Centennial Coal

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT

Newstan Colliery

January 2011 to December 2011

Mining Leases
Owned and Operated by
Centennial Newstan Pty Ltd
ABN 68 101 508 865

Centennial Coal
Environment Matters

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Name of mine	**Newstan Colliery**
Titles / Mining Leases	**Newstan Colliery Holding**
MOP Commencement Date	**01 July 2005**
MOP Completion Date	**30 June 2012**
AEMR Commencement Date	**1 January 2011**
AEMR End Date	**31 December 2011**
Name of Lease Holder	**Centennial Newstan Pty Limited**
Reporting Officer	**Jeffrey Dunwoodie**
Title	**Environment & Community Coordinator**
Signature	
Date	**29 February 2012**

1. INTRODUCTION

Newstan Colliery is an existing underground coal mine owned and operated by Centennial Newstan Pty Limited (Centennial Newstan). Newstan Colliery is regionally located approximately 25 kilometres south-west of Newcastle and 140 kilometres north of Sydney within the Lake Macquarie Local Government Area (LGA). The Newstan Colliery pit top and Surface Facilities Area is located approximately four kilometres north of the township of Toronto.

Newstan Colliery began mining operations in 1887 and has since undertaken extensive mining within the Young Wallsend, Great Northern, Fassifern, Borehole and West Borehole coal seams. The Newstan Colliery produces both a semi soft coking coal and thermal coal for the domestic and export markets.

This Annual Environmental Management Report (AEMR) provides a measurement of progress towards the attainment of environmental objectives at the Newstan Colliery during the reporting period, 1 January 2011 to 31 December 2011.

The AEMR has been developed in accordance with the Newstan Colliery mining lease conditions, the requirements of the Newstan development consent (DA 73-11-98 MOD3) and Department of Primary Industries -Mineral Resources document titled "Guidelines to the Mining, Rehabilitation and Environmental Management Process". (Document edg03 mremp guide v3 dated January 2006).

This AEMR document will be made publically available on the Newstan Colliery website in accordance with the Newstan development consent condition 9.2(a).

1.1 CONSENTS, LEASES AND LICENCES

Newstan Colliery operates under development consent (DA 73-11-98 MOD3) granted by the (now) Minister for Planning on 14 May 1999 which was modified on 23 September 2007 to allow the mining of LW24 and the construction of a ventilation shaft at Awaba, on 1 December 2009 to allow for the Washing of Mandalong Coal, and on 26 November 2010 to allow for the Washing of Awaba Coal. This applies to the Pit Top Area, Coal Handling and Preparation Plant (CHPP), stockpile areas, the rail loop, haulage roads, Northern Reject Emplacement Area (NREA) including the tailings dam and water management dams, Southern Reject Emplacement Area (SREA) and longwalls 21 to 24.

An application was made under S. 100 of the *Coal Mine Health and Safety Act* 2002 on 27 November 2006 to construct stages two through to five of the Southern Reject Emplacement Area (SREA) tailings storage facility. Approval was granted by the chief inspector of coal mines on 10 January 2007.

1.1.1 Consent Conditions

The Newstan Colliery development consent contains conditions that detail specific requirements on matters to be included in the AEMR. These are set out in Table 1 below, together with notation of the section of this document in which each matter is addressed. These sections of the report are to satisfy the Consent requirements and reporting of compliance to the Department of Planning.

Table 1. Consent Condition Requirements

Consent Requirement	Section Addressed
3.4 Flora and Fauna Assessment	
(a) (vi) 4. Development of a program to specifically monitor the success or otherwise of proposed ameliorative measures in relation to the threatened flora and fauna species	3.2 & Appendix 3 &

Consent Requirement	Section Addressed
over five years from the commencement of construction in the relevant area. The monitoring is to be undertaken by experienced Botanist(s)/ Zoologist(s). Annual progress reports and a final report outlining the implementation and success or otherwise of the ameliorative measures shall be included in the AEMR during the monitoring period.	4
4.1 Surface and Ground Water Management	
(iv) investigation into opportunities to reduce the minewater discharge into LT Creek in consultation with the OEH and include the results of such investigations in the Annual Environmental Management Report	3.1.4
6.1 B Greenhouse Gases Recording and Reporting	
(a) Record the greenhouse gas emissions generated by the development, and the effectiveness of the measures implemented under the Energy Savings Action Plan	3.14
(b) Report on this monitoring in the AEMR	3.14 & Appendix 7
8.2 Surface and Ground Water	
(a) (iii) The results and interpretation of surface and groundwater monitoring are to be provided by the Applicant in an approved form to the DWE, LMCC and DECC on a six monthly basis, unless otherwise directed by the Director-General. The results are to be contained and analysed in the Annual Environmental Management Report (condition 9.1)	3.1.1 & Appendix 2
8.3 Air Quality and Dust	
(c) Provide all results and analysis of air quality monitoring in the AEMR including a determination of the dust deposition rate in gm/m^2/month, which shall be plotted in the AEMR.	3.3 & Appendix 2
8.4 Noise and Blast	
(a) A summary of noise monitoring results shall be included in the AEMR.	3.4
(b)(ii) include the results of the monitoring information as required by the OEH and in the AEMR (Condition 9.2).	3.4
8.5 Flora and Fauna	
The applicant shall carry out any further works required by the Director-General as a result of the monitoring. A summary of monitoring results shall be included in the AEMR.	3.2 & Appendix 3 & 4
8.6 Cultural Heritage	
The Applicant shall monitor the effectiveness of measures outlined in the archaeology and heritage management plan (condition 3.3). A summary of monitoring results shall be included in the AEMR	3.5
8.7 Subsidence Monitoring	
The Applicant shall include information on monitoring conducted and the interpreted results in the AEMR (condition 9.2).	3.6
9.1 Annual Environmental Management Report	
Each year the Applicant shall submit an AEMR to the Director-General and to all relevant agencies. This report must:	
(a) identify the standards and performance measures that apply to the development;	1.1 & 1.2
(b) describe the works carried out in the last 12 months;	2
(c) describe the works that will be carried out in the next 12 months;	6
(d) include a summary of the complaints received during the past year, and compare this to the complaints received in the previous 5 years;	4.1
(e) include a summary of the monitoring results on the development during the past year;	3.1 -3.16
(f) Include an analysis of these monitoring results against the relevant: • impact assessment criteria/limits; • monitoring results from previous years; and	 3.1-3.16 3.1.2, 3.2, 3.3.2, 3.4.1, 3.5, 3.6, 3.7

Consent Requirement	Section Addressed
• predictions in the EIS and SEE noted in condition 1.1;	2.2.3 (SEE), 3.1.1, 3.3.2, 3.4.1.
(g) identify any trends in the monitoring results over the life of the development;	3.1.2, 3.2, 3.3.2, 3.4.1, 3.5, 3.6, 3.7
(h) identify any non-compliance during the previous year; and	3.16
(i) describe what actions were, or are being, taken to ensure compliance.	3.16
9.2 Access to Information	
(a) Within 3 months of the approval of any plan/strategy/program required under this consent (or any subsequent revision of these plans/strategies/program), or the completion of the audits or AEMRs • provide a copy of the relevant document/s to the relevant agencies, • ensure that a copy of the relevant document/s is made publically available at the mine; and • put a copy of the relevant document/s on its website.	1
10.2 Community Consultation	
(a) Complaints The Environmental Officer (refer condition 3.1) shall be responsible: (i) for responding to complaints with respect to construction works and mine operations on a dedicated and publicly advertised telephone line, 24 hours per day 7 days per week, entering complaints or comments in an up to date system, and ensuring that a response is provided to the complainant within 24 hours; and (ii) providing a report of complaints in the AEMR throughout the life of the project to the Director-General, LMCC, OEH, DRE, and CCC.	4.1 & Appendix 6

1.1.2 Environment Protection Licence

Newstan Colliery operates under Environment Protection Licence 395 administered by the Office of Environment & Heritage (OEH).

A copy of the 2011 Annual Return submitted to the OEH is provided in **Appendix 1**.

1.1.3 Mining Authorities

Newstan Colliery mining authorities comprises of several exploration licences, authorisations consolidated mining leases, private land leases, mining purpose leases and subleases of mining leases.

The holding is bordered to the north by the West Wallsend and Westside mines, to the east by the Teralba mine and to the west by West Wallsend Number 2 mine, all owned by Oceanic Coal.

The southern boundary of Newstan Colliery is bordered by the Eraring Power Station.

The total mineral area within the Newstan Colliery Holding is 6817.4 hectares. Surface leasehold and freehold land has an area of 2604.39 hectares. These areas are summarised in **Table 2**.

Mining operations are controlled by the conditions contained within these leases and the provisions of the *Coal Mine Health & Safety Act* and the *Mining Act*.

Table 2 Details of Mining Leases and Mining Rights for Newstan Colliery

Title	Mineral (ha)	Surface (ha)	Expiry
CCL727	2087.82	577.791	19/08/2027
MPL304	Nil	0.0699	25/03/2014
MPL305	Nil	0.4047	25/03/2014
ML1380	78.0	Nil	18/09/2016
ML1452	1587.0	Nil	06/07/2020
ML1480	14.49	14.49	20/07/2023
CCL762	434.23	NIL	13/10/2022
CCL764	108.8	7.449	18/05/2021
CCL763	190.91	74.57	09/06/2022
PLL497	20.23	Nil	24/08/2017
CCL746	2519	1900	31/12/2028
MPL327	Nil	1.041	05/08/2015
MPL328	Nil	0.397	08/08/2015
ML1586	449.1	Nil	13/10/2022
ML1587	3	3	23/10/2027
Lot C DP 381399	Nil	2.959	
Lot 148 DP 728974	Nil	0.356	
Portion 36	Nil	20.230	
Lots 17&18 DP 1031778	Nil	0.35	-
Portion 194	Nil	1.73	-
Total	**7492*(ha)**	**2,604.9(ha)**	
*Some mining leases overlap. Total Mineral area by plan is 6565.4 ha.			

Consolidated Coal Leases 727, 746, 763 and 764, Mining Leases 1380, 1452 1586, 1587 and 1480 and Private Lands Lease 497 held by Centennial Newstan Pty Ltd collectively provide rights to mine for Newstan Colliery.

1.1.4 Subleases

Recent changes to the Mining Act 1992 have resulted in all the subleases held by Newstan Colliery being deregistered. All subleases have now been reregistered and Newstan Colliery is in the process of having these subleases included into the Newstan Colliery Holding.
The Newstan Colliery has eight benefiting subleases with adjoining mining lease holders to mine various coal seams. Generally all mineable economic reserves subject to these subleases have been extracted. However there are mineable reserves remaining within CCL718.

All sublease agreements for Newstan Colliery are assignable. Sublease agreements for the Newstan Colliery Holding are summarised in **Table 3**.

Table 3 Sublease agreements for the Newstan Colliery Holding

Mining Lease	Agreement		Sublessor
	Type	Date	
PtCCL 718	Sublease	2/3/81	Ocal
PtCCL 718	Sublease	21/8/84	Ocal
PtCCL 718	Sublease	1/8/90	Ocal
Pt CCL 774	Sublease	18/12/76	Mt Thorley Op
Pt CCL 774	Sublease	20/9/78	Mt Thorley Op
Pt CCL 774	Sublease	10/3/80	Mt Thorley Op
Pt CCL 774	Sublease	18/2/81	Mt Thorley Op
Pt CCL 774	Sublease	24/10/84	Mt Thorley Op

Note: Subleases continue with periodic renewal of headleases.

1.1.5 Authorisations

Newstan Colliery is subject to three authorities under the Mining Act that provide for exploration activities to be carried out from the surface.

Table 4 summarises Authorisation details for these mines.

Table 4. Authorisation Details

Authorisation	Expiry	Area (ha)
A399	17/11/2012	693
EL5138	09/11/2011 (Renewal Lodged)	1793
EL6641 (Previously Part EL4443)	23/10/2012	454.1

Licences and Mining rights with consent conditions pertaining to rehabilitation of lands include and have been summarised in the following table.

Mining Title	Condition
CCL 727	20(a, b, [f i,ii]) 26a
CCL 763	20 (a, b, c), 25, 26 (a,b)
CCL 764	20 (a, b, c), 25, 26 (a, b)
CCL 746	20 (a, [b iv, f]), 25
MPL 304	33, 34, 35, 36, 37, 38
MPL 305	33, 34, 35, 36, 37, 38
ML 1480	2[4 {b, e, i}], 3 [2 {f}]
EL 1538	24, 25, 26, 37 {j}
EL 472	24, 25, 26
A399	22, 23, 25, 26, 27

1.1.6 Surface Land

Surface land associated with mine access and mine infrastructure is included in CCL727, CCL763, CCL 746, CCL764 and freehold land owned by Centennial Coal and freehold land leased by Centennial Coal.

Centennial Fassifern Pty Limited (Centennial Fassifern) also owns and manages several parcels of land that adjoin Colliery land. These lands provide buffering for the mine's operations and are generally leased to tenants for grazing purposes. Both Centennial Newstan and Centennial Fassifern are wholly owned subsidiaries of Centennial Coal Company Limited.

1.1.7 Hazardous Substance Management System

Centennial Newstan operates under a risk management based hazardous substance management plan which provides practical guidance for the purchase, storage, use, handling and disposal of hazardous substances.

1.2 MINE CONTACTS

Contact details are provided in **Table 5**.

Table 5. Mine Contact Details – Newstan Colliery

NAME	POSITION	PHONE	E-MAIL
Terry O'Brien	Mine Manager	4956 0205 0439 367 494	terry.obrien@centennialcoal.com.au
Jeffrey Dunwoodie	Environment & Community Coordinator	4956 0206 0448 490 023	jeffrey.dunwoodie@centennialcoal.com.au
Nerida Manley	Environment & Community Officer	4956 0214 0427 015 647	nerida.manley@centennialcoal.com.au

1.3 ACTIONS REQUIRED AT PREVIOUS AEMR REVIEW

There were six required actions provided by the Department of Planning & Infrastructure for inclusion in the 2011 AEMR:

Table 6. Actions required at previous AEMR review and section addressed.

Actions Required	Section Addressed
1. AEMR is to be submitted by the end of February 2012.	Contents Page
2. Include a plan of environmental monitoring locations.	Appendix 8 & 9
3. Improve display of dust monitoring data.	3.3.2
4. Include a comparison of GHG emissions with prior year's emissions.	3.14
5. Include discharge water quality data in main section of AEMR.	3.1
6. The AEMR is to address the requirements of condition 9.1 (f) and (g) in terms of an analysis of monitoring results against the relevant predictions in the EIS/SEEs and the identification of trends in the monitoring results over the life of the development.	2.2.3, 3.1-3.16

2. OPERATIONS DURING THE REPORT PERIOD

2.1 EXPLORATION

Five exploration drill holes were completed in the 2011 calendar year as part of the Newstan exploration programme. Twenty-one exploration drill holes (including two large diameter drill holes) were completed in the 2010 calendar year. All drill sites completed in 2011 and 2010 have been rehabilitated.

A modification to the Newstan Stage 1 Exploration Area for an additional eighteen exploration drill sites was granted by Industry and Investment NSW (I&I) on 9 April 2009. Approval for the Newstan Lochiel Stage 2 exploration area was granted by I&I on 13 July 2009, approving fourteen exploration drill sites. A modification to both the Stage 1 and Stage 2 Newstan Lochiel exploration areas was granted by I&I on 4 November 2009, approving the development of four large diameter drill holes across the two exploration areas.

2.2 LAND PREPARATION

Construction of the stage one tailings storage facility in the SREA was completed in January 2007. Construction of the stage two tailings storage facility seepage dam and clean water dam commenced in April 2007 and was completed in February 2008. During 2011, 6.0 ha was cleared for construction of the stage two tailings dam and no further clearing was undertaken within the SREA during this period.

No additional land disturbance occurred during the reporting period within the NREA and Pit Top areas.

2.3 CONSTRUCTION

2.3.1 Southern Reject Emplacement Area (SREA).

Construction of the Stage two - three tailings storage facility (TSF) was completed to RL 38 in October 2010, with further dam construction works undertaken during 2011, with the Stage two TSF constructed to RL 40 at the end of the reporting period. Construction materials have and will continue to be sourced from within the dam footprint. Coarse reject material from the coal handling and preparation plant will also be used for construction.

The seepage and clean water dam was completed in February 2008 using materials sourced from the footprint of the dams and the stage two tailings storage facility. A flocculent plant was installed adjacent to the Clean Water and Seepage Dams in September 2008. Construction of the clean water diversion drains within the SREA commenced in October 2009 and continued during 2011. At the end of the reporting period approximately 2000 metres of rock lined drain had been constructed (see **Figures 1 and 2**).

The SREA clean water diversion drain has been constructed around the SREA to divert surface run-off from 120 hectares of bushland to the south-arm of LT Creek. The SREA clean water diversion drain will have a design capacity to divert approximately 40,000 m3 of clean water around the SREA during a storm event with an Average Recurrence Interval (ARI) of 20 years and a storm duration period of 3 hours. The SREA clean water diversion drain will remain for the life of the Tailings Dam and will enable surface flows from rehabilitated areas to be diverted off-site in future.

Figure 1 - A completed section of the Newstan SREA clean water diversion drain.

Figure 2 - Newstan SREA clean water diversion drain flow in 2011 following a heavy rainfall event.

2.3.2 Final Pollution Control Dam (FPCD).

On 12 April 2011, Newstan commenced earthworks associated with the expansion of the FPCD from a capacity of 18 ML to 50 ML. The expansion of the Final Pollution Control Dam which is expected to be completed in 2012 (weather permitting) to a storage volume of 50 ML will provide sufficient storage to contain the potential run-off generated from a 10 year, 24 hour Annual Recurrence Interval storm event.

Figure 3 - Newstan FPCD construction to 50ML capacity.

2.3.3 Proposed Ventilation Shaft at Awaba

Construction of the ventilation shaft at Awaba down to the West Borehole Seam is expected to commence in 2012.

An assessment of the noise and air quality monitoring results against the predictions as stated in the Statement of Environmental Effects (SEE) for the 2007 modification is unable to be completed for the AEMR at this time as required by 9.1(f) as the ventilation shaft construction has not yet commenced.

2.4 MINING

Newstan Colliery Run of Mine (ROM) production during 2011 was 55,189 tonnes (this timeframe is the same as the EPL 395 anniversary date). There were two development units operating within the reporting period within the West Borehole Seam. Newstan has approval to extract up to 4 million tonnes per annum of ROM coal from within the Newstan Colliery Life Extension Area.

Budget ROM production for the next reporting period (2012) is 181,602 tonnes.

Appendix 5 (NS2731) displays the area mined in the 2011 AEMR reporting period.

2.5 MINERAL PROCESSING

The coal handling and preparation plant (CHPP) processes Newstan ROM coal for domestic and export markets as well as coal from various other Centennial operations for the export market. Newstan has approval to process up to 4 million tonnes per annum of ROM coal through the Newstan CHPP. Newstan CHPP operations for the report period (2011) are summarised below:

THROUGHPUT: 2,461,310 tonnes

SALEABLE PRODUCTION: 2,016,388 tonnes

2.6 WASTE MANAGEMENT

2.6.1 Washery Waste

Production of saleable coal from the CHPP results in two forms of reject material requiring disposal, those being coarse reject and fine reject.

Report period reject quantities associated with Newstan CHPP operations are listed in **Table 7** below.

Table 7. Reject Quantities

Year	Throughput (t)	Coarse Reject (t)	Fine (t)	Total (t)
2010	2,016,388	196,192	248,730	444,922

During the reporting period, coarse reject material was trucked from the CHPP to the NREA and used for the capping of the disused tailings dam.

All fine reject material was pumped to the Stage Two TSF in the SREA. No underground disposal of tailings was undertaken in 2011.

2.6.2 Sewage Treatment

Sewage and grey water from the bathhouse and various toilet facilities are gravity fed to a Wastewater Treatment Plant.

Aerated and rested effluent is pumped from the treatment plant to a maturation dam located in the NREA. Residence time in the dam is approximately 30 days with evaporation and leaching through the reject being the means of disposal.

Sewage from underground is conveyed to the surface in fully self-contained portable sanitary units. These units are specifically designed for underground use. The units are emptied, cleaned and serviced by a contract company licensed to undertake and dispose of the effluent.

Monitoring of the sewage treatment plant is undertaken quarterly by a qualified contracting company as per condition O2.4 of EPL395 and reported within the Annual Return.

In 2012, Newstan will be connected to the Hunter Water sewage system and will no longer require on-site sewage treatment.

2.6.3 Oil and Grease

Waste oil and greases are stored in tanks and drums within bunded areas for removal by Nationwide for recycling or disposal.

Oil water separation is achieved by the use of two hydro-cyclone oil water separators on flows from vehicle work and storage areas as well as the compressor and drum crushing bunker. Two other triple interceptor oil water separators are located at conveyor drifts for treatment of oily water in these areas and are inspected weekly and maintained as necessary.

Hydrocarbon spill kits are inspected monthly by J. R. Richards and re-stocked as required. Oily rag bins and oil filter bins are also serviced by J. R. Richards on a monthly basis.

2.6.4 Paper and Cardboard

Office paper and cardboard is collected and recycled by J. R. Richards.

2.6.5 Metals

Metals are collected and stored in a surface bunker. Simm's Metal is contracted to collect the scrap metal.

2.6.6 Printer Cartridges

Centennial Newstan participates in the Planet Ark printer cartridge recycling scheme. Dedicated collection boxes are provided at each of the main site printers for collection of used cartridges.

2.6.7 General Waste

General refuse and non-recyclable materials are stored in a concrete bunker and separated into 3 metre bins. The material was collected by Veolia and J. R. Richards for disposal. In 2011, 224.79 tonnes of refuse material were taken off-site by Veolia and J. R. Richards. .

2.7 PRODUCT STOCKPILES

Newstan Stockpile Capacity:

ROM;	150, 000	tonnes
Product:	200, 000	tonnes

3. ENVIRONMENTAL MANAGEMENT

3.1 WATER MANAGEMENT

Water management at Newstan Colliery is documented in the Revised Water Management Plan (Version 9). During 2010 Newstan submitted this Revised Water Management Plan to the Department of Planning for approval.

3.1.1 Surface Water

The basis of the mine's water management is based on reuse of water on site including sediment laden runoff contained in sediment dams.

Water runoff is concentrated via a network of kerb and guttering, collection sumps, pipes and drains, sediment sumps and pollution control dams. Water is then pumped to Connolly's Dam for reuse in the coal preparation plant.

Water monitoring is undertaken in accordance with the Revised Water Management Plan, Development Consent and Environment Protection Licence 395 requirements. Figures 4, 5, 6, 7, 8 and 9 show the pH, total suspended solids (TSS), oil & grease and electrical conductivity (EC) trends for LDP001 and LDP002 in 2011. A detailed summary of the surface water monitoring results for 2011 (including metals) are provided in the AECOM monitoring report in **Appendix 2**. Surface monitoring locations are provided in **Appendix 8** – NS2541.

An analysis of the LDP001 data from 2011 against the relevant predictions in the Newstan Environmental Impact Assessment (EIS) completed in November 1998 identifies that the pH, Conductivity and TSS results are all within the predicted limits identified in the EIS water quality assessment. The TSS levels of discharge events from LDP002 in 2011 were above the non-filterable residue (mg/l) levels specified in the EIS.

All 2011 reportable incidents associated with surface waters are documented in Section 3.16 of this AEMR and listed in **Appendix 1** (the 2011 Annual Return for EPL 395).

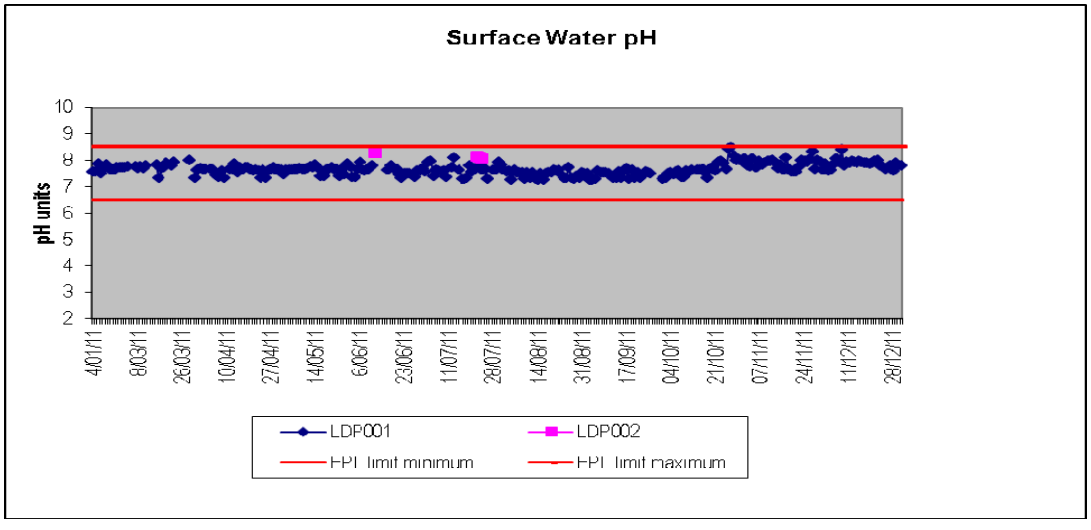

Figure 4 - LDP001 and LDP002 pH trends (2011)

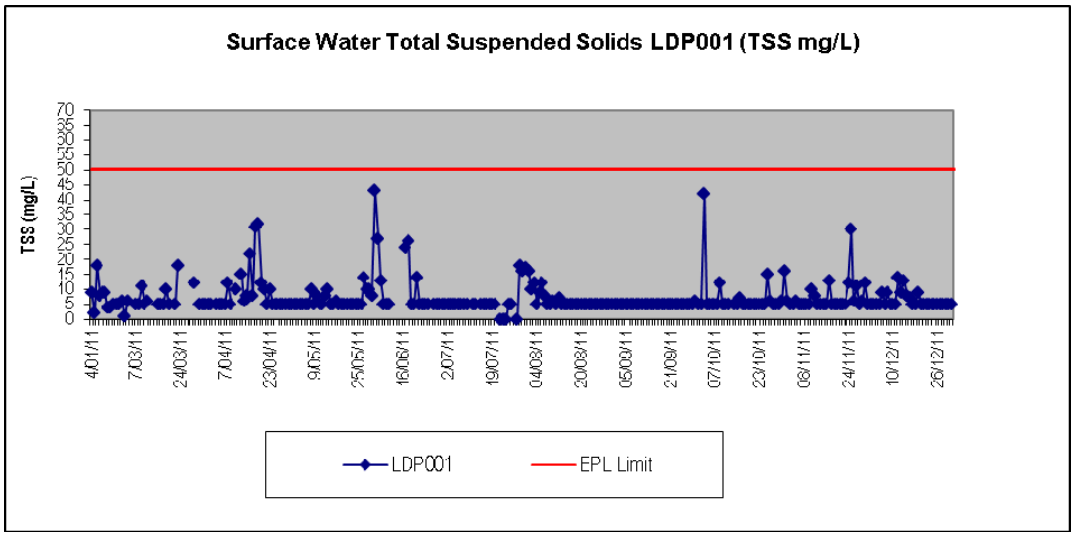

Figure 5 - LDP001 TSS trends (2011).

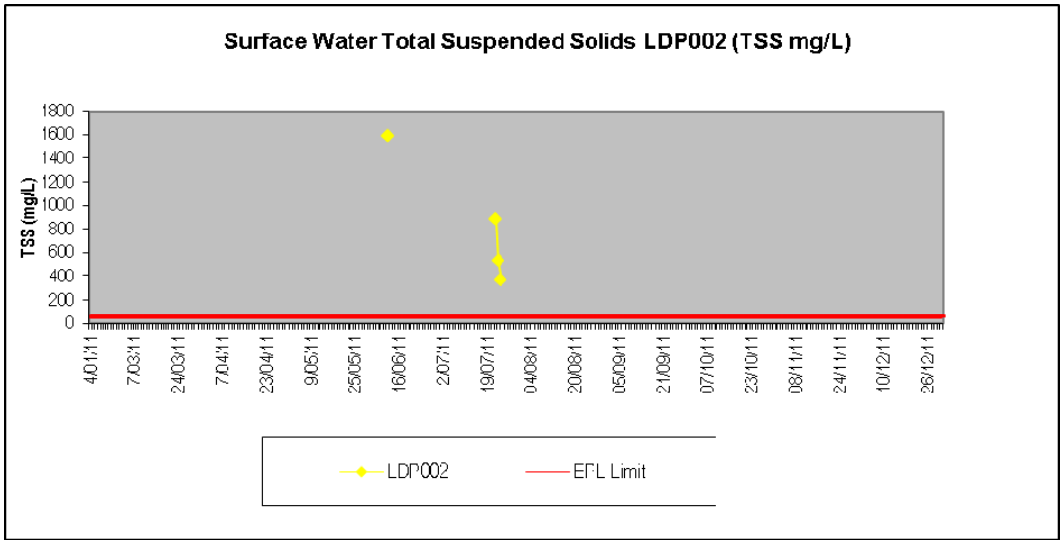

Figure 6 - LDP002 TSS trends (2011).

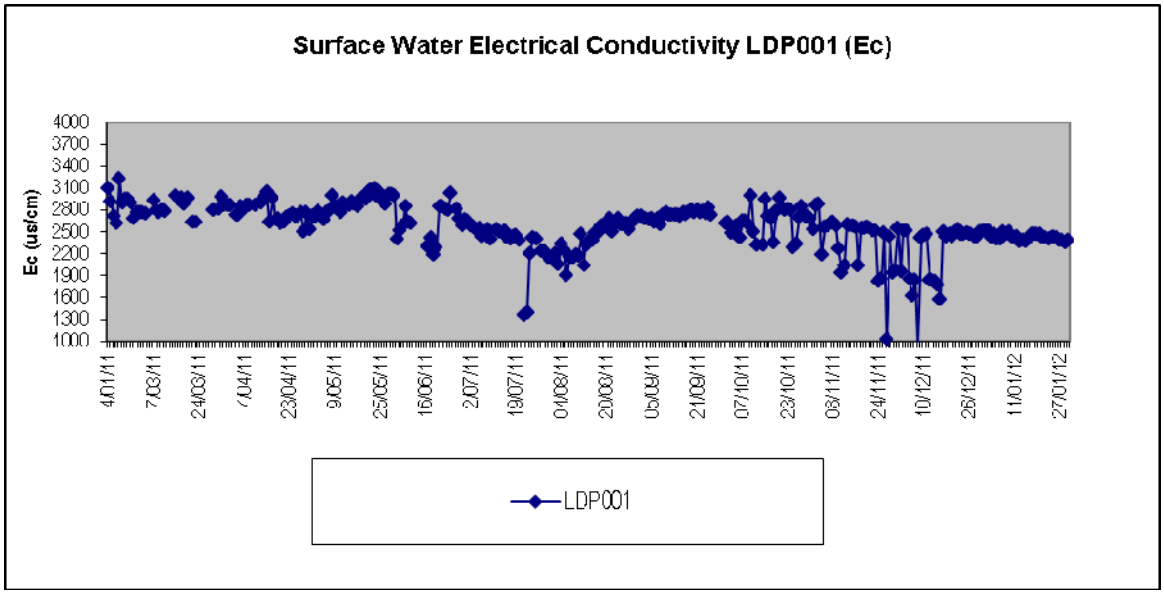

Figure 7 - LDP001 EC trends (2011).

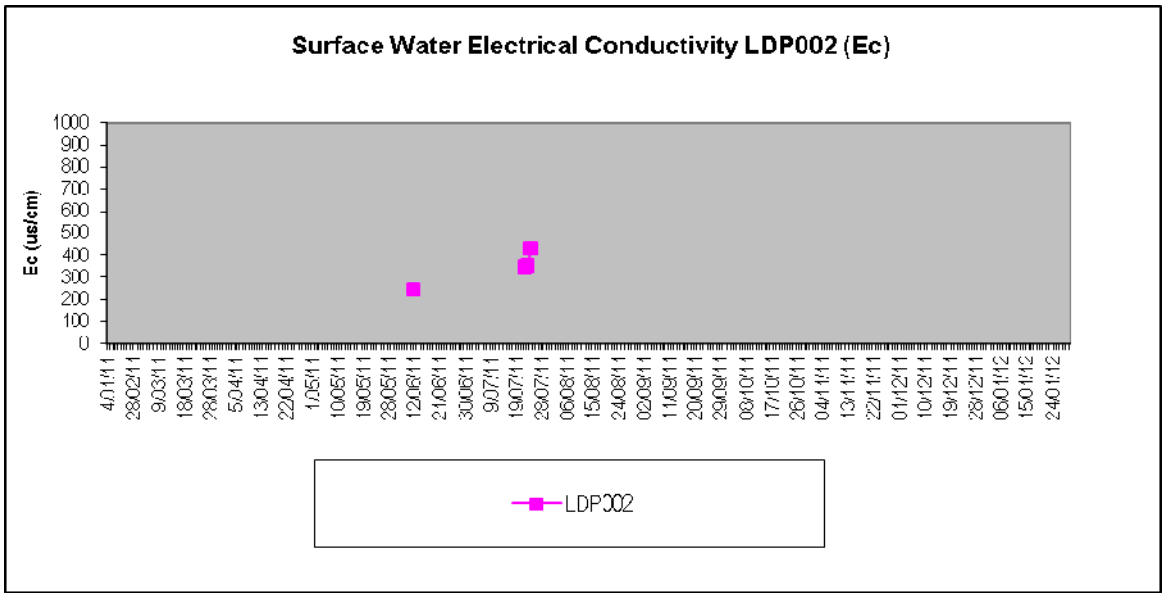

Figure 8 - LDP002 EC trends (2011).

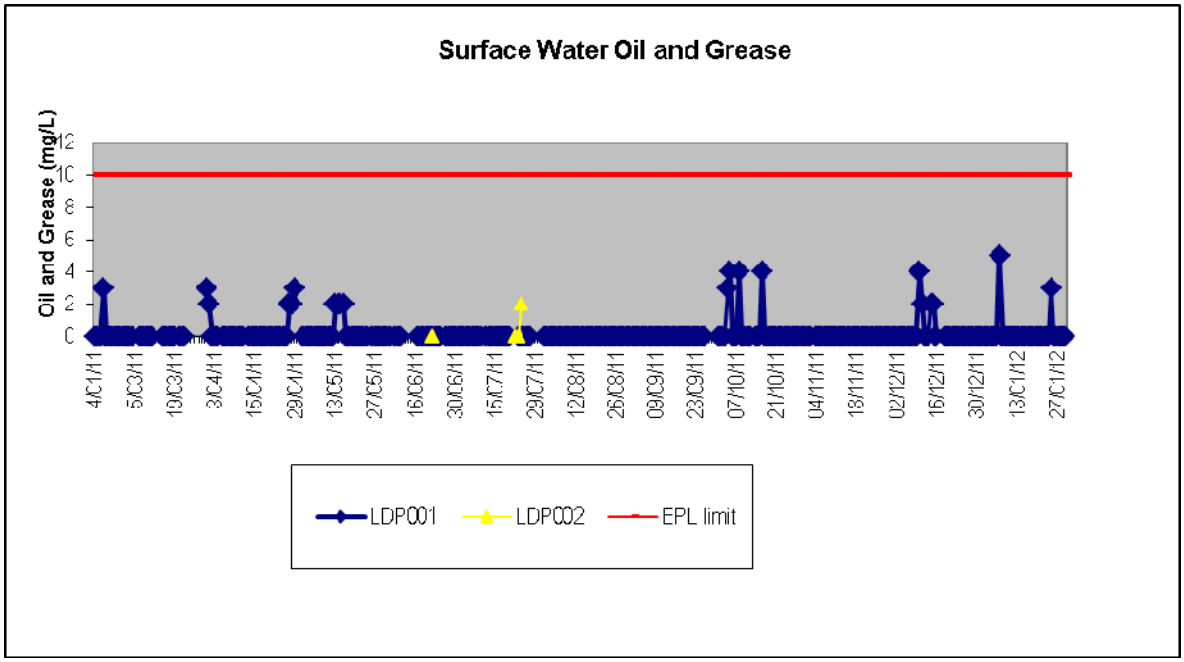

Figure 9 - LDP001 and LDP002 Oil and Grease trends (2011).

3.1.2 Groundwater

Newstan has eighteen groundwater monitoring bores. The majority were installed to establish groundwater baseline conditions for the proposed Awaba Open Cut Mine. Even though the application for the Awaba Open Cut Mine was withdrawn, it was determined appropriate to continue monitoring the groundwater bores to determine the impact of longwall mining on the groundwater levels and quality.

Quarterly monitoring and reporting of water level, pH and electrical conductivity (EC) is undertaken as well as biannual analyses of major cations (Ca, Mg, Na and K), major anions (Cl, SO_4 and alkalinity), minor anions (NO_2 as N, NO_3 as N, reactive P and F) and total Fe.

The shallow bores are purged and sampled with foot valves and tubing dedicated to each bore, whereas the deeper bores (MB02-MB06, MB16 and MB18), monitoring the coal seam aquifers, are sampled with a Bennett Auto Sample Pump with tubing dedicated to each well.

Baseline water samples were collected from the installed bores during the first sampling round in October 2005. Subsequent monthly sampling to date has involved measurement of water level and field measurement of pH and EC.

Sampling is no longer undertaken at MB1 due to repeated vandalism of the monitoring bore that has rendered it unserviceable.

Alluvial Aquifer

Graphs of pH and EC trends are shown on Figures 10 and 11.

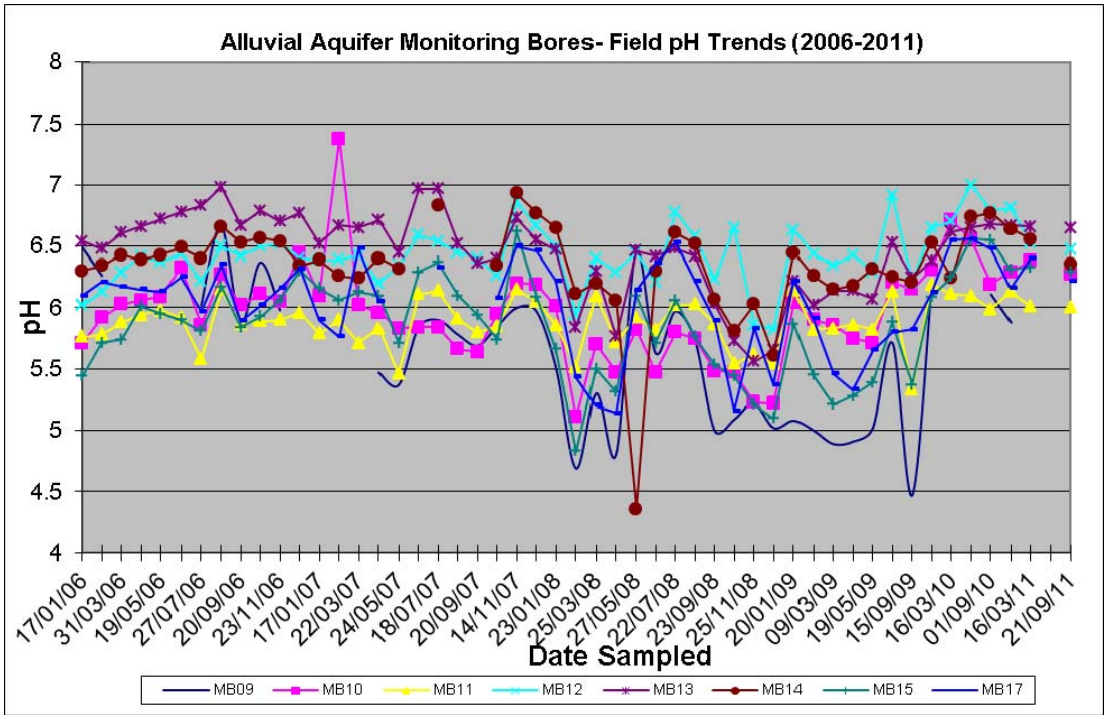

Figure 10 - Alluvial aquifer monitoring bores – pH trends (2006-2011).

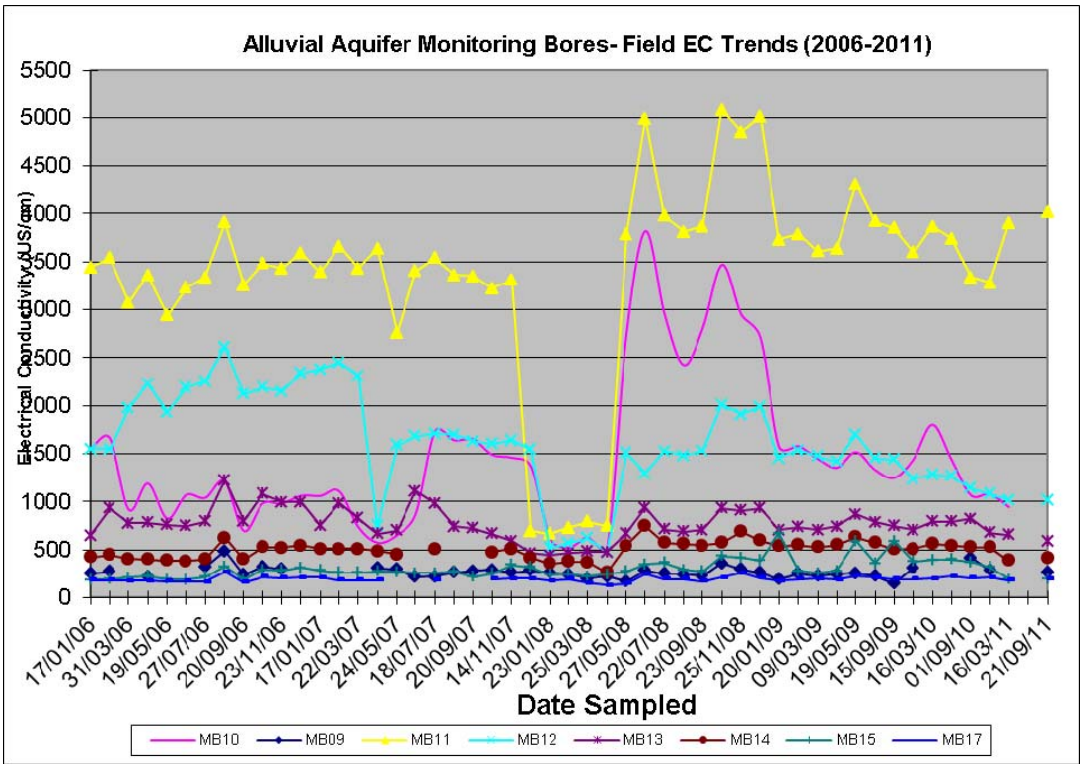

Figure 11 - Alluvial aquifer monitoring bores – EC trends (2006-2011).

The data indicates a slightly acidic pH generally in the range of 6.0 to 7.0 for the alluvial groundwater. The electrical conductivity (EC) has a wide range of 129-4000µS/cm. This large range may reflect the recharge source of the alluvial groundwater at the monitoring locations by either;

- direct surface infiltration from rainfall, giving relatively low EC readings; or
- upward leakage or lateral flow from the Permian sediments into the alluvium, giving higher EC readings.

Figure 11 indicates that monitoring bores MB11 has relatively high EC levels (although variable throughout 2008, 2009 and 2010). The EC levels of MB10 and MB12 have reduced during 2011 to EC levels recorded in 2005 and 2006. The EC of the remainder of the bores is generally less than 1000µS/cm and as such is fresh.

Coal Seams and Bedrock Aquifers

Graphs of pH and EC trends are shown on Figure 12 and 13.

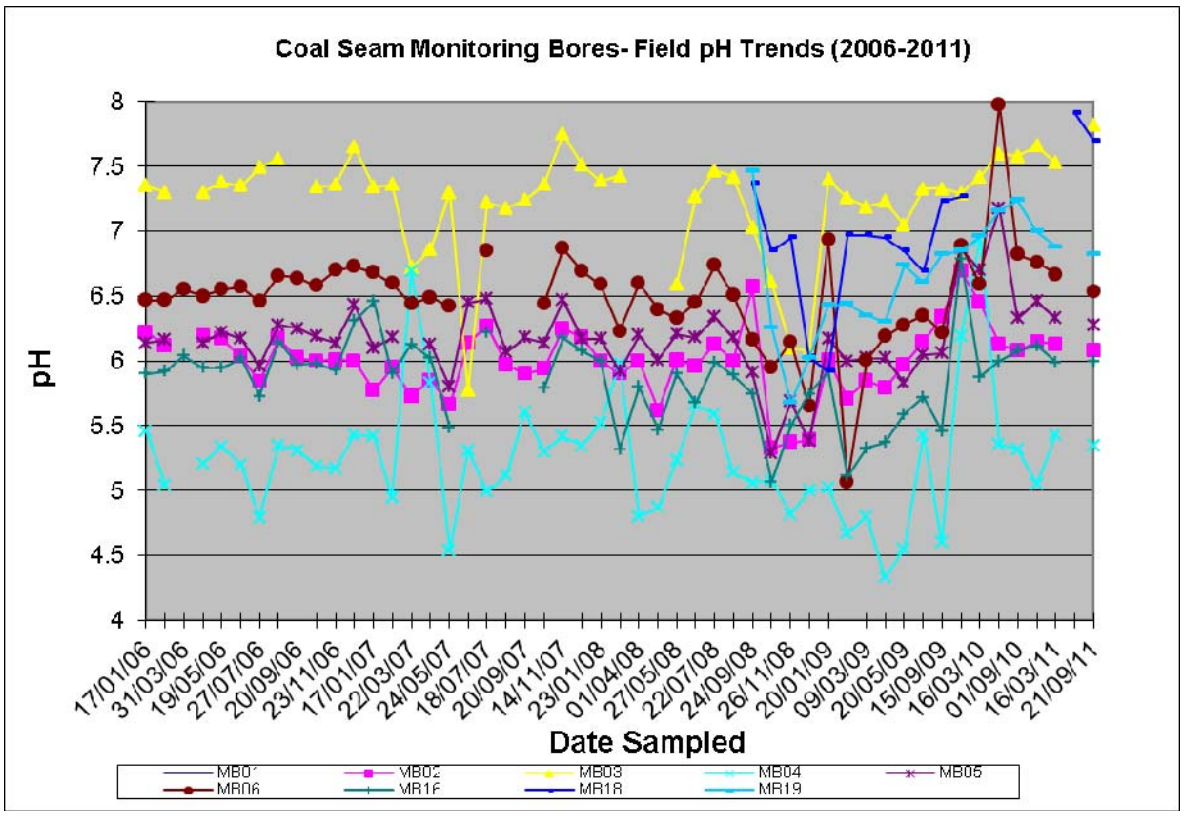

Figure12 - Coal Seam monitoring bores – pH trends (2006-2011).

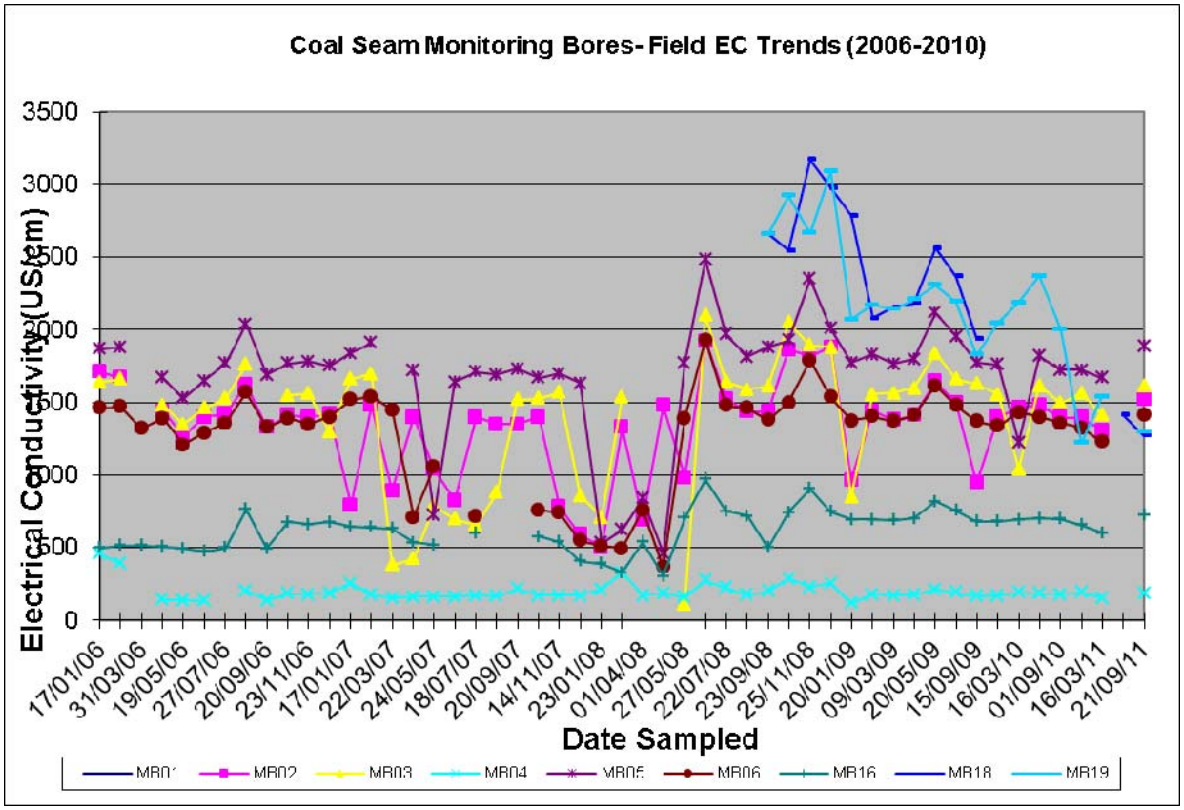

Figure 13 - Coal Seam monitoring bores – EC trends (2006-2011).

The pH trends shown on Figure 12 indicate that groundwater from the coal seams are slightly acidic in the range 5.50 – 7.5 during 2011.

Groundwater samples collected from the coal seam monitoring bores have a variable EC ranging from 110µS/cm, collected from bore MB4 and to a high of almost 2000 µS/cm for bore MB05 as shown on Figure 13.

3.1.3 Water Budget

Newstan utilises potable and recycled water for surface operations and recycled water from dams and old workings for underground operations.

Potable water is used in the bathhouse and amenity systems, blending with mine water to operate the undeground mining equipment, surface emergency backup fire fighting system, in the washery (limited) and vehicle/machinery wash-down.

All other operations utilise recycled water from the colliery dams and Fassifern No 1. bore.

Newstan used 28.99ML of fresh water during the reporting period. This compares with 26.36ML in 2010 and 38.6 ML in 2009.

Approximately 338.6 ML of recycled water was used underground for mining equipment, in the CHPP and for dust suppression. This compares with 293 ML recycled in 2010.

Table 8 summarises the stored water for Newstan Colliery during 2011.

Table 8. Stored Water – Newstan Mine

	Volumes Held (ML)		
	Start of Reporting Period	At end of Reporting Period	Storage Capacity
Clean water			
Storage tank 1	1	1	1
Storage tank 2	1	1	1
Storage tank 3	1	1	1
By-wash Dam	40	40	40
Dirty Water			
Graunch's Dam Cell 1	0	0	9
Graunch's Dam Cell 2	0	0	9
Sewage Maturation Pond	2.5	2.5	5.0
Connolly's Dam	100	100	130
Rail Loop Dams	0.4	0.4	7.7
Weighbridge Dam	0.2	0.2	4.7
Final Pollution Dam	0.9	0.9	45
Haul Road Dams 1 & 2	1	1	10
TSF (Stage 1 and 2)	0	0	240
Pre-Settlement Dam	0.1	0.1	5
Seepage Dam	0.5	0.5	23.7
Clean Water Dam	2	2	38.5

A description of the role and purpose of the water management structures is provided in the Revised Water Management Plan that has been provided to OEH, NOW, DRE, LMCC and DoPI.

The average volume of water discharged from LDP001 during the reporting period was 5.4 ML per day with a total of 1,969ML being discharged for the year. Water from LDP001 discharges to the By-wash Dam where it is allowed to discharge to LT Creek.

A summary of discharges recorded by Newstan Colliery is provided in Table 9.

Table 9. Discharge data recorded by Newstan for 2011

Discharge Point	**Total Annual Discharge (ML)**
LDP001	1,969.55
LDP002	11.14
Proposed LDP003	0
Stony Creek (at Blackalls Park	0

3.1.4 Discharge Reduction Investigations

Condition 4.1 (iv) of DA 73-11-98 requires that Newstan investigates opportunities to reduce the minewater discharge into LT Creek and include the results of such investigations in the Annual Environmental Management Report.

The following options have been investigated at Newstan in consultation with the Office of Environment & Heritage to reduce the minewater discharge into LT Creek.

1. Water segregation options - A review completed by GHD in 2009 did not identify any additional locations for clean water diversions within the SREA beyond those which were either already in place, or which had been identified by Newstan already as future opportunities. The SREA clean water diversion drain is currently under construction with completion expected in 2012/13.

2. Water reduction techniques (spray irrigation) – A review completed by a GHD ecologist in 2009 determined that this option was not feasible at the Newstan Colliery.
3. Options for additional storage dams - Investigation into increasing surface water storages on site which was determined to not be feasible (apart from the expansion of the FPCD from 18ML to 50ML) due to the relatively small surface footprint available for dam construction and the large volumes of water required to be managed (over 4GL per year)

Newstan cannot reduce the volume of discharge through LDP001 (7ML/day) on a daily basis or during prolonged or intense rainfall events due to the risk of an uncontrolled discharge from the Fassifern No 1/Great Northern seam at the Stony Creek Pipeline during these events.

A hydrogeological model was completed by GHD in July 2009 for the Fassifern No1 / Great Northern seam underground water storage area. A report was prepared by GHD that concluded that for above average rainfall conditions, a dewatering rate of 11ML per day (and up to 14ML per day under certain conditions) would be required to maintain the two metre buffer (below the Stony Creek pipeline within the Fassifern No1/Great Northern seam) and that this rate is required for both operational and care and maintenance phases of the mine. Newstan is currently investigating water treatment options in consultation with the OEH, to reduce the risk of an uncontrolled discharge event form the Stony Creek pipeline.

3.2 FLORA AND FAUNA

Hunter Eco consultants undertook the annual monitoring of Tetratheca juncea along subsidence monitoring lines over longwalls 22, 23 and 24, the NREA and SREA to determine if longwall mining and its associated activities had impacted populations identified in the Newstan Life Extension Area Environmental Impact Assessment Study The monitoring undertaken during 2009 showed that significant changes had occurred in transects over Longwalls 22 and 23 as a result of bushfires in 2008 and 2009. The 2010 report concluded that there was no immediate evidence of any vegetation loss along the transects with the 2011 report finding an increase in the Tetratheca juncea clumps in the transects over Longwalls 22, 23 and 24 (**Appendix 3**).

The Tetratheca juncea clusters in the SREA and NREA both showed a slight increase in numbers and a general increase over the life of the development. The monitoring to date has shown that Tetratheca juncea has colonised disturbed areas such as subsidence monitoring lines, old exploration tracks, drill sites and rehabilitated subsidence cracks.

In November 2011, RPS Australia East Pty Ltd (RPS) completed a survey of translocated Tetratheca juncea within the SREA (**Appendix 4**). The translocations are progressively undertaken for the expansion of the SREA Tailings Storage Facility. RPS concluded that; “A total of 115 (45%) of the original 253 plants were flowering two years after translocation, and a healthy population totalling 399 plants were observed within and immediately adjacent to the translocation area”. Newstan will continue to monitor the success of translocations within the SREA and implement any recommendations from RPS to improve the translocation success rate.

No additional flora or fauna monitoring was requested by the Director General, Department of Planning during the reporting period.

3.3 AIR QUALITY AND DUST

3.3.1 Dust Deposition Gauges

Originally there was a total of 9 depositional dust gauges located around the Newstan Colliery pit top facilities and Fassifern. Dust gauge 8 was decommissioned in 2005 due to the tree growth in the private garden that the gauge was located in (no longer compliant with the relevant standard) and continual vandalism by school children. Dust Gauge 7 was removed and decommissioned by a private land owner to

allow fill to be placed in the owner's horse paddock. Dust Gauge 7 was re-instated in August 2009 to the south-east of Newstan Colliery at the Fassifern Archery Complex.

Newstan currently has 8 depositional dust gauges located around the Colliery pit top facilities, NREA, SREA and Fassifern. An independent review of the dust deposition monitoring data is provided by AECOM in **Appendix 2**. The following graph, Figure 14, displays Newstan's Annual Average Dust Deposition in 2011 (Insoluble Solids).

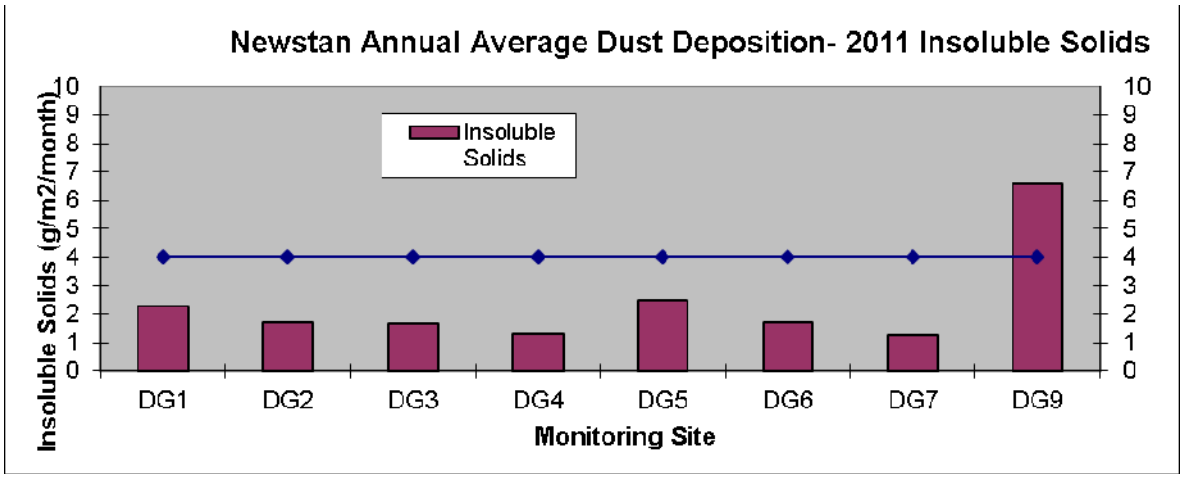

Figure 14 - Newstan Average Annual Dust Deposition for 2011.

Apart from DG9, all particulate dust gauges recorded average particulate monitoring results below 4g/m^2/month for 2011.

DG9 is located adjacent to adjacent to the Stage 2 Tailings Dam within the SREA. The slightly elevated average dust levels for DG9 in 2011 are as a direct result of an anomalous result recorded in July 2011. The particulate monitoring result for July 2011 at DG9 was 47.3g/m2/month, with visual analysis estimating the sample contained 70% vegetation matter and 20% insect material.

During 2011, Newstan continued spraying chemical dust suppressants on gravel roads and hardstand areas to minimise dust emissions.

Dust monitoring locations are provided in **Appendix 9** – NS2677.

3.3.2 High Volume Dust Sampling

High volume dust sampling was undertaken to monitor dust deposition rates and concentrations of Total Suspended Particulates (TSP) and Suspended Particles PM_{10}.

The Hill Top High Volume dust sampling point (HVS1) is located to the north of the NREA near Culgan's property.

The Water Tank High Volume Dust Sampling point (HVS2) is located to the south of Newstan Colliery near the Fassifern Railway Station. It was not possible to locate the southern high volume dust sampler at the Fassifern Public School as required by the Development Consent DA 73-11-98, due to the need to undertake extensive tree clearing at the school. The site chosen is located closer to the mine site.

Table 10 displays the annual average PM10 (ug/m3) at HVS1 and HVS2 since monitoring commenced in 2007. The table demonstrates a significant reduction in the annual average PM10 levels at the Newstan Colliery since 2007, especially at HVS2.

Annual Average PM10 (ug/m3)		
Year	**Hill Top (HVS1)**	**Water Tank (HVS2)**
2007	18.64	25.60
2008	15.98	25.76
2009	16.61	19.36
2010	11.64	16.22
2011	14.28	17.73

Table 10. Annual Average PM10 (ug/m3) at HVS1 and HVS2.

Newstan's Development Consent and Environmental Protection Licence do not specify criteria for TSP or $PM_{10.}$ The air quality impact assessment completed for the Newstan EIS (November 1998) predicted that average TSP levels would be approximately 10ug/m3 at Wakefield and Fassifern. The predicted maximum 24 hour average concentrations for existing operations is estimated to be a TSP of 100ug/m3 at the nearest residence to the north of the Northern Reject Emplacement Area and east of the railway line within Fassifern. This equates to a PM10 concentration of approximately 50ug/m3. Figure 15 displays the rolling annual average high volume dust sampling results at the Hill Top Location (HVS1) and Figure 16 displays the rolling annual average high volume dust sampling results at the Water Tank Location (HVS2).

All results for both locations were below the criteria for TSP of 90ug/m3 (annual average), PM10 of 50ug/m3 (24 hour average) and PM10 of 30ug/m3 (annual average) during the 2011 reporting period.

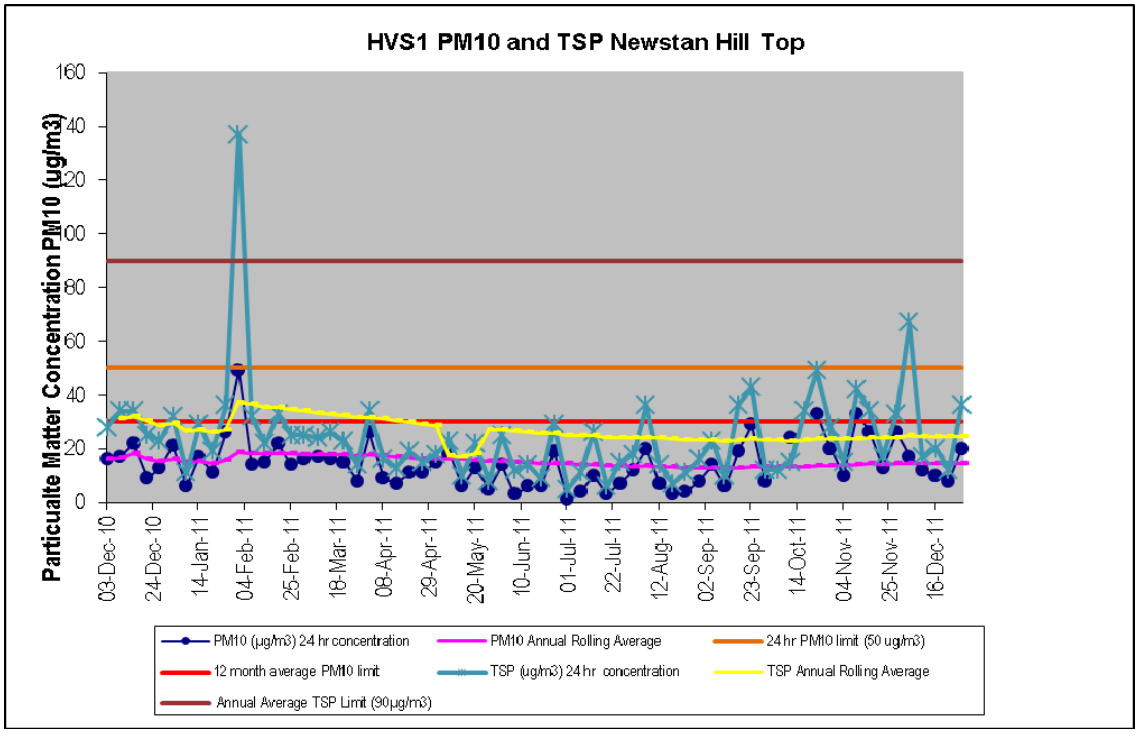

Figure 15 - Newstan Rolling Annual Average High Volume Dust Sampling at the Hill Top Location (HVS1).

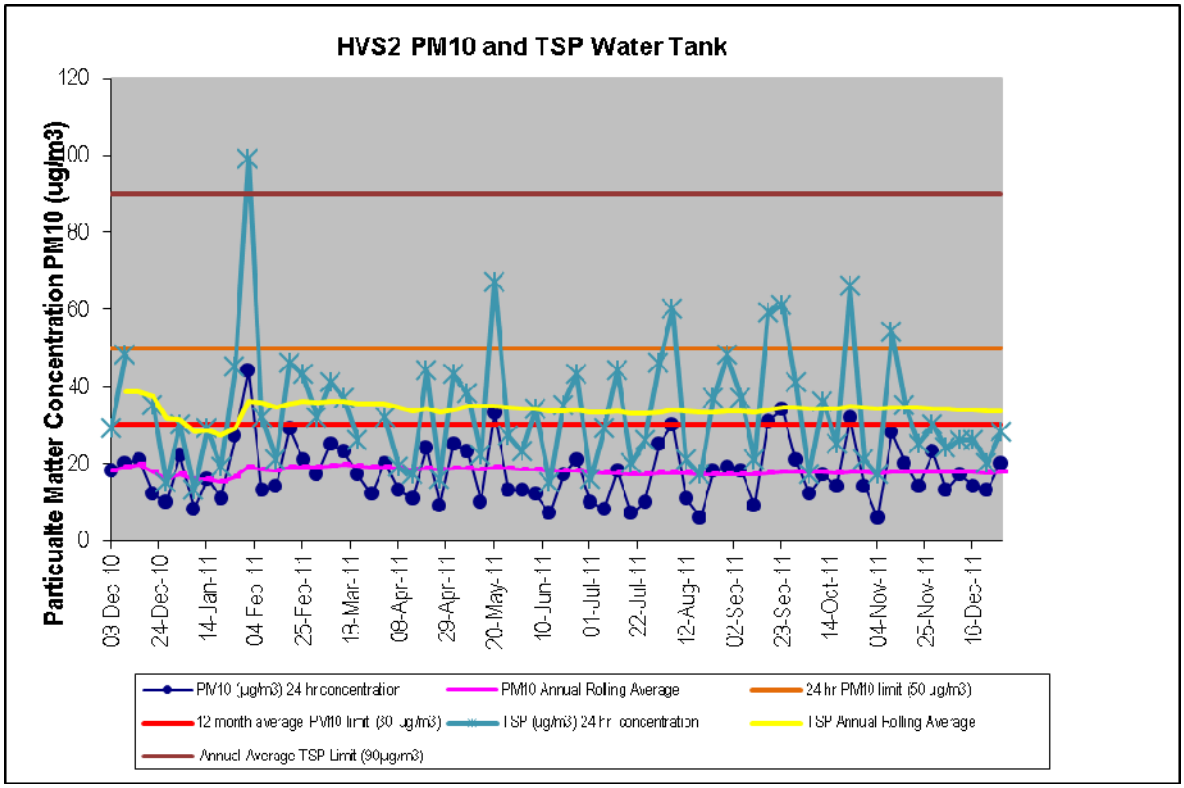

Figure 16 - Newstan Rolling Annual Average High Volume Dust Sampling at the Water Tank Location (HVS2).

3.4 NOISE AND BLAST

3.4.1 Noise

Attended noise monitoring was carried out in February, May, August and December 2011 at seven locations identified in the Newstan Colliery Noise Management Plan and in accordance with the Development Consent. A fifteen minute noise measurement was taken at each of the locations once during the daytime period (7am to 10pm), and during four non-consecutive night-time periods (10pm to 8am). The noise monitoring results are compared with noise criteria displayed in Table 11 and Table 12, as outlined in the development consent condition 6.4a and referred to as Newstan Colliery (Noise Planning Criteria). Since noise monitoring commenced in December 2006, any exceedances of the relevant noise criteria have generally occurred during the night-time period during favourable climatic conditions (temperature inversions) and not during the day-time period (as predicted by the Newstan EIS completed in November 1998).

Quarterly noise monitoring conducted in February 2011 recorded a noise exceedance of the relevant criteria limit of 38dB (A). 46dB (A) was measured at a residence (NC2) to the north-west of Newstan during the night-time monitoring period. This noise exceedance has since been investigated with the likely cause identified as track slap on the Giacci D9T and D9N dozers when reversing at speed on the Run of Mine (ROM) stockpile.

Since this noise exceedance a number of actions have been implemented to prevent a reoccurrence of the noise exceedance including the following;

- A toolbox talk with all the Giacci dozer operators was conducted explaining the need to only use first gear when backing down off the stockpile to reduce track slap.
- A risk assessment has been conducted on the dozers only being able to select low gear in reverse and work was completed during the shutdown (21 March 2011), which physically prevents the D9N dozer from selecting any other gear other than low gear when in reverse.
- The D9T dozer has an electronic gear shift mechanism, and all gears above first have been restricted when reversing.
- Squawker alarms are now fitted to all plant (replacing beeping alarms) operating on the ROM stockpile.

There were no further exceedances of the noise criteria at NC2 during 2011.

Quarterly noise monitoring conducted in May 2011 identified that noise emissions from the operations were within criteria at all monitoring locations in the day and night periods.
Quarterly noise monitoring conducted in August 2011 recorded a noise exceedance of the relevant criteria limit of 37dB (A). 41dB (A) was measured at a residence (NC4) to the south-east of Newstan during night-time monitoring.

Quarterly noise monitoring conducted in December 2011 also recorded a noise exceedance of the relevant criteria limit of 37dB (A) at NC4. 48dB (A) was measured at a residence (NC4) to the south-east of Newstan during night time-monitoring.

This noise exceedance recorded in August 2011, was investigated with the likely cause being noise from the Newstan mine ventilation fan failure alarm and low frequency noise from the Newstan Washery which was clearly audible at the residence during the survey. A significant temperature inversion (predicted to be >3 degrees/100m) during the morning of 17/8/11 is likely to have enhanced the noise level at the residence during the night time survey.

Electrical alterations have since been made to the mine ventilation fan failure alarm to ensure the alarm is not activated for extended periods at night.

The following investigations have been undertaken by the Newstan Washery to reduce low frequency noise emissions as a result of noise exceedances at NC4 in August and December 2011;

1. Conducted an initial noise monitoring survey on 27 June 2011 to determine the source of the noise/vibration and establish a baseline.
2. Conducted a more detailed survey on 1 July 2011 to determine which of the 12 screens in particular were the source of the low frequency noise.
3. On 15 July 2011 Newstan contracted an acoustic expert from Brisbane with specialised equipment to determine if the noise/vibration that was being generated was due to the three screens (identified by previous surveys) or if the three screens were actually exciting the building and the building itself was transmitting or perhaps amplifying the noise/vibration.

The following measures have since been implemented by the Newstan Washery to reduce low frequency noise emissions;

1. Closed off the open areas of the underpan on one of the screens.
2. Closed off all the openings in the southern wall of the building with colorbond sheeting.
3. Removed weights from screen exciter counterweights.

4. Stopped processing coal on night-shift between 6 September 2011 and November 2011 until a traffic light monitoring system was installed into the Washery programmable logic controller (PLC) to determine temperature inversion strengths which has allowed operations to be modified during temperature inversions.
5. Replaced all the alsynite sheeting with colourbond sheeting on both the southern and eastern walls and the roof.
6. Changed drive pulley on Screen 21 Desliming Screen twice.
7. Tried running at different feed rates whilst undertaking noise monitoring to see if the feed rate was a contributing factor.

Future noise mitigation proposals for the Newstan Washery include the following:

1. Continue modifying screen pulley sizes to achieve lower energy levels
2. Investigate possible changes to underpan configuration.
3. Contracted consultant VIPAC to conduct modelling of the plant to determine what further major changes need to be made to the wall structure and cladding to reduce noise emissions.

In order to minimise noise generated by train operations at Newstan Colliery, the following operating procedures have been implemented, except in emergency situations.

1. G Class locomotives shall be marshalled as the lead locomotive whenever possible.
2. All trailing locomotives at the front of the train shall be shut down as soon as possible after arrival at Newstan. Some locomotives may already be shut down prior to departing the dump Station on the empty leg of the cycle. The bank engines are not required to be shut down.
3. The use of the Locomotive horn at level crossings at Newstan Colliery is restricted to EMERGENCY use only. The headlight and ditch lights shall be used to provide adequate warning.
4. The use of the Locomotive horn prior to moving the train at Newstan Colliery is restricted to EMERGENCY use only.
5. All shunting shall be carried out with radio communication. The use of the locomotive horn is prohibited.
6. Train 'run-ins' and 'run-outs' shall be managed professionally by the train crew, ensuring correct use of the automatic (train) brake and independent brake. The Banking engines may be utilised to assist with the loading process to minimise train noise.
7. Trailing locomotives shall be restarted prior to departure. Ensure the warm up time is kept as close to 15 minutes as possible.
8. Centennial Coal has also committed to purchasing new locomotives, which are the quietest locomotives available in the industry. Only three new locomotives are required (currently six are required) which will be delivered in April 2012.
9. A 6 metre high bund wall will be constructed at the south-eastern end of the Rail Loop stockpile in 2012.
10. An automatic coal train loading system will be installed at Newstan in the long term.

Table 11. Newstan Annual Average Acoustic Assessment Results 2011 (Day Time Monitoring 7am-10pm- ($L_{A10\ (15\ min)}$ dB(A))

Location	DC Limit	Feb-11	May-11	Aug -11	Dec -11
35 Jefferson Road, Wakefield (NC1).	42	Nil	36	<36	<37
Fassifern Road, Wakefield (29 Fassifern Road Wakefield) (NC2).	42	38	35	<40	<40
Other Wakefield Dwellings (37 McCanns Road, Wakefield)	42	Nil	Nil	<37	<38
4 Wallsend Road, Fassifern (NC3)	43	Nil	Nil	<42	<40
Fassifern Primary School	45	Nil	42	43	<39
33 Narara Street, Fassifern (NC4)	43	Nil	Nil	37	<37
51 Reynolds Street, Fassifern (NC5)	44	Nil	Nil	<32	<38

Table 12. Newstan Annual Average Acoustic Assessment Results 2011 (Night Time Monitoring 10pm-8am- ($L_{A10\ (15\ min)}$ dB(A))

Location	DC Limit	Feb-11	May-11	Aug -11	Dec-11
35 Jefferson Road, Wakefield (NC1)	40	40	<35	<37	<40
Fassifern Road, Wakefield (29 Fassifern Road Wakefield) (NC2).	38	**46**	36	<38	38
Other Wakefield Dwellings (37 McCanns Road, Wakefield)	39	Nil	38	<33	<38
4 Wallsend Road, Fassifern (NC3)	40	Nil	<35	40	<40
33 Narara Street, Fassifern (NC4)	37	Nil	37	**41**	**<48**
51 Reynolds Street, Fassifern (NC5)	37	Nil	Nil	<33	37

3.4.2 Blasting

No blasting was undertaken during the reporting period.

3.5 CULTURAL HERITAGE

Cultural heritage management at Newstan Colliery is documented in the Archaeology and Cultural Heritage Management Plan, based upon archaeology and cultural heritage assessments from the Newstan Life Extension Area EIS November 1998 (LEA EIS) and the Newstan Colliery Modification to Development Consent Statement of Environmental Effects April 2007 (LW24 SEE).

The LEA EIS identified rock shelters within sandstone outcrops on ML1452 to the east of current mining operations. It also suggested that there may be potential sites along Lords Creek that may be impacted by subsidence repair works in Lords Creek. Mining has not occurred in the eastern sections of ML1452 therefore there has been no potential for impact on the rock shelters. LW24 and 25 were shortened such that no mining occurred under Lords Creek hence the need to undertake subsidence repair works in Lords Creek is negated.

The LW24 SEE identified a scar tree approximately 400m north-west of LW24. This scar tree has not been impacted by mining operations.

3.6 SUBSIDENCE

Due to the nature of current mining operations (first workings), subsidence inspections at Newstan Colliery are now undertaken on a quarterly basis, and include inspections of previous subsidence rehabilitation.

Tilt meters were installed as required by the management plans for the Transgrid transmission towers and monitored as required, details were submitted to DRE in the Weekly Subsidence Management Status Reports and also available on the argus monitoring website, to which all stakeholders had access.

Surface inspections were conducted weekly during 2008 and 2009 on the Transgrid transmission towers T14A, 15, 16, 17, 18, 19 and 20. Weekly surface inspections were also undertaken during 2008 and 2009 on Hawkemount road and various tracks, Energy Australia transmission lines, and general bushland (including Lords Creek). Surface inspections aim to identify surface cracking, step change in the surface, drainage, tilting and ponding.

Weekly subsidence reports were communicated to the District inspector, DRE, LMCC, Transgrid, Railcorp, MSB, Lake Macquarie Council during the 2008 and 2009 period.

The End of Panel report for LW24 and LW25 which included subsidence monitoring results was submitted to Industry & Investment in June 2010.

During the reporting period, quarterly inspections of the rehabilitation of the LW22 subsidence cracks (which were rehabilitated in 2009) was undertaken. Rehabilitation and stabilisation of the area was undertaken by seeding, placement of mulch, installation of straw bales, diversion structures and straw bale sediment traps. During 2011, ongoing monitoring of the rehabilitation of cracking associated with LW22 has identified that the areas have stabilised and a cover crop is well established with native species beginning to colonise the area. Newstan will continue to monitor the LW22 subsidence crack rehabilitation area on a quarterly basis.

Future subsidence monitoring programs will be developed for mining operations to be conducted in the Main West area in 2012.

3.7 METEOROLOGICAL MONITORING

Newstan operates an on-site meteorological station. The meteorological station complies with the requirements of AS 2922 1987 and development consent condition 8.1.

Total rainfall for the reporting period is shown in the Table 13 below.

Table 13. Newstan Rainfall Data

Total Rainfall for 2007, 2008, 2009, 2010 & 2011 (mm)					
Month	**2007**	**2008**	**2009**	**2010**	**2011**
Jan	1	219.2	23.2	108.5	22.5
Feb	130.4	229.4	226.8	34.0	57.5
Mar	123.2	174.2	78.4	106.0	101.5
Apr	130.4	329.4	36.8	28.5	137.5
May	83.6	1.6	116.3	63.0	112
Jun	471	127.8	92	135.0	220
Jul	29.6	8.2	23	91.5	196.5
Aug	100	32	1	49.5	42.00
Sep	29.2	221.2	23.5	34.5	0
Oct	23	103.4	70.5	65.0	166.5
Nov	150	66.4	43.5	175.5	151
Dec	101.6	28	60.5	82.0	75
Total Rainfall	**1373**	**1540.8**	**795.5**	**973.0**	**1282**

3.8 EROSION, SEDIMENT & TOPSOIL STRIPPING

Erosion and sediment control practices are employed where any surface disturbance takes place. The installation of sediment fencing and straw bales around small disturbances such as drill pads and stabilised subsidence cracks is normal practice.

Progressive stabilisation and rehabilitation of disturbed areas is undertaken with all land disturbance activities associated with the Newstan Colliery activities.

Re-contouring of the old reject emplacement areas in the NREA emplacement area continued during the reporting period. Capping and revegetation of this area was also undertaken during the reporting period.

Figure 17 - Successful rehabilitation of the northern section of the NREA (seeding undertaken in 2009).

Newstan's longwall mining operations wee located between Awaba and Freeman's Drive. There were no surface disturbances undertaken in this area within the reporting period.

In the instance of a need to repair subsidence impacts, many of these activities require land disturbance and as a consequence can result in soil erosion and the generation of sediment.

Pre-clearing inspections are undertaken of all proposed land disturbing activities by the Environment & Community Coordinator. Where possible land disturbing activities are located to minimise the amount of cut and fill required as well as the area and duration of exposure.

Temporary control measures are installed prior to disturbance. A range of temporary and permanent erosion and sediment control measures are utilised for these activities. These include:

- Hand application of mulch
- Application of Bonded Fibre Matrix hydro-mulch
- Brush matting using cleared vegetation
- Revegetation
- Silt fences
- Straw bales
- Gypsum treatment of dispersive soils
- Sediment sumps; and
- Inclined diversion banks.

The measures utilised are selected dependent on the site constraints (dispersive soils, slope), time of year, type of flow (concentrated or sheet flow) and the duration of disturbance. Specialist contractors are utilised

to install the erosion and sediment control measures and quantities of erosion and sediment control materials are maintained by both Centennial Newstan and the contractor at all times.

During 2011, 6.0 hectares of previously disturbed vegetation was cleared for the construction of the Stage 2 Tailings Dam and the clean water diversion drain in the Southern Reject Emplacement Area. Approximately 3,000m^3 of topsoil was stripped following clearing and stored in accordance with the Soil Stripping Management Plan or utilised in the rehabilitation of areas of disturbance surrounding the clean water diversion drain.

3.9 WEEDS AND PESTS

Ongoing weed and pest control was undertaken at Newstan during the reporting period in accordance with the site weed management action plan developed in 2010. Spraying was conducted by Hunter Land Management (HLM) for the control of pampas grass, lantana, crofton weed, noogoora burr, castor oil, morning glory and tobacco bush. Herbicide use is recorded and filed at Newstan in accordance with legislative requirements.

3.10 VISUAL / STRAY LIGHT

Portable lighting is subject to a management procedure to ensure that there is no impact to neighbours due to stray light. No visual or stray light complaints were recorded for the reporting period.

3.11 SPONTANEOUS COMBUSTION

In 2011 there were no spontaneous combustion incidents.

3.12 BUSHFIRE

Bushfire management on site is undertaken in accordance with the Newstan Colliery Bushfire Management Plan which was revised in 2009.

3.13 HYDROCARBON CONTAMINATION

Potential areas where historic operations may have contaminated land have been identified. A Phase1 site contamination assessment was completed in 2009. The Phase 1 report recommended that a Phase 2 site assessment be completed to identify the risks of contamination to possible receptors. The Phase 2 site assessment was completed in the 2011 reporting period. The purpose of the Phase 2 Environmental Site Assessment was to assess the presence of impact within the Newstan Colliery pit top area.

All bulk and minor hydrocarbon storages are concrete lined and bunded, significantly minimising the potential for hydrocarbon contamination of soil or water on site.

Several spill kits are located around the pit top for employee and contractor usage in the event of a spill.

3.14 GREENHOUSE GAS

Table 14 provides a summary of Newstan's Greenhouse Gas emissions for the 2011 AEMR reporting period. Total greenhouse gas emissions (specifically fugitive emissions) are lower in 2011 compared to 2010 as a result of reducing the speed of the Newstan mine ventilation fan in 2011. A summary of the progress of Newstan Energy Savings Action Plan (ESAP) is included in **Appendix 7**.

Table 14. Newstan's Greenhouse Gas emissions for 2010 & 2011.

Emissions Summary (CO_2-eT)		
	2010 Total	**2011 Total**
Electricity	14,383.48	20,110.48
Diesel	2,027.62	3,927.43
Fugitives – CH_4	143,893.8	102,117.20
Fugitives – CO_2	2,817.878	1,438.23
Total GHG Emissions (tonnes)	**163,122.8**	**127,593.34**

3.15 PUBLIC SAFETY

The pit top area is fenced and monitored by security cameras and guards when required. A public safety plan for subsidence of roads tracks and trails has been developed in consultation with LMCC.

Subsidence cracks generated by the longwalls are rehabilitated promptly to reduce risk to the public. Signs warning of subsidence cracks and the potential for subsidence cracks in the area are installed and maintained.

3.16 REPORTABLE INCIDENTS

During the 2011 reporting period a total of five incidents were reported to the OEH (see the Annual Return in **Appendix 1** for further detail) which included the following.

3.16.1 LDP002 Total Suspended Solids (TSS) Exceedance – June 2011

At 1.00pm on Sunday, 12 June 2011 water was recorded discharging from the Final Pollution Control Dam (LDP002) at the Newstan Colliery. The discharge continued until 7.00am on Monday, 13 June 2011. Surface water discharge from LDP002 showed a TSS reading above the 50mg/L limit as set out in condition L2.4 of Newstan's EPL 395. The discharge was reported to the OEH Environment Line service, in accordance with Condition R2.1 of EPL 395, on Sunday, 12 June 2011.

Rainfall monitoring data provides that 106.45mm of rain fell at the Newstan Colliery in the 12 hours prior to the discharge from LDP002. This led to an exceedance of the capacity of the Final Pollution Control Dam, which led to a discharge with a TSS result of 1590mg/L.

On 12 April 2011, Newstan commenced earthworks associated with the expansion of the Final Pollution Control Dam (FPCD) to from a capacity of 18 ML to 50 ML. During the rainfall event of 11-13 June 2011, the FPCD expansion construction site was flooded which provided additional capacity which reduced the total volume of water discharged from LDP002.

The expansion of the Final Pollution Control Dam to a storage volume of 50 ML will provide sufficient storage to contain the potential run-off generated from a 10 year, 24 hour Annual Recurrence Interval storm event.

3.16.2 LDP002 Total Suspended Solids (TSS) Exceedance – July 2011

At 9.00pm on Friday, 22 July 2011 water was recorded discharging from the Final Pollution Control Dam (LDP002) at the Newstan Colliery. The discharge continued until 11.30am on Sunday, 24 July 2011. Surface water discharge from LDP002 showed a TSS reading above the 50mg/L limit as set out in condition L2.4 of Newstan's EPL 395. The discharge was reported to the OEH Environment Line service, in accordance with Condition R2.1 of EPL 395, on Friday, 22 July 2011.

Rainfall monitoring data provides that 191.0mm of rain fell at the Newstan Colliery in the 72 hours prior to the discharge from LDP002. This led to an exceedance of the capacity of the Final Pollution Control Dam, which led to a discharge with a TSS result of 884mg/L.

On 12 April 2011, Newstan commenced earthworks associated with the expansion of the Final Pollution Control Dam (FPCD) to from a capacity of 18 ML to 50 ML. During the rainfall event of 22-24 July 2011, the FPCD expansion construction site was flooded which provided additional capacity which reduced the total volume of water discharged from LDP002.

The expansion of the Final Pollution Control Dam to a storage volume of 50 ML will provide sufficient storage to contain the potential run-off generated from a 10 year, 24 hour Annual Recurrence Interval storm event.

3.16.3 Seepage Event from Road Side Dam

At 1.00pm on Saturday, 23 July 2011 water was identified seeping at an estimated flow rate of 5-10 litres per second from a concentrated point from under the Newstan Haul Road into LT Creek. The water was believed to have been seeping from the Road Side Dam. The seepage event continued until approximately 4.00pm on Saturday, 23 July 2011 when the water levels in the Road Side Dam were pumped down.

It is possible that water seepage from the Road Side Dam has entered a historical culvert that was bricked up and sealed in 1995 and found a seepage path out under the eastern side of the Newstan haul road and into LT Creek. Water samples were collected at the seepage point and from downstream at SP003 (EPL Point 3) and 20 metres upstream from the seepage point. The total suspended solids (TSS) reading of seepage into LT Creek was 388 mg/L. The TSS reading downstream at SP003 was 30 mg/L and upstream was 6 mg/L.

The water level in the Road Side Dam was pumped to the lowest possible level immediately following detection of the seepage event to LT Creek, at 1.00pm on Saturday, 23 July 2011. The seepage event continued until approximately 4.00pm on Saturday, 23 July 2011. The historical culvert was opened and pumped full of concrete on Tuesday, 26 July 2011, following excavation works which were completed on Monday, 25 July 2011. The Road Side Dam wall was also reinforced with clay material on top of the concrete filled historical culvert. No further seepage has been detected with the water level in the Road Side Dam maintained at low levels.

3.16.4 Technical Non-Compliance – LDP002 monitoring

The monthly analysis of discharge waters at LDP002 during July 2011 was not undertaken for calcium, magnesium, nitrogen (ammonia), phosphorus, potassium, silica, sodium and sulphur as required by condition M2.3 of EPL395.

In future external consultants, whom have collected the samples, will complete a chain of custodies (COC) form including all analytes detailed in full. This COC form will then be forwarded to Centennial Newstan for approval to prevent a recurrence of this non-compliance.

3.16.5 Technical Non-Compliance – Air Monitoring Requirements

Particulate matter (PM10) sampling was not undertaken at EPA Monitoring Point 15 – HVS1 (High Volume Air Sampler 1 – Hill Top location) at the frequency (every 6 days) as required by condition M2.2 of EPL 395. Total suspended particulates (TSP) sampling was not undertaken at EPA Monitoring Point 16 – HVS2 (High Volume Air Sampler 2 – Water Tank location near Fassifern Railway Station) at the frequency (every 6 days) as required by condition M2.2 of EPL 395.

Sampling was not undertaken at Monitoring Point 16 on 27 March 2011 due to a power outage and at Monitoring Point 15 on 5 October 2011 due to a power outage and on 17 October 2011 due to a blocked filter.

A 24 hour real-time PM10 and TSP monitor will be installed at the HSV2 (Water Tank) monitoring location in 2012 which will provide the data required in the event of equipment or electrical faults with the standard High Volume Air Samplers.

3.17 INDEPENDENT AUDIT

The next Independent Environmental Audit of Newstan Colliery in accordance with consent condition 8.9 (ii) is required to be completed prior to May 14, 2012. The Independent Environmental Audit report completed in 2009 is publically available on the Newstan Colliery website.

3.18 AGENCY REQUIREMENTS

3.18.1 Department of Environment, Climate Change & Water

Condition 3.3 Heritage Assessment and Management

There have been no works during 2011 that have necessitated the need for the Koompahtoo Local Aboriginal Land Council to be invited to collect artefacts in accordance with condition 3.3(d).

Condition 3.5 (d) Prevention of Soil Erosion

Incidents concerning Condition 3.5 (d) were reported to the OEH in accordance with the POEO Act and EPL 395, details are provided in Section 3.16 of this AEMR and Appendix 1.

The Newstan Colliery Erosion and Sediment Control Plan was updated in 2006 to encompass the SREA. In accordance with consent condition 3.5, the Erosion and Sediment Control Plan was sent to the Director General of Planning on 28 September 2006. Approval is yet to be received from DWE (NOW). Centennial Newstan have written to the DWE (NOW) to progress approval without success. The Revised Water Management Plan (Version 9) addresses stormwater management.

Condition 4.1 (e) Surface and Groundwater Management

An independent review of surface water monitoring results was conducted by AECOM and is provided in **Appendix 2**. As listed in Section 3.16 of this AEMR and **Appendix 1**, there were two exceedances of the discharge concentration limits during the reporting period.

A summary of discharges recorded by Newstan Colliery is provided in Table 9.

There was no irrigation of waste water on site.

Condition 5.3 Waste

During the 2011 period there was a slight increase in the total annual waste disposal from 187.21 tonnes in 2010 to 224.79 tonnes in 2011 as a result of the re-commencement of mining activities in July 2011.

Condition 6.3 Blast Management

No blasting was undertaken in 2011.

Condition 6.4 Noise Control

Noise monitoring was undertaken in February, May, August, and December in accordance with conditions 6.4 (a), (b), (c) and (d).

There were 17 noise complaints during the 2011 reporting period.

Condition 8.1 Meteorological

A weather station compliant with AS3580 (which superseded AS 2922) and AS 2923 was operational on site during 2011.

Condition 8.2 Surface and Ground Water

Monitoring at Newstan Colliery during the 2011 period was conducted as per the requirements of EPL395. Reportable incidents for 2010 are listed in Section 3.16 of this AEMR and Appendix 1 (the 2011 Annual Return).

On the 18th of March 2004, the then Department of Infrastructure, Planning and Natural Resources agreed to Newstan's request to provide surface and groundwater monitoring results on an annual basis in the AEMR, rather than on a six monthly basis as required by consent condition 8.2 (a)(iii).

Condition 8.3 (d) Ambient Dust Monitoring

Dust deposition monitoring and total suspended particulate monitoring was undertaken in accordance with Condition 8.3 (d). An independent review of the dust deposition monitoring data is provided by AECOM in Appendix 2.

There were two dust complaints during the 2011 reporting period.

3.18.2 NSW Office of Water (previously DWE)

Condition 4.1 (d) Surface and Ground Water Management

The Bywash Dam at Newstan Colliery was constructed around the year 1950. It is licenced under the *Water Act* 1912. This licence provides an allocation of 750 megalitres per year for coal mining purposes.

The Bywash Dam has not resulted in any down stream erosion and sedimentation. It has a large reno-mattress spillway to allow the safe passage of flood waters.

There is no extraction of water from exploration bores or groundwater monitoring bores except for groundwater monitoring purposes. All groundwater extraction bores at Newstan Colliery are currently licenced, or applications have been submitted for a request for licensing under the *Water Act 1912*.

3.18.3 Division of Resources & Energy (formerly Industry & Investment).

Condition 1.4 Security Deposits and Bonds

A security deposit has been lodged with the Division of Resources & Energy (DRE) in accordance with consent requirements.

3.18.4 Lake Macquarie City Council

There are no General Terms of approval from Lake Macquarie City Council

4. COMMUNITY RELATIONS

4.1 COMPLAINTS & ENQUIRIES

There were 19 community complaints regarding Newstan Colliery operations during the 2011 reporting period, including 17 which were received from the one resident. Table 15 provides the number of complaints received in 2011 and for the previous five years. **Appendix 6** details all complaints and enquiries received in 2011.

The Newstan community complaints and enquiries line is in place and contactable on 1800 247 662. Callers are directed to the Environment & Community Coordinator.

Table 15. Newstan Complaints Summary 2006 – 2011.

Record of Complaints	
	Total
2006	4
2007	3
2008	0
2009	0
2010	21
2011	19

4.2 COMMUNITY LIASON

A Community Consultative Committee (CCC) has been in place at Newstan since 1999. The Committee meets quarterly to review the environmental performance of the mine and other relevant matters. Minutes of the meeting are kept and distributed by the independent Chairman. The minutes are also available on the Centennial Newstan website. Meetings of the Newstan CCC were held in March, June, August & November during the reporting period.

Newstan Colliery is supportive of its local community and seeks opportunities to provide assistance to community groups whenever possible.

During the reporting period, Centennial Newstan supported the Lake Macquarie "Paddlefest" event and employees were involved in the Speers Point Australia Day celebrations. Newstan also provided assistance to the local community as per the following;

- In 2011 garden beds were constructed by Newstan employees at the entrance to the Blackalls Park Public School.
- In 2011 the garden beds were planted out Newstan employees at the entrance to the Blackalls Park Public School with the school children involved.
- Newstan employees attended the Centennial Coal display at the Newcastle Show during 2011.
- Organised a Clean Up Australia Day event for Centennial employees for Miller Road at Fassifern.
- Newstan arranged for an ongoing monthly clean-up of Miller Road.

5. REHABILITATION

5.1 BUILDINGS

No additions to buildings were undertaken during the report period at Newstan. No buildings were removed during the reporting period.

5.2 REHABILITATION OF DISTURBED LAND

Re-contouring of the old reject dumps in the NREA continued during the reporting period, with a total of 3.0 hectares rehabilitated. Capping of the de-commissioned NREA tailings dam also continued. The NREA tailings dam was 53% capped at the end of the reporting period. These works are planned to continue in the 2012 reporting period.

Table 16 displays a rehabilitation summary for the Newstan Colliery.

Table 16. Newstan rehabilitation summary.

	Area Affected / Rehabilitated (Hectares		
	To date	**Last Report (2006)**	**Next Report (estimated)**
A: Mine Lease Area			
A1 Mine Lease(s) area	**2,604.9**		
B: Disturbed Areas			
B1 Infrastructure area	64.84	66	64.84
B2: Active Mining Area	0	0	0
B3: Waste emplacements		8.3	
B4: Tailings emplacements	22.4	8.24	25
B5: Shaped waste emplacement	8.0	0	0
All Disturbed Areas	95.24	82.54	89.84
C: Rehabilitation Progress			
C1 Total rehabilitation area	7.63 (since 06)	6	9.63
D: Rehabilitation on Slopes			
D1 10 to 18 degrees	3	6	
D2 Greater than 18 degrees			8.0
E: Surface of Rehabilitated Land			
E1 Pasture and grasses		3	
E2 Native forests / ecosystems		3	8.0
E3 Plantations and crops			
E4 Other			

5.3 REHABILITATION TRIALS AND RESEARCH

No rehabilitation trials or research was undertaken at Newstan Colliery during the reporting period. Rehabilitation works undertaken to date on the NREA and SREA have proven successful therefore negating the need to undertake rehabilitation trials.

5.4 DEVELOPMENT OF FINAL REHABILITATION PLAN

A Rehabilitation Strategy document was prepared for Newstan Colliery and submitted to the DPI (now the Division of Resources & Energy) in March 2007. DRE approved the Newstan Rehabilitation Strategy in February 2011.

6. ACTIVITES PROPOSED IN THE NEXT AEMR

Planned environmental activities for next year are outlined in Table 17.

Table 17. Planned environmental activities for 2012.

Activity	Target Completion Date
Complete the expansion of Final Pollution Control Dam	December 2012
Commence installation of LDP002 Flocculation Plant	December 2012
Rehabilitation of NREA	Ongoing
Rehabilitation of NREA TSF	Ongoing

Appendix 1: 2011 Annual Return EPL 395

Appendix 2: AECOM Report on Surface and Dust Deposition Monitoring - 2011

Appendix 3: Hunter Eco Flora Monitoring Report

Appendix 4: RPS Report - Translocation of Tetratheca Juncea within SREA.

Appendix 5: Plan NS2731

Appendix 6: 2011 Complaints & Enquiries

Newstan Complaints Summary for 2011.

Date	Method	Summary of Complaint	Newstan Response
30/3/11	Phone Call	Phone call to Newstan from OEH stating that OEH had received a complaint in regard to dust from Newstan operations.	Newstan sent an email to OEH on 31/3/11 requesting further information on the complaint to allow Newstan to complete an investigation. No response was received from OEH.
17/5/11	Phone Call	Complaint lodged regarding noise & vibration of a home in Fassifern, which complainant believes may be from Newstan operations.	Newstan Washery had removed sheeting on eastern side of plant during the recent shutdown - this gap was open at the time of the complaint. Sheeting was re-installed on the eastern side of the Newstan Washery on 21/5/11. Resident was informed.
8/6/11	Phone Call	Complaint received from a Fassifern resident whom had experienced vibration during the night.	Newstan personnel visited the residence on 9/6/11. Newstan has engaged a consultant to conduct a noise assessment of the Newstan Washery and around Fassifern (including at the complainants home) to determine the type of low frequency noise and the potential source of the noise within the Washery. This may then allow Newstan to implement mitigating measures at the source. Newstan has also committed to keeping the resident updated on progress.
25/8/11	Email	Complaint from a Fassifern resident regarding night-time noise from Washery and Rail Loop.	Newstan responded to complainant on 25/8/11. VIPAC (noise consultants), Schenck (screen manufacturers) & Washery personnel have commenced investigations to determine noise mitigation options for the Newstan Washery. A noise mitigation investigation had also commenced with Southern Short-haul Rail (Rail Loop noise)
5/9/11	Email	Complaint from a Fassifern resident regarding night-time noise from Washery and Rail Loop.	Newstan responded to complainant on 7/9/11 (on Env. Coordinator's return to site). The Newstan Washery ceased night time operations between 11pm and 6am on Monday 5/9/11 until a monitoring program for temperature inversions is put in place. Noise mitigation investigations were continuing with Southern Short-haul Rail.

7/9/11	Email	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 7/9/11. Outlined noise mitigation measures for the rail loop.
13/9/11	Phone	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 13/9/11. Outlined noise mitigation measures for the rail loop.
19/9/11	Phone	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 19/9/11. A meeting was scheduled to be held at Newstan with the Mine Manager on 11 October 2011.
23/9/11	Email	Complaint from a Fassifern resident regarding noise from the Washery.	Newstan responded to complainant and confirmed that a meeting was scheduled to be held at Newstan with the Mine Manager on 11 October 2011.
28/9/11	Email	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 4/11/11 (on Env. Coordinator's return to site).
10/10/11	Email	Complaint from a Fassifern resident regarding night-time noise from Washery and Rail Loop.	Meeting held with complainants at Newstan at 8am on 11/10/11. Attendance from Terry O'Brien, David Guy, Neil Drakeford & Jeff Dunwoodie. Current train loading and Washery noise mitigation measures were outlined by Newstan. Long-term noise mitigation measures were also discussed. A site inspection of the complainant's home was completed following the meeting.
24/10/11	Email	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 24/10/11. Confirmed to complainant that three new locomotives were scheduled to arrive at Newstan in April 2012.
7/11/11	Phone	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 8/11/11.
7/11/11	Phone	Complaint regarding coal dust deposited on the roof of a local home.	Site inspection by Newstan personnel on 8/11/11 and complaint resolved with resident.
20/11/11	Phone	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 21/11/11. Confirmed to complainant that three new locomotives were scheduled to arrive at Newstan in April 2012.
30/11/11	Email	Complaint from a Fassifern resident regarding night-time noise from Washery and Rail Loop.	Newstan responded to the complainant on 30/11/11. Provided update on noise mitigation measures being implemented at Newstan.
9/12/11	Email	Complaint from a Fassifern resident regarding night-time Rail Loop operations.	Newstan responded to the complainant on 9/12/11.
16/12/11	Email	Complaint from a Fassifern resident regarding noise from the Washery.	Newstan responded to the complainant on 16/12/11. Discussions and investigations are ongoing between Newstan and the complainant

Newstan Enquiries Summary for 2011.

Date	Method	Summary of Enquiry	Newstan Response
22/2/11	Email	Email forwarded by Newstan CCC Chairman from community member requesting that Newstan hold a community forum for the Main West Modification (Mod 4).	Enquirer contacted on 22/2/11 with an offer for Newstan personnel to be made available to attend a meeting of the LT Creek Sustainable Neighbourhood Group and provide an overview presentation of the project. Individual would raise this item at next LT Creek SNG meeting on 3 March 2011 to determine if the presentation can be included on the agenda of a future SNG meeting (held on 19/4/11).
22/2/11	Email	Email to Mine Manager and General Manager Operations (North) requesting a site inspection at Newstan for CCC members and for Newstan to hold a community forum for the Main West Modification (Mod 4).	Email sent to Newstan CCC Chairman on 23/2/11 confirming a site inspection for 22 March 2011, following the CCC meeting. The email also informed the Newstan CCC Chairman that a response had been provided regarding the request for a public forum for the Main West Modification (Mod 4). Refer to above enquiry dated 22/2/11.
18/4/11	Phone Call	A resident requested a copy of the Newstan Lochiel Project area plan that appeared in the Newcastle Herald on 6/4/11.	Plan was mailed to local resident on 19/4/11.
19/4/11	Email	Email request for copies of the Newstan presentations provided at a meeting with LT Creek SNG members on 19/4/11. Maps were also requested.	Presentations mailed to enquirer on 21/5/11. Newstan did not provide the water management map for document control purposes and instead referred the enquirer to the LT Creek Catchment Water Quality Management Plan available from the LMCC website which includes a number of plans showing the Newstan water management system.
19/4/11	Letter	Question from a Fassifern resident were tabled at a meeting between Newstan and the LT Creek SNG members on 19/4/11. Questions were in relation to dust emissions, the Final Pollution Control Dam (FPCD) expansion and increasing discharge from LDP001.	A letter responding to the questions raised was provided on 19/5/11.
19/4/11	Letter	Question from a resident were tabled at a meeting between Newstan and the LT Creek SNG members on 19/4/11.	A letter responding to the questions raised was provided on 19/5/11.

		The questions were in relation to Newstan's water quality monitoring program and the Main West Project.	
7/6/11	Email	A number of questions from the group "No Open Cut Mine for Awaba" (NOCMFA) in relation to the Newstan Lochiel Project submission to the Department of Planning on 25 March 2011.	A letter response was provided to the NOCMFA group on 6/7/11.
22/6/11	Letter tabled at Newstan CCC meeting by Robyn Charlton on behalf of David Kirkness (Fassifern resident).	Request for a visit to inspect the Final Pollution Control Dam (FPCD) construction site. Question regarding insurance in the event of a dam wall failure.	Newstan site inspection completed on 7/7/11 attended by Robyn Charlton & David Kirkness. Inspection completed Final Pollution Control Dam (FPCD) construction site. On 14/7/11 a letter was provided to Robyn Charlton in relation to insurance claims arising from a potential failure of the FPCD.
24/6/11	Email	Requested copies of the Newstan CCC presentations of 22 June 2011 and a site inspection for Newstan CCC.	Newstan CCC presentations were provided on 24/6/11 as requested. Newstan site inspection completed on 7/7/11 attended by Robyn Charlton, Hannah Gissane, John Milligan, David Kirkness & Matt Stackhouse. Inspections completed of LDP001, Final Pollution Control Dam (FPCD) & Southern Reject Emplacement Area (SREA).
7/7/11	Email	Questions following site inspection regarding water management and other issues.	Response provided by email on 25/7/11.
23/8/11	Tabled at the Newstan CCC meeting by Robyn Charlton.	Concerns raised by a Fassifern resident regarding vibration of their home at night. Resident contact details were provided as well as time and dates when vibration had been noticed.	Newstan contacted the resident on 9/9/11and informed them that the washing of coal on night shift had stopped on 6/9/11. Washing of coal will not be undertaken at night until noise mitigation measures are implemented.
23/8/11	Tabled at the Newstan CCC meeting by Robyn Charlton.	Enquiry at the Newstan CCC regarding the preservation of the proposed Awaba Nature Reserve.	This issue was addressed in the Main West Response to Submissions document completed in September 2011. The impacts of the proposed Main West Mining Project on the proposed Awaba Nature Reserve are negligible and there are no requirements (from OEH or DP&I) for Newstan to provide offsets.
23/8/11	Tabled at the Newstan CCC meeting by Robyn Charlton.	Request for Newstan to conduct portable dust monitoring in the Fassifern community. This request was made at the Newstan CCC meeting on 23/8/11.	Robyn Charlton has provided a list of residents interested in the dust monitoring. Newstan arranged for the installation of particulate dust gauges in December 2011.

6/9/11	Email / letter	Email / letter received requesting a copy of an incident report following Mr Moors cardiac arrest at the Newstan Office in March this year.	Newstan provided a letter in response to the Newstan CCC Chairman on 14/9/11.
14/11/11	Phone Call	Enquiry from a resident in regard to proposed mining (first workings) under Olney St. at Awaba.	Newstan Environmental Coordinator and Technical Services Manager visited the resident on 15/11/11 to discuss the mine plan and subsidence.
17/11/11	Phone Call	Enquiry from a resident in regard to proposed mining (first workings) under Olney St. at Awaba.	Newstan Environmental Coordinator and Technical Services Manager visited the resident on 18/11/11 to discuss the mine plan and subsidence.

Appendix 7: 2011 Energy Savings Action Plan

Site name : Newstan Colliery											
Project No.	**Measure Description**	**Cost to Implement $**	**Energy savings GJ p.a.**	**Greenhouse gas reduction tCO2 p.a.**	**Winter peak demand reduction kVA**	**Summer peak demand reduction kVA**	**Energy cost savings $ p.a.**	**Peak demand cost savings $ p.a.**	**Maintenance or other cost savings $ p.a.**	**Payback period years**	**Completion Date**
Energy consumption should be reported in GJ and can be calculated using the Energy Savings Calculator below.											
Projects implemented since last report											
1	Automatic "On Demand"control of mine water booster pumps	5000	626	185	9	9	7490	7	1290	0.57	Jan-09
2	Set up Auto control of Stackout conveyor and Sizers to stop when no coal	5000	4147	1135	0	0	49637	0	5000	0.09	Mar-09
3	Reduced main vent fan speed during care & maint times	5000	9479	2598	176	176	113705	95	4200	0.04	Feb-09
4	Replace fan worn inlet cone and repair cracks in inlet ducting	90000	14800	4049	82	82	177132	45	2100	0.50	Aug-09
5	PLC control of washery external lighting systems	15000	243	66	4	4	2900	3	10000	1.16	Mar-09
6	Regular inspection and repair of compressed air line leaks	15000	2416	661	45	45	28962	242		0.51	Jul-09
7	Relocate Air Compressor(s) to Awaba	150000	3240	1009	64	64	40950	350	32500	2.03	Jul-11
8	**Replacement of air pumps with electric pumps**									Unknown	90% complete
9	**Rationalised power usage and decreased load**									Unknown	Completed-removed old hot water, rationalised UG air pumps and automated system to pump only when required.
10	**Replaced hot water systems with energy efficient heat pumps.**									Unknown	Completed

Appendix 8: NS2541 – Surface Water Monitoring Locations

Appendix 9: NS2677 – Dust Monitoring Locations