimises pollution wherever possible. Water carts are constantly used onsite for dust suppression through water spraying. All plant and equipment are maintained as efficiently as possible. Efficient mining design was undertaken to minimise greenhouse gas emissions.	Complies
4(a)	Ensure visible air pollution generated by development is regularly assessed. Operations relocated, modified, stopped as required to minimise air quality impacts on privately owned land and ensure visibility and safety of motorists.	Regular inspections (usually daily) are undertaken by the Environmental Officer for visual dust plumes. Photographic assessments of visual dust are generally undertaken once a week (Environmental Officer takes photographs of the mine from the southern end of Werris Creek town). The audit team viewed this photographic monitoring data during the site visit.	Complies

Condition	Requirement	Evidence	Audit Finding
4(b)	Ensure trucks entering/leaving site have loads covered.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible.	Complies
4(c)	Implement all practicable measures to minimise the offsite odour and fume emissions generated by any spontaneous combustion or blasting.	Interviews with the Environmental Officer and blasting contractor (Orica) staff confirmed that water carts are on standby to assist at all blasting events. A fire has never resulted at the mine site from blasting activities. Orica, the contractor who carries out blasting uses a score system to rate the results of each blast. Any blast scoring over 2 has to be monitored further. There have been some complaints during this audit period in relation to fume odour.	Complies
Additional Air Quality Mitigation Measures			
5	If receive written request from landowner where subsequent dust monitoring shows dust generated is greater than deposited dust criteria in Table 6, must consult with landowner, install first flush system (or similar) on tank water used for drinking.	An interview with the Environmental Officer confirmed that WCC has never received such a request from a landowner.	Complies
Monitoring			
6	By May 2005, prepare/implement Air Quality Monitoring Program in consultation with OEH. Include protocol for evaluating compliance with air quality impact assessment and land criteria in DA.	Original version of the Air Quality Monitoring Program was approved by DP&I on 20 June 2005. The latest version of this was approved by DP&I in letter 23 September 2009 (Air Quality Monitoring Program (WCL, 2009).	Complies
NOISE – Noise Impact Assessment Criteria			
7	Ensure noise generated does not exceed criteria in at any residence on privately-owned land.	Two monitored exceedances occurred in 2008. These are as follows: - 44 dB(A) at Cintra property on 30 June 2008 at 3:29 pm; and - 36dB(A) at Mountain View property on 15 September 2008 at 10:05 pm. One monitored exceedance occurred on 15 October 2009 at the Marengo property. This exceedance occurred at 8:02 am and the noise emanating from WCC was measured to be 40 dB(A)$_{LAeq(15minute)}$, whereas the criteria in	Not Compliant Recommendation Made

Condition	Requirement	Evidence	Audit Finding
		Condition 7 specify $_{35LAequ(15minute)}$. Cintra was subsequently purchased by WCC on 31 March 2010, and Marengo on 17 May 2010. The results of noise monitoring should be closely monitored and operations adjusted as required to reduce impacts.	
NOISE - Rail Noise Impact Assessment Criteria			
8	Ensure noise generated by shunting operations does not exceed criteria in Table 8.	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified.	Complies
NOISE - Land Acquisition Criteria			
9	If noise generated exceeds criteria in Table 9 and receive written request from landowner, initiate independent review and if required, acquire land according to conditions in the DA.	An interview with the Environmental Officer confirmed that the purchases of surrounding land to date have all been the result of private agreements, and the formal procedures outlined in this condition have not been relied upon.	Not Triggered
NOISE - Operating Conditions			
10	Ensure reversing alarms fitted to vehicles onsite have mid-high frequency broadband as described in the EIS.	An interview with the Workshop Supervisor confirmed that there is a system in place whereby vehicles and plant have to go through safety checklist to ensure this type of alarm is fitted. A qualified mechanic performs this check. This procedure also applies to contractors brining new plant onto site.	Complies
NOISE - Rail Spur Management Plan			
11	Prepare/implement Rail Spur Management Plan for shunting operations in consultation with ARTC and the company providing rail freight services to WCC. Shall not carry out shunting until D-G has approved Plan. Plan must include:	The *Rail Spur Management Plan (WCC June 2005)* satisfies these requirements. Section 9.1 deals with noise monitoring. Section 8 deals with mitigation measures.	Complies
11(a)	Noise monitoring program for privately owned residences in proximity to spur line/rail load-out facilities.	The *Rail Spur Management Plan (WCC June 2005)* satisfies these requirements. Section 9.1 deals with noise monitoring. Section 8 deals with mitigation measures.	Complies

Condition	Requirement	Evidence	Audit Finding
11(b)	Measures to reduce noise/vibration impacts on impacted residences.	The *Rail Spur Management Plan (WCC June 2005)* satisfies these requirements. Section 9.1 deals with noise monitoring. Section 8 deals with mitigation measures.	Complies
11(c)	Measures to avoid/minimise impacts other than noise/vibration including train headlights and interruption of public road access across spur line.	The *Rail Spur Management Plan (WCC June 2005)* satisfies these requirements. Section 9.1 deals with noise monitoring. Section 8 deals with mitigation measures.	Complies
NOISE - Operating Hours – Construction Stage			
12	Can operate between 7:00am-6:00pm Monday-Friday and 8:00am-6:00pm Saturday excluding public holidays during construction. Construction not to commence until 8:00am if there are temperature inversion conditions or southeast winds > 3m/s and northwest winds > 3 m/s without OEH approval. Shall notify DP&I of commencement date of construction.	Stage 2 commenced in 2006 and so these requirements are not relevant to the current auditing period.	Not Triggered
NOISE – Operating Hours – Stage 1 Operations			
13	After completing an eastern acoustic bund 15m tall, may operate mine between 7:00am-10:00pm Monday-Friday and 8:00am-2:00pm Saturday, excluding public holidays. Must not commence until 8:00am if there are temperature inversion conditions or southeast winds > 3m/s and northwest winds > 3 m/s without OEH approval. Shall notify DP&I of date Stage 1 operations commence.	Stage 2 commenced in 2006 and so these requirements are not relevant to the current auditing period.	Not Triggered
14	In addition to Cl 13, may operate train load-out facility between 2:00pm-10:00pm Saturday, excluding public holidays. Maintenance may take place 24 hours/day Monday-Saturday.	Stage 2 commenced in 2006 and so these requirements are not relevant to the current auditing period.	Not Triggered
Operating Hours – Stage 2 Operations			
15	Undertake acoustical validation study, in manner approved by OEH, of predicted noise impacts contained in EIS against measured noise impacts of 1st 6 months of mining operations. If OEH satisfied with study, may progress to Stage 2 operations. Stage 2 operations include:	The 2008 URS Audit states that DP&I approved the mine to progress to Stage 2 Operations in a letter dated 9 January 2006. An interview with the Environmental Officer confirmed that the mine currently operates with 2 x 10.5 hour shifts between 7am-4am on weekdays. Reduced hours are undertaken on Saturdays as required. Maintenance staff are present onsite for 2 x 12 hour shifts 24 hours a day.	Complies
15(a)	12:00pm-4:00am and 7:00am-12:00pm Monday-Friday.		
15(b)	12:00pm-4:00am and 7:00am-2:00pm Saturday.		
15(c)	Onsite processing of coal permitted between additional hours 2:00pm-10:00pm Saturday.		

Condition	Requirement	Evidence	Audit Finding
15(d)	Overburden removal and emplacement permitted any time Monday-Saturday.		
15(e)	Operation of coal load-out facility and maintenance activities permitted at any time Monday-Sunday.		
	Note: Stage 2 operating hours do not apply to blasting (see conditions 20 and 23) or to the dispatch of coal by road (see condition 52).		
Monitoring			
16	Before commencing development, prepare Noise Monitoring Program for the development in consultation with OEH. Must include noise monitoring protocol for evaluating compliance with criteria in conditions 7, 8 and 9.	The Noise Management Protocol & Noise Monitoring Program for the Werris Creek Coal Mine (WCL, November 2010) (most updated version) meets this requirement.	Complies
Additional Noise Mitigation Measures			
16A	If noise monitoring shows noise generation ≥ 38 dB(A) $L_{Aeq(15\ minutes)}$ at any privately owned resident (except where separate agreement or acquisition negotiations in place), and receive request from landowner, shall implement additional noise mitigation such as double glazing/insulation. If within 3 months no agreement, refer to D-G for resolution.	This was not triggered during the audit period.	Not Triggered
METEOROLOGICAL MONOTORING			
17	By July 2005, ensure there's a suitable meteorological station operating in the vicinity of the development according to requirements of Approved Methods for Sampling Air Pollutants in NSW and to OEH's/D-G's satisfaction.	There is a meteorological station operating, and reports were made about this in 2008-2009 AEMR, and again in the 2010-2011 AEMR. 2009 URS Audit states email from OEH 7 March 2005 indicated that the weather station appeared to be consistent with the requirements of AS2923-1987. The weather station was reported to be installed before operations began at the site, and that results from the station were also included in 2010-2011 AEMR.	Complies

Condition	Requirement	Evidence	Audit Finding
BLASTING & VIBRATION			
Airblast Overpressure Limits			
18	Ensure airblast overpressure from blasting at the development doesn't exceed criteria in Table 10 at any residence on privately owned land.	During 2010-2011, no exceedances of the 120dB(A) in Table 10 occurred. Only two blasts above the 115dB(A) criteria occurred, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of these criteria occurred.	Complies
Ground Vibration Impact Assessment Criteria			
19	Ensure ground vibration from blasting at the development doesn't exceed criteria in Table 11 at any residence on privately owned land or noise sensitive locations as defined in OEH's Industrial Noise Policy (note: INP defines 'noise sensitive locations' as residential premises, schools, hospitals, places of worship, parks and wilderness areas).	During 2010-2011, no exceedances of the 10mm/s in Table 11 occurred. Only two blasts above the 5mm/s criteria occurred, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of these criteria occurred.	Complies
Blasting Hours			
20	Only carry out blasting at the development between 10:00am-4:00pm Monday-Friday during Construction Stage and 9:00am-5:00pm for Stages 1 and 2, except for further restrictions under Cl 22. No blasting on Saturdays, Sundays, public holidays or any other time without OEH approval.	During the reporting period, blasting has only been carried out during the approved hours. The audit team viewed monitoring records of all blasts that occurred during the auditing period. Blasting generally takes place during the lunch period between 12:00am and 2:00pm during lunch breaks when personnel are already out of the mine site. When more than one blast has been required, the approval of OEH has been sought (e.g. for the two blasts occurring on 5 November 2010 - Appendix 6 to AEMR 2010-2011).	Complies
Blasting Frequency			
21	Not more than 1 blast a day at the site without OEH approval.	During the report period, when more than one blast has been required, the approval of OEH has been sought (e.g. for the two blasts occurring on 5 November 2010 - Appendix 6 to AEMR 2010-2011).	Complies

Condition	Requirement	Evidence	Audit Finding
Monitoring			
22	Prior to any blasting, must prepare an implement a detailed Blasting Monitoring Program for the development in consultation with OEH and to D-G's satisfaction. Shall monitor airblast overpressure and ground vibration impacts of blasting operations of the development at privately owned residences or noise sensitive locations as defined in INP (note: INP defines 'noise sensitive locations' as residential premises, schools, hospitals, places of worship, parks and wilderness areas). Must use monitoring parameters in Table 12.	The Werris Creek Coal Blasting Monitoring Program (WCL, 2010) meets these requirements. It is a revised version approved by DP&I in December 2010 for amended monitoring locations following property acquisitions and procedures for continuous noise monitoring and truck operation noise mitigation. Section 3.7 of AEMR 2010-2011 outlines the compliance with this monitoring.	Complies
Blasting in Proximity to the Quirindi to Werris Creek Road			
23	Prepare/implement Traffic Management Plan in consultation with Council and DP&I to D-G's satisfaction for blasting activities requiring temporary closure of Quirindi to Werris Creek Road. Include: (a) adequate warning to road users prior to blasting; (b) follow up inspections are made to ensure that public roads are safe and clear of debris; (c) and blasting does not occur at any time during which delays the transportation of children to/from school.	The 2008 USR audit report states that WCC personnel present onsite since December 2007 were not aware that the road had been closed in the past. It was indicated in a letter from WCC to DP&I, dated 4 July 2005 that road closure requirements were not projected to arise until 2008. It was not determined whether the road will need to close in the future. The WCC Coal Procedure Road Closure (WCL, 2010) details these issues and has been approved by DPI, LPCC, and DP&I.	Complies
Public Notice			
24	During the life of the development, shall:	The general complaints/information hotline operated by the Environmental Officer serves this function. During the site visit, the audit team observed the Environmental Officer efficiently dealing with complaints received via this hotline. Most of the areas within 2 km of the mine are owned by WCC. Closest landowner is now 2.7 km from mine. Nearby landowners are consulted with regularly, and receive monitoring reports with WCC contact details on them.	Complies
24(a)	Operate blasting hotline, or alternative as agreed to by D-G to enable public to get up-to-date blasting information.		
24(b)	Annually notify landowners/occupiers of any land within 2 km about this hotline/system.		

Condition	Requirement	Evidence	Audit Finding
Property Inspections			
25	Before any blasting, advise all landowners within 2 km and any other landowners nominated by D-G, that they are entitled to property inspection.	The closest landowner is within 2.7 km of the mine, so this provision is not triggered. However, WCC continues to consult with other nearby landowners in relation to blasting in general.	Not Triggered
26	If receive written request for property inspection from landowner within 2 km/landowner nominated by D-G, they are entitled to inspection. Within 3 months of request, must:	The closest landowner is within 2.7 km of the mine, so this provision is not triggered. However, WCC continues to consult with other nearby landowners in relation to blasting in general.	Not Triggered
26(a)	Commission qualified inspector (approved by D-G) to investigate;		
26(b)	Give landowner copy of report.		
Property Investigations			
27	If landowner within 2 km/nominated by D-G claims their property is damaged through blasting, must: - Commission qualified inspector (approved by D-G) to investigate; and - Give landowner copy of report. If investigations confirm this as cause, and both parties agree, WCC will repair the damage to D-G's satisfaction. If disagreement, refer to D-G.	The closest landowner is within 2.7 km of the mine, so this provision is not triggered. However, WCC continues to consult with other nearby landowners in relation to blasting in general.	Not Triggered
SURFACE & GROUND WATER			
Pollution of Waters			
28	Except under EPL, shall comply with s120 POEO Act (note: s120 makes it an offence to pollute any waters).	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria, resulting in a contravention of Section 120 *Protection of the Environment Operations Act 1997*. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days.	Not Compliant Recommendation Made

Condition	Requirement	Evidence	Audit Finding
		The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	
Discharge Limits			
29	Except under EPL, ensure discharges from licensed discharge points comply with limits in Table 13.	All but one of the discharge events from the licensed water discharge points complied with the Table 13 criteria. On 16 November 2010, a discharge from SB2 exceeded pH criteria by 0.09 (8.59 rather than 8.5). Subsequent monitoring of the Quipolly Creek indicated that this discharge did not impact the water quality of the creek. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days. The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	Not Compliant Recommendation Made
Groundwater Contingency Plan			
30	By July 2005, prepare Groundwater Contingency Plan to D-Gs satisfaction. Must:	This is included as part of Section 7.4 and Appendix 1 of Werris Creek Coal Mine Site Water Management Plan (WCL, 2009). This Contingency Plan was originally prepared in August 2005.	Complies
30(a)	Include program to establish the natural variability of groundwater quality and quantity.		
30(b)	Establish trigger levels, benchmarks and contingency criteria.		
30(c)	Provide measures to mitigate any impacts of the mine on the quality/quantity of groundwater supplies available on privately owned land.		
30(d)	Provide for negotiated agreements with affected landowners, including compensation where landowners incur costs.		

Condition	Requirement	Evidence	Audit Finding
Site Water Balance			
31	Annually must:	This has been prepared in each AEMR for this reporting period (Section 2.8.8 of 2010-2011 AEMR, and Sections 2.8.2 of the 2008-2009 and 2009-2010 AEMRs).	Complies
31(a)	Review site water balance for development against predictions in the EIS.		
31(b)	Recalculate site water balance for the development.		
31(c)	Report results in AEMR to D-G's satisfaction.		
Site Water Management Plan			
32	Before any doing any development, shall prepare Site Water Management Plan in consultation with OEH and to D-G's satisfaction. Must include:	The Werris Creek Coal Mine Site Water Management Plan (WCL, 2009) fulfils these requirements.	Complies
32(a)	Predicted site water balance.		
32(b)	Erosion and Sediment Control Plan.		
32(c)	Surface Water Monitoring Program.		
32(d)	Groundwater Management Plan.		
32(e)	Strategy for decommissioning of water management structures on the site.		
33	The Erosion and Sediment Control Plan shall:	This is included as part of Section 5.0 of Werris Creek Coal Mine Site Water Management Plan (WCL, 2009).	Complies
33(a)	Be consistent with requirements of Blue Book.		
33(b)	Identify activities for construction/operational phases of the development that could cause soil erosion/generate sediment.		
33(c)	Describe location, function and capacity of erosion and sediment control structures.		
3(d)	Describe measures to minimise soil erosion/potential for migration of sediments to downstream waters.		
34	Site Water Management Plan shall include:	This is included as part of Section 6.0 of Werris Creek Coal Mine Site Water Management Plan (WCL, 2009).	Complies
34(a)	Surface water impact assessment criteria.		
34(b)	Program to monitor the land in waste water utilisation area(s) and receiving waters.		

Condition	Requirement	Evidence	Audit Finding
34(c)	A program to monitor the quality of water contained in, or discharged from, water storages (including the mining void) associated with the development.		
34(d)	A program to monitor surface water flows and quality upstream and downstream of the confluence of the Northern catchment into Werris Creek and the Southern catchment into Quipolly Creek.		
34(e)	A program to monitor the effectiveness of the Erosion and Sediment Control Plan.		
35	The Ground Water Management Plan must cover the full cycle of operations from pre-mining to completion of rehabilitation/restoration of all groundwater. Must include:	This is included as part of Section 7.0 of Werris Creek Coal Mine Site Water Management Plan (WCL, 2009).	Complies
35(a)	Clearly defined objectives for the GWMP.		
35(b)	Release criteria applicable to the objectives of the GWMP.		
35(c)	Identification of monitoring bores and piezometers which are representative of those areas likely to be impacted within and around the operational area.		
35(d)	Inclusion of at least 1 monitoring bore at a location outside the predicted influence of the mine, within the regional fractured rock layer.		
35(e)	Inclusion of bores representative of groundwater use in the area, including the shallow aquifer adjacent to Quipolly Creek.		
35(f)	Pre-mining and post-mining, for a period of 10 years after mining has ceased, monitoring of watertable levels and water quality.		
35(g)	Analytes to be monitored.		
35(h)	Procedures for sampling and monitoring.		
35(i)	Frequency of readings in relation to all specified parameters.		
35(j)	Levels of readings indicating contamination/impacts of the groundwater.		
35(k)	Procedures for investigation of detected contamination/impacts.		

Condition	Requirement	Evidence	Audit Finding
Independent Review of Monitoring			
36	Provide to DP&I annual review and report on surface and groundwater monitoring and observable trends. Report completed by suitable qualified/independent hydrogeologist approved by D-G.	The Final Void Management Plan Werris Creek Coal (AECOM, 2010) meets these requirements (a)-(b). Table 2 of the FVMP outlines how the FVMP meets these requirements.	Complies
Final Void Management			
37	At least 3 years before mining ceases, or as D-G directs, must prepare/implement FVMP in consultation with DP&I and OEH to D-G's satisfaction. Must: (b) (c)	The Final Void Management Plan Werris Creek Coal (AECOM, 2010) meets these requirements (a)-(b). Table 2 of the FVMP outlines how the FVMP meets these requirements.	Complies
37(a)	Investigate options for future use of the final void.		
37(b)	Re-assess potential groundwater impacts of the development.		
37(c)	Describe what actions/measures would be implemented to: - Minimise potential adverse impacts associated with final void; and how to - Manage/monitor these over time.		
FLORA AND FAUNA			
Biodiversity and Offset Strategy			
38	Implement Biodiversity Offset Strategy (as per Table 16 and Figure in Appendix 3) according to best practice flora/fauna management to D-G's satisfaction.	This was an outstanding issue after the 2008 URS audit. *The Biodiversity Offset Strategy and Management Plan Werris Creel Biodiversity Offset Strategy (Eco Logical, 20 October 2010)* now complies with this condition. A letter has been sighted from DP&I dated 6 July 2011 which approves the appointment of AECOM staff to undertake an independent audit of the BOMP. Thus it can be inferred that the DP&I have approved this BOMP.	Complies
Agreement to Conserve Offset Area			
39	Before 30 June 2010, must implement suitable arrangements for long term security of the offsets in the BOS to D-G's satisfaction (either through Deed of Agreement with Minister, rezoning land under LEP, caveats on title under *Conveyancing Act 1919*.	Long term security of the Biodiversity Offset Areas has not been finalised. On 18 June 2010, WCC did submit a proposed caveat to DP&I (the due date for the security to be finalised being 30 June 2010). However, this proposed caveat was rejected by DP&I. WCC are still engaged in negotiations with DP&I to finalise the security of this land.	Not Compliant Recommendation Made

Condition	Requirement	Evidence	Audit Finding
		WCC have shown best endeavours to achieve this timeframe in relation to the long term security issue. It is recommended that WCC follows up with DP&I to bring these negotiations to a close.	
Biodiversity Offset Management Plan			
40	Prior to 31 August 2009, the Applicant shall prepare and subsequently implement a Management Plan for the Biodiversity Offset Strategy to the satisfaction of the Director-General. This plan must include:	The original Biodiversity Offset Strategy was prepared as part of original EIS in 2004. This BOS was approved by DP&I. In 2007, WCC applied to extend mine and revised BOS approved September 2008. Further consent to modify operations was given in September 2009 which led to another revision of BOS. The current version is Biodiversity Offset Strategy & Management Plan: Werris Creek Biodiversity Offset Strategy (Eco Logical, 2010). This was accepted by DP&I in August 2010 as being consistent with original BOS in original DA-172-7-2004. See Table 1 of BOMP for breakdown of compliance with subsections (a)-(d).	Complies
40(a)	A description of the BOS.		
40(b)	Assessment and completion criteria.		
40(c)	Flora and Fauna monitoring program for the BOS.		
40(d)	Detailed description of procedures applied to the BOA, including: - Erosion and sediment control. - Soil and water management. - Bushfire management. - Exclusion of domestic livestock grazing. - Weed management, targeting major woody and noxious weeds. - Retention of regrowth native vegetation. - Maintaining availability of a suitable fire control unit onsite. - Limiting human access to the offset area to authorised personnel only. - Retaining all dead timber and fallen logs. - Retaining bush rock *insitu.* - Carrying out infill planting of native vegetation tubestock. - Feral animal control.		
Annual Review of Biodiversity Offset Management Plan			
41	Shall: (a) annually review performance under BOMP; (b) if necessary revise the BOS to D-G's satisfaction.	The Werris Creek Coal Mine - Biodiversity Offset Area Annual Monitoring Report Spring 2010 was prepared by Eco Logical on 23 May 2010. On 30 March 2011, WCC Environmental Officer Andrew Wright conducted annual	Complies

Condition	Requirement	Evidence	Audit Finding
		review of the BOMP by filling out the annual review form stipulated in Appendix 4 of the BOMP as the annual review criteria.	
Independent Audit of the Biodiversity Offset Management Plan			
42	Before 31 August 2011, and every 3 years hereafter, commission and pay cost of Independent Audit of BOMP. Audit must:	The current audit satisfies these requirements. A letter has been sighted from DP&I dated 6 July 2011 which approves the appointment of AECOM staff to undertake an independent audit of the BOMP.	Complies
42(a)	Be conducted by suitably qualified, experienced and independent person approved by D-G.		
42(b)	Assess performance of the BOMP.		
42(c)	If necessary, recommend actions/measures to improve performance of BOMP.		
Conservation Bond			
41	Following independent audit of BOMP at the end of 2011, or prior to the cessation of mining (whichever is 1st), must lodge reasonable conservation bond with DP&I to ensure sufficient resources available to fully implement BOS. Amount of bond is set by D-G and D-G may alter the amount after subsequent audit reports.	These requirements come into effect after the current audit.	Not Triggered
ABORIGINAL AND EUROPEAN HERITAGE			
Conservation of the "Narrawolga" Site			
42	Manage the removal, re-location and protection of the axe-grinding grooves known as Narrawolga Site according to information accompanying modification application DA-172-7-2004 MOD-2 and to D-G's satisfaction.	According to the Archaeology and Cultural Heritage Management Plan (WCL, 2007) page 8, a record of the salvage and removal of the Narrawolga site according to the agreed Management Plan is contained in The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys and Reports Pty Ltd, March 2007.	Complies
Archaeology and Cultural Heritage Management Plan			
43	Prepare/implement ACMP in consultation with OEH and Nungaroo LALC. Plan must:	The Archaeology and Cultural Heritage Management Plan (WCL, 2007) meets these requirements. 2008 URS Audit states that D-G approved this plan on 30 July 2007 (2008 URS Audit Section 4), as a revised edition of the original A&CMP dated May 2005.	Complies
43(a)	Describe in detail a conservation program for Aboriginal cultural heritage during the development.		
43(b)	Establish a consultation protocol, including regular meetings, with		

Condition	Requirement	Evidence	Audit Finding
	the local Nungaroo LALC for Aboriginal cultural heritage management onsite during the development.		
43(c)	Make provision for the local Aboriginal community to monitor works at the development that occur in areas considered by the local Aboriginal community to be culturally sensitive.		
43(d)	Describe the procedures that would be implemented if any heritage or archaeological sites were discovered during the development.		
43(e)	Describe a contingency plan and reporting procedure should damage to Aboriginal sites or places occur at the development.		
43(f)	Describe the induction and training program to be undertaken by all employees and contractors in respect of cultural heritage awareness and protection.		
43	Must not carry out any development until D-G approves this plan.		
45A	Before 31 May 2007, shall revise Werris Creek Coal Mine Archaeology and Cultural Heritage Management Plan in terms of the ongoing management of Narrawolga Site in consultation with OEH, the Nungaroo LALC and other representatives of the local Aboriginal community, to D-G's satisfaction.	The Archaeology and Cultural Heritage Management Plan (WCL, 2007) was prepared in July 2007, so it was a bit late meeting this requirement. 2008 URS Audit states that D-G approved this plan on 30 July 2007 (2008 URS Audit Section 4).	Complies
"Narrawolga" Homestead			
44	By February 2006, ensure qualified heritage architect fully and appropriately records the Narrawolga homestead building in a report that: - Records material elements of the building; and - Identifies materials to be recovered during the demolition of the building for reuse.	During the 2008 URS Audit it was found that a report recording the heritage of the Narrawolga homestead was undertaken in November 2005. The report concluded that "the building does not have any significant material or items that are specifically treated or retained. The audit team were advised that a copy of this report has been provided to the Liverpool Plains Shire Council.	Complies
	Must implement report recommendations and provide copy to Council.		
Reporting			
45	Give detailed progress report on measures implemented to preserve/protect Aboriginal cultural heritage in the AEMR.	Section 3.10 of the AEMR 2010-2011 details the progress of the A&CMP. Sections 3.12 of the 2008-2009 and 2009-2010 AEMRs details the same.	Complies

Condition	Requirement	Evidence	Audit Finding
TRAFFIC AND TRANSPORT			
New Mine Access Road Intersection to Werris Creek Road			
46	Shall:	The 2008 URS Audit states that the access road is understood to have been designed and constructed by Liverpool Shire Council on behalf of WCC. No lighting was observed at the intersection, however, given that the Council designed and constructed the intersection it is considered that this is acceptable.	Complies
46(a)	Before 31 January 2006, design/construct mine access road from mine site to the Quirindi to Werris Creek Road.		
46(b)	Prior to construction of mine site access road/Quirindi to Werris Creek Road intersection, produce a Traffic Management Plan for its construction/operation.		
46(c)	Maintain the intersection for the life of the mine.		
46(d)	Provide street lighting according to local electricity authority guidelines.		
Escott Road and Coal Haul Road Intersection			
47	Shall:	The intersection was observed by the audit team during the site visit and was considered to be maintained in a good condition. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details traffic management issues for the site and has been approved by DPI, LPCC, and DP&I.	Complies
47(a)	Before using coal haul road from the mine site to rail load-out facility, design/construct intersection of coal haul road and Escott Road.		
47(b)	Prior to construction of intersection, produce a Traffic Management Plan for its construction/operation.		
47(c)	Maintain intersection for life of mine.		
47(d)	Provide street lighting according to local electricity authority guidelines.		
Escott Road and Werris Creek Road Intersection			
48	Maintain the Escott Road/Werris Creek Road intersection for the life of mine to Council's satisfaction.	The intersection was observed at the time of the audit and it appeared to be in good condition.	Complies
Internal Roads			
49	Shall tar seal:	Internal roads were observed during the time of the audit to be sealed.	Complies
49(a)	Mine access road before 31 January 2006.		
49(b)	Coal haul road from the mine to the rail load-out facilities prior to their use for coal transport.		

Condition	Requirement	Evidence	Audit Finding
Coal Haulage			
52	Only haul coal from site by road between:	An interview with the Coal Processing Manager confirmed that operational staff are not onsite before 7:00am, so no loading can be undertaken before this time. The procedure for the site is that no trucks are loaded after 4:00pm unless it can be shown that the load will be delivered before 6:00pm.	Complies
52(a)	7:00am-6:00pm Monday-Friday.		
52(b)	7:00am-2:00pm Saturday.		
52(c)	At no time on public holidays.		
52	Not to operate until 8:00am if there are temperature inversion conditions or southeast winds > 3m/s and northwest winds 3 m/s without OEH approval.		
53	Ensure spillage from coal haulage vehicles minimised and sediment laden runoff from roads is effectively managed to prevent harm to environment.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible.	Complies
Monitoring			
54	Shall:	Sections 2.11 of 2008-2009, 2009-2010 and 2010-2011 AEMRs include this information. Ongoing records are maintained of the amounts of coal that are transported offsite.	Complies
54(a)	Keep records of: - Amount of coal transported from site/year; and - Number of coal haulage movements generated by development		
54(b)	Include these figures in AEMR.		
VISUAL IMPACT			
Visual Amenity			
55	Carry out development in a way that prevents/minimises visual impacts, including:	The mine is topographically located in a position where it is hidden from most properties. Progressive rehabilitation is taking place, and tree screens have been installed for one neighbouring property. The bund encapsulated in overburden dump.	Complies
55(a)	Design/construction of infrastructure in manner that minimises visual contrasts.		
55(b)	Progressive rehabilitation of mine overburden emplacements (particularly outer batters) including partial rehabilitation of temporarily inactive areas and proposed topsoil storage stockpiles.		

Condition	Requirement	Evidence	Audit Finding
55(c)	Construction of 15 m high acoustic/visual bund on eastern perimeter of overburden emplacement (parallel to Quirindi to Werris Creek Road) during Construction Stage).		
55(d)	Tree planting on northern and eastern sides of coal stockpile and rail load-out facility to D-G's satisfaction.		
56	If landowner of private residence having direct views of mine/train load-out facility more than 2 km distance requests WCC in writing to investigate ways to minimise the visual impact of the development on their dwelling, within 3 months, Werris Creek must:	This has not occurred during the audit period	Not Triggered
56(a)	Commission suitably qualified person approved by D-G to investigate ways to minimise visual impact from development at the dwelling.		
56(b)	Give landowner copy of visual impact mitigation report.		
56	If parties agree, Werris Creek to implement. If disagree, refer to D-G for resolution.		
Lighting Emissions			
57	Shall:	The Environmental Officer has implemented program of capturing photo data every minute. The audit team viewed this photographic data during the site visit. Any lighting emissions that occur during the day or night are therefore recorded so that issues can be identified. This standard is about types of lights that are installed and is implemented.	Complies
57(a)	Take all practicable measures to mitigate offsite lighting impacts from development.		
57(b)	Ensure external lighting complies with AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting to D-G's satisfaction.		
GREENHOUSE GAS EMISSIONS			
58	Implement Energy Savings Plan for project to D-G's satisfaction. Must:	The Werris Creek Coal - Energy Savings Action Plan (WCL, 2010) meets all these requirements.	Complies
58(a)	Be prepared according to Guidelines for Energy Savings Action Plans (DEUS, 2005).		
58(b)	Include consideration of energy use by mobile equipment/investigate ways to reduce GHG emissions generated by the project, including the use of mains electrical power to operate equipment associated with the coal processing plant and the rail load-out facility.		

Condition	Requirement	Evidence	Audit Finding
58(c)	Be submitted to D-G before 30 June 2010.		
58(d)	Include program to monitor effectiveness of measures to reduce energy use onsite.		
58	Must also report GHG monitoring/management measures in AEMR.		
WASTE MANAGEMENT			
59	Shall:	Receipts received from waste collection contractors are available upon request. All other waste management requirements have been found to be compliant, as per Sections 2.6 of the AEMR 2008-2009, 2009-2010 and 2010-2011. However it is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.	Complies Recommendation Made
59(a)	Monitor amount of waste generated by the development.		
59(b)	Investigate ways to minimise waste generated by the development.		
59(c)	Implement reasonable/feasible measures to minimise waste generated by the development.		
59(d)	Report on waste management/minimisation in the AEMR.		
60	Not cause/permit/allow waste generated outside mine to be received at the mine for storage/treatment/processing/disposal or any waste generated at the mine to be disposed of at the mine, except as expressed by EPL. This only applies to waste activities that require licensing under the POEO Act.	An interview with the Environmental Officer confirmed that no waste generated offsite has been received onsite during the audit period.	Complies
HAZARDS MANAGEMENT			
Spontaneous Combustion			
61	Shall:	Interviews with the Environmental Officer and with blasting contractor (Orica) staff confirmed that water carts are on standby to assist at all blasting events. A fire has never resulted at the mine site from blasting activities. Orica, the contractor who carries out blasting uses a score system to rate the results of each blast. Any blast scoring over 2 has to be monitored further. There have been some complaints during this audit period in relation to fume odour.	Complies
61(a)	Take necessary measures to prevent as far as practical, spontaneous combustion onsite.		
61(b)	Manage any spontaneous combustion onsite to D-G's satisfaction.		

Condition	Requirement	Evidence	Audit Finding
Dangerous Goods			
62	Ensure storage/handling/transport of:	The use of explosives has been approved by the DP&I. A copy of Dangerous Goods notification for diesel storage is maintained onsite. Orica (blasting contractor) maintain dangerous good notifications for explosive goods magazine (the 7 July to 4 June 2012 acknowledgement no is 35/037966 WorkCover). Also have a notification of dangerous goods on premises (diesel storage tanks). Explosive magazines are maintained by Orica. The current WorkCover 35/037161 expires on 27/11/2013. All the Orica staff have licences and training to deal with explosives. Magazine keepers have access to safe to get keys out to get access. Orica keeps database for training.	Complies
62(a)	Dangerous goods is done according to relevant Australian Standards, particularly AS 1940-2004 The storage and handling of flammable and combustible liquids and AS 1596:2008 The storage and handling of LP Gas and the Dangerous Goods Code.		
62(b)	Manage explosives according to DP&I requirements.		
BUSHFIRE MANAGEMENT			
63	Shall:	An interview with the Environmental Officer confirmed that water carts are maintained onsite at all times as standby fire fighting equipment. These water carts were observed throughout the site by the audit team during the site visit. Hoses can be pressurised if needed. Dozers and graders are also available to cut fire breaks if needed. Additional water is also stored onsite.	Complies
63(a)	Ensure development suitably equipped to respond to any fires onsite.		
63(b)	Assist Rural Fire Service and emergency services as much as possible if there's a fire onsite during the development.		
64	Prepare/implement Bushfire Management Plan for site, to satisfaction of Council and Rural Fire Service.	The Bushfire Management Plan for the Werris Creek Coal Mine (WCL, 2007) satisfies this requirement.	Complies
MINE CLOSURE STRATEGY			
Landscape Management Plan			
65	Prepare/implement LMP for development to satisfaction of DPI and D-G. Must:	The Landscape Management Plan - Werris Creek Coal (AECOM, 2010) satisfies these requirements. Letter dated 5/05/2010 from DP&I accepts the LMP. Table 2 of the LMP provides breakdown of how the rehabilitation components of the LMP satisfy this requirement of a rehabilitation plan.	Complies
65(a)	Be prepared in consultation with OEH, NOW and DPI by suitably qualified expert.		
65(b)	Submitted to D-G for approval before 30 August 2010. Include: - Rehabilitation Management Plan; and - Mine Closure Plan. Can negotiate with D-G if unable to provide Mine Closure Plan in 1st copy of this LMP.		

Condition	Requirement	Evidence	Audit Finding
Rehabilitation Management Plan			
66	RMP must include:	The Landscape Management Plan - Werris Creek Coal (AECOM, 2010) satisfies these requirements. Letter dated 5/05/2010 from DP&I accepts the LMP. Table 2 of the LMP provides breakdown of how the rehabilitation components of the LMP satisfy this requirement of a rehabilitation plan.	Complies
66(a)	Objectives for site rehabilitation.		
66(b)	Description of short/medium/long term measures that would be implemented to: - Rehabilitate the site; - Manage the remnant vegetation and habitat onsite; - Maximise effective habitat linkage to surrounding vegetated lands; - Conserve and reuse topsoil; - Control weeds/feral pests/access; and - Manage potential conflicts between the rehabilitation works and Aboriginal cultural heritage.		
66(c)	Detailed performance and completion criteria for the rehabilitation of the site.		
66(d)	Discussion of its relationship with the BOMP.		
66(e)	Detailed description of how the performance of the rehabilitation of the mine would be monitored over time to achieve the stated objectives.		
66(f)	Description of potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigated these risks.		
66(g)	Details of who (by person and position) is responsible for monitoring/reviewing/implementing the plan.		
Mine Closure Plan			
67	Must:	The Mine Closure Plan Werris Creek Coal (AECOM, 2010) meets these requirements set out in (a)-(e). Table 3 MCP outlines how the MCP complies with these individual requirements.	Complies
67(a)	Define objectives/criteria for mine closure.		
67(b)	Investigate options for the future use of the site, including the final void.		

Condition	Requirement	Evidence	Audit Finding
67(c)	Investigate ways to minimise the adviser socio-economic effects associated with mine closure, including reduction in local employment levels.		
67(d)	Describe the measures that would be implemented to minimise/manage the ongoing environmental effects of the development.		
67(e)	Describe how the performance of these measures would be monitored over time.		
SCHEDULE 6 – ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING			
ENVIRONMENTAL MANAGEMENT STRATEGY			
1	Before development, must prepare/implement Environmental Management Strategy (EMS) to D-G's satisfaction. Must:	WCC's Environmental Management Strategy (EMS) was approved by DP&I in a letter dated 7 April 2005. However, this EMS has not been updated subsequent to the last IEA undertaken in 2008. It is recommended that WCC ensures this review and update (if required) of the EMS is actually undertaken following the current audit	Not Compliant Recommendation Made
1(a)	Provide strategic context for environmental management of the development.		
1(b)	Identify the statutory requirements that apply to the development.		
1(c)	Describe in general how the environmental performance of the development would be monitored and managed during the development.		
1(d)	Describe the procedures that would be implemented to: - 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; - Respond to emergencies;		
1(e)	Describe the role, responsibility, authority, and accountability of all the key personnel, involved in environmental management of the development.		
1(f)	Be updated following each Independent Environmental Audit under Cl 6.		

Condition	Requirement	Evidence	Audit Finding
2	Three months after completing Independent Environmental Audit, must review and revise (if necessary) the EMS to D-G's satisfaction.	WCC's Environmental Management Strategy (EMS) has not been updated subsequent to the last IEA undertaken in 2008. It is recommended that WCC ensures this review and update (if required) of the EMS is actually undertaken following the current audit	Not Compliant Recommendation Made
ENVIRONMENTAL MONITORING PROGRAM			
3	Before July 2005, prepare Environmental Monitoring Program (EMP) in consultation with relevant agencies and to D-G's satisfaction. Must consolidate the various monitoring requirements in Schedule 4 into a single document.	2008 URS Audit states that Environmental Monitoring Program was approved by DP&I in a letter dated 18 October 2005.	Complies
4	Within 3 months of Independent Environmental Audit in Cl 6, review and revise if necessary the EMP to D-G's satisfaction.	Sighted letter to Liverpool Plains Shire Council dated 4 September 2009. This letter accompanied copies of management plans that were revised as per the requirements of the 2008 IEA and subsequently approved by DP&I in 2009: Blasting Monitoring Program (24 August 2009); Noise Monitoring Program (24 August 2009); Site Water Management Plan (20 August 2009); and Waste Management Plan (19 August 2009).It is recommended that subsequent to the current audit, WCC ensures that any plans requiring revision are updated within the specified three month period.	Complies
ANNUAL REPORTING			
5	Annually, prepare AEMR to D-G's satisfaction. Must:	AEMRs were prepared for 2008-2009, 2009-2010, and 2010-2011 reporting periods. Have sighted letters approving first two AEMRs. 2010-2011 AEMR yet to receive approval from Departments.	Complies
5(a)	Identify the standards and performance measures that apply to the development.		
5(b)	Include a summary of the complaints received during the past year, and compare this to the complaints received in the previous 5 years.		
5(c)	Include a summary of the monitoring results on the development during the past year.		

Condition	Requirement	Evidence	Audit Finding
5(d)	Include an analysis of these monitoring results against the relevant: - Limits/criteria in this consent; - Monitoring results from previous years; and - Predictions in the EIS.		
5(e)	Identify any trends in the monitoring over the life of the development.		
5(f)	Identify and discuss any non compliance during the previous year.		
5(g)	Describe what actions were, or are being, taken to ensure compliance.		
INDEPENDENT ENVIRONMENTAL AUDIT			
6	At the end of 2008, and every 3 years thereafter, unless D-G directs otherwise, must commission/pay for Independent Environmental Audit. IEA must:	The first Independent Environmental Audit was conducted by URS in 2008. The next Audit due in 2011 and the current Audit by AECOM satisfies these requirements.	Complies
6(a)	Be conducted by a suitably qualified, experienced, and independent person approved by D-G.		
6(b)	Be consistent with ISO 19011:2003 – Guidelines for Quality and/or Environmental Systems Auditing.		
6(c)	Assess the environmental performance of the development, and its effects on the surrounding environment.		
6(d)	Assess whether the development is complying with the relevant standards/performance measures/statutory requirements.		
6(e)	Review the adequacy of EMS and EMP.		
6(f)	If necessary, recommend measures/actions to improve environmental performance and/or the environmental management and monitoring systems.		
7	Within 6 weeks of audit, submit hard copy to D-G with a response to any recommendations contained in report.	A letter was sighted dated 17 November 2008 which was submitted to DP&I along with the 2008 URS audit findings. The audit report is dated 24 October 2008 so this falls within the required six weeks.	Complies

Condition	Requirement	Evidence	Audit Finding
7A	Within 3 months of submitting audit report to D-G, must review and if necessary revise strategies/plans/programs required under this consent to D-G's satisfaction.	Sighted letter to Liverpool Plains Shire Council dated 4 September 2009. This letter accompanied copies of management plans that were revised as per the requirements of the 2008 IEA and subsequently approved by DP&I in 2009: Blasting Monitoring Program (24 August 2009); Noise Monitoring Program (24 August 2009); Site Water Management Plan (20 August 2009); and Waste Management Plan (19 August 2009).	Complies
COMMUNITY CONSULTATIVE COMMITTEE			
7	By May 2005, must establish a Community Consultative Committee to oversee development's environmental performance. CCC shall:	During the 2009-2010 reporting period, only 3 Community Consultative Committee meetings were held, whereas the required amount is 4 per annum (AEMR Table 4.2 2009-2010).	Not Compliant
7(a)	Be comprised of: - 2 representatives from the Applicant, including the person responsible for environmental management at the mine; - 1 representative from Council; and - At least 3 representatives from the local community, approved by D-G in consultation with Council.		
7(b)	Be chaired by the representative from Council or 3rd party as approved by the D-G.		
7(c)	Meet at least 4 times/year, or as determined by D-G.		
7(d)	Review/provide advice on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints.		
8	Must: (a) (b) (c) (e) f) (g) and (h)	CCC meeting minutes were sighted during the audit which complied with these requirements.	Complies
8(a)	Ensure 2 of its representatives attend the CCC meetings.		
8(b)	Provide CCC with regular information on the environmental performance/and management.		
8(c)	Provide meeting facilities for the CCC.		
8(d)	Arrange site inspections for CCC, if necessary.		
8(e)	Take minutes of CCC's meetings.		

Condition	Requirement	Evidence	Audit Finding
8(f)	Make minutes available at Council within 14 days of meeting, or as agreed by CCC.		
8(g)	Respond to advice/ recommendations CCC may have in relation to environmental management/performance.		
8(h)	Forward a copy of the minutes of each CCC meeting, and any responses to CCC's recommendations to the D-G within 1 month of the CCC meeting.		
ACCESS TO INFORMATION			
9	Within 1 month of approval of any management plan/strategy/monitoring program required under DA/ or completion of an IEA, must: provide copy of documents to Council, relevant agencies and CCC; and ensure copy of documents is made publically available at Council to satisfaction of the D-G.	Sighted letter to Liverpool Plains Shire Council dated 4 September 2009. This letter accompanied copies of management plans that were revised as per the requirements of the 2008 IEA and subsequently approved by DP&I in 2009: Blasting Monitoring Program (24 August 2009); Noise Monitoring Program (24 August 2009); Site Water Management Plan (20 August 2009); and Waste Management Plan (19 August 2009).	Complies
10	During life of mine, must:	An interview with the Environmental Officer confirmed that every quarter, environmental monitoring reports (e.g. dust, noise, water quality) are sent to CCC members. Information is available on the WCC website, and information is provided to the public upon request.	Complies
10(a)	Make results of monitoring required under the DA-172-7-2004 (as modified) publically available at the mine.		
10(b)	Update these results regularly (at least every 2 months) to D-G's satisfaction.		

Appendix D

Environmental Impact Statement (2004)

Appendix D Environmental Impact Statement (2004)

Page	Requirement	Evidence	Audit Findings
xxvi	Aboriginal Heritage		
xxvi	The Proponent has reached an agreement with the Nungaroo LALC for ongoing monitoring and adoption of operational safeguards to ensure the Site remained undisturbed.	An Archaeology and Cultural Heritage Management Plan (WCL, 2007) was approved by D-G on 30 July 2007 (2008 URS Audit Section 4), as a revised edition of the original A&CMP dated May 2005. LALC members have been continuously consulted with throughout the life of the project.	Complies
xxvi	Proponent would commit to undertaking the recommendations of the independent blasting assessment to protect the Site whilst mining proceeds towards the nominated limit of mining near the Site.	An Archaeology and Cultural Heritage Management Plan (WCL, 2007) was approved by D-G on 30 July 2007 (2008 URS Audit Section 4), as a revised edition of the original A&CMP dated May 2005. The archaeological site has been removed under archaeological supervision and with LALC approval, and is maintained offsite where it is protected from the impacts of blasting.	Complies
2-22	Soil Inventory		
2-22	The Proponent intends to maintain an inventory of these soils, i.e. the volumes of soils stripped, respread and/or stockpiled would be surveyed and recorded throughout the life of the proposal.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. This was sighted by the audit team. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition. It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	Complies Recommendation
2-26	Overburden and Interburden Blasting		
2-26	During the initial year of mining when all residences and the Werris Creek – Quirindi Road lie outside this 500m setback, the Proponent would monitor the distance fly rock (if any) travels beyond the blast envelope and identify if further safeguards would be required for future blasts during Years 2 to 7 when the Werris Creek – Quirindi Road would lie within 500m of the limit of mining.	This requirement is not relevant to the current audit period.	Not Triggered

Page	Requirement	Evidence	Audit Findings
2-36 – 4-120	**Roads and Rail**		
2-36	The Proponent proposes to construct a purpose-built mine entrance and mine access road for the entry and exit of all mine-related traffic.	This requirement is not relevant to this auditing period. This was undertaken during the previous audit period.	Not Triggered
2-39	The Proponent intends to minimise the number of haul roads constructed external to the mine and overburden emplacement footprint, thereby limiting the overall area of disturbance, maintenance costs, and opportunities for dust generation.	During the site visit the audit team observed that haul road construction has been kept to a minimum.	Complies
2-41	It is the Proponent's intention to pre-fabricate the larger components of the rail load-out facility off the Project Site and transport these to the location following the granting of development consent.	This requirement is not relevant to this auditing period. This was undertaken during the previous audit period.	Not Triggered
4-118	The Proponent is committed to ensuring that the re-opening of the Werris Creek rail siding and increases to the number of trains using the Werris Creek Rail Centre and Main Northern Railway are in line with local and State government guidelines or policies, accepted industry standards and reasonable community expectations. To this end, while there are few safeguards that can be implemented on the movement of rail wagons once loaded, the Proponent intends to maintain communication with local residents and landholders to ensure any negative impacts on amenity or lifestyle would be ameliorated as efficiently as possible.	An interview with the Environmental Officer confirmed that this is undertaken as part of the contract WCC maintains with Pacific National for rail services.	Complies
4-120	Whilst the likely increase in traffic volumes on the Werris Creek – Quirindi Road would be small and therefore the potential for accelerated deterioration of this road negligible, the Proponent would discuss the implementation of a contributions plan with Liverpool Plains Shire Council. These contributions would be sufficient to maintain both the Werris Creek – Quirindi and Escott Roads at their current standards with particular emphasis placed on contributing to the maintenance of the intersections constructed with the mine access and rail load-out roads.	An interview with the Environmental Officer confirmed that all road construction and maintenance at the WCC site has been undertaken in consultation with the Liverpool Plains Shire Council.	Complies
2-43	**Electricity**		
2-43	Following the demolition of the "Narrawolga" residence, the Proponent would assess the feasibility of installing a branch line to the existing line which services the Zeolite Australia Pty Ltd processing plant to supply the fixed Project Site facilities.	This requirement is not relevant to this audit period.	Not Triggered

Page	Requirement	Evidence	Audit Findings
2-51	**Sewage**		
2-51	The Proponent would install adequate toilet and hand-washing facilities within the mine facilities and amenities area for the site workforce and visitors. These facilities would incorporate a biocycle sewage treatment system approved by Liverpool Plains Shire Council. This facility would be serviced by a licensed waste collection and disposal contractor as required.	Section 2.6 of the AEMR 2010-2011 states that WCC has a biocycle sewage treatment system approved by Liverpool Plains Shire Council.	Complies
2-52-53	**Safety and Security**		
2-52-53	Erection of minimum 1.2m high stock fencing around the areas of activity within the Project Site and/or the maintenance of existing fencing within the “Narrawolga”, “Cintra” and “Eurunderee” properties. Internal fencing would also be established and/or maintained to enable the continuance of agricultural activities in areas unaffected by mining and related activities.	The audit team observed fences to be maintained around the project area. All fences in the Biodiversity Offset Area have been pulled down, and rehabilitation areas are also not fenced.	Complies
2-52-53	Maintain a lockable gate at the junction of the mine access road and the Werris Creek – Quirindi Road. The gate would be locked whenever mining and associated activities are not being undertaken within the Project Site, i.e. Typically 2:00pm Saturday to 7:00am Monday.	The audit team observed this gate to be well maintained.	Complies
2-52-53	Position security/warning signs at strategic locations around or within the Project Site indicating the presence of earthmoving and mining equipment, deep excavations and steep slopes. The positioning of signs would depend on the location of the mining activities at any one time. Signs identifying blasting procedures and times would also be installed.	The audit team observed security and warning signs are utilised throughout the site.	Complies
2-52-53	Employee induction in safe working practices and regular follow-up safety meetings and reviews.	This forms part of the employee induction information that was sighted during the audit. An interview with the Environmental Officer confirmed that safety information is regularly discussed at the site.	Complies
2-52-53	Installation of bunds along the margins of all internal haul roads to a height of half the height of the largest mobile equipment’s wheels.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Page	Requirement	Evidence	Audit Findings
2-52-53	Implement appropriate controls with respect to the use of explosives to ensure compliance with Statutory requirements at all times.	The Werris Creek Coal Blasting Monitoring Program (WCL, 2010) meets these requirements. The use of explosives has been approved by the DP&I. A copy of Dangerous Goods notification for diesel storage is maintained onsite. Orica (blasting contractor) maintain dangerous good notifications for explosive goods magazine (the 7 July to 4 June 2012 acknowledgement no is 35/037966 WorkCover). Also have a notification of dangerous goods on premises (diesel storage tanks). Explosive magazines are maintained by Orica. The current WorkCover 35/037161 expires on 27/11/2013. All the Orica staff have licences and training to deal with explosives. Magazine keepers have access to safe to get keys out to get access. Orica keeps database for training.	Complies
2-52-53	Ensure that the Proponent's blasting contractor utilises correct blasting procedures to contain the fragmented rock within the design blast area and to minimise the generation of ground and air vibrations. Further safety measures pertaining to blasting are identified in Section 4.6.4.	The Werris Creek Coal Blasting Monitoring Program (WCL, 2010) outlines the procedures to deal with these requirements. During the audit it was confirmed with Orica blasting contractors that these are the procedures followed.	Complies
2-52-53	Ensure all earthmoving equipment complies with the Mine Mechanical Engineers Minimum Requirements for Mechanical Apparatus and is fitted with appropriate safety equipment, e.g. rollover protection structures and seatbelts, an operating reversing alarm (or other approved warning device) and an approved location and method of operation for the fire suppression system, which would be maintained in a good condition and operated safely at all times.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant. There is a system in place whereby vehicles and plant have to go through safety checklist to ensure this type of alarm is fitted. A qualified mechanic performs this check. This procedure also applies to contractors brining new plant onto site.	Complies
2-52-53	Ensure all size reduction and screening equipment at all times complies with all relevant requirements and standards.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Page	Requirement	Evidence	Audit Findings
2-52-53	Ensure all trucks transporting product coal from the mine, both to the rail load-out facility and domestic customers, are roadworthy, well maintained and are driven in a safe and courteous manner.	An interview with the Coal Processing Manager confirmed that trucks are inspected for maintenance issues at the time they receive their weighbridge documentation. At this time, it is confirmed that the truck load is covered.	Complies
2-53 – 4.44	**Rehabilitation**		
2-53	The Proponent would adopt a progressive approach to the rehabilitation of disturbed areas within the Project Site to ensure that, where practicable, areas where mining or overburden placement are completed are quickly shaped and vegetated to provide a stable landform.	Sterile crops have been planted on topsoil areas to prevent erosion, but rehabilitation has not commenced yet and is not due to commence under the BOMP until December 2011.	Complies
2-53	In the short term, the objective would be to stabilise all earthworks, drainage lines and disturbed areas no longer required for mine-related activities in order to minimise erosion and the generation of sediment-laden water, and to reduce the visibility of the activities from adjacent properties and the local road network. Erosion control would be achieved by the early establishment of a ground cover while appropriately positioned tree lot plantings would assist in creating a visual screen to adjacent properties.	Sterile crops have been planted on topsoil areas to prevent erosion. These seeded topsoil areas were observed by the audit team during the site visit.	Complies
2-53	- Provide a low maintenance, geotechnically stable and safe landform which is commensurate with the agricultural land uses on and around the Project Site and/or nature conservation. - Blend the created landforms with the surrounding land fabric as far as practicable. It is the objective that the vegetated post-mining landform would appear as a natural extension of the existing north-south ridge forming the centre of the open cut mine area. - Revegetate with native tree, shrub and grass species and/or pasture species comparable with either the existing vegetation communities or those which occurred in the area prior to mining and agriculture-related disturbance. Particular emphasis would be placed on the extension of the White Box Yellow Box Blakely's Red Gum Woodland community which occurs within and adjacent to the proposed limit of mining and the proposed out-of-pit overburden emplacement. The deliberate extension of the woodland community would compensate for those areas disturbed by the mine development, link currently isolated remnant pockets	Rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered

Page	Requirement	Evidence	Audit Findings
	of this community, and provide a greater area and more diverse native fauna habitat, and wildlife corridors. - Re-instate as much Class III Land Capability / Class 2 Agricultural Suitability land as possible compared with that disturbed during the mine life.		
2-58-62	Rehabilitation of the overburden emplacement and worked out sections of the open cut mine would involve four basic steps:	Rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
2-58-62	Step 1: Overburden Placement and Shaping - Placement and shaping of the overburden to create slopes with gradients generally less than 10° would be undertaken in a manner which, wherever practicable, ensures that any friable or weathered materials are placed below the subsoil and topsoil layers as a cover over the more competent overburden and interburden materials, thereby avoiding the exposure of large rocks on the final surface.	Rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
2-58-62	Step 2: Subsoil and Topsoil Replacement - Subsoil and topsoil would be placed on the shaped landform in the reverse order to stripping, i.e. subsoil then topsoil, with the materials being preferentially sourced from areas being stripped in advance of mining or, if no such materials are available, from previously established stockpiles. The subsoil layer would be spread on an even but roughened surface which has been ripped along the line of the contour to break any compacted and/or smooth surfaces. Ripping would also assist the keying of the subsoil materials, maximise ingress of water and minimise erosion. The thickness of subsoil and topsoil replaced has been determined based on the: i) areas designated for the various final land uses, i.e. thicker soil layers would be replaced in areas designated for cropping; ii) volumes of the various soils (SMU 1 to 3) on the Project Site; and iii) recommendations of Cunningham (2004a).	Rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
2-58-62	An inventory of soils would be maintained as described in Section 2.4.3.5 to assist the selective use of the soil resources as outlined in Table 2.12.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. This was sighted by the audit team during the site visit. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition.	Complies Recommendation

Page	Requirement	Evidence	Audit Findings
		It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	
2-58-62	Cleared trees, branches of <300mm diameter and other vegetative debris would be spread over those areas designated for native woodland re-establishment. Tree stumps and large roots would be buried within the overburden emplacement with the preferred option of the Proponent to find a commercial market for logs of >300mm in diameter as saw logs, fence posts or firewood.	The audit team observed that cleared trees have been strategically placed on other parts of the site to act as fauna habitat.	Complies
2-58-62	Step 3: Drainage Installation - Contour banks would be progressively installed on the rehabilitated landform. The banks would be constructed with channel back slopes of 10° and channel foreslopes of 40°. The heights (effective depths) and cross-sectional areas of the individual banks would be determined on the basis of the individual sub-catchment areas but would generally be less than 0.7m and 3.0m2 respectively.	This rehabilitation has not taken place yet.	Not Triggered
2-58-62	Step 4: Agricultural Land Pasture Sowing – Revegetation with Grasses and Pasture Species.	This rehabilitation has not taken place yet.	Not Triggered
2-58-62	The topsoiled surface would be sown with a mixture of pasture species appropriate to the season. The seed mixture would include fast growing non persistent cover species and perennial grasses and legumes. A list of suitable warm season grasses, cool season legumes and cool season grasses is provided in Table 2.13. In order to maximise seed germination and establishment, where practicable, sowing would employ scratch or direct seeding techniques in lieu of broadcast seeding, with specialised techniques such as straw mulching, bitumen mulching and hydro-mulching used where rapid soil stabilisation and erosion protection are required.	This rehabilitation has not taken place yet.	Not Triggered
2-58-62	Step 5: Endangered Native Woodlands - Revegetation with Native Species - A selection of locally occurring tree species would be planted on the constructed landform, primarily on the eastern slope of the overburden emplacement and around each of the major water management structures identified on Figure 2.14. The trees would encourage the re-establishment of the pre-agricultural vegetation	This rehabilitation has not taken place yet.	Not Triggered

Page	Requirement	Evidence	Audit Findings
	communities and create habitat corridors for native fauna. In order to compensate for removal of part of the endangered White Box Yellow Box Blakely's Red Gum Woodland community, planting of the species contained within this community would take precedence. Quirindi Community Nursery has commenced collection of seed from the "Narrawolga" property and propagation of seedlings of these and other native tree and shrub species specifically for the proposed revegetation program.		
2-58-62	Seed of locally occurring shrub species would also be broadcast to encourage the re-establishment of the shrub layer and seedlings of these species planted to provide early cover while the broadcast seed germinates and establishes. All areas revegetated to re-instate native woodland would be fenced and all stock excluded. The choice of the eastern slopes of the overburden emplacement for the reestablishment of native woodland communities was made for three reasons: i) Establishing a White Box Yellow Box Blakely's Red Gum Woodland community to the northeast of the limit of mining which would effectively link the native woodland communities retained southwest of the overburden emplacement and to the east of the Project Site; ii) As a result of linking the existing woodland communities comprising mainly White Box Yellow Box Blakely's Red Gum, the continuous vegetation would effectively form a wildlife corridor for use by native fauna species. This would ultimately encourage an increase in the population density of local fauna species and possibly encourage the expansion in habitat of other species not currently represented in this area; iii) Establishing a woodland community along the eastern perimeter of the operation would provide an attractive visual screen for residences east of the Project Site and motorists travelling along the Werris Creek - Quirindi Road.	This rehabilitation has not taken place yet.	Not Triggered
2-58-62	Step 5: Endangered Native Woodlands - Revegetation with Native Species - a selection of locally occurring tree species would be planted on the constructed landform, primarily on the eastern slope of the overburden emplacement and around each of the major water management structures identified on Figure 2.14. The trees would	This rehabilitation has not taken place yet.	Not Triggered

Page	Requirement	Evidence	Audit Findings
	encourage the re-establishment of the pre-agricultural vegetation communities and create habitat corridors for native fauna. In order to compensate for removal of part of the endangered White Box Yellow Box Blakely's Red Gum Woodland community, planting of the species contained within this community would take precedence. Quirindi Community Nursery has commenced collection of seed from the "Narrawolga" property and propagation of seedlings of these and other native tree and shrub species specifically for the proposed revegetation program. Seed of locally occurring shrub species would also be broadcast to encourage the re-establishment of the shrub layer and seedlings of these species planted to provide early cover while the broadcast seed germinates and establishes. All areas revegetated to re-instate native woodland would be fenced and all stock excluded. The choice of the eastern slopes of the overburden emplacement for the reestablishment of native woodland communities was made for three reasons: i) Establishing a White Box Yellow Box Blakely's Red Gum Woodland community to the northeast of the limit of mining which would effectively link the native woodland communities retained southwest of the overburden emplacement and to the east of the Project Site; ii) As a result of linking the existing woodland communities comprising mainly White Box Yellow Box Blakely's Red Gum, the continuous vegetation would effectively form a wildlife corridor for use by native fauna species. This would ultimately encourage an increase in the population density of local fauna species and possibly encourage the expansion in habitat of other species not currently represented in this area; iii) Establishing a woodland community along the eastern perimeter of the operation would provide an attractive visual screen for residences east of the Project Site and motorists travelling along the Werris Creek - Quirindi Road.		
2-63	The Proponent would progressively rehabilitate disturbed areas once they are no longer required for project-related activities and, once rehabilitated, those areas would be well defined to prevent inadvertent passage of vehicles over them.	This rehabilitation has not taken place yet.	Not Triggered

Page	Requirement	Evidence	Audit Findings
4-44	Approximately 71ha of Class 2 Agricultural Suitability / Class III Land Capability land would be disturbed by the proposal. This class land is used predominantly as cropping land on, and surrounding, the Project Site. It is the Proponent's objective to maximise the areas of land available to agricultural cropping on the final landform within the context of other land uses such as nature conservation.	This forms part of the final rehabilitation objectives for the site but this rehabilitation has not commenced.	Not Triggered
2-64	**Noxious Weed Management**		
2-64	The Proponent is conscious of the problems of noxious weed infestation and would take the necessary precautions to prevent the development of excessive weed growth within the rehabilitated areas. The appropriate noxious weed eradication methods and programs would be undertaken in consultation with the Department of Primary Industries (Agriculture) and/or the local Noxious Weed Inspector. This program of inspection and eradication would continue as part of the post-mine ongoing maintenance program.	Ongoing weed inspection and maintenance is undertaken by the Environmental Officer. The Northern Inland Weed Advisory Committee visited mine site and discussed strategies for herbicides for St John's Wort. The outcome has been the effective control of St John's Wort with minimal impact on surrounding native grasses. A site inspection by an ecologist during the audit evidenced that the weed control program appears to be satisfactory. Negotiations with an adjoining landowner have resulted in the Environmental Officer performing weed control for St John's Wort on that property.	Complies
4-20 - 4-25	**Water Management**		
4-20	It is the Proponent's intention to contain as much "dirty" water on site as possible. This would be achieved through a number of water management structures including catchment banks, culverts and sedimentation basins.	An interview with the Environmental Officer confirmed that dirty water is stored onsite and is only discharged or reused once treated.	Complies

Page	Requirement	Evidence	Audit Findings
4-25	Although the proposed open cut would be located entirely within the Permian coal measures which are separated from the other water-bearing strata by a relatively impermeable claystone layer, the Proponent would monitor groundwater levels in piezometers installed adjacent to the limit of mining and on the southern boundary of the Project Site. While not anticipated to occur, should a significant decrease in saturated thickness or yield be noticed in the bores of surrounding landholders (up to 15% fluctuation in yield or saturated thickness is considered to represent natural variation due to factors such as annual rainfall and recharge), the Proponent would redrill to deepen the existing bore, or construct an additional deeper bore for the effected landholder.	Table 3.15 of AEMR 2010-2011 details how this piezometer water quality monitoring system is in place. This 15% fluctuation is something that is allowed for in the Site Water Management Plan.	Complies
4-64	**Design Operational Safeguards**		
4-64	The Proponent is committed to protecting the Site from blasting or overburden placement activities. The following design and operational safeguards, which include all requests of the Nungaroo LALC, would be adopted: - The Site would be fenced by the Proponent prior to the commencement of mining activities and covered with a protective blast mat when blasting approaches within 500m of the Site. - All employees on site would undergo an induction to the Project Site which would include reference to the cultural significance of the Site and the requirement for it to remain undisturbed. - As the development of the open cut mine encroaches to within 100m of the Site, the Proponent would initiate a comprehensive monitoring program of blasting impacts including ground vibration and air blast overpressure. A representative of the Nungaroo LALC would be employed to observe the blasting and blast monitoring. - The Proponent would commission an independent blasting expert to assess the likely impact of blasting on the Site and provide recommendations as to the requirements to ensure the Site remains undisturbed from all blasts. - The Proponent would present the recommendations from the independent blasting expert to the Nungaroo LALC for validation and with a commitment to follow the recommendations provided.	The archaeological site has been moved to a safer location to protect it from blasting and overburden emplacement activities. This was undertaken in consultation with the LALC. The relocated site was observed by the audit team and appeared to be maintained in good condition.	Complies

Page	Requirement	Evidence	Audit Findings
	- The Proponent would convene regular meetings with the Nungaroo LALC to discuss the management of the Site in addition to more general issues.		
4-66	**European Heritage**		
4-66	Notwithstanding the absence of items of heritage significance within the Project Site, the Proponent is committed to the dismantling of the "Narrawolga" residence to the extent necessary to recover building materials that could be re-used for building/renovations of structures of the inter-war era. The items that would be dismantled for re-use would be identified by a heritage architect as part of the recording recommended by Hill Lockhart architects. Following the recovery of the re-usable items, the remaining structure would be demolished.	According to the Archaeology and Cultural Heritage Management Plan (WCL, 2007) page 8, a record of the salvage and removal of the Narrawolga site according to the agreed Management Plan is contained in The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys and Reports Pty Ltd, March 2007.	Complies
xxvi – 4.83	**Noise Management**		
xxvi	The Proponent would monitor noise levels at a number of the surrounding residences and maintain dialogue with these residents to ensure that the impacts of noise generated by the proposal are minimised.	The Noise Management Protocol & Noise Monitoring Program for the Werris Creek Coal Mine (WCL, 2010) (most updated version) meets this requirement.	Complies
4-75	In addition to the design and development features of the proposal, the Proponent would apply the following noise controls: - Equipment with lower sound power levels would be used in preference to more noisy equipment. - All equipment used onsite would be regularly serviced to ensure the sound power levels remain at or below nominated levels used to predict noise generation of the proposal. - Mid-high frequency broadband reverse beepers would be fitted to mobile equipment, decreasing sound power levels by 2 to 3 dB(A). - The on-site road network would be well maintained to limit body noise from empty trucks travelling on internal roads. - All truck drivers would be instructed to avoid the use of engine brakes when approaching the mine site entrance or Escott Road intersection, and to be mindful of noise when accelerating. - The Proponent would endeavour to negotiate an agreement with any resident experiencing an exceedance of the environmental noise criteria presented in Section 4.5.3.	An interview with the Environmental Officer confirmed that sound power level monitoring was conducted for all plant and equipment onsite in July 2010. All were found to be compliant with the criteria stipulated in Table 1 Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (WCL, 2010). No new types of plant or equipment have been purchased since then. During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies

Page	Requirement	Evidence	Audit Findings
		There is a system in place whereby vehicles and plant have to go through safety checklist to ensure this type of alarm is fitted. A qualified mechanic performs this check. This procedure also applies to contractors brining new plant onto site. Roads and intersections were observed at the time of the audit to be maintained in good condition. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details traffic management issues for the site and has been approved by DPI, LPCC, and DP&I The Whitehaven Coal Procedure Road Closure (WCL, 2010) details traffic management issues for the site and has been approved by DPI, LPCC, and DP&I. WCC currently holds private agreements with several nearby properties including the Glenara, Almore, Wiley, Mead, Kyooma, Alco Park and Tonsley Park properties.	
4-78	The Proponent would seek feedback from the residents potentially most affected by the mining/overburden placement activities and operation of the rail load-out facility to assess the impacts of noise generated by the operation. Should further noise reduction be necessary, additional noise controls would be investigated.	The Development Consent 172-7-2004 outlines the formal procedures for this dialogue with neighbouring properties that are affected by noise and vibration. None of these formal procedures have even been invoked, and all such dialogue with neighbours has been undertaken on other terms. WCC currently holds private agreements with several nearby properties including the Glenara, Almore, Wiley, Mead, Kyooma, Alco Park and Tonsley Park properties.	Complies

Page	Requirement	Evidence	Audit Findings
4-79	The Proponent would commission a program of noise monitoring to demonstrate compliance with the criteria nominated in the environment protection licence for the proposal. The program would focus upon collection of data that accurately reflects various activities underway on site under a range of weather conditions and at various times of day and night. Weather data during the periods of monitoring would be retrieved from the proposed on-site weather station.	Not relevant to this auditing period.	Not Triggered
4-83	Given that blast-generated noise is impulsive and may startle people if unexpected, the Proponent would follow the following blast notification procedures: - Prior notification of the proposed blasting schedule to the residents at each of the "Old Colliery", "Preston Park", "Railway View", "Hillview", "Cintra", the Zeolite Australia and "Escott" residences of the proposed blasting schedules. The notification procedures, which include advance notice of the time and date of each proposed blast and a verbal confirmation on the day of the blast, would be continued throughout the life of the proposed open cut mine. Documentary evidence of the notification, together with the results of the blast monitoring, would be retained at the Production Manager's office. - The Company would erect a blast notice board near the mine entrance and at the Escott Road crossing notifying passing motorists whether a blast is planned on that day, and if so, at what time.	Closest landowner is within 2.7 km of the mine, so this provision is not triggered as per the requirements of Condition 25, Schedule 4 of the DA-172-7-2004 (as modified), which supersedes this Environmental Impact Statement (R.W. Corkery & Co. Pty. Limited, 2004). However, WCC continues to consult with other nearby landowners in relation to blasting in general.	Not Triggered
4-86 – 4.94	**Air Quality**		
4-86	The Proponent would commence mining operations at the southern end of the open cut mine at a distance of approximately 700m from the Werris Creek - Quirindi Road. It would be not until about Year 3 that any blasting is planned to occur within 500m of the Werris Creek – Quirindi Road. The Proponent intends to undertake a comprehensive blast monitoring program to develop a robust site law by that stage to confirm that fly rock travel distances are well within 200m and that there is no need to close the Werris Creek - Quirindi Road or the Main Northern Railway Line during the time of the blast. It is also noted that the direction of throw during all blasts is currently planned to be generally in	The 2008 USR audit report states that WCC personnel present onsite since December 2007 were not aware that the road had been closed in the past. It was indicated in a letter from WCC to DP&I, dated 4 July 2005 that road closure requirements were not projected to arise until 2008. It was not determined whether the road will need to close in the future. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details these issues and has been approved by DPI, LPCC, and DP&I.	Complies

Page	Requirement	Evidence	Audit Findings
	a westerly or southerly direction.	An interview with blasting contractor (Orica) staff confirmed that Orica undertakes monitoring of flyrock distribution. Sentries are stationed around blast sites to watch for flyrock and prevent people driving into the area. These sentries than communicate the 'all clear' back to the shot firer. Flyrock distribution is only measured if it leaves the 500m blasting zone.	
4-86	The Proponent's blasting contractor would be required to use aggregates for blasthole stemming and to use NONEL-type delay or electronic detonators to initiate charges. The use of NONEL-type delay or electronic detonators would avoid the requirement for detonating cord downlines and, the absence of detonating cord trunklines (i.e. surface lines) prevents the dust cloud that is formed when such trunklines detonate on a dry dusty surface.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
4-87	During Year 1 when the predicted vibration levels meet the blasting criteria for the proposal the Proponent would undertake blast monitoring analysis of blast data to more accurately determine the local ground characteristics. This would ultimately allow for more accurate predictions of air and ground vibration levels.	This is not relevant to the current auditing period.	Not Triggered
4-87	It is noted that the Proponent intends to allow grazing on sections of the Project Site not required for the mining, processing or associated activities, however, by excluding the grazing of livestock from within 200m of the limit of mining, any impact associated with airblast overpressure would be eliminated.	An interview with the Environmental Officer confirmed that cattle have been excluded from the project area. Cattle were not observed in the project area by the audit team during the site visit.	Complies
4-94	The Proponent would apply a wide range of air pollution control measures to ensure air quality standards are not compromised by its activities. These operational controls have been categorised as either dust control measures or controls for other air contaminants.	An interview with the Environmental Officer confirmed that water carts and fixed water spraying devices are available at all of these points to apply water where necessary. The audit team observed these water carts throughout the site.	Complies
4-94	Earthmoving equipment and on-site vehicles would be fitted with exhaust controls which satisfy the NSW OEH emission requirements. The Proponent would ensure that all equipment is properly maintained to ensure no unacceptable exhaust emissions occur and commit to the removal of any vehicle or item of mobile equipment from on-site activities which is observed not to comply with NSW OEH guidelines.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start	Complies/Not Able to Verify

Page	Requirement	Evidence	Audit Findings
	The exhausts of all equipment would be directed upwards or to the side so as not to impinge on the ground and cause dust lift-off.	form is completed and updated into a spreadsheet for all these items of plant. Due to time restraints of the audit team, the requirement relating to the OEH approved exhausts was not able to be verified.	
4-109 – 4.111	**Visual Impacts**		
4-109	The principal visual control to be adopted by the Proponent would involve the strategic placement of overburden material. The overburden emplacement would be in places at least 40m above existing ground level and would form the most visually noticeable element of the proposal from most vantage points. The overburden emplacement has however been designed to appear as a continuation of the existing north-south oriented ridge located within the Project Site, itself over 40m higher than adjacent areas of land on the Project Site. In addition, the emplacement has been designed to visually shield the mining activity ongoing in the open cut from the majority of residences and traffic along the Werris Creek-Quirindi Road. As illustrated on Figure 4.23, only the residences of “Railway View” and “Hillview” would have direct but obscured views into parts of the open cut.	With approval of DA-172-7-2004 MOD5, an earthen screen has been constructed along Werris Creek Road to reduce the visual impact of mining operations. Tree planting has been undertaken along this visual bund to provide a further screening effect (AEMR 2009-2010 Section 3.11.2 and AEMR 2010-2011 Section 3.9.2).	Complies
4-111	It is acknowledged that for several residences, there would be direct views into the active open cut and final mine void. These impacts would be ameliorated as far as possible through the construction and rehabilitation of the overburden emplacement and progressive rehabilitation in general, however, during the proposed seven years of the proposal, the Werris Creek Coal Mine would likely impact on the visual amenity for the residences of “Railway View” and “Hillview”. The Proponent would maintain continuing communication with the affected residents and implement any reasonable additional controls to further reduce the impact on their visual amenity.	With approval of DA-172-7-2004 MOD5, an earthen screen has been constructed along Werris Creek Road to reduce the visual impact of mining operations. Tree planting has been undertaken along this visual bund to provide a further screening effect (AEMR 2009-2010 Section 3.11.2 and AEMR 2010-2011 Section 3.9.2). During the auditing period, WCC has also purchased all neighbouring properties with direct views into the mining pit. WCC has nonetheless received a number of community complaints during the auditing period relating to visual impacts from lighting plants. The Environmental Officer. These have been dealt with according to the standard complaints procedures for WCC.	Complies

Page	Requirement	Evidence	Audit Findings
		The Environmental Officer has also implemented a program of capturing photo data every minute. The audit team viewed this photographic data during the site visit. Any lighting emission that occur during the day or night are therefore recorded so that issues can be identified.	
4-124	**Landowners**		
4-124	During the life of the proposal, there would be a significant impact on the land use on the Project Site. However, this should not influence the land use of surrounding landholders. As discussed in previous sub-sections, there would likely be some impact resultant from noise, dust and visual amenity at some surrounding residences, however, the operational safeguards and/or ameliorative measures adopted by the Proponent would ensure these satisfy local and/or State government guidelines or criteria and/or reasonable community expectations. The Proponent is committed, however, to maintaining consultation with surrounding residents affected by the proposal and implementing further controls to meet any reasonable community expectations or complaints.	WCC continues dialogue with the local community, as per the Community Consultative Committee meetings that are held annually (Sections 4.2 of the AEMRs 2008-2009, 2009-2010 and 2010-2011). The general complaints/information hotline operated by the Environmental Officer serves this function. During the site visit, the audit team observed the Environmental Officer efficiently dealing with complaints received via this hotline. During the life of the mine, the following neighbouring properties have been purchased by WCC: Narrawolga; Eurunderee; Hillview; The Colliery; Railway View; Preston Park; Branga; Escott; Cintra; Marengo; and Plain View.	Complies
5-14	**Integration of Safeguards and Procedures**		
5-14	The Proponent recognises that all members of the local Werris Creek/Quirindi communities should benefit appropriately from the proposal. In order to ensure a realistic distribution of benefits, the Proponent would: - Continue to consult with the local community and maintain a pro-active approach to issues of interest. This dialogue would also include a system to record, manage and respond to any complaints relating to the operation. - Adopt a policy for the proportional representation of the local Aboriginal community in the workforce. An agreement between the Proponent and the Nungaroo LALC has been reached in this regard.	WCC continues dialogue with the local community, as per the Community Consultative Committee meetings that are held annually (Sections 4.2 of the AEMRs 2008-2009, 2009-2010 and 2010-2011). The Local Aboriginal Land Council (LALC) is contracted to remove and recycle paper from the site. LALC members have been continuously consulted with throughout the life of the project.	Complies

This page has been left blank intentionally.

Appendix E

Statement of Environmental Effects (2009)

Appendix E Statement of Environmental Effects (2009)

Section	Requirement	Evidence	Audit Finding
1.6.2	Surface Water, Erosion and Sediment Control		
1.6.2	The management of surface water at the Werris Creek Coal Mine is undertaken in accordance with the objectives identified within the Site Water Management Plan (RWC, 2005) as follows:	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
1.6.2	To ensure sufficient quantities of water can be obtained through the capture of “dirty” water, harvest of “clean” water, to meet the requirements for dust suppression.	See above.	Not Triggered
1.6.2	To ensure the segregation of “dirty” water from “clean” water, with “dirty” water directed to and detained in sediment basins, and sediment basin discharge to storage dams.	See above.	Not Triggered
1.6.2	To capture “contaminated” water and treat this appropriately prior to further use or discharge.	See above.	Not Triggered
1.6.2	To maximise the use of “dirty” water for dust suppression purposes and minimize the necessity to harvest “clean” run-on water.	See above.	Not Triggered
1.6.2	To minimise the volume of water discharged from the site but, should the discharge of water prove necessary, ensure sufficient settlement time is provided prior to discharge such that suspended sediment within the water meets the criteria of Condition 4(29) of DA-172-7-2004.	See above.	Not Triggered
1.6.2	To minimise erosion and sedimentation from all active and rehabilitated areas of the site and biodiversity offset area.	See above.	Not Triggered
1.6.2	To minimise any impacts on the availability and/or quality of surface water available to surrounding residents and landholders.	See above.	Not Triggered
1.6.2	The sediment basins are regularly inspected and cleaned out once capacity is reduced by 20% to ensure that an adequate settlement zone is maintained within each structure.	See above.	Not Triggered
1.6.2	Water captured and stored within sumps of the active open cut area is either used for dust suppression within the open cut, or is pumped to either VWD1 or VWD2 (see Section 1.5.2.4).	See above.	Not Triggered

Section	Requirement	Evidence	Audit Finding
1.6.2	Fuel tanks with a combined storage capacity of 100 000L and various containers of oils, lubricants and grease on-site are fully bunded to ensure that in the event of a leak or rupture, no fuel escapes from the bunded area. The bunded area has the capacity to contain >110% of the largest fuel tank. Pipes with lockable valves have been installed to allow for the removal of any minor spills or rainfall. Any water or fuel so removed is pumped to a tank for collection and off-site disposal. Similarly, in the event of a tank rupture, the contaminated fuel will be pumped from the bunded area to drums or a tanker(s) and be collected by a licensed oil recycling contractor.	See above.	Not Triggered
1.6.2	All fuel and oil is securely stored on site.	See above.	Not Triggered
1.6.2	Runoff from the wash-down bay is directed to an oil separator and containment system for subsequent pump-out and disposal.	See above.	Not Triggered
1.6.2	Spill kits are maintained at all appropriate locations at the mine e.g. fuel farm.	See above.	Not Triggered
1.6.2	Any spills of fuel or oil external to the bunded areas will be immediately cleaned up with the affected material transported to an approved waste depot for disposal or treated/remediated in a manner on-site approved by the OEH (EPA).	See above.	Not Triggered
1.6.2	Monitoring of surface water has been undertaken from SD1 to SD10 and water storages VWD1 and VWD2 (see Figure 1.8) at quarterly intervals.	See above.	Not Triggered
1.6.2	Water from the wet weather discharge points SB2, SB9 and SB10, as well as water within Werris and Quipolly Creeks upstream and downstream of the mine, is sampled within 12 hours of the commencement of any discharge from the wet weather discharge points.	See above.	Not Triggered
1.6.2	All water management structures are regularly inspected as part of routine mine operations undertaken by the Applicant, with any maintenance or repair works initiated as and when required.	See above.	Not Triggered

Section	Requirement	Evidence	Audit Finding
1.6.3	Groundwater		
1.6.3	In accordance with a groundwater monitoring program contained within the mine's SWMP, groundwater levels are measured quarterly within the 14 groundwater monitoring bores (three piezometers and 11 privately owned bores)	Appendix 4 of the AEMRs 2008-2009, 2009-2010 and 2010-2011 specify that this is carried out quarterly.	Complies
1.6.3	In accordance with Condition 4(36) of DA-172-7-2004, the collected groundwater data is independently reviewed on an annual basis by an approved consultant and reports generated.	Appendix 4 of the AEMRs 2008-2009, 2009-2010 and 2010-2011 contain specialist groundwater reports prepared by GeoTerra.	Complies
1.6.3	Chemical analyses of the water within these bores is undertaken quarterly.	Appendix 4 of AEMRs 2008-2009, 2009-2010 and 2010-2011 specify that this is done quarterly.	Complies
1.6.3	Recently, the Applicant constructed a further three piezometers (P1, P2 and P3) to the north and south of the open cut area with continuous data loggers installed. Data from these piezometers has yet to be analysed but will be included in future groundwater reviews undertaken in accordance with Condition 4(36) of DA-172-7-2004.	Section 2.8.4 of the AEMR 2008-2009 identifies that these three piezometers were installed. Later AEMRs confirm that these piezometers continue to be used.	Complies
1.6.4	Noise Management		
1.6.4	The construction of initial components of the out-of-pit overburden emplacement to form a 15m high acoustic bund in order to reduce noise propagation to the east.	This was part of an earlier stage of onsite development that occurred before 'Stage Two' commenced in 2006.	Not Triggered
1.6.4	Installation and maintenance of appropriate mufflers on plant and equipment.	An interview with the Environmental Officer confirmed that mufflers are not installed on all plant and equipment. Plant and equipment have instead been dealt with by a sound power level monitoring process to ensure they are within acceptable noise limits.	Complies
1.6.4	Scheduling activities to minimise operation of equipment or changing operational procedures on the recommendation of the Applicant's acoustic consultant, Spectrum Acoustics.	An interview with the Environmental Office confirmed that operations are scheduled to be as efficient as possible and so reduce unnecessary simultaneous equipment usage. Acoustic consultants have not recommended this.	Complies
1.6.4	Treatment or replacement of noisy equipment.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor	Complies

Section	Requirement	Evidence	Audit Finding
		confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	
1.6.4	Regular servicing of equipment to ensure sound power levels remain at or below the levels nominated in the 2004 EIS for the mine (RWC, 2004).	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
1.6.4	Adherence to the hours of operations of Condition 4(15) of DA-172-7-2004.	An interview with the Environmental Officer confirmed that the mine currently operates with 2 x 10.5 hour shifts between 7am-4am on weekdays. Reduced hours are undertaken on Saturdays as required. Maintenance staff are present onsite for 2 x 12 hour shifts 24 hours a day.	Complies
1.6.4	Enclosure of fixed items of plant, e.g. Generators.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
1.6.4	Construction of earth bunds adjacent to noise sources to create a barrier for the propagation path.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
1.6.4	On-going site road maintenance to limit body noise from empty trucks.	Internal roads were inspected by the audit team and appeared to be maintained in good condition.	Complies
1.6.4	Workforce education or instruction, e.g. instruction of truck drivers to avoid use of engine brakes when approaching the mine site entrance or Escott Road intersection.	Roads and intersections were observed at the time of the audit to be maintained in good condition. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details traffic management issues for the site and has been approved by DPI, LPCC, and DP&I The Whitehaven Coal Procedure Road Closure (WCL, 2010) details traffic management issues for the site and has been approved by DPI, LPCC, and DP&I.	Complies
1.6.4	Routine maintenance of locomotives and rail track;	Rail Contractor Pacific National has responsibility for carrying out this maintenance. The Coal Processing Manager (WLC employee) maintains records of this maintenance.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.4	Speed restrictions to 15km/hr on the Werris Creek Rail Spur.	The 15 kph speed limit is written into the Rail Spur Management Plan (WCL, 2005), and is signposted at the spur.	Complies
1.6.4	Minimising drop height into rail wagons from the rail load-out bin.	An interview with the Coal Processing Manager confirmed that, as part of the Rail Spur Management Plan (WCL, 2005), the coal drop height is minimised as far as possible.	Complies
1.6.4	Since the commencement of operations in April 2005, and more specifically since the 100% acquisition of the mine by Whitehaven, the following additional noise management measures have been implemented to reduce possible emissions at the rail load-out facility as follows.	See below. All of these commitments were found to either be compliant, or to not be triggered.	Complies
1.6.4	The properties of “Old Colliery”, “Hillview” and “Railway View”, where up to 80% of all exceedances of noise criteria had been recorded, have been purchased by the Applicant (making these residences project related and therefore exempt from noise criteria).	These properties continue to be owned by WCC.	Complies
1.6.4	Where practical, limiting dozer operations outside the hours of 7:00am to 6:00pm.	An interview with the Environmental Officer confirmed that dozer operations are limited to these hours where practical.	Complies
1.6.4	Instructing the dozer operator to only use low gear to reverse down the stockpile slopes within the Product Coal Storage Area.	An interview with the Environmental Officer confirmed that all operators are trained in this. They are required to use 6th gear in trucks rather than 5th gear when coming downhill to lower rpms.	Complies
1.6.4	Instructing the dozer operator to observe wind direction and preferentially operate where the stockpile acts as a buffer to surrounding residences.	Most of the areas within 2 km of the mine are owned by WCC and the closest landowner is now 2.7 km from mine. So this action is no longer necessary.	Not Triggered
1.6.4	Investigating possible sound power reductions through the fitting of specially designed sound attenuation panels, specially designed muffler, undercarriage and track plate fitments, or alternative measures to ensure noise compliance. This will include assessment of alternative machines to determine most appropriate options at the load out for material handling and noise compliance requirements.	An interview with the Environmental Officer confirmed that mufflers are not installed on all plant and equipment. Plant and equipment have instead been dealt with by a sound power level monitoring process to ensure they are within acceptable noise limits.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.4	In excess of the required quarterly monitoring of noise at eight residential locations surrounding the mine, noise is monitored on a monthly basis by a specialist independent acoustic consultant.	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified.	Complies
1.6.5	**Blasting**		
1.6.5	Blast design and implementation is undertaken by a suitably qualified blasting engineer and/or experienced and appropriately certified shot-firer.	Blasting is carried out by the suitably qualified and licensed contractor, Orica in accordance with the relevant standard AS 2187.2-2006 – Explosives - Storage and Use.	Complies
1.6.5	The blast face, where practical, is oriented away from or at an oblique angle to nearby residences.	Due to time restraints of the audit team, this was unable to be verified	Not Able to Verify
1.6.5	Blast hole spacing is implemented in accordance with blast design.	An interview with blasting contractor (Orica) staff confirmed that this is the procedure that is applied.	Complies
1.6.5	Appropriate burden distance and stemming length are selected and then implemented precisely.	An interview with blasting contractor (Orica) staff confirmed that this is the procedure that is applied.	Complies
1.6.5	Appropriate materials for stemming are used, e.g. <20mm aggregates.	An interview with blasting contractor (Orica) staff confirmed that this is the procedure that is applied.	Complies
1.6.5	A notification procedure for potentially impacted residents and staff is implemented prior to every blast.	Closest landowner is within 2.7 km of the mine, so this provision is not triggered as per the requirements of Condition 25, Schedule 4 of the DA-172-7-2004 (as modified) However, WCC continues to consult with other nearby landowners in relation to blasting in general.	Not Triggered
1.6.5	A blast notice board is installed adjacent to Werris Creek and Quirindi road at the mine entrance notifying of the next blast and is updated within 24 hours of the next blast.	Notice board is installed at mine entrance advising days that blasting occurs.	Complies
1.6.5	Environmental conditions are monitored on site through a meteorological station. Blasting cannot occur without confirmation environmental levels are appropriate.	Meteorological monitoring station continues to record data on a daily basis, and blasting is rescheduled if meteorological conditions do not permit.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.5	All blasts at the mine are monitored in accordance with a Blast Monitoring Program (BMP) as follow: (a) at four locations (WB-1 to WB-4), airblast overpressure and ground vibration is monitored every blast; (b) at monitoring locations WB-5 to WB-8, monitoring of airblast overpressure and ground vibration is alternated.	This has been overridden by new monitoring location and frequency requirements outlined in the revised Werris Creek Coal Blasting Monitoring Program (WCL, 2010).	Not Triggered
1.6.6	**Air Quality**		
1.6.6	The principal dust generating activities are temporarily ceased when protracted dry periods and/or high winds lead to significant dust generation and dispersal towards the surrounding residences.	An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased.	Complies
1.6.6	All earthmoving equipment is fitted with exhaust controls which satisfy NSW OEH emission requirements.	Due to time restraints of the audit team, this was unable to be verified	Not Able to Verify
1.6.6	Bund walls and wind breaks are constructed beyond the areas to be disturbed as required.	This was observed by the audit team during the site inspection.	Complies
1.6.6	Where practicable, soil stripping is undertaken at times when there is sufficient soil moisture to prevent significant dust lift-off.	An interview with the Environmental Officer confirmed the procedure that is followed. Soil is not stripped during periods of excessive moisture to reduce the likelihood of damage to soil structure. However, soil is stripped when it is sufficiently moist to maintain structure and reduce dust emissions.	Complies
1.6.6	Stripping of soil in periods of high winds is avoided.	An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased.	Complies
1.6.6	Dust suppression by water application is undertaken.	Water carts are available onsite at all times to assist with dust suppression. This was observed by the audit team during the audit.	Complies
1.6.6	The drill rigs utilise water injection or are fitted with dust collectors.	An interview with the Environmental Officer confirmed that the drilling rig uses a water spray and is attached to a vacuum type dust collector.	Complies
1.6.6	Blast hole stemming is used to prevent venting of explosion gases.	An interview with blasting contractor (Orica) staff confirmed that this is the procedure that is applied.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.6	Blasting is conducted outside periods which may be influenced by low-level atmospheric temperature inversions.	Meteorological monitoring station continues to record data on a daily basis, and blasting is rescheduled if meteorological conditions such as temperature inversions do not permit.	Complies
1.6.6	The following factors contributing to non-ideal detonation behaviour and higher emission (principally NO2) concentrations are avoided whenever possible: - weak overburden which reduces the necessary explosive confinement, this will be ripped in preference to blasting; - water infiltration; - long explosive columns; and - explosive pre-compression, caused by hole-to-hole shock propagation due to wet overburden and clay veins.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
1.6.6	Ripping of softer overburden material is avoided during periods of high wind.	An interview with the Environmental Officer confirmed the procedure that is followed. Soils are not stripped during periods of excessive moisture. However, soils are also stripped when it is sufficiently moist to maintain structure and reduce dust emissions.	Complies
1.6.6	The placement of overburden into the in-pit overburden emplacement is undertaken preferentially during periods of high wind.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
1.6.6	Low moisture coal is sprayed with water prior to removal to raise moisture content to >6%.	An interview with the Coal Processing Manager confirmed that water carts and fixed water spraying devices are available at all of these points to apply water where necessary.	Complies
1.6.6	Water is applied to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.	An interview with the Coal Processing Manager confirmed that water carts and fixed water spraying devices are available at all of these points to apply water where necessary.	Complies
1.6.6	All conveyors are fitted with appropriate cleaning and collection devices to minimise the amount of material falling from the return conveyor belts.	An interview with the Coal Processing Manager confirmed that conveyors have scrapers fitted to them to scrape into bins. They are also fitted with automatic water sprays located at five points. When trains are loaded, the top of train is sprayed. This spray nozzle stays on for 3-4 seconds after the train finished loading.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.6	Clear definition of any access or haul roads and the restriction of vehicles and equipment to those roads.	These roads were observed by the audit team during the audit and appear to be well maintained and to be primarily used by haul trucks.	Complies
1.6.6	Progressive rehabilitation of areas of disturbance (including topsoil and subsoil stockpiles).	The beginnings of topsoil rehabilitation were observed during the audit.	Complies
1.6.6	Installation of bund walls and windbreaks, as required.	This was observed by the audit team during the site inspection.	Complies
1.6.6	The speed of vehicles is restricted during hot and windy weather.	An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased. The sign-posted speed limit for the internal Rail Loa-out Road is constantly limited to 80 km/hr, with a 20km/hr speed limit at the “Give Way” intersection with Escott Road.	Complies
1.6.6	The road for the transportation of coal product between the site facilities area and mine entrance is sealed.	This internal road was observed during the time of the audit. It was sealed and appeared to be maintained in good condition.	Complies
1.6.6	Internal haul roads are regularly watered. The frequency of water application to the various internal haul roads and exposed surfaces will be dependent on climatic factors.	Water carts were observed during the audit to be maintaining dust suppression on these internal roads.	Complies
1.6.6	Earthmoving equipment and on-site vehicles are: - fitted with exhaust controls which satisfy NSW OEH emission requirements; - properly maintained and any mobile equipment which does not comply with NSW OEH guidelines is removed.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
1.6.6	All trucks carrying product coal from the mine are covered with approved covers and the tailgates securely fixed to prevent windblown dust emission or spillages.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.6	The Applicant maintains a network of seven deposited dust gauges (Sites WCA1 to WCA7) and five high volume air samplers (HVAS) to monitor total suspended particulate matter (TSP) and the <10µm component of airborne particulate matter (PM_{10}) in accordance within an Air Quality Monitoring Program.	This is as per the monitoring requirements outlined and implemented in Table 1 Environmental Management Strategy for the Werris Creek Coal Mine (WCL, 2005).	Complies
1.6.6	Each dust deposition gauge is replaced and the deposited dust measured every 28 days ±2 days in accordance with the relevant Australian Standard (AS/NZS 3580.10.1:2003).	This is the procedure outlined and implemented as per Section 3.5 of the Environmental Management Strategy for the Werris Creek Coal Mine (WCL, 2005).	Complies
1.6.6	Each HVAS is monitored 1 in 6 days as per the requirements of the OEH and in accordance with AS/NZS 3580.10.1:2003.	This is as per the monitoring requirements outlined and implemented in Table 1 Environmental Management Strategy for the Werris Creek Coal Mine (WCL, 2005).	Complies
1.6.7	**Flora and Fauna**		
1.6.7	A total of 53 ha of the final landform would be designated for nature conservation, with the rehabilitation involving the planting of tubestock and direct seeding of tree, shrub and grass species associated with this community to provide linkages between the existing isolated remnants of the community.	This rehabilitation has not commenced yet.	Not Triggered
1.6.7	Approximately 200 hectares of Mining Lease 1653, including the 53 hectares to be developed as a White Box Yellow Box Blakely's Red Gum Community, would be excluded from grazing for the life of the proposal.	Cattle have been excluded from these areas. The audit team did not observe cattle grazing in this area during the site visit.	Complies
1.6.7	Domestic livestock grazing would be excluded from the offset area.	Cattle have been excluded from these areas. The audit team did not observe cattle grazing in this area during the site visit.	Complies
1.6.7	The Applicant is committed to limiting the area of vegetation cleared ahead of mining to approximately 100m, with cleared vegetation <300mm in diameter to be salvaged and reused in the rehabilitation of the final landform.	Larger trees and debris removed as part of vegetation clearing have been placed in rehabilitation areas to provide habitat for native fauna. These were observed by the audit team during the site visit.	Complies
1.6.7	Prior to the commencement of each clearing campaign, an inspection is carried out on the area to be cleared to: - ascertain if any Koalas are present (searches are undertaken for any Koala in the area to be subject to clearing, as well as in the adjoining areas); and - trees containing tree hollows are inspected for the presence of any native fauna utilising those hollows.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.7	Tree clearing activities are then undertaken as soon as practicable after the pre-clearing inspection in order to minimize the potential for colonization in the intervening period.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies
1.6.7	In the event that one or more Koala's (or other threatened fauna species) are identified, the relocation protocols included in the mine's Flora and Fauna Management Plan (Sections 4.7.4 to 4.7.6) would be implemented.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling. This issue with Koalas has not arisen yet on the site.	Not Triggered
1.6.7	Seed collection, handling, storage and propagation is currently undertaken in accordance with the procedures contained within the mine's Flora and Fauna Management Plan (Section 4.11).	An interview with the Environmental Officer confirmed that native grass and Whitebox seeds have been collected onsite. Tubestock that is planned to be used is a combination of onsite seeds and other seeds collected from the local Quirindi area.	Complies
1.6.7	Weed and feral animal control is currently undertaken in accordance with the procedures contained within the mine's Flora and Fauna Management Plan (Section 4.12).	These issues were dealt with in the BOMP Audit which was conducted in parallel with the IEA. Refer to the BOMP Audit Report for findings.	Not Triggered
1.6.7	Five permanent photo points and 100m x 100m quadrats have been established on areas that will remain undisturbed for the life of the mine. Four of these quadrats are located within remnant White Box Yellow Box Blakely's Red Gum woodlands at the locations east, north and south of the area of disturbance. The fourth quadrat is located on former cultivation land to the north of the mine in an area that is currently cleared. This fourth quadrat has been selected to provide information on the degree and rate of colonisation of a cleared area by native tree vegetation.	Seven quadrat photo points are currently being used as part of flora and fauna management. Photographic data from these monitoring points was observed by the audit team.	Complies
1.6.7	Flora monitoring of all quadrats is conducted annually by a qualified botanical consultant with each monitoring period comprising foliage cover measurements along two 100m step-point transects; an assessment of species composition using the modified Braun-Blanquet (Poole) Scale, and tree and shrub counts to quantify deaths and regeneration.	This requirement to use the Braun-Blanquet technique has been superseded by the new flora monitoring system outlined in the Biodiversity Offset Management Plan (Eco Logical, 2010). This overrides the commitments in this SEE from March 2009 relating to flora monitoring techniques.	Not Triggered

Section	Requirement	Evidence	Audit Finding
1.6.7	Over the life of the mine, additional 100m x 100m quadrat and associated photo points will be established within the native woodland and pasture zones of the final landform at a frequency of one per 10ha. The monitoring of these quadrats is to be the same as for the original four.	Seven quadrat photo points are currently being used as part of flora and fauna management. Photographic data from these monitoring points was observed by the audit team.	Complies
1.6.7	Fauna monitoring has been confined to the land within the 200ha stock exclusion zone within the following habitats: (a) Habitat 1 [Remnant Woodland]; (b) Habitat 4 [Farm Dams – Amphibian sampling]; and (c) Regenerating White Box Yellow Box Blakely's Red Gum Woodland.	These requirements for fauna monitoring have been updated in the Biodiversity Offset Management Plan (Eco Logical, 2010). This overrides the commitments in this SEE from March 2009 relating to fauna monitoring techniques.	Not Triggered
1.6.7	Within Habitat 1 and the Regenerating White Box Yellow Box Blakely's Red Gum Woodland, a control 100m X 100m quadrat and photo point has been established with additional quadrats and photo points to be established at a frequency of one per 25ha and one per 10ha respectively.	Seven quadrat photo points are currently being used as part of flora and fauna management. Photographic data from these monitoring points was observed by the audit team.	Complies
1.6.7	Within Habitat 4, frog populations are sampled annually.	Annual monitoring for frogs is carried out, as per the requirements of Table 15, Section 7.4 of the Biodiversity Offset Management Plan (Eco Logical, 2010).	Complies
1.6.9	**Spontaneous Combustion**		
1.6.9	The length of time coal is held in stockpiles is minimised with a general policy of first stockpiled, first despatch operated as far as practicable.	Coal stored in the ROM and stockpile areas is open and exposed to prevailing winds at all times. Dozers and water carts available at all times to minimise spontaneous combustion. These coal stockpiles were observed by the audit team during the site visit.	Complies
1.6.9	Coal stockpiles are regularly monitored for signs of spontaneous combustion.	An interview with the Environmental Officer confirmed that coal stored in ROM and stockpile areas is visually inspected on a regular basis as required.	Complies
1.6.9	Any spontaneous combustion incident is immediately reported to mine management (and then DPI-MR).	This has not occurred during the auditing period.	Not Triggered
1.6.9	Any spontaneous combustion event is to be immediately extinguished by excavation, spreading and saturation with water. The incident and management is to be reported to the DPI-MR as soon as possible after the incident.	An interview with the Environmental Officer confirmed that a water cart is on standby to assist at all blasting events. A fire has never resulted at the mine site from blasting activities.	Complies

Section	Requirement	Evidence	Audit Finding
1.6.9	Monitoring of spontaneous combustion is undertaken by visual inspections of the ROM and rail load-out stockpiles by the Mine Manager and Open Cut Examiners during routine shift inspections.	An interview with the Environmental Officer confirmed that coal stored in ROM and stockpile areas is visually inspected on a regular basis as required.	Complies
1.7	**Ongoing Documentation**		
1.7	Should development approval be granted for the modification, the Applicant would revise the existing Mining Operations Plan (MOP) in accordance with the Mining, Rehabilitation and Environmental Management Process (MREMP).	The Mining Operations Plan was revised and updated in October 2009 alongside the most recent modification consent received from DP&I.	Complies
1.7	The modified operations would then become the focus of all future Annual Environmental Management Reports (AEMRs), also prepared in accordance with the MREMP.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
1.7	Both documents would be prepared in accordance with DPI–MR's document entitled "Guidelines to the Mining, Rehabilitation and Environmental Management Process" version 3, dated January 2006, but with the AEMR also including those additional aspects identified in DA-172-7-2004 (as amended).	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
1.7	As has been the case with similar documentation for the existing mine, each document would be accompanied by relevant plans, photographs and appendices.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
2.1.3	**Approvals Required**		
2.1.3	In addition to the proposed modification to DA-172-7-2004, an aquifer interference licence under the Water Management Act 2000 (WM Act) will be required to enable the full dewatering of the underground workings.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
2.5.4.2	**Vegetation Clearing**		
2.5.4.2	The clearing of vegetation on the Mine Site would be undertaken on an annual basis, with the extent of clearing undertaken in each campaign sufficient for the subsequent year of mine development.	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring.	Complies

Section	Requirement	Evidence	Audit Finding
2.5.4.2	When practicable, the clearing campaigns, particularly the removal of trees, would be scheduled for the autumn period.	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring.	Complies
2.5.4.3	**Drainage Installation**		
2.5.4.3	Due to the presence of the White Box Yellow Box Blakely's Red Gum Woodland Community, containing listed Koala feed species, an inspection would be carried out to identify if Koalas are present prior to each clearing campaign. If identified, clearing would be suspended until the Koala(s) move away or are removed by a suitably qualified person.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies
2.5.4.3	The Applicant would continue to routinely liaise with Soil Services and other specialist consultants with respect to the water management system performance and the achievement of its objectives, with modifications or additional structures installed as necessary, subject to relevant approval processes.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
2.5.4.3	All water management structures would continue to be inspected and ongoing maintenance, such as channel slope stabilisation, sediment removal and erosion protection carried out, as required.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
2.5.4.4	**Soil Stripping and Stockpiling**		
2.5.4.4	The Applicant would continue to strip, stockpile and respread soil using the same methods and employing the same following general principles as are currently implemented at the mine.	These commitments are complied/not triggered/unable to be verified as outlined below.	Complies/ Not Triggered/ Not Able to Verify
2.5.4.4	Areas of disturbance requiring soil stripping would be clearly defined following vegetation clearing (using marker pegs/posts if necessary).	An interview with the Environmental Officer confirmed that this is the procedure that is followed.	Complies
2.5.4.4	Topsoil and then subsoil would be stripped to the depth recommended for the particular soil type (refer to Table 2.7).	An interview with the Environmental Officer confirmed that this is the procedure that is followed.	Complies
2.5.4.4	As far as practicable, no soil would be stripped or otherwise handled in wet conditions (to avoid breakdown in soil structure).	An interview with the Environmental Officer confirmed the procedure that is followed. Soils are not stripped during periods of excessive moisture. However, soils are also stripped when it is sufficiently moist to maintain structure and reduce dust emissions.	Complies

Section	Requirement	Evidence	Audit Finding
2.5.4.4	The stripped soil would preferentially be transported to a completed section of the final landform for respreading as part of rehabilitation activities. If areas of the final landform are not available, the topsoil and subsoil would be stockpiled at locations surrounding the overburden emplacement at heights no greater than 2m and 3m respectively, with slopes no greater than 1:2 (V:H) and a slightly roughened surface to minimise erosion.	Soil stockpiles were observed by the audit team during the site visit. The soil stockpiles complied with these requirements.	Complies
2.5.4.4	The stockpile would then be identified by soil type and located in positions to avoid surface water flows.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition. It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	Complies Recommendation Made
2.5.4.4	All stockpiles would be seeded with a non-persistent cover crop to reduce erosion potential, as soon as possible after completion of stockpiling. Where seasonal conditions preclude adequate development of a cover crop, stockpiles will be treated with a straw/vegetative mulch to improve stability.	Sterile crops have been planted on many of the exposed topsoil areas to prevent erosion. Seeded topsoil areas were observed by the audit team during the site visit.	Complies
2.5.4.4	Sediment fencing would be erected immediately down-slope of the stockpiles until a stable vegetation cover is established.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
2.5.4.4	Vehicle access on the soil stockpiles would be prohibited.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
2.5.4.4	In the event that unacceptable weed generation is observed on soil stockpiles, a weed eradication program would be implemented.	This had not occurred during the auditing period.	Not Triggered
2.5.4.4	The inventory of soil resources on the mine site would be expanded and regularly reconciled with rehabilitation requirements.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition.	Complies Recommendation is made

Section	Requirement	Evidence	Audit Finding
		It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	
2.5.4.4	Due to the generally good structure of both the topsoils and subsoils, bulldozers and/or open bowl scrapers would be used for stripping.	Scrapers were observed stripping and relocating soil during the site visit.	Complies
2.5.4.4	In order to minimise handling, scrapers would dump their loads neatly to form a uniform stockpile that requires little further forming prior to establishment of a vegetation cover.	Scrapers were observed stripping and relocating soil during the site visit according to these requirements.	Complies
2.5.4.4	Prior to construction of these dams, the topsoil layer only would be stripped and then replaced on the bank of each cell.	An interview with the Environmental Officer confirmed that no dams have been constructed onsite during this auditing period.	Not Triggered
2.5.5.4	**Overburden and Interburden Blasting**		
2.5.5.4	Blast design, drilling, loading and firing would be undertaken by a suitably qualified and experienced blasting engineer holding a shot-firer's certificate issued by the DPI-MR.	Blasting is carried out by the suitably qualified and licensed contractor, Orica in accordance with the relevant standard AS 2187.2-2006 – Explosives - Storage and Use.	Complies
2.5.5.4	Blast design parameters to be adopted within the proposed modified open cut mine are as per Table 2.8	The Werris Creek Coal Blasting Monitoring Program (WCL, 2010) supersedes these commitments made in the SEE March 2009 relating to blast design.	Not Triggered
2.5.5.4	As is currently implemented by the Applicant, a precautionary exclusion zone of 500m would be maintained for each blast.	An interview with blasting contractor (Orica) staff confirmed that this is the exclusion zone that is applied.	Complies
2.5.5.4	In accordance with the DPI-MR recommended safe exclusion distance, the Applicant would manage the temporary closure of the Werris Creek-Quirindi Road for each blast in this area i.e. unless the DPI-MR authorise blasting without closure.	The 2008 USR audit report states that WCC personnel present onsite since December 2007 were not aware that the road had been closed in the past. It was indicated in a letter from WCC to DP&I, dated 4 July 2005 that road closure requirements were not projected to arise until 2008. It was not determined whether the road will need to close in the future. At this stage, the road has still not been closed. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details these issues and has been approved by DPI, LPCC, and DP&I.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.5.5.4	In the event it is necessary to close the road, it would be managed in accordance with Traffic and Rail Management Plan prepared for the modified operations and would incorporate the following features to minimise the potential disruption to local traffic: (a) blasts would occur outside the operating hours of school bus services; (b) avoidance, where possible, of timetabled rail movements; (c) adequate warning would be provided to road users in the form of road signs identifying standard blast times; (d) follow-up inspections of the road would be undertaken in the unlikely event it is necessary to remove any debris prior to re-opening of the road.	The 2008 USR audit report states that WCC personnel present onsite since December 2007 were not aware that the road had been closed in the past. It was indicated in a letter from WCC to DP&I, dated 4 July 2005 that road closure requirements were not projected to arise until 2008. It was not determined whether the road will need to close in the future. At this stage, the road has still not been closed. The Whitehaven Coal Procedure Road Closure (WCL, 2010) details these issues and has been approved by DPI, LPCC, and DP&I.	Not Triggered
2.5.5.4	The overburden and interburden materials would be blasted and removed by conventional haulback methods, i.e. the overburden and interburden would be transported by haul truck to the overburden emplacement.	This process was observed by the audit team during the site visit.	Complies
2.5.5.4	Where practicable, throw blasting and/or carry dozing would continue to augment haulback placement of overburden and interburden materials in the mined-out areas of the open cut mine.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
2.5.5.4	The final overburden emplacement within the modified mine area would rise to a maximum elevation of 445m AHD and be constructed to enable the outer slopes to be profiled with a comparatively gentle slope of 10 degrees.	This stage of operations has not been reached yet.	Not Triggered
2.5.5.4	A series of contour banks, similar to those on the existing landform, would be created at approximately 10m vertical intervals on the outer slopes of the emplacement.	This stage of operations has not been reached yet.	Not Triggered
2.5.5.4	The internal slope of the overburden emplacement would be left at angle of repose given the likely continuation of the mine to the north.	This stage of operations has not been reached yet.	Not Triggered
2.7.1.1	**Transport to Coal Product Storage Area**		
2.7.1.1	The speed limit on the Rail Load-out Road would continue to be limited to 80km/hr with a further speed restriction of 20km/hr enforced at the “Give Way” signed intersection with Escott Road.	These are the signposted speed limits as observed by the audit team during the audit.	Complies

Section	Requirement	Evidence	Audit Finding
2.7.1.1	In order to increase the efficiency of coal loading, it is proposed to construct a second loading bin and conveyor adjacent to the existing bin and conveyor on the Werris Creek Siding.	An interview with the Coal Processing Manager confirmed that this second loading bin was never constructed. Pacific Carbon constructed a pad next to rail line with ARTC approval instead.	Not Triggered
2.7.1.1	The second bin would be of approximately 350t capacity and equivalent height to the existing bin.	An interview with the Coal Processing Manager confirmed that this second loading bin was never constructed. Pacific Carbon constructed a pad next to rail line with ARTC approval instead.	Not Triggered
2.7.1.1	The existing overhead power line to the existing feed hopper would be placed underground in a location approved by Country Energy.	As the second loading bin was not commissioned, this was not required.	Not Triggered
2.9	**Hours of Operation**		
2.9	The hours of operation at the mine would not change from those approved by DA-172-7-2004: (a) 7:00am to midnight, midnight to 4:00am, Monday to Friday; (b) midnight to 4:00am, 7:00am to 2:00pm, Saturday; (c) on-site coal processing may be undertaken for the additional hours of 2:00pm to 10:00pm Saturday; and (d) the rail load-out facility and maintenance activities are undertaken at any time Monday to Sunday.	These are the hours of operation as confirmed during an interview with the Environmental Officer. The mine currently operates with 2 x 10.5 hour shifts between 7am-4am on weekdays. Reduced hours are undertaken on Saturdays as required. Maintenance staff are present onsite for 2 x 12 hour shifts 24 hours a day.	Complies
2.11.6	**Rehabilitation Procedures**		
2.11.6	Step 1: Overburden Placement and Shaping Placement and shaping of the overburden to create final slopes with gradients generally up to 10° would continue to be undertaken in a manner which, wherever practicable, ensures that any friable or weathered materials are placed below the subsoil and topsoil layers as a cover over the more competent overburden and interburden materials, thereby avoiding the exposure of large rocks on the final surface.	The operations have not reached this stage.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.11.6	Step 2: Subsoil and Topsoil Replacement Subsoil and topsoil would continue to be placed on the shaped landform in the reverse order to stripping, i.e. subsoil then topsoil, with the materials being preferentially sourced from areas being stripped in advance of mining or, if no such materials are available, from previously established stockpiles. The subsoil layer would be spread on an even but roughened surface which has been ripped along the line of the contour to break any compacted and/or smooth surfaces. Ripping would also assist the keying of the subsoil materials, maximise ingress of water and minimise erosion.	The operations have not reached this stage.	Not Triggered
2.11.6	An inventory of soils is maintained at the mine to ensure that adequate soil resources remain available for the selective use of the soil resources	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition. It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	Complies Recommendation is made
2.11.6	Cleared trees, branches of <300mm diameter and other vegetative debris would then be spread over those areas designated for native woodland re-establishment.	Larger trees and debris removed as part of vegetation clearing have been placed in rehabilitation areas to provide habitat for native fauna. This was observed by the audit team during the site visit.	Complies
2.11.6	Step 3: Drainage Installation Contour banks would continue to be progressively installed on the rehabilitated landform. The banks would be constructed with channel back slopes of 10° and channel foreslopes of 40°. The heights (effective depths) and cross-sectional areas of the individual banks would be determined on the basis of the individual sub-catchment areas but would generally be less than 0.7m and 3.0m^2 respectively.	The operations have not reached this stage.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.11.6	Step 4: Agricultural Land Pasture Sowing – Revegetation with Grasses and Pasture Species The topsoiled surfaces would be sown with a mixture of pasture species appropriate to the season. The seed mixture would include fast growing non persistent cover species and perennial grasses and legumes. A list of suitable warm season grasses, cool season legumes and cool season grasses is provided in Table 2.11. In order to maximise seed germination and establishment, where practicable, sowing would employ scratch or direct seeding techniques, with specialised techniques such as straw mulching, bitumen mulching and hydro mulching used where rapid soil stabilisation and erosion protection are required.	The operations have not reached this stage.	Not Triggered
2.11.6	Step 5: Endangered Native Woodlands – Revegetation with Native Species. All seedlings would continue to be propagated from locally sourced seed. All areas of the final landform designated for nature conservation would be excluded from stock to provide optimum conditions for vegetation establishment.	Cattle grazing has been excluded from these areas, and this was observed by the audit team during the site visit. An interview with the Environmental Officer confirmed that seeds collected so far have been sourced from the site, and from the local Quirindi area.	Complies
2.11.6.3	**Water Management Structures**		
2.11.6.3	Rehabilitation procedures applied to individual water management structures would be assessed on a case by case basis to determine the most appropriate strategy. Generally, the outer banks of all water management structures would be topsoiled immediately on construction and seeded with appropriate cover and perennial pasture species.	Full scale rehabilitation has not commenced yet, and the rehabilitation/construction of water structures onsite has not commenced.	Not Triggered
2.11.6.3	Specialised treatments such as sodding, bitumen/jute meshing or rock-lining may be utilised on those structures carrying the largest volumes of water or where an adequate cover of pasture species cannot be attained.	Full scale rehabilitation has not commenced yet, and the rehabilitation/construction of water structures onsite has not commenced.	Not Triggered
2.11.6.3	Where practicable, native tree and shrub species would be planted around the water storages to be retained in the final landform.	This stage of rehabilitation has not been undertaken yet.	Not Triggered
2.11.6.3	The Applicant would undertake regular water quality monitoring for a period of at least 5 years post mining to verify water quality parameters remain consistent and within stock drinking water parameters.	This requirement has not come into effect yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.11.6.4	Other Areas of Disturbance		
2.11.6.4	The Applicant would progressively rehabilitate disturbed areas once they are no longer required for project-related activities and, once rehabilitated, those areas would be well defined to prevent inadvertent passage of vehicles over them.	This requirement has not come into effect yet.	Not Triggered
2.11.6.5	Rehabilitation Maintenance		
2.11.6.5	The Applicant would maintain an ongoing rehabilitation monitoring program in accordance with existing procedures. This includes general assessment of vegetation establishment and seeding, as and when required.	The first stages of rehabilitation have begun. The procedures in the Biodiversity Offset Management Plan are followed to regularly assess the state of rehabilitation landscapes.	Complies
2.11.6.5	All drainage controls on the mine site are inspected on a regular basis and maintenance works undertaken, as and when required.	Drainage controls are regularly inspected by the Environmental Officer.	Complies
2.11.6.5	Grazing is excluded across the areas subject to rehabilitation to provide optimum conditions for vegetation establishment and fauna habitation.	Cattle have been excluded from these areas, and this was observed by the audit team during the site visit.	Complies
2.11.6.5	The overburden emplacement areas are regularly inspected to identify areas of localised subsidence or excessive erosion and ameliorative measures implemented, as required.	Overburden emplacement areas are regularly inspected by the Environmental Officer.	Complies
2.11.6.5	The overall success of mine rehabilitation will be measured by qualified flora and fauna experts who will be able to make comparisons of rehabilitated areas with control plots established around the site.	This requirement has not come into effect yet.	Not Triggered
2.11.6.6	Noxious Weed Management		
2.11.6.6	The Applicant monitors noxious weeds on a regular basis with an external weed spraying contractor engaged to undertake weed management campaigns across the site.	Weed management controls are implemented onsite. However, these are undertaken by the Environmental Officer rather than a contractor.	Complies
2.11.6.6	Any specific targeted noxious weed campaign would continue to be undertaken utilizing best practice methodologies and in consultation with the Department of Primary Industries and Rural Lands Protection Board.	An interview with the Environmental Officer confirmed that, after consultation with Northern Inland Weeds Council, Grazon was recommended for use on St John's Wort. The outcome of using this product has been effective control of St John's Wort with minimal impact on surrounding native grasses.	Complies

Section	Requirement	Evidence	Audit Finding
2.11.7	Offset Strategies		
2.11.7	In addition to rehabilitation of the final landform (115ha rehabilitated to re-establish the White Box Yellow Box Blakely's Red Gum Woodland community), the Applicant proposes the following additional measures, to be incorporated into an overall biodiversity offset strategy: (a) 124ha of Liverpool Plains Grassland (vegetation on Cracking Clay Soils of Liverpool Plains), including 22ha of remnant White Box Yellow Box Blakely's Red Gum Woodland to the south of the mine; (b) 20ha of remnant White Box Yellow Box Blakely's Red Gum Woodland on the "Railway View" property to the southeast of the mine; and (c) 4.5ha of Tumbledown Gum Woodland community on the "Railway View" property to the southeast of the mine.	This stage of rehabilitation has not begun yet.	Not Triggered
2.11.7	The biodiversity offset would be secured in the long term by notation on title, and the offset areas managed in accordance with a management plan to be developed in consultation with the OEH and DP&I.	Long term security of the Biodiversity Offset Areas has not been finalised. On 18 June 2010, WCC did submit a proposed caveat to DP&I (the due date for the security to be finalised being 30 June 2010). However, this proposed caveat was rejected by DP&I. WCC are still engaged in negotiations with DP&I to finalise the security of this land. WCC have shown best endeavours to achieve this timeframe in relation to the long term security issue. It is recommended that WCC follows up with DP&I to bring these negotiations to a close.	Not Compliant Recommendation Made
4.1.1.2.2	Clean Water Management		
4.1.1.2.2	The existing clean water controls (diversion banks and storage dams) of the mine site would be modified as follows (refer to Figure 4.3):	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.1.1.2.2	- SD1, which is located within the footprint of the modified open cut area, would be drained and removed prior to vegetation clearing and soil stripping in this area.	See above.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.1.1.2.2	- DB1a, a diversion bank would be extended and realigned around the north-eastern perimeter of the modified open cut area to divert clean runoff initially into SD2.	See above.	Not Triggered
4.1.1.2.2	- DB2a would be constructed up-slope of the underground water storage area, diverting water flowing from the northwest to the west of the four dams and into natural drainage. Water would be discharged from DB2a via a level spreader, constructed with a grade not exceeding 1º.	See above.	Not Triggered
4.1.1.2.2	All water diversion and storage structures would be constructed prior to disturbance within the relevant catchment.	See above.	Not Triggered
4.1.1.2.2	In the case of the proposed modifications to the clean water management system (described on Figure 4.3):	See above.	Not Triggered
4.1.1.2.2	- DB1a would be constructed and commissioned prior to the draining and removal of SD1; and	See above.	Not Triggered
4.1.1.2.2	- DB2a would be constructed prior to the commencement of any earthworks associated with the construction of the dams within the Underground Water Storage Area.	See above.	Not Triggered
4.1.1.2.2	The storage dams and their estimated capacities to be maintained on the mine site are identified in Table 4.4.	See above.	Not Triggered
4.1.4.2.3	**Dirty Water Management**		
4.1.4.2.3	The existing dirty water management system of the mine site (catch banks and sediment basins) would be modified as follows (refer to Figure 4.3):	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.1.4.2.3	- CB1a would be constructed beyond the downstream toe of the overburden emplacement. CB1a would channel runoff from the overburden emplacement into an existing catch bank (CB1) that runs around the toe of the overburden emplacement.	See above.	Not Triggered
4.1.4.2.3	- CB1 would be upgraded to carry water flowing off the overburden emplacement before discharging into SB3.	See above.	Not Triggered
4.1.4.2.3	Should further dirty water management structures be required, these	See above.	Not Triggered

Section	Requirement	Evidence	Audit Finding
	would be designed and constructed in accordance with the requirements contained within "Managing Urban Stormwater: Soils and Construction, 4th eds. Vol. 1 and 2E" (Landcom, 2004 & 2008), and be completed prior to the commencement of any surface disturbing activities (unless impractical to do so, e.g. for reasons of access etc.).		
4.1.4.2.4	**Void Water Management**		
4.1.4.2.4	The water is and would continue to be collected within one or more sumps where it naturally seeps back into the groundwater underground, is pumped directly into water trucks for on-site dust suppression or is pumped to one of the two Void Water Dams (VWD1 and VWD2 - see Figure 4.3).	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.1.4.2.4	Rehabilitating surfaces of the final landform would be intermittently with the void water (which has been assessed of suitable quality for irrigation).	See above.	Not Triggered
4.1.4.2.4	To protect against increase in soil salinity, which may be counterproductive to the rehabilitation aims of the proposed irrigation, that Applicant would commit to the following:	See above.	Not Triggered
4.1.4.2.4	- The water of the void water would be sampled and analysed prior to irrigation. Should the electrical conductivity exceed 1 500µS/cm or pH fall outside the 5.5 to 8.5 range, the water would not be used for irrigation.	See above.	Not Triggered
4.1.4.2.4	- The soil of the final landform irrigated using the void water would be regularly sampled and analysed with irrigation activities ceased if the soil salinity increases significantly over time. The Applicant proposed to sample and analyse the soil at 6 monthly intervals.	See above.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.1.4.2.4	- The vegetation of the rehabilitated areas of the final landform would be regularly inspected. If signs of vegetation stress or poor condition are observed, irrigation activities would be ceased until it can be established the condition is not attributable to the irrigation.	See above.	Not Triggered
4.1.4.2.5	**Underground Water Management**		
4.1.4.2.5	Water from the underground workings would be pumped into one of four cells within the underground water storage area in the south-western corner of the mine site.	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.1.4.2.5	The combined capacity of the water storage cells, based on a surface area of approximately 5.8ha and average depth of 6m, would be at least 370ML.	See above.	Not Triggered
4.1.4.2.5	DB2a and the banks of the dams themselves would isolate the active cells from natural surface water drainage, restricting the total inflows to the dams to the groundwater and a small volume of direct rainfall.	See above.	Not Triggered
4.1.4.2.5	Groundwater quality has been found to be slightly saline and not considered of ANZECC drinking water guideline standard. To accommodate this slightly saline water, and to prevent seepage through the floor and banks of the cells which might ultimately discharge downstream of the mine site, the cells would be compacted to achieve a hydraulic conductivity < 1x10-9m/s.	See above.	Not Triggered
4.1.4.2.5	The Applicant would submit design specifications, construction QA/QC program and an "as constructed" report by a qualified engineer to the OEH prior to and following construction of the cells.	See above.	Not Triggered
4.1.4.2.6	**Contaminated Water Management**		
4.1.4.2.6	The following management practices would continue to be adopted to ensure water emanating or flowing from wash-down areas, workshops, and hydrocarbon storage and refuelling areas is not contaminated by hydrocarbons or is treated appropriately, if contaminated.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
4.1.4.2.6	All water from wash-down areas and workshops would be directed to oil separators and containment systems for subsequent removal.	This was observed by the audit team during the site inspection.	Complies
4.1.4.2.6	All storage tanks would be bunded with an impermeable surface and a capacity to contain a minimum 110% of the largest storage tank capacity.	Under Section 5.9.2(d) *AS 1940-2004 The storage and handling of flammable and combustible liquids*, a tank with an integral second containment does not have to be bunded to store 110% of its contents. Rather, the secondary containment only needs to be able to store the entire contents of the primary containment. The tanks at WCC are self bunded with a spill storage capacity of 100%, and are double-skinned. They are thus compliant with these requirements.	Complies
4.1.4.2.6	All hydrocarbon products would be securely stored.	During the audit period, there was one incident involving a hydrocarbon spill. In 2008 two contract scrapers collided causing the diesel tank of one vehicle to rupture. Approximately 25 litres of diesel was spilt. The remaining fuel in the ruptured tank was pumped into a mobile service truck. Fuel on the ground was directed with hand dug trenches to a catch point and soaked up with gravel material and absorption products from spill kits. All fuel spilt was contained within the immediate area, with no contamination of nearby waterways. The soil from the area was then excavated and removed to a washbay sump for rehabilitation. WCC consulted with OEH in relation to the incident and the response from the Department indicated that they were pleased by the manner in which WCC handled the incident (2008-2009 AEMR).	Complies
4.1.4.2.6	With the exception of less mobile mining equipment which would be refuelled within the open cut mine, designated areas would be allocated for refuelling and minor maintenance work and the use of these areas enforced by mine management.	This was observed by the audit team during the site inspection.	Complies
4.1.4.2.6	In the event of a hydrocarbon spill, which may enter natural or constructed drainage, a 4 phase remedial action plan would be adopted: (a) Phase 1 Identify the source of the contamination, stop the spill or leak and isolate the source from discharging to drainage through the construction temporary bunds or sumps; (b) Phase 2 Place oil booms or similar equipment within end-point structures, e.g.	During the audit period, there was one incident involving a hydrocarbon spill. In 2008 two contract scrapers collided causing the diesel tank of one vehicle to rupture. Approximately 25 litres of diesel was spilt. The remaining fuel in the ruptured tank was pumped into a mobile service truck. Fuel on the ground was directed with hand dug trenches to a	Complies

Section	Requirement	Evidence	Audit Finding
	sediment basins or storage dams, to prevent material from discharging; (c) Phase 3 Pump contaminated water from end-point structures and either pump through on-site oil-water separator or transport to a facility licensed to accept contaminated water. Recover any contaminated soil and either spread within a designated "land farming" area for natural remediation or transport to a facility licensed to accept contaminated soil; and (d) Phase 4 Remediate any temporary diversion, bunding or sump structures, treating residual contamination as outlined in Phase 3 above.	catch point and soaked up with gravel material and absorption products from spill kits. All fuel spilt was contained within the immediate area, with no contamination of nearby waterways. The soil from the area was then excavated and removed to a washbay sump for rehabilitation. WCC consulted with OEH in relation to the incident and the response from the Department indicated that they were pleased by the manner in which WCC handled the incident (2008-2009 AEMR).	
4.1.4.2.7	**Vegetation Management**		
4.1.4.2.7	As a general rule, a ground cover would be maintained on the mine site beyond the proposed areas of disturbance.	This was observed by the audit team during the site visit. Healthy ground cover continues to extend beyond the areas of disturbance.	Complies
4.1.4.2.7	Importantly, the Applicant would undertake progressive revegetation of all completed landforms as discussed in Section 2.11.	The beginnings of the rehabilitation program have commenced.	Complies
4.1.4.2.7	The Applicant proposes to maintain this ground cover at 70% or better in all areas immediately adjacent to the active areas of disturbance on the mine site.	This was observed by the audit team during the site visit. Healthy ground cover continues to extend beyond the areas of disturbance.	Complies
4.1.4.2.7	In addition to the undisturbed areas of the mine site, the Applicant would also reduce the erosion potential (or C-factor) of all drainage paths, i.e. diversion and catch banks, by establishing and maintaining a vegetative cover or installing a Rolled Erosion Control Product (RECP), e.g. jute mesh, coconut fibre, etc. within the channel.	Sterile crops have been planted on many of the exposed topsoil areas to prevent erosion. Seeded topsoil areas were observed by the audit team during the site visit.	Complies
4.1.4.2.7	A vegetative cover of 70% or better, or RECP installation, would be achieved within 3 months of channel construction.	Channels have not been constructed yet, so this requirement has not come into effect.	Not Triggered
4.1.4.3.1	**Water Availability Controls - Introduction**		
4.1.4.3.1	The Applicant would continue to manage water availability with two primary goals in mind:	These commitments were found to be complied with, as below.	Complies

Section	Requirement	Evidence	Audit Finding
4.1.4.3.1	Minimising any reduction in the availability of surface runoff to downstream users. This would be achieved by ensuring that the clean water dam capacity of the mine site remains within the Maximum Harvestable Rights Dams Capacity (MHRDC) allocation for the mine site.	Maximum Harvestable Right (amount of clean water used) is 47.5 ML/annum. The current total capacity of all clean water dams is 25.85ML, which is well below this maximum harvestable right (Table 2.1of AEMR 2010-2011).	Complies
4.1.4.3.1	Ensuring sufficient water is captured on the mine site to meet the operational requirements of the mine.	A site water balance has been prepared in each AEMR for this reporting period (Section 2.8.8 of 2010-2011 AEMR, and Sections 2.8.2 of the 2008-2009 and 2009-2010 AEMRs).	Complies
4.1.4.3.3	**Site Water Balance**		
4.1.4.3.3	As is the current practice, the water balance would be updated each year in the AEMR, reflecting changes to water management structures or refinements in the input / output calculations.	This has been prepared in each AEMR for this reporting period (Section 2.8.8 of 2010-2011 AEMR, and Sections 2.8.2 of the 2008-2009 and 2009-2010 AEMRs).	Complies
4.1.4.3.3	The separate balances are provided for each water type (clean, dirty and void), along with an overall water balance including all water types.	This has been prepared in each AEMR for this reporting period (Section 2.8.8 of 2010-2011 AEMR, and Sections 2.8.2 of the 2008-2009 and 2009-2010 AEMRs).	Complies
4.1.5.2.2	**Dirty Water Management (Residual Impacts)**		
4.1.5.2.2	The proposed modification provides for the storage of all void and underground water within the dams VWD1 and VWD2 and the underground water storage area. These dams would be isolated from natural drainage and would be maintained to ensure no discharge of water, which may be slightly to moderately saline, from the mine site.	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.1.5.2.2	The permeability of these dams would not exceed 1 x 10-9 m/s.	See above.	Not Triggered
4.2.4.1	**Groundwater Contamination**		
4.2.4.1	All hydrocarbon products would be securely stored.	During the audit period, there was one incident involving a hydrocarbon spill. In 2008 two contract scrapers collided causing the diesel tank of one vehicle to rupture. Approximately 25 litres of diesel was spilt. The remaining fuel in the ruptured tank was pumped into a mobile service truck. Fuel on the ground was directed with hand dug trenches to a catch point and soaked up with gravel material and absorption products from spill kits. All fuel spilt was contained within the immediate area, with no contamination of nearby waterways.	Complies

Section	Requirement	Evidence	Audit Finding
		The soil from the area was then excavated and removed to a washbay sump for rehabilitation. WCC consulted with OEH in relation to the incident and the response from the Department indicated that they were pleased by the manner in which WCC handled the incident (2008-2009 AEMR).	
4.2.4.1	All of the mining fleet would be refuelled within designated surface facilities area. With the exception of some maintenance activities on mobile equipment, all maintenance works requiring the use of oils, greases and lubricants would be undertaken within designated surface facilities areas, i.e. maintenance workshop.	Interviews with staff onsite confirmed that these are the procedures that are followed. However, due to feasibility requirements, larger fuelling tanks fill up at the designated surface area, and then mobilise throughout the site to refuel other vehicles throughout the site. During the site visit the audit team observed the maintenance works taking place in their designated area. It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water separators and containment areas.	Complies Recommendation Made
4.2.4.1	All water from wash-down areas and workshops would be directed to oil/water separators and containment systems.	Interviews with staff onsite confirmed that this is the procedure that is followed. This wash-down area and oil/water separator system was observed by the audit team during the site visit. It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water separators and containment areas.	Complies Recommendation Made
4.2.4.1	All storage tanks would either be self-bunded tanks or bunded with an impermeable surface and a capacity to contain a minimum 110% of the largest storage tank capacity.	Under Section 5.9.2(d) *AS 1940-2004 The storage and handling of flammable and combustible liquids*, a tank with an integral second containment does not have to be bunded to store 110% of its contents. Rather, the secondary containment only needs to be able to store the entire contents of the primary containment. The tanks at WCC are self bunded with a spill storage capacity of 100%, and are double-skinned. They are thus compliant with these requirements.	Complies

Section	Requirement	Evidence	Audit Finding
4.2.4.2	Groundwater Availability		
4.2.4.2	Groundwater management would continue through monitoring of surrounding bores. Should any reduction available groundwater occur, mitigation measures would be developed to ensure that is replaced by a comparable water source or otherwise compensated.	These bores continue to be monitored as per the water quality monitoring results contained in Appendix 4 of AEMR 2008-2009, 2009-2010 and 2010-2011. Bore water was extracted during the 2010-2011 reporting period as outlined in Section 2.8.4 of the AEMR 2010-2011. Bore water was also extracted during the 2008-2009 reporting period as outlined in Section 2.8.2 of the AEMR 2008-2009. Annual water balances have not recorded a significant declined in groundwater, so the requirement to implement mitigation measures has not been triggered.	Complies
4.2.4.2	Replacement and/or compensatory measures would be developed in consultation with the affected land owner but may include: (a) deepening of the affected bore to increase the available saturated thickness; (b) drilling and installation of a replacement bore outside the area of drawdown impact; (c) construction of surface water capture and containment structures such as dams or rainwater tanks to supplement reduced groundwater source; or (d) transfer of groundwater drawn from Applicant-owned bores or the void itself.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
4.2.6	Groundwater Monitoring		
4.2.6	The Groundwater Monitoring Program and monitoring result would continue to be assessed annually by a hydrogeological specialist, with changes to the program incorporated as deemed appropriate by this person(s).	The Site Water Management Plan: Werris Creek Coal Mine (WCL, 2009) was updated in March 2009 to reflect any changes proposed by this Statement of Environmental Effects (SEE). As this Site Water Management Plan was specifically audited as part of the IEA, it was not considered necessary to audit the commitments relating to site water management as set out in the SEE.	Not Triggered
4.2.6-4.3.5	Noise		
4.2.6	The Applicant would continue to implement the operational safeguards and controls documented in Section 1.6.4.2.	These requirements are outlined in the Noise Management Section of this document. The audit found that all of these conditions were either complaint, or were not able to be verified.	Complies

Section	Requirement	Evidence	Audit Finding
4.2.6	Construction of the second rail load-out bin and conveyor and underground water dams would only be undertaken during the day time, excluding those periods when inversion conditions occur.	This second loading bin was never constructed. Pacific Carbon constructed a pad next to rail line with ARTC approval instead.	Not Triggered
4.2.6	Each lift of the overburden emplacement would continue to be constructed using the same controls as currently approved. That is: - the initial overburden emplacement would form a 15m high acoustic bund around the outside of the emplacement lift, with all subsequent overburden placement for that lift undertaken behind this 15m high bund; - the 15m high bund would only be constructed during the day time when inversion conditions or winds from the north-western quadrant do not prevail; and - overburden emplacement during the evening and night time, as well as when inversion conditions or winds from the north-western quadrant prevail, would be undertaken within the mine void or behind the 15m high acoustic bund.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.2.6	Surface clearing and soil stripping operations using scrapers would not be undertaken under inversion conditions or when winds from the southeast quadrant prevail.	There is a meteorological station operating, and reports were made about this in 2008-2009 AEMR, and again in the 2010-2011 AEMR. Results from the station were also included in 2010-2011 AEMR. This meteorological station continues to monitor events such as temperature inversions. The Environmental Officer follows a procedure each day based on forecasted weather conditions. If temperature inversions are predicted, the Environmental Officer will advise that operations may need to be modified. An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased.	Complies
4.2.6	As far as practicable, mining operations would be scheduled such that when land preparation or overburden removal activities occur at or within 10m of surface, overburden placement would be undertaken below surface level, i.e. within the completed section of the open cut.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
4.2.6	The Applicant would provide for the planting of trees along the northern boundary of this property (Tonsley Park) in order to provide a visual as well as acoustic barrier for noise propagated from the mine to the north.	This visual screen of trees was observed by the audit team during the site visit.	Complies
4.3.4.3.1	In order to mitigate exceedances of noise criteria, the Applicant has committed to ceasing all soil stripping activities when inversion or southeast wind conditions prevail.	An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased.	Complies
4.3.5	The monthly monitoring is to be continued until such time as the OEH is satisfied that noise criteria can be consistently met.	An interview with the Environmental Officer confirmed that monthly monitoring continues to be undertaken by acoustics engineers. It is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified.	Complies
4.4.4.1	**Blasting**		
4.4.4.1	Blast design and implementation would be undertaken by a suitably qualified blasting engineer and/or experienced and appropriately certified shot-firer.	Blasting is carried out by the suitably qualified and licensed contractor, Orica in accordance with the relevant standard AS 2187.2-2006 – Explosives - Storage and Use.	Complies
4.4.4.1	Blast design for the modified operations at the Werris Creek Coal Mine would continue to include the following features to meet these industry standards: - ensuring that burden distances and stemming lengths are such that explosion gases are almost completely without energy by the time they emerge into the atmosphere; - ensuring that charges consistently detonate in carefully designed sequences.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Noise and airblast generation would continue to be controlled by ensuring that all, or nearly all, of the explosion energy is consumed in fragmenting and displacing the overburden by the time the gases vent (via the broken burden rock and/or ejected stemming material) into the atmosphere. This objective would be met by ensuring that:	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Blasthole spacing is implemented in accordance with blast design;	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies

Section	Requirement	Evidence	Audit Finding
4.4.4.1	the burden distance and stemming length are carefully selected and then implemented precisely;	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	appropriate materials, e.g. 20mm aggregates, are used for stemming;	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	charges detonate in the correct sequence and with inter-row delays that provide good progressive release of burden; and	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	the maximum weight of explosive detonated in a given delay period (the maximum instantaneous charge (MIC)) is limited to conservative and proven levels.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Subsequent refinements of these controls would continue to be implemented on the basis of the blast monitoring program.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Ground vibration would continue to be controlled by ensuring:	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	- the minimum practicable weight of explosive detonates at an instant, i.e. minimising the MIC, by using the maximum number of delay periods in each blast; and	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	- most of the energy liberated by the charge(s) on a given delay number is consumed in providing good fragmentation, adequate displacement and/or a loose, highly diggable muckpile, rather than in creating ground vibrations, i.e. by ensuring that the burden distance and effective sub-drilling are not too large.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Blast-generated dust would be minimised by ensuring that stemming columns are not ejected for considerable distances into the atmosphere.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	Stemming column lengths would be such that their ejection velocities are low.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	The blasting contractor would be required to use aggregates for blasthole stemming and to use NONEL delay-type or electronic detonators to initiate charges.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
4.4.4.1	The Applicant proposes to maintain a blast envelope of 250m around each blast. All mobile equipment and personnel would be required to be relocated to at least 250m from the site of the blast prior to initiation and remain outside the blast envelope until the shot firer confirms it is safe to re-enter.	Interviews with blasting contractor (Orica) staff confirmed compliance with these requirements.	Complies
4.4.4.1	The Applicant would continue to monitor the distance fly-rock travels to ensure that the blast envelope remains appropriate.	Interviews with blasting contractor (Orica) staff confirmed that sentries are mandated around blast to watch for flyrock and prevent people driving into the area. If flyrock leaves the 500m blasting zone, this distance is measured.	Complies
4.4.4.1	The Applicant maintains a blast notice board near the mine entrance on the Werris Creek - Quirindi Road notifying passing motorists and landholders when the next blast is programmed, and at what time.	Notice board is installed at mine entrance advising days that blasting occurs.	Complies
4.4.4.1	The blast monitoring program would be continued.	Interviews with the Environmental Officer and blasting contractor (Orica) staff confirmed that blast monitoring is undertaken for each blast as per the requirements in the Werris Creek Coal Blasting Monitoring Program (WCL, 2010).	Complies
4.5.4	**Air Quality**		
4.5.4	Cleared trees and branches would be retained for use in stabilising slopes identified for rehabilitation with native woodland communities.	Larger trees and debris removed as part of vegetation clearing have been placed in rehabilitation areas to provide habitat for native fauna. This was observed by the audit team during the site visit.	Complies
4.5.4	Where practicable, soil stripping would be undertaken at a time when there is sufficient soil moisture to prevent significant lift-off of dust.	An interview with the Environmental Officer confirmed the procedure that is followed. Soil is not stripped during periods of excessive moisture to reduce the likelihood of damage to soil structure. However, soil is stripped when it is sufficiently moist to maintain structure and reduce dust emissions.	Complies
4.5.4	Soil stripping during periods of high winds would be avoided.	An interview with the Coal Processing Manager confirmed that when conditions are too dry or windy to the point where dust cannot be sufficiently suppressed by water cart, operations are temporarily ceased.	Complies
4.5.4	Dust suppression by water application would be used to increase soil moisture should stripping occur during periods of high wind.	An interview with the Coal Processing Manager confirmed that when dust cannot be controlled with water carts (as determined by a visual assessment), then soil stripping ceases.	Complies

Section	Requirement	Evidence	Audit Finding
4.5.4	Ripping of softer overburden material would be avoided during periods of high wind.	An interview with the Coal Processing Manager confirmed that when dust cannot be controlled with water carts (as determined by a visual assessment), then soil stripping ceases.	Complies
4.5.4	The drilling rig would utilise water injection or, alternatively be fitted with dust collectors.	An interview with the Environmental Officer confirmed that the drilling rig uses a water spray and is attached to a vacuum type dust collector.	Complies
4.5.4	Blast hole stemming using aggregates to prevent venting of explosion gases	Interviews with blasting contractor (Orica) staff confirmed compliance with this requirement.	Complies
4.5.4	Notwithstanding the moist nature of the ROM coal, water would be applied to the coal at the feed hopper, crusher and at all conveyor transfer and discharge points.	An interview with the Coal Processing Manager confirmed that water carts and fixed water spraying devices are available at all of these points to apply water where necessary. These water carts and spraying devices were observed by the audit team during the site visit.	Complies
4.5.4	All conveyors would be fitted with appropriate cleaning and collection devices to minimise the amount of material falling from the return conveyor belts.	An interview with the Coal Processing Manager confirmed that conveyors have scrapers on them to scrape into bins. They are also fitted with automatic water sprays located at five points. When trains are loaded, the top of train is sprayed. This spray nozzle stays on for 3-4 seconds after the train finished loading.	Complies
4.5.4	Some flexibility would exist to temporarily cease operation in the event of protracted dry periods, high winds, and significant dust generation and dispersal towards the surrounding residences.	An interview with the Coal Processing Manager confirmed that if water spraying is unable to sufficiently suppress dust (determined through visual assessment), operates are temporarily halted. Trucks also cannot tip during high winds, so these operations must cease.	Complies
4.5.4	The mine entrance road and rail load-out road are sealed.	These internal roads were observed during the time of the audit. They was sealed and appeared to be maintained in good condition.	Complies
4.5.4	Internal haul roads are watered.	Water carts were observed during the audit to be maintaining dust suppression on these internal roads.	Complies
4.5.4	The extent of clearing/site preparation in advance of mining is minimised.	This practice was adhered to during the auditing period, as per Sections 3.11.1 of the AEMRs 2008-2009 and 2009-2010, and Section 3.9.1 in the AEMR 2010-2011.	Complies

Section	Requirement	Evidence	Audit Finding
4.5.4	Progressive rehabilitation of areas of disturbance including topsoil and subsoil stockpiles.	The beginnings of topsoil rehabilitation were observed during the audit.	Complies
4.5.4	Installation of bund walls and windbreaks as required.	With approval of DA-172-7-2004 MOD5, an earthen screen has been constructed along Werris Creek Road to reduce the visual impact of mining operations. Tree planting has been undertaken along this visual bund to provide a further screening effect (AEMR 2009-2010 Section 3.11.2 and AEMR 2010-2011 Section 3.9.2).	Complies
4.5.4	The coal loaded to the conveyor of the rail load-out facility would be watered as required to prevent dust lift-off.	An interview with the Coal Processing Manager confirmed that water carts and fixed water spraying devices are available at all of these points to apply water where necessary. These water carts and spraying devices were observed by the audit team during the site visit.	Complies
4.5.4	Coal would not be loaded above the truck body sides, thereby preventing the accidental loss of the coal from the truck during transportation.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible. Closing the tarp on a truck prevents the truck from being filled above its body height.	Complies
4.5.4	All trucks carrying product coal from the mine would be covered with approved covers and the tailgates securely fixed to prevent windblown dust emission or spillages.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible.	Complies
4.5.7	**Greenhouse Gas Assessment**		
4.5.7	The Applicant is committed to reducing greenhouse gas emissions and will investigate low emissions technology as it can be practically applied to the mining operation.	This is discussed in the Energy Savings Action Plan and in Sections 3.1.5 of AEMRs 2008-2009, 2009-2010, and 2010-2011.	Complies

Section	Requirement	Evidence	Audit Finding
4.5.8	Monitoring		
4.5.8	With the following exceptions, the Applicant proposes to maintain the same monitoring program as identified in Section 1.6.6.3 and described in the Air Quality Monitoring Program (AQMP) approved for the Werris Creek Coal mine in April 2005.	These conditions in Section 1.6.6 are outlined above in Air Quality. All of these conditions were found either to be compliant, or were unable to be verified. The Air Quality Monitoring Program continues to be carried out and the results of this monitoring are included in Appendix 4 of the AEMRs 2008-2009 and 2009-2010, and Appendix 3 of the AEMR 2010-2011.	Complies
4.5.8	The high volume samplers at locations WCHV1 and WCHV3 ("Old Colliery" and "Railway View") would be relocated to non-project related residences, possibly on the "Marengo" and/or "Cintra" properties.	WCHV1 is now located on the Cintra property. WHCV3 is now located on the Railway View property. However, since this commitment was made, both of these properties have been purchased by WCC. A high volume sampler is maintained at the non project related property of Tonsley Park (WCHV2).	Complies
4.5.8	The dust gauges at locations WCA3, WCA4 and WCA5 ("Old Colliery", "Hillview" and "Railway View") would be relocated to non-project related residence, possibly on the "Marengo", "Hazeldene", "Woodlands" and/or "Glenara" properties.	Dust gauges are now maintained at the following monitoring points: WC-2 (Cintra); WC-5 (Railway View); WC-7 (Tonsley Park); WC-8 (Plain View); WC-9 (Marengo); WC-10 (Mountain View) and WC-11 (Glenara). Of these dust gauge locations, only WC-10 at Mountain View and WC-11 at Glenara continue to be on non project related property, as all other properties have been purchased by WCC since this commitment was made.	Complies
4.5.8	The monitoring would continue to be undertaken in accordance with the OEH document "Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales", 2001 and with Australian Standards AS2922-1987 and AS3580.10.1-1991.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.6.2.3.1	Flora and Fauna		
4.6.2.3.1	The extent of clearing undertaken would be minimised and consistent with operational requirements.	This practice was adhered to during the auditing period, as per Sections 3.11.1 of the AEMRs 2008-2009 and 2009-2010, and Section 3.9.1 in the AEMR 2010-2011.	Complies
4.6.2.3.1	All areas to be cleared would be clearly defined.	An interview with the Environmental Officer confirmed that this is the procedure that is followed.	Complies
4.6.2.3.1	All clearing and topsoil stripping would be undertaken in campaigns on an as needs basis.	This practice was adhered to during the auditing period, as per Sections 3.11.1 of the AEMRs 2008-2009 and 2009-2010, and Section 3.9.1 in the AEMR 2010-2011.	Complies

Section	Requirement	Evidence	Audit Finding
4.6.2.3.1	Soil material and biomass would be directly transferred to an active rehabilitation area, where practicable.	It has not been practicable yet to transfer subsoils directly onto sections of the final landform. Currently, all stripped soils are maintained in stockpiles which were visually inspected by the audit team and appeared to be maintained in good condition.	Not Triggered
4.6.2.3.1	Progressive rehabilitation of all disturbed surfaces would be undertaken in accordance with the procedures described in Section 2.11 of this SoEE.	This rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
4.6.2.3.1	Any additional internal roads required on the cleared lands would be constructed well away from stands of native vegetation.	An interview with the Environmental Officer confirmed that no additional roads have been constructed during this period.	Not Triggered
4.6.2.3.1	The single occurrence of the Brigalow within the Brigalow Belt South, Nandewar and Darling Riverine Plains Bioregions Ecological Community would not be affected by the modified open cut mine area although a buffer of 50m is proposed between the edge of the open cut mine and the community.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.6.2.3.1	Noxious weeds would be controlled at all times.	Weed management controls are implemented onsite by the Environmental Office. A site inspection by the ecologist during the audit confirmed that this weed control program is proving effective.	Complies
4.6.2.3.1	In order to compensate for the additional disturbance of up to 38.4ha of the mine site, including 8.8ha of the White Box Yellow Box Blakely's Red Gum Woodland EEC, a strategy to rehabilitate specific areas of the mine site to native vegetation, maintain a habitat corridor between the rehabilitated land and existing biodiversity offset area and create an additional biodiversity offset area would be adopted.	This rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
4.6.2.3.1	White Box Yellow Box Blakely's Red Gum Woodland community type native vegetation would be re-established and designated for nature conservation in the area of 115ha nominated for rehabilitation	This full-scale rehabilitation has not been undertaken yet.	Not Triggered
4.6.2.3.1	The location of the native vegetation reestablishment in the final landform has been chosen to maximise connectivity to remnant patches of the White Box Yellow Box Blakely's Red Gum Woodland community to the east and south of the overburden emplacement.	This rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.6.2.3.1	The biodiversity offset strategy for the approved Werris Creek Coal Mine incorporates a 124ha area on the "Eurunderee" property to the west of the mine site. This would be connected to the rehabilitated native vegetation of the final landform through the maintenance of a habitat corridor on which agricultural activity would be ceased.	The offset area includes 52.2 ha of mine rehabilitation for a corridor linking the eastern and western sections of the biodiversity offset area and providing landscape connectivity (Section 1 Werris Creek Coal Mine – Biodiversity Offset Area Annual Monitoring Report, Eco Logical, Spring 2010).	Complies
4.6.2.3.1	A second habitat corridor would be maintained between the conserved remnant patch of White Box Yellow Box Blakely's Red Gum Woodland community to the south of the overburden emplacement and the Werris Creek – Quirindi Road.	The offset area includes 52.2 ha of mine rehabilitation for a corridor linking the eastern and western sections of the biodiversity offset area and providing landscape connectivity (Section 1 Werris Creek Coal Mine – Biodiversity Offset Area Annual Monitoring Report, Eco Logical, Spring 2010).	Complies
4.6.2.3.1	Remnant vegetation remains within the road easement as well as on the "Railway View" property to the immediate east.	Vegetation remains in the Railway View property as per Section 2.1 of Werris Creek Coal Mine – Biodiversity Offset Area Annual Monitoring Report, Eco Logical, Spring 2010. Remnant vegetation was observed on the road easement by the audit team during the site visit.	Complies
4.6.2.3.1	The Applicant proposes to establish a long-term conservation area on the "Railway View" property, adjacent to the second habitat corridor.	This offset area in the Railway View property has been confirmed, as per Section 2.1 of Werris Creek Coal Mine – Biodiversity Offset Area Annual Monitoring Report, Eco Logical, Spring 2010.	Complies
4.6.2.3.1	Where possible, the removal of trees would be carried out between late spring to early autumn to avoid and/or minimise impact on spring nesting birds and overwintering bats.	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring.	Complies
4.6.2.3.1	Prior to each clearing campaign, a survey would be undertaken to ascertain the presence of any listed threatened species. In the event any listed threatened species are identified, they would be relocated prior to the commencement of clearing.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies

Section	Requirement	Evidence	Audit Finding
4.6.2.3.1	No felled timber within the mine site would be burnt. Rather, all stumps would be buried within the overburden emplacement, all branches and tree trunks <300mm in diameter or containing hollows would be placed over the areas of the final landform designated for the re-establishment of native woodland. Large diameter logs not containing hollows may be sold and/or used for farm-related activities.	Larger trees and debris removed as part of vegetation clearing have been placed in rehabilitation areas to provide habitat for native fauna. This was observed by the audit team during the site visit.	Complies
4.6.2.3.1	Revegetation of the final landform has been designed to re-establish similar areas of the native vegetation to that disturbed, link revegetated areas with remnants of the endangered White Box Yellow Box Blakely's Red Gum Woodland community and create habitat corridors for native fauna.	This rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
4.6.2.3.1	The Applicant has provided for an additional offset area including almost 25ha of native woodland (20ha of White Box Yellow Box Blakely's Red Gum Woodland community and 4.5ha of Tumbledown Gum community) to offset the clearing of 8.8ha native vegetation over the modified open cut and overburden emplacement areas. The ratio of conserved to cleared native vegetation is almost 3:1.	This rehabilitation has not yet fully commenced and is not due to commence under the BOMP until December 2011.	Not Triggered
4.6.2.3.1	Stock grazing would be excluded from the remaining open woodland remnants within a 200ha area to the north and east of the open cut mine.	Cattle grazing has been excluded from these areas, and this was observed by the audit team during the site visit.	Complies
4.6.2.3.1	Tree removal should be timed so as to avoid the breeding season of nesting birds and hollow-reliant fauna (December - March).	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring.	Indeterminate
4.6.2.3.1	Prior to tree felling a suitably qualified and experienced ecologist should inspect and mark all hollow bearing trees within the proposed felling area.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies

Section	Requirement	Evidence	Audit Finding
4.6.2.3.1	At the time of felling a suitably qualified and experience ecologist should supervise the felling of all hollow-bearing trees and where possible instruct felling machinery operators on an appropriate method to minimise harm to wildlife that may remain with tree hollows.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies
4.6.2.3.1	Where possible felled trees should be placed on the ground amongst existing trees to provide habitat for ground cover dependent species.	The audit team observed that cleared trees have been strategically placed on other parts of the site to act as fauna habitat.	Complies
4.6.2.3.1	A Flora / Fauna Management Plan is maintained by the Applicant and this would be updated to include the new biodiversity offset area included as part of the proposed modification.	The Flora and Fauna Management Plan has now been incorporated into the Biodiversity Offset Management Plan (Eco Logical, 2010).	Complies
4.7.2.5	**Cultural Heritage**		
4.7.2.5	- Known Indigenous heritage will be managed in accordance with the approved Cultural Heritage Management Plan, which will be regularly reviewed and updated as necessary.	The Archaeological and Cultural Heritage Management Plan for the Werris Creek Coal Mine (WCL, 2007) fulfils these requirements. Section 3.10 of the AEMR 2010-2011 and Sections 3.12 of the AEMRs 2008-2009 and 2009-2010 outline how indigenous heritage continues to be managed according to these guidelines.	Complies
4.7.2.5	- If any further Aboriginal objects are uncovered at any time during the course of the proposed modification, work at the area would cease and Applicant must contact the NSW OEH for advice.	An interview with the Environmental Officer confirmed that this has not occurred during the auditing period.	Not Triggered
4.7.2.5	- The Applicant already includes a Cultural Heritage Awareness component as part of the site induction process. This is to help raise awareness and ameliorate any impact on heritage sites during site establishment and subsequent mining activities. This includes making all staff and contractors aware of their responsibilities with respect to Aboriginal heritage under the *National Parks and Wildlife Act 1974*.	This is included as part of the staff training package that was sighted by the audit team during the site visit.	Complies

Section	Requirement	Evidence	Audit Finding
4.8.4	Visual Amenity		
4.8.4	In keeping with the original proposal, the modified overburden emplacement would create a visual barrier between vantage points to the south and east (notably the Werris Creek – Quirindi Road) and the workings of the open cut itself.	With approval of DA-172-7-2004 MOD5, an earthen screen has been constructed along Werris Creek Road to reduce the visual impact of mining operations. Tree planting has been undertaken along this visual bund to provide a further screening effect (AEMR 2009-2010 Section 3.11.2 and AEMR 2010-2011 Section 3.9.2).	Complies
4.8.4	The modified overburden emplacement continues the original design theme (such as final landform would appear as a continuation of the existing north-south oriented ridge located centrally within the mine site), creating a horseshoe type hill shape around the open cut void.	This was observed by the audit team during the site inspection.	Complies
4.8.4	The increasing height of the overburden emplacement would be mitigated by the progressive rehabilitation program of the Applicant. That is, the overburden emplacement would be raised in 10m “lifts”, with each lift topsoiled and seeded with a cover crop following completion to convert the earth structure to a more natural grass covered slope.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
4.8.4	The second rail load-out bin would be constructed with a similar green shade as the existing bin which is barely perceptible from vantage points surrounding the Coal Product Storage Area and Rail Load-out Facility.	An interview with the Coal Processing Manager confirmed that this second loading bin was never constructed. Pacific Carbon constructed a pad next to rail line with ARTC approval instead	Complies
4.8.4	The Applicant would provide for additional planting of vegetation along the southern boundary of the “Tonsley Park” property to complete the visual screen for this property.	This visual screen of trees was observed by the audit team during the site visit.	Complies
4.8.4	As is the current practice, floodlights would be positioned and directed to minimise emissions, with lighting not required at any given time would not be used.	This practice was adhered to during the auditing period, as per Sections 3.11.1 of the AEMRs 2008-2009 and 2009-2010, and Section 3.9.1 in the AEMR 2010-2011.	Complies
4.8.4	Where the use of floodlights is required in the open cut, on the overburden emplacements or within the coal handling and processing area, they would be directed downwards and towards the west.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
4.8.4	Minimising the extent of land disturbance/clearing in advance of mining.	This practice was adhered to during the auditing period, as per Sections 3.11.1 of the AEMRs 2008-2009 and 2009-2010, and Section 3.9.1 in the AEMR 2010-2011.	Complies

Section	Requirement	Evidence	Audit Finding
4.8.4	Undertake progressive rehabilitation of all disturbed areas of the mine site using a combination of pasture species and tree plantings.	This full scale rehabilitation has not commenced yet.	Not Triggered
4.8.4	Implementation of air quality controls as identified in Section 4.5.4.	These conditions in Section 4.5.4 are outlined above in Air Quality. All of these conditions were found to be compliant.	Complies
4.8.4	Maintaining the mine and associated areas of disturbance in a clean and tidy condition at all times.	The site was observed to be in a tidy and orderly condition at the time of the audit.	Complies
4.9.5	**Soils Management Controls**		
4.9.5	Topsoil would be stripped to a depth of between 15cm to 20cm over the modified areas of the open cut and overburden emplacement and deeper (up to 1m) over the Underground Water Storage Area and when practicable directly transferred onto sections of the final landform.	An interview with the Environmental Officer confirmed that this is the procedure that is followed. To date most soil has been transferred to soil stockpiles which were observed by the audit team during the site visit.	Complies
4.9.5	When required, topsoil stockpiles would not exceed 2m in height and, where practical, maintained as windrows in preference to larger structures. Any stockpiles likely to be retained for over 3 months would be immediately seeded (seasonal conditions allowing) with non-persistent pasture species to reduce erosion potential and maintain some biological activity within the soil.	The Landscape Management Plan: Werris Creek Coal Mine (AECOM, 2010) supersedes this requirement and provides that topsoil stockpiles cannot be more than 3m in height. This 3m high condition has been found to be compliant.	Not Triggered
4.9.5	Subsoils would be stripped and when practicable directly transferred onto sections of the final landform.	It has not been practicable yet to transfer subsoils directly onto sections of the final landform. Currently, all stripped soils are maintained in stockpiles which were visually inspected by the audit team and appeared to be maintained in good condition.	Complies
4.9.5	When required, subsoil stockpiles would not exceed 3m in height and would typically be placed in larger stockpiles than the topsoil.	An interview with the Environmental Officer confirmed that this is the procedure followed. Soil stockpiles were observed by the audit team during the site visit and appeared to be well maintained.	Complies
4.9.5	An inventory of soil resources present on the mine site, both in stockpiles and awaiting stripping, would continue to be maintained and regularly reconciled with rehabilitation requirements.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition.	Complies Recommendation is made

Section	Requirement	Evidence	Audit Finding
		It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	
4.9.5	Water management structures would be utilised to divert surface water flow away from soil stockpile areas, thus reducing the potential for erosion.	An interview with the Environmental Officer confirmed that stormwater runs from the site into sediment basins as part of the overall Creek Coal Mine Site Water Management Plan (WCL, 2009).	Complies
5.3.2	**Precautionary Principle**		
5.3.2	The framework for ongoing environmental management, operational performance and rehabilitation of the mine site would continue to be managed in accordance with the DPI-MR Mining, Rehabilitation and Environmental Management Process (MREMP), both of which would involve the input from relevant State and local government agencies.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3.2	The Mining Operations Plan would be updated.	The Mining Operations plan was last revised and updated in October 2009, in line with the most recent modification to consent from the DP&I.	Complies
5.3.2	Annual Environmental Management Reports would continue to be prepared to report on the progress of the operation and provide an opportunity to review the effectiveness of the environmental management strategies adopted.	These AEMRs were adequately prepared for the 2008-2009, 2009-2010 and 2010-2011 reporting periods that occurred within this auditing period.	Complies
5.3.2	All on-site procedures would be regularly reviewed, particularly in light of monitoring results.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3.2	Surface water, groundwater, noise, deposited dust levels, airblast overpressure and ground vibration, flora and fauna, would continue to be monitored in order to ensure the continued compliance of the operation with goals outlined in this document.	All of these areas continue to be monitored. The ongoing data from this monitoring is contained within the Appendices to the AEMRs 2008-2009, 2009-2010 and 2010-2011.	Complies
5.3.2	Wherever possible, areas not required for mining or associated activities would remain grassed to assist in minimising erosion and reducing the suspended sediment load in surface water flowing through the mine site.	The audit team observed that most of the areas surrounding active mining operations were grassed. Topsoil stockpiles were also observed to have been seeded with sterile crops to prevent erosion.	Complies

Section	Requirement	Evidence	Audit Finding
5.3.2	Topsoil and subsoil would be stripped, stockpiled and re-spread on the basis of the quality of the soil (as indicated by the soil mapping unit), and planned final land use of different areas of the final landform.	Topsoils are currently stockpiled and separated into different classes. Soil stockpiles were visually inspected by the audit team during the site visit, and were observed to be managed in good condition. Full scale re-respreading of soils has not been required as part of rehabilitation works yet.	Complies
5.3.3	**Social Equity**		
5.3.3	In order to ensure a realistic distribution of benefits, the Applicant would continue to consult with the local community and maintain a pro-active approach to issues of interest.	WCC continues dialogue with the local community, as per the Community Consultative Committee meetings that are held annually (Sections 4.2 of the AEMRs 2008-2009, 2009-2010 and 2010-2011).	Complies
5.3.3	This dialogue would also include a system to record, manage and respond to any complaints relating to the operation.	The general complaints/information hotline operated by the Environmental Officer serves this function. During the site visit the audit team observed the Environmental Officer effectively managing complaints received via the complaints hotline.	Complies
5.3.4	**Conservation of Biodiversity and Ecological Integrity**		
5.3.4	Pre-clearing surveys of native tree species would be undertaken and any threatened species encountered would be relocated prior to clearing.	An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out a survey before tree felling to check for fauna. The ecologist checks trees again after felling.	Complies
5.3.4	Cleared vegetation <300mm in diameter or containing hollows would be retained and used in the rehabilitation of areas designated for native vegetation re-establishment.	Larger trees and debris removed as part of vegetation clearing have been placed in rehabilitation areas to provide habitat for native fauna. This was observed by the audit team during the site visit.	Complies
5.3.4	Post-mining rehabilitation of the mine site would include the establishment of native vegetation.	This requirement has not come into effect yet.	Not Triggered
5.3.4	Weed eradication programs would be developed and implemented, as required.	Weed management controls are implemented onsite by the Environmental Officer.	Complies
5.3.4	The “Railway View” offset area would be incorporated into the Werris Creek Coal Mine biodiversity offset strategy.	As per Table 2.11 of AEMR 2010-2911, this property was purchased on 5 June 2008. Full scale rehabilitation has not commenced yet.	Complies

This page has been left blank intentionally.

Appendix F

Environmental Protection Licence 12290

Appendix F Environmental Protection Licence 12290

Section	Requirement	Evidence	Audit Finding
1	ADMINISTRATIVE CONDITIONS		
A1	What the licence authorises and regulates		
A1.2	Scale of mining activities not to exceed 0-2 million tonnes of loaded coal works, and more than 500,000-2 million tonnes of coal produced through mining.	AEMR 2008-2009 states that during that reporting period, 958,935 tonnes of ROM coal were produced. AEMR 2009-2010 states that during that reporting period, 1,220,910 tonnes of ROM coal were produced. AEMR 2010-2011 states that during that reporting period, the WCC produced 1,323,205 t of ROM coal (AEMR Section 2.4).	Complies
A1.3	Not carry out scheduled activities until the scheduled development works are completed, except as elsewhere provided in this licence.	Not relevant to this audit period.	Not Triggered
3	Limit Conditions		
L1	Pollution of waters		
L1.1	Must comply with s120 POEO Act in relation to pollution of waters except as otherwise provided for in the EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria, resulting in a contravention of Section 120 *Protection of the Environment Operations Act 1997*. Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days. The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	Not Compliant Recommendation Made
L3	Concentration Limits		
L3.1	Must not exceed concentrations of discharged pollutants at monitoring/discharge points specified in Tables of EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek. Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion).	Not Compliant Recommendation Made

Section	Requirement	Evidence	Audit Finding
		Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days. The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	
L3.2	Specified percentage of pH samples must be within the specified ranges in Table of EPL.	On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek. The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	Not Compliant Recommendation Made
L3.4	Total Suspended Solids concentration limits specified for Points 10, 12 and 14 may be exceeded for water discharged from sediment basins provided that:	Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). Since this incident the EPL has been amended to allow this Total Suspended Solids criteria to exceed 50mg/L after 39.2mm of rain over 5 days. The results of water monitoring should be closely monitored and operations adjusted as required to reduce impacts.	Not Compliant Recommendation Made
L3.4(a)	Discharge occurs solely as a result of rainfall measured at the premises exceeding 39.2mm over consecutive 5 days prior to discharge.		
L3.4(b)	All practical measures implemented to dewater sediment dams within 5 days of this rainfall so that they have sufficient capacity to store run off from a 39.2mm, 5 day rainfall event.		
L5	**Waste**		
L5.1	Not cause/permit/allow waste generated outside mine to be received at the mine for storage/treatment/processing/disposal or any waste generated at the mine to be disposed of at the mine, except as expressed by EPL. This only applies to waste activities that require licensing under the POEO Act.	An interview with the Environmental Officer confirmed that no waste generated offsite has been received onsite.	Complies
L6	**Noise Limits**		
L6.1	Noise from premises not exceed: (a) and (b)	On 27 October 2010, one exceedance of noise limits occurred at the private property ‘Glenara’ due to a significant	Not Compliant
L6.1(a)	An LA1(1minute) noise emission criterion of 45 dB(A) at night.		

Section	Requirement	Evidence	Audit Finding
L6.1(b)	At all other times (including the night), an L_{Aeq}(15minute) noise emission criterion of 35 dB(A), except as expressly provided by this licence.	change in weather conditions. DP&I, OEH and property owners notified of exceedance. No complaints were received. Two monitored exceedances occurred during the 2008-2009 reporting period. These are as follows: - 44 dB(A) at Cintra property on 30 June 2008 at 3:29 pm; and - 36dB(A) at Mountain View property on 15 September 2008 at 10:05 pm. One monitored exceedance occurred on 15 October 2009 at the Marengo property. This exceedance occurred at 8:02 am and the noise emanating from WCC was measured to be 40 dB(A)$_{LAeq(15minute)}$, whereas the criteria in Condition 7 specifies $_{35}LAeq(15minute)$. Cintra was subsequently purchased by WCC on 31 March 2010, and Marengo on 17 May 2010. The results of noise monitoring should be closely monitored and operations adjusted as required to reduce impacts.	Recommendation Made
L6.2	Noise from the premises is to be measured at a point within 30 m of any non-project related residence to determine compliance with this condition.	The procedure in place is that all of these measurements are taken within 3.5-30m.	Complies
L6.4	**Noise Management**		
6.4	Requirements for noise measurements under EPL L6. L_{Aeq} noise level must be measured or computed at any point within 30m of any non-project related residence over a period of 15 minutes using "FAST" response on the sound level meter. 5dB(A) must be added to the measurement level if the noise is substantially tonal or impulsive in character.	An interview with the Environmental Officer confirmed that this is the procedure followed.	Complies
L6.5	Noise emission limits identified in the licence apply under all meteorological conditions except:	This is the procedure followed in noise monitoring, as identified in Section 3.8 of AEMR 2010-2011.	Complies
L6.5(a)	During rain and wind speeds (as 10 m height) greater than 3 m/s.		
L6.5(b)	Under "non-significant weather conditions" as per INP.		
L6.6	Noise impacts where wind speed exceeds 3m/s at 10m above the ground must be addressed by:	An interview with the Environmental Officer confirmed that this is managed on as needs basis. Data for all temperature	Complies

Section	Requirement	Evidence	Audit Finding
L6.6(a)	Documenting noise complaints received to identify any higher level of impacts/wind patterns.	inversions is maintained so it can be referenced against any noise data or noise complaints. Works are altered where they can be to mitigate noise.	
L6.6(b)	Where levels of noise complaints indicate a higher level of impact than actions to quantity and ameliorate any enhanced impacts where wind speed exceeds 3m/s at 10m above ground must be developed and implemented.		
L6.7	Limits in EPL L6.1 don't apply where a current legally binding agreement exists with residential occupants that:	WCC currently holds private agreements with several nearby properties including the Glenara, Almore, Wiley, Mead, Kyooma, Alco Park and Tonsley Park properties.	Complies
L6.7(a)	Agrees to an alternative noise limit for that property.		
L6.7(b)	Provides an alternative means of compensation to address noise impacts from the premises.		
L6.7	Copy of agreement given to EPA before new noise limits apply.		
L7	**Hours of operation**		
L7.1	Construction activities only between 7:00am-10:00pm Mondays-Fridays, 8:00am-6:00pm Saturdays, and not on Sundays or public holidays.	Not relevant to this audit period.	Not Triggered
L7.2	Operational activities only at these times: - vegetation clearing/soil removal 7:00am-8:00pm Monday-Friday and not on Saturdays; - drilling 12:00pm-4:00am and 7:00am-midnight Monday-Friday and midnight-4:00am Saturdays; - blasting 9:00am-5:00pm Monday-Friday and not on Saturdays; - overburden removal and emplacement 24 hours/day Monday-Saturday; - internal transport of coal products to ROM stockpile midnight-4:00am and 7:00am-midnight Monday-Friday, Saturdays from midnight-4:00am and 7:00am-2:00pm; - onsite processing midnight-4:00am and 7:00am-midnight Monday-Friday, Saturday midnight-4:00am and 7:00am-2:00pm; - coal transport to rail load-out facility midnight-4:00am and 7:00am to midnight Monday-Friday, Saturday midnight-4:00am and 7:00am-2:00pm; - maintenance 24 hours/day Monday-Saturday and Sundays if required;	These are the hours that are abided by. An interview with the Environmental Officer confirmed that the mine currently operates with 2 x 10.5 hour shifts between 7am-4am on weekdays. Reduced hours are undertaken on Saturdays as required. Maintenance staff are present onsite for 2 x 12 hour shifts 24 hours a day.	Complies

Section	Requirement	Evidence	Audit Finding
	- coal loading trains 24 hours/day Monday-Saturday and Sunday if required; - coal loading to trucks for domestic market 7:00am-6:00pm Monday-Friday and Saturday 7:00am-2:00pm Saturdays; - rehabilitation 7:00am-10:00pm Monday-Friday and Saturday 7:00am-2:00pm.		
L7.3	Before commencing development, prepare Noise Monitoring Program for the development in consultation with OEH. Must include noise monitoring protocol for evaluating compliance with criteria in conditions 7, 8 and 9.	Not relevant to this audit period.	Complies
L7.4	The hours of operation specified in conditions L7.1 or 7.2 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.	Not relevant to this audit period.	Not Triggered
L8	**Blasting**		
L8.1	Overpressure from blasting at premises must not exceed 120 dB(A) (Lin Peak) at any time. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.	During 2010-2011, no exceedances of the 120dB(A) in Table 10 occurred. Only two blasts above the 115dB(A) criteria occurred, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of these criteria occurred.	Complies
L8.2	Overpressure from blasting at premises not more than 115dB (LinPeak) for >5% of total blasts over each reporting period (reporting period is annually on anniversary of EPL issue - 1 April). Error margins associated with any monitoring equipment used to measure this not taken into account in determining if limit been exceeded.	During 2010-2011, no exceedances of the 120dB(A) in Table 10 occurred. Only two blasts above the 115dB(A) criteria occurred, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of these criteria occurred.	Complies
L8.3	Ground vibration peak particle velocity from blasting at premises not more than10mm/s at any time. Error margins with monitoring equipment not taken into account in determining if limit been exceeded.	There were no exceedances of the 10mm/s criteria during 2010-2011. Only two blasts occurred above the 5mm/s criteria, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of this criteria occurred.	Complies
L8.4	Ground vibration peak particle velocity from blasting at premises not more than 5mm/s for more than 5% total blasts over each reporting period (reporting period is annually on anniversary of EPL issue –	There were no exceedances of the 10mm/s criteria during 2010-2011. Only two blasts occurred above the 5mm/s criteria, which is less than the 5% allowable (AEMR 2010-	Complies

Section	Requirement	Evidence	Audit Finding
	1 April). Error margins associated with monitoring equipment not taken into account in determining if limit been exceeded.	2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of this criteria occurred.	
L8.5	Blasting at premises only between 9:00am-5:00pm Monday-Friday. Need written EPA permission for other times.	During the reporting period, blasting has only been carried out during the approved hours. An interview with the Environmental Officer confirmed that blasting generally takes place during the lunch period between 12:00am and 2:00pm during lunch breaks when personnel are already out of the mine site. When more than one blast has been required, the approval of OEH has been sought (e.g. for the two blasts occurring on 5 November 2010 - Appendix 6 to AEMR 2010-2011).	Complies
L8.6	Blasting hours in L7.2 can be varied by EPA in writing.	This has not occurred during this audit period.	Not Triggered
L8.7	Not more than 1 blast a day at the site without EPA approval.	During the report period, when more than one blast has been required, the approval of OEH has been sought (e.g. for the two blasts occurring on 5 November 2010 - Appendix 6 to AEMR 2010-2011).	Complies
L8.8	To determine compliance with L8.1, L8.2, L8.3 and L8.4:	This is the procedure that is followed in the Blast Monitoring Plan.	Complies
L8.8(a)	Airblast overpressure/ground vibration levels measured and electronically recorded at any point within 30m of any non-project related residential building or other sensitive locations such as schools/hospitals for all blasts carried out on premises;		
L8.8(b)	Instruments for measuring airblast overpressure/ground vibration must meet AS 2187.2-2006 Explosives - Storage and use - Use of explosives.		
L9	**Potentially offensive odour**		
L9.1	EPL does not permit the emission of any offensive odours from the premises. Emission of such an odour would thus constitute an offence under s129 POEO Act.	Interviews with the Environmental Officer and with blasting contractor (Orica) staff confirmed that water carts are on standby to assist at all blasting events. A fire has never resulted at the mine site from blasting activities. Orica, the contractor who carries out blasting uses a score system to rate the results of each blast. Any blast scoring over 2 has to be monitored further. There have been some complaints during this audit period in relation to fume odour.	Complies

Section	Requirement	Evidence	Audit Finding
4	OPERATING CONDITIONS		
O1	Activities must be carried out in a competent manner		
O1.1	Licensed activities must be carried out in competent manner, includes:	The site was inspected during the time of the audit and the storage and handling of substances appeared to be undertaken in a competent manner. The site was observed to be in a tidy and orderly condition at the time of the audit. Most wastes are removed from the site by licensed contractors.	Complies
O1.1(a)	Processing, handling, movement and storage of materials and substances used to carry out the activity.		
O1.1(b)	Treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.		
O2	Maintenance of plant and equipment		
O2.1	All plant/equipment installed at premises or used in conjunction with licensed activity must:	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
O2.1(a)	Be maintained in proper/efficient condition.		
O2.1(b)	Operated in proper/efficient manner.		
O3	Dust		
O3.1	Operations at premises must be carried out in manner minimising dust emissions from premises.	Water carts are constantly used onsite for dust suppression through water spraying. These water carts were observed throughout the site by the audit team during the site visit. Other mitigation measures that are employed are outlined in Section: 3.1.2 of AEMR 2010-2011.	Complies
O3.2	Trucks transporting coal from premises covered immediately after loading to prevent emissions/spillage. Covered until just before unloading.	An interview with the Coal Processing Manager confirmed that a system is in place whereby trucks do not receive their weighbridge documentation until a visual inspection has been undertaken to ensure the truck load is covered and no loose pieces of coal are visible.	Complies
O4	Stormwater/Sediment Control – Operation Phase		
O4.1	Stormwater Management Scheme prepared/implemented. Must mitigate impacts of stormwater runoff from/within premises following construction completion. Must be consistent with current Stormwater Management Plan for catchments on the site.	An interview with the Environmental Officer confirmed that stormwater runs from the site into sediment basins as part of the overall Creek Coal Mine Site Water Management Plan (WCL, 2009).	Complies

Section	Requirement	Evidence	Audit Finding
O5	Waste Water Utilisation Areas		
O5.1	Waste water only applied to Point 15 under P1.3 EPL.	There is no treated water onsite, it is all pumped out, so this Section becomes non applicable.	Not Triggered
O5.2	Spray from waste water application doesn't drift beyond boundary of waste water utilisation area where it's applied.	There is no treated water onsite, it is all pumped out, so this Section becomes non applicable.	Not Triggered
O6	Maintaining Waste Water Utilisation Areas		
O6.1	Waste water utilisation areas must effectively utilise waste water applied to those areas. Includes use for pasture/crop production, as well as ensuring soil can absorb nutrients, salts, hydraulic load and organic materials in solids/liquids. EPA may require monitoring of land and receiving waters to determine impact of waste water application.	There is no treated water onsite, it is all pumped out, so this Section becomes non applicable.	Not Triggered
O7.1	Reversing beepers on vehicles at premises mid-high frequency broadband as described in EIS.	An interview with the Coal Processing Manager confirmed that there is a system in place whereby vehicles and plant have to go through safety checklist to ensure this type of alarm is fitted. A qualified mechanic performs this check. This procedure also applies to contractors brining new plant onto site.	Complies
5	MONITORING AND RECORDING CONDITIONS		
M1	Monitoring records		
M1.1	Results of any monitoring records required under EPL or load calculation protocols must be recorded/retained as per EPL M1.	Load based licensing not used for this premises, therefore this requirement is not relevant.	Not Triggered
M1.2	All records required to be kept under EPL must be:	All monitoring data is kept in this format for at least four years. The Environmental Officer was able to produce records of this monitoring data for the audit team during the site visit.	Complies
M1.2(a)	In legible form readily reduced to legible form.		
M1.2(b)	Kept for at least 4 years after monitoring/event took place.		
M1.2(c)	Produced in legible form to any authorised officer of EPA who asks.		
M1.3	Records of samples required under EPL include:	The audit team sighted sampling sheets during the audit and these were found to comply with these conditions.	Complies
M1.3(a)	Date(s) samples taken.		
M1.3(b)	Time(s) collected.		
M1.3(c)	Point at which taken.		
M1.3(d)	Name of person collecting sample.		

Section	Requirement	Evidence	Audit Finding
M2	**Requirement to monitor concentration of pollutants discharged**		
M2.1	For each monitoring/discharge point or utilisation area on Page 19 EPL, must monitor concentration of each pollutant specified, in manner specified.	During the 2009-2010 reporting period, not all monitoring for PM10, water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time. During the 2008-2009 reporting period, surface water discharged from monitoring point 12 and was contained within the project related property of 'Eurunderee.' Sampling for Special Frequency 2 was not followed for monitoring points 23, 24, 25 and 26 as discharge did not leave the Eurunderee property. Also during the 2008-2009 period, monitoring for point 16 was only carried out three times out of the required four times for the reporting period.	Not Compliant
M3	**Testing methods – concentration limits**		
M3.1	Monitoring for concentration of pollutants emitted to air required by the licence must be done according to:	These air quality monitoring procedures are contained in the Air Quality Monitoring Program which was approved by DP&I on 20 June 2005. The latest version of this was approved by DP&I in letter 23 September 2009 (Air Quality Monitoring Program (WCL, 2009)). The Werris Creek Coal Mine Site Water Management Plan (WCL, 2009) also fulfils these requirements.	Complies
M3.1(a)	Any methodologies required under POEO Act.		
M3.1(b)	If no requirements under POEO Act, the methodologies stated in EPL.		
M3.1(c)	If no methodologies under POEO Act and licence, any methodology approved in writing by EPA prior to testing taking place.		
M3.2	Monitoring for concentrations of pollutants discharged to waters or applied to utilisation area must be done according to the Approved Methods for the Sampling and Analysis of Water Pollutants in NSW, unless another method has been approved by EPA in writing before testing takes place.		

Section	Requirement	Evidence	Audit Finding
M4	Recording of pollution complaints		
M4.1	Must keep legible record of all complaints made regarding pollution arising from any activity to which EPL applies.	Table of complaints made during 2008-2009 reporting period recorded in Table 23 2008-2009 AEMR. In Table 4.1 of 2009-2010 AEMR. Complaints Register in Appendix 9 of AEMR 2010-2011 shows all complaints made during 2010-2011 reporting period.	Complies
M4.2	Record must include:	Table of complaints made during 2008-2009 reporting period recorded in Table 23 2008-2009 AEMR. In Table 4.1 of 2009-2010 AEMR. Complaints Register in Appendix 9 of AEMR 2010-2011 shows all complaints made during 2010-2011 reporting period. All of these Complaints Registers meet these requirements (a)-(f).	Complies
M4.2(a)	Date/time of complaint.		
M4.2(b)	Method of complaint.		
M4.2(c)	Any personal details provided by complainant.		
M4.2(d)	Nature of complaint.		
M4.2(e)	Action taken relating to complaint, including contacting complainant.		
M4.2(f)	If no action taken, reasons for this.		
M4.3	Record kept for at least 4 years after complaint made.	A complaints record has been maintained for as long as site has been in operation and is reported in AEMR each year.	Complies
M4.4	Records must be produced to authorised EPA officers if they ask.	This has not occurred during the audit period.	Not Triggered
M5	Telephone complaints line		
M5.1	Operate telephone complaints line during mine operation hours to receive public complaints about activities at premises or vehicle/mobile plant.	Sections 4.1 of the 2008-2009, 2009-2010 and 2010-2011 AEMRs state that WCC maintains a designated complaints line. The Environmental Officer was observed to be efficiently dealing with complaints received through the complaints line during the site visit.	Complies
M5.2	Must notify public of complaints phone number.	Sections 4.1 of the 2008-2009, 2009-2010, and 2010-2011 AEMRs state that the phone number is regularly published in community newsletters, in the Werris Creek Flyer and signposted on the front entrance to the mine site.	Complies
M5.3	Conditions M5.1, and M5.2 do not apply until 3 months after:	Not relevant to this audit period.	Not Triggered
M5.3(a)	The date of the issue of this licence; or		

Section	Requirement	Evidence	Audit Finding
M5.3(b)	If this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.		
6	**REPORTING CONDITIONS**		
R1	**Annual return documents**		
R1.1	**What documents must an Annual Return contain?**		
R1.1	Complete/supply to EPA an Annual Return in approved form comprising: (a) and (b)	The EPA website states that the Annual Returns have been completed for every reporting period from 2005-2011. It appears that these returns were therefore acceptable to the EPA.	Complies
R1.1(a)	Statement of Compliance.		
R1.1(b)	Monitoring and Complaints Summary.		
R1.1	Before end of each reporting period (annually on anniversary of EPL issue - 1 April), EPA provides licensee with copy of form that must be returned to EPA. Annual Return is not to be completed until end of reporting period (1 April).		
R1.2-1.4	**Period covered by Annual Return**		
R1.2	An Annual Return must be prepared for each reporting period.	The EPA website states that the Annual Returns have been completed for every reporting period from 2005-2011.	Complies
R1.3	If EPL is transferred to a new licensee:	This is not relevant to this auditing period.	Not Triggered
R1.3(a)	Transferring licensee must prepare Annual Return for operations up to the date on which application to transfer licence was granted.		
R1.3(b)	New licensee must prepare Annual Return for period commencing on date application for licence transfer granted until last day of reporting period.		
R1.4	Where the EPL is surrendered/revoked, licensee must prepare Annual Return for period commencing 1st day of reporting period until:	This is not relevant to this auditing period.	Not Triggered
R1.4(a)	Date when written notice of approval of EPL surrender is given.		
R1.4(b)	Date from which revocation of licence operates.		

Section	Requirement	Evidence	Audit Finding
R1.5	**Deadline for Annual Return**		
R1.5	Annual Return submitted to EPA by registered post within 60 days after end of reporting period, or 60 days after EPL transfer.	The EPA website states that the Annual Returns have been completed for every reporting period from 2005-2011. It appears that these returns were therefore acceptable to the EPA.	Complies
R1.6	**Notification where actual load cannot be calculated**		
R1.6	Not applicable.	Load based licensing is not required for WCC.	Not Triggered
R1.7	**Licensee must retain copy of Annual Return**		
R1.7	Must keep copy of Annual Return.	The Environmental Officer maintains copies of Annual Returns available onsite.	Complies
R1.8-9	**Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary**		
R1.8	Annual Return includes certified Statement of Compliance and Monitoring and Complaints summary signed by:	The EPA website states that the Annual Returns have been completed for every reporting period from 2005-2011. It appears that these returns were therefore acceptable to the EPA.	Complies
R1.8(a)	Licence holder; and		
R1.8(b)	Person approved in writing by EPA to sign on licence holder's behalf.		
R1.9	Person given written approval to certify certificate of compliance under Pollution Control Act licence is taken to be approved for purpose of R1.8 until date of 1st review of EPL (23 June 2014).	Not relevant to the audit.	Not Triggered
R2	**Notification of environmental harm**		
R2.1	POEO Act requires licensee to notify EPA as soon as practicable after aware of environmental harm incident. EPL requires this notification made by calling Environmental Line service on 131 555.	Relevant exceedances of the EPL have been notified to the EPA during this auditing period.	Complies
R2.2	Must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Relevant exceedances of the EPL have been notified to the EPA during this auditing period.	Complies
R3	**Written report**		
R3.1	If EPA suspect:	Not relevant to this auditing period.	Not Triggered
R3.1(a)	An event has occurred on the premises; or		
R3.1(b)	Event has occurred in connection with vehicles/mobile plant carrying out associated activities.		
	And event has caused/likely to cause material environmental harm, EPA may request written report on the incident.		

Section	Requirement	Evidence	Audit Finding
R3.2	Licensee must make all reasonable inquiries relating to event and supply report to EPA if EPA has requested under EPPL R3.1	Not relevant to this auditing period.	Not Triggered
R3.3	EPA may require report to contain:	The Annual Returns for this auditing period have contained this information for exceedances that have occurred so far.	Complies
R3.3(a)	Cause/time/duration of incident;		
R3.3(b)	Type/volume/concentration of discharged pollutants;		
R3.3(c)	Name/address/business hrs contact of employees who witnessed event;		
R3.3(d)	Name/address/business hrs contact of other available witnesses;		
R3.3(e)	Licensee's subsequent actions including contacting complainants;		
R3.3(f)	Details of measures taken/proposed to prevent/mitigate recurrence; and		
R3.3(g)	Other relevant matters.		
R3.4	If written request from EPA for more details, must provide further requested information.	Not relevant to this auditing period.	Not Triggered
G	**General conditions**		
G1	**Copy of licence kept at the premises**		
G1.1	Copy of EPL kept at premises.	A copy of the EPL is kept on the premises by the Environment Officer.	Complies
G1.2	EPL must be given to EPA officer who asks.	Not relevant to this auditing period.	Not Triggered
G1.3	EPL must be available for inspection by anyone working at the premises.	A copy of the EPL is kept on the premises by the Environment Officer, and is available upon request.	Complies

This page has been left blank intentionally.

Appendix G

Other Management Plans

Appendix G Other Management Plans

Section	Requirement	Evidence	Audit Finding
Landscape Management Plan (AECOM, 2010)			
Table 1	WCC Project Manager responsible for: a) implementing LMP / associated LMP references; b) undertake training in relevant Management Plans and procedures as required; c) provide resources required and support to implement management strategies/procedures.	An interview with the Environmental Officer confirmed that he is undertaking all of these duties.	Complies
Table 1	WCC Environmental Officer responsible for: a) preparing LMP; b) implementing, monitoring and reviewing LMP/procedures LMP references; c) consult with regulatory authorities as required; d) undertake monitoring under LMP; e) undertake rehabilitation maintenance as required; f) provide measures for continual improvement to LMP, management strategies and associated procedures; g) ensure all personnel undertaking works regarding LMP are trained/competent; h) report LMP progress in AEMR; i) has sound understanding of ecological principals/rehabilitation practices.	During the audit, the audit team interviewed the Environmental Officer, observed his performance, and sighted relevant documents and reports containing the details of his actions in carrying out these requirements. The audit team were satisfied that the Environmental Officer is fulfilling these requirements.	Complies
Table 1	WCC Open Cut Personnel and Contractors implement LMP/associated procedures where relevant.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
5.1.1	WCC uses following pre-start practices: a) disturbance areas kept to minimum area required by having one year's worth of mining blocks surveyed/boundary clearly pegged to ensure disturbance is only done once/yr; b) Pre Start Clearing Inspection completed by ecologist of the proposed disturbance area to identify the presence of fauna/flora; and c) Pre Start Clearing Inspections identify biological resources within the disturbance area including habitat resources (hollows, stag trees and coarse woody debris) and the availability of endemic seed.	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring. An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out pre-clearance surveys before vegetation is cleared. During this survey the ecologist also checks (before tree felling) for fauna. The ecologist checks trees again after felling.	Complies

Section	Requirement	Evidence	Audit Finding
5.1.1	Active clearing practices include: a) environmental/noxious weeds controlled within disturbance area before clearing; b) undertake seed collection; c) identified habitat trees are inspected prior to felling; d) If no fauna is observed, bulldozer used to rip root zone around base of the tree; e) dozer slowly pushes tree to allow it to fall under its own weight; f) trained wildlife handler onsite to inspect tree and to attend to any injured animals; g) toppled trees left on ground overnight to allow fauna relocation; h) trees reinspected in the morning before being relocated to rehabilitation areas for habitat augmentation.	Weed management controls are implemented onsite by the Environmental Officer, and a visual inspection by the ecologist during the audit confirmed that these weed management controls are working well. An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out pre-clearance surveys before vegetation is cleared. During this survey the ecologist also checks (before tree felling) for fauna. The ecologist checks trees again after felling.	Complies
5.1.2	During soil stripping, following requirements adhered to: a) soil stripped to a depth generally in accordance with Soil Mapping Units (SMU) defined within 2009 WCC Mining Operations Plan (MOP); b) soils stripped when moist to maintain structure/reduce dust; and c) topsoil/subsoil stripping during periods of excessive soil moisture content (i.e. following heavy rain) will also be avoided to reduce likelihood of damage to soil structure.	An interview with the Environmental Officer confirmed that this is the procedure that is followed during soil stripping. Topsoils are stripped to a depth of 300mm. Under the requirements of the Mining Operations Plan, another 1m of topsoil is then stripped. Soil is not stripped during periods of excessive moisture to reduce the likelihood of damage to soil structure. However, soil is stripped when it is sufficiently moist to maintain structure and reduce dust emissions.	Complies
5.1.3	Following requirements adhered to: a) stockpiles located away from mining, traffic areas and watercourses on level/gently sloping areas with each SMU stockpiled separately; b) soil stockpiles no higher than 3m and slightly roughened surface to minimise erosion; c) soil stockpiles seeded with non-persistent cover crop (or mulch) to reduce erosion as soon as possible after completion of stockpiling; d) Soil Stockpile Register and Plan is maintained, documenting the SMU, location and volume of each stockpile; and e) Soil stockpile inspections undertaken biannually to monitor soil condition, erosion and identify any weed infestation requiring control.	A Soil Stockpile Register and Plan is maintained by the Environmental Officer and was sighted by the audit team during the site visit. Soils are separated into different classes. Soil stockpiles were visually inspected by the audit team during the audit, and were observed to be managed in good condition. It is recommended that this soil stockpile inventory be revised and updated to better reflect the location of different soil types as there are two very different topsoil types/qualities stripped at the site.	Complies Recommendation Made

Section	Requirement	Evidence	Audit Finding
5.2	Weed control includes: a) regular inspections of WCC lands (including disturbance, rehabilitation and soil stockpiles) to identify areas requiring the implementation of weed management measures; b) consultation with neighbouring land owners/relevant government stakeholders (e.g. Council, Northern Inland Weeds Advisory Committee), regarding regional weed management strategies; c) implementation of appropriate weed management measures (may include mechanical removal, approved herbicides, biological control taking into account seasonal growth); d) control of noxious weeds identified on WCC owned land according to DP&I NSW control category and regional Weed Management Plan; and e) follow-up inspections to assess effectiveness of the weed management measures implemented and requirement for any additional management measures	Ongoing weed inspection and maintenance is undertaken by the Environmental Officer. The Northern Inland Weed Advisory Committee visited mine site and discussed strategies for herbicides for St John's Wort. The outcome has been the effective control of St John's Wort with minimal impact on surrounding native grasses. A site inspection by an ecologist during the audit evidenced that the weed control program appears to be satisfactory. Negotiations with an adjoining landowner have resulted in the Environmental Officer performing weed control for St John's Wort on that property.	Complies
5.3	WCC undertake vertebrate pest control program in consultation with neighbouring land owners, includes: a) implementation of a vertebrate pest monitoring/control program integrated with surrounding landholders. Includes: 1) implement vertebrate pest monitoring/control program integrated with surrounding landholders; b) mandatory pest control for any declared pests known to occur on WCC mine owned land; c) use of a range of appropriate pest control measures (e.g. the destruction of habitat, trapping, targeted shooting programs and baiting); and d) (d) follow-up inspections to assess effectiveness of control measures and if additional measures required.	These issues were dealt with in the BOMP Audit which was conducted in parallel with the IEA. Refer to the BOMP Audit Report for findings.	Not Triggered
5.4	WCC implement following actions to manage bushfires: a) biannual site inspection by appropriate personnel; b) hazard reduction burning program to reduce fuel levels may be considered in consultation with NSW Rural Fire Service (excluding rehabilitation or biodiversity offset area);and c) controlled burns undertaken at intervals across site to create mosaic fire pattern (excluding rehabilitation or biodiversity offset area).	An interview with the Environmental Officer confirmed that he undertakes regular site inspections to identify bushfire hazards. Hazard reduction burning has not been required to be considered at this stage.	Complies

Section	Requirement	Evidence	Audit Finding
5.5	WCC undertake all activities in manner that conserves cultural heritage items and/or sites including areas to be disturbed, rehabilitation and biodiversity offset areas.	An interview with the Environmental Officer confirmed that onsite activities are undertaken according to the Archaeology and Cultural Heritage Management Plan (WCL, 2007), and the Biodiversity Offset Management Plan (Eco Logical, 2010).	Complies
6.5	WCC undertake: a) Modification/minimising disturbance areas to what is necessary; and b) scheduling of vegetation clearance activities to occur at particular time (e.g. when hollows in trees to be cleared are not in use).	An interview with the Environmental Officer confirmed that vegetation clearing generally takes place in Autumn. When production demands make this impractical, clearing is sometimes undertaken from late Summer to early Winter. Clearing is avoided during mid Winter and Spring. An interview with the Environmental Officer confirmed that it is standard practice for an ecologist to carry out pre-clearance surveys before vegetation is cleared. During this survey the ecologist also checks (before tree felling) for fauna. The ecologist checks trees again after felling.	Complies
6.6	Following strategies to protect native fauna habitat: a) restriction of vegetation clearing to minimum required for operations; b) proliferation of tracks avoided. The main arterial tracks are to be maintained in good condition with access to temporary work sites via offsets from these; and c) layout of surface works such as roads, survey lines, drill tracks and fencing, will be planned to minimise dissection of habitat areas.	This was observed by the audit team during the site audit. All fences have been removed from the Biodiversity Offset Area. The rehabilitation areas are not fenced.	Complies
6.7	Revegetation species mix will be specific to the woodland ecological community being restored.	Full scale vegetation has not commenced yet.	Not Triggered
6.8.1	WCC will create aquatic habitat within rehabilitation areas, biodiversity offset areas and dams onsite during/after mining.	Full scale vegetation has not commenced yet. There are plans to incorporate aquatic habitat restoration as part of future rehabilitation.	Not Triggered

Section	Requirement	Evidence	Audit Finding
6.9	Implement following measures within mine rehabilitation and biodiversity offset areas: a) habitat trees salvaged from disturbance area can be used as stag trees or coarse woody debris in rehabilitation and offset areas; b) once the rehabilitated vegetation communities are of sufficient maturity, nest boxes and/or nesting structures will be installed to supplement arboreal habitat. Nest boxes trees will be maintained within rehabilitation areas for the life of the mine; c) rock /rock substitutes (e.g. roof tiles) will be selectively placed within rehabilitation areas and selective biodiversity offset areas to provide shelter and basking habitat for reptiles.	Full scale rehabilitation has not commenced yet. There are plans to install nest boxes in the future.	Not Triggered
7.1	Rehabilitation requirements at WCC following open cut mining or other activities associated with mining process will be implemented to achieve rehabilitation objectives in Table 8 LMP.	Full scale vegetation has not commenced yet.	Not Triggered
7.1.1	Rehabilitation will consist of two final land uses: a) class III cropping land; and b) native woodland (White Box, Yellow Box, Blakely's Red Gum Woodland and Brigalow Community).	Full scale vegetation has not commenced yet.	Not Triggered
7.1.1	Woodland areas will include habitat augmentation and corridors for fauna movement linking with adjacent areas associated with the BOA.	Full scale vegetation has not commenced yet.	Not Triggered
7.1.1	Rehabilitation strategies will need to be specific to the target final land use by focusing on the following key structural composition elements: a) establishing a soil profile and amelioration if required; b) Vegetation composition; and c) habitat augmentation.	Full scale vegetation has not commenced yet.	Not Triggered
7.2	Rehabilitation strategies will need to be specific to the target final land use by focusing on the following key structural composition elements: a) establishing a soil profile and amelioration if required; b) Vegetation composition; and c) habitat augmentation.	Full scale vegetation has not commenced yet.	Not Triggered
7.2	Rehabilitation is to ensure a geotechnically stable/safe landform commensurate with surrounding landscape in condition that will promote/support future revegetation and the final land use.	No geotechnical failures or slumping was observed in the rehabilitation areas by the audit team during the site audit.	Complies

Section	Requirement	Evidence	Audit Finding
7.2.1.1	To ensure geotechnically stable landforms/chemically inert materials to support revegetation, spoil shaping will adhere to the following: a) final landform surface for rehabilitated areas across the WCC mine will be shaped to ensure all slopes are at, or less than 10°; b) slopes of interim land surfaces (not during mining operations) such as final voids and ramps can exceed 10°, but will not exceed 18° without DP&I approval; c) materials suspected of being chemically unfavourable for revegetation will be buried a minimum 2m below final rehabilitated land surface; d) contour banks will be designed/built to control surface water runoff according to Soils and Construction Guidelines and the Water Management Plan; and e) where possible drainage paths, contour drains, ridgelines, and emplacements will be shaped, in undulating informal profiles in keeping with natural landforms of the surrounding environment.	Full scale vegetation has not commenced yet, but topsoil spreading so far as adhered to the requirement to have a less than 10^{o} external surface grade.	Complies
7.2.1.2	To promote rehabilitation sustaining plant growth and to achieve its final land use topsoil respreading, adhere to following requirements: a) subsoil/topsoil will not be respread when moist, to avoid excessive compaction; or too dry to avoid excessive dust and wind erosion; b) the SMUs pre-mining land capability will be reused in respective rehabilitation areas reinstating similar land capabilities in the rehabilitation commensurate with the final land use (e.g. ecological community or agriculture); c) all contractor machinery used to handle and transport topsoil shall be washed down both prior to and at the completion of works to minimise the risk of transfer of weeds; d) topsoil (typically black soil) generally used for Class III rehabilitation back to agricultural land and subsoils (typically brown) generally used for woodland ecological community areas; and e) soil surface will be ripped prior to revegetation to improve soil aeration and infiltration.	An interview with the Environmental Officer confirmed the procedure that is followed. Soil is not stripped during periods of excessive moisture to reduce the likelihood of damage to soil structure. However, soil is stripped when it is sufficiently moist to maintain structure and reduce dust emissions. Machinery is washed in a bay when equipment moves between different jobs. Topsoil is generally ripped in this manner before it is vegetated.	Complies
7.2.2	If soil insufficient to sustain plant growth, soil amelioration may be required.	This has not been required yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
7.2.3	WCC will undertake two revegetation methodologies based on establishing a final land use of agriculture (Class III Land Capability) and woodland ecological communities. WCC are committed to revegetation across the site to return mining land back to the original land use. Through the strategies outlined in this LMP and the BOMP, WCC will aim to improve upon the EECs across the site and biodiversity offset area, thereby creating a refuge and wildlife corridor for common and threatened native species.	Full scale vegetation has not commenced yet.	Not Triggered
7.2.3.1	WCC will aim to re-establish woodland ecological communities on designated rehabilitation and biodiversity offset areas. Revegetation activities will be undertaken in spring and autumn. Opportunistic revegetation may be practiced if areas become available for seeding/planting in summer and winter. After surface soil amelioration and surface preparation is completed for any given area, revegetation will commence as soon as practicable.	Full scale revegetation has not commenced yet.	Not Triggered
7.3.3.1	Woodland seed and tubestock supply will preferentially be of local provenance. Seed collected onsite will be incorporated into the revegetation mix or propagated to produce tubestock for planting. Seed and tubestock supplied from outside sources will be preferentially of Liverpool Plains provenance or from an area within NSW of similar climatic and soil conditions to the Liverpool Plains area. Potential climate change impacts on the area should be considered when sourcing seed from outside the Liverpool Plains region (i.e. areas of drier climatic regions). The use of fertiliser tablets, water crystals, irrigation, DTER® and other revegetation aids will used on a case by case basis.	An interview with the Environmental Officer confirmed that native grass and Whitebox seeds have been collected onsite. Tubestock that is planned to be used is a combination of onsite seeds and other seeds collected from the local Quirindi area.	Complies
7.3.3.1	Woodland revegetation will be undertaken via a combination of direct seeding and tubestock planting. Species selection will include a combination of overstorey, middlestorey and understorey strata. Plants will be selected from the species lists provided within appendices to LMP.	Full scale revegetation has not commenced yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
7.2.3.2	Areas identified for the establishment and maintenance of Class III Land Capability will be managed to ensure an ongoing sustainable grazing or cropping land use. It is proposed that when rehabilitation measures are completed, the land will be at least equal to the production capability of the pre-mining environment. Pasture will consist of local and exotic grasses and legumes that are common within the region. Crop selection will be as per local cropping practises and produce yields equal to the pre-mining capability.	Full scale rehabilitation has not commenced yet.	Not Triggered
8.5	Monitoring of areas that will have a final agricultural land use will assess the health of the land by: a) determining soil nutrient status and pasture quality; b) assessment of land capability (using Rural Land Capability mapping system) and agricultural suitability; c) evaluate pasture composition and required grazing regime. Experienced agronomist will undertake biennial agricultural assessment of the Class III rehabilitation areas.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
10	Annual reviews are to be conducted on the LMP to assess effectiveness of plan against requirements in Section 3 LMP. Undertaken using template in Appendix H LMP.	This Landscape Management Plan is not yet 12 months old, and has not received official approval from DP&I as of yet.	Not Triggered
Archaeology and Cultural Heritage Plan (WCL, 2007)			
2.3	In order to protect/conserve Narrawolga Site in situ, WCC in will: a) construct fenced buffer around the “Narrawolga Site” of at least 30 metres; b) Install/maintain protective barrier/mat over the “Narrawolga Site”; c) engage suitably qualified/experienced/independent blasting expert approved by D-G, to assess/report on likely impacts of blasting on “Narrawolga Site” and recommend measures to protect site from potential blasting impacts; d) provide copy of report to Nungaroo LALC; (e) and following validation by the Nungaroo LALC, implement recommendations of the report.	A Geotechnical Assessment of Potential Impacts of Blasting on Narrawolga Site undertaken in February 2006 by GE Holt & Associates Pty Ltd. Subsequent to these findings, an option to manage removal, relocation and protection of the axe grinding grooves was prepared in consultation with LALC. Led to parties agreeing to Management Plan for removal, storage and replacement of the Narrawolga axe grinding groove site, WCC (Archaeological Surveys and Reports Pty Ltd, September 2006). This Narrawolga site was inspected by the audit team and it appears to be maintained in a good condition away from the impacts of blasting.	Complies

Section	Requirement	Evidence	Audit Finding
2.5	Management Plan for removal, storage and replacement of the Narrawolga axe grinding groove site, WCC (Archaeological Surveys and Reports Pty Ltd, September 2006) requires: a) qualified surveyor & archaeologist to accurately provenance each sandstone block on which the grinding-grooves occur, and draw scaled site plan showing surface topography of the ridge on which the site occurs (to include the site and the surrounding area for a distance of 30 m from the outer limits of the site) and the alignment of each block; b) each block numbered, photographed, and archaeologically recorded by archaeologist and representative of Nungaroo LALC; c) each block carefully removed by appropriate machinery, numbered by archaeologist with marking-paint on a surface other than the upper surface, and conveyed by truck to enclosed (fenced) storage area. Procedure monitored by archaeologist and LALC representative. Representatives of Taylor family wish to observe removal of the blocks; d) once placed in storage area each block would be examined for its condition, damage, etc. details of which should be recorded by the archaeologist on prepared Condition Reports, one for each block. The Taylor family expressed their wish to view the storage area; and e) after transfer, archaeologist prepare a report of the procedure, including details of the site, a copy of the surveyor's plan of the site, copies of the Condition Reports, and a photographic record of the events.	A record of salvage/removal of the Narrawolga Site is contained in The Salvage and Removal of the Narrawolga axe-grinding groove site, WCC by Archaeological Surveys & Reports Pty Ltd, March 2007. Items (a)-(e) were completed.	Complies
2.5	Access to storage compound by suitably qualified people only permitted with Mine Manager's authority (Nungaroo LALC given periodic access by giving Mine Manager 48 hrs notice).	There has only been one site visit by a LALC community member who suggested sites be covered. The sites have since been covered with tarp for protection.	Complies

Section	Requirement	Evidence	Audit Finding
2.5	After Narrawolga Site relocated: a) blocks on which axe grinding-grooves occur shall be mechanically replaced according to surveyor's site plan; b) operation monitored by archaeologist/LALC representative; c) sign erected at roadside to mine entrance informing public of controlled removal/replacement of the grinding groove blocks with Aboriginal agreement; d) after site restored, archaeologist shall prepare amended Site Recording Form detailing what has taken place with photographic/descriptive report of replacement procedure, and condition of restored grinding groove site, and lodge this with OEH, WCC Manager, Nungaroo LALC and the 3 Aboriginal groups involved in community consultation process.	These activities took place prior to the current auditing period.	Not Triggered
2.5	WCC Manager wait for expert's report on suitability of planting Wollemi Pines in proximity to grinding groove site. If expert recommends species wouldn't thrive there, WCC Manager consult further with Taylor Family to select another plant species.	This issue was not resolved during the auditing period. It is recommended that WCC follow up on this request from the Taylor family regarding the Wollemi Pines.	Complies Recommendation Made
3.1	WCC undertake all activities in a manner conserving the cultural heritage values of the area. Continue existing open/honest relationship between WCC management and Nungaroo LALC, regular consultation with LALC and involvement with community members.	An interview with the Environmental Officer confirmed that WCC maintains a good relationship with the local LALC.	Complies

Section	Requirement	Evidence	Audit Finding
3.2	Following consultation procedures: a) Mine Manager will advise chairperson of LALC of planned commencement of activities; b) Mine Manager contact LALC chairperson monthly to advise mine's progress/programme for ensuing period. All consultation diarised; c) Before topsoil stripping, WCC Manager notify LALC Chairperson or nominated Sites Officer of extent, location, timing and expected duration of the planned campaign, inviting representative to monitor topsoil stripping; d) if Chairperson/Site Monitor requests, WCC Manager attend community meetings at LALC office or arrange site visits for interested LALC personnel/members; e) if archaeological sites are identified in the absence of Site Monitor, WCC Manager notify Chairperson and/or Site Monitor following the initiation of the procedures identified in Section 3.5 A&CMP.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.4	Prior to any person undertaking work onsite, must undergo general induction programme incorporating environmental aspects including archaeological and cultural heritage management, procedures and obligations. Form and detail of the induction will be determined by the nature of the work to be undertaken.	The site induction package was sighted during the audit. It contains information about these requirements.	Complies
3.4	These procedures are incorporated into both WCC and the principal mining contractor's induction documentation. Copies of these documents are available at the respective site offices for inspection.	The site induction package was sighted during the audit. It contains information about these requirements.	Complies
3.4	All operators engaged in soil disturbing / soil stripping activities will be given additional training in the recognition of Aboriginal sites by experienced personnel in this field.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.4	Poster identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions / responses has been prepared by WCC's consultant archaeologist. Copies are exhibited within employee lunch rooms.	These posters are not currently displayed. It is recommended that posters identifying the types of cultural heritage material that may be located on the site during mining operations as well as basic actions/responses or similar be displayed in staff lunchrooms.	Not Compliant Recommendation Made

Section	Requirement	Evidence	Audit Finding
3.5	If a potential site/artefact is discovered, following procedure followed: a) work will cease in the area; b) if area of discovery is in deposited material then work will also cease in the area where the material has come from; c) person discovering the artefact will notify their supervisor who will ensure that work has ceased and the area(s) is / are cordoned off with tape; d) supervisor (contractor or WCC) will notify their senior Manager who will in turn inform the WCC Manager or senior WCC person on site; e) WCC Manager will: i) request a qualified archaeologist to attend the site and advise on its archaeological significance; ii) request the Site Monitor for Nungaroo LALC, if not already present, to attend and advise on its cultural significance in consultation with the qualified archaeologist; iii) if the find is determined to be a site, notify OEH with the advice from the archaeologist and Nungaroo LALC for determination of further procedures; and WCC Manager will implement the procedures issued by OEH.	This has not occurred during the audit period.	Not Triggered
3.1.2	Survey work will be undertaken to define the limits of underground workings in accordance with safe work procedures (old underground coal mine could contain sites of community interest).	An interview with the Environmental Officer confirmed that the project is currently working through the southern end of the underground mine. CCC has produced a document about history of mining in Werris Creek with the assistance of a Heritage Consultant, and which was sighted by the audit team during the site visit. This will be made publically available at the Werris Creek Rail Museum (A History of Coal Mining at Werris Creek 2011).	Complies
4.2	The Company will report annually in the AEMR on the measures implemented to preserve and protect Aboriginal and European cultural heritage	This is contained in Sections 3.10 and 3.11 of AEMR 2010-2011, and Sections 3.12 and 3.13 of AEMR 2009-2010, and Section 3.12 of AEMR 2008-2009.	Complies

Section	Requirement	Evidence	Audit Finding
Final Void Management Plan Werris Creek Coal (AECOM, 2010)			
2.0	Project Manager responsible for: a) implementing procedures referenced in FVMP; b) undertaking training in relevant Management Plans and procedures as required; c) providing resources required to implement these procedures; and (d) scheduling resources to undertake final void treatments.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
2.0	Environment and Community Office responsible for a) preparing FVMP; b) implementing, monitoring and reviewing programs and procedures linked to FVMP; c) consulting with regulatory authorities as required; d) undertaking monitoring as required; e) undertaking maintenance as required; f) providing measures for continual improvement to FVMP and procedures; g) ensuring all personnel undertaking works in relation to FVMP are trained and competent; and (h) reporting the progress on final void in the AEMR.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
3.0	The preparation and continual update of a FVMP will be undertaken with the MCP. The MCP will be progressively reviewed and updated over the life of the mine.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.1.1	The WCC Mine MOP Amendment (2009) plans show a pit depth for the last G Seam extraction at RL280 m to be back filled to final floor position at RL300 m. The final void floor will be up to 120 m beneath the original land surface high point at ~RL420 m but void perimeter where it intersects the natural surface will be at RL400 m. The top of the void will be approximately 700 m long north-south and 800 m wide east-west and the void floor will be 300 m wide by 200 m long. After mining, the void high wall, endwall and low wall will be battered down to a maximum slope of 18°.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.1.3	Once mining in an open cut pit has finished, the remaining final void will either be: - Put to an interim use, typically in support of other mining activities (e.g. as a tailings, rejects or water impoundment), before being rehabilitated and closed; - Directly subject to rehabilitation and closure, to achieve the proposed final end use; or - Put under care and maintenance for a period before (or between) interim uses, further mining operations and ultimate closure of the site.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.1.3	Planning for final void management, therefore, needs to take into account the sequencing and nature of post-mining void use and the risks that need to be managed during each stage.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.1.3	Use of the final void will not be as an emplacement area because no coal washing is undertaken onsite. Final land use for the final void once rehabilitated will be woodland ecological community (White Box-Yellow Box-Blakely's Red Gum Ecological Community) according to LMP for the areas above the void water body and as water storage to the lower portion of the void. Water storage may be used by other organisations (e.g. Council).	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.1.3	Details concerning the final land use of the ecological community and water bodies land uses will be determined as part of the broader mine closure planning process, in consultation with relevant stakeholders	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.2.1	The rainfall within the isolated mine area catchments will be captured in the void.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.2.1	During the operating years of WCC, the water collected onsite will be used as dust suppression. Void water is used preferentially first for dust suppression, with clean and dirty water sources allowed to be discharged offsite (dirty water must meet relevant criteria with the Environmental Protection Licence 12260), otherwise can be used as a back up dust suppression.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.2.3	A detailed assessment of the volume and quality of water that will require management during the interim land uses and/or final land use will be undertaken, as part of the feasibility assessment and design for these final uses.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.2.3	The in-void water balance as applies to the WCC site is to be managed to prevent void from overflowing and to optimise the safety, stability, water quality, beneficial use and visual amenity aspects of final void closure.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
4.2.4	A detailed water balance model will be developed for the WCC mine prior to final void closure, should a remnant void remain after the proposed interim use of the void. As the pit is proposed for interim use beyond 2013, it is currently premature to undertake a detailed water balance.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.0	The final void will ultimately be managed to minimise potential safety and environmental impacts and maximise beneficial use.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.0	Final design specifications for the void will be based on a detailed water balance including verified groundwater modelling predictions and a re-assessment of post-mining groundwater equilibration, along with specialist geotechnical investigations to ensure landform stability. Water diversion works will be implemented based on the water balance outcomes, predominately aimed at diverting any upstream catchments away from entering any final void.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.1	Provided in FVMP Table 3.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.2	Appropriate risk management processes need to be implemented throughout all phases of a project to identify potential sustainable development risks associated with closure. Appropriate mitigation strategies need to be developed to control or eliminate risks and, where possible, implemented as part of the design phase of a project or prior to the commencement of closure.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.3	At the cessation of mining, the initial decommissioning of the void will take place and include: a) stabilisation of any lose materials on unstable slopes; b) rehabilitation of pit verges, including re-spreading of topsoil and sowing of vegetation to stabilise the soil; and c) installation of interim drainage management if required.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.3	In the event that a care and maintenance period of greater than twelve months is required, the associated risks will be managed as outlined in Table 9 FVMP.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
5.4.2	Final void closure will be integrated into the Mine Closure Plan for WCC. The general process for final void rehabilitation and closure will be as follows: a) WCC will undertake ongoing liaison with LPSC, DPI NSW and the community regarding the design and use of the final void; b) technical studies required to assist with void closure planning will be commissioned (e.g. assessments of geotechnical risk, water balance modelling); c) any material contained in temporary overburden dumps as identified by the Inspector of Coal Mines will be placed in the final void; d) all excess infrastructure or equipment relating to mining or interim use will be removed from the void and surrounds; e) rehabilitation and revegetation works will be undertaken to ensure a stable landform, to manage drainage of the site, to control public access and to achieve final land uses; f) at the completion of final void decommissioning, the Inspector of Coal Mines will be invited to site to ensure that the void has been left in a stable, safe and visually acceptable manner; and g) ongoing monitoring and maintenance of rehabilitated areas will be undertaken for an agreed period until completion criteria has been attained.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.3	To address the potential risks and opportunities of surface water and groundwater flows into and out of the final void following closure, the following will be undertaken prior to the start of final void rehabilitation: a) groundwater modelling predictions will be verified for each void; b) surface water inputs to the final void will be predicted; c) the water balance for each void will be determined; d) post-mining groundwater equilibration will be assessed; and e) the likely quality of water that will be stored in (and potentially released) from the final void will be predicted. This will include an assessment of the potential for contaminants to leach out of host rocks or materials placed in the void (e.g. from saline water).	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
5.4.3	Information derived from the above will be used as a basis for developing detailed design criteria and specifications for the final void, including developing and implementing surface water and groundwater management controls.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.3	Surface water will be managed to prevent uncontrolled inflow into the final void and to maintain the optimal water balance for the void. Surface water management may include works to construct structures such as contour banks, drains and drop structures established to control surrounding catchment flows.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.3	The WCC void is expected to be decommissioned as permanent water body and this will be confirmed as part of the broader mine closure process. Agreement will be reached with DPI NSW regarding the quality of water allowed being stored in the void	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.4	To mitigate the risk associated with geotechnical stability, the final void will be independently assessed by a geotechnical expert following the cessation of mining and designed to ensure long-term geotechnical stability. Specialist assessments will ascertain whether slopes are appropriate for long term stability of high walls, and to identify management measures. If studies indicate that reshaping of high walls is required to ensure landform stability and public safety, consultation will be undertaken with DPI NSW. The geotechnical assessments will take into account the proposed interim use of water storage and the proposed timing of this use following the cessation of mining.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.4	The steep slopes within void areas will be trimmed using an excavator or dozer and void floors will be sloped at a slight angle to facilitate drainage to a common low-point. The final landforms, batter slopes, drainage and benching will be designed to ensure the long term stability of the landform and to enable the agreed end land use (determined as part of the broader mine closure program) to be established. Disturbed areas on the verge and surrounding the void will also be revegetated. It is recommended that the high wall benches and void floor be revegetated using a mixture of native tree and understorey species.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
5.4.6	The rehabilitation at WCC will consist of a mixture of agriculture areas for grazing, and woodland areas which will include habitat augmentation and corridors for fauna movement linking with adjacent woodland areas.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.6	Agricultural areas will be rehabilitated to grazing land of Class III (land capability) consistent with the pre-mining land capability. Native woodland areas will be planted with species consistent with the characteristic vegetation communities found within the WCC, in order to provide habitat for threatened species recorded or potentially occurring within the area. WCC Development Consent Conditions specify woodland rehabilitation to achieve the endangered ecological community of White Box-Yellow Box-Blakely's Red Gum Woodland.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.6	Revegetation of these areas will be in accordance with the LMP. The potential to use the features of the final landform to create areas that support native vegetation and fauna (both terrestrial and aquatic) will be considered during rehabilitation and closure planning.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.6	The final void present a potential danger to native fauna and stock, primarily the risk that animals fall into or become trapped in the void. To minimise this risk, fencing, bunds and/or other measures would be implemented to restrict the access of fauna to the void crests. The void floors will be sloped at a slight angle to facilitate drainage, this will also assist any fauna that have fallen into the void/ water storage to extract themselves from the water and exit the void.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.7	As a precaution, exposed carbonaceous material in the void will be covered by a quantity of inert material of greater than five metre thickness, to minimise spontaneous combustion risks. Seams exposed in high wall benches will also require covering with a minimum of one metre of compacted inert spoil.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.8	Measures will be implemented to limit public access to the void and to address ongoing public safety.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
5.4.8	At the void crest (high walls and end walls) this may involve the construction of a safety berm and security fence along the length of the walls. This is to provide an engineered barrier between the pit and the surrounding area. The trench and berm is to be constructed in such a way that it would physically stop a vehicle. The configuration of safety berms and fences will include the following: a) 1.8 m chain mail fence; b) 2 m earthen berm set back at least 5 m from the edge of the highwall / end wall; c) 1 m trench on the outside of the berm; and d) 4-wire stock fence on the outside of the trench. The fence should also have warning signs placed at 50 m intervals along the fence so that they can be read by anyone who may be approaching the void area.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.9	Final landform design and revegetation undertaken as part of the mine closure process will specifically consider ways of improving visual amenity and returning the landscape to a visually aesthetic landform that is compatible with the surrounding landscape.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.9	Revegetation of the areas surrounding the final void and the capped void areas themselves will be undertaken to ensure that that the rehabilitated areas are visually consistent with the surrounding landscape.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.9	Views of the WCC mine from residential locations will be limited to distant views (over a distance of approximately 4 kilometres). However, given the visual character of the local area, once mining operations are complete, the rehabilitation of the WCC site will provide for improved visual amenity, through rehabilitation to native woodland vegetation.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.4.9	Revegetation of the WCC void will also focus on restoring native ecosystems (refer to WCC Landscape Management Plan).	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
5.5	Follow final void management program for 2010-2014 based on Table 10 FVMP.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
6.0	The post closure monitoring and measurement program will be similar to that undertaken during the operation of the mine only scaled back to focus on those aspects of the site that have the potential to cause pollution or that are designated indicators of the success or failure of the rehabilitation works.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
6.0	The monitoring program will be designed to demonstrate that closure completion criteria have been met. This period would also plan for remedial action where monitoring demonstrates completion criteria are unlikely to be met. If progressive rehabilitation has been successful, with stabilisation and revegetation meeting completion criteria, this last phase of closure may be shortened (ANZMEC/MCA 2000).	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
6.1	Surface water monitoring will be in-accordance with the WCC Water Management Plan (GSS Environmental, 2009). Quarterly monitoring will occur for the parameters listed in Table 11 FVMP. Water monitoring will be conducted in accordance with WCC Water Management Plan and will be compared against predictions made for final void water quality and post mining groundwater quality when a detailed water model is prepared at closure.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
6.1	Following closure void water levels are to be surveyed quarterly, and entered into a spreadsheet to trend water volume changes and prevent overtopping. This program be conducted for up to five years after decommissioning and final rehabilitation has been completed, or until such time as monitoring records demonstrate that the site is no longer contributing, nor has the potential to contribute, pollutants to the surrounding environment, and that rehabilitation has achieved a satisfactory stage of maturity and ground cover.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
6.2	Piezometers will be checked quarterly for depth of water and field water quality parameters (i.e. pH and electrical conductivity). Water monitoring will be conducted in accordance with WCC Water Management Plan and are compared against predictions made for final void water quality and post mining groundwater quality when a detailed water model is prepared at closure.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Indeterminate

Section	Requirement	Evidence	Audit Finding
6.2	Groundwater from the piezometers will be collected and tested on an annual basis for a larger suite of parameters including metals. This program will be conducted for up to five years after decommissioning and final rehabilitation has been completed, or until such time as monitoring records demonstrate that the site is no longer contributing, nor has the potential to contribute, pollutants to the surrounding environment, and that rehabilitation has achieved a satisfactory stage of maturity and ground cover.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Indeterminate
6.3	The geotechnical stability of the highwall and other steep slopes will be monitored annually during closure and the post-closure monitoring and maintenance period, or as required by a suitably qualified expert in consultation with DPI NSW. Monthly inspections of void will check and record for signs of slope instability, which are precursors of instability.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
6.4	The success of final void revegetation will be monitored as part of the LMP during the post-closure monitoring and maintenance period. Revegetation monitoring will target the relevant completion criteria relating to final land use (Refer to WCC LMP).	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
7.0	A review protocol for final void management will be completed annually in accordance with the review schedule. Results will be collated with other reviews to be reported to management at the annual management review of the WCC EMS. The plan will be revised due to: a) deficiencies being identified; b) results from the Monitoring and Review Program; c) recommendations resulting from the Monitoring and Review Program; d) c+C104hanging environmental requirements; e) improvements knowledge or technology becomes available; f) change in legislation; g) change in the activities or operations associated with WCC; and h) following the annual management review.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered
7.0	FVMP will be updated every five years (or as otherwise directed by the D-G). Any amendments to the plan will be undertaken in consultation with the appropriate regulatory authorities and approved in the same manner as the initial Management Plan.	The requirements under the Final Void Management Plan are not required to be undertaken yet.	Not Triggered

Section	Requirement	Evidence	Audit Finding
Rail Spur Management Plan (WCL, 2005)			
7.0	Activities on the Rail Spur subject to noise criteria outlined in Table 1 of RSMP. These criteria apply to any residence on privately owned land not subject to a legally binding agreement between WCC and the occupant.	An interview with Environmental Officer confirmed that these are the criteria used.	Complies
7.2.1	Maximum allowable vibration velocity of 2.82mm/s would apply to residences in vicinity of the Rail Spur.	An interview with the Environmental Officer confirmed that vibration monitoring is not undertaken because previous monitoring in Hunter Valley showed that coal trains don't generate vibration in excess of these criteria. Section 8.3 of Rail Spur Management Plan details this.	Complies
8.2	Safeguards to be employed to minimise noise impacts include: a) routine maintenance of locomotives (including noise suppression equipment, e.g. mufflers) for compliance with EPA rail noise criteria; b) routine track inspections / maintenance; c) restricting speeds on the Rail Spur to a maximum of 15 kph; d) loading trains when moving uphill with locomotive and wagon couplings under load; e) telemetry control of train speeds would ensure train acceleration, slowing or stopping would be gradual and not a source of coupling slap. Approximately 800m north of the private rail crossing, the Rail Spur is downhill which will enable the train to idle towards Werris Creek with all couplings under compression. The change from tension to compression on couplings would occur at low speed and approximately 500m from the nearest residence (Patterson); f) stop board positioning to maximize the distance from nearby residences; g) welded rail joints; h) minimizing the coal drop height into the wagon; i) coal bin positioning in excess of 1 km from the nearest potentially affected resident; j) maintaining coal within the loading bin, thereby minimizing the noise generated by coal falling onto the metal bin floor; k) liaising with “Cintra” re train movements to avoid / minimize concurrent stock / train movements on the private level crossing	An interview with the Environmental Officer confirmed that the rail contractor Pacific National is contracted to carry out this maintenance. The WCC Coal Processing Manager ensures the contractor maintains the rail spur, and he maintains records of this. The 15 kph speed limit is the written procedure for rail spur activities, and this speed is signposted in the rail spur area. The procedure for filling trains is as follows. The first 3rd of the train is filled and then the whole train runs past the loading bin. As the train then heads back past the fill bin, the remainder of the train is filled. Procedures exist for train speed and braking. Stop boards are in place on the WCC side of Tonsley Park to prevent trains idling alongside this private property. ARTC standards are followed with rail joints all welded. The coal drop height is minimised so it is as low as possible. The coal load out bin is always maintained in a full condition so there is always coal available to load the next train.	Complies

Section	Requirement	Evidence	Audit Finding
	which will necessitate sounding the horn; l) train driver / signal controller contact once loaded to minimize the requirement to stop at the outbound stop board. When parked at stop boards the locomotive engine speeds will be in idle; m) use of “town horns” at the private and public level crossings. It should be noted that there is also a public level crossing on the Werris Creek – Quirindi Road / Main Northern Railway Line adjacent to the Maggs and Woods residences and less than 200 m from the Sleight / Lewis residence.	The time that trains spend idling is minimised as far as possible, but this is reliant on availability of the rail line in relation to other trains. Trains use ‘town horns’ when approaching level crossings.	
8.4	Impacts from train headlights and lights operating on the train loader would be minimised by: a) restricting locomotives headlight use to low beam; b) lighting installation at the train loading facility consistent with AS 1680.2.4:1997 and safety requirements; and c) using loading facility lighting only when the facility is in operation.	An interview with the Coal Processing Manager confirmed that, during loading, train lights are turned off and low beams are used.	Complies
8.6	To minimise the potential for train movements on the Rail Spur to disrupt stock movement across the private level crossing on “Cintra”, WCC and the potentially affected landowners / land users will develop a train / stock movement notification procedure. The location of the “completion of loading point” to the south of this crossing will limit restrictions to personnel movement across it to two periods of approximately four minutes duration per train.	The Cintra property has now been purchased by WCC, so this requirement is no longer relevant.	Not Triggered
8.7	Air quality safeguards for minimising emissions/impacts include: a) maintaining stockpiled coal at the rail load-out facility and coal product storage area in a damp condition, i.e. not conducive to dust lift off and dispersal; b) minimizing the distance between the coal train loading chute and the wagon; c) regular locomotive maintenance by Pacific National to ensure compliance with exhaust emission standards; d) limitation of coal train speeds on the Rail Spur.	Water carts and fixed water spraying devices are available throughout the site to apply water where necessary. These water carts were observed throughout the site by the audit team during the site visit. An interview with the Coal Processing Manager confirmed that the distance between the coal loading chute and wagon is minimised with lowest drop height practicable. Rail Contractor Pacific National has responsibility for carrying out this maintenance. The Coal Processing Manager maintains records of this maintenance.	Complies

Section	Requirement	Evidence	Audit Finding
		The 15 kph speed limit is written into the Rail Spur Management Plan (WCL, 2005), and is signposted at the spur.	
9	Formal monitoring of Rail Spur operational impacts will be limited to: a) monitoring of noise to verify compliance with the criteria identified in Table 1 RSMP; and b) air quality, i.e. deposited dust and PM_{10} monitoring (see Section 9.2 RSMP).	Air quality is monitored as part of the Air Quality Monitoring Program at Tonsley Park and Cintra. Noise monitoring is carried out as per the requirements of the RSMP.	Complies
9	Response to any other issues arising from the operation of the Rail Spur, including additional monitoring requirements (if any), will be determined based on the outcomes of regular liaison between WCC personnel and local residents, landowners or land users and/or issues arising through the complaints management procedure (see Section 10 RSMP) or by the Community Consultative Committee.	An interview with the Environmental Officer confirmed that WCC maintains dialogue with neighbouring residences. The complaints hotline continues to be managed by the Environmental Officer, and the audit team observed the Environmental Officer efficiently dealing with complaints made through the hotline during the site visit.	Complies
9.1	Rather than being conducted at specific intervals, train noise will be measured by WCC personnel or other nominated person(s) as the opportunity arises. The main issues associated with train noise are: a) maximum noise levels as trains enter the spur line and pass by residence(s); b) maximum noise levels from shunting as received at the nearest residence in Werris Creek and the Zeolite Australia residence; and c) maximum noise levels from coal loading operations (i.e., filling empty wagons). Measurement of the above train noise sources will be conducted as follows. i) all noise investigations will be carried out in accordance with NSW OEH's Industrial Noise Policy, 2000 (INP), Environmental Noise Control Manual (ENCM) and applicable Australian Standards; ii) noise levels will be measures in 1/3 octave bands using an instrument with IEC Type 1 characteristics as defined in AS 1259-1900 Sound Level Meters. The instrument will have current calibration as per manufacturer's instructions and field calibration will be confirmed before and after measurements with a sound level calibrator; iii) The instrument will be set to A-weighting, "fast" response	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified. These are the procedures followed as part of noise monitoring.	Complies

Section	Requirement	Evidence	Audit Finding
	and sufficient 1-minute measurements will be taken at the relevant location to ensure capture of the noise source; iv) field notes will be taken during each measurement recording the time and duration of noise events, noise sources, instantaneous noise levels and frequency range of identified train noise sources; v) extraneous noise sources will be filtered from the measured signal, using Bruel & Kjaer Evaluator Software and the L_{Aeq} (15 minute) noise level from the rail loading activities and advancing locomotive during loading activities will be identified and compared with the relevant criterion in Consent Condition 4(7). In the event that coal loading occurs at night, an LA1 (1 minute) noise level would also be measured and the recorded level compared with the criterion in Consent Condition 4(7); vi) extraneous noise sources will be filtered from the measured signal, using Bruel & Kjaer Evaluator Software and the LA(max) noise level attributable to train movements beyond the rail load-out facility will be identified and compared with the relevant criterion in Consent Condition 4(8); vii) (g) details regarding measured LA1 (1 minute) noise levels, survey interval, weather conditions, extraneous noise sources, monitoring locations and times of measurement will be recorded for inclusion in the noise monitoring report.		
9.1	At least three surveys of train noise will be conducted to determine compliance with the criteria. These surveys may coincide with attended surveys of site construction works, but need not do so. If, after three consecutive train noise surveys, it is found that noise compliance is achieved then no further train noise surveys will be necessary unless there is a change in train configuration or component. If noise criterion exceedances are measured, then a rail noise mitigation strategy will be formulated, presented to the relevant parties for approval and, once approved, will be implemented.	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. The last monthly acoustics monitoring to coincide with shunting operations occurred in May 2011. Exceedances of these criteria have not been identified.	Complies

Section	Requirement	Evidence	Audit Finding
9.1	Following implementation of the rail noise mitigation strategy, one further train noise compliance survey will be conducted. This procedure will be followed iteratively until compliance of train noise criteria is achieved or other agreements are reached.	These criteria were already agreed upon before this audit period.	Not Triggered
10.0	Any general complaint received relating to Rail Spur operations will be managed in accordance with the complaints receipt and response procedures identified in the Werris Creek Coal Mine Environmental Management Strategy.	The Environmental Officer deals with noise complaints relating to the rail spur as part of the general complaints hotline for the site.	Complies
10.0	If any landowner considers air quality criteria nominated in the Air Quality Monitoring Programme are being exceeded and such exceedances were not predicted in the EIS, he/she may request WCC in writing for an independent review of the air pollution impacts of the mine on his/her land. In the event of such a request, WCC will: a) advise the D-G of DPI; and b) if so directed by the D-G, initiate an independent review and respond to findings according to procedures in DA-172-7-2004 (as modified) Sch 5 Cl 4-9. Land acquisition, if initiated, would be undertaken according to DA-172-7-2004 (as modified) Sch 5, Cl 10-12.	An interview with the Environmental Officer confirmed that these procedures have not been relied on by any neighbouring landowners during the auditing period.	Not Triggered
11.0	Reporting on Rail Spur operations as follows: a) usage - annually in the AEMR; b) noise annually in AEMR and quarterly to D-G DPI and affected landowners/tenants; c) air quality - annually in the AEMR and EPL return, quarterly to the D-G DPI and affected landowners/tenants, and at each CCC meeting; d) complaints -annually in the AEMR and EPL return.	Noise, air quality and complaints were all dealt with in the AEMRs 2008-2009, 2009-2010 and 2010-2011 for the reporting period. Sections 2.11 of the AEMRs deal with rail spur usage.	Complies
11.0	Air quality and noise monitoring results will also be made publicly available at the mine.	These are available to the public on request. Information is also available on WCC's website.	Complies

Section	Requirement	Evidence	Audit Finding
Noise Management Protocol & Noise Management Program for the Werris Creek Coal Mine (WCL, 2010)			
Pg8	Other mitigation measures to be adopted to control operational noise are set out as follows: a) mobile mining equipment to be used during the operational phases must have certification that noise levels do not exceed the Sound Power Levels listed in Table1 NMP; b) equipment not listed in Table 1 must have a maximum dynamic Sound Power Level of 116 dB(A) as measured generally in accordance with ISO 6395:1988 “Acoustics - Measurement of exterior noise emitted by earth-moving machinery Dynamic test conditions” or as otherwise advised by the acoustic consultant.	Sound power level monitoring was conducted for all plant and equipment onsite in July 2010. All were found to be compliant with the criteria stipulated in Table 1 Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (WCL, 2010). No new types of plant or equipment have been purchased since then.	Complies
Pg8	Continue to implement SentineX continuous noise monitoring system to monitor real time noise levels and provide feedback on noise performance to operations personnel.	The results of this real time monitoring are sent to the Environmental Officer each day. This allows the Environmental Officer to deal with any particular noise related issues that arose during the night.	Complies
Pg8	"Continue to implement the procedure "Noise Management and Mitigation." When the continuous noise monitor system triggers an alarm, an operational response is required. In Appendix A NMP.	The Environmental Officer follows a procedure each day based on forecasted weather conditions. If temperature inversions are predicted, the Environmental Officer will advise that operations may need to be modified.	Complies
Pg8	Continue to implement procedure "Truck Operations Noise Management." This improves operator's practice in lowering engine revolutions per minute, thus minimising unnecessary noise emissions from truck haulage. In Appendix B NMP.	An interview with the Environmental Officer confirmed that all operators trained in this. They are required to use 6th gear in trucks rather than 5th gear when coming downhill to lower rpms.	Complies
Pg10	Continue to address any concerns raised by local community in a timely and efficient manner.	The general complaints/information hotline operated by the Environmental Officer serves this function. The Environmental Officer was observed to be efficiently dealing with complaints made through the hotline during the site visit.	Complies

Section	Requirement	Evidence	Audit Finding
Pg11	If noise levels of plant/machinery exceed levels in Table 1 NMP, or if noise levels at any resident exceed the levels outlined in the DA, then the noise producing plant/machine shall be measured by an independent acoustic consultant. Sound attenuation measures will be installed to plant and equipment where necessary to ensure that noise emissions comply with the relevant noise levels in Table 1 NMP. Alternatively the equipment would be stood down or removed from the site.	Sound power level monitoring was conducted for all plant and equipment onsite in July 2010. All were found to be compliant with the criteria stipulated in Table 1 Noise Management Protocol and Noise Monitoring Program for the Werris Creek Coal Mine (WCL, 2010). No new types of plant or equipment have been purchased since then. During the audit period, machinery was not found to exceed these noise levels.	Complies
Pg12	Noise monitoring compliance during Stage 2 operations will continue to be undertaken by a specialist acoustical consultant through monthly attended noise monitoring. WCC's specialist acoustical consultant will undertake all attended noise monitoring at the locations in Table 2 NMP and will also include monitoring of the rail load-out facility where required.	Monthly monitoring is undertaken by acoustics engineers and has been appended to the AEMRs 2008-2009, 2009-2010 and 2010-2011.	Complies
Pg12-14	Attended noise surveys will be conducted as follows:	These commitments have been complied with as outlined below. Some recommendations for improvement have been made.	Complies Recommendation Made
Pg12-14	All noise investigations will be carried out in accordance with INP, Environmental Noise Control Manual and applicable Aus Standards.	The INP criteria are used by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made
Pg12-14	Noise levels will be measured in 1/3 octave bands using an instrument with IEC Type 1 characteristics as defined in AS 1259-1900 "Sound Level Meters."The instrument will have current calibration as per manufacturer's instructions and field calibration will be confirmed before and after measurements with a sound level calibrator.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made

Section	Requirement	Evidence	Audit Finding
Pg12-14	The instrument will be set to A-weighting "fast" response and measurements of L_{Aeq}(15 minute) will be taken at each location in Table 2 NMP. Each measurement will be stored at a sampling rate of no greater than 5 seconds for further analysis.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made
Pg12-14	Attended surveys will be conducted within a 24-hour period with at least 3 measurements taken at each location in Table 2 NMP so that measurements will be obtained for each of the day, evening and night time periods of operations.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made
Pg12-14	Field notes will be taken during each measurement recording the time/duration of noise events, noise sources, instantaneous noise levels and frequency range of identified site noise sources.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made
Pg12-14	Extraneous noise sources will be filtered from the measured signal using Buel & Kjaer Evaluator Software and the L_{Aeq}(15 minute) level attributable to WCC activities will be identified and compared with the relevant criterion.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made

Section	Requirement	Evidence	Audit Finding
Pg12-14	Details regarding plant configuration, survey interval, weather conditions, extraneous noise sources, monitoring locations and times of measurements will be recorded for inclusion in the noise monitoring report.	This is the procedure that is followed by Spectrum Acoustics in carrying out the monthly noise monitoring surveys at WCC. It is recommended that in future, these Spectrum Acoustics reports contain an introductory section clearly outlining the methodology, criteria and equipment employed as part of this monitoring at WCC.	Complies Recommendation Made
Pg12-14	Meteorological data will be obtained from the onsite weather station to help identify sources of noise and for use in comparing data against the EPL and DA-172-7-2004 (as modified) regarding strength of temperature inversion and wind speeds.	There is a meteorological station operating, and reports were made about this in 2008-2009 AEMR, and again in the 2010-2011 AEMR. Results from the station were also included in 2010-2011 AEMR.	Complies
Pg12-14	Specialist acoustical consultant will provide data collected in a report for WCC.	This annual report by Spectrum Acoustics is included as Appendix 8 in the AEMR 2008-2009, and in Appendix 7 of AEMRs 2009-2010 and 2010-2011.	Complies
Pg14	The Environmental Officer (or delegated person) will review and compile the results of all monthly noise monitoring reports. This person will also be responsible for providing notification to all relevant parties of any exceedances to the EPL and Consent Criteria. Results will continue to be included in the Annual Environmental Management Report (AEMR) for presentation to the relevant departments and the local community.	The Environmental Officer compiles the results of this monthly noise monitoring. Exceedances of criteria that occurred during the audit period were reported to the EPA as per the EPL annual returns. These results are also compiled annually by Spectrum Acoustics and included in the WCC AEMR (Appendix 8 in the AEMR 2008-2009, and Appendix 7 in AEMRs 2009-2010 and 2010-2011). An interview with the Environmental Officer confirmed that most neighbouring properties receive a letter each month which is prepared by the Environmental Officer. This letter contains the environmental monitoring data relevant to that property from the previous month, including noise and blasting data.	Complies

Section	Requirement	Evidence	Audit Finding
Pg14-15	Train noise will be measured by WCC's specialist acoustical consultants as the opportunity arises. Will be conducted with same procedures (a)-(i) specified for noise compliance modelling. These surveys will coincide with attended surveys of monthly monitoring for noise compliance on site. It is recognised that at least two surveys of train noise will be undertaken for the AEMR period each year. If this figure has not been achieved through normal scheduled monitoring, then a specific set of monitoring on the train load-out will be arranged. If, after two consecutive train noise surveys, it is found that noise compliance is achieved then no further train noise surveys will be necessary during the AEMR period, unless there is a series of noise complaints received relating to loading of trains, or a specific request received from a neighbour or Department. If noise criterion exceedances are measured, then a rail noise mitigation strategy will be formulated, presented to the relevant parties for approval and, once approved, will be implemented.	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified.	Complies
Pg15	Following implementation of the rail noise mitigation strategy, additional train noise compliance surveys will be conducted. This procedure will be followed until compliance of train noise criteria is achieved or other agreements are reached.	An interview with the Environmental Officer confirmed that monthly monitoring undertaken by acoustics engineers is scheduled to occur as often as possible at the same time as shunting operations are occurring. Exceedances of these criteria have not been identified.	Not Triggered
Pg16	All persons undertaking any form of work on site will be required to attend a site-specific induction training course, at which they will be instructed in the environmental rules, procedures and processes applicable whilst they are on the site.	The site induction package was sighted during the audit. It contains information about these requirements.	Complies
Bushfire Management Plan for the Werris Creek Coal Mine (WCL, 2007)			
1.7	The Manager of Mining Engineering has the overall responsibility for the management of the mine, including the responsibility for compliance with the commitment within the Bushfire Management Plan and the Mine's Fire and Emergency Management System developed in accordance with the *Coal Mines Regulation Act 1982* (note: this Act has been repealed, now refer to the *Coal Mine Health and Safety Act 2002*).	An interview with the Environmental Officer confirmed that the Manager of Mining Engineering undertakes these responsibilities.	Complies

Section	Requirement	Evidence	Audit Finding
1.7	The WCC Site Manager and Mining Contractor's Project Manager have the responsibility of ensuring that all the on-site safeguards and controls are in place and are effective for the prevention and control of bushfires, and that the desired environmental outcomes are achieved.	An interview with the Environmental Officer confirmed that these personnel ensure that water carts are available onsite in a serviceable condition	Complies
1.7	All Werris Creek Coal personnel have responsibilities to observe and comply with the requirements of the Bushfire Management Plan, and to observe best practice when handling flammable or hazardous materials and operating heavy machinery within the mine lease.	An interview with the Environmental Officer confirmed that hot work permits are used onsite to prevent personnel working in un-mowed areas without bushfire equipment. All onsite vehicles have fire extinguishers and fire extinguisher training is provided to staff.	Complies
2.1	A Fire Officer will be appointed by the Mine Manager as required by Clause 21(2)(c) of the *Coal Mines (General) Regulation 1999* (note: this Regulation has been repealed and replaced with the Coal Mine Health and Safety Regulation 2006). The Fire Officer's responsibilities will include: a) compliance with the Bushfire Management Plan; b) maintenance and inspection of fire fighting equipment is carried out by Chubb; and c) reporting and replacement of damaged fire equipment. The Fire Officer will report directly to the Mine Manager and will be required to complete periodic reports of his inspections.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
2.2	A biannual inspection of the biodiversity offset area and land boundaries owned and controlled by WCC will be carried out by the Fire Officer at the mine. Periodic formal or informal site inspections will be invited from the Werris Creek Bush Fire Service and Liverpool Plains Shire Council.	During the audit, auditors were invited to view weekly maintenance schedule for plant and equipment. These records ensure that personnel working on all shifts can observe the maintenance that has been carried out on plant and equipment. An interview with the Workshop Supervisor confirmed that before every shift, a pre start form is completed and updated into a spreadsheet for all these items of plant.	Complies
2.2	All earthmoving machinery will be maintained in good working order with efficient exhaust systems and spark arrestors. Regular inspections, as required by *Coal Mines Regulation Act 1982* will be carried out.	An interview with the Environmental Officer confirmed that all onsite vehicles have fire extinguishers and fire extinguisher training is provided to staff.	Complies

Section	Requirement	Evidence	Audit Finding
2.2	All earthmoving machinery and mobile equipment will be fitted with appropriate sized and approved fire extinguishers suitable for the control of flammable liquid and electrical fires. Some of the heavy machinery will be fitted with independent fire suppression systems in addition to two 80:BE rated fire extinguishers while all light vehicles will be fitted with one 80:BE rated fire extinguisher;	The audit team observed fire extinguishers in all office areas. These fire extinguishers were appropriately signed.	Complies
2.2	Workshops and Offices will be installed with an approved 80:BE rated fire extinguisher. Their location will be indicated by an appropriate sign.	The audit team observed fire extinguishers in all office areas. These fire extinguishers were appropriately signed.	Complies
2.2	a) All fuel and oil storage will be located and constructed in accordance with the requirements of the *Dangerous Goods Act*; b) fuel and oil storage areas will be signposted as to the contents of the storages and will be fitted with approved 80:BE rated fire extinguishers; and c) all fuel tanks on-site will be fully or self bunded to ensure that in the event of a leak or rupture, no fuel escapes from the bunded area. Each bunded area will have the capacity of at least 110 per cent of the largest tank. Bunds may be integrated, i.e. form part of the tank structure, or be external;	Under Section 5.9.2(d) *AS 1940-2004 The storage and handling of flammable and combustible liquids*, a tank with an integral second containment does not have to be bunded to store 110% of its contents. Rather, the secondary containment only needs to be able to store the entire contents of the primary containment. The tanks at WCC are self bunded with a spill storage capacity of 100%, and are double-skinned. They are thus compliant with these requirements.	Complies
2.2	Designated “No Smoking” areas will be clearly marked on-site. These will include: a) fuel and oil storage areas; b) within areas flagged or barricaded areas in preparation for blasting; c) within 20 m of the explosives magazines; d) when transporting explosives or within 20 m of a vehicle transporting explosives; e) within workshops; f) all buildings and offices; and g) any gas cylinder storage areas.	Staff are directed to smoke away from covered areas and from flammable areas. This practice was observed by the audit team during the site visit.	Complies

Section	Requirement	Evidence	Audit Finding
2.2	Provision of fire equipment on-site will be in accordance with the requirements of Clause 14 of the *Coal Mines Regulation (Fire Control – Open Cut Mines) Regulation 1984* (note this has now been replaced by the *Coal Mine Health and Safety Regulation 2006*): a) All fire extinguishers will comply with AS/NZS 1841.11:1997 will be compatible with those of the Rural Fire Service; b) all fire equipment will be kept in a serviceable condition and be inspected at Pre-start and inspected by Chubb every 6 months; and c) the water truck will be maintained on-site to provide immediate response to a bushfire.	An interview with the Environmental Officer confirmed that water carts are maintained onsite at all times as standby fire fighting equipment. Hoses can be pressurised if needed. Dozers and graders are also available to cut fire breaks if needed. Additional water is also stored onsite. An interview with the Environmental Officer confirmed that the OHS system contains these fire management procedures, and Chub checks fire equipment every six months to ensure it is compliant.	Complies
2.2	A fire tender will be: a) available for use when the open cut mine is in operation; b) tested at least monthly for mobility and operation of the water pump; c) properly maintained, with operators trained in the use of all equipment; d) able to be supplied with water from operating mobile water trucks should the need arise; e) equipped with: i) 2 x 80 B:E fire extinguishers; and ii) Hose and fittings to fill Rural Fire Service Truck. Additionally, the site water truck will be fitted with a water cannon for fire fighting purposes and be kept filled. All fire equipment will be compatible with that of the Rural Fire Service.	The audit team observed fire extinguishers in all these areas. These fire extinguishers were appropriately signed. An interview with the Environmental Officer confirmed that water carts are maintained onsite at all times as standby fire fighting equipment. Hoses can be pressurised if needed. Dozers and graders are also available to cut fire breaks if needed. Additional water is also stored onsite.	Complies
2.2	Approved 80 B:E rated extinguishers shall be installed and maintained at the following locations: a) Fuel and Lube Bay 2 x Extinguishers; b) Offices 2 x Extinguishers; and c) workshops 2 x Extinguishers.	The audit team observed fire extinguishers in all these areas. These fire extinguishers were appropriately signed.	Complies
2.2	Equipment will not be stored on uncleared ground.	Staff are directed to store equipment on hardstand areas. This was the practice observed by the audit team during the site visit.	Complies

Section	Requirement	Evidence	Audit Finding
2.2	The water for fire fighting purposes will be sourced from the various water storages and licensed bores in the mining lease or WCC's landholding.	An interview with the Environmental Officer confirmed that water carts are maintained onsite at all times as standby fire fighting equipment. Hoses can be pressurised if needed. Dozers and graders are also available to cut fire breaks if needed. The preference is to use void water obtained onsite, however other water is also stored onsite and available for fire fighting use if necessary.	Complies
2.2	a) WCC will enforce clearing restrictions. Clearing operations will not be undertaken during periods of extreme fire danger as defined by the Bureau of Meteorology's Severe Weather Station; b) the retention of cleared debris for use in the rehabilitation programme will be strictly adhered to and there would be no burning of debris undertaken; c) all vehicle movements within the DA-172-7-2004 (as modified) area will be confined to defined roads or tracks; d) where appropriate, controlled high intensity short term grazing will be employed to assist in the reduction of vegetative fuel loads.	An interview with the Environmental Officer confirmed that grazing takes place on lands adjacent to the mining area. Periods of high risk fire danger have rarely occurred during this auditing period. Onsite vehicles are confined to internal roads and debris are not burnt.	Complies
2.2	A suitable fire break will be established and maintained around the perimeter of the mining lease and/or WCC's landholding. The fire breaks will be a minimum of 6 m wide and kept free of flammable material. Additional firebreaks will be maintained around the explosives magazines and flammable materials storage areas. Firebreaks will be inspected at minimum 6-monthly intervals.	During the site visit, the audit team observed these 6 m fire breaks between adjacent properties.	Complies
2.2	a) All blasting operations will be carried out and confined to the face area of the mine; b) All flammable material will be removed by pre-stripping the topsoil prior to any drilling and blasting operations taking place; and c) All blasting will be carried out in accordance with the Guideline as set out by the *Department of Mineral Resources and Clause 25 of the Coal Mines (Open Cut) Regulation 1999.*	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
2.2	All welding activities will, as far as practicable, be conducted and confined to the workshop. If in the event that welding or cutting is to be carried out outside the workshop area, the following safeguards will be employed: a) the area within a 20 m radius will be cleared of all flammable material; b) all oils and greases will be cleared from the work area; c) fire extinguishers of an 80:BE rating will be positioned within 10 m of the work area; and d) a Fire Tender will be put on standby during the welding or cutting operations.	An interview with the Environmental Officer confirmed that hot work permits are used onsite to prevent personnel working in un-mowed areas without bushfire equipment. All onsite vehicles have fire extinguishers and fire extinguisher training is provided to staff. Water carts are available onsite at all times to assist with extinguishing fires.	Complies
2.2	a) Routinely turn over coal in the ROM and product coal stockpile areas to minimize stockpile residence time; b) in longer term stockpiles, creation of a shallow stockpile batter face to the direction of the prevailing wind; c) Compaction of the stockpile area by use of mobile equipment; and (d) visual inspections for evidence (visual or smell) of combustion.	Coal stored in the ROM and stockpile areas is open and exposed to prevailing winds at all times. Dozers and water carts available at all times to minimise spontaneous combustion. This was observed by the audit team during the site visit.	Complies
2.2	Vehicular access will be maintained around all areas of mining related activities.	Internal road access was observed at the time of the audit. These roads are appeared to be maintained in good condition.	Complies
2.3	Fire prevention and fuel load reduction (if required) in rehabilitated mine areas or the biodiversity offset areas will be undertaken in accordance with the Mine's Flora and Fauna Management Plan. and will involve a combination of fire breaks and short periods of high intensity grazing. It is also conceivable that controlled burns may also be used in the offset areas through consultation with the Rural Fire Service. Fuel load / fire security in rehabilitated and bio-diversity offset areas will be inspected bi-annually with one such inspection occurring prior to the commencement of each bushfire season.	This has not occurred during the auditing period.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.4	In the event that a fire cannot be controlled by the Mine fire fighting teams or that threatens public property, the mine emergency procedures as defined in the Werris Creek Coal Mine Fire and Emergency System will be followed. These procedures include evacuation and notification of external emergency services. Contact details for relevant personnel or services at or external to the Mine are provided in Appendix 1 BMP and will be posted at all telephones on site.	This has not occurred during the audit period.	Not Triggered
2.5	Marshall Mining and Earthmoving will form fire teams that will trained in accordance with coal mining legislation. All mine personnel, visitors and sub-contractors will be advised of the nominated muster area in the case of an emergency.	The site induction package was sighted during the audit. It contains information about these requirements. Fire marshals and wardens are in place across the site.	Complies
2.6	This Plan will be reviewed annually with any substantial amendments to procedures agreed with the Rural Fire Service and Liverpool Plains Shire Council prior to implementation.	During the auditing period, the Bushfire Management Plan was not reviewed. It is recommended that the Plan be reviewed sometime in the near future.	Not Compliant Recommendation Made
2.7	Records of all inspections will be retained at the mine. Copies of the bi-annual inspection report will be forwarded to the Mine's Environmental Officer.	Bushfire inspections are included as part of the Biodiversity Offset Area inspections carried out by the Environmental Officer.	Complies
2.7	WCC management will liaise with the Rural Fire Service, Werris Creek and adjacent landowners regarding fire hazard minimisation at the Mine and on WCC landholdings. Additionally WCC will, where possible, respond to any community fire emergency situation and provide assistance by way of machines, water, equipment and labour.	The Environmental Officer engages in ongoing dialogue with adjoining landowners regarding track management. WCC offers to grade boundaries on neighbour's side of fence.	Complies

Section	Requirement	Evidence	Audit Finding
Werris Creek Coal Air Quality Monitoring Program (WCL, 2009)			
2.0	Will determine compliance with limitations set out in Conditions of Consent, DA-172-7-2004 (as modified) and maintain monitoring requirements of the EPL-12290.	Sections 3.1 of the AEMRs 2008-2009, 2009-2010 and 2010-2011 analyse compliance with the conditions in DA-172-7-2004 (as modified). During the 2009-2010 reporting period, not all monitoring for PM_{10} was undertaken as per EPL 12290 Condition M2.1. This was due to the facts that there was a dispute with a property owner, an Environmental Officer was not employed at the site for approximately three months, and there was a change of consultants undertaking the monitoring at this time.	Not Compliant
3.2	Deposited dust gauges mounted above ground level on a star picket or similar support which is sufficiently sturdy as to prevent noticeable sway and funnel is horizontal.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.2	Site identifier, e.g. WCA1 and the name of the property will be marked on the PCV sample bottle holder and pre-marked on each bottle using a permanent marker.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.3	Sites for deposited dust gauges are to be selected to avoid restricted airflows, such that the funnel has a minimum clear sky angle of 120^{o} and to avoid localised sources of pollution, e.g. unsealed roads. Also positioned to avoid interference by stock.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
3.4	Sample collection, changeover and analysis performed by specialist contractor and involves following steps: i) Wash deposited matter adhering to inside of funnel into the deposit gauge; ii) Remove funnel and seal bottle with a lid. Identify the date/time of removal on bottle on field sheet; iii) Insert clean funnel into a fresh bottle containing algaecide, mark date and time on the bottle and insert bottle into the holder for the next sampling period. Ensure the funnel aperture is horizontal; iv) Following collection of the bottles from all sites, return the bottles removed from the holders to the laboratory for analysis following completion of all relevant details on the field sheet which is dated and signed.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.4	During storage prior to transport, bottles are kept on cool, dark environment to prevent growth of algae, etc.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.4	Laboratories used for deposited dust analysis are to be NATA accredited for the tests performed.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
3.5	Collection/changeover of sample bottles occurs on first day of each month or as near as possible.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.2	PM_{10} and TSP sampling will be undertaken using a PM_{10} size-selective inlet or TSP inlet respectively, fitted to an ECOTECH 3000 or equivalent high volume air sampling unit which complies with Australian and OEH standards including: i) Automatic volumetric flow control to maintain a constant flow rate; ii) Programmable sampling periods to enable multiple daily, weekly, 6 day or 1 in 'x' days sampling sequences.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.3	High volume samplers will be sited with the base affixed to a concrete slab on ground, i.e. such that the filter would be positioned within the breathing zone (1-2m above ground level) and sited in accordance with AS 2922-1287.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.3	The site identifier, e.g. WCHV1, will be clearly identified on the sampling unit.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
4.4	Sample collection, changeover and analysis are undertaken by a specialist contractor, Sampler set up, operation and filter installation/change out are undertaken in accordance with AS 3580.9.6.2003 as described below.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.4.1	Initial set up i) Conducted by sampler in accordance with manufacturer's instructions, by suppler; ii) Ensure filter holder and surrounding area are clean before installing filter; iii) Remove pre-weighted (tared) filter from its container and place in filter holder, ensuring filter identification number is face down on the holder. Clamp down carefully; iv) Replace size-selective inlet; v) Set sampler flow rate, operate sampler until stable air flow occurs and record "start flow rate" from sampler flow rate indicator on field sheet.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.4.2	Return to collect the exposed filter as soon as practicable after the sampling period is complete. Then: i) Before removing the filter, operate the sampler until stable air flow occurs and record final flow rate on field sheet. If final flow rate differs from initial flow rate by more than 10%, discard sample; ii) Record all relevant details on field sheet for each site including: date taken/collected, filter paper number, site identification number, total run time, verification that sampler time is correct to within 15 minutes of actual time, verification that high volume sampler check that time was in correct sample sequence, operator identification, relevant comments, e.g. meteorological conditions/local activities/fires/dust/storms which may affect PM_{10} or TSP; iii) Remove filter from holder touching outer edges only. Reject sample if evidence is misalignment, blockage or breakthrough; iv) Remove large debris or insects carefully using clean tweezers; v) Fold filter so that only surfaces with collected particular matter are in contact; vi) Place filters in labelled dust proof container; vii) Install a new filter in accordance with procedure identified in	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
	4.4.1; viii) Return removed filter to laboratory for analysis, together with completed field sheet.		
4.4.2	Avoid changing filters during windy or rainy conditions. If unavoidable, remove filter holder to protected location first.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.4.2	Laboratories used for PM_{10} and TSP analysis must be NATA accredited for the tests performed.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.4.2	Prior to returning samples to laboratory, do not expose to extremes of temperature which could result in loss of semi-volatiles.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.5.1	Each sampler and inlet shall be maintained in accordance with the program identified in Table 3.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
4.5.2	High volume sampler units are to be calibrated each two months by the external specialist contractor, with a record of calibration retained for each sampler unit.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
5.0	On receipt of deposited dust, PM_{10} or TSP results from the laboratory, the data will be examined, any questions will be raised with laboratory, and results transferred to Excel spreadsheet.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
5.0	Data then examined for compliance with relevant criteria identified within DA-172-7-2004 (as modified) as identified in Table 4.	Sections 3.1.3 of AEMRs 2008-2009, 2009-2010 and 2010-2011 compare the air quality monitoring data for the relevant reporting periods against DA-172-7-2004 (as modified) criteria.	Complies
5.0	Copy of the results will be provided to WCC's nominated recipients and to any resident on whose property a monitor is positioned, if requested.	An interview with the Environmental Officer confirmed that most neighbouring properties receive a letter each month which is prepared by the Environmental Officer. This letter contains the environmental monitoring data relevant to that property from the previous month, including noise and blasting data.	Complies
5.0	Any exceedances will be reported to OEH and DP&I. Investigate cause if required and provide written response on the non compliance according to DA-172-7-2004 (as modified) to OEH. Will also notify affected landowners/tenants/, community consultative committee members, and provide results in AEMR.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
6.0	General complaints received relating to air quality issues managed according to complaints receipt response procedures in Werris Creek Coal Mine Environmental Strategy (Section 6.2).	The complaints register for WCC during the auditing periods was sighted by the audit team. Eight complaints relating to air quality were made during the auditing period. These complaints were dealt with as part of WCC's overall complaints management system.	Complies
6.0	If affected landowner requests, may request WCC in writing for independent review of air pollution impacts of mine on his/her land. WCC would then notify DP&I D-G, and initiate independent review if D-G requests. Any subsequent land acquisition undertaken as per Schedule 5 DA-172-7-2004 (as modified).	Such a request has not been received during this audit period.	Not Triggered
7.0	Incorporate air quality monitoring results in each AEMR along with: (i) An analysis of the results against the relevant criteria with DA-172-7-2004 (as modified) and monitoring results for the previous years; (ii) Identification of trends over the life of the development; (iii) The identification and discussion of any non compliances during the reporting period; and (iv) A description of actions implemented to ensure compliance.	This is dealt with in Sections 3.1 of the AEMRs 2008-2009, 2009-2010 and 2010-2011.	Complies
7.0	Results of monitoring should be made available for public examination.	These results are available to the public on request. Information is also available on WCC's website.	Complies
Werris Creek Coal Blasting Monitoring Program (WCL, 2010)			
2.0	For every blast, there will be at least 4 monitors. Table 1 BMP outlines the permanent and mobile blast monitoring locations that will be maintained. Table 2 BMP outlines the WCC blasting criteria for each monitoring location.	Appendix 7 of AEMR 2008-2009 shows the four monitoring locations that were used. This is also contained in Appendix 6 of AEMR 2009-2010, and Table 3.22 of AEMR 2010-2011.	Complies
2.0	"Tonsley Park" is currently the closest privately owned and occupied residence to WCC and is therefore the representative permanent location for community blast monitoring of every blast.	Table 3.22 of AEMR 2010-2011 confirms that Tonsley Park has a permanent monitoring location which monitored every blast during the 2010-2011 reporting period. An additional three monitoring locations are used for each blast depending on the location of the blast.	Complies
2.0	Cintra" was acquired by WCC on 31st March 2010 and is now considered as a project related property and is not subject to the relevant compliance criteria in Section 7.0, however due to a clause within the sale contract limited blast monitoring is required at the site.	Blast monitoring was carried out at Cintra during the most recent reporting period as per Table 3.22 of the AEMR 2010-2011.	Complies

Section	Requirement	Evidence	Audit Finding
2.0	"Greenslopes" & "Banool" is the closest privately owned property but contains no residence, however when the property owner constructs a permanent dwelling onsite, it will become a permanent monitoring location.	Table 3.22 of the AEMR 2010-2011 shows that Greenslopes is now a permanent monitoring location.	Complies
2.0	WCC is contractually obligated by Australian Rail Track Corporation to monitor blast vibration levels at key railway infrastructure locations for every blast within 500m of the railway line.	Table 3.22 of AEMR 2010-2011 states that the ARTC Culvert was monitored during every blast within 500m if the railway line during that reporting period.	Complies
2.0	WCC will also: a) monitor flyrock / blast rock distribution for each blast; and b) video all major blasts to assist in the interpretation of results.	An interview with blasting contactor (Orica) staff confirmed that sentries are mandated around blast to watch for flyrock and prevent people driving into the area. If flyrock that leaves the 500m blasting zone, this distance is measured. Most blasts are visually recorded.	Complies
2.0	Instrumentation used to measure the airblast overpressure and ground vibration levels will meet the requirements of Australian Standard 2187.2 of 1993. A combination of Texcel µMx and Texcel Compact Monitors will be used at all monitoring sites to analyse airblast overpressure (dBL) and peak particle velocity in a radial, vertical and transverse direction (mm/s), i.e. ground vibration. All equipment for the measurement of airblast overpressure will have a lower cut-off frequency of 2Hz, and a frequency bandwidth of 2 Hz to 500 Hz.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies
3.0	Only calibrated monitors will be used for blast monitoring at the Werris Creek Coal Mine, with copies of calibration certificates or other means of verification available on site. The date of last calibration is automatically printed on each monitor print-out and each report provided by the blast contractor.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting. All calibration records are maintained on the premises.	Complies
4.1	All aspects of blasting operations will be undertaken by the blast contractor and in accordance with AS 2187.2-2006 – Explosives - Storage and Use, a copy of which will be retained on site in the blasting contractor's office.	An interview with blasting contractor (Orica) staff confirmed that this is the standard followed in blasting. Orica staff and the Environmental Officer have electronic copies of this standard available.	Complies

Section	Requirement	Evidence	Audit Finding
4.2	Prior to monitors being placed in the field, the following aspects will be verified for each instrument: a) battery is charged. Note: batteries will be placed on charge immediately following data downloading from each blast; b) date and time are correct; c) location (Site) for each monitor is marked on the carry case; d) Instrument "fields" are correctly set to reflect the distance from the blast site to identified monitor location. The instrument fields, i.e. near, medium and far, determine the period of recording for airblast once the monitor is triggered on either ground vibration or airblast itself. Instrument trigger levels are set to minimize the potential for false initiation of the recording sequence by, for example, wind, but would record airblast or ground vibration events approaching or greater than the standard vibration criteria of 115 dBL and 5 mm/s respectively. For the far field setting, triggers would typically be set at about 0.37 mm/s and 111.9 dBL; e) Setting adjustment as necessary; and (f) Print-off a confirmation of settings from the logger.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies
4.2	Table 3 BMP outlines distance range between blast site and the monitor, the appropriate field setting and the duration of airblast recording.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies
4.2	To ensure consistency, a sheet identifying the monitor settings for each blast monitoring site will be retained at the site office and adjusted as necessary to reflect, for example, increasing or decreasing distances to the blast site and monitoring results, e.g. false trigger frequency.	An interview with blasting contractor (Orica) staff confirmed that trigger values are adjusted as required. It was advised that one monitoring location was receiving ongoing complaints in relation to blasting despite the trigger levels not being exceeded. This resulted in the trigger levels being lowered in response to community concerned.	Complies
4.3	The instrument will be set up at the pre-selected location at each monitoring point, between 3.5 m and 30 m from the residence or building to be monitored. Prior to initiation, a Werris Creek Mine Site Blast Check List form which includes verification that the monitors are in place and records salient weather data, e.g. wind direction and cloud cover, will be complete and signed by the shotfirer.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies

Section	Requirement	Evidence	Audit Finding
4.3	The instrument set-up procedure involves the following steps: a) insert the soil spike into the ground and level the geophone; b) set up microphone; c) connect microphone and geophone to the monitor; d) turn power on. Powering up the monitor initiates a self check culminating in a VDU advice that the instrument is functioning properly; and e) press “start”. Following a countdown sequence, the monitor moves into a “standby mode” to wait for triggering.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies
4.4	Following the completion of the blast, the following activities will be undertaken prior to the monitor being returned to the office for data downloading. i) Press “stop” button; ii) Turn power off; iii) Disconnect microphone and geophone; (iv) Remove soil spike; and (v) Pack instrument up.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures followed in blasting.	Complies
4.5	On the return of each monitor to the site office, staff will: a) retrieve / download the data to the office computer; b) review the data and delete any data pertaining to false triggers, i.e. triggers before the blast initiation time; c) generate a results print-out sheet (in Microsoft Word) and insert relevant data relating to the blast, e.g. blast pattern, hole spacing, number of rows, number of holes, blasthole diameter, stemming, MIC, explosives type and weight, delay type (interval and duration (ms)) and any relevant comments or observations. An example of a typical results sheet from the Whitehaven Coal Mine is attached as Appendix 2; d) print-off and distribute the results to the nominated recipients. Prior to the commencement of blasting activities, the owner of each building where monitoring is undertaken, will be asked if they would like to receive copies of the relevant blast results. Result distribution may be by email, fax or in hardcopy as appropriate or requested. Copies of the printouts, the Mine Site blast checklist and details such as blast design, charging and tie in pattern are retained on the mine site files; e) transfer the data for the blast to an Excel spreadsheet; and f) place monitor battery on charge to await the next blast.	An interview with blasting contractor (Orica) staff confirmed that these are the standard procedures employed following a blasting event. An interview with the Environmental Officer confirmed that most neighbouring properties receive a letter each month which is prepared by the Environmental Officer. This letter contains the environmental monitoring data relevant to that property from the previous month, including noise and blasting data.	Complies

Section	Requirement	Evidence	Audit Finding
5.0	Following each blast, all personnel involved in the firing of the shot will monitor the movement of any post blast fume. Blast sentries will wait in position and monitor any post blast fume until it has safely dissipated. Once the risk of post blast fume is removed, sentries will communicate the all clear back to the shot firer via radio communications.	An interview with blasting contractor (Orica) Sentries mandated around blast to watch for fumes, flyrock, and prevent people driving into the area. These sentries are responsible for communicating the all clear back to the shot firer. Orica uses a score system to rate the results of each blast. Any blast scoring over 2 requires further monitoring. There have been some complaints during this audit period in relation to fume odour.	Complies
5.0	WCC has developed a Post Blast Fume Alert Procedure which allows for the proper management and notification of neighbouring residence if post blasting fume has not dissipated. The procedure is initiated in the unlikely event that post blast fume may become a risk for a neighbouring residence.	Orica, the blasting contractor uses a score system to rate the results of each blast. Any blast scoring over 2 requires further monitoring. There have been some complaints during this audit period in relation to fume odour. As most adjoining land is owned by WCC, neighbours rarely required notification regarding blast fume.	Complies
6.0	Following each blast, the area surrounding the blast site will be inspected and flyrock distribution to the front, rear and both sides of the blast site recorded. At a minimum, data recorded will comprise the maximum flyrock projection distance in each direction from the blast.	An interview with blasting contractor (Orica) staff confirmed that sentries are mandated around blast to watch for flyrock and prevent people driving into the area. If flyrock that leaves the 500m blasting zone, this distance is measured.	Complies
7.0	In the event that the results of a blast identify an exceedance of: a) peak vector sum velocity (ground vibration) at or above – 5 mm/s (ppv); and/or b) peak overpressure at or above – 115 dBL, Werris Creek Coal Pty Ltd (WCC), as Licencee under the *Protection of the Environment Operations Act 1997* and holder of Development Consent DA-172-7-2004, will report the incident to OEH and DP&I. WCC will also undertake investigations into any possible exceedances and forward this information onto the departments as required.	During 2010-2011, no exceedances of the 120dB(A) in Table 10 occurred. Only two blasts above the 115dB(A) criteria occurred, which is less than the 5% allowable (AEMR 2010-2011 Section 3.7.2). Sections 3.9.2 of the 2008-2009 and 2009-2010 AEMRs state that, during those two reporting periods, no exceedances of these criteria occurred.	Complies
8.0	Any formal complaints received relating to any blast will be managed in accordance with the complaints receipt and response procedure presented in the Werris Creek Coal Mine Environmental Management Strategy (Section 6.2), and DA Sch 4, Cl 27.	The general complaints/information hotline operated by the Environmental Officer serves this function. During the site visit, the audit team observed the Environmental Officer efficiently responding to community complaints in relation to blasting.	Complies

Section	Requirement	Evidence	Audit Finding
Site Water Management Plan Werris Creek Coal Mine (WCL, 2009)			
3.2	Maximum Harvestable Right (amount of clean water used) is 47.5 ML/annum.	The current total capacity of all clean water dams is 25.85ML, which is well below this maximum harvestable right (Table 2.1of AEMR 2010-2011).	Complies
3.2	If any new clean water dams or diversion banks are required, they would be built generally in accordance with SWMP specifications and would ensure clean water dams don't have a total capacity > Maximum Harvestable Right (47.5 ML/annum).	An interview with the Environmental Officer confirmed that no new dams or banks have been constructed during this auditing period.	Not Triggered
3.2	Clean water is used for dust suppression, coal processing, plant watering, or is allowed to discharge offsite. However, clean water can only be used where there's insufficient void or dirty water.	An interview with the Environmental Officer confirmed that clean water has not had to be used for these purposes yet.	Complies
3.3	Northern Area (Rail Load-out Facility) drains into Sediment Basin SB10. As SB10 is the licensed discharge point, it is to be maintained, where practically possible, in a dry condition to provide full capacity to store dirty water during rainfall events.	An interview with the Environmental Officer confirmed that all licensed discharge points were maintained in a drawn down condition during the audit period.	Complies
3.3	Middle Area (Rail Load-out Road and Magazine Area) drains (via a series of dams and catch drains) to Sediment Basins SB8 and SB9 which store and treat Dirty water prior to re-use or discharge off-site at the OEH Licensed discharge point 12 (SB9). Water level in SB9 is to be maintained as much as possible in a dry condition to provide capacity to store dirty water during rainfall events.	An interview with the Environmental Officer confirmed that all licensed discharge points were maintained in a drawn down condition during the audit period.	Complies
3.3	Southern Area (Offices, workshops, coal processing operations, overburden emplacements and areas undergoing rehabilitation) drains (via a series of dams and catch drains) to Sediment Basins (SB1, SB2, SB3, SB4, SB5, SB6 and SB7) which store and treat Dirty water prior to re-use or discharge off-site at the OEH Licensed discharge point 10 (SB2). All Sediment Basins are to be maintained in a dry condition where possible to provide full capacity to store dirty water during rainfall events.	An interview with the Environmental Officer confirmed that all licensed discharge points were maintained in a drawn down condition during the audit period.	Complies

Section	Requirement	Evidence	Audit Finding
3.3	Dirty' water is used for dust suppression, coal processing or watering of plants, (where there is insufficient 'Void' water). Excess 'Dirty' water is contained in Sediment Basins which allow for the settling of suspended sediment. Discharges from the Dirty water system can occur at three points located at the outlet of Sediment Basins. The points are: a) EPL Discharge Point 10, (SB2, Southern Area); b) EPL Discharge Point 12, (SB9, Middle Area); and c) EPL Discharge Point 14, (SB10, Northern Area).	Some 1.6ML of dirty water was used for dust suppression during 2010 when void water was not available (Section 2.8.4 of AEMR 2010-2011).	Complies
3.3	To work within the guidelines of table 6.1 of the Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries (OEH, 2008), stored water will be pumped out as soon as practicable after rainfall events to provide the required capacity for further runoff of surface water.	An interview with the Environmental Officer confirmed that this is procedure followed onsite.	Complies
3.3	In Addition to the above, Werris Creek Coal will also utilise the following methods for the management of captured surface waters within the "middle area" as per the above mentioned requirements of the Mines and Quarries Guidelines, specifically the 5 day, 90th percentile management requirements: a) Farm Dam 6 (FD6) will be used as a storage point for farm dams 2 and 3 (FD2, FD3). FD2 and FD3 will be pumped into FD6 for treatment through flocculation processes if necessary. Once sampling confirms water quality parameters meet licence requirements (see Controlled Discharge of Surface Waters below), FD6 will be discharged off the mine lease via an irrigation pipe and volume pump. FD6 will discharge at the licence discharge point and spill way of SB9; b) Dust suppression water carts can also access FD6 and in cases where after treatment water retained in FD6 does not meet requirements, water can be drawn from this point to be utilised around the site; c) Werris Creek Coal can also utilise VWD2 as an alternate means of storage and disposal of surface water captured in the middle area farm dams when there is sufficient storage in this dam. Water stored in VWD2 is readily used around the mine site for general dust suppression, in operations at the screening plant and will be linked to a 15m high sprinkler system to control dust	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
	at the rail load-out pad; and (d) FD4 and FD5 will be pumped out after rain events and will flow through heavy vegetation to SB9 where it will be treated if necessary, drawn off for dust suppression or controlled discharged off site.		
3.3	Where water quality parameters meet licence requirements of EPL 12290, retained waters will be deliberately discharged in a controlled fashion from SB2, SB9 and SB10. The following process will be adhered to before undertaking a controlled discharge: a) Sample discharge points after rainfall and obtain analysis; b) if water quality complies with the licence discharge limits, then and only then can a deliberate controlled discharge take place without further treatment; c) if water quality does not comply with licence discharge limits, treatment via flocculation will be considered. After flocculation, a resample will be undertaken to confirm compliance with licence discharge limits. If within limits discharge can occur. Page 14 Whitehaven Coal Limited – Werris Creek Site Water Management Plan Werris Creek Coal Mine; and d) if after treatment, water quality parameters are above licence limits, then stored water will be pumped out and used for dust suppression. Controlled discharges will be released via a volume pump and in staggered succession onto vegetated areas so as to minimise any potential erosion issues.	All controlled water discharges (i.e. those not resulting from uncontrolled rainfall events) met these criteria during the reporting period.	Complies
3.3	Pumping of water from sediment basins will be prioritised in accordance with retained capacity in the off-site discharge basins. That is, priority will be given to pumping out from SB2, SB9 and SB10 in order to avoid off-site discharge. Water from these sites will be pumped either direct to water carts, or, pumped back up the sediment chain to storages with greater capacity, thereby ensuring the off-site discharge points are pumped out first to avoid discharge. In the event that discharge does occur, the relevant water quality criteria as prescribed within the EPL are shown in Table 3 SWMP. Discharge waters will be sampled to verify water quality meets these parameters.	An interview with the Environmental Officer confirmed that WCC has used water from the dirty water dams onsite during the auditing period. However, the practice of maintaining these dams in a drawn down state during recent months has negated the need to use this water, for example, for dust suppression.	Complies
3.3	If any new sediment basins or catch drains are required, they will be built according to Managing Urban Stormwater: Soils and Construction, Volume 2E Mines and Quarries (OEH, 2008).	An interview with the Environmental Officer confirmed that no new sediment basins or catch drains have been constructed during the audit period.	Not Triggered

Section	Requirement	Evidence	Audit Finding
3.3	The void water can be pumped directly into the water truck for dust suppression, or can be pumped to dam/s outside the void for storage and re-use on site.	An interview with the Environmental Officer confirmed that this is the procedure followed onsite.	Complies
3.4	Further consideration will also be given to the future use of Void water for the watering of areas undergoing rehabilitation. This would not be done without the approval of OEH, and have to be subject to salinity criteria. Any decisions to undertake irrigation of void water will only be carried out upon receipt of approval through the relevant agencies.	An interview with the Environmental Officer confirmed that this has not occurred during the audit period.	Not Triggered
4.0	Site Water Balance will be updated annually in the AEMR.	This has been prepared in each AEMR for this reporting period (Section 2.8.8 of 2010-2011 AEMR, and Sections 2.8.2 of the 2008-2009 and 2009-2010 AEMRs).	Complies
4.1.3	The amount of groundwater available to WCC is limited to a 50ML extraction limit. For this reason, water would not generally be sourced from groundwater extraction bores unless the other water sources on site were unavailable. Any use of groundwater from the licensed bore is regularly monitored to validate usage against extraction limits.	Bore water was extracted during the 2010-2011 reporting period as outlined in Section 2.8.4 of the AEMR 2010-2011. Bore water was also extracted during the 2008-2009 reporting period as outlined in Section 2.8.2 of the AEMR 2008-2009.	Complies
5	All erosion and sediment control structures will be constructed or erected in accordance with the recommendations identified in the relevant standard drawing and construction notes in Blue Book.	An interview with the Environmental Officer confirmed that this is the standard design procedure used onsite. Design to 1:50 ARI event with 3 m high and wide drains.	Complies
5.3	Procedures to reduce erosion/sedimentation:	All of these procedures were found to either be compliant, or were unable to be audited due to time constraints of the auditing team.	Complies
5.3(a)	Structure required for ESC control will be constructed or installed prior to the commencement of activities in that area.	An interview with the Environmental Officer confirmed that no new water management structures have been constructed during this auditing period.	Complies
5.3(b)	Areas on site without some form of vegetation cover will be minimised. A non-persistent cover crop will be sown on any exposed surfaces not required for operational purposes, erosion control structure or stockpiles retained in excess of three months.	Sterile crops have been planted on many of the exposed topsoil areas to prevent erosion. These seeded topsoil areas were observed by the audit team during the site visit.	Complies
5.3(c)	When bare topsoil stockpiles are not wholly contained within the mining area and associated “dirty” water management system, temporary sediment control measures such as sand bags and silt fences will be used to prevent sediment from leaving the stockpile area.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
5.3(d)	ESC structures will be numbered and inspected monthly/after a rainfall event of >25mm/24hr, to assess success in preventing erosion, identify signs of potential erosion and determine the retained capacity, especially within the sediment basins.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3(e)	ESC structures will be cleaned of accumulated sediment material (or extended or replaced) as soon as 20% capacity is lost due to the accumulated material such that the specified capacities are maintained.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3(f)	To maintain capacity within the sediment basins, water will be pumped out as soon as practicable after rainfall events, once water quality is within the limits of the EPL, to maintain the following water levels: i) sediment basins that are licensed discharged points (i.e. SB2, SB9 & SB10) are to be maintained in a dry condition where possible to provide full capacity to store dirty water during rainfall events; and ii) all other sediment basins are to be kept below 50% capacity where possible to provide capacity to store dirty water during rainfall events;	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3(g)	As part of a surface water monitoring program, water from the following discharge points will be sampled for suspended sediment [EPA 14 (SB10), EPA 12 (SB9) and EPA 10 (SB1 and SB2)].	These points were measured as required for suspended sediment during the auditing period. Whilst this requirement of monitoring frequency was adhered to, the following non compliances with criteria were recorded during this monitoring: - On 16 November 2010, a licensed water discharge event resulted in an exceedance of pH criteria. Subsequent monitoring of Quipolly Creek indicated that this discharge did not impact on the water quality of the creek. - Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion).	Complies

Section	Requirement	Evidence	Audit Finding
5.3(h)	If suspended sediment concentration of discharged water exceeds 50mg/L: i) OEH will be advised. Salient preceding weather information will also be provided; ii) Upstream structures will be inspected and cleaned of consolidated sediment as required; or iii) A flocculent will be added to the water contained within the sediment basin or storage dam to increase the efficiency of sediment settlement ; or iv) Consideration will be given to augmenting or building additional sediment basin(s) to provide greater settlement time for the sediment containing water (this would be done in consultation with OEH).	Two wet weather discharge events in the 2008-2009 reporting period resulted in exceedances of the Total Suspended Solids criteria (69 mg/L at point 12 on one occasion, and 154 mg/L at point 10, and 68 mg/L at point 12 on another occasion). These exceedances were reported to the EPA and were included as part of the EPL annual return. The Environmental Officer advised that flocculants had been used as an ameliorant during this auditing period to deal with excessive total suspended solid measurements.	Complies
5.3(i)	Water falling on the shaped and topsoiled overburden emplacement will be directed by contour banks to stable water disposal areas. Rock flumes may eventually be constructed, where necessary, to convey runoff to drainage conduits leading to the site's sediment control dam system.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3(j)	Following heavy rain, erosion is identified on the rehabilitated landform or in operational areas, it will be remediated quickly using one or a combination of the following: i) Filling the erosion channels; ii) Cross-ripping (along the contour) to assist infiltration; iii) Installation of additional controls, e.g. banks sown with a non-persistent cover crop.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3(k)	Areas previously identified as exhibiting and treated to prevent further erosion will be monitored on at minimum a monthly basis or following a rainfall event of >25mm/24hr.	Due to time restraints of the audit team, this was unable to be verified	Not Able to Verify
6.2	The location of all surface water and groundwater monitoring points is presented on Figure 3 SWMP. Table 10 SWMP identifies the monitoring point locations, frequency and the parameters of monitoring. Table 11 SWMP describes the unit of measure and sampling method for each parameter listed.	An interview with the Environmental Officer confirmed that this is the criteria that are tested against.	Complies

Section	Requirement	Evidence	Audit Finding
6.3	Recorded values for pH, Total Suspended Solids (TSS) and Grease and Oil will be compared against the criteria presented in Table 12 SWMP. The recorded values for all other parameters will be plotted to identify any trends over time. OEH will be notified in the event of increasing levels of any parameter or exceedance of the assessment criteria.	References are made to baseline data being collected, and to trigger values being established, however the baseline data is not clearly compared against new monitoring data. It is recommended that this comparison to baseline data is clarified.	Complies Recommendation Made
7.2.2	All monitoring results are compared to baseline monitoring data which was obtained at the commencement of operations. Groundwater levels will be assessed to the nearest 0.01m and all monitoring locations surveyed to AHD so relative levels can be determined.	Not all groundwater monitoring was undertaken at MW3 and MW5 (as is required by Table 13 in the SWMP) during the 2009-2010 reporting period, as the site was without an Environmental Officer for approximately three months, there was a dispute with a property owner, and a change of monitoring consultants also took place at this time.	Not Compliant
7.2.2	Subsequent measurement of groundwater levels and chemical parameters will be undertaken at quarterly intervals. Monitoring will continue for a period of up to 10 years after mining has ceased, however the frequency will be reassessed after mining is complete as it may be possible, depending on results, to lengthen the intervals.	This requirement has not come into effect yet.	Not Triggered
7.2.2	Table 13 SWMP identifies the monitoring point locations, frequency and the parameters of monitoring. Table 14 SWMP describes the unit of measure and sampling method for each parameter listed.	These are the procedures followed as per the monitoring results contained in Appendix 4 of AEMR 2008-2009, 2009-2010 and 2010-2011. During the 2009-2010 reporting period, not all monitoring for water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time.	Not Compliant
7.2.2	Bores will be purged prior to sampling until pH and salinity measurements have become stable. This usually involves removal of at least three bore volumes of groundwater or purging until dry. Samples will be collected and placed in appropriately preserved containers and kept on ice. Samples will be transported on ice under chain of custody documentation and arrive at the laboratory within appropriate holding times.	An interview with the Environmental Officer confirmed that this is the procedure followed during bore water monitoring.	Complies

Section	Requirement	Evidence	Audit Finding
7.2.2	In addition to those parameters presented in Table 14, additional parameters will be monitored to assess any trends in groundwater chemistry over time. These include the following: a) Total Petroleum Hydrocarbons – these contaminants (typically oils and diesel) will be used during mining; b) Heavy Metals – some heavy metals may be used during e.g. associated with waste oils. These should include arsenic, cadmium, chromium, nickel, lead, copper, manganese and zinc; and c) Major cations and anions – to asses overall changes in groundwater chemistry.	These are monitored as per the water quality monitoring results contained in Appendix 4 of AEMR 2008-2009, 2009-2010, and 2010-2011.	Complies
7.3	Groundwater levels are expected to naturally vary by up to 15%, so any reduction in standing water level or saturated thickness of the bore greater than this will be treated as significant and subject to further investigation. The ANZECC 2000 irrigation and livestock guidelines will be used as trigger levels (see Table 15 SWMP). Additional triggers have been established for EC and pH, whereby a variation of greater than 15% of the background EC value or 0.5 pH units will trigger further action.	This is the procedure that is followed by GeoTerra in preparing the annual groundwater report.	Complies
8.0	Unless they interfere with post-mining land uses, the drainage control structures will also be retained to direct the flow of surface water on the site to these water storages. Final rehabilitation of these structures will be defined in a mine closure plan which will be produced within 3 years of the cessation of mining.	These final rehabilitation measures have not begun yet.	Not Triggered
9.0	The Environmental Officer at Werris Creek Coal Mine is responsible for the implementation of this SWMP. When the Environmental Officer is absent, WCC would nominate alternative personnel.	The Environmental Officer is generally responsible for this. During the audit period, there was a period of three months when the WCC site did not have an Environmental Manager. During this time the Project Manager was responsible for implementing the SWMP. During the 2009-2010 reporting period, not all monitoring for water quality following overflow and groundwater quality was undertaken due to a dispute with a property owner, and that an Environmental Officer was not employed at the site at the relevant time, and that there was a change of consultants undertaking monitoring at this time.	Not Compliant

Section	Requirement	Evidence	Audit Finding
9.0	All procedures relating to the inspections of water management structures, sediment control structures and water monitoring are to be undertaken in accordance with site-based procedures manuals.	Procedures for water management are outlined in the SWMP which is consistent with site based procedures.	Complies
10.0	All water monitoring results and an assessment of water management and erosion and sediment controls at Werris Creek Coal Mine will be included within the AEMR to be submitted to the relevant government agencies on an annual basis. All monitoring results will be assessed against the impact assessment criteria.	These water quality monitoring results are included in Appendix 4 of AEMR 2008-2009, 2009-2010, and 2010-2011.	Complies
10.0	An annual review and report will be prepared providing comment on surface and groundwater monitoring and observable trends. The report is to be completed by a suitably qualified and independent hydrogeologist, whose appointment has been approved by the Director-General. This review will generally be provided as part of the AEMR.	This groundwater report has been prepared annually by GeoTerra. It is included in Appendix 4 of AEMR 2008-2009, 2009-2010, and 2010-2011.	Complies
10.0	The SWMP will be reviewed if there is a significant variation to the mine plan and/or surface activities. Where any changes are recommended as a result of review, the SWMP will be revised to increase its effectiveness. Any amendments to the SWMP will be undertaken in consultation with the appropriate regulatory authorities where required, including DWE, DECC, and Liverpool Plains Shire Council.	The two revisions of the SWMP to date have been undertaken in consultation with OEH.	Complies
Groundwater Contingency Plan for the Werris Creek Coal Mine (WCL, 2005)			
3.0	WCC has, and will, undertake additional groundwater level and/or quality monitoring programmes as agreed with surrounding landowners in order to provide a greater knowledge of groundwater chemistry and/or natural level fluctuations, as well as continually monitoring the groundwater level at Site MW-7 (subject to the agreement of the landowner) by means of a data logger.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
4.0	Table 2 GCP presents the trigger levels for changes in groundwater level and chemistry agreed with DPI Tamworth. The trigger levels will be assessed against a benchmark of the natural conditions which have been and/or are currently being established through the baseline monitoring programme.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered

Section	Requirement	Evidence	Audit Finding
4.0	In the event that routine monitoring indicates that a trigger has been reached or is being approached, WCC will commission a hydrogeologist to review the data, with the outcomes of that review, including any recommendations, being subject to discussion and agreement with the DIPNR hydrogeologists.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
4.0	A trigger of pH or EC would initially lead to an increase in the analytes monitored and/or frequency of sampling to confirm the magnitude and extent of the change in water chemistry and verify the change is a consequence of mining.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
5.0	Should the saturated thickness trigger level be achieved in any bore, WCC will notify the affected landowner(s) and, if WCC's and DPI's hydrogeologists are of the opinion that the reduction is a consequence of mining, initiate the mitigation measures identified in Section 5.2 GCP. An independent authority may also be used where a dispute arises as to the cause of the change, given that groundwater supply and quality can be affected by non-mining related factors such as bore siltation, aquifer depletion by large scale agricultural users, bacterial infection, fertilizer contamination etc.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered

Section	Requirement	Evidence	Audit Finding
5.0	In the event a major liquid hydrocarbon/contaminant spill was to occur, WCC will implement the following 3-phase remediation plan: a) phase 1 - recover as much as possible at the source by pumping the contaminant from the surface and excavating contaminated materials and stockpiling them on site under cover and on an impermeable surface (e.g. a high density polyethylene sheet). This material will later be bio-remediated on site and/or transported to an approved waste depot; b) phase 2 source control - Begin hydraulic control of the source to prevent spreading of contamination. This will involve digging one or more holes close to the centre of the spill area, and pumping from these holes to create a cone of depression with a hydraulic gradient towards the holes. This will prevent movement of contamination away from the area of the spill; c) phase 3 recovery - If necessary, install boreholes to remove and treat contaminated groundwater. Any contaminated surface water or groundwater recovered will be treated on site prior to release (or use for processing or dust suppression) under an EPA licence.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
5.0	No solid potential contaminants will be used on the site in sufficient quantity as to require development of a specific contingency plan. However, any spillages of such materials, e.g. explosives, will immediately be cleaned up and disposed of in an appropriate manner approved by OEH.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
5.0	If monitoring demonstrates that changes in groundwater quality have occurred, appropriate measures to mitigate impacts on groundwater quality will be developed in consultation with DPI's hydrogeologists.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered

Section	Requirement	Evidence	Audit Finding
6.0	In the event that monitoring identifies a reduction in the saturated thickness within any bore which is in excess of the identified trigger level and a consequence of mining, WCC will enter into negotiations with the affected landowners with the intent of formulating an agreement which provides for one or a combination of: a) re-establishment of saturated thickness in the affected bore(s) through bore deepening; b) establishment of additional bores to provide a yield at least equivalent to the affected bore prior to mining; c) provision of access to alternative sources of water; and d) monetary compensation to reflect increased water extraction costs (if any), for example as a consequence of lowering pumps or installation of additional or alternative pumping equipment.	The conditions within the groundwater contingency plan have not been invoked during the current audit period.	Not Triggered
Waste Management Plan for the Werris Creek Coal Mine (WCL, 2009)			
4.0	Regular monitoring of waste receptacles is undertaken by senior WCC staff members, with waste receptacles located in close proximity to heavy usage areas, such as: a) in the breeze ways of offices and crib rooms; and b) the workshop area.	Receptacle areas were observed by the audit team during the site visit. An interview with the Environmental Officer confirmed that contractors visit the site each fortnight to empty bins. These receptacles are inspected at least once a week.	Complies
4.0	Monitoring of the waste receptacles is generally undertaken to determine that the appropriate waste materials are being disposed of in their correct bins and waste streams are divided for ease of sorting.	An interview with the Environmental Officer confirmed that contractors remove general waste from the site fortnightly. During this process, waste is checked to ensure it has been disposed of in the correct receptacle. The contractors who dispose of waste oil (Northern Lubequip – Tamworth) also ensure this waste material has been properly separated and isolated.	Complies
4.0	Additionally, internal and external inspections of the above mentioned areas have occurred intermittently, to identify areas of improvement and determine compliance with this document and other relevant key guidelines and licences.	An interview with the Environmental Officer confirmed that WCC staff check general waste receptacles at least once a week, and oil waste separators are also checked to ensure they are processing waste liquids properly.	Complies

Section	Requirement	Evidence	Audit Finding
5.1	The following actions/strategies have been put into practice to minimise the accumulation/generation of waste on site and disposal to landfill: a) all personnel working on the mine site undergo a site induction. The site induction includes the waste management practices on the mine site; b) all waste areas have been clearly identified as waste storage areas. This includes bins and other receptacles for domestic and recycling waste, which are marked according to the type of waste accepted, e.g. scrap metal, oil filters and oily rags, other recyclables, general waste, etc; c) clear written instructions have been erected at appropriate locations detailing recycling and waste separation information; d) with the exception of mined overburden / interburden materials and solid waste generated in the wash-bay sump (all production wastes), there is no long term storage of any waste materials on the mine site. Notably, small quantities of the mined rock have been utilised in the construction of rock lined water ways, rock bunds and other items of mine site infrastructure such as the ROM coal and product stockpile areas.	The site induction package that was sighted by the audit team includes some information about waste management. Waste receptacles and disposal areas are sufficiently labelled as such, and no wastes are stored on the site long term. It is recommended that clearer written instructions be erected onsite to provide guidance on how wastes are separated and recycled.	Complies Recommendation Made
5.2	The following methods have been utilised to minimise waste production onsite: a) ordering specifications of material quantities for the workshop and contractors are as accurate as possible to avoid the over-ordering of materials and the potential for excess waste; b) (b) the use of degreasers is regulated in the workshop areas to ensure the efficiency of the oil-water separator; c) all waste items suitable for reuse or recycling are utilised in such a way.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
5.3	These items are placed into appropriate collection bins, which are collected by a recycling contractor on a regular basis.	General waste is collected from the site by a contractor fortnightly. The Quirindi Aboriginal Corporation recycles paper from the site. Another contractor recycles waste metal from the site. Waste batteries are disposed of by Gunnedah Windscreens and Batteries, Waste tyres are disposed of by Browns Tyre Service. Waste oil and grease is collected by Northern Lubequip – Tamworth) (Section 2.6 AEMR 2010-2011).	Complies

Section	Requirement	Evidence	Audit Finding
5.3	Generated in significant amounts and on a continuing basis from the WCC workshop and contractors. The scrap metal is placed into large skip bins, which are collected by a metal recycler as sufficient quantities are available.	An interview with the Environmental Officer confirmed that a contractor recycles waste metal from the site.	Complies
5.3	WCC's senior staff members undertake regular inspections of the all waste storage locations to ensure that the appropriate separation and collection of waste is being managed appropriately. As far as practical, WCC maintains a register of recycled material at the mine site.	Waste storage locations are regularly inspected as part of general site inspections. A basic waste register is contained in the AEMR, and receipts from contracted waste collectors containing amounts of waste removed from the site are available upon request. It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.	Complies Recommendation Made
5.4	Opportunities for the re-use of materials on site are evaluated on a regular basis, i.e. mined rock is to be re-used where possible in the construction of waterways.	An interview with the Environmental Officer confirmed that such opportunities have been considered during this auditing period, for instance some waste gravel from the site has been reused as road gravel onsite.	Complies
5.5	Disposal is viewed as the last option in the management of waste, only if the avoidance, re-use or recycling of the waste in question is not practical. The following systems have been implemented at the mine in regard to waste disposal: a) Only transport operators or companies that are licensed by the appropriate authorities are contracted to remove waste from the mine site; b) waste vehicle tyres have been stored on site and disposed of at appropriately licensed facilities on an as needs basis; and c) waste materials, which cannot be either re-used or recycled, are sent to a licensed landfill that may accept that category of waste. An experienced waste contractor will remove the waste off site.	An interview with the Environmental Officer confirmed that only licensed contractors are permitted to take waste from the site. General waste is collected from the site by a contractor fortnightly. The Quirindi Aboriginal Corporation recycles paper from the site. Another contractor recycles waste metal from the site. Waste batteries are disposed of by Gunnedah Windscreens and Batteries. Waste oil and grease is collected by Northern Lubequip – Tamworth).Waste tyres are disposed of by Browns Tyre Service as described in Section 2.6 AEMR 2010-2011.	Complies
5.5	Due to the nature of the material left in the wash-bay sump there is little opportunity for this product to be recycled or reused on site. After consultation with the OEH, it was noted that if the residual material contained in the sump was tested for hydrocarbon contaminates and concentration levels were under the General Solid Waste threshold, the waste material could be disposed of in pit. The following details	The wash bay sump at the workshop follows this standard procedure. It is recommended that the gravel at the refuelling point be recontoured to improve the capture and filtering of hydrocarbon spills and dirty water into the oil/water	Complies Recommendation Made

Section	Requirement	Evidence	Audit Finding
	the process for disposal of solid waste material residing in the wash bay sump: a) after the wash bay is used and the sump contains water, the oil / water separator is engaged, removing all hydrocarbons floating on the surface of the liquid. Oils and grease captured in this process are stored for removal and recycling as previously mentioned; b) all residual solid waste is dried, aerated and exposed to UV radiation. This process helps in the breakdown and removal of any residual hydrocarbons; c) a minimum of four core samples are randomly taken from the solid waste product and mixed for consistent results. Soil Samples are sent to a NATA accredited laboratory for analysis; and d) after testing for hydrocarbon levels, if hydrocarbon levels are under the General Solid Waste threshold (C6-C9 petroleum hydrocarbons <650mg/kg and C10 –C36 petroleum hydrocarbons <10,000mg/kg) this material is disposed of in pit. If hydrocarbon contaminants are above this threshold then treatment of the solid waste will continue until hydrocarbon concentrations are within the desired limits.	separators and containment areas.	
5.5	Included in Appendix 2 of WMP is a schedule of wastes that are generated on the mine site during the establishment, development and operation of the mine. The quantities of these wastes are regularly monitored by WCC's staff and reported as required.	These are maintained through accounting receipts that are retained from contractors stating the amounts and dates of waste removal. However it is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.	Complies Recommendation Made
5.6	WCC has ensured that the mine will comply with the requirements of the POEO Act 1997, through the adoption of a waste hierarchy philosophy of Avoid, Reuse, Recycle and Disposal.	An interview with the Environmental Officer confirmed that this standard waste management hierarchy is applied onsite.	Complies

Section	Requirement	Evidence	Audit Finding
5.6	All contractors removing waste from site are suitably licensed with appropriate governing bodies as required.	An interview with the Environmental Officer confirmed that all contractors removing waste from the site are appropriately licensed. General waste is collected from the site by a contractor fortnightly. Quirindi Aboriginal Corporation recycles paper from the site. Another contractor recycles waste metal from the site. Waste batteries are disposed of by Gunnedah Windscreens and Batteries. Waste oil and grease is collected by Northern Lubequip – Tamworth).Waste tyres are disposed of by Browns Tyre Service as described in Section 2.6 AEMR 2010-2011.	Complies
6.0	Waste management data has been documented and is reported in each Annual Environmental Management Report (AEMR). The information includes the quantities and type of waste removed off site for recycling or disposal, the contractor engaged to remove the wastes, and the final destination for all waste products. Details will also be provided on the success of the WMP implemented and any areas that require improvements, included and highlighted.	Waste management data has been reported in Sections 2.6 of AEMRs 2008-2009, 2009-2010, and 2010-2011. However, this information does not contain quantities and types of waste removed offsite for recycling or disposal, and the final destination for all waste products. It is recommended that a waste register be maintained recording types and quantities of wastes, and the final destinations for those wastes after being removed offsite by contractors.	Not Compliant Recommendation Made
7.0	Project Manager, Manager of Mining and Engineering, Workshop Supervisor, Manager of Coal Processing and Environmental Officer are responsible for the following activities: a) implementing the activities contained in this WMP, including recording sources and destinations of recyclable wastes; b) ensuring that all on-site waste contractors are inducted; c) ensuring that all waste contractors are appropriately licensed; d) ensuring that all waste materials are separated and recycled appropriately; e) maintaining a database that records the quantities and types of waste removed from the site; and f) conducting regular audits around the mine site to inspect waste management practices.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
7.0	Contractors engaged by WCC to operate at the mine are responsible for: a) ensuring that all wastes are placed into the appropriate storage areas or receptacles; b) ensuring they comply with all on-site regulations; c) ensuring they engage in safe work practices; and d) undertaking work practices that comply with this WMP.	Due to time restraints of the audit team, these commitments were unable to be verified.	Not Able to Verify
Werris Creek Coal – Energy Savings Action Plan (WCL, 2010)			
3.1.2	All new equipment and facilities shall be purchased and/or designed using energy efficient best practice.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.2	All purchased equipment and plant shall be specified to achieve the most efficient energy usage over the expected life of the equipment and plant. Consideration shall be given to whole of life costing techniques in the evaluation and selection process.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.2	All plant designs shall incorporate the latest technologies in energy efficiency which shall be demonstrated to the satisfaction of Whitehaven Coal Mining or their representative.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.3	Portable air compressors should be an appropriate size for the required task. Care shall be taken in locating air compressors to ensure that they are positioned in a naturally clean environment away from any source of heat or direct sunlight.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.3	Air compressors should be turned off when not in use for extended periods of time.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.3	Scheduled inspections and maintenance should be undertaken to identify any issues such as air leaks.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.4	Air conditioning systems shall use environmentally friendly refrigerants. Systems shall be efficient in their design, include modern energy efficient controls and be turned off when not needed.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.5	Transportable buildings are used at Werris Creek Coal. The buildings have been located in an area with no natural shade due to project requirements.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.5	A more thorough investigation into insulation and building location should be undertaken if more permanent buildings are proposed.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
3.1.6	Fuel efficiency should be considered when purchasing diesel engines. Personnel should request engine specifications from the supplier prior to purchase. These specifications should include expected fuel efficiency and are to be compared with specifications for other similar engines.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.6	All diesel engines shall be maintained on a regular basis (as per manufacturer's recommendations and site experience) to ensure efficient operation. Diesel engines should be shut down when not in use (where appropriate) to reduce fuel consumption.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.7	Lighting systems shall utilise high efficiency light fittings, where practicable. Lighting systems employing natural light shall be used wherever practicable.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.7	Mobile external security lighting shall consist of sodium vapour fittings.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.7	Lighting shall be turned off when not in use (except lighting used for safety and security reasons). Lighting should be fitted with daylight sensors where possible. All mobile lighting plants shall be fitted with day/night sensors and /or programmable timers to ensure that the plants are turned off when not required.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.8	Pumps shall be properly sized for the duty with consideration given to static head pressures, dynamic head pressures and volume flows. Within these parameters, pumps shall operate as close as possible to the point of maximum efficiency. High efficiency impellers shall be used where appropriate. Pumps shall be fitted with flow sensors to shut down the pumps in the absence of liquid flow.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.9	Where appropriate, all equipment shall be shut down when not in use for long periods. Equipment shall be fitted with automatic cut-off systems.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.9	Operator training is essential to ensure the efficient operation and maintenance of equipment.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.9	Opportunities should be identified on an ongoing basis to upgrade or replace equipment to improve efficiency, where cost effective.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
3.1.10	The mine shall be designed to ensure that the following objectives are achieved: a) Movement of Overburden - the overburden associated with the open cut shall be moved the minimum distance to its final location in a single process without re-handling. At the end of mine, the overburden shall be reshaped to Mining Operation Plan (MOP) requirements; b) Mining Efficiency - operations shall be designed to minimise the loss of coal in operations and also to maximise the recovery of exposed coal. Road grades shall not exceed 10 % and hauling distances shall be minimised to reduce diesel consumption; and c) Mine Plan - the mine plan shall optimise 'flat hauling', i.e., the haulage of coal or waste as far as possible on the flat.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.11	The distances over which water is pumped shall be kept to a minimum to reduce pumping requirements. Gravity assist shall be utilised wherever possible.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.12	It is planned to produce energy performance targets to encourage a reduction in the energy used on site through a process of continual improvement.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.12	It is intended to utilise the energy data that will be available from the fuel dispensing records on site to track energy usage by area and function and combine that information with data on coal production to produce relevant energy performance indicators.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.12	It is proposed to separately monitor energy usage by major items of plant as listed in the main equipment shown in Section 2.4. ESAP.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
3.1.12	Also, the procedures and controls identified in this Action Plan will be incorporated into WCC standard operating procedures to ensure implementation across site.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
7.3	Assign responsibilities for energy use reporting.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
7.3	Generate monthly reports of site energy use.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify

Section	Requirement	Evidence	Audit Finding
8.9, Table 15	Replace diesel powered drive pacs (power supply units for screening and conveyor – total of 90 HP) with electrically powered units (68kW motor loads). Planned completion date for this is 2009-2010, approximately by June 2010 (12 months after ESAP completed).	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
7.3	Create energy target (when appropriate) and review during the annual ESAP update	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
7.3	Monitor and report on the Key Performance Indicator for energy use across the site.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
7.4	A meeting will be conducted in approximately 12 months (June 2011) (in line with the initial ESAP review) to assess progress against the Energy Guide and this ESAP. The meeting will consider any potential energy projects for inclusion in the Energy Savings Action Plan. This review process will be conducted in a brainstorming fashion to ensure that all possibilities are considered fully and without criticism. The outcome from the meeting, and any other energy reviews, will be listed in future ESAP reports.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
8.7	A useful measure of the energy efficiency performance for Werris Creek Coal will be to monitor the key performance indicator of energy usage per tonne Run of Mine (ROM) coal produced and MJ per bank cubic metre total equivalent movement (BCM TEM). Follows format in Table 13 ESAP.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
8.8	No specific energy targets at this time. Future reports on this ESAP will discuss what has been achieved in relation to estimated energy performance levels, any future identified projects and provide a detailed quantitative measure of energy performance at that time.	Due to time restraints of the audit team, this was unable to be verified.	Not Able to Verify
Mine Closure Plan Werris Creek Coal (AECOM, 2010)			
2.0	Project Manager responsible for: a) implementing the procedures referenced in this MCP; b) undertaking training in relevant Management Plans and procedures as C186required; c) allowing for forward planning to prepare and bulk shape areas for rehabilitation as per the LMP.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
2.0	Environmental Officer responsible for: a) implementing, monitoring and reviewing the programs and procedures linked to this MCP; b) consulting with regulatory authorities and other stakeholders as required; c) undertaking closure monitoring as required; d) undertaking rehabilitation maintenance as required; e) providing measures for continual improvement to this MCP and procedures; f) ensuring all personnel undertaking works in relation to this MCP are trained and competent; g) reporting the progress of any rehabilitation in the AEMR; and h) has a sound understanding of ecological principals and rehabilitation practises.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
8.1	Appropriate risk management needs to be implemented to identify potential sustainable development risks associated with closure. Mitigation strategies need to be developed to control or eliminate risks and, where possible, implemented prior to the commencement of closure. Examples	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
8.3	The risk register in Table 11 MCP will be formally reviewed and updated as closure planning progresses.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
11.0	As mine closure approaches, the social impact mitigation strategy will need to be further defined. WCC will undertake a social impact assessment (SIA) to develop a social strategy for mine closure in the event no additional approvals are granted. The scope of the SIA is expected to include: a) a baseline demographic survey of the region; b) assessment of the demands on, and contributions to, local services by the mines; c) compiling more accurate data on household income distribution, especially among people employed directly and indirectly by the mines, and the proportion of income that is spent in the sub-region; d) establishing a benchmark for retention of economic activity within the site should be included in the considerations for the SIA; e) studies/monitoring of social contributions and sustainability post-closure; f) identification of relationships with local suppliers, including quantification of the amount of direct company expenditure on goods and services in the sub-region and the degree of dependence of support industries on this expenditure; g) consideration of opportunities for social sustainability post-closure, such as the establishment and growth of other industries in the sub-region that have the potential to provide employment opportunities for displaced mineworkers; h) the degree of re-training or other assistance which mine employees may require to gain employment within other industries; i) management of expectations concerning mine closure, such as negative expectations (e.g. loss of jobs) and positive expectations (e.g. pay-outs or voluntary redundancies); and j) assessment of the nature and extent of the current economic / social contribution of mining in order to consider the future contribution / loss of contribution post-closure.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
12.2.1	It is assumed that at imminent closure, the final WCC void and overburden emplacement to the south of the void will be decommissioned and rehabilitated as follows:	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
	a) a geotechnical assessment and water balance and quality modelling will be undertaken to assess void closure risks; b) the FVMP will be updated outlining void closure procedures, final landform and water management objectives; c) pit wall slopes will be battered back to achieve safe and stable angles over the long term (based on recommendations of geotechnical expert); d) at the toe of in pit slopes a bund 1.5 m high and at least 6 m from the base of the walls will be constructed to contain any rock falls. The void will be shaped into a final agreed landform; e) any exposed coal seams in the void will be covered with inert material sourced from the overburden emplacement to manage the risk of spontaneous combustion; f) materials from the overburden emplacement will be used as required in final void revegetation (e.g. to provide a growth medium on benches, sloped areas above the final predicted water level); g) local drainage will be diverted away from the void. The low wall side of overburden emplacement will be shaped into a final agreed landform; h) the low wall side of overburden emplacement and any suitable areas of the pit will be revegetated with initial ground cover to rapidly stabilise disturbed areas; i) final drainage controls will be established on the low wall side of the overburden emplacement and within the void; j) (g) mine support infrastructure will be removed (e.g. workshop, office, mine services); (h) any residual hydrocarbon or other soil or water contamination will be appropriately treated or removed; (i) safety berms and a security fence will be constructed, as required to protect public safety, along the length of the walls; k) final revegetation aimed at establishing grassy White Box Woodland will be undertaken within the final void and pit surrounds in accordance with the LMP (AECOM 2010); l) rehabilitation maintenance and monitoring will be undertaken until completion criteria are achieved.		

Section	Requirement	Evidence	Audit Finding
12.2.2	Domain 2 covers the current Coal Processing facility, internal haul road and Rail Load Out Facility. At closure it is assumed that the following activities will be required: a) deconstruction of Crushing Plant infrastructure and office and deconstruction of Rail Load Out Plant infrastructure and demobilisation of the facilities offsite for use within the Whitehaven Group; b) hydrocarbon contamination assessment of Coal Processing and Rail Load Out facilities; c) coal Processing and Rail Load Out facility pads will be scalped to remove all carbonaceous material to be buried with the final void; d) removal of tar seal of the internal haul road and bury in pit; e) install drainage across the domain to appropriately manage water runoff and reduce erosion and sedimentation; f) undertake revegetation to establish Grassy White Box Woodland and ongoing maintenance; and g) monitoring in accordance with the LMP (AECOM 2010).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
12.2.3	Areas requiring rehabilitation on the outer part of the overburden emplacement will need to have the appropriate final land uses established. The flat plateau of the rehabilitation is proposed to go back to Class III (Land Capability) agriculture land use will the slopes will have Grassy White Box Woodland established. The rehabilitation activities including drainage installation is described in the LMP (AECOM 2010). The Biodiversity Offset Area aims to restore grassy White Box Woodland both on WCC mine site land (including part of the rehabilitation area) and on offsite land owned and managed by WCC. The restoration activities will be undertaken are described in the Biodiversity Offset Management Plan (Eco Logical, 2010).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
12.2.4	Existing water management infrastructure not required post closure will be decommissioned and rehabilitated. In particular the Underground Water Storage Dam and Void Water Dams will not be required post mining and will be pushed in and rehabilitated in accordance with the LMP (AECOM 2010).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
12.2.5	Existing land principally to the north of the current mining area will have the existing land uses continued consisting of grazing and remanent vegetation of Grassy White Box Woodland and Tumbledown Gum Woodland. The future management of the Buffer Land area is outline in the LMP (AECOM 2010).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.2	The closure risk assessment in Section 8 will be formally updated as mine closure planning progresses. A risk assessment workshop will be undertaken to review and identify new risks associated with closure and to amend the existing risk register and re-prioritise management actions.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.3	It is envisaged that electricity services to any remaining infrastructure will be removed prior to the commencement of building demolition works. Other services such as telecommunication and water/waste water reticulation services will also be removed.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.3	It is assumed that all buildings and fixed plant (including machinery, workshops, office, storage sheds, etc.) will be demolished and removed from the site. Where appropriate the materials recovered during demolition will be sold, re-used or recycled. Concrete footings and pads along with other potential inert building waste will either be sold or broken up and buried on site.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
13.3	As part of closure, if not before: a) electricity services to any remaining infrastructure will be removed prior to the commencement of building demolition works. Other services such as telecommunication and water/waste water reticulation services will also be removed; b) it is assumed that all buildings and fixed plant (including machinery, workshops, office, storage sheds, etc.) will be demolished and removed from the site. Where appropriate the materials recovered during demolition will be sold, re-used or recycled. Concrete footings and pads along with other potential inert building waste will either be sold or broken up and buried on site; c) any redundant plant or equipment will either be sold to scrap dealers or disposed of at an appropriate landfill facility by a licensed waste contractor; and d) the hardstand areas around the administration building, stores area and workshop will be ripped up with the waste material either be sold for recycling where a buyer exists or broken up and buried on site.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.3	The hardstand areas around the administration building, stores area and workshop will be ripped up with the waste material either be sold for recycling where a buyer exists or broken up and buried on site.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.4	WCC will undertake a preliminary (Phase 1) contamination assessment of the workshop and crushing plant facility areas to determine the potential for contamination of these areas. Following this, a detailed (Phase 2) contamination assessment will be undertaken with samples tested to confirm whether any contamination is present. If a remediation phase is required, the contaminated material will be treated in an onsite bioremediation facility, where practicable, and once confirmed as clean (i.e. general solid waste – “non putrescible”) then will be disposed of in pit.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.5	At closure, a final geotechnical assessment will be undertaken for both the final void (high and low walls) and the overburden emplacement area by a geotechnical engineer. If required, recommendations for treatment of slopes such as blasting, will be implemented so that a long term stable landform can be established.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
13.6	Until rehabilitation works are completed and the completion criteria achieved, the dirty water management system will be maintained to manage sediment laden and/or contaminated water. The clean, void and underground water management systems will be removed and the dams rehabilitated unless there is a reason for these dams to be retained, with the excess water transferred to the final void.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.7	Rehabilitation will be undertaken progressively during the life of the mine including aspects such as landform reshaping, topsoil management, revegetation and habitat augmentation. Rehabilitation maintenance will be undertaken until completion criteria are achieved	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.7	At closure, the majority of the land disturbed by WCC will have undergone initial rehabilitation. Remaining and new areas of disturbance will be rehabilitated as they become available. All rehabilitation works will be completed in accordance with the Landscape Management Plan (AECOM, 2010).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.10	It is proposed that a berm, ditch and chain mesh fence be installed around the perimeter of the final void to prevent unauthorised access while the rest of the mine site after closure will maintain a 6 strand barb wire fence and locked gates to limit access by stock and others.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.11	All activities undertaken in accordance with this Plan will be clearly documented and appropriate records will be kept. The Annual Environmental Management Report will be prepared for submission to DPI NSW for review of progress against the Plan.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
13.12	Relinquishment of land assets and mining tenements will be undertaken progressively where possible. DPI NSW has a statutory responsibility to ensure that satisfactory rehabilitation outcomes are achieved. When post mining monitoring shows that all completion criteria have been satisfactorily achieved the DPI NSW can relinquishment of land assets, mining tenements and rehabilitation security bonds.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
15.1	As WCC will implement a rehabilitation monitoring program in accordance with the LMP (AECOM, 2010) including: a) Rehabilitation Methodology Records; b) quarterly Visual (Rehabilitation) Inspections; c) annual Revegetation (Ecosystem Function Analysis); and d) annual Fauna Monitoring. Following closure of the mine it is recommended that the existing environmental monitoring program, as per requirements of the existing EPL, be maintained until all decommissioning and rehabilitation works have been completed. Notwithstanding this, there may be the need to establish some additional monitoring sites depending on the nature of the decommissioning works and also in response to finding possible sources of pollutants to the environment. The type and location of this monitoring will be determined during the decommissioning phase of the mine site.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
15.2	The rehabilitation monitoring program described above will demonstrate progress towards achieving the completion criteria. This period should also plan for remedial action if monitoring indicates completion criteria are unlikely to be met. If progressive rehabilitation has been successful, with stabilisation and revegetation meeting completion criteria this last phase of closure may be shortened. It is, however, unlikely to be less than five years in duration (ANZMEC/MCA 2000).	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
15.2	The post-closure monitoring and measurement program will be similar to that undertaken during operation of the mine only scaled back to focus on those aspects of the site that have the potential to cause pollution or is being used as an indicator to verify the success or failure of the rehabilitation works.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
15.2	The intensity of operations will reduce considerably when coal production ceases and decommissioning work will most likely be restricted to daylight hours. On that basis, it would be reasonable for WCC to seek approval for suspension of noise monitoring. There should be no need for blasting after coal production has ceased. Once it becomes clear that blasting will not be required for any decommissioning or rehabilitation/reshaping work, the monitoring required could be removed.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

Section	Requirement	Evidence	Audit Finding
15.2	The meteorological station shall be retained until earthworks associated with decommissioning have been completed and air quality monitoring is no longer required.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
15.2	Follow the summary in Table 14 MCP of the recommended programme of monitoring post-closure. It is recommended this program be conducted for up to five years after decommissioning and final rehabilitation has been completed, or until such time as monitoring records demonstrate that the site is no longer contributing, nor has the potential to contribute, pollutants to the surrounding environment, and that rehabilitation has achieved a satisfactory stage of maturity and ground cover.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
15.2	Until the mining lease is relinquished, regular visual inspections should be undertaken of all rehabilitated area, particularly waterways, banks sediment control dams and diversions. The inspections should assess signs of failure, sedimentation, erosion and any other areas that may require repair. The inspection should also include the presence of noxious weeds with a weed spraying program to be implemented as required. The frequency of the visual inspections could be reduced once it can demonstrate that the vegetation is established and landform is stable.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered
16.0	An internal review and update of this MCP will be undertaken annually by the Environmental Officer. In addition, an independent review of the plan will be undertaken every three years and will be undertaken every three years and will include a review of the design and adequacy of assumptions used in the plan, with selected site verification.	Due to time restraints of the audit team, these commitments were unable to be verified. This annual review should have been undertaken around the date of 13 April 2011 when the report reached its first anniversary.	Not Able to Verify
16.0	Performance against the actions listed in the mine closure action plan will also be incorporated into any review of this MCP. Notwithstanding this, the MCP will be reviewed wherever there is a major change to the mining operation resulting in a change to the MOP.	Most provisions of the Mine Closure Plan have not been invoked yet as the Werris Creek Mine is still fully operational.	Not Triggered

This page has been left blank intentionally.