AshtonCoal

ASHTON COAL OPERATIONS PTY LIMITED

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT 2004 / 2005

AshtonCoal

ASHTON COAL OPERATIONS PTY LIMITED

Name of Mine:	**Ashton Coal Mine**		
Titles / Mining Leases:	**ML1529 and ML1533**		
MOP Commencement Date:	**25/08/2004**	MOP Completion Date:	**25/08/2009**
AEMR Commencement Date:	**02/09/2004**	AEMR Completion Date:	**01/09/2005**
Name of Leaseholder:	**White Mining (NSW) Limited & ICRA (Ashton) Pty Ltd**		
Name of Mine Operator (if different):	**Ashton Coal Operations Pty Ltd**		
Reporting Officer:	**Mike Chapman**		
Title:	**General Manager**		
Signature:	.....		
Date:	3-3-06		

3 March 2006

TABLE OF CONTENTS

1.0 INTRODUCTION

The Ashton Coal Project (ACP) is located approximately 14km north-west of Singleton near the village of Camberwell (refer Page 9). During the period of this Annual Environmental Monitoring Report (AEMR), the project has progressed beyond the majority of construction activities into operational activities.

The project currently consists of an open cut mine and associated coal preparation plant, stockpiling, administration buildings, workshops, stores, bathhouse facilities and car parking. Development of the underground mine first workings is expected to commence in late 2005 with longwall installation late in 2006.

In March 2005, the mining contract with Henry Walker Eltin was terminated and the mining is now conducted and managed by Ashton Coal Operations Pty Limited (ACOL) as an owner operator.

This report has been developed in accordance with the conditions of Environmental Protection Licence No. 11879 and all relevant development consent conditions. The structure of this report is based on the document "*Guidelines and Format for Preparation of Annual Environmental Management Report*", Department of Mineral Resources, Document No. EDG03 MREMP Guide V2 dated December 2002.

The ACP is owned by Felix Resources Limited (60%), Itochu Corporation (20%) and International Marine Corporation Group (20%) and operated by ACOL.

This report covers the period 2 September 2004 to 1 September 2005. In accordance with Condition 9.3 of the Development Consent, Ashton has consulted with the Director-General of the Department of Infrastructure Planning and Natural Resources in relation the preparation of this report.

1.1 CONSENTS, LEASE AND LICENCES

An interim Mining Operations Plan (MOP) was submitted to the Department of Mineral Resources (DMR) in August 2003, prior to the commencement of construction activities on site. A draft MOP that addressed the life of the open cut mine was submitted to the Department of Mineral Resources (DMR) in July 2004. The MOP is now approved and has subsequently been modified for inclusion of the increased height of the Eastern Emplacement Area and the removal of the Western Emplacement Area from the MOP (January 2005). In the near future, a further revised MOP to include the underground operation will be submitted for approval to DPI-MR.

The following table provides a summary of the status of all leases, licences and approvals obtained by Ashton.

LEASES, LICENCES AND APPROVALS

Statutory Authority	Type of Approval	Grant Date	Expiry Date
Department of Mineral Resources	Mine Operations Plan	09/12/2004	9/12/2009
	Coal Lease ML1533	26/2/2003	26/02/2024
	Coal Lease ML1529	17/9/2003	11/11/2012
	Exploration Lease EL4918	17/9/1999	17/12/2005
	Exploration Lease EL5860	14/03/2004	21/05/2005
Department of Infrastructure, Planning and Natural Resources	Development Consent (DA No. 309-11-2001-i)	11/10/2002	11/10/2023
	Modification to Condition 6.34 to allow EPA to specify noise criteria in Table 5	15/10/2003	
	Modification under S96(2) to allow increase in the RL of the Eastern Emplacement Area to 135mRL along with the removal of the Western Emplacement Area and associated infrastructure.	27/01/2005	
Environment Protection Authority	Licence No. 11879	02/09/2003	Licence held under the Protection of the Environment Operations Act (PEOA)
	Variation to Condition 6.7 (Noise limits) to allow establishment of Eastern Environmental Bund	10/11/2003	09/03/2004
Department of Infrastructure, Planning and Natural Resources	Water Licences Including 20AL201564 - Glennies Creek 122ML 20AL203056 - Glennies Creek 4ML 20AL200568 - Glennies Creek 3ML 20AL201311 - Glennies Creek 3ML 20AL201083 - Glennies Creek 3ML 20AL200508 - Glennies Creek 3ML 20AL201624 - Hunter River 3ML 20AL201625 - Hunter River 585ML 20AL203106 - Hunter River 15.5ML		

LEASES, LICENCES AND APPROVALS			
Statutory Authority	**Type of Approval**	**Grant Date**	**Expiry Date**
	20SL044434 - Bowmans Creek 366ML 20SL042214 - Bowmans Creek 14ML Part 3A permit No P1819 to install two power poles near Bowmans Creek Permit No CW802609 to construct levee bank on Bowmans Creek	 05/12/2003 08/09/2003	 05/12/2004 07/09/2008
National Parks and Wildlife Service	AHIMS Permit No 1591 to collect Aboriginal artefacts in area north of New England Highway	21/07/2003	

Copies of all licences and approvals have been provided to government agencies and Singleton Council and are available for inspection at the ACOL site office.

The Minister Assisting the Minister for Infrastructure and Planning (Planning Administration) modified the Development Consent on 15 October 2003 to allow EPA to specify noise limit criteria for the construction of the Eastern Environmental Bund. The Environment Protection Licence (EPL) No 11879 was modified on 10 November 2003 to incorporate revised noise limit criteria for a three month period until 9 March 2004.

An application pursuant to section 92(2) of the *Environmental Planning and Assessment Act (1979)* was submitted to DIPNR in August 2004 to modify the Development Consent by removing the Western Emplacement Area and raising the Eastern Emplacement Area by 10 metres. This was approved on 27th January 2005.

1.2 MINE CONTACTS

Positions of responsibility for operations and environment are detailed hereunder:

KEY MINE CONTACTS			
Area of Responsibility	**Name**	**Title**	**Contact Number(s)**
General Manager	M. Chapman	General Manager	(02) 6576 1111
Open Cut Mine	B. Chilcott	Mining Manager	(02) 6570 9128
CHPP	P. Davis	Declared Plant Manager	(02) 6570 9148
Environment	P. Horn	Environmental Officer	(02) 6570 9125
Environmental Contact Line			(02) 6576 1830

ACOL's General Manager, Mr Mike Chapman, has overall responsibility for the operational and development phases of the project and statutory manager for the open cut coal mine. Mr Brian Chilcott is Mining Manager for the open cut operation. Mr Paul Davis is CHPP Manager and Declared Plant Manager. Mr Peter Horn is responsible for day-to-day environmental management and is the nominated Environmental Officer for the project. ACOL's Board of Directors has ultimate responsibility for Ashton's environmental performance.

1.3 ACTIONS REQUIRED AT AEMR REVIEW

The AEMR review included a site inspection on 13 January 2005. During the site inspection, several issues were identified that required attention, these are detailed in the following table.

AEMR Review			
#	Issue	Recommended Action	Comment
1	AEMR Table 1	Production and waste schedule to be provided in AEMR	See Section 2.4.2
2	ROM Dump hopper	Site inspection showed excessive amount of fugitive dust during loading of the hopper. Dust suppression system to be installed.	Modifications are being made to the hopper spray system as part of the ROM stockpile spray system which is now installed.
3	Environmental Bund 6	Environmental Bund 6 has adequate vegetation coverage, although limited rainfall has resulted in plant dieback. Ongoing maintenance will be required to maintain vegetation coverage for stabilisation and aesthetic issues.	Maintenance implanting of tubestock has occurred. Drip watering of trees has been ongoing. Some seed spraying has occurred in areas where revegetation has failed. Galenia spraying has occurred and the bund will be a part of a rolling program of weed control on the site.
4	Hydrocarbon Management	Inspection showed poor housekeeping of hydrocarbons. Management and maintenance of hydrocarbons to be improved.	New fuel farm installed all site fuels are stored in this area. CHPP oil storage reduced and bunded areas used for remainder.
5	Spillways	The spillways from the process water dam and Lake Topliss are to be designed as per Reference 1	The process water Dam spillway has been rock-lined and reshaped. Lake Topliss is in Strip 3 and will be mined in the near future.
6	Equipment storage	Review and consolidation of equipment laydown areas to be conducted in consultation with DPI – MR.	Laydown areas have been consolidated and are inspected weekly by the Environment Officer to ensure inappropriate materials are not stored in laydown areas.
7	Weeds (*Galenia spp.*) on rehabilitation	Undertake weed control on the rehabilitation areas where required.	A control program has commenced and will be ongoing.
8	Drainage on coal Haul road	Review drainage of the Coal Haul Road following rainfall and implement controls if required.	Completed. Ongoing review.

AEMR Review			
#	Issue	Recommended Action	Comment
9	Rehabilitation of EEA – Eastern Section	An eastern section of the EEA has been identified by the company as having topsoil placed on unacceptable slopes. The topsoil will be removed to enable reshaping of the profile.	Completed
10	Rehabilitation of EEA – Southern Section	Ashton to review the condition of the vegetation on the southern section of the EEA and implement contingency strategies if required.	Has been planted with tubestock, may still need some further grass seeding, this will be done once *Galenia spp.* treatment is completed.
11	Dam 5/6	Ashton to ensure the dam has not triggered the Dams Safety Committee criteria for a prescribed dam	ACOL believe that Dam 5 / 6 will not trigger the Dam Safety Committee criteria for a Prescribed Dam due to low water levels above RL and no down-gradient residences or other at-risk critical infrastructure. ACOL will commission a risk assessment to verify this before the next AMER.
12	Rehabilitation of Noise Bund on Glennies Creek Road	Ashton to implement mitigation strategies to achieve an adequate vegetation coverage to achieve stabilisation and aesthetic principals.	This is underway as part of the establishment of the Glennies Creek Road Environmental Bund.
13	Drainage at Noise Bund on Glennies Creek Road	Ashton to design drainage plan to manage runoff that is ponding on the southern side of the bund.	Singleton Shire Council and ACOL have determined a course of action to deal with the ponding, a design and cost has been received from SSC. The drain will be installed as soon as only clean water runoff is collected in that area (ie following rehabilitation of the bund).

1.4 INDEPENDENT ENVIRONMENTAL AUDITING

ACOL sourced an Independent Environmental Audit in compliance with Consent Condition 8.8 and 8.9 one year after the commencement of construction. This audit was reported in the 2003-04 AEMR, the next audit will be due in June 2006.

The recommendations arising from the audit included the following:

Independent Compliance Audit		
Audit Recommendation	**Proposed Action**	**Status**
The interim storage areas for fuels, oils and used batteries were not in compliance with consent conditions with most drums not on bunded pallets or within a bunded area.	The temporary fuel storage facility at ACP comprises a self-bunded tank and was in compliance. Temporary oil storage at ACOL comprises an earthen bunded area and is in compliance.	A new concrete bunded area for fuel and oil storage at ACOL has been completed and is now operational. All servicing of CHPP plant is now undertaken at the ACOL workshop. Oils at the CHPP are now stored in temporary bunded containers, oil storage quantities have been reduced at the CHPP such that additional bunding is no longer required.
The interim use of workshops at CHPP and ACP, prior to permanent workshop establishment is not in compliance with consent conditions. There was no oil / water separators installed at these locations.	Oil / water separator at ACOL was constructed prior to the audit, but was awaiting power supply. Oil / water separator at CHPP workshop is not required due to the movement of bulk hydrocarbon handling activities to the ACOL workshop area.	Now fully operational. Not required.
Further reinforcement should be undertaken to ensure that in addition to being aware of consent condition requirements, operators are aware of procedures to be used to minimise adverse environmental performance. An operator questioned during the audit at the CHPP was unaware of a procedure for determining whether loading from the raw coal stockpile	Environmental awareness training at CHPP to be upgraded.	All inductions now incorporate environmental awareness training.

Independent Compliance Audit		
Audit Recommendation	**Proposed Action**	**Status**
should cease during windy conditions if dust emissions are excessive		
Large bare areas at the CHPP were generating dust during the audit as a result of wind gusts, in between watering by the tanker. Areas not in use should be revegetated as soon as possible.	Some of these areas have been revegetated, others remain bare due to occasional use or planned near future use. The use of a small water cart on-sit has reduced the dust emissions from these areas.	Ongoing controls required.
Raw coal stockpiles do not have an automatic spray system. Dust suppression is via cannons and sprays on water tankers. This needs to be rectified as soon as possible to minimise potential dust emissions.	Automatic water spray system to be installed on the raw coal stockpile.	Currently underway.
Blasting does not occur if wind speeds are > 10 m/s. This is considered to be too high a limit and a figure of 6 m/s would be more acceptable. The blasting limit wind speed criteria should be reviewed.	The Blasting and Vibration Management Plan is to be revised to ensure that blasting does not occur when the wind is emanating from the NW sector at greater than a pre-determined speed.	Completed. Further changes to be considered in October 2005.
Efforts should be made to further increase the extent of recycling. Cardboard and paper is one waste stream that could be easily recycled.	Paper / cardboard recycling bins to be placed at ACOL office, CHPP and ACOL Mine office.	Completed Administrative processes are being established to record quantities and to track disposal of waste removed from site.
A schedule or other means of identifying when items in the Development Consent are triggered or require action, would facilitate management of this process.	The Development Consent contains an inordinate number of administrative requirements for reports to numerous regulatory agencies.	Schedule of environmental reporting requirements developed by end 2004. Completed

Figure 1: Ashton Coal Project

2.0 OPERATIONS DURING THE REPORTING PERIOD

2.1 EXPLORATION

Mining Lease 1533

- Open Cut - 55 holes (5 cored + 50 open holes)
- Underground - 4 hole (2 core + 2 open holes)
  - 3 in-seam long holes

Exploration Licences 5860 & 4918

- Area being assessed - 16 open holes

2.2 LAND PREPARATION

The area of land preparation is reduced from the preceding AEMR reporting period as clearing was only conducted for the extension of the open-cut to the west and for the establishment of the Arties Pit and Glennies Creek Road Environmental Bund.

All Aboriginal artefacts in the area north of the New England Highway were collected in accordance with AHIMS Permit No 1591 prior to the disturbance of the surface of the land and were reported in the last AEMR reporting period.

Each area was inspected in accordance with the Flora and Fauna Management Plan prior to clearing. Stags suitable for fauna habitation were to be collected for placement in the Southern woodland and the Eastern Emplacement Area. Stag collection occurred in the 2003-04 reporting period but no stags were collected in this reporting period due to a lack of stags in the areas cleared.

Topsoil was collected and stockpiled in accordance with the Soil Stripping Management Plan apart from some excessive stockpiling near the Arties Pit where soil was stockpiled at heights above optimum levels (<3m high).

2.3 CONSTRUCTION

The majority of site construction was completed in the 2003-04 AEMR reporting period. Some additional construction works were conducted during this period as follows:

- Arties Pit and associated haul road adjacent to Glennies Creek Road;
- Rehabilitation related civil works on the Eastern Emplacement Area (drains, drop structure etc);
- Sedimentation Detention Ponds and Diversion Drains;
- Glennies Creek Environmental Bund was commenced;
- Fuel storage and distribution facilities for the open cut;
- Connection of water network to Glennies Creek Coal Mine for water sharing; and
- Commencement of construction pad for underground portals and associated infrastructure.

Further construction activity related to the underground mine will commence in the next AEMR reporting period.

2.4 MINING

2.4.1 Estimated Mine Life

The life-of-mine MOP for the Open Cut Mine anticipates that open cut mining will be completed by mid 2009.

The underground mine is planned for commencement in late 2005 with longwall commencement early in 2007, with an expected mine life of 18 years.

2.4.2 Mine Production and Mining Constraints

The MOP anticipates the removal of approximately 60 Mbcm of overburden and the extraction of 14 Mt of Run of Mine (ROM) coal at a rate of 2.4 Mtpa.

Open cut mining operations commenced on 17 January 2004 and are limited to the hours of 7am to 10pm Monday to Saturday and 8am to 10pm on Sundays and public holidays by conditions defined in the Development Consent and EPL. Water cart operations, CHPP and maintenance activities are permitted 24 hours per day. Mining equipment includes:

- 2 (No) Liebherr 994B excavators
- 1 (No) Liebherr 994 excavator
- 7 (No) Komatsu 630E trucks
- 3 (No) Komatsu 730E trucks
- 2 Cat 789 trucks
- 2 (No) Drilltech DK45 drill rig
- 3 (No) Addril Atlas Copco grasshopper drill rigs
- 1 (No) Komatsu PC1100 excavator
- 4 (No) D10 bulldozer
- 2 (No) Cat 777 water trucks
- 1 (No) Cat 16H grader
- 1 (No) Cat 14H grader
- 1 (No) Komatsu WA 600 wheel loader
- 2 (No) Cat 994 wheel loaders (ACP)
- 1 (No) Komatsu 475 dozer (ACP)
- 1 (No) Komatsu PC1000 excavator
- 4 (No) Cat 777D trucks
- 1 (No) Cat D8R dozer
- 1 (No) Cat D9R dozer

Permanent workshop, office and refuelling facilities are located at the western limit of the proposed open cut, in the vicinity of the Clean Coal Stockpile and Train Loading Infrastructure.

Mining activities have concentrated on extending the Barrett Pit (a box cut) on the eastern extremity of the open cut. The box cut has been extracted to full depth and the in-pit emplacement of excavated overburden has commenced. All overburden extracted from the initial box cut has been placed in the Eastern Emplacement Area.

The Arties Pit is adjacent to the New England Highway on the south-western boundary of the open-cut site. The primary reason for the accelerated development of this pit is to provide access to the Pikes Gully seam in the south-western highwall to allow the development of portals and headings for the underground mine.

Operations in the reporting period and predictions for the next reporting period are detailed in the following table.

Cumulative Production

	Start of Reporting Period	At end of Reporting Period	Estimate for end of next Reporting Period
Topsoil Stripped	72,600	81,200	90,000
Topsoil used/spread	2,750	17,000	25,000
Waste Rock	6,038,000	15,250,000	25,000,000
Coal	320,000	1,563,000	3,450,000
Processing Waste	80,000	410,000	900,000
Product Coal	280,000	1,410,000	3,100,000

Significant mining constraints currently experienced are as follows:

- The limited amount of external dumping capacity requires that the initial box cut be excavated to full depth in the smallest practical mine envelope. This requires a concentration of mining equipment in a small mining area and is currently impacting equipment productivity;
- The box cut is located on the eastern limb of the Camberwell Anticline, with seams dipping at up to 18 degrees;
- The close proximity of the village of Camberwell requires careful management of operations when the prevailing winds emanate from the northwest sector. By developing the southern side of the emplacement during suitable weather conditions in March – May, alternate dumping positions were able to be maintained at lower levels on the northern side of the Eastern Emplacement Area to ensure compliance with air quality and noise criteria during the winter months when weather conditions were unfavourable. The availability of in-pit dumping is expected to improve this situation in the near future; and
- Blasting is constrained by the proximity of the New England Highway, Main Northern Railway, Glennies Creek Road and the village of Camberwell, which define the times of blasting and the Maximum Instantaneous Charge that can be utilised. Ashton therefore requires blast designs that contain the level of ground vibration emanating from the blast and direct vibration away from sensitive receptors. There has been an improvement in blasting results throughout this reporting period.

2.4.3 Changes in Mining Equipment or Method

The original approved height of the Eastern Emplacement Area was limited to RL 125 in accordance with the conditions of the Development Consent, but an application pursuant to Section 92(2) of the *Environmental Planning and Assessment Act (1979)* to lift the height of this emplacement area by 10 metres to RL 135 was submitted to DIPNR and approved on 27th January 2005. The modification allowed:

- The removal of the Western Emplacement Area;
- Avoided the need for almost 500,000 truck movements through the underpass beneath Bowmans Creek Bridge on the New England Highway and the construction of this haul road;
- The visual impacts to be concentrated a smaller area;
- A reduction in the number of residences affected by noise and dust, and
- Protection of the Oxbow Aboriginal Heritage site from impact.

HWE trialled the viability of Through Seam Blasting within the operation with varying degrees of success. It was predicted that this trial would increase the productivity of mining equipment, as it removed the need for operations on the steeply dipping coal seams. Electronic initiations of blasts were also considered to control ground vibration. Since ACOL has assumed control of mining operations, blast vibration and overpressure levels have improved markedly due to improved blast design. Modifications in approach to mining and equipment management has allowed the continuation of mining the seams individually. This methodology provides advantages in processing and provides greater controls over mine output, there are disadvantages in reliance on timely drill and blast and the need for more blasts.

2.5 MINERAL PROCESSING

The CPP is designed for a throughput of 400tph and incorporates a dense medium circuit and a fines spiral circuit. The associated materials handling is designed for 800tph and includes a rotary breaker on the ROM coal side and a skyline conveyor on the product coal side. Product coal is recovered through a series of coal valves and conveyed to a Train Loading Station mounted over a dedicated rail siding. It commenced operation on 11 April 2004.

The CHPP is operated by Australian Coal Processing and is currently manned for 24 hour per day operation on a five day per week basis.

The CHPP processed 1.74 Mt ROM of coal during the reporting period to produce 1.02Mt of semi-soft and thermal product coals.

2.5.1 Changes or Additions to Process or Facilities

Modifications are proposed to the fine coal circuit to reduce the quantity of ash currently retained within the fine coal. These changes will be on-going.

2.5.2 Recovery/Dilution

The amount of dilution in the coal has varied consistently with the trialling of through seam blasting techniques in the open cut. Additional operational processes are being implemented in the open cut to reduce the amount of dilution included in the ROM coal.

2.5.3 Coal Treatment Plant Capacity

Following an initial commissioning phase, the CHPP is now operating at its design throughput rate of 400 tph. The addition of an another CHPP module to process the underground product is expected to increase capacity to 1000tph

2.5.4 Saleable Production

Saleable production for the reporting period amounted to 1.02Mt, made up of semi-soft coking coal and thermal coal. All ROM coal is campaigned through the CHPP on a seam-by-seam basis and blended on the product stockpile to meet individual shipments.

All coal was transported by rail to the Port of Newcastle for sale on the export market.

2.6 WASTE MANAGEMENT

Coarse rejects are transferred to a rejects bin, loaded on to ACOL trucks and transported to the overburden dump for disposal. A total of 478,749 tonnes of coarse reject material were disposed of in this manner during the reporting period.

Fine rejects are pumped to a small series of tailings ponds, treated with coagulant and, following release of entrapped moisture, are excavated and transported to the overburden dump for disposal. A total of 243,325 tonnes of fine reject material were disposed of in this manner during the reporting period.

2.6.1 Chemical/Physical Characteristics of Residues

Coarse rejects are generally mudstones and claystones, with some sandstones, and generally contained minimal amounts of carbonaceous material.

The fine rejects contain finely disseminated clays and mudstone, which have been flocculated using a relatively inert chemical. It contains a higher concentration of carbonaceous material than the coarse reject, but it is expected that the proposed modifications to the fine coal circuit at the CPP will reduce this concentration in the near future.

2.6.2 Handling and Disposal Procedures

Procedures for the mining of the tailings dams are included in the MOP and the Manager's Rules for the Declared Plant.

Procedures for the disposal of both coarse and fine reject material are contained in the MOP and the Tipping Rules developed by the Open Cut Mine Manager.

2.6.3 Monitoring and Maintenance of Containment Facilities

All coarse and fine reject materials were disposed of within the Eastern Emplacement Area and covered with inert overburden material.

2.6.4 Sewage Treatment/Disposal

Ashton Coal Operations Limited operates an on-site sewerage management system for the site administration offices. This system was approved by Singleton Shire Council as part of Development Application No. DA 494/2003. The system consists of male and female toilets, two showers, six wash sinks, a septic tank, an envirocycle treated tank and pump out and a moveable spray system.

Similar sewerage treatment systems have been installed at both the open cut and CHPP facilities. Both include transpiration beds for effluent disposal and are approved by SSC.

2.6.5 Fuel Containment

Sine ACOL became owner/operator, the open cut workshop and fuel storage facilities have been upgraded to industry best practise at the western end of the mine area, dedicated bunded areas have been provided for both fuel and oil storage.

ACOL Hydrocarbon storage area

An oil separator has been installed at the open cut workshop to capture any inadvertent spills of fuel or oil on the mobile plant parking area and workshop.

At the CHPP, hydrocarbons are currently stored in drums in self-bunded containers. Only small volumes of specialised lubricants are stored in this area. These are stored in a dedicated bunded area.

2.6.6 Oil Containment and Disposal

All waste oils generated on site are collected and transported off site by an approved disposal contractor to dedicated waste oil facilities.

2.6.7 Rubbish Disposal

Both general waste and waste for recycling are disposed of in skip bins located at strategic locations around the site. These bins are collected by a waste management contractor, transported off site and disposed of in an approved manner.

For the next AEMR period, all waste disposal will be captured and reported including hydrocarbon waste, recyclable materials and general waste.

2.7 ROM COAL AND COAL PRODUCT STOCKPILES

Both ROM coal and product coal are stockpiled adjacent to the CHPP.

2.7.1 Stockpile Capacity

The capacity of the ROM coal stockpile is approximately 250Kt of ROM coal.

The capacity of the product coal stockpile is approximately 300Kt.

2.7.2 Changes in Product Transport

All product coal was transported off site by rail during the reporting period. No changes are envisaged to this mode of transport.

2.8 WATER MANAGEMENT

Ashton is a nil discharge site. All water collected on site is collected in storage dams and utilised in the mining process, the treatment process or to irrigate rehabilitated areas.

2.8.1 Clean Water Management

Clean water is currently collected from:

- Glennies Creek;
- Hunter River; or
- Undisturbed areas on site.

There is an agreement in place to use excess underground water from Glennies Creek Coal Mine (Glennies Creek Coal Management Pty Ltd). This water supply is used intermittently to top up process water levels.

Town water is also imported for use in office and bath house facilities.

Clean water from undisturbed areas is permitted to follow natural drainage paths off site where it is not collected.

2.8.2 Contaminated Water Management

All water contaminated by contact with carbonaceous material is collected on site and utilised for site dust suppression or in the coal washing process.

2.8.3 Drainage

Drainage from undisturbed areas is managed in one of two ways:

- Drainage from small undisturbed areas that do not form part of the general mine catchment area are permitted to follow their natural drainage path; or
- Drainage from most areas is channelled in to the runoff water dam and used for the watering of environmental bunds and rehabilitated areas or site dust suppression.

Drainage from disturbed areas is captured in sedimentation control dams and transferred to runoff water dam.

2.8.4 Water Supply and Demand

Licences are held by ACOL to pump water from Glennies and Bowmans Creeks and the Hunter River (refer to **Table 1**). These licences were modified to permit the industrial use of the water during the reporting period.

The project water balance for the reporting period is detailed in the following table:

Ashton Water Balance		
Water Source	Glennies Creek Hunter River Captured on site Glennies Creek Mine water **TOTAL**	115 107 310 10 **542**
Water Use	Dust mitigation (mining) Dust mitigation (CHPP) Watering rehabilitated areas Entrapped in product coal Trapped in tailings Evaporation Currently stored on site **TOTAL**	315 45 12 5 5 40 120 **542**

Construction of a pipeline from Glennies Creek Mine is now complete. The pipe has the capacity to transfer water at around 1 ML per day. This water is saline and is be utilised for dust suppression in the open cut and as supplementary feed for the CHPP, thereby replacing higher quality waters that were being used for that purpose.

2.9 HAZARDOUS MATERIAL MANAGEMENT

2.9.1 Spontaneous Combustion Incidence

A Spontaneous Combustion Management Plan has been prepared and implemented on site.

There has been no spontaneous combustion incidences reported during the year or during the mine site history of operation.

2.10 OTHER INFRASTRUCTURE MANAGEMENT

Other infrastructure established on site includes a railway siding, various roads, electricity reticulation, site communications and water reticulation system.

The HWE licence under the Dangerous Goods Act, 1975, for the explosives magazine and above-ground tanks for oxidising liquids was transferred to ACOL in March 2005. At the time of the transfer, additional capacity for the new hydrocarbon storage area was added to the license. Licence No 35/036424.

3.0 ENVIRONMENTAL MANAGEMENT AND PERFORMANCE

A network of real-time environmental monitoring stations was installed prior to the commencement of operations and is utilised to ensure continued compliance with the criteria established in the Development Consent and the EPL. Figure 1 and Figure 2 from the Air Quality Management Plan presented in Appendix 2 detail monitoring locations.

3.1 AIR POLLUTION

3.1.1 Meteorological Monitoring

Ashton established two meteorological monitoring stations prior to the commencement of construction and operation activities on site. These are located at Monitoring Location 1 in the village of Camberwell and at the Repeater Station on the ridge above the village (see Figure 2 in Appendix 2). Monitoring Location 1 is the primary meteorological station, with the repeater station being primarily used to measure temperature inversions.

The highest site (Repeater Station) daily temperature of 42.0 ^{o}C was recorded on 14 January 2005.

The lowest site daily temperature of -2.3 ^{o}C was recorded on 13 August 2005.

3.1.1.1 Rainfall

Rainfall data for the reporting period is displayed in the following table.

Rainfall Data 2004-05

Month	Rainfall (mm)	Long Term Median Rainfall (mm)
Sep 04	36.2	50.4
Oct 04	61.8	34.5
Nov 04	42.8	64.6
Dec 04	81.6	83.4
Jan 05	56.6	69.6
Feb 05	116.8	94.7
Mar 05	79.2	68.5
Apr 05	8.5	41.3
May 05	43.4	43.6
Jun 05	87	34.8
Jul 05	12	40.8
Aug 05	7	31.5
Total	**632.9**	**657.7**

Long Term Median Data from Bureau of Meteorology, for Singleton STP.

The annual rainfall was close to the long term median for Singleton NSW. There was an extended dry period through July and August 2005.

Where necessary due to equipment failure, data from Camberwell Mine has been used to supplement the information obtained on site.

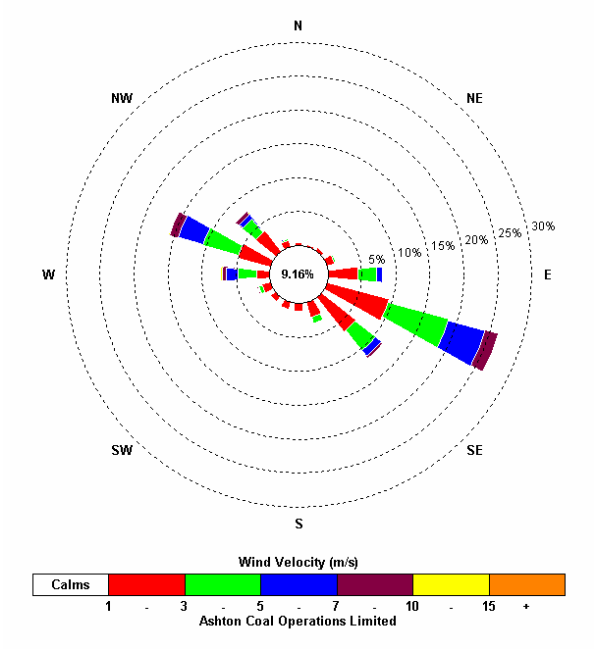
3.1.1.2 Wind Speed and Direction

Observed wind patterns for the period are outlined in the following table:

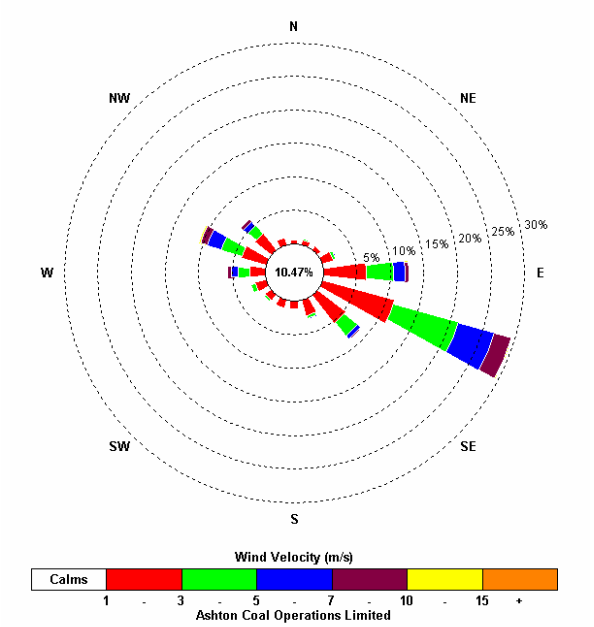
WIND PATTERNS BY MONTH 2004 - 2005		
Month	**Primary Wind Direction (Qudrant)**	**Secondary Wind Direction (Quadrant)**
September	WNW	ESE
October	WNW	ESE
November	WNW	ESE
December	ESE	-
January	ESE	WNW
February	ESE	WNW
March	E to SSE	WNW
April	ESE	WNW
May	WNW	ESE
June	WNW	ESE
July	WNW	-
August	WNW	-

The dominant wind direction from September 2004 to May 2005 was from the East South East (ESE) and to a lesser extent the West North (WNW). During June to August 2005 the dominate wind direction changed to the West North West. These trends are typical of wind patterns in the Hunter Valley.

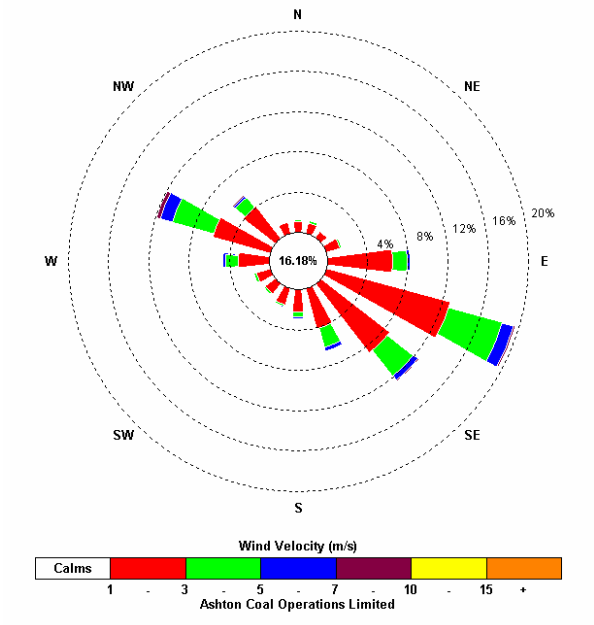
1st Quarter Windrose Sep 04 – Nov 04



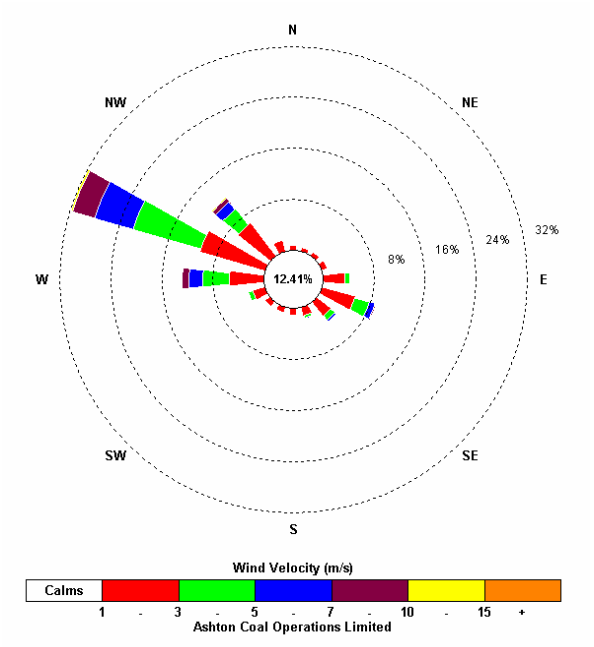
2nd Quarter Windrose Dec 04 – Feb 05



3rd Quarter Windrose Mar 05 – May 05



4th Quarter Windrose Jun 05 – Aug 05



3.1.1.3 Temperature Inversions

Temperature inversions are measured by temperature variation between Monitoring Station 1 and the Repeater Station, where there is a height differential of approximately 60 metres, and are recorded on the Real Time Environmental Monitoring System. Significant temperature inversions have been identified, with 222 out of 310 days monitored recording a temperature inversion of greater than 3° C per 100 metres (ie 72% of days). It should be noted that a percentage of these days had only small inversions of 1 or 2 °C/100m for a very short period of time (less that 0.5hours). Analysis of inversion impacts on noise at receptors will be included in the noise modelling to be conducted shortly.

3.1.2 Dust Criteria and Control Procedures

3.1.2.1 Particulate Matter < 10µg (PM_{10})

The criteria for particulate matter less than 10µm (PM_{10}) is as follows:

- Annual mean less than 30µg/m^3 on a cumulative basis, and
- 24 hour average contribution from Ashton Mine not to exceed 50µg/m^3.

Locations of PM_{10} monitoring stations are detailed on **Figure 1** of Appendix 2. They are as follows:

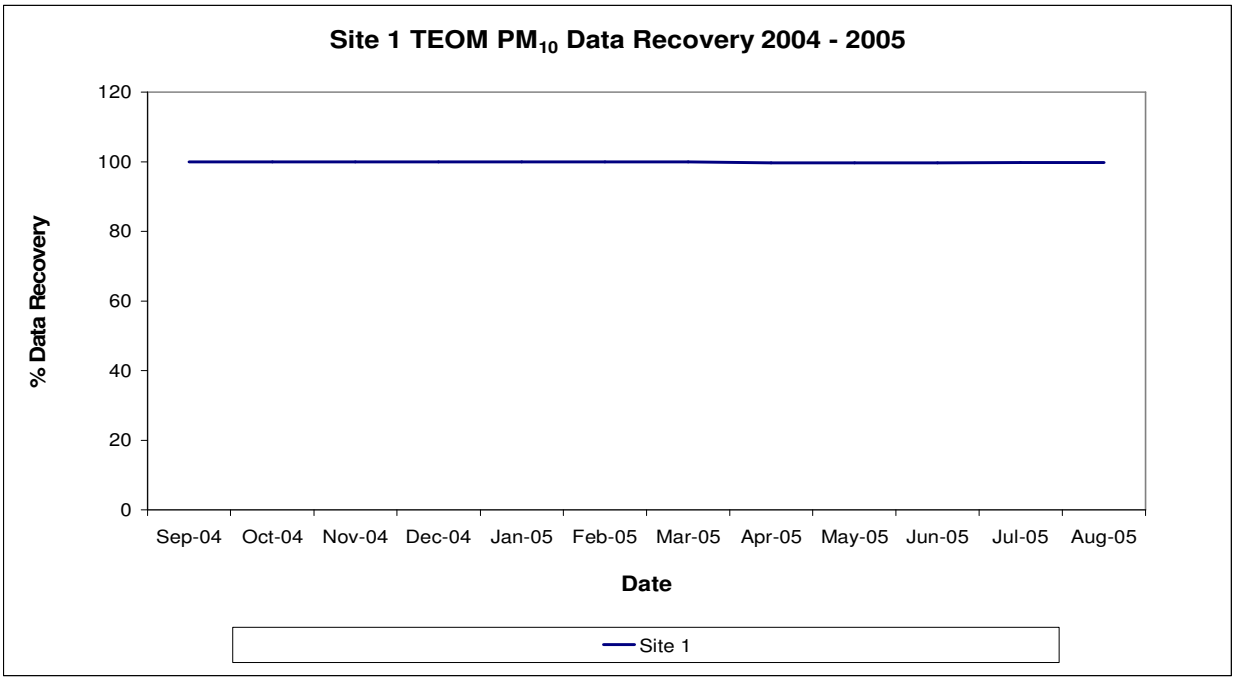
Location of PM_{10} Monitoring Stations	
Monitoring Station No	**Location**
1	Camberwell village (north)
2	Camberwell village (south)
3	Property east of Camberwell village
4	**On site** north of Eastern Emplacement Area
6	**On site** near Train Loading Station
7	**On site** at country end of rail siding

Monitoring Locations 4, 6 and 7 are located within the mine operations area, immediately south of the Main Northern Railway and are intended to monitor the incoming concentrations of PM_{10} dust when the prevailing winds are from the northwest sector, the wind direction that presents the greatest risk of impact to the village of Camberwell.

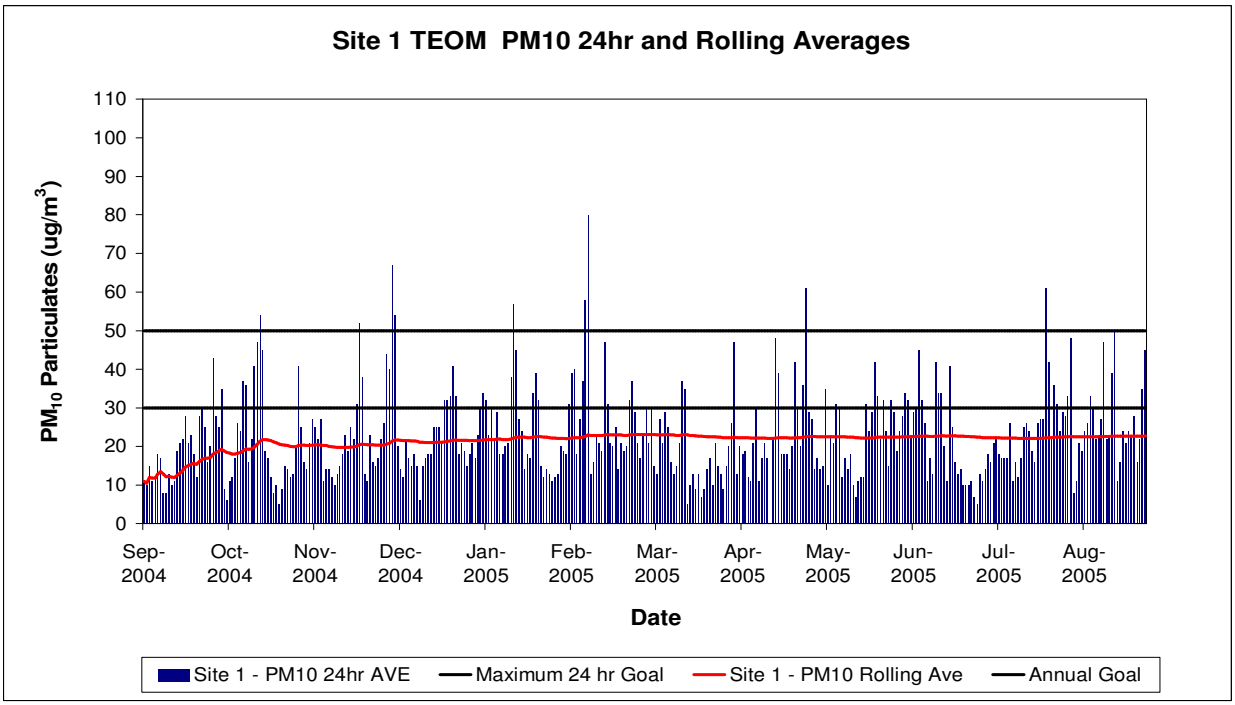
The Ashton contribution to the concentration of PM_{10} matter at Community sites is calculated by subtracting the incoming dust concentration (which is assumed to be the lowest level recorded at sites 4, 6 or 7) from the ambient level of dust concentration at the three community sites. This is a very conservative calculation. The Air Quality Management Plan details the calculations using the average of the three background TEOMs, the management plan calculation can be biased due to high dust levels at Location 6 caused by on-site activities.

Site 1 TEOM

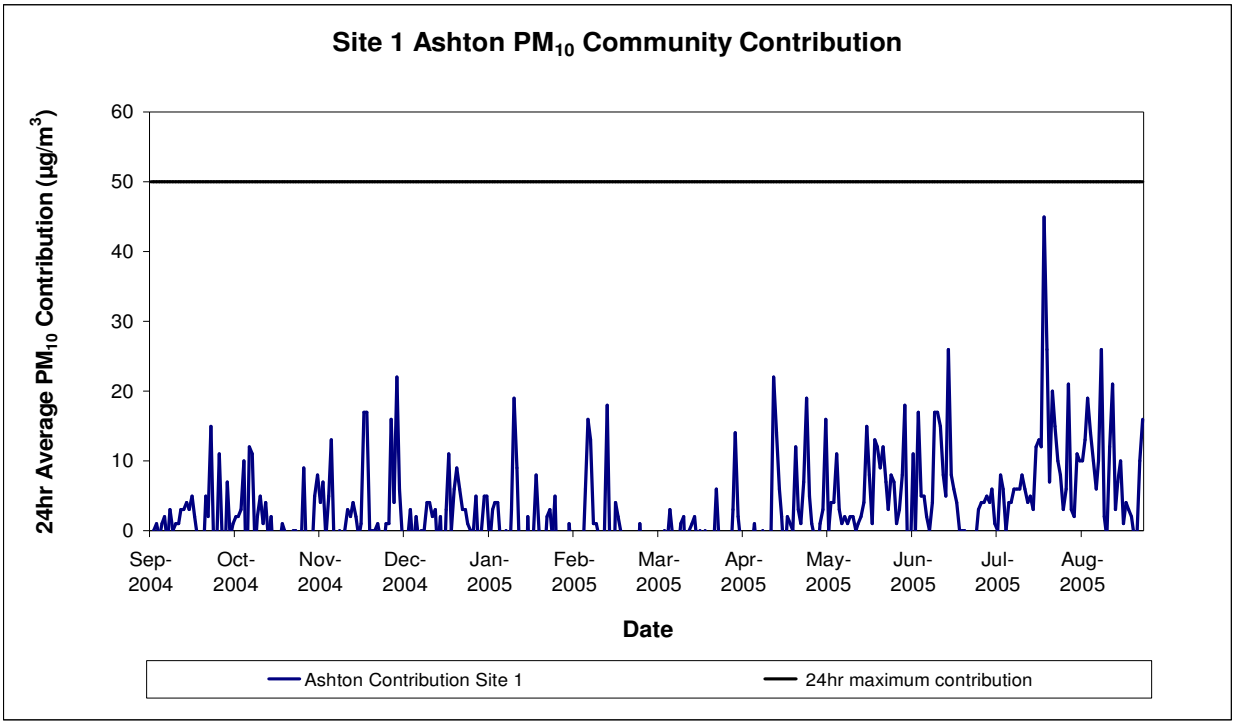
Site 1 is located in the northern portion of the village of Camberwell. Results of PM_{10} monitoring at this location were as follows:



100% of data was recovered at Site 1.



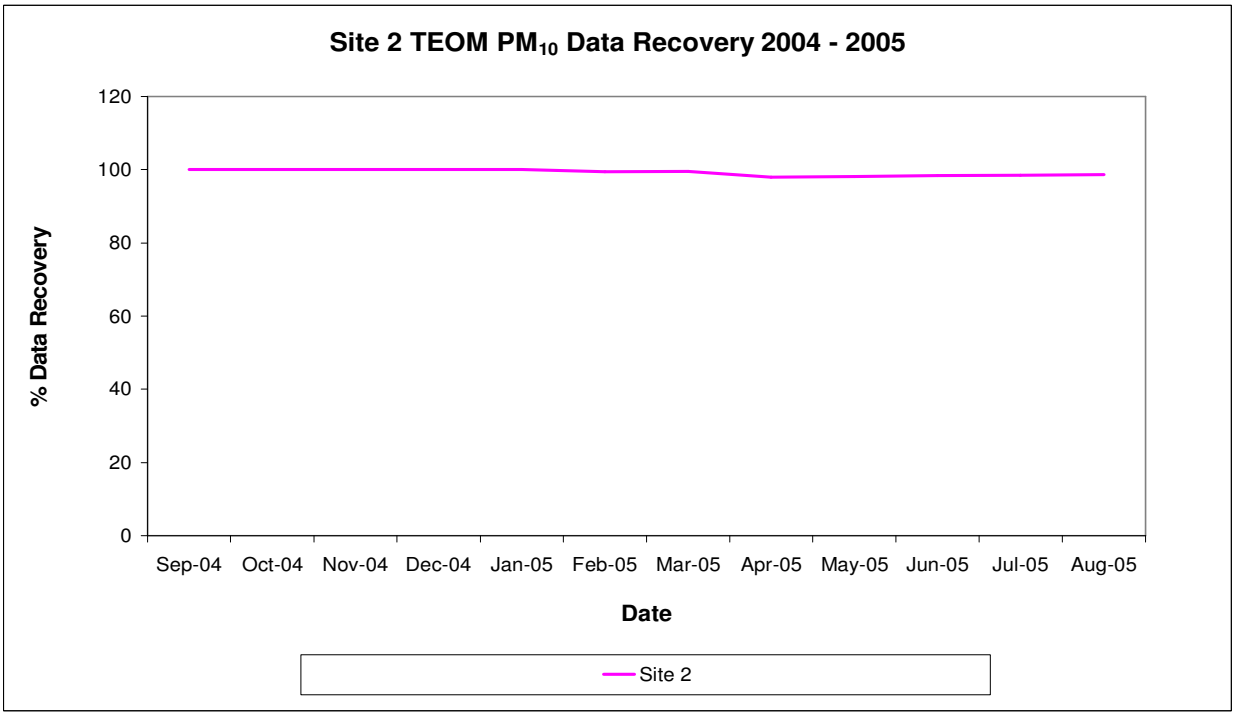
The rolling average PM_{10} results for Site 1 demonstrates compliance with the annual goal of $30\mu g/m^3$.



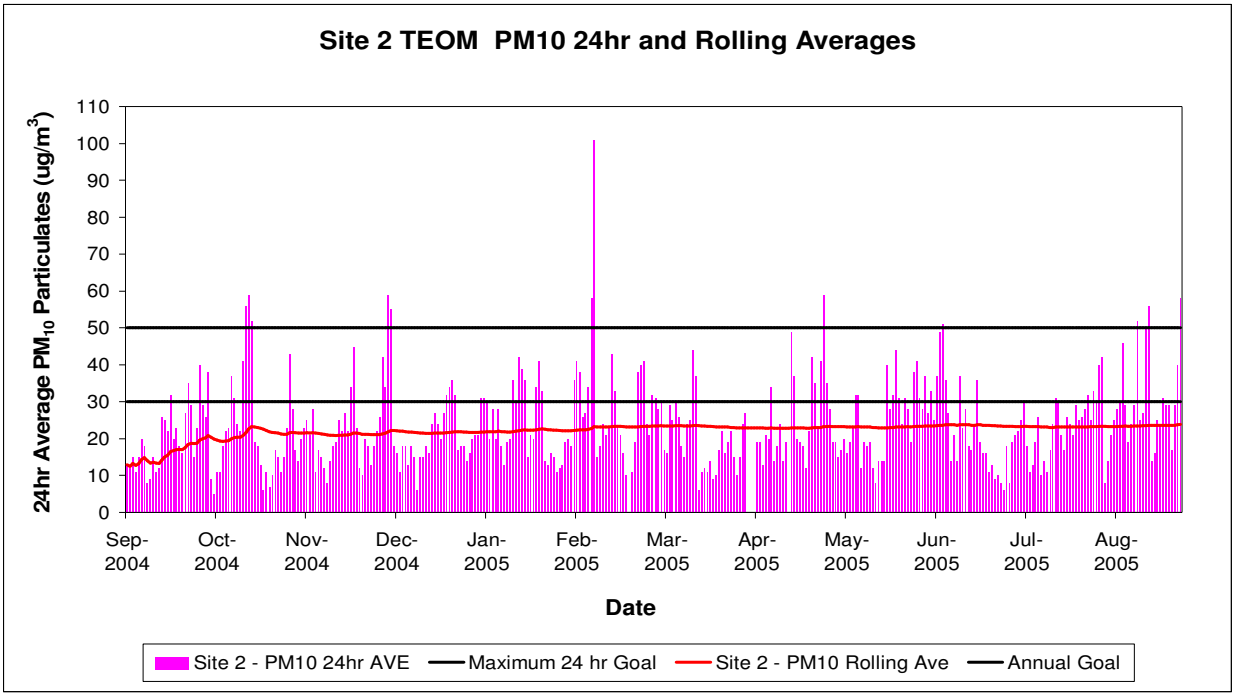
Ashton remained in compliance with the criteria of 50 µg/m^3 at all times.

Site 2 TEOM

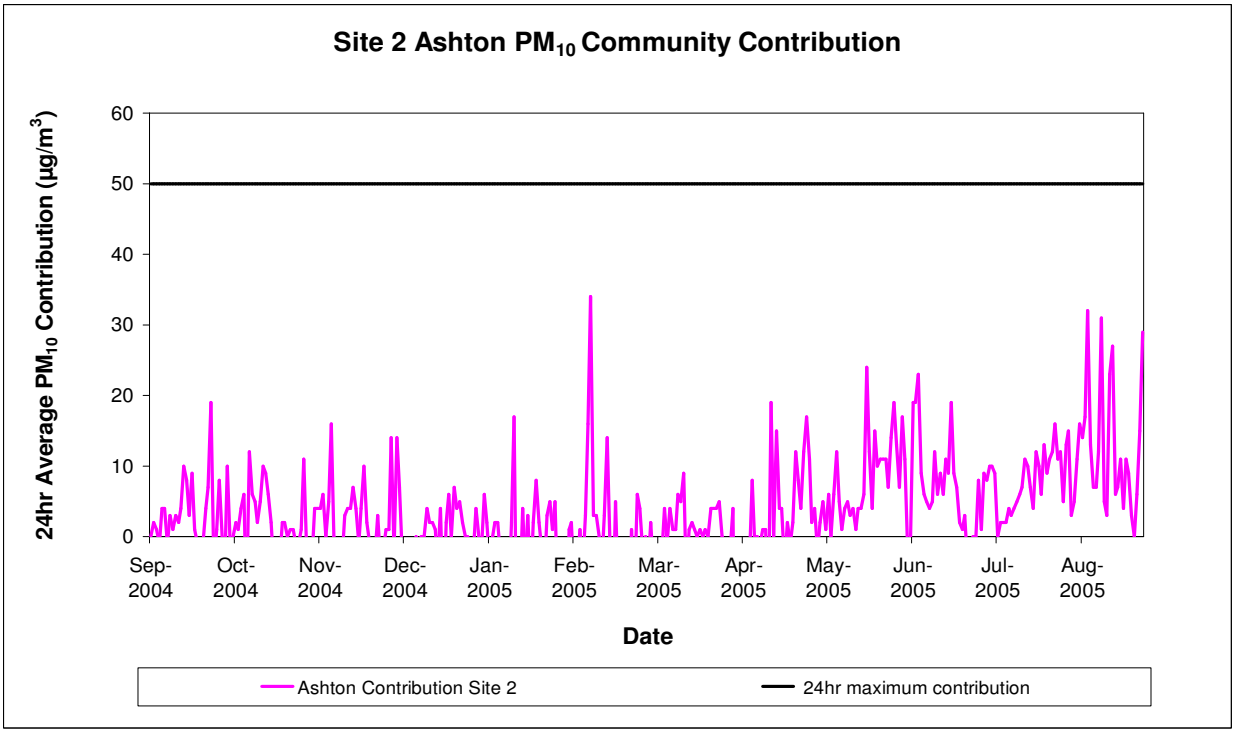
Monitoring Station Site 2 is located in Camberwell village on the south side of the New England Highway. Results of PM_{10} monitoring at this location were as follows:



99% of data was recovered at Site 2.



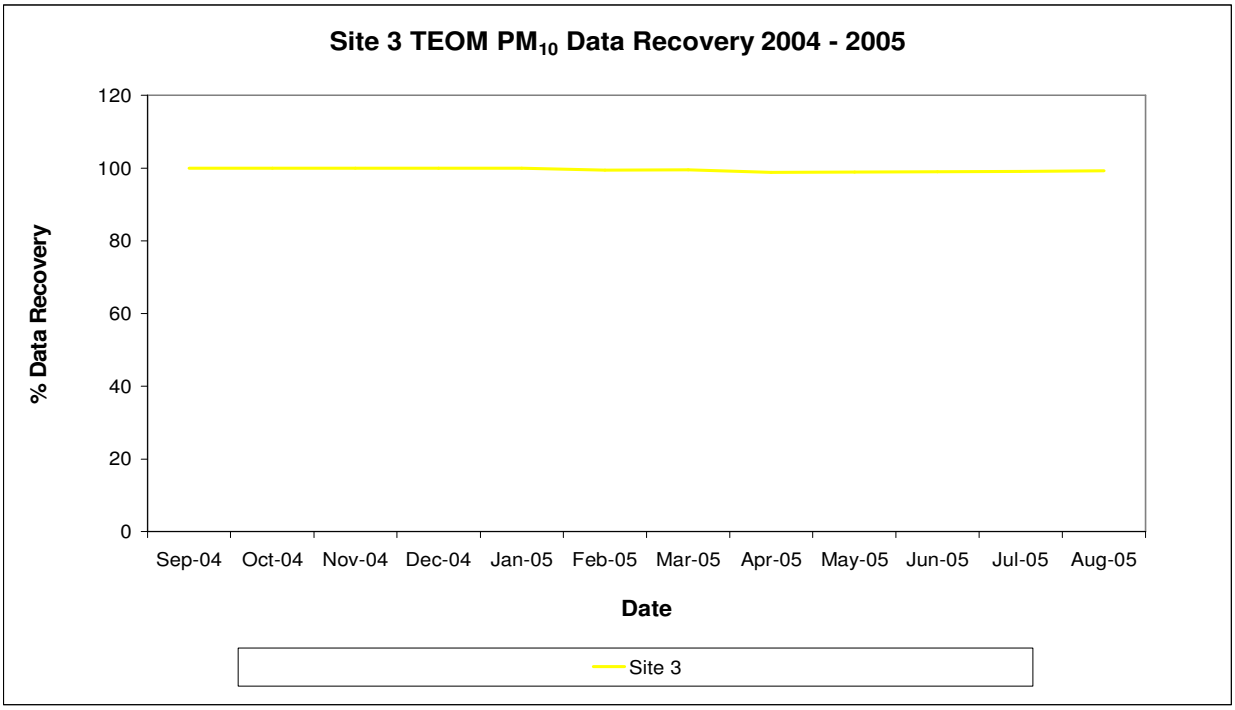
The rolling average PM_{10} results for Site 2 demonstrates compliance with the annual goal of 30µg/m^3.



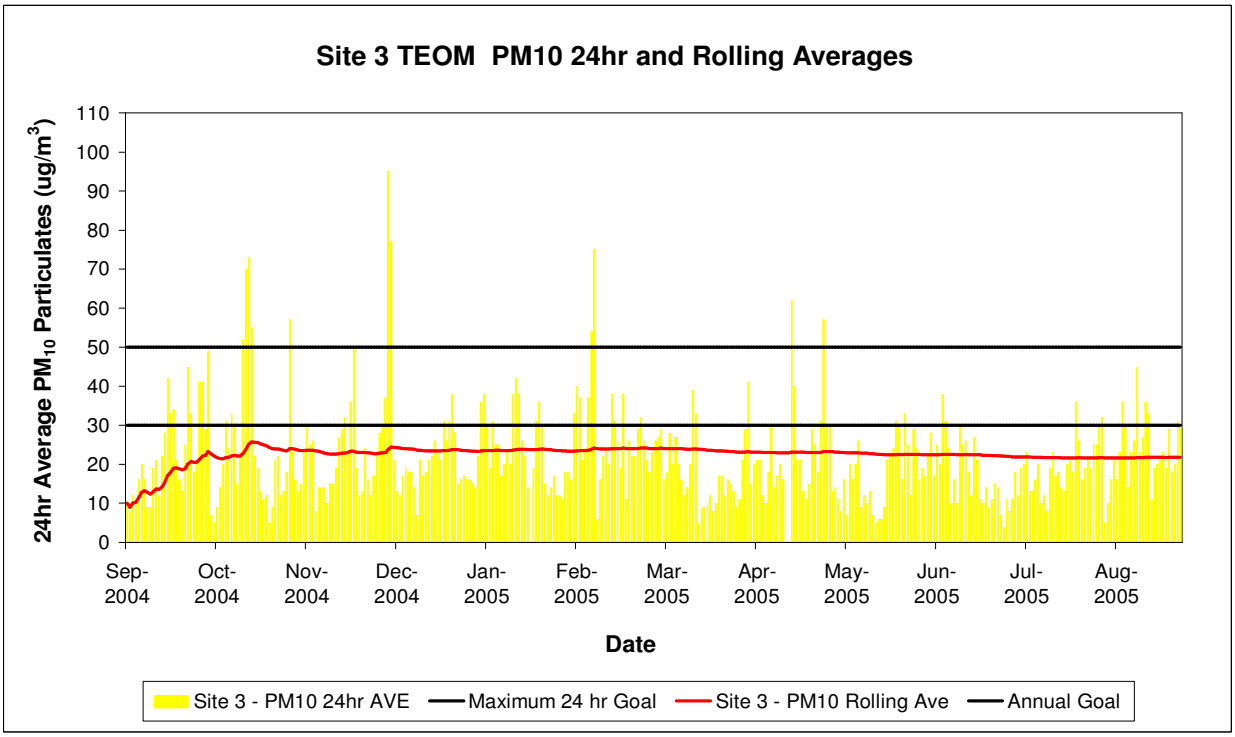
Site No 2 is located close to the New England Highway, and may be influenced by passing traffic when the winds emanate from the north, however Ashton remained in compliance with the criteria of 50 µg/m^3 at all times.

Site 3 TEOM

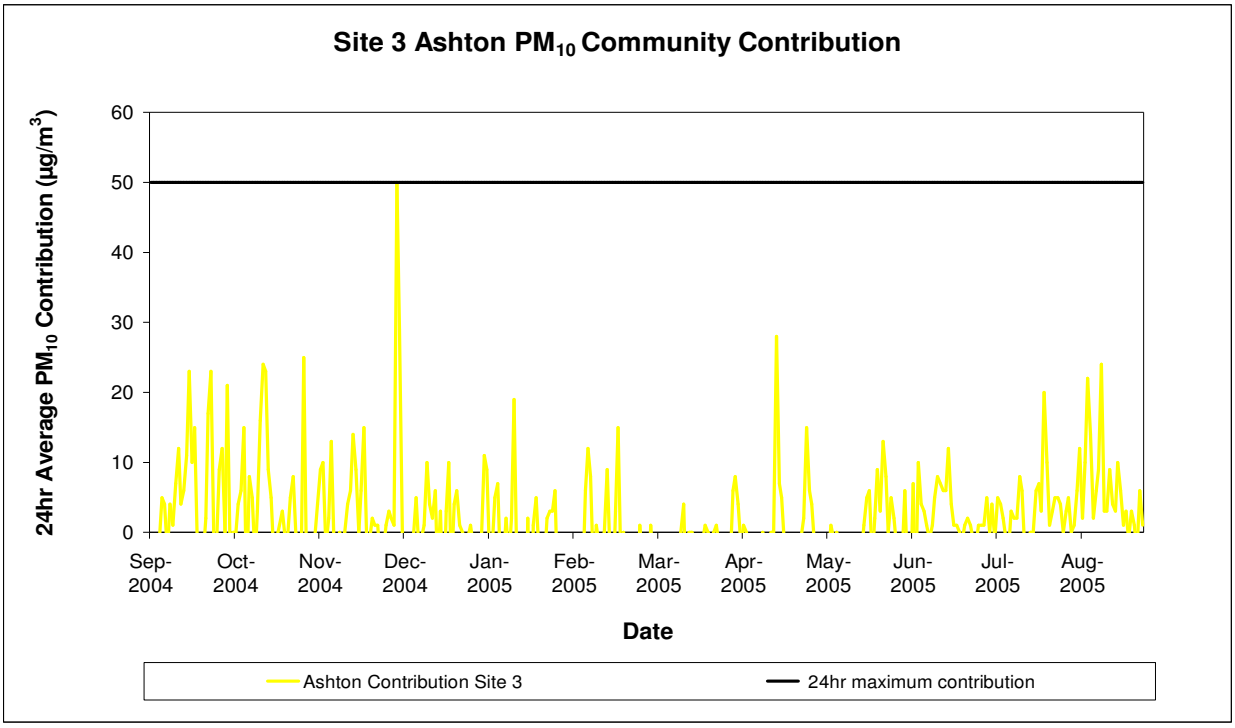
SIte 3 is located on a farming property to the east of the Eastern Emplacement Area. Results of PM_{10} monitoring at this location were as follows:



99% of data was recovered at Site 3.



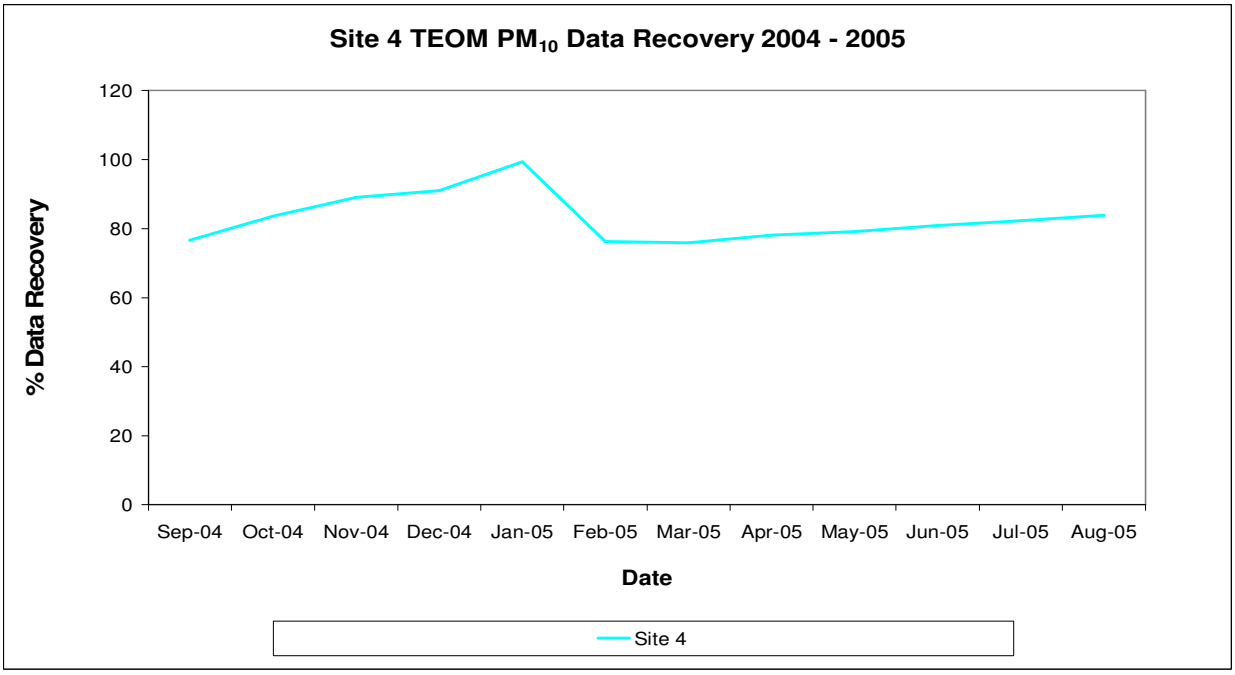
The rolling average PM_{10} results for Site 3 demonstrates compliance with the annual goal of 30µg/m^3.



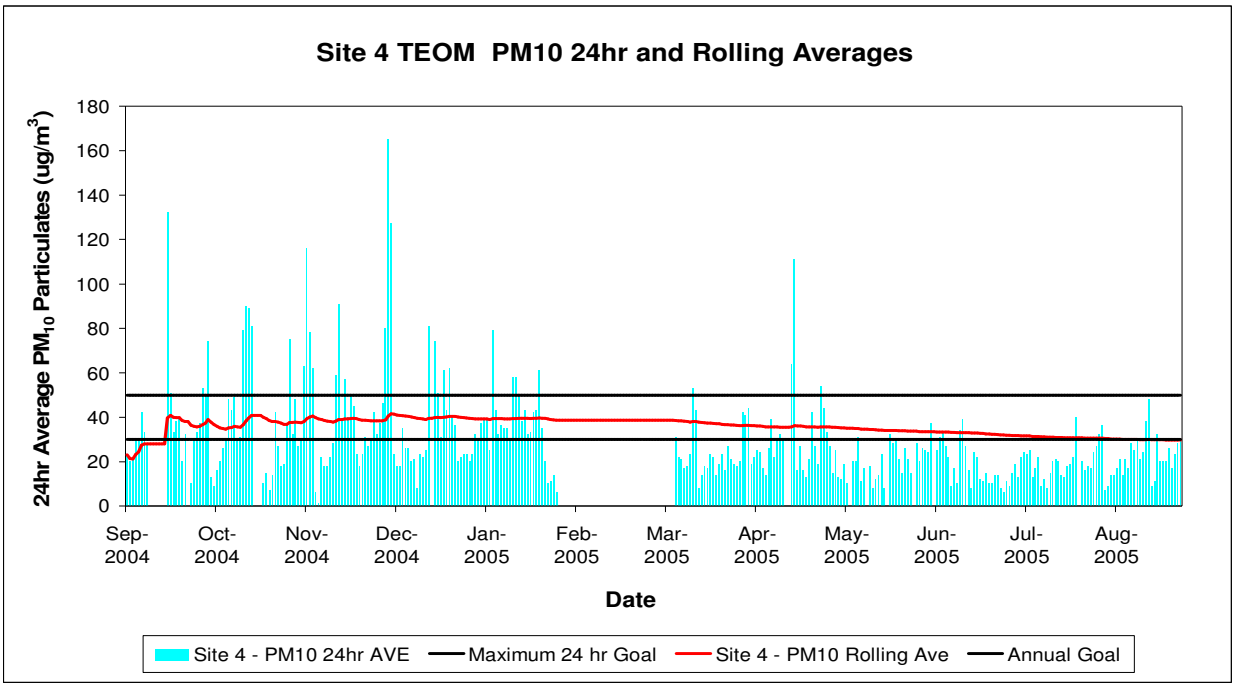
Site 3 remained in compliance with the community contribution criteria of 50 µg/m^3 at all times.

Site 4 TEOM (On-Site)

Site 4 was previously located between the Eastern Emplacement Area and the Main Northern Railway and was impacted by dumping operations at the adjacent overburden emplacement area. Power was supplied to the site via a generator and due to the lack of reliability of this method of power supply, data recovery was affected. During May '05 the TEOM was relocated to the end of the Eastern Emplacement, next to Sediment Dam 5/6. Mains power was available at this site.



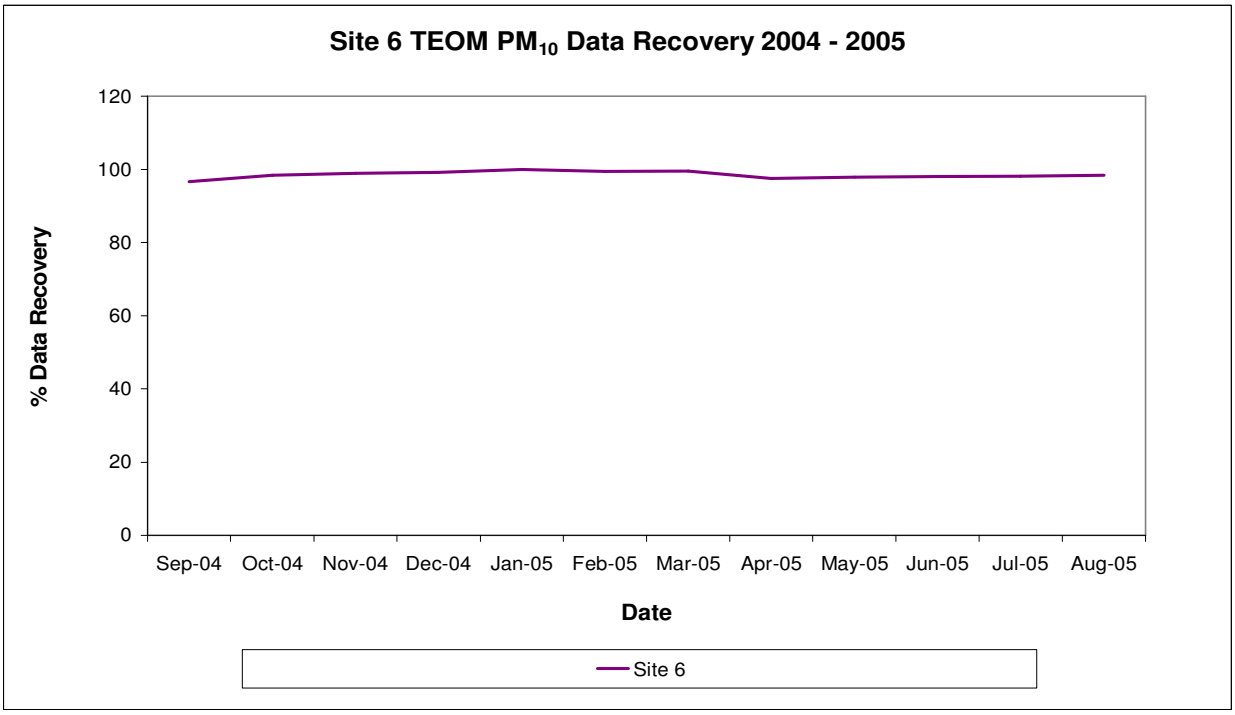
84% of data was recovered at Site 4. Data recovery improved when the Site was relocated and electricity connected rather than reliance on a generator.



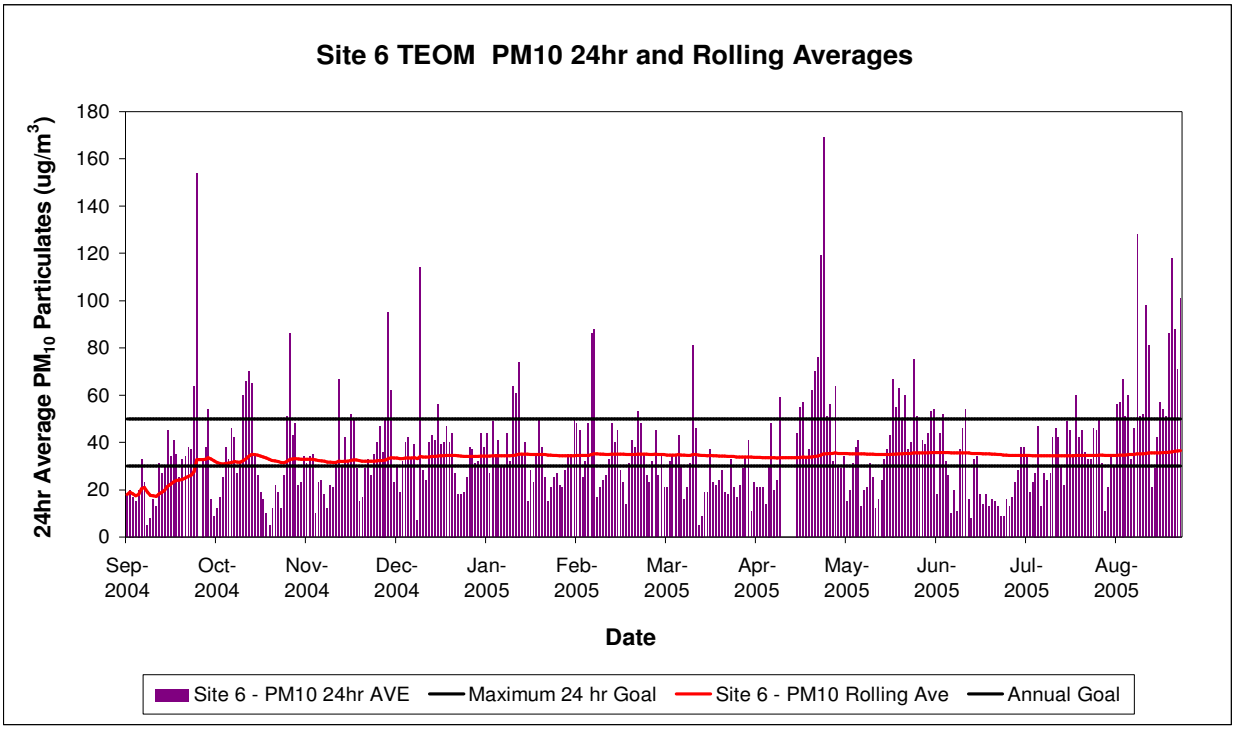
The annual goal of 30µg/m^3 is not expected to apply to onsite TEOMS.

Site 6 TEOM (On-Site)

Site 6 is located between the ACOL mine office complex and the Main Northern Railway. It is in close proximity to the coal haul road and the Train Loading Station.



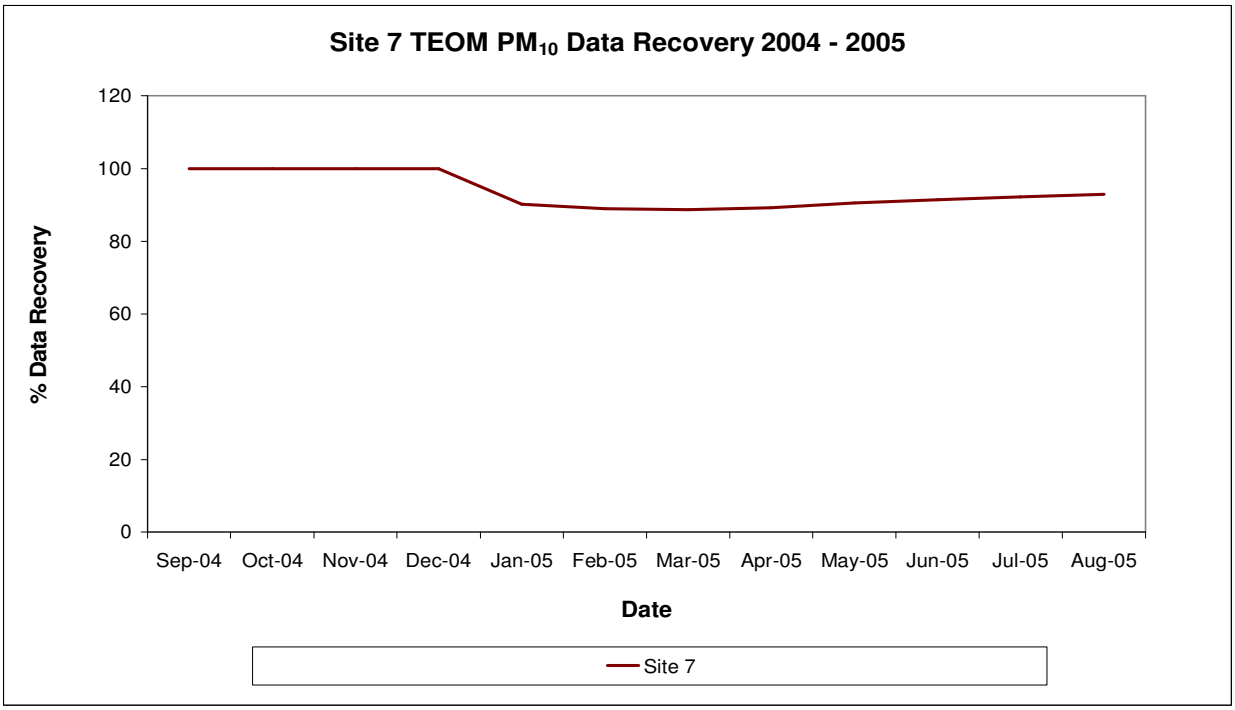
98% of data was recovered at Site 6.



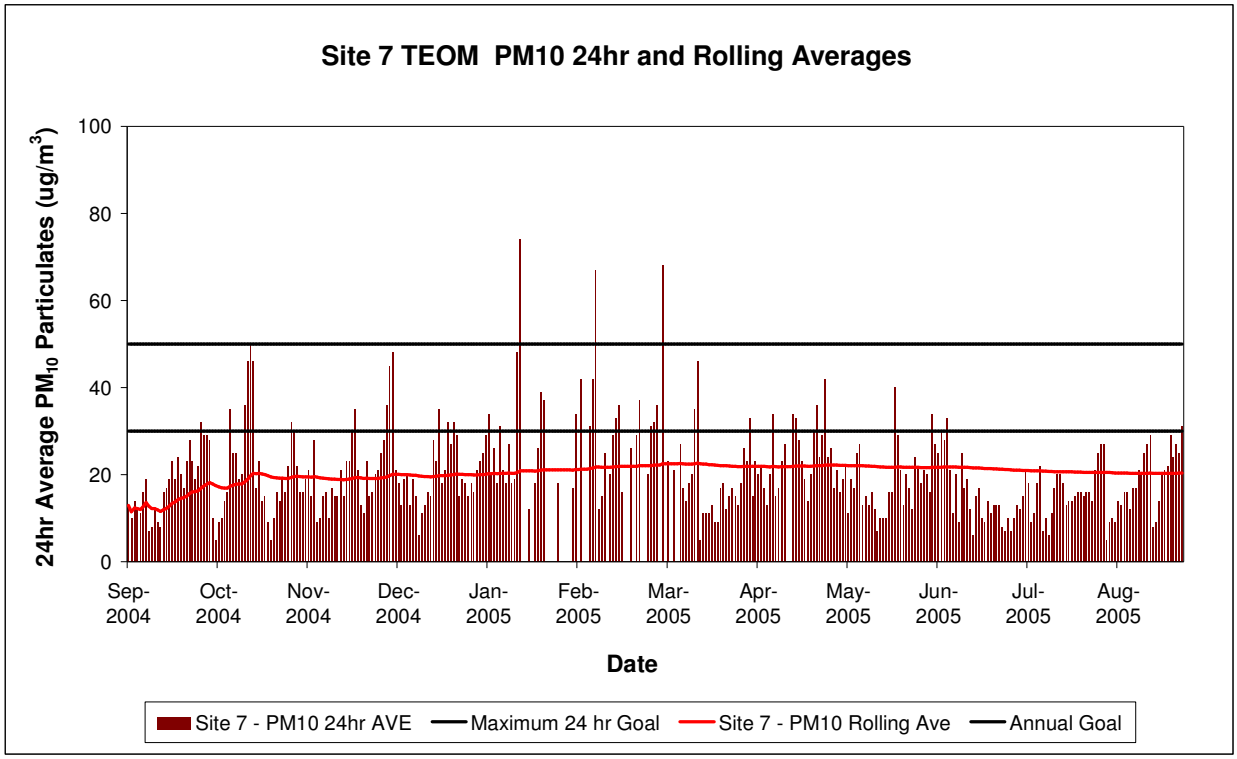
The annual goal of 30µg/m^3 is not expected to apply to onsite TEOMS. This TEOM is heavily impacted by an adjacent access road and nearby coal haul road.

Site 7 TEOM (On-Site)

Monitoring station No 7 is located adjacent to the Main northern Railway at the country end turnout. The site is remote from mining operations.



93% of data was recovered at Site 6.



The annual goal of 30µg/m^3 is not expected to apply to onsite TEOMS. The results from this monitor show why it is selected for most calculations of Ashton's Contribution. It is generally the lowest of the background TEOMs.

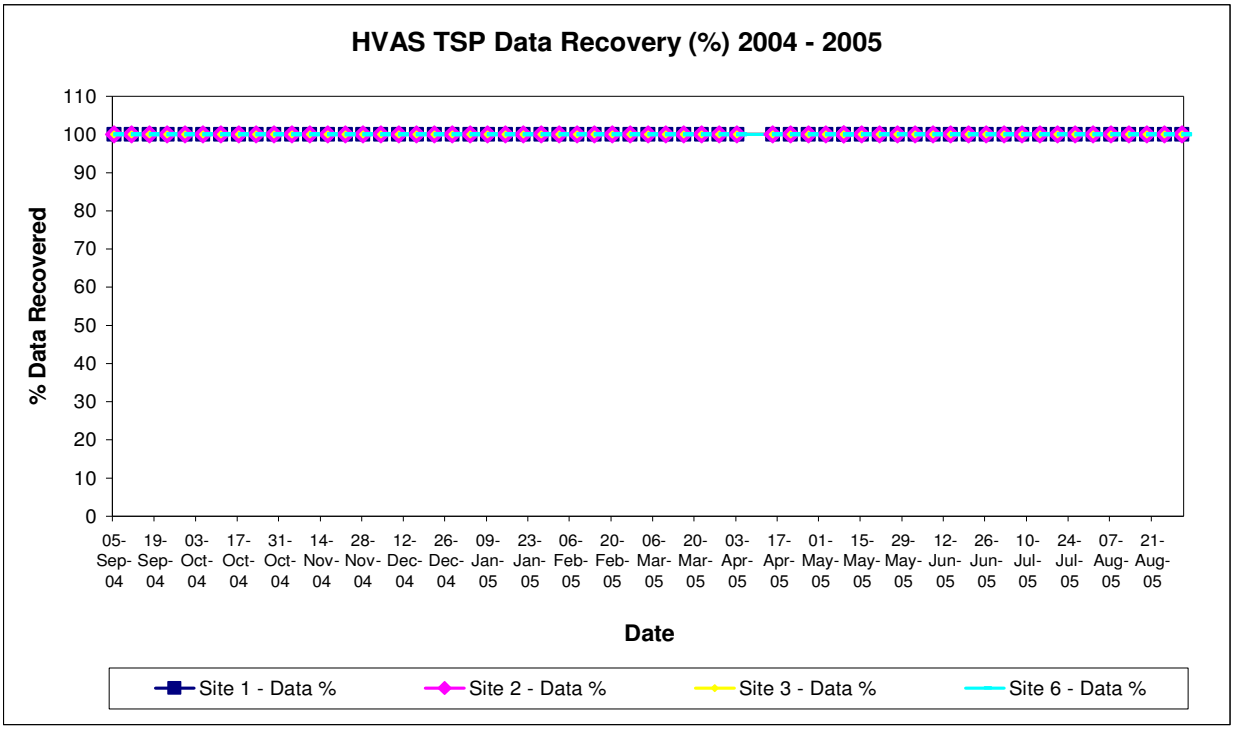
3.1.2.2 Total Suspended Particulate Matter (TSP)

Guideline values for TSP indicate that results are not to exceed 90µg/m^3 (annual mean).

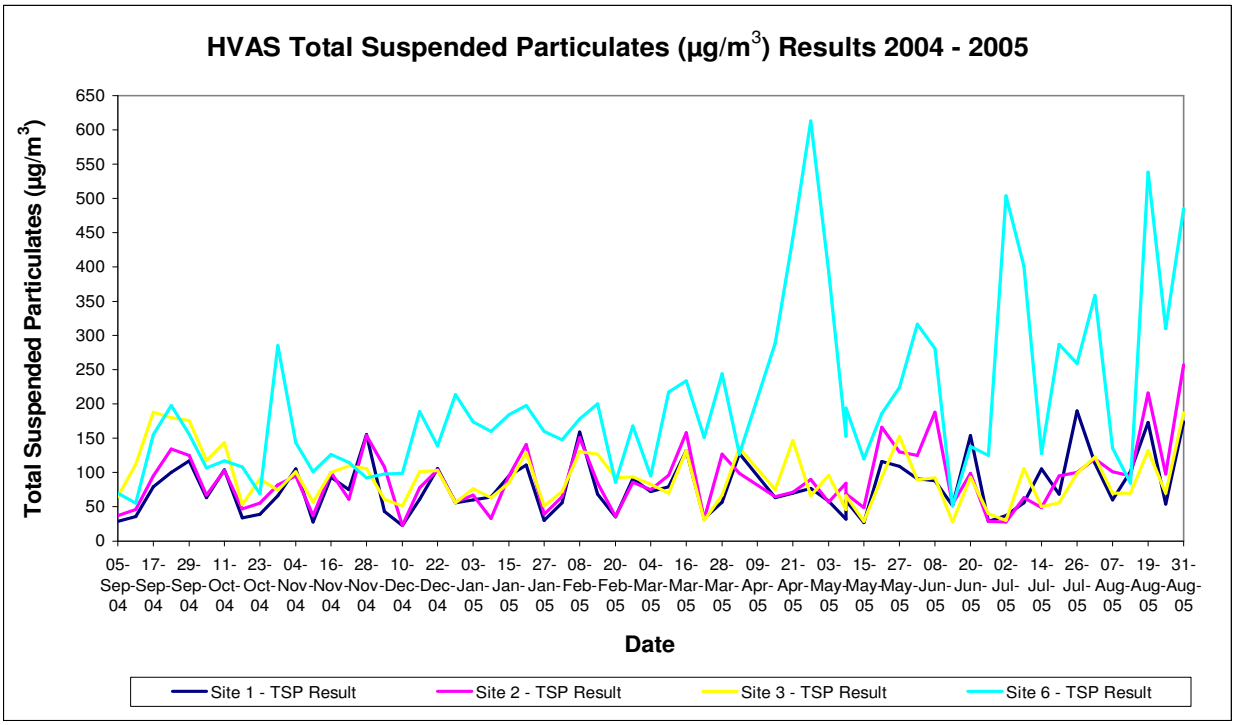
The locations of High Volume Air Samplers to monitor TSP are detailed on Figure 1 of Appendix 2. They are as follows:

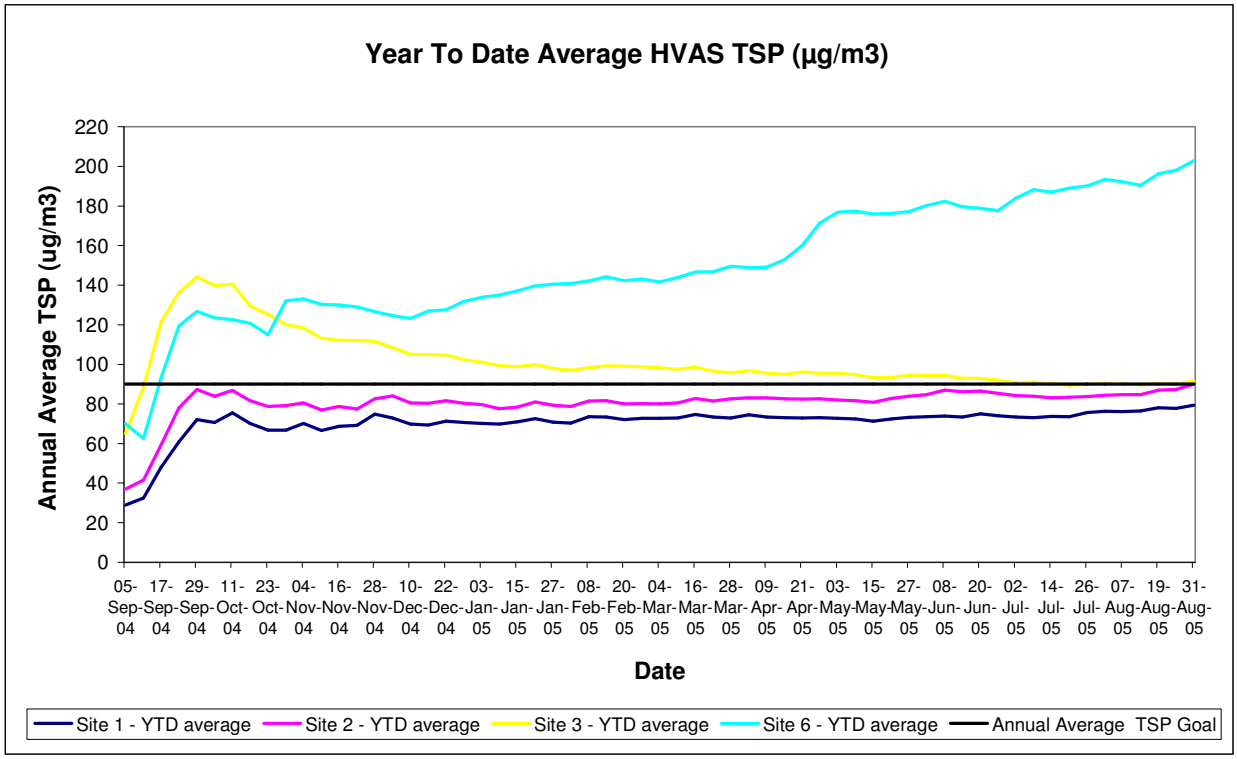
Location of TSP Monitoring Stations	
Monitoring Station No	**Location**
1	Camberwell village (north)
2	Camberwell village (south)
3	Property east of Camberwell village
6	On site near Train Loading Station

Data from all TSP monitors was as follows:

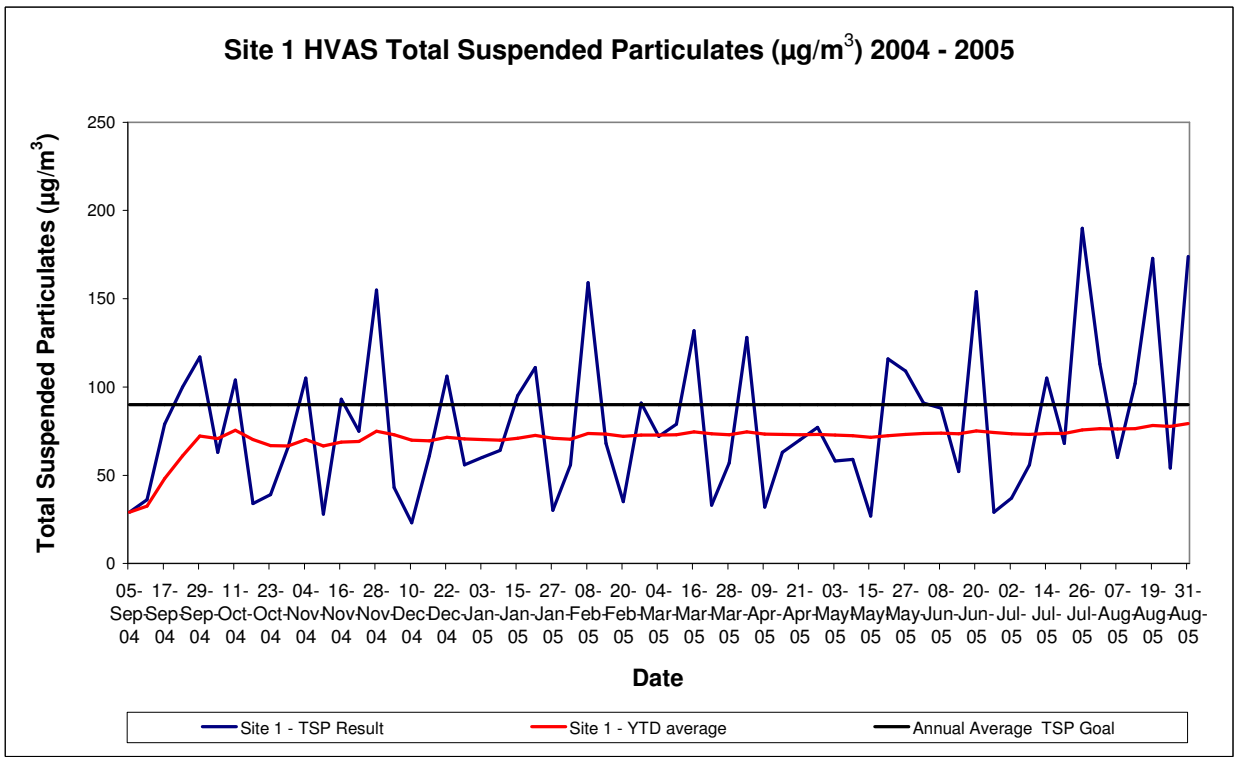


Data recovery for all sites was 100%.



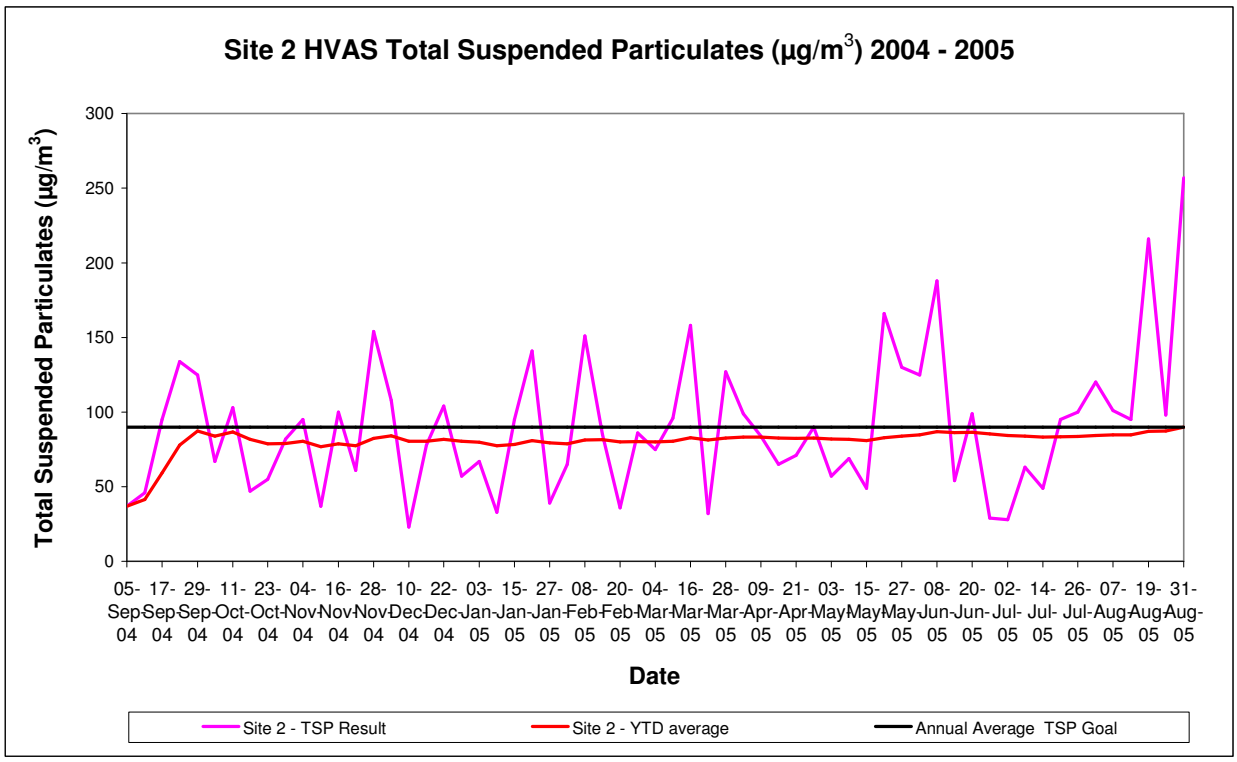


Site 1 HVAS



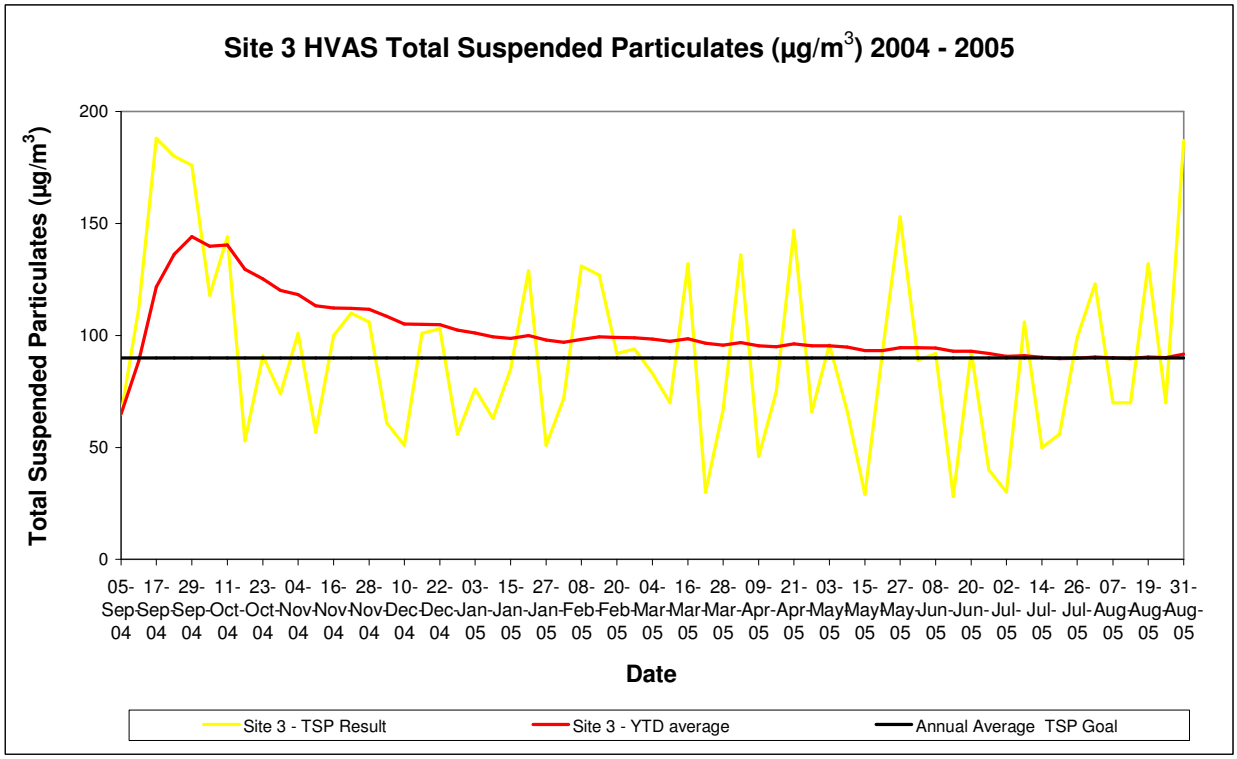
The rolling average TSP results for Site is below the annual average TSP goal of 90µg/m^3.

Site 2 HVAS



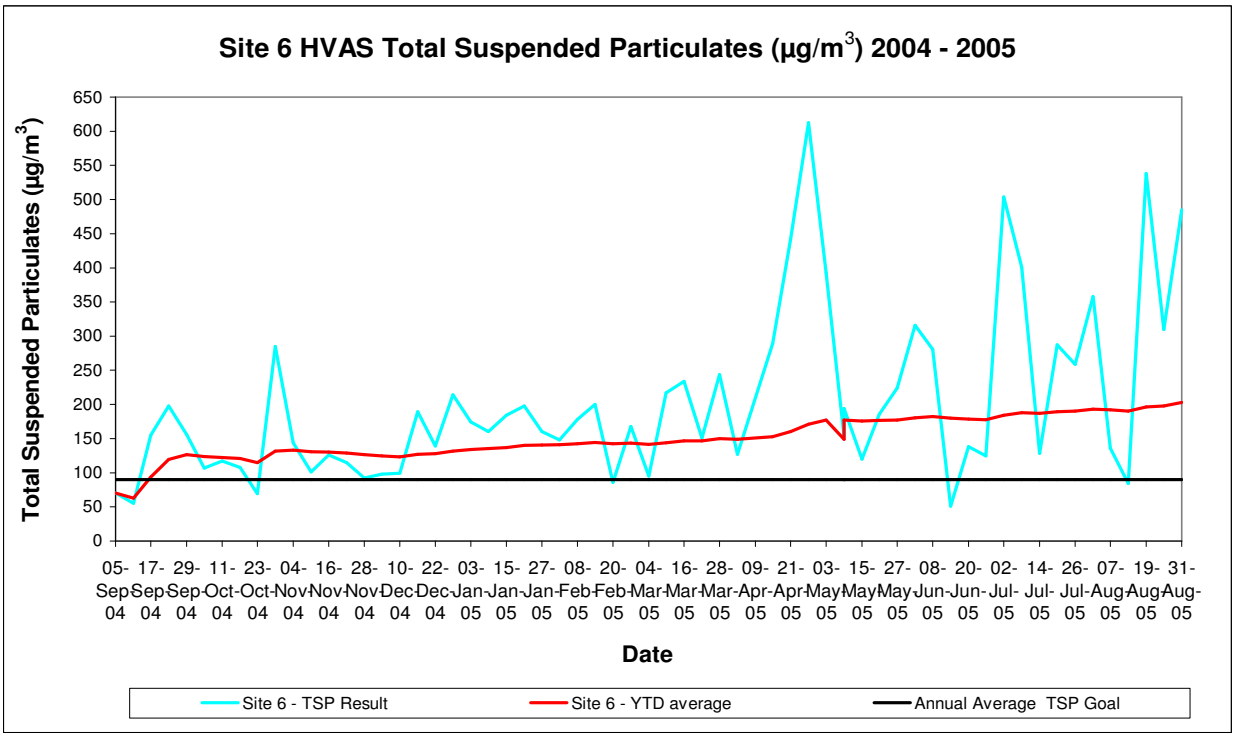
The rolling average TSP results for Site 2 are below the annual average TSP goal of 90µg/m^3.

Site 3 HVAS



The rolling average TSP result for the reporting period of 91.7µg/m^{3}s at Site 3 is slightly above the annual average TSP goal of 90µg/m^3. The rolling average decreased throughout the reporting period. Impacts from farming activities and surrounding minesites (other than Ashton) are expected to have elevated this result significantly.

Site 6 HVAS



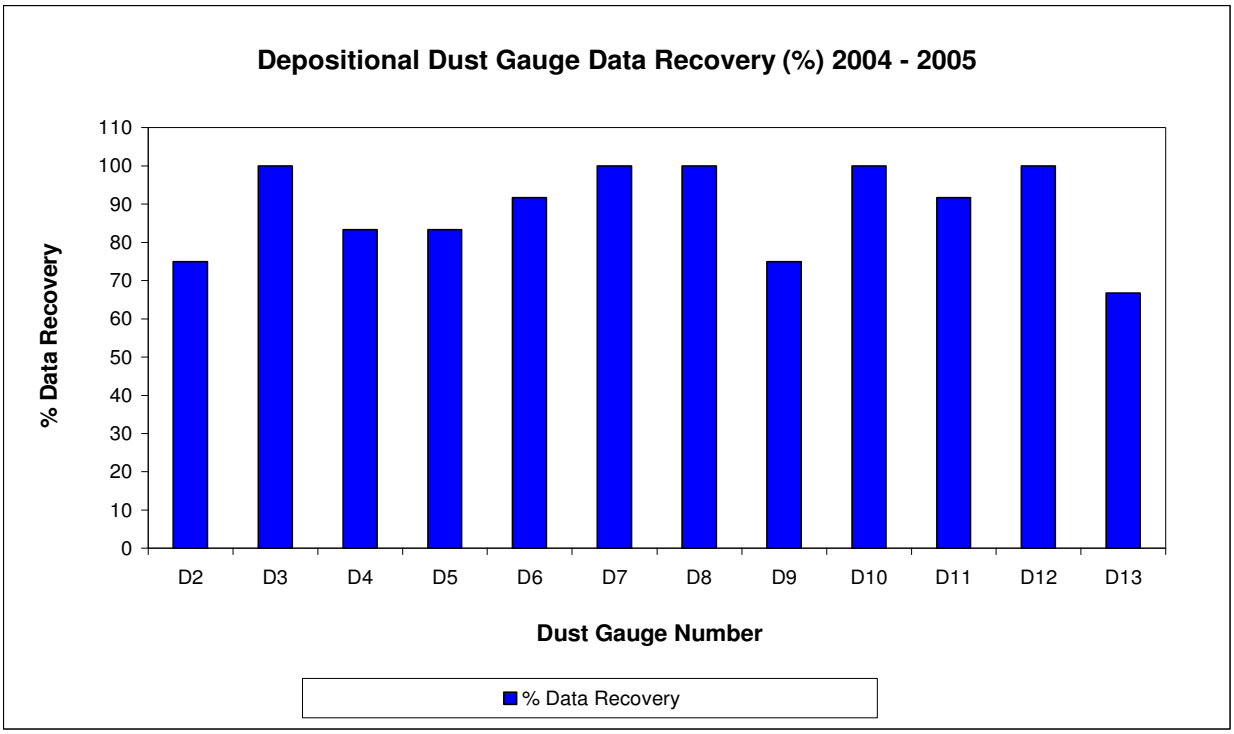
The rolling average TSP goal of 90µg/m^3 is not expected to apply to onsite HVAS.

3.1.2.3 Dust Deposition Gauges

The location of Dust Deposition gauges is detailed on Figure 1 of Appendix 2. They are as follows:

Location of Dust Deposition Gauges	
Monitoring Station No	**Location**
2	Ravensworth property west of open cut
3	Ravensworth property near Hunter River
4	Ashton property near Hunter River
5	New England Highway SE of Camberwell village
6	St Clements Church
7	TEOM site 1
8	TEOM site 2
9	TEOM site 3
10	**On site** - TEOM site 4 (near East OB dump)
11	NE of Emplacement Area on Glennies Creek Rd
12	**On site** – TEOM site 6 (alongside coal haul road)
13	**On site** – TEOM site 7 (country end turnout)

Data recovery for all depositional dust gauges is as follows:

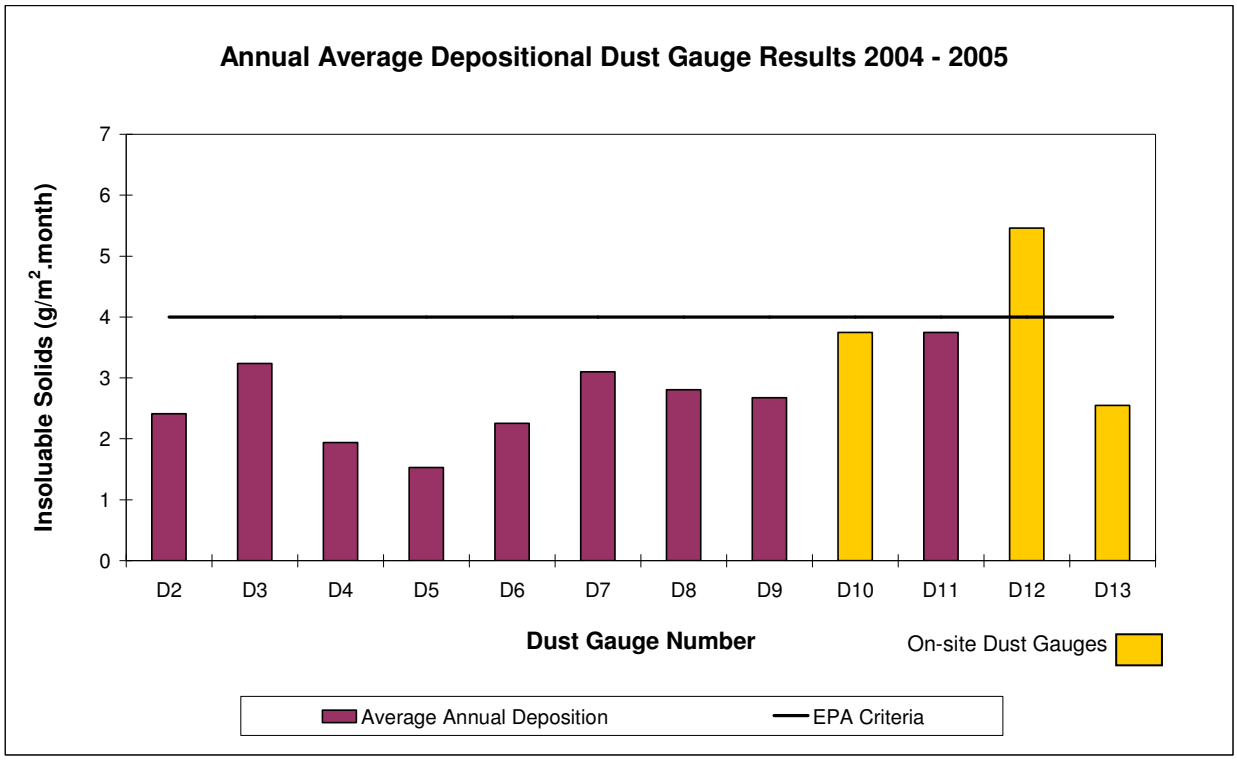


Dust Deposition Gauges – Extent of Contamination		
Gauge Number	**Data Availability (%)**	**Data Loss**
D2	75	3 contaminated results
D3	100	0 contaminated result
D4	83	1 contaminated result
D5	83	2 contaminated result
D6	92	1 contaminated results
D7	100	0 contaminated results
D8	100	0 contaminated results
D9	75	3 contaminated results
D10	100	0 contaminated results
D11	92	1 contaminated results
D12	100	0 contaminated results
D13	67	4 contaminated results

Table 9 shows the annual average insoluble solids for each gauge over the 2004 – 2005 reporting period.

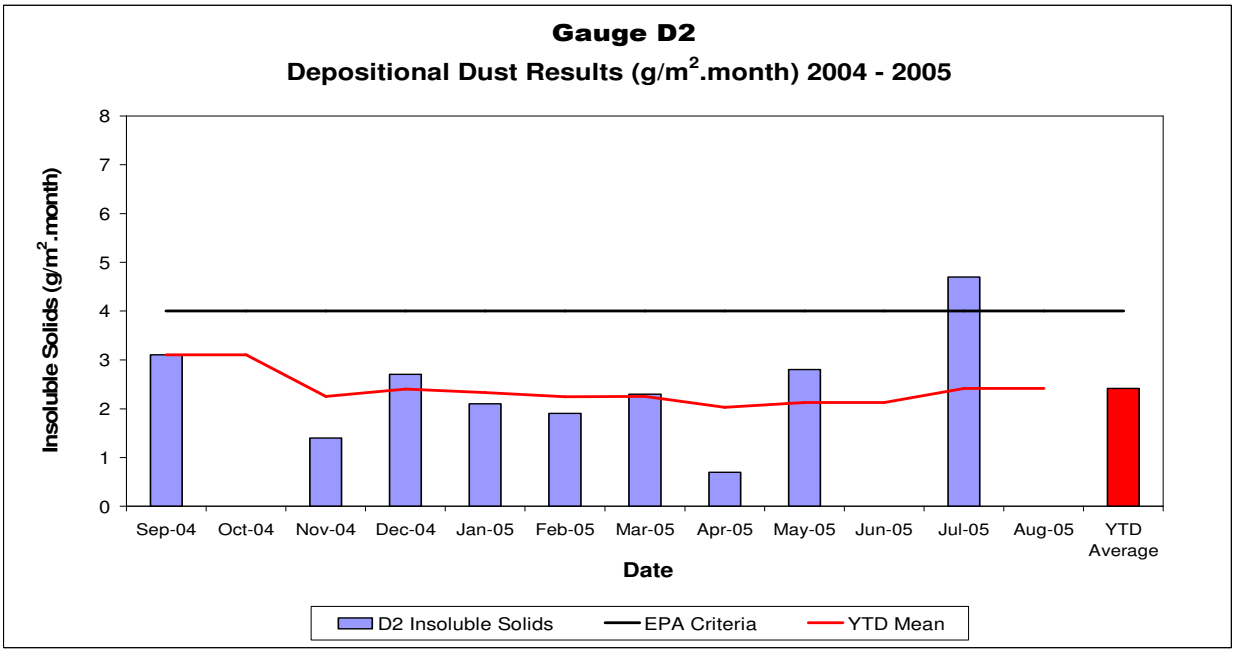
TABLE 9: INSOLUBLE SOLIDS ANNUAL AVERAGE RESULTS (EXCLUDING CONTAMINATED GAUGES)		
Dust Gauge	**Annual Average EIS Background Values (g/m^2.month)**	**Annual Average 2004 – 2005 (g/m^2/month)**
D2	3.5	2.4
D3	3.9	3.2
D4	1.6	1.9
D5	2.0	1.5
D6	1.5	2.3
D7	NA	2.8
D8	NA	2.7
D9	NA	2.2
D10 (on site)	NA	3.8
D11	NA	1.6
D12 (on site)	NA	5.5
D13 (on site)	NA	2.6

The annual average dust deposition for all depositional dust gauges is as follows:



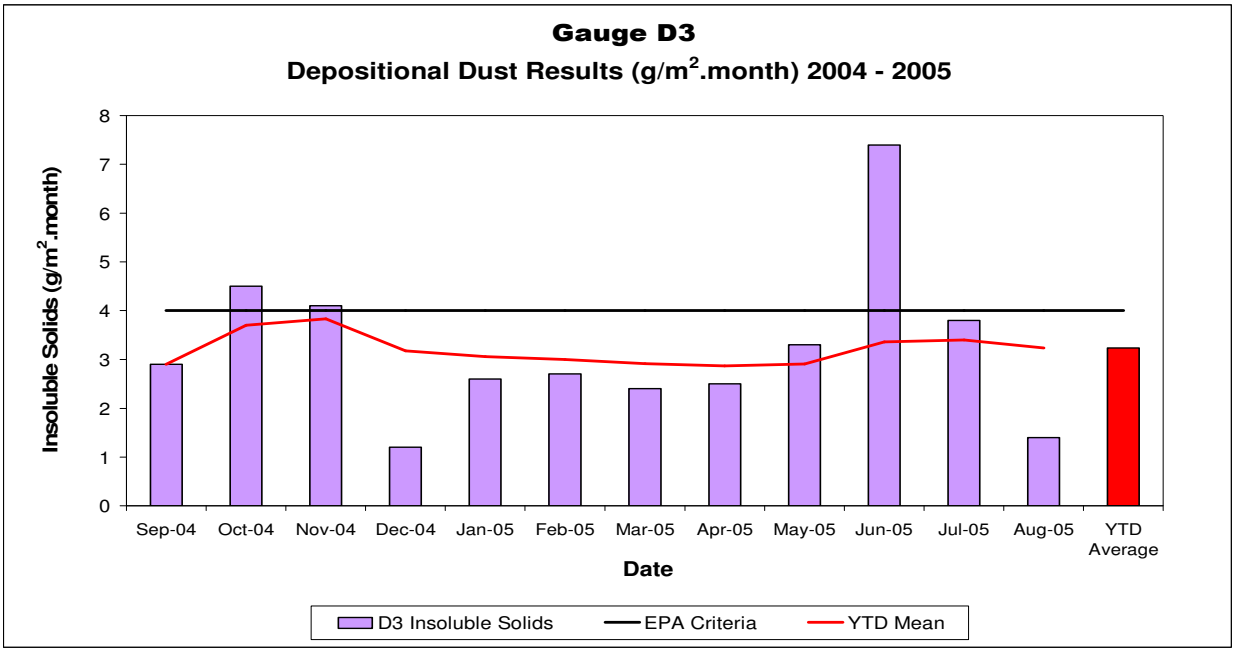
All annual average dust gauge results for the 2004-2005 reporting year were within the EPA criteria of 4 g/m^2.month except for D12. D12 is located on site adjacent to the coal haul road and is heavily influenced by activity on that road. EPA criteria is not expected to apply to this gauge.

Results for individual dust gauges are as follows

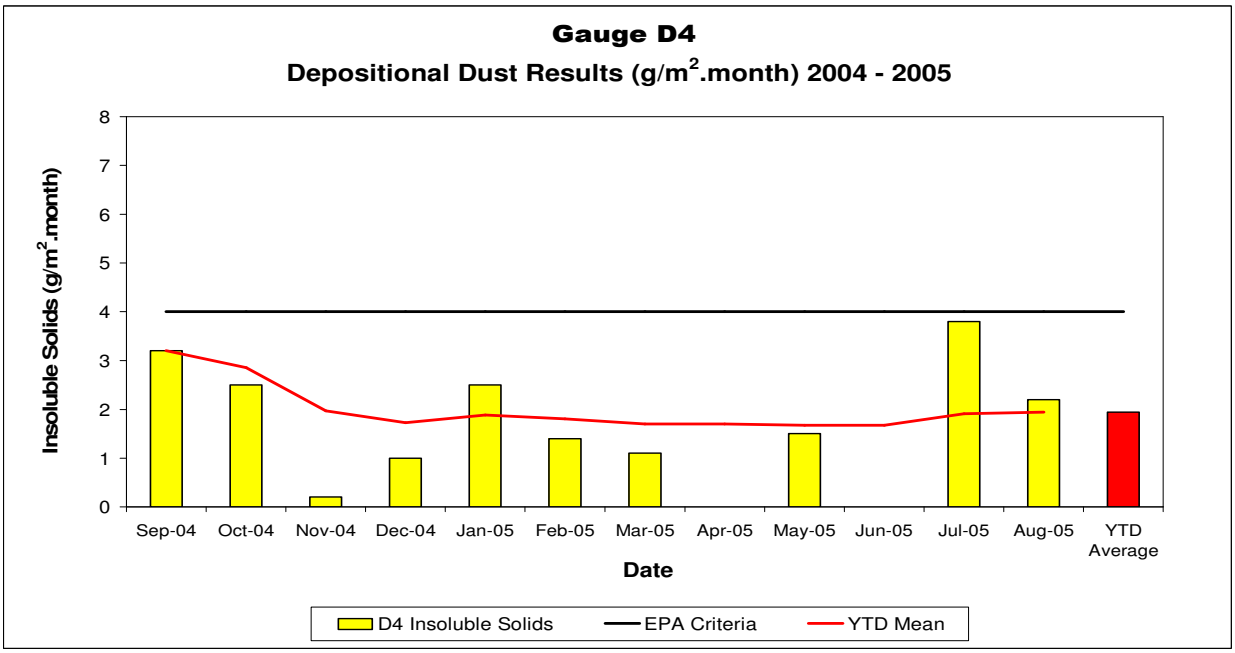


Depositional dust gauge D2 is located to the west of Ashton on Ravensworth property. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month. The elevated July

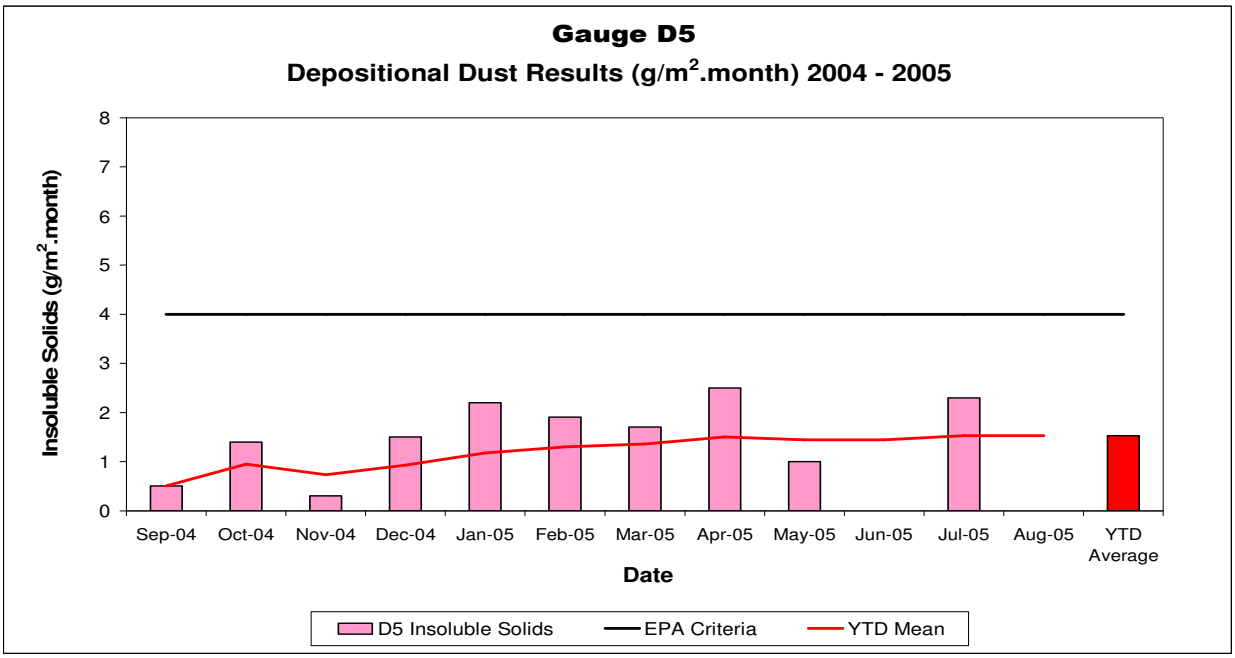
result occurred during a month where wind direction was predominantly west to northwest indicating that mines from this direction contributed greatly to this result and that the contribution from Ashton was negligible.



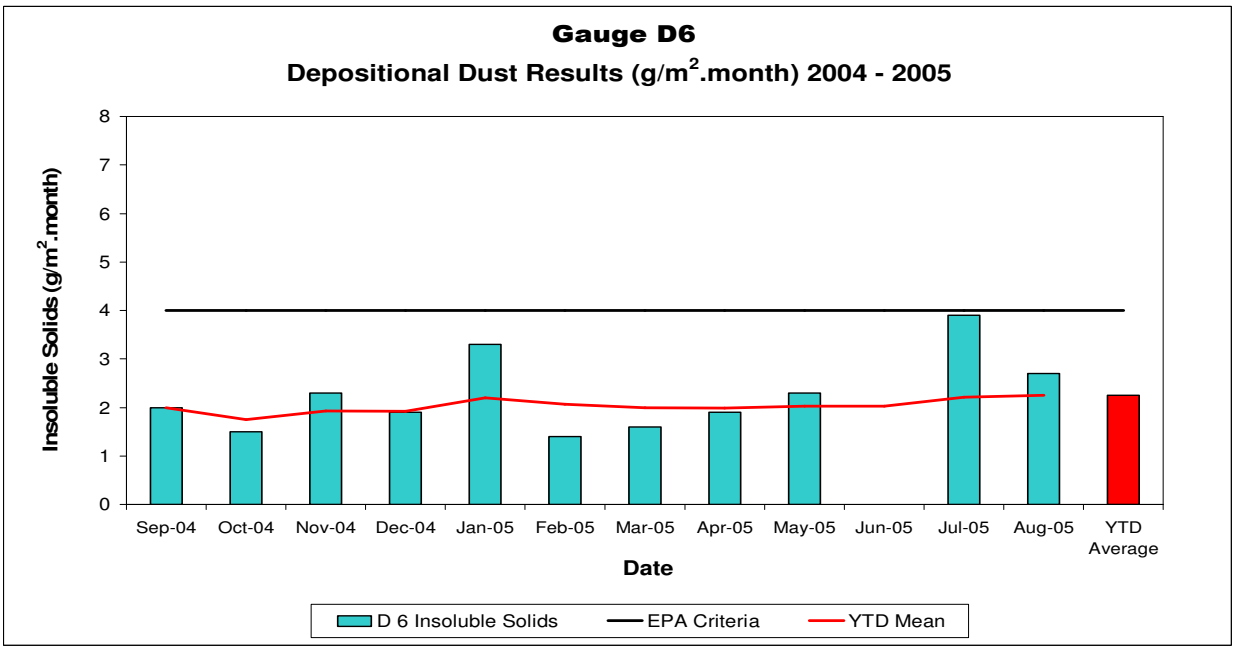
Depositional dust gauge D3 is located well to the south of the Ravensworth Mine near the Hunter River. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month. The elevated June and July results occurred during months where wind direction was predominantly west to northwest indicating that mines from this direction contributed greatly to this result and that the contribution from Ashton was negligible.



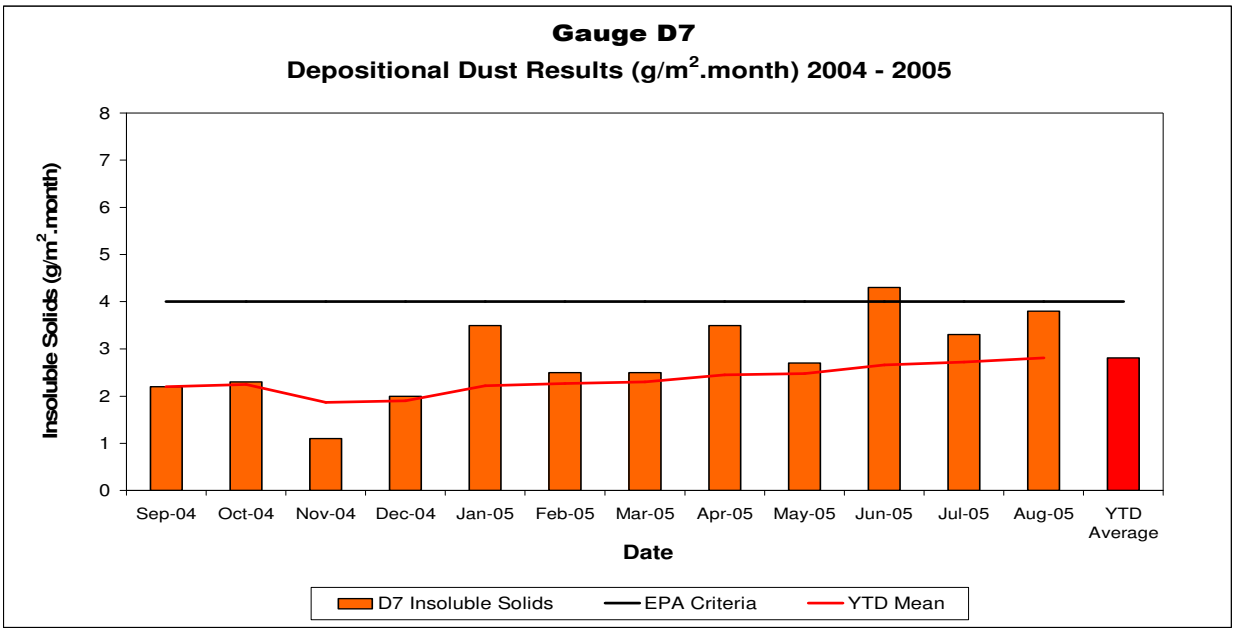
Depositional dust gauge D4 is also located well to the south of the Ashton Mine near the Hunter River. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



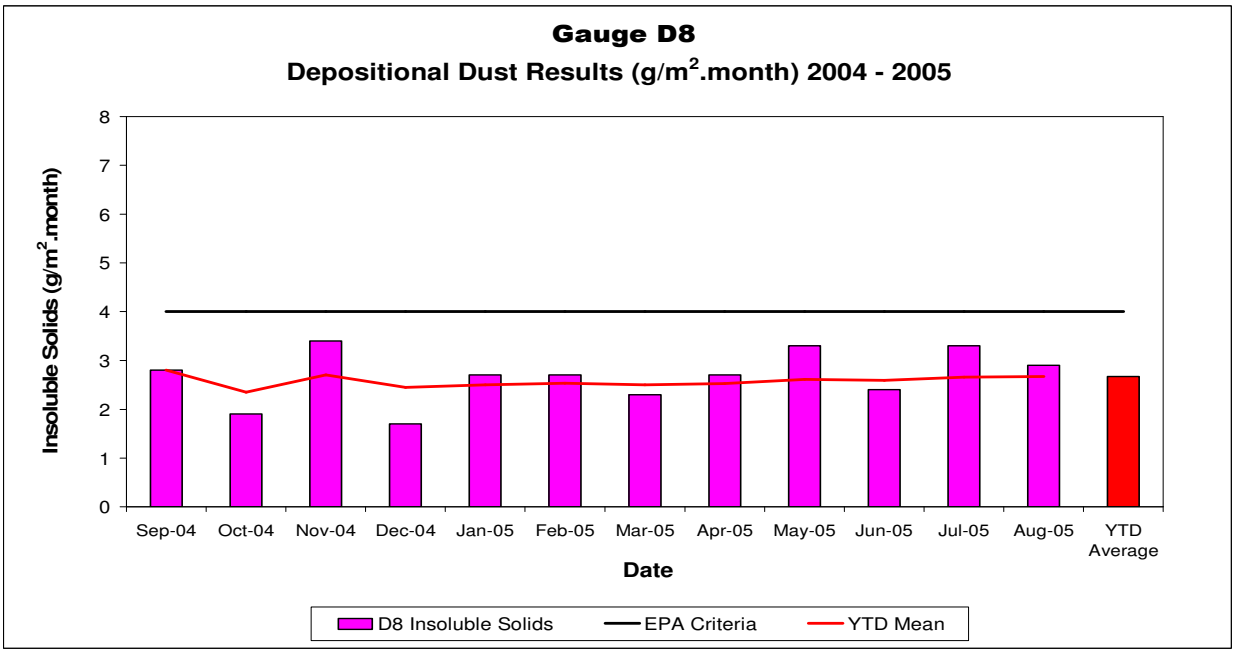
Depositional dust gauge D5 is located adjacent to the New England Highway approximately 4km south east of the Ashton Mine. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



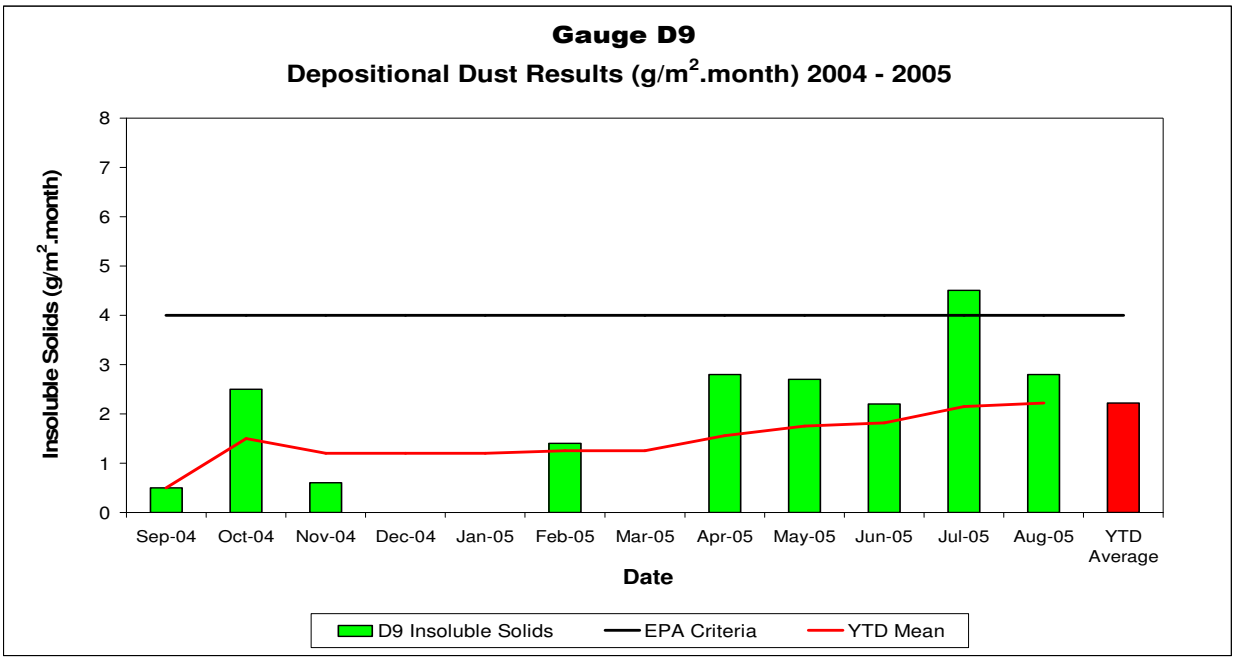
Depositional dust gauge D6 is located near St Clements Church in the village of Camberwell and is in close proximity to the Ashton Mine. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



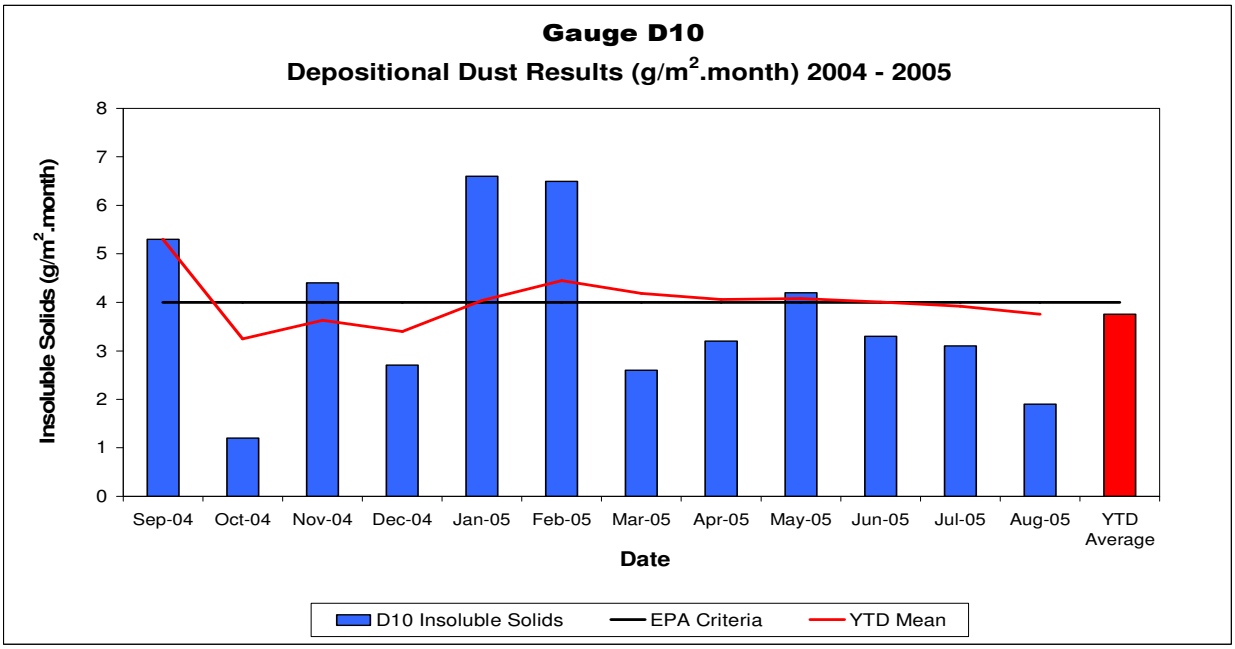
Depositional dust gauge D7 is located in the northern portion of Camberwell village and is in close proximity to the Ashton Mine (approximately 500m from open-cut operations). Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



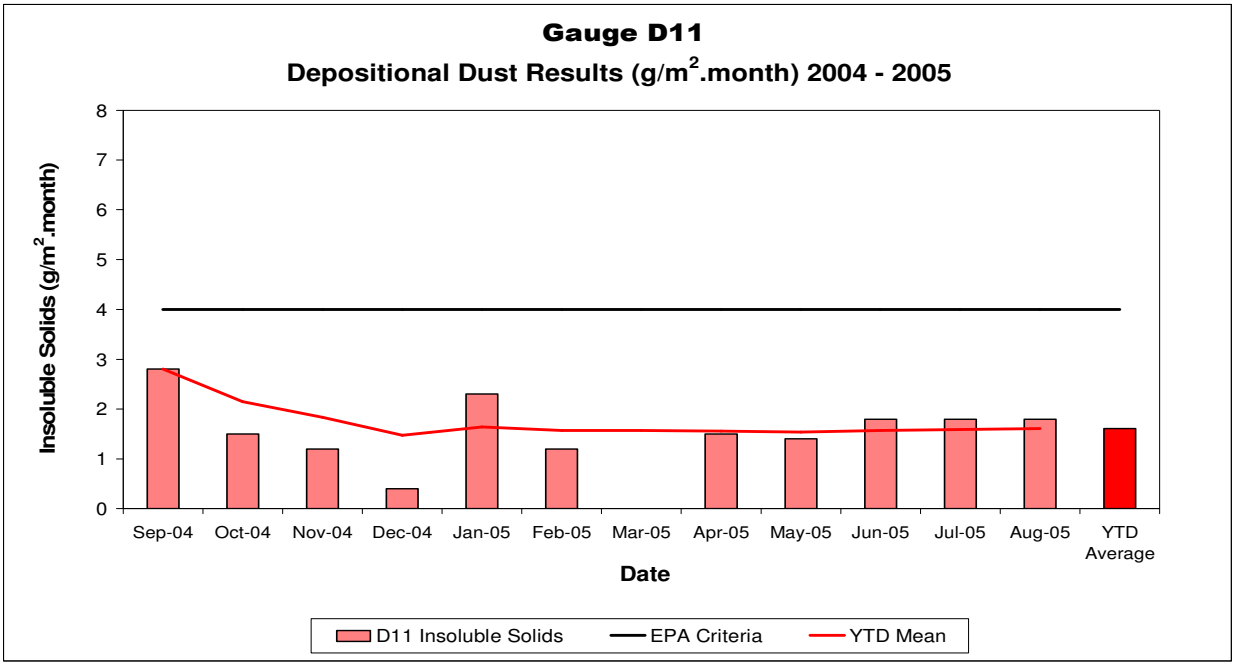
Depositional dust gauge D8 is located in Camberwell village on the south side of the New England Highway. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month. Results elevated above background are potentially a result of impacts from the highway.



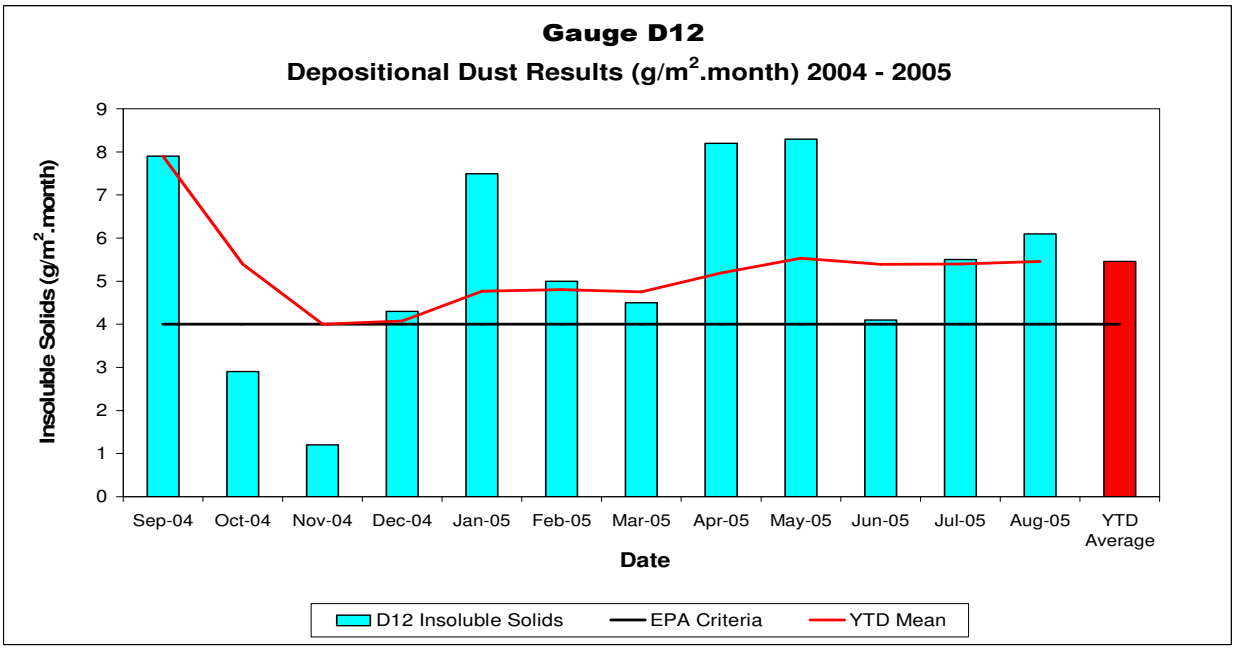
Depositional dust gauge D9 is located on a farming property immediately south east of the Eastern Emplacement Area. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



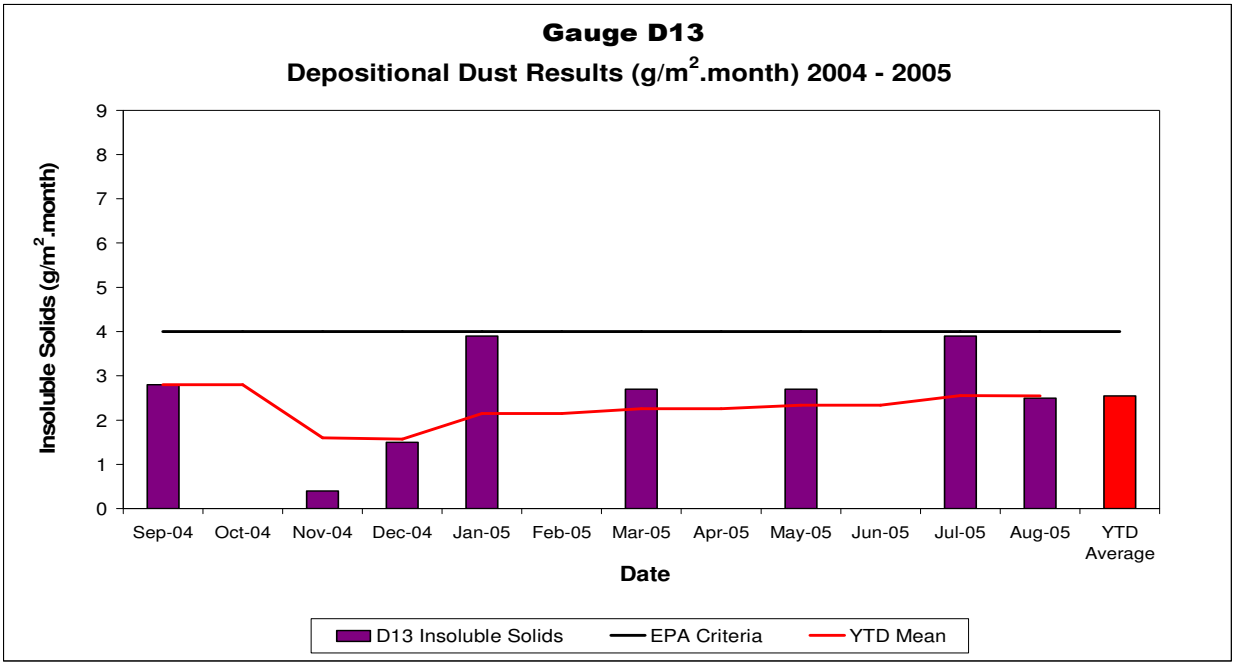
Depositional dust gauge D10 is located on-site between the Eastern Emplacement Area and the Main Northern Railway and is influenced by activity on the overburden dump and a gravel access road and the Ashton Coal rail loop and the Main Northern Rail Line that run beside it's location (all within 50m). Year-to-date annual average results are slightly below the EPA criteria of 4g/m^2/month.



Depositional dust gauge D11 is located on Glennies Creek Road north east of the Eastern Emplacement Area in a grazing/farming area. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.



Depositional dust gauge D12 is located on site adjacent to an access road and the main coal haul road and is heavily influenced by activity on those roads. Year-to-date annual average results are above the EPA criteria of 4g/m^2/month, however this criteria is not expected to apply to on-site dust gauges.



Depositional dust gauge D13 is located on site adjacent to the western end turnout of the rail siding. Year-to-date annual average results are below the EPA criteria of 4g/m^2/month.

3.2 EROSION AND SEDIMENT CONTROL

3.2.1 Methods of Control

All runoff from disturbed areas is channelled into a series of sediment control dams established in accordance with the Erosion and Sediment Control Management Plan (ESCP). These dams have worked effectively and the water has been utilised on site for dust suppression activities by either direct extraction from the storage or by transfer to other storage dams.

Major runoff storage dams are located in the following areas:

- On the north-west side of the CHPP (Process Water Dam and Settling Dam);
- On the eastern side of the Eastern Emplacement Area (Dam 5/6); and
- On the south-western side of the open cut area (Lake Topliss and smaller dams).

In addition, there are a number of minor runoff capture dams that intercept runoff water before it departs site. These dams may also contain sedimentation control devices in the form of hay bales, silt fences, etc where required.

3.2.2 Monitoring Results

Visual inspections are undertaken on a regular basis.

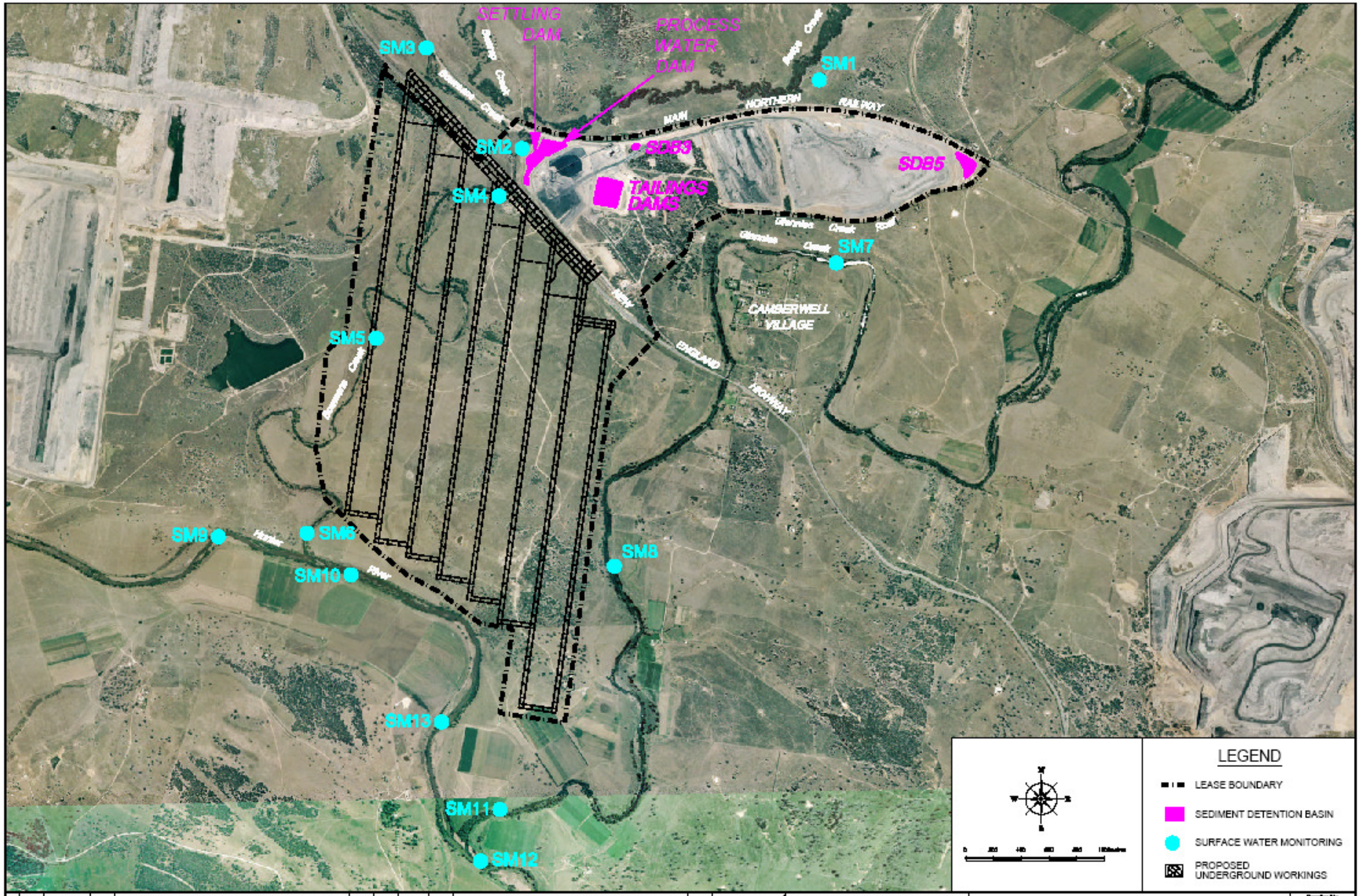
3.3 SURFACE WATER POLLUTION

The water monitoring locations are detailed in Figure 2 from the Site Water Management Plan (following page) as well as the following table:

Surface Water Monitoring Locations		
Monitoring Station	**Stream**	**Location**
SM 1	Bettys Creek	Glendell land upstream of Ashton
SM 2	Bettys Creek	Just upstream of confluence with Bowmans Creek
SM 3	Bowmans Creek	Water pool at north west corner of mine lease
SM 4	Bowmans Creek	Water pool just downstream of New England Highway
SM 5	Bowmans Creek	Halfway down Ashton property
SM 6	Bowmans Creek	Just upstream of confluence with Hunter River
SM 7	Glennies Creek	Upstream of Ashton Mine
SM 8	Glennies Creek	Halfway down Ashton property
SM 9	Hunter River	Upstream of confluence with Bowmans Creek
SM 10	Hunter River	Downstream of confluence with Bowmans Creek
SM 11	Glennies Creek	Upstream of confluence with Hunter River
SM 12	Hunter River	Downstream of confluence with Glennies Creek
SM 13	Hunter River	Upstream of confluence with Glennies Creek

Abbreviations used within Section 3.3 are as follows:

µS/cm	*microsiemens per centimetre*
mg/l	*milligrams per litre*
TDS	*Total Dissolved Solids*
TSS	*Total Suspended Solids*
EC	Electrical Conductivity



REVISIONS									
REV.	DATE	BY	DESCRIPTION	CHK.	REV.	DATE	BY	DESCRIPTION	CHK.

AshtonCoal
PO Box 899 Singleton NSW 2330
Prepared by Co-Ordinates Pty Ltd

SITE WATER MANAGEMENT PLAN
FIGURE 2
SEDIMENT DETENTION BASINS

Drawing No. 0D772
Revision No. A

Date	Scale	Drawn	Checked	Approved	Sheet Size
10.08.05	1: 25,000	MN	JF	PH	A3

3.3.1 Monthly Water Quality Monitoring Results

All monthly water samples were collected and analysed during the reporting period for pH, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS) Total Hardness ($CaCO_3$), Dissolved Major Cations (Ca, Mg, Na and K) and Oil and Grease (O & G). An additional comprehensive analysis was also conducted on a monthly basis at SM4 in Bowmans Creek.

3.3.1.1 pH

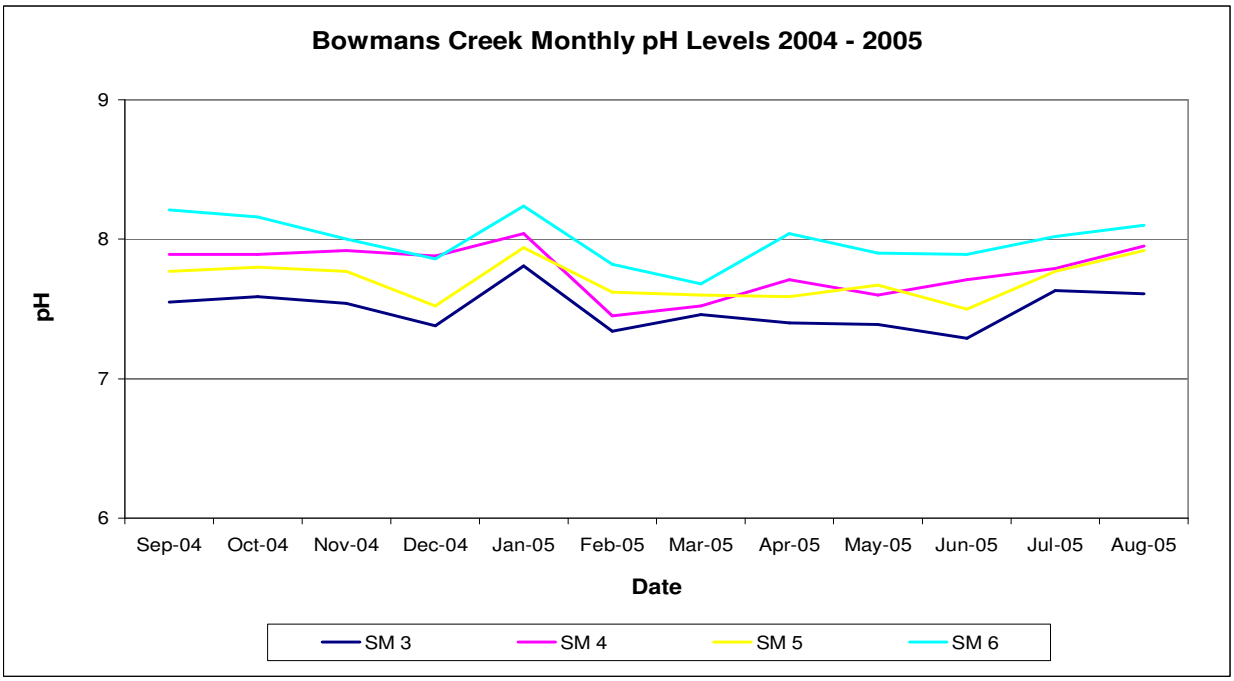
The results of monthly pH monitoring were as follows:

pH	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			7.6	7.9	7.8	8.2	7.8	7.7	8.3	8.3	7.8	8.1	8.2
11-Oct-04			7.6	7.9	7.8	8.2	7.8	7.8	8.2	8.2	7.7	8.2	8.2
11-Nov-04			7.5	7.9	7.8	8.0	7.7	7.5	8.1	8.1	7.8	8.3	8.1
21-Dec-04			7.4	7.9	7.5	7.9	7.5	7.4	7.9	7.9	7.5	7.6	7.9
19-Jan-05			7.8	8.0	7.9	8.2	7.9	8.0	8.3	8.3	8.0	8.0	8.3
23-Feb-05			7.3	7.5	7.6	7.8	7.6	7.5	7.9	8.0	7.7	7.7	7.9
30-Mar-05			7.5	7.5	7.6	7.7	7.6	7.6	8.0	8.1	7.8	7.8	8.0
28-Apr-05			7.4	7.7	7.6	8.0	7.9	7.7	8.0	8.1	7.9	7.8	8.0
25-May-05			7.4	7.6	7.7	7.9	7.6	7.6	8.0	8.1	7.8	7.8	8.0
15-Jun-05			7.3	7.7	7.5	7.9	7.6	7.6	8.1	8.1	7.7	7.9	8.0
12-Jul-05			7.6	7.8	7.8	8.0	7.8	7.9	8.2	8.2	8.0	7.9	8.1
10-Aug-05			7.6	8.0	7.9	8.1	7.8	7.8	8.2	8.2	7.9	8.0	8.2
Min			7.3	7.5	7.5	7.7	7.5	7.4	7.9	7.9	7.5	7.6	7.9
Av			7.5	7.8	7.7	8.0	7.7	7.6	8.1	8.1	7.8	7.9	8.1
Max			7.8	8.0	7.9	8.2	7.9	8.0	8.3	8.3	8.0	8.3	8.3

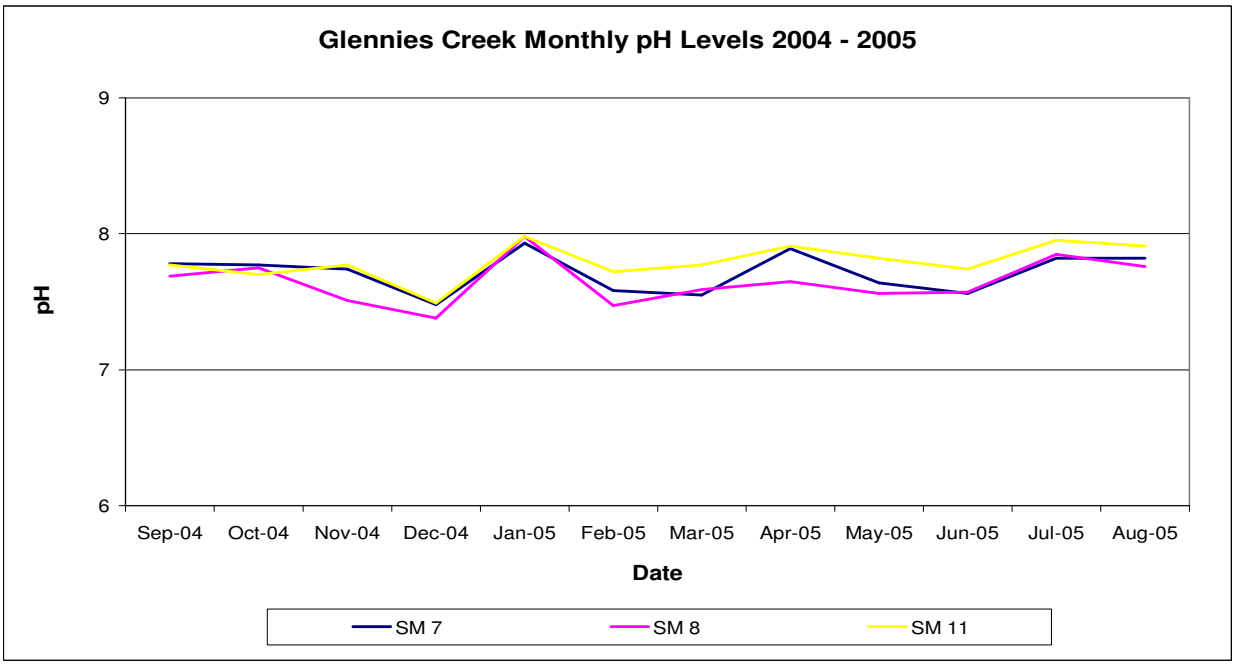
Monthly water quality monitoring of pH levels in Bowmans Creek, Glennies Creek and the Hunter River over the reporting period demonstrate that pH levels have been consistently within the neutral (min pH = 7.3) to slightly alkaline (max pH = 8.3) range. There was little variation in pH at each site with a maximum range of less than one pH unit. This variation is likely to be attributed to natural fluctuations in water pH as a result of rainfall runoff, evaporation, vegetation decay and fluvial sediment movements.

The results show a consistent (though minor) increase in pH between SM3 (upstream of Ashton Operations) and SM4 (downstream of Ashton Operations) over the reporting period. It is possible that subsurface flows in Bettys Creek are causing this change.

Betty's Creek (SM1 and SM2) remained dry throughout the year. pH levels in Bowmans Creek (SM3, SM4, SM5 and SM6) were neutral to slightly alkaline (ranging from 7.3 to 8.2) and remained within the acceptable recommended pH range. There was a slight variation amongst the different sites sampled, however fluctuations throughout the reporting period followed a similar pattern.



Glennies Creek (SM7, SM8 and SM11) pH levels were neutral to slightly alkaline (ranging from 7.4 to 8.0) with little variation between sites, and remained within the acceptable recommended pH range. Slight pH fluctuations throughout the reporting period followed a very similar pattern across all sites.



pH levels in the Hunter River (SM9, SM10, SM12 and SM13) were neutral to slightly alkaline (ranging from 7.6 to 8.3) with minimal variation between sites, and remained within the acceptable recommended pH range. Slight pH fluctuations throughout the reporting period followed a very similar pattern across all sites.

3.3.1.2 Electrical Conductivity (EC)

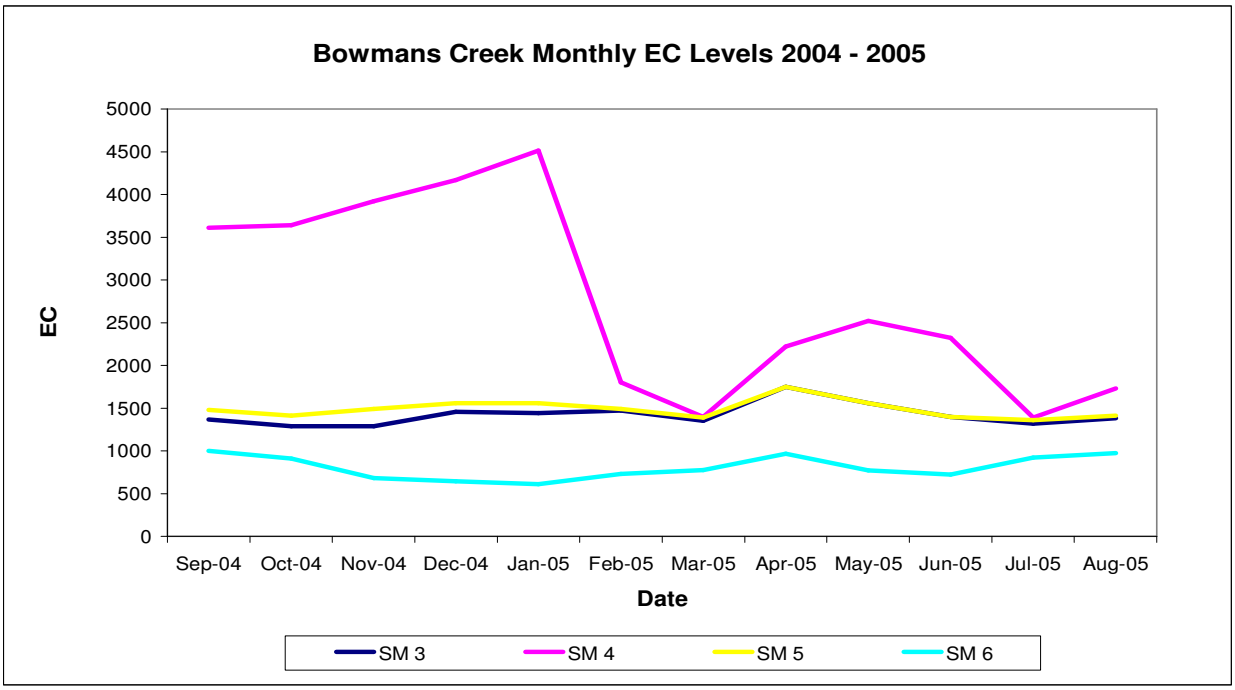
The results of EC monitoring are as follows:

EC	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			1370	3610	1480	998	398	306	811	831	299	512	815
11-Oct-04			1290	3640	1410	910	347	348	666	728	363	578	661
11-Nov-04			1290	3920	1490	686	420	421	558	630	420	658	605
21-Dec-04			1460	4170	1560	645	300	300	350	548	303	403	543
19-Jan-05			1440	4510	1560	609	294	295	478	498	296	381	493
23-Feb-05			1470	1800	1490	731	351	331	616	631	329	476	633
30-Mar-05			1350	1400	1390	774	494	506	601	635	512	561	614
28-Apr-05			1750	2220	1750	966	369	370	809	820	360	498	833
25-May-05			1560	2520	1560	770	370	371	622	647	375	495	627
15-Jun-05			1400	2320	1400	723	340	336	560	581	333	480	569
12-Jul-05			1320	1390	1360	920	398	405	664	710	410	540	682
10-Aug-05			1380	1730	1410	973	293	287	704	717	303	561	715
Min			1290	1390	1360	609	293	287	350	498	296	381	493
Av			1423	2769	1488	809	365	356	620	665	359	512	649
Max			1750	4510	1750	998	494	506	811	831	512	658	833

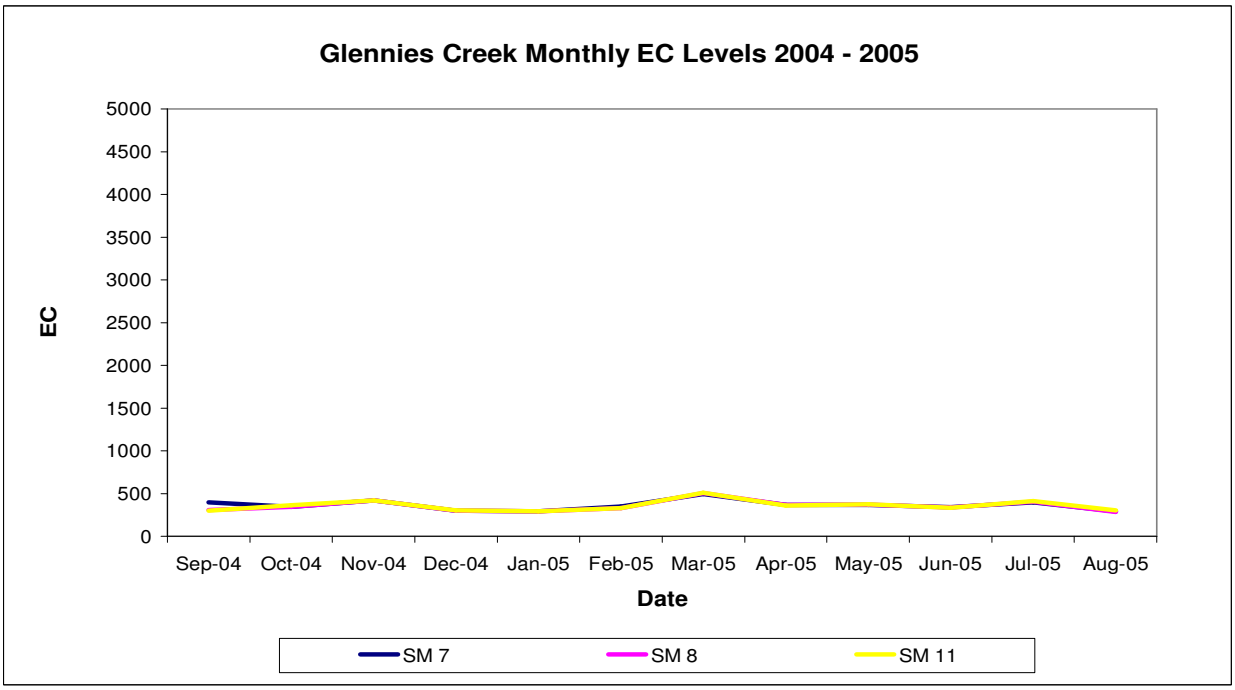
Betty's Creek (SM1 and SM2) remained dry throughout the year.

EC in Bowmans Creek (SM3, SM4, SM5 and SM6) remained relatively static (below 1750) at each monitoring point except for SM4. SM4 is a waterhole immediately downstream of the New England Highway.

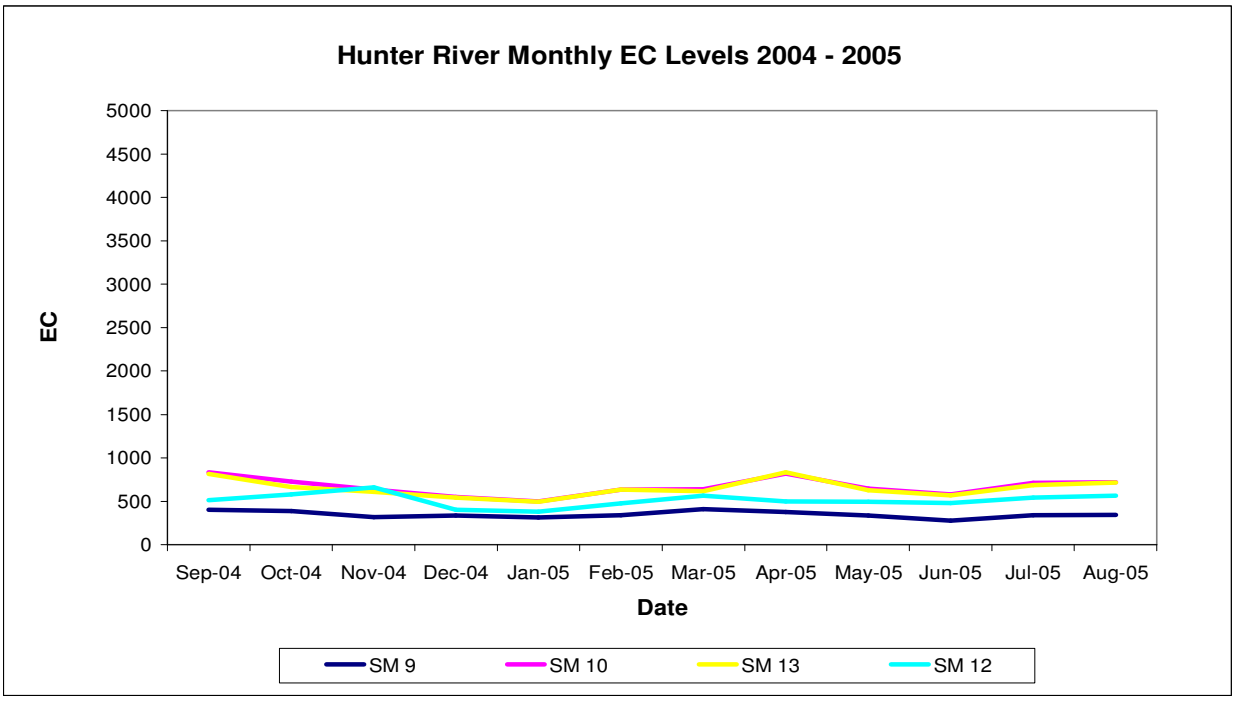
As for pH, SM4 showed an increase in EC over SM3 which may have been due to subsurface flow from Bettys Creek.



The EC of water in Glennies Creek (SM7, SM8 and SM11) remained consistently low (below 512). Glennies Creek is considered a controlled stream as it is dammed Lake St Clair from which water is regularly released resulting in consistent water quality results.



EC at SM9 (upstream of Bowmans Creek confluence) was marginally lower than SM10 (downstream of Bowmans Creek confluence), indicating a very slight negative impact from Bowmans Creek to salinity levels in the Hunter River. Conductivity at SM13 (upstream of Glennies Creek confluence) was higher than SM12 (downstream of Glennies Creek confluence). This indicates that Glennies Creek is having a positive impact on Hunter River salinity levels.

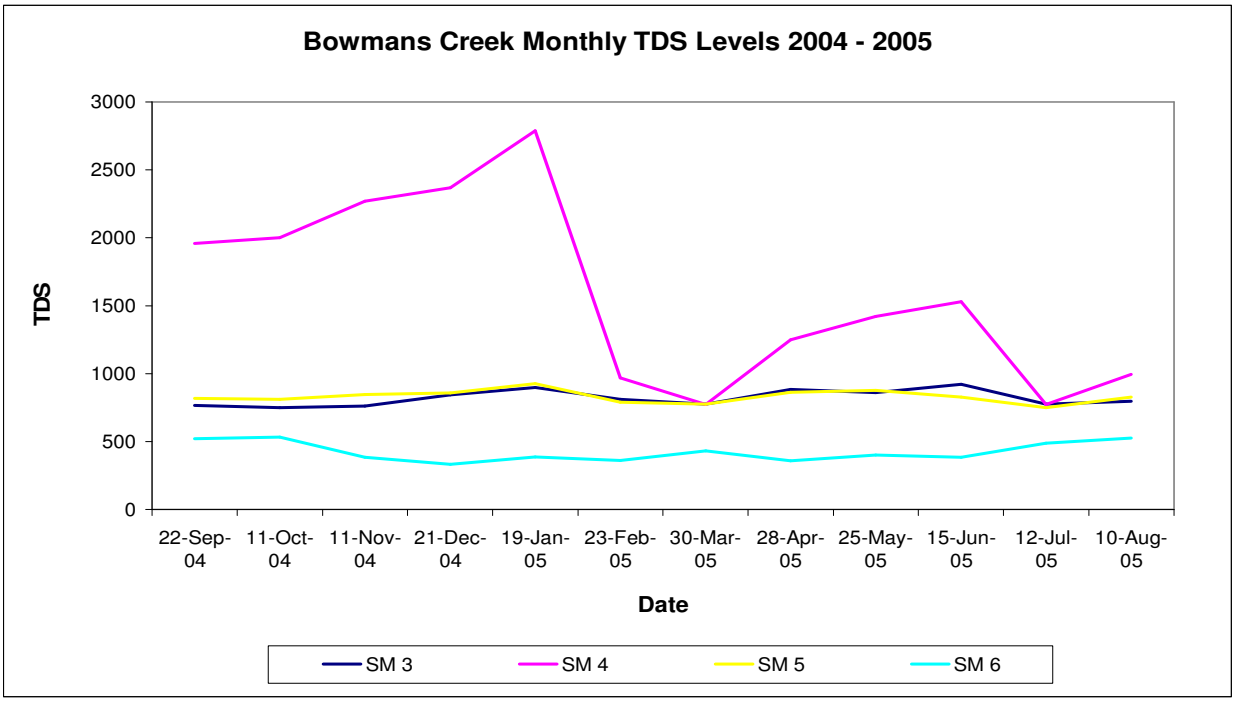


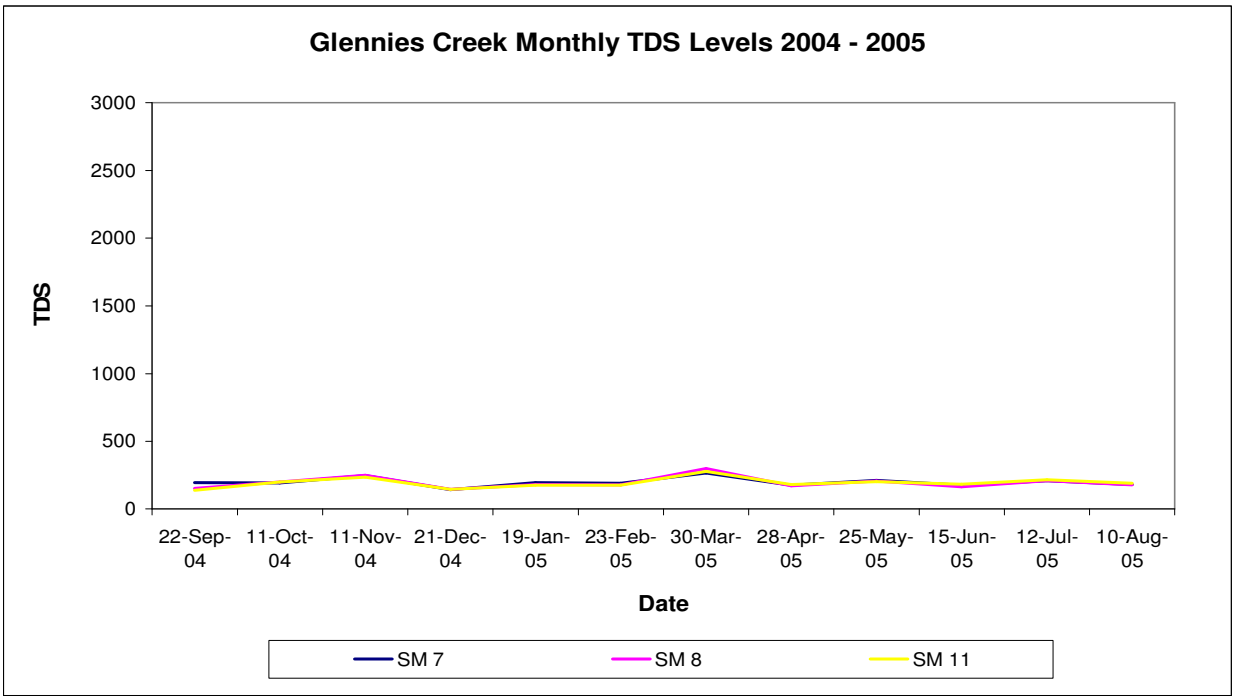
3.3.1.3 Total Dissolved Solids (TDS)

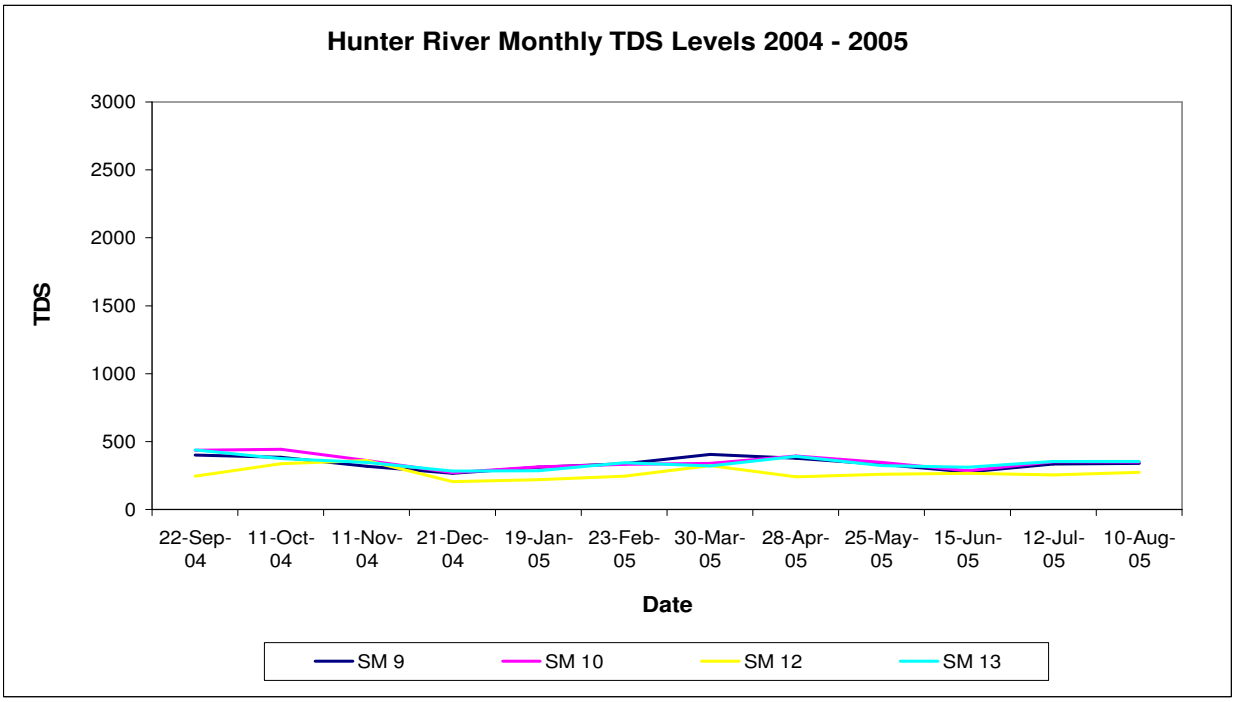
Monthly TDS results are as follows:

TDS	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			766	1960	819	523	194	153	403	437	138	248	439
11-Oct-04			749	2000	811	533	192	201	387	443	201	338	376
11-Nov-04			764	2270	846	387	246	249	318	362	237	361	348
21-Dec-04			845	2370	858	333	142	144	266	272	145	204	283
19-Jan-05			900	2790	926	388	194	181	312	314	175	219	286
23-Feb-05			810	968	792	360	188	179	338	334	176	248	344
30-Mar-05			776	774	778	432	266	300	406	340	278	326	322
28-Apr-05			884	1250	862	359	176	172	378	394	180	242	390
25-May-05			860	1420	878	402	210	206	334	346	202	260	324
15-Jun-05			922	1530	828	386	174	164	278	286	184	266	312
12-Jul-05			776	774	748	488	208	208	336	352	216	254	356
10-Aug-05			796	996	826	528	180	179	340	350	188	274	356
Min			749	774	748	333	142	144	266	272	138	204	283
Av			821	1592	831	427	198	195	341	353	193	270	345
Max			922	2790	926	533	266	300	406	443	278	361	439

TDS results closely reflect EC results.




Glennies Creek Monthly TDS Levels 2004 - 2005
TDS
3000
2500
2000
1500
1000
500
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 7
SM 8
SM 11

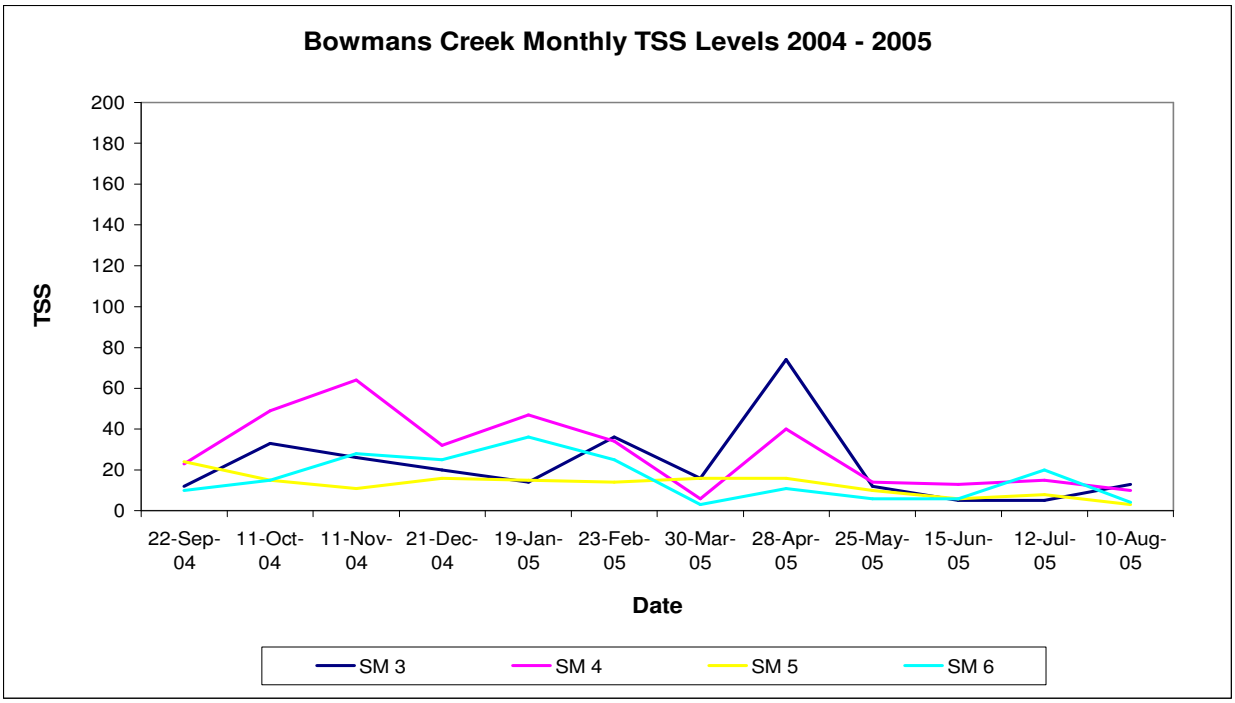

Hunter River Monthly TDS Levels 2004 - 2005
TDS
3000
2500
2000
1500
1000
500
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 9
SM 10
SM 12
SM 13

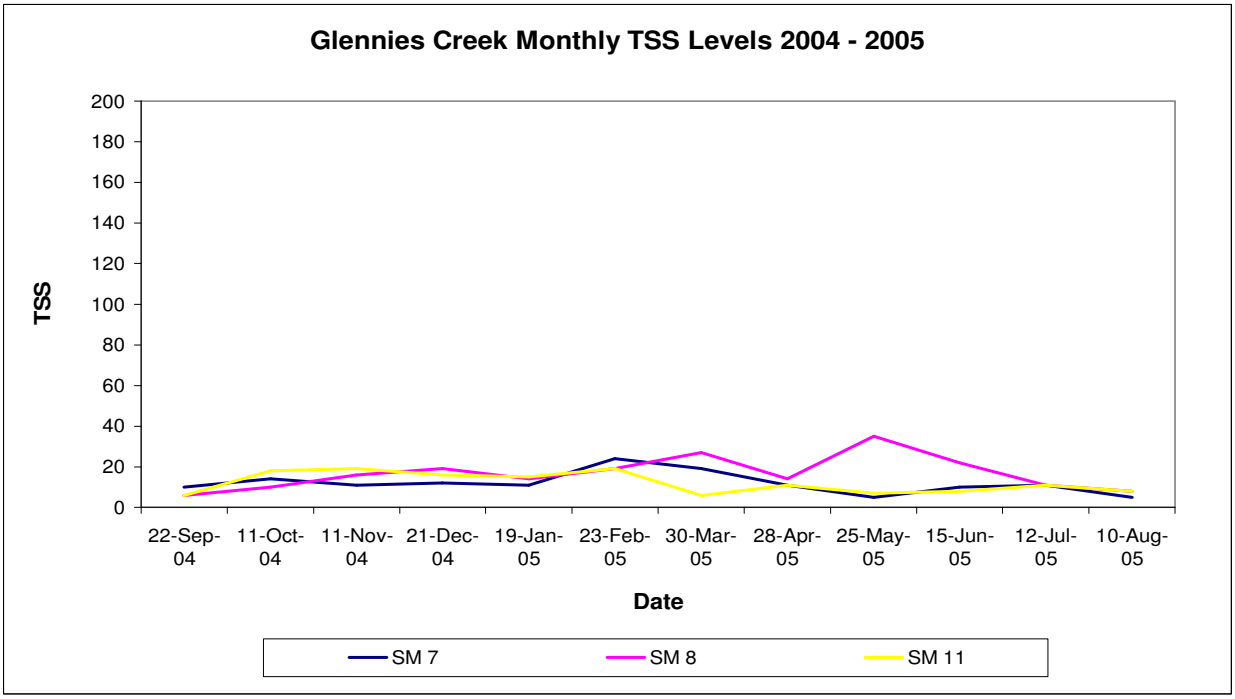
3.3.1.4 Total Suspended Solids (TSS)

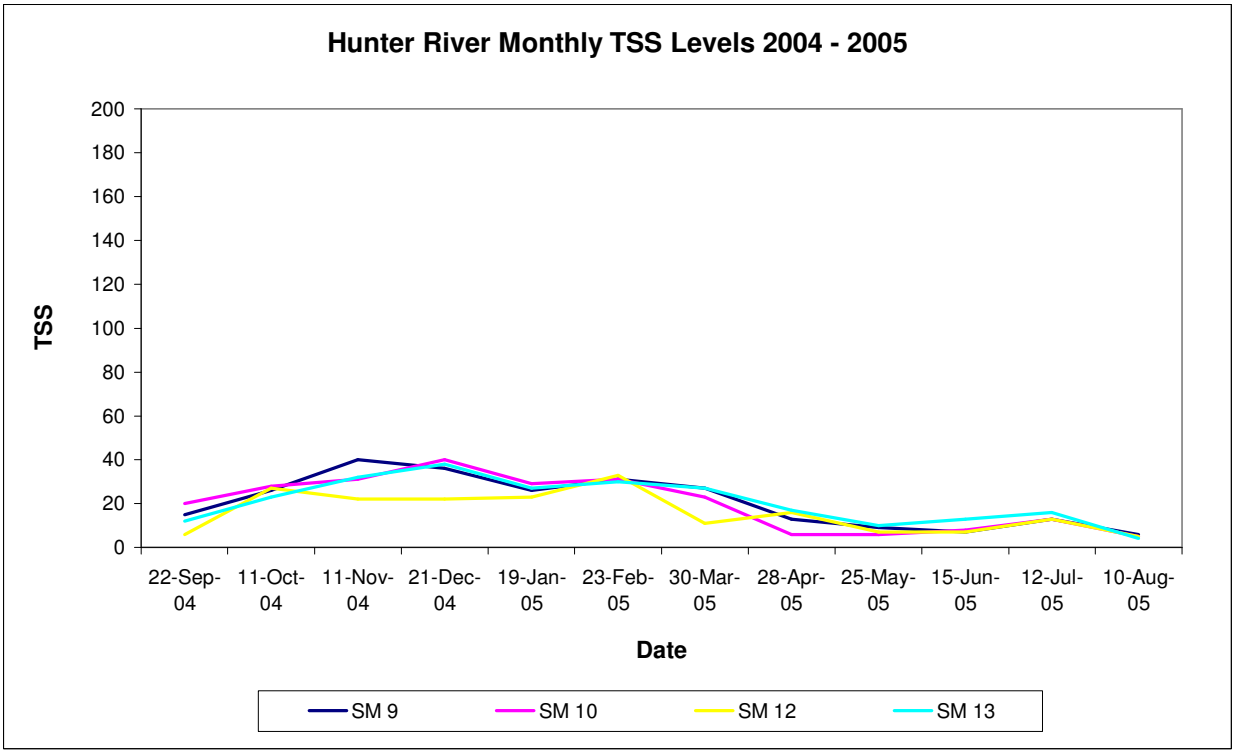
Monthly TSS results are as follows:

TSS	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			12	23	24	10	10	6	15	20	6	6	12
11-Oct-04			33	49	15	15	14	10	26	28	18	27	23
11-Nov-04			26	64	11	28	11	16	40	31	19	22	32
21-Dec-04			20	32	16	25	12	19	36	40	16	22	38
19-Jan-05			14	47	15	36	11	14	26	29	15	23	27
23-Feb-05			36	34	14	25	24	19	31	31	19	33	30
30-Mar-05			16	6	16	3	19	27	27	23	6	11	27
28-Apr-05			74	40	16	11	11	14	13	6	11	16	17
25-May-05			12	14	10	6	5	35	9	6	7	7	10
15-Jun-05			5	13	6	6	10	22	7	8	8	7	13
12-Jul-05			5	15	8	20	11	11	13	13	11	13	16
10-Aug-05			13	10	3	4	5	8	6	5	8	5	4
Min			5	6	3	3	5	6	6	5	6	5	4
Av			22	29	13	16	12	17	21	20	12	16	21
Max			74	64	24	36	24	35	40	40	19	33	38

The TSS results don't provide any evidence of impacts from Ashton site activities to water quality with respect to suspended solids.




Glennies Creek Monthly TSS Levels 2004 - 2005
TSS
200
180
160
140
120
100
80
60
40
20
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 7
SM 8
SM 11

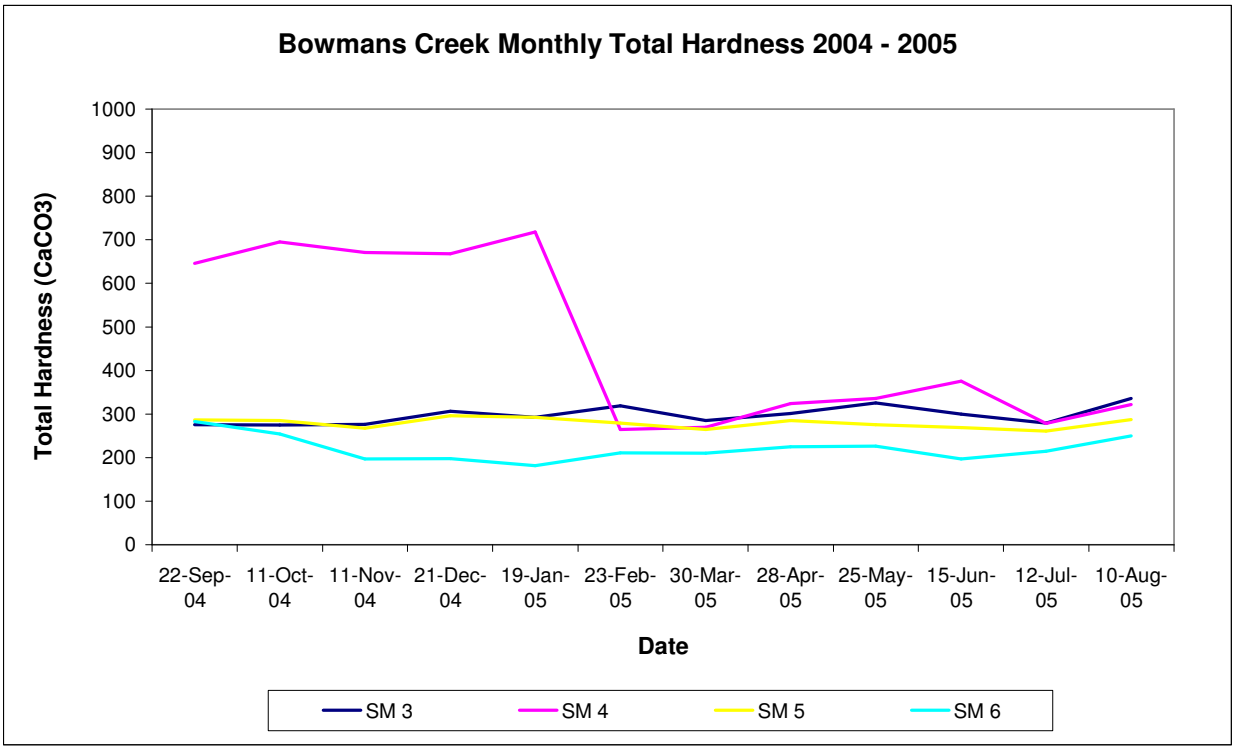

Hunter River Monthly TSS Levels 2004 - 2005
TSS
200
180
160
140
120
100
80
60
40
20
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 9
SM 10
SM 12
SM 13

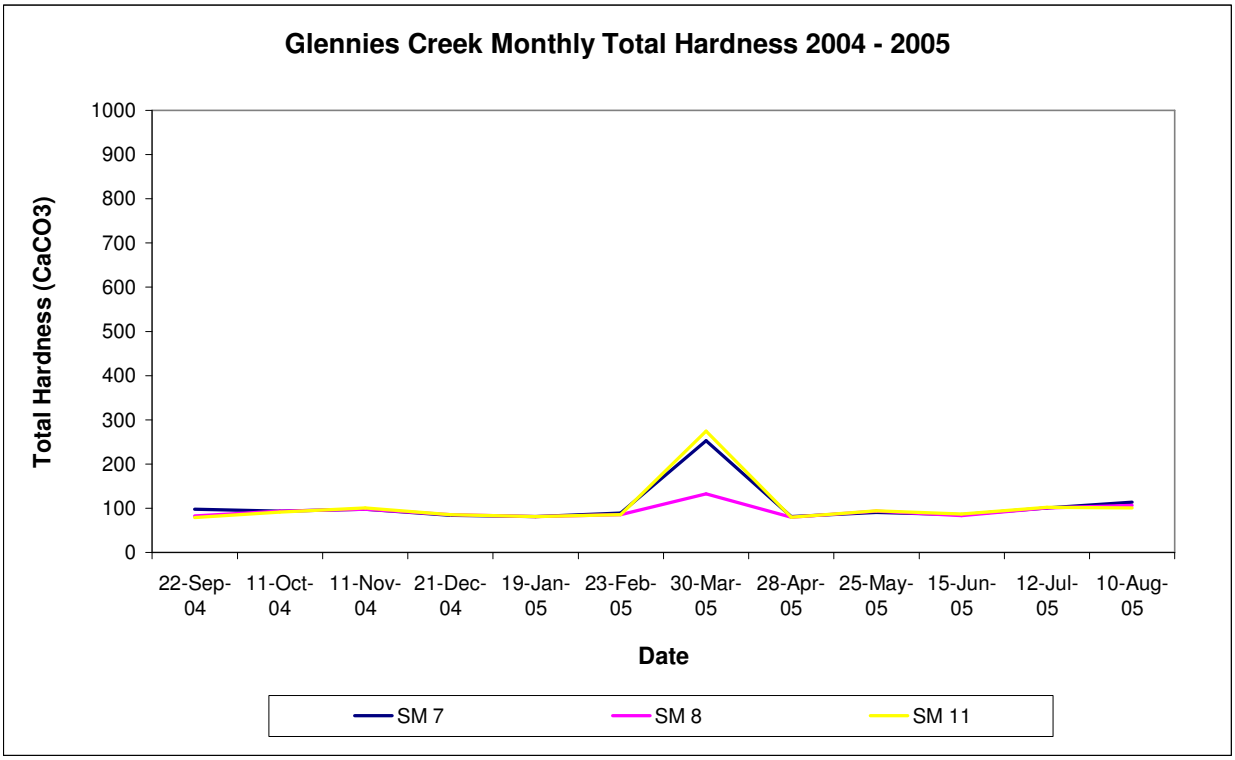
3.3.1.5 Total Hardness ($CaCO_3$)

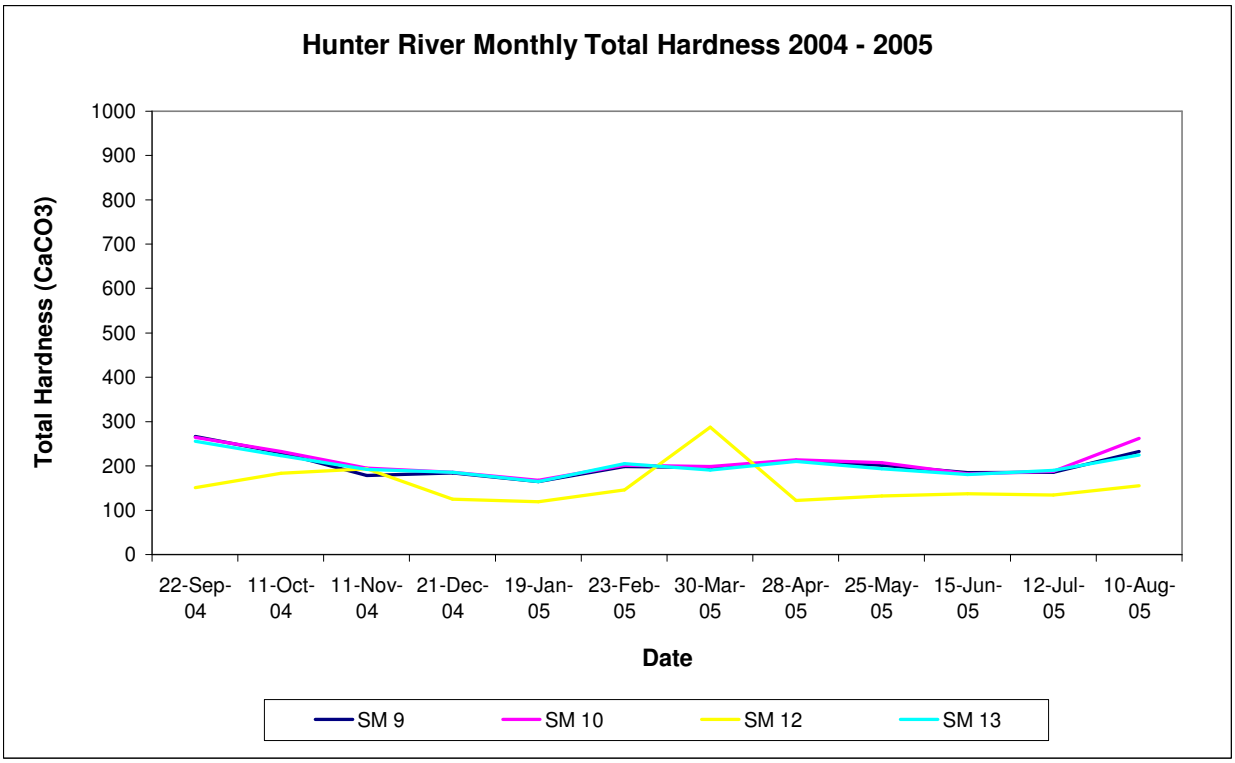
Monthly Total Hardness results are as follows:

Total Hardness	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			276	646	287	283	98	82	266	265	79	151	255
11-Oct-04			275	695	285	254	93	93	229	232	92	183	223
11-Nov-04			277	671	267	197	98	98	179	195	101	193	192
21-Dec-04			306	668	296	198	84	85	184	186	85	125	186
19-Jan-05			292	718	292	181	81	81	165	167	81	119	165
23-Feb-05			319	265	279	211	89	85	199	202	85	146	205
30-Mar-05			285	270	265	210	253	132	196	199	275	288	191
28-Apr-05			302	324	285	225	81	80	212	214	80	122	210
25-May-05			326	336	276	227	91	93	202	207	94	132	193
15-Jun-05			300	376	269	197	85	83	185	182	87	137	180
12-Jul-05			279	278	261	215	101	101	186	188	102	134	190
10-Aug-05			336	322	288	250	114	106	232	262	101	155	225
Min			275	265	261	181	81	80	165	167	79	119	165
Av			298	464	279	221	106	93	203	208	105	157	201
Max			336	718	296	283	253	132	266	265	275	288	255

With the minor increase in pH, EC and TDS between SM3 and SM4, an increase in hardness of the magnitude observed would be expected.




Glennies Creek Monthly Total Hardness 2004 - 2005
Total Hardness (CaCO3)
1000
900
800
700
600
500
400
300
200
100
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 7
SM 8
SM 11


Hunter River Monthly Total Hardness 2004 - 2005
Total Hardness (CaCO3)
1000
900
800
700
600
500
400
300
200
100
0
22-Sep-04
11-Oct-04
11-Nov-04
21-Dec-04
19-Jan-05
23-Feb-05
30-Mar-05
28-Apr-05
25-May-05
15-Jun-05
12-Jul-05
10-Aug-05
Date
SM 9
SM 10
SM 12
SM 13

3.3.1.6 Oil and Grease

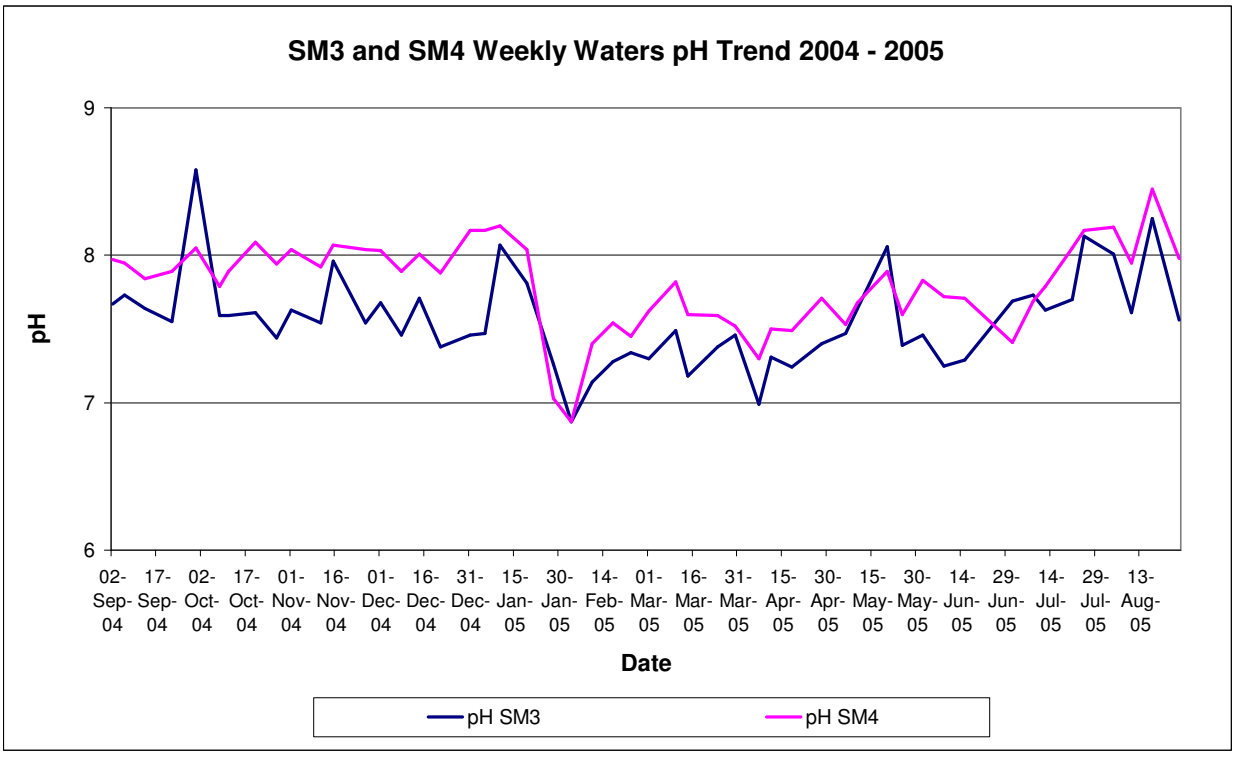
Monthly Oil and Grease results are as follows:

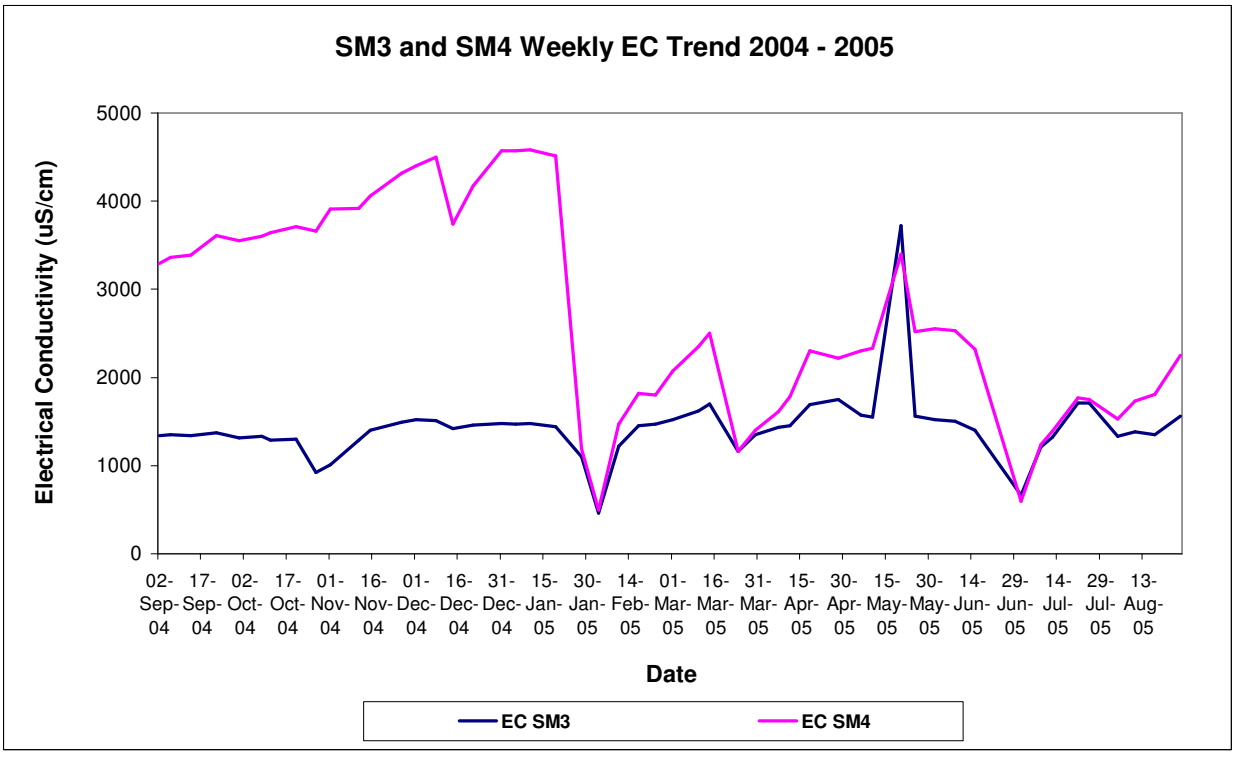
Oil & Grease	SM1	SM2	SM 3	SM 4	SM 5	SM 6	SM 7	SM 8	SM 9	SM 10	SM 11	SM 12	SM 13
22-Sep-04			0	0	0	0	0	0	0	0	0	0	0
11-Oct-04			0	0	0	0	0	0	0	0	0	0	0
11-Nov-04			0	0	0	0	0	0	0	0	0	0	0
21-Dec-04			0	0	0	0	0	0	0	0	0	0	0
19-Jan-05			0	0	0	0	0	0	0	0	0	0	0
23-Feb-05			0	0	6	0	0	0	0	0	0	0	0
30-Mar-05			0	0	0	0	0	0	0	0	0	0	0
28-Apr-05			0	0	0	0	0	0	0	0	0	0	0
25-May-05			0	0	0	0	0	0	0	0	0	0	0
15-Jun-05			0	0	0	0	0	0	0	0	0	0	0
12-Jul-05			0	0	0	0	0	0	0	0	0	0	0
10-Aug-05			0	0	0	0	0	0	0	0	0	0	0
Min			0	0	0	0	0	0	0	0	0	0	0
Av			0	0	1	0	0	0	0	0	0	0	0
Max			0	0	6	0	0	0	0	0	0	0	0

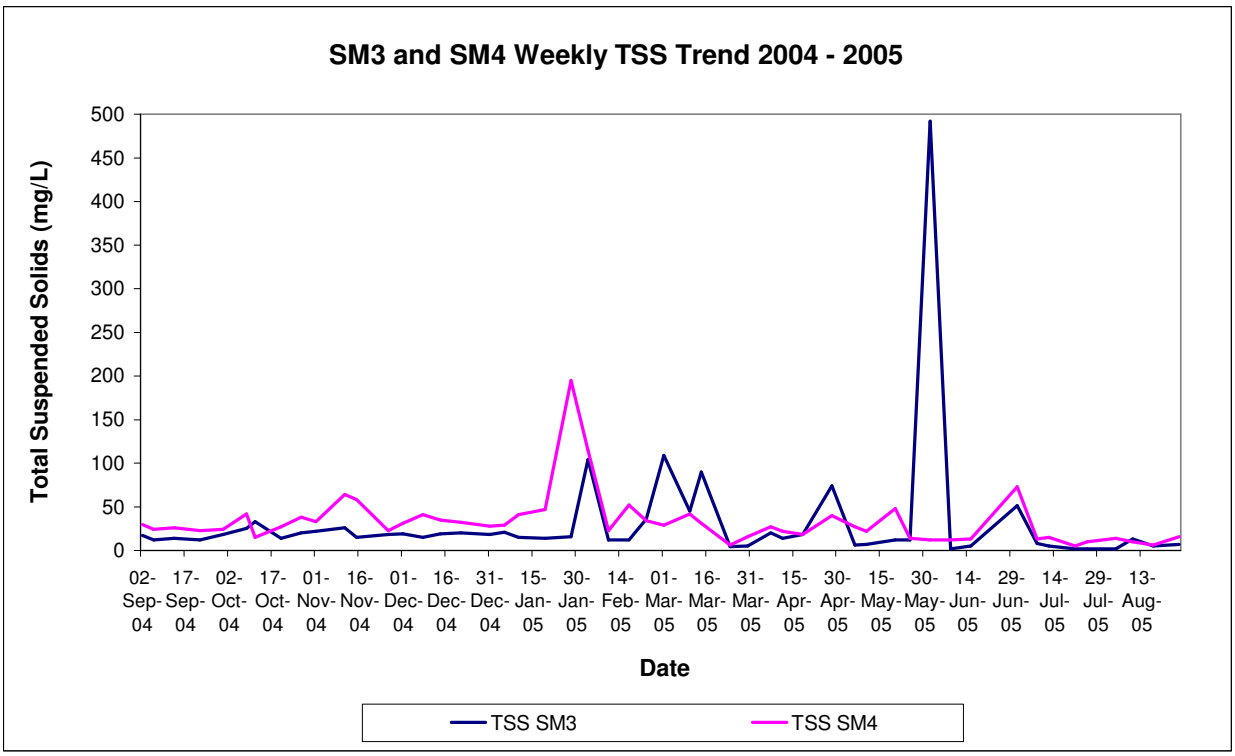
The lack of any results above laboratory quantification limits (apart from the result at SM5 on 23 February 2005) suggests no hydrocarbon impacts to the surface waters surrounding the Ashton Operation at the times of sampling. The February SM5 is likely to be an anomaly caused by natural organic substances analytically interfering with the oil and grease analysis.

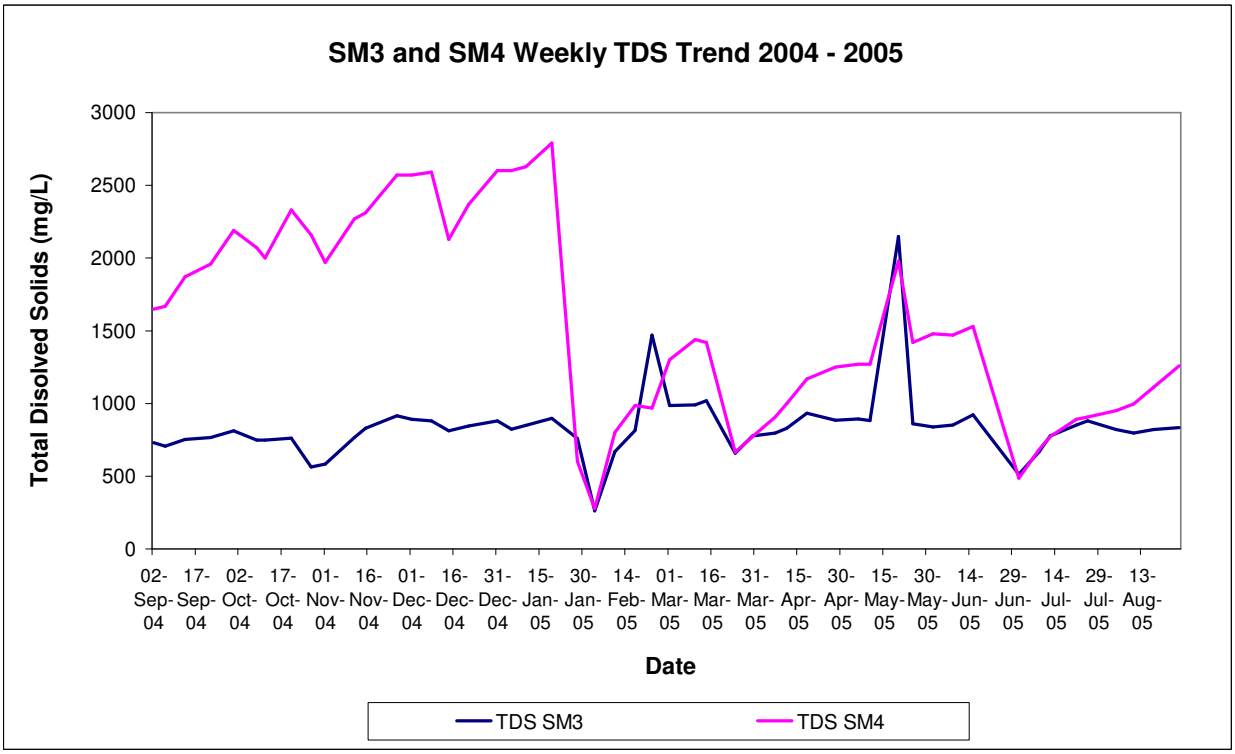
3.4 WEEKLY WATER QUALITY MONITORING RESULTS

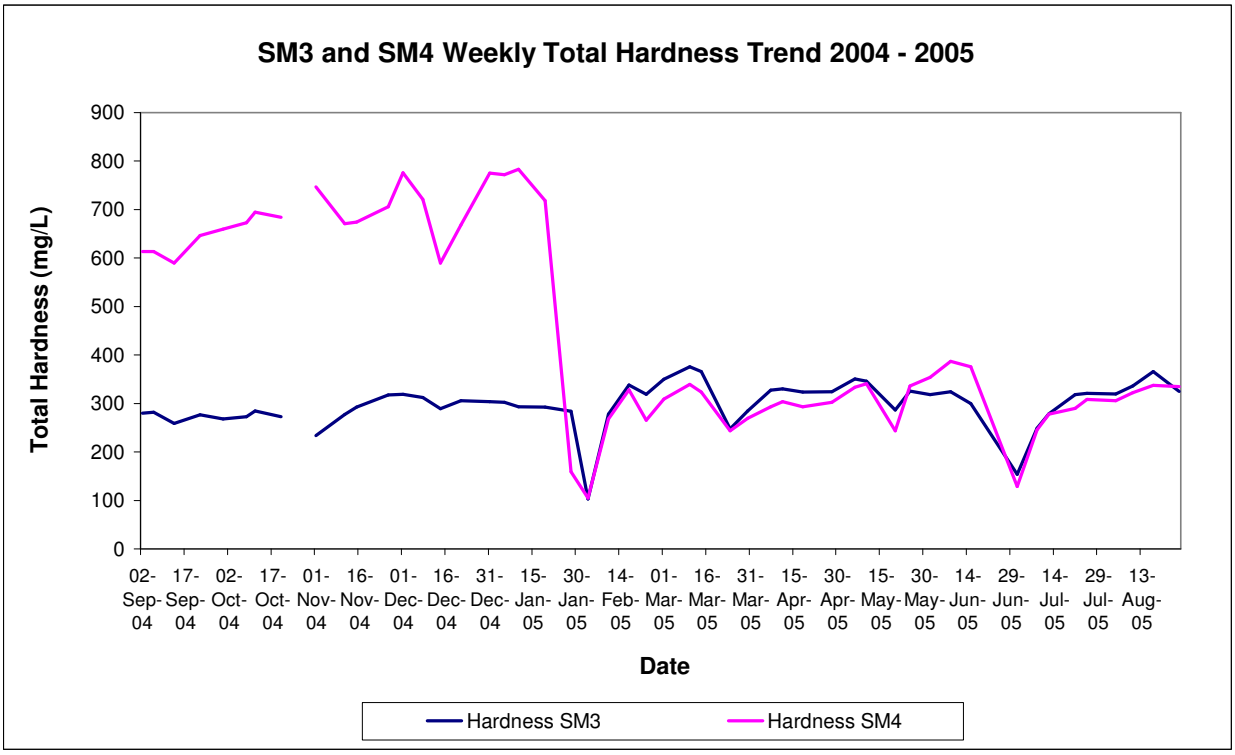
Weekly water samples were collected and analysed during the reporting period for pH, Electrical Conductivity (EC), Total Dissolved Solids (TDS), Total Suspended Solids (TSS) Total Hardness ($CaCO_3$) and Oil and Grease (O & G).






SM3 and SM4 Weekly TSS Trend 2004 - 2005
Total Suspended Solids (mg/L)
500
450
400
350
300
250
200
150
100
50
0
02-Sep-04
17-Sep-04
02-Oct-04
17-Oct-04
01-Nov-04
16-Nov-04
01-Dec-04
16-Dec-04
31-Dec-04
15-Jan-05
30-Jan-05
14-Feb-05
01-Mar-05
16-Mar-05
31-Mar-05
15-Apr-05
30-Apr-05
15-May-05
30-May-05
14-Jun-05
29-Jun-05
14-Jul-05
29-Jul-05
13-Aug-05
Date
TSS SM3
TSS SM4


SM3 and SM4 Weekly TDS Trend 2004 - 2005
Total Disolved Solids (mg/L)
3000
2500
2000
1500
1000
500
0
02-Sep-04
17-Sep-04
02-Oct-04
17-Oct-04
01-Nov-04
16-Nov-04
01-Dec-04
16-Dec-04
31-Dec-04
15-Jan-05
30-Jan-05
14-Feb-05
01-Mar-05
16-Mar-05
31-Mar-05
15-Apr-05
30-Apr-05
15-May-05
30-May-05
14-Jun-05
29-Jun-05
14-Jul-05
29-Jul-05
13-Aug-05
Date
TDS SM3
TDS SM4


SM3 and SM4 Weekly Total Hardness Trend 2004 - 2005
Total Hardness (mg/L)
900
800
700
600
500
400
300
200
100
0
02-Sep-04
17-Sep-04
02-Oct-04
17-Oct-04
01-Nov-04
16-Nov-04
01-Dec-04
16-Dec-04
31-Dec-04
15-Jan-05
30-Jan-05
14-Feb-05
01-Mar-05
16-Mar-05
31-Mar-05
15-Apr-05
30-Apr-05
15-May-05
30-May-05
14-Jun-05
29-Jun-05
14-Jul-05
29-Jul-05
13-Aug-05
Date
Hardness SM3
Hardness SM4

3.5 GROUND WATER POLLUTION

Ashton monitored the status of 20 groundwater bores during the reporting period, primarily to collect background data for the proposed underground mine. The Standing Water Level in each bore was checked on a quarterly basis, whilst pH, Electrical Conductivity (EC), TSS, TDS, Hardness and Oil & Grease was sampled according to the schedule listed in the Site Water Management Plan (and subsequently, the Groundwater Management Plan).GM2, OC1 and OC2 were decommissioned after the 3rd quarter sampling due to mining operations.

A full summary of groundwater results is presented in the following tables:

DEPTH	Nov-04	Feb-05	May-05	Aug-05
RM01	DRY	DRY	11.46	11.47
RM02	10.29	10.28	7.80	8.04
RM03	DRY	DRY	10.04	10.21
RM04	6.52	7.31	7.41	7.42
RM05	11.89	11.86	11.93	11.91
RM06	6.13	5.97	6.03	5.96
RM07	5.72	5.55	5.79	5.60
RM09	5.19	4.72	4.81	4.68
RM10	6.02	5.90	5.96	5.92
RA02	DRY	DRY	9.07	8.41
RSGM1	5.59	5.02	5.13	4.87
PB1	5.19	5.13	5.16	5.14
GM1	9.23	9.51	9.94	10.16
GM2	7.32	7.72	7.85	NA
GM3	DRY	DRY	DRY	DRY
GM3A	DRY	10.53	11.73	12.47
GM4	DRY	DRY	DRY	DRY
GM5	DRY	DRY	DRY	DRY
OC1	54.82	55.36	57.15	NA
OC2	54.82	55.36	57.52	NA

pH	Nov-04	Feb-05	May-05	Aug-05
RM01	DRY	DRY	DRY	DRY
RM02	6.71	6.88		7.87
RM03	DRY	DRY	DRY	DRY
RM04	7.04	7.22		8.17
RM05	6.53	6.83		8
RM06	7.15	7.36		8.18
RM07	7.13	7.21	7.81	8.17
RM09	6.97	7.11	6.89	8.15
RM10	6.85	6.95	7.09	8.1
RA02	DRY	DRY	DRY	DRY
RSGM1	6.87	7.17	7.82	8.14
PB1	7.08	7.18		8.22
GM1	7.69	7.55	6.81	8.38
GM2	7.01	7.18	6.76	NA
GM3	DRY	DRY	DRY	DRY
GM3A	7.64	7.63		8.48
GM4	DRY	DRY	DRY	DRY
GM5	DRY	DRY	DRY	DRY
OC1	6.87	7.02	6.99	NA
OC2	8.01	7.95	7.05	NA

EC	Nov-04	Feb-05	May-05	Aug-05
RM01			DRY	DRY
RM02	8400	7130		6060
RM03			DRY	DRY
RM04	1600	1580		722
RM05	2460	2550		1070
RM06	1260	1220		1220
RM07	1620	1660	6120	1290
RM09	1260	1260	5810	1160
RM10	1490	1460	3700	1330
RA02			DRY	DRY
RSGM1	10900	9050	5480	8720
PB1	1600	1560		1070
GM1	5780	5500	9370	5600
GM2	4680	4060	1460	NA
GM3			DRY	DRY
GM3A	7540	6460		5720
GM4			DRY	DRY
GM5			DRY	DRY
OC1	6490	5740	1260	NA
OC2	6700	6080	1400	NA

TSS	Nov-04	Feb-05	May-05	Aug-05
RM01	DRY	DRY	DRY	DRY
RM02				
RM03	DRY	DRY	DRY	DRY
RM04				
RM05				
RM06				
RM07	16	46	72	76
RM09	34	50	83	384
RM10	32	10	67	74
RA02	DRY	DRY	DRY	DRY
RSGM1	123	170	13	104
PB1				
GM1	26	21	23	20
GM2	52	31	6	NA
GM3	DRY	DRY	DRY	DRY
GM3A	34	252		8380
GM4	DRY	DRY	DRY	DRY
GM5	DRY	DRY	DRY	DRY
OC1	74	456	18	NA
OC2	28	97	9	NA

TDS	Nov-04	Feb-05	May-05	Aug-05
RM01	DRY	DRY	DRY	DRY
RM02				
RM03	DRY	DRY	DRY	DRY
RM04				
RM05				
RM06				
RM07	947	988	3610	834
RM09	750	756	3640	722
RM10	862	870	2240	858
RA02	DRY	DRY	DRY	DRY
RSGM1	5460	6340	3140	6120
PB1				
GM1	3190	3220	5920	3180
GM2	2620	2360	822	NA
GM3	DRY	DRY	DRY	DRY
GM3A	4300	3670		3200
GM4	DRY	DRY	DRY	DRY
GM5	DRY	DRY	DRY	DRY
OC1	3670	3400	688	NA
OC2	3830	3660	772	NA

CaCO3	Nov-04	Feb-05	May-05	Aug-05
RM01			DRY	DRY
RM02				
RM03			DRY	DRY
RM04				
RM05				
RM06				
RM07	318	354	420	279
RM09	240	257	894	255
RM10	338	303	586	321
RA02			DRY	DRY
RSGM1	1480	1510	112	1430
PB1		NT		
GM1	127	132	1370	131
GM2	760	734	277	NA
GM3			DRY	DRY
GM3A	202	237		141
GM4			DRY	DRY
GM5			DRY	DRY
OC1	960	1000	233	NA
OC2	469	480	245	NA

Oil & Grease	Nov-04	Feb-05	May-05	Aug-05
RM01			DRY	DRY
RM02				
RM03			DRY	DRY
RM04				
RM05				
RM06				
RM07	<5	<5	<5	<5
RM09	<5	<5	<5	<5
RM10	<5	<5	<5	<5
RA02			DRY	DRY
RSGM1	<5	<5	18	<5
PB1				
GM1	8	<5	<5	<5
GM2	<5	<5	<5	NA
GM3			DRY	DRY
GM3A	<5	<5		<5
GM4			DRY	DRY
GM5			DRY	DRY
OC1	<5	<5	<5	NA
OC2	<5	<5	<5	NA

3.6 CONTAMINATED AND POLLUTED LAND

There are no known areas of contaminated or polluted land at the Ashton Coal Project.

3.7 THREATENED FLORA AND FAUNA

3.7.1 Flora and Fauna Surveys

Condition 3.46 of the Development Consent requires the preparation of a Flora and Fauna Management Plan (FFMP), which was approved by the Director General of DIPNR. This plan includes details of fauna surveys, which were carried out by Environmental Resources Management in the reporting period. Preclearing surveys were not conducted in this period, the small areas of regrowth that were cleared were inspected previously and determined to present little risk due to poor diversity. All areas cleared were inspected by the Environment officer to confirm lack of fauna (threatened or otherwise) prior to clearing. Topsoil stripping was limited by nesting of a pair of masked lapwing or plover (*Vanellus miles*) for a fortnight in the main area stripped during the reporting period.

The Flora and Fauna Management Plan has now been modified to account for the activities and potential impacts of the underground operation and has been submitted for review and approval to various NSW Government authorities including DEC, DoP, DNR and DPI.

Work undertaken for the surveys included:

- Pitfall trapping, Small and Medium Terrestrial Mammal Trapping, Arboreal Mammal Trapping, Targeted Amphibian Searches and Microchiropteran Bat Surveys were conducted;
- General Observations were also recorded to extend site knowledge;
- Avifauna Surveys and species specific Grey Crowned Babbler surveys; and
- Recording Nest Box Monitoring and Installation.

The personnel involved in the surveys were as follows:

- Naomi Buchorn — Supervising Ecologist
- Joanne Woodhouse — Field Ecologist
- Tessa Wilson — Assisting Field Ecologist

The results of these surveys are summarised hereunder:

3.7.2 Fauna Surveys

A survey conducted by ERM (2005) did not add to previous species lists for the site. The surveys conducted previously identified a total of 54 species of animal comprising 47 species of bird (one introduced), six species of mammal (three introduced), and two reptiles. Four animals were captured during the trapping surveys, including two Yellow-footed Antechinus, one Common Brush-tailed Possum and one unidentified skink. The low number of captured animals is not surprising given the disturbed nature of much of the site.

3.7.3 Significant Species of Animal

The Grey-crowned Babbler has been observed at a number of locations within the open cut project area. This species is listed as vulnerable on the *Threatened Species Conservation Act 1995*. Although a maximum of eight birds were seen at any one time during the February 2004 survey by Parsons Brinckerhoff, it is not clear whether the same birds were being observed at different locations. The subsequent ERM (2005) survey indicated that the group located on the minesite had increased in number to 11. The group in the southern woodland comprised 12 individuals at the time of the ERM survey.

Six of the birds recorded on site are listed as migratory species under the *Environment Protection and Biodiversity Conservation Act 1999*. The site, however, cannot be considered an "important habitat for migratory species under the Act since it:

- Does not contain an ecologically significant proportion of the population;
- Is not at the limit of the species' range; and
- Is not in an area where the species are declining.

Migratory species are therefore not likely to be impacted by the clearing of vegetation on site.

3.7.4 Habitat Trees

Forty-four (44) trees were initially marked on site as potential habitat trees. Material from these trees has been salvaged for placement as fauna hides on the Eastern Emplacement Area and for use in the Southern Woodland during the 2003-04 reporting period. No further salvage of habitat trees has occurred in this reporting period as the areas cleared mainly consisted of Casuarina regrowth.

3.7.5 Weed Surveys

A total of 41 species of noxious and environmental weeds have previously been identified on site. Of these, three species were declared noxious in the Upper Hunter County Council control area and the remaining species are regarded as environmental weeds.

Woodland areas within the site contain the lowest diversity of weed species, with pockets of weeds occurring under larger trees, particularly habitat trees. Drainage lines in the woodland areas also supported large numbers of weeds. The greatest diversity and abundance of weeds is found in open grassland areas, whilst disturbed areas and roadsides provide habitat for some species of weed.

3.7.6 Weed Management

Weed control operations have been conducted by Yunaga Mine Services, a company consisting of members of the Wonnarua Aboriginal group and other neighbouring groups.

Approximately 20 Hectares of spraying occurred both on site and along Glennies Creek, with Galenia, Green Cestrum and African Boxthorn being the target species. All three of these weeds are declared noxious in NSW. The areas of green cestrum treated contained a medium to high density of mature weeds.

3.8 CONSERVATION AREA

Discussions have progressed with DEC Parks in respect to declaring parts of the Southern Woodland a Conservation Area. Important factors in these discussions are summarised hereunder:

- Protecting the site as a potential habitat area and as an area containing Aboriginal artefacts;
- Maintaining access through the area to property No 130
- Managing the impacts of subsidence in the area;
- Effectively controlling access to the site for local Aboriginal groups and for the maintenance of overhead power lines that traverse the area.

These discussions are expected to conclude in the next reporting period.

A preliminary ecological assessment of the Southern Woodland was conducted by Parsons Brinkerhoff between 7 and 9 September 2004 and a subsequent assessment was conducted by ERM between 7 and 10 June 2005. The ERM assessment included:

- An inspection of the 10 nest boxes established in the area;
- Subsequent installation of a further 10 nest boxes in the Conservation Area,
- A Flora survey;
- A Fauna survey;
- Call playback surveys;
- A spotlighting survey; and
- Bird surveys

The results of this assessment were as follows:

- The vegetation community has a low species diversity, but is dominated by native species in moderate condition that is likely to regenerate well if grazing animals are controlled;
- The fauna habitat within the woodland generally corresponds to the vegetation community and is in moderate condition. Although older trees containing hollows are present, these are few and are likely to be a major limiting factor for arboreal animals dependent on tree hollows, including mammals and birds. The provision of nest boxes will to some extent increase this resource. The absence of significant ground and mid-storey vegetation also reduces the habitat value of the site, particularly for woodland birds;
- A total of 36 species of animal have been recorded in the study area, comprising 30 birds (one introduced) and six mammals (one introduced). No reptiles or amphibians were observed, although it is likely that the time of the survey (very early spring) would have influenced this result. Two threatened species have been recorded in the study area (Grey-headed Flying Fox and Grey-crowned Babbler); and
- Mammals observed within the study area are characteristic of species found in open woodland habitats. Generally the fauna habitat on the western side of the study area is in better condition for mammalian species, providing a range of foraging and roosting resources such as myrtaceous trees and hollows. The time of year meant that bat surveys were not carried out, however, some bats were heard foraging during the spotlight surveys.

The conclusion of the assessments was that the site has at least State significance due to the presence of the Grey-crowned Babbler which is listed as vulnerable on the *Threatened Species Conservation Act 1995*.

The area will require some input to ensure the flora diversity is increased to allow more variation in habitat and an increase in fauna diversity. It is anticipated that this will be achieved through selective thinning of dominant species (particularly Bull Oak) and replacement with other species as identified in the EIS.

3.9 BLASTING

Due to the proximity of the Main Northern Railway, Glennies Creek Road and the village of Camberwell to the mining operations area, a complex series of controls have been established to ensure that blasts conform to the criteria defined in the Development Consent and the EPL.

Blasting times are limited to the hours of 9am to 5pm Monday to Saturday inclusive by the Development Consent, but the EPL also states that blasting cannot occur on Sundays or public holidays without the prior approval of the EPA.

To ensure that ground vibration does not exceed criteria at receptor locations, the Maximum Instantaneous Charge (MIC) is calculated for each blast at the design stage. Procedures are also in place to ensure that sufficient depth of crushed stemming material is also placed in the collar of each blast hole to minimise the effects of air blast (air overpressure).

The Blasting and Environmental Management Plan (BVMP) also requires the completion of a Blasting Environmental Checklist prior to each blast. This checklist ensures that meteorological conditions are appropriate for the blast to occur. There are also checklists for Community Notification and Notification of the Common Management Committee when the common requires closing. During the reporting period a risk assessment developed for clearing the Camberwell Common was repeated at the request of the Common Management Committee.

The Road and Rail Closure Management Plan (RRCMP) also requires the closure of Glennies Creek Road if any part of the road comes within the 500 metre zone of exclusion that is required to be established around each blast. If any blast is within 200 metres of the Main Northern Railway, then ACOL seek possession of the railway for the duration of the blast. This ensures that no rail traffic enters the zone of exclusion within a blast period.

The residents of Camberwell village and all occupiers of buildings within two kilometres of blasting locations are provided advance notice of planned blasting events on the Ashton website (www.ashtoncoal.com.au) and, excepting where they have requested to be removed from the contact list, one hours prior to each blasting event by telephone.

Structural surveys of St Clements Anglican Church, the Camberwell Community Hall and any residences for which the owner accepted the offer, were carried out prior to the commencement of blasting activities. Each owner received a copy of the structural assessment report and copies of the reports for St Clements Anglican Church and the Camberwell Community Hall were forwarded to DIPNR. Several follow up surveys have been conducted in the current reporting period as requested by community residents and property owners.

3.9.1 Blast Criteria and Control Procedures

The Development Consent defines the following criteria:

"The Airblast overpressure level from blasting operations carried out in or on the premises must not exceed:

(a) 115dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; and

(b) 120dB (Lin Peak) at any time

At any residence or other noise sensitive receiver such as the St Clements Anglican Church and Camberwell Community Hall

The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed:

(a) 2mm/s for more than 5% of the total number of blasts carried out in or on the premises during each reporting period; and

(b) Exceed 10mm/s at any time

At any residence or other noise sensitive receiver such as the St Clements Anglican Church and Camberwell Community Hall."

Condition No L7.3 of EPL 11879 requires the ground vibration peak particle velocity not to exceed 5 mm/second for more than 5% of blasts carried out on the premises within the 12 months of the reporting period, with no blast to exceed 10 mm/second.

Ashton has therefore adopted the following goals for ground vibration:

- Annual average ground vibration from blasting is to be less than 2 mm/second at the nearest residence;
- Not more than 5% of blasts to exceed 2 mm/second; and
- No blast to exceed 5 mm/second at the nearest residence.

3.9.2 Review of Blast Monitoring Results

A total of 160 blasts took place during the reporting period. Comprehensive blast monitoring results are presented in Appendix 4. The locations for blast monitors stations were approved by the EPA prior to installation.

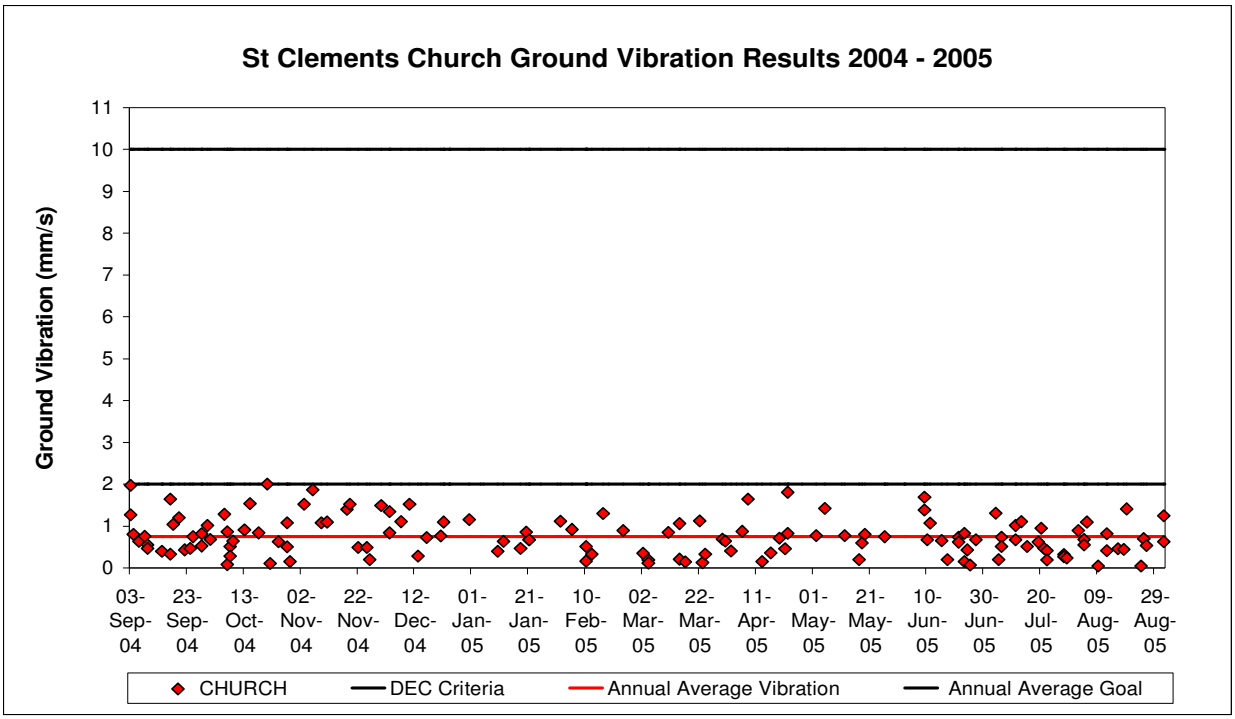
The locations are detailed hereunder:

Table 11
Location of Blast Monitoring Stations

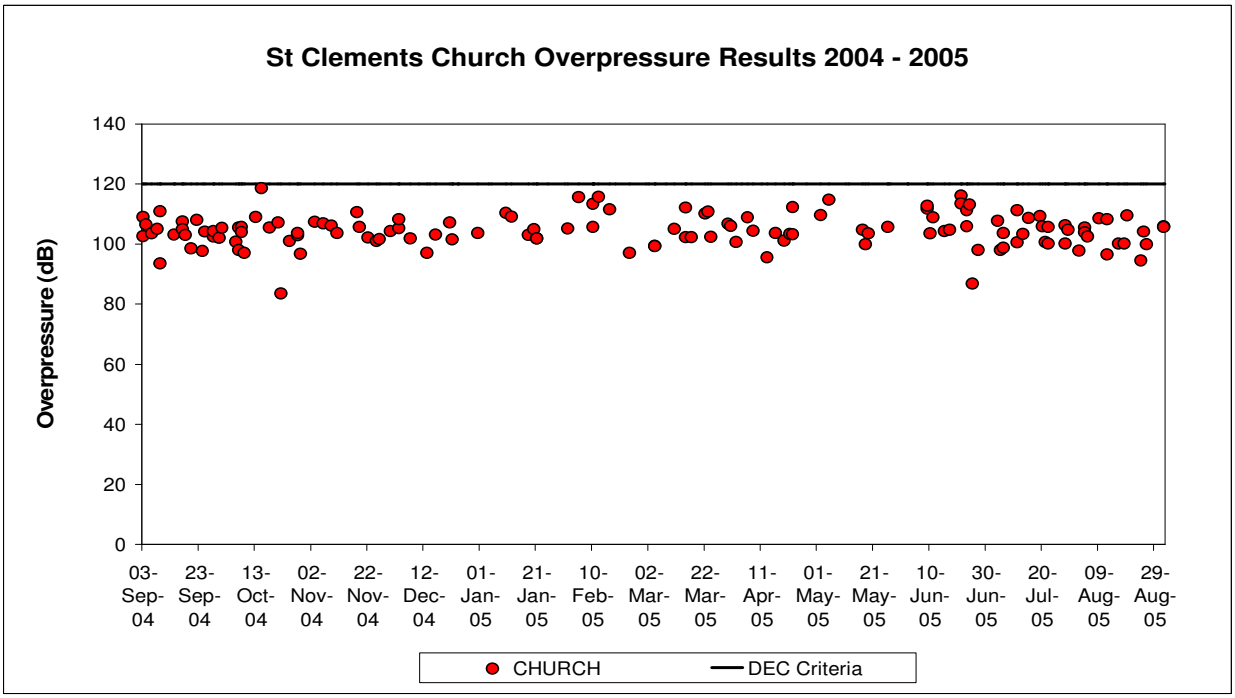
Monitoring Station No	Location
1	Camberwell village (north)
2	St Clements Church
3	Alongside Main Northern Railway

	ST. CLEMENTS CHURCH		CAMBERWELL VILLAGE		RAILWAY	
	Vibration	Overpressure	Vibration	Overpressure	Vibration	Overpressure
Results Captured	138	135	149	149	84	84
Data Recovery (%)	86%	84%	93%	93%	52%	52%
Results > 10mm/s	0		0		1	
Results > 2mm/s	0		23		5	
Results > 2mm/s & <10mm/s	0		23		4	
Results >2dB & <10mm/s (%)	0		15%		4.8%	
Results >120 dB		0		1		1
Results >115dB		4		9		5
Results >115dB & <120dB		4		8		4
Results >115dB & <120dB (%)		3%		5.4%		4.8%

Ground vibration (mm/s) and overpressure results (dBL) for the St Clements Church blast monitor are as follows:

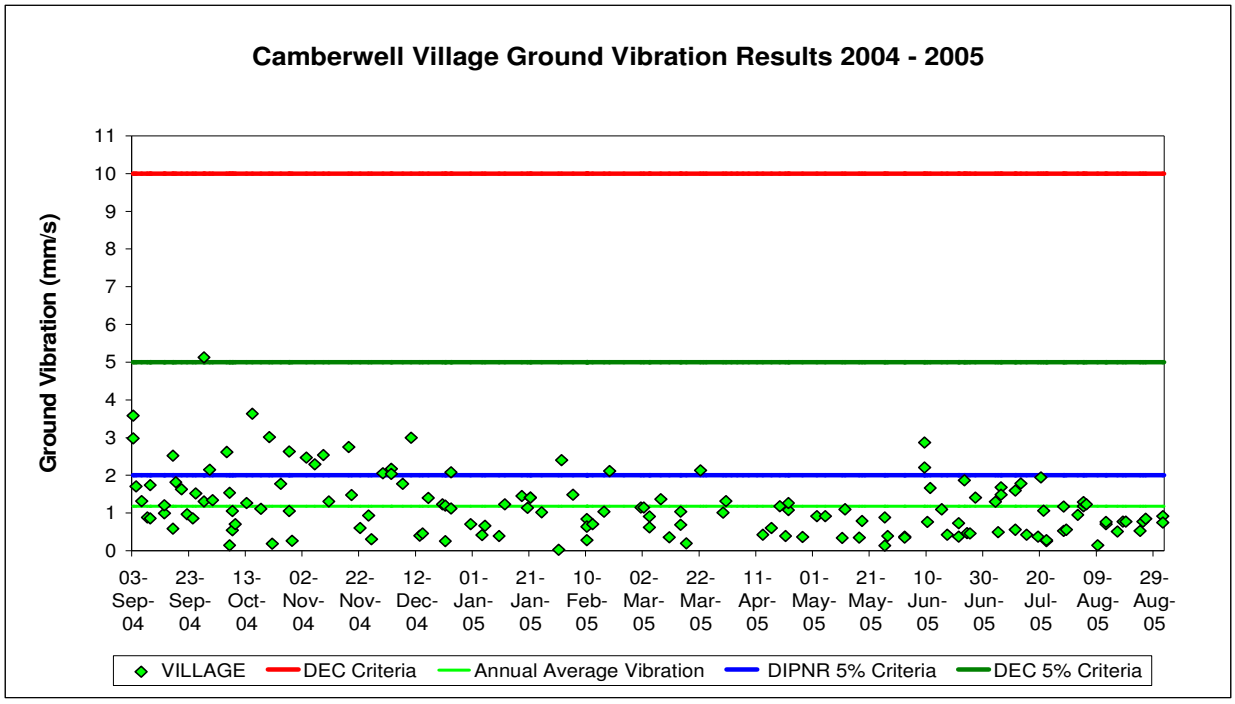


Ground vibration results for 138 blasts out of a possible 160, were captured by the St Clements Church Blast Monitor (86% data recovery). No results captured by this monitor exceeded 2mm/s. The annual average vibration was less than 1mm/s.

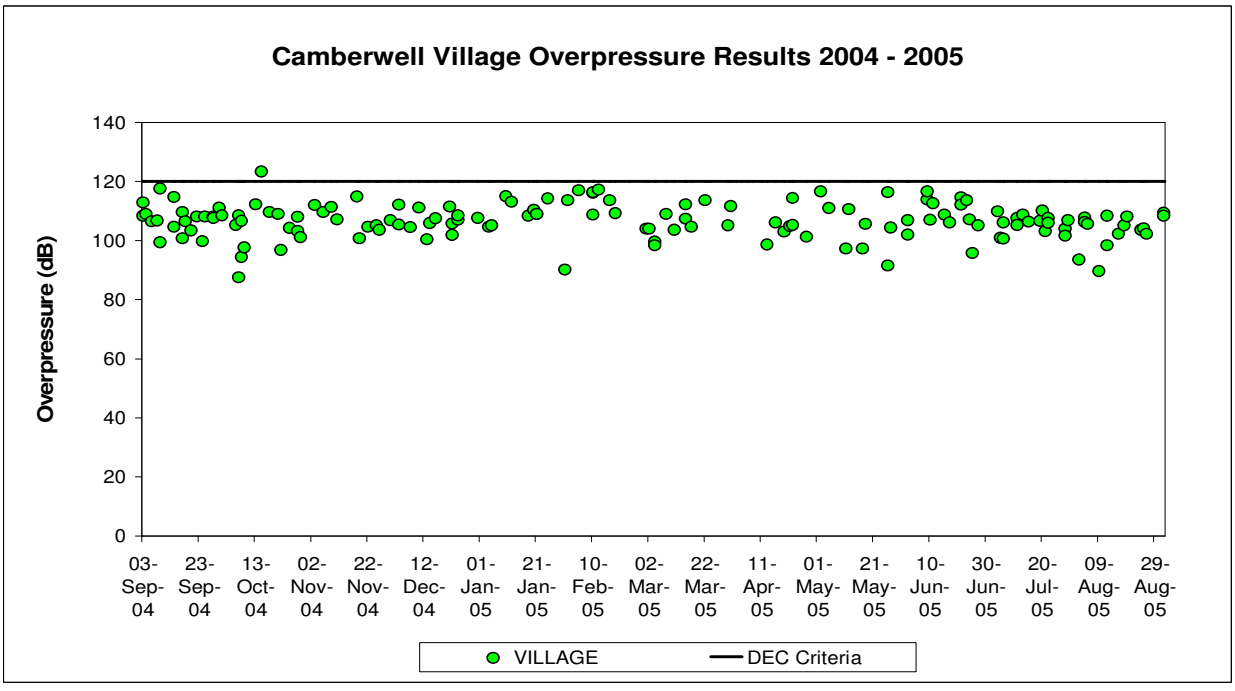


Overpressure results for 135 blasts out of a possible 160 were captured by the St Clements Church Blast Monitor (84% data recovery). No results captured by this monitor exceeded 120dB. Three percent (3%) of overpressure results were between 115dBL and 120dBL.

Ground vibration (mm/s) and overpressure results (dBL) for the Camberwell Village blast monitor are as follows:

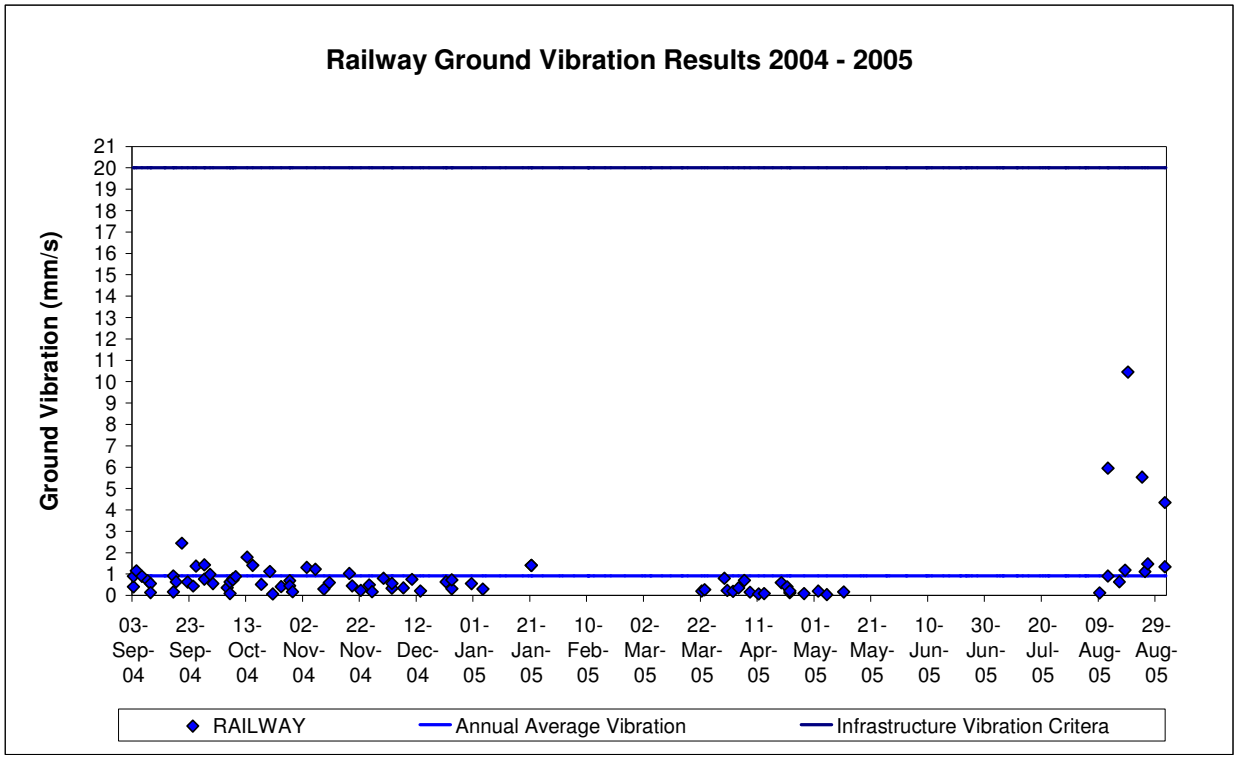


Ground vibration results for 149 blasts out of a possible 160, were captured by the Camberwell Village Blast Monitor (93% data recovery). No results captured by this monitor exceeded 10mm/s. 15 percent (15%) of ground vibration results were between 2mm/s and 10mm/s. It should be noted that since ACOL staff assumed control of drill and blast there has been a significant improvement in the levels recorded in the village and the number of exceedences. This is expected to continue allowing ACOL to reach full compliance for the next reporting period. Annual average vibration was less than 1.5mm/s.



Overpressure results for 149 blasts out of a possible 160 were captured by the Camberwell Village Blast Monitor (93% data recovery). One result (123.4 dBL) captured by this monitor exceeded 120dBL on 15 October 2004. A full report was submitted to DEC – EPA. Five percent (5.4%) of overpressure results were between 115dBL and 120dBL.

Ground vibration (mm/s) for the Railway blast monitor are as follows:



Ground vibration results for 84 blasts out of a possible 160, were captured by the Railway Blast Monitor. This equates to 52% data recovery, significant data loss occurred when the monitor was removed from service due to mining in the area where it was located. The monitor was subsequently moved to a location where it is not expected to be disturbed in the future. The criteria for the railway and other off-site infrastructure is 20mm/sec with no limit on overpressure – there were no exceedences of this criteria. Annual average vibration was less than 1 mm/s.

3.10 OPERATIONAL NOISE

3.10.1 Noise Criteria

Noise generated by the Ashton Coal Project must not exceed the limits specified in Condition 6.34 (Table 5), which is detailed hereunder:

Noise Limits (dB(A))				
Location	**Day**	**Evening**	**Night**	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(1\ minute)}$
Any residence not owned by the Applicant or not subject to an agreement between the Applicant and the residence owner as to an alternate noise limit	38	38	36	46

ACOL submitted an application pursuant to Section 96(1A) of the Environmental Planning and Assessment Act 1979, to delete the following text in Condition 6.34:

> *"Noise generated by the development must not exceed the limits specified in Table 5 below."*
>
> And replace it with:
>
> *"Except as may be expressly provided by an EPA Licence, noise generated by the development must not exceed the limits specified in Table 5 below."*

This modification to the Development Consent was approved by the Minister Assisting the Minister for Infrastructure and Planning (planning Administration) on 15 October 2003.

An application to modify EPL 11879 was subsequently approved by the EPA on 10 November 2003. It included the following modification:

L6.7 Noise generated prior to 9 March 2004 by activities associated with the establishment of the Eastern Bund must not exceed the noise limits in the table below. Note that the works on the eastern bund are considered as operational noise from the mine premises.

Noise Limit dB(A)	
Location	***Day***
	$L_{Aeq(15\ minute)}$
Any residence not owned by the licensee or not subject to an agreement between the licensee and the residence owner as to alternate noise limits	*43*

> *Establishment of the Eastern Bund must only be conducted between 7am and 6pm Monday to Friday and between 7am and 1pm on Saturdays. Establishment work shall not be carried out on Sundays or Public Holidays.*

Work associated with the establishment of the Eastern Environmental Bund commenced in mid January 2004. The 43 dB(A) criteria was utilised for the period up to 9 March 2004, with the 38 dB(A) being applicable after that date.

3.10.2 Results of Noise Monitoring

3.10.2.1 Noise Compliance Assessment Report

Condition 6.45 of the Development Consent requires a Noise Compliance Assessment Report to be submitted to EPA and DIPNR within 3 months of commencement of normal operations and on an annual basis thereafter in the AEMR. Noise Compliance Assessment Reports were conducted quarterly throughout the reporting period and were prepared by Spectrum Acoustics.

3.10.2.2 Quarterly Noise Monitoring

Condition 6.44 of the Development Consent requires detailed noise monitoring surveys at potentially affected residences on a 3-monthly basis. Ashton decided to undertake this monitoring on a monthly basis in the early phases of the project in order to better understand any local effects that may need to be managed, monitoring has now returned to the quarterly schedule required in consent conditions. All monitoring was performed by Spectrum Acoustics, utilising manned monitoring methods as specified in the EIS.

Quarterly noise monitoring results are as follows:

1st Quarter December 2004 (22 & 23 December 2004):

ACP Noise Monitoring Results – 22 December 2004			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	5:25pm	40	ACP (37), birds (35), train (34)
Stapleton	6:10pm	52	Domestic noise (51), **ACP (42)**, birds (39), traffic NEH (39)
Clark	5:50pm	50	Domestic noise (48), **ACP (43)**, birds (38), traffic NEH (36)
Horadam	6:48pm	49	Traffic NEH (48), birds (41)
Moss	6:30pm	60	Traffic NEH (60)
Richards	7:31pm	41	Train (37), ACP (35), other mine noise (35), birds (34)
Stapleton	8:49pm	45	Traffic NEH (42), birds (39), ACP (37)
Clark	7:56pm	50	Domestic noise (49), birds (39), ACP (37), traffic NEH (37)
Horadam	8:13pm	47	Traffic NEH (47), birds (38)
Moss	8:30pm	57	Traffic NEH (57)
Richards	9:20pm	39	ACP (34), other mine noise (34), birds (32), traffic (30)
Clark	9:42pm	41	ACP (38), traffic NEH (37), birds (30), train (30)

ACP Noise Monitoring Results – 23 December 2004			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	8:11am	38	ACP (34), birds (34), other mine noise (33)
Stapleton	7:15am	43	Birds (40), traffic NEH (38), ACP (35)
Clark	6:58 am	38	ACP (36), birds (31), traffic NEH (32)
Horadam	7:50am	47	Traffic NEH (47), birds (35)
Moss	7:30am	59	Traffic NEH (59)
Richards	9:55am	40	Birds (38), other mine noise (33)
Stapleton	8:55am	42	Traffic NEH (39), birds (38), ACP (34)
Clark	8:36am	38	ACP (35), birds (32), Traffic NEH (32)
Horadam	9:30am	46	Traffic NEH (46)
Moss	9:12 am	56	Traffic NEH (56)

Note: Where mine noise from ACP exceeds the noise goal of 38 dB(A) $L_{eq\ (15\ min}$ it is shown in bold.

Noise emissions from ACP were above the noise goal of 38 dB(A) $L_{eq(15\ min)}$ at two locations during the afternoon of 22 December 2004.

2nd Quarter March 2005 (30 & 31 March 2005):

ACP Noise Monitoring Results – 30 March 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	6:00pm	40	Plane (38), mines other than ACP (34), insects (33), ACP inaudible
Stapleton	6:49pm	47	Traffic NEH (45), insects (42), ACP not measurable
Clark	6:24pm	43	Insects (41), traffic NEH (40), mines other than ACP (30), ACP not measurable
Horadam	7:10pm	44	Traffic NEH (40), mines other than ACP (40), insects (37), ACP inaudible
Moss	7:05pm	48	Traffic NEH (47), insects (40)
Richards	8:05pm	37	Mines other than ACP (33), traffic NEH (32), trains (30), insects/birds (27), ACP inaudible
Stapleton	8:49pm	43	Traffic NEH (43), insects (30), ACP not measurable
Clark	8:31pm	42	Traffic NEH (41), mines other than ACP (35), ACP inaudible
Horadam	9:08pm	40	Traffic NEH (39), mines other than ACP (33), ACP inaudible
Moss	9:27pm	44	Traffic NEH (43), mines other than ACP (36), ACP inaudible

ACP Noise Monitoring Results – 31 March 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	7:44am	37	ACP (33), mines other than ACP (33), insects/birds (31)
Stapleton	7:17am	42	Traffic NEH (40), insects/birds (36), ACP (30)
Clark	6:59am	39	Traffic NEH (37), insects/birds (33), ACP (30)
Horadam	8:10am	48	Traffic NEH (47), insects/birds (39), ACP (30)
Moss	8:27am	48	Traffic NEH (48), ACP inaudible
Richards	9:15am	35	Mines other than ACP (33), insects/birds (30)
Stapleton	9:40am	41	Traffic NEH (39), insects/birds (34), ACP (30)
Clark	8:45am	40	Traffic NEH (37), insects/birds (31), ACP (33), domestic noise (30)
Horadam	9:58am	46	Traffic NEH (46), insects/birds (38)
Moss	10:15am	48	Traffic NEH (48)

Noise emissions from ACP were below the noise goal of 38 dB(A) $L_{eq(15\ min)}$ throughout the survey period.

3rd Quarter May 2005 (1 & 2 June 2005):

ACP Noise Monitoring Results – 1 June 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	5:00 pm	37	Mines other than ACP (37), birds (28), ACP inaudible
Stapleton	5:46 pm	47	Local vehicle (45), traffic NEH (42), dogs (30), ACP (33)
Clark	5:25 pm	45	Local vehicle (42), traffic NEH (40), birds and dogs (37), domestic noise (30), ACP audible but not measurable
Horadam	6:08 pm	50	Traffic NEH (50), ACP inaudible
Moss	6:25 pm	52	Traffic NEH (52), ACP inaudible
Richards	7:10 pm	43	Mines other than ACP (42), train (35), ACP inaudible
Stapleton	7:56 pm	49	Traffic NEH (46), **ACP (46)**
Clark	7:33 pm	42	Traffic NEH (40), ACP (37), mines other than ACP (34)
Horadam	8:32 pm	51	Traffic NEH (50), **ACP (41)**
Moss	8:15 pm	54	Traffic NEH (54), ACP audible between traffic but not measurable
Richards	9:02pm	45	Train (43), mines other than ACP (40)
Stapleton	9:45 pm	49	Traffic NEH (49), mines other than ACP (<35)
Clark	9:26 pm	45	Traffic NEH (49), mines other than ACP (41), ACP (35), train (32)

ACP Noise Monitoring Results – 2 June 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Clark	6:58 am	53	Traffic NEH (52), ACP audible but not measurable over high traffic noise. **Estimated contribution (>40)**
Richards	7:40 am	53	**ACP (50)**, farm animals (49), mines other than ACP (<35)
Horadam	8:16 am	53	Traffic NEH (53), ACP audible but not measurable over high traffic noise. **Estimated contribution (>40)**, insects/birds (<40)
Moss	8:35 am	53	Traffic NEH (53), ACP audible on occasion but not measurable
Stapleton	8:57 am	46	Traffic NEH (43), **ACP (42)**, birds (33)
Richards	9:32 am	38	Mines other than ACP (37), ACP (30), birds (29)

Note: Where mine noise from ACP exceeds the noise goal of 38 dB(A) $L_{eq\ (15\ min}$ it is shown in bold.

Noise emissions from ACP were above the noise goal of 38 dB(A) $L_{eq(15\ min)}$ at several locations throughout the survey period. All high results on 1 June 2005 occurred during a significant inversion event (8.6 to 9.9°C/100m). On 2 June 2005, the elevated measurements at Clark, Richards and Horadam were recorded during an inversion event however the inversion event stopped at 8.30am (approximately) so the Stapleton result at 8.57am is an exceedence.

4th Quarter August 2005 (17 & 18 August 2005):

ACP Noise Monitoring Results – 17 August 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Richards	5:20 pm	49	Birds (47), mines other than ACP (44), ACP inaudible
Stapleton	6:02 pm	44	Traffic NEH (42), other mine (37), birds (30), ACP inaudible
Clark	5:45 pm	41	Traffic NEH (38), other mines (38), domestic noise (30), ACP inaudible
Horadam	6:20 pm	46	Traffic NEH (46), other mines (36), ACP inaudible
Moss	6:38 pm	56	Traffic NEH (56), other mines (40), ACP inaudible
Richards	7:15 pm	43	Mines other than ACP (43), ACP inaudible
Stapleton	8:00 pm	47	Traffic NEH (47), ACP inaudible
Clark	7:40 pm	41	Dogs (37), traffic NEH (36), other mines (36), ACP inaudible
Horadam	8:35 pm	47	Traffic NEH (47), ACP inaudible
Moss	8:17 pm	54	Traffic NEH (54), ACP inaudible
Richards	9:00 pm	45	Other mines (45), ACP inaudible
Stapleton	9:40 pm	48	Traffic NEH (47), other mines (36), ACP (36)
Clark	9:23 pm	45	Traffic NEH (43), other mines (37), train (33), ACP inaudible

ACP Noise Monitoring Results – 18 August 2005			
Location	**Time**	**DB(A),Leq**	**Comments**
Clark	7:00 am	51	**ACP (48)**, traffic NEH (45), dogs and birds (43)
Stapleton	7:22 am	54	Traffic NEH (52), **ACP (50)**, birds (36)
Richards	8:03 am	46	**ACP (45)**, farm animals and birds (39)
Horadam	8:30 am	52	Traffic NEH (53), ACP audible but not measurable over high traffic noise. **Estimated contribution (40)**
Moss	8:47 am	53	Traffic NEH (53), ACP audible on occasion but not measurable
Clark	9:07 pm	43	Traffic NEH (39), **ACP (39)**, birds (34)
Stapleton	9:25 pm	46	Traffic NEH (43), **ACP (40)**, birds (36)

Note: Where mine noise from ACP exceeds the noise goal of 38 dB(A) $L_{eq\ (15\ min}$ it is shown in bold.

Noise emissions from ACP were above the noise goal of 38 dB(A) $L_{eq(15\ min)}$ at several locations throughout the survey period. There was a temperature inversion from the early morning until approximately 8.15am which accounts for the highest of the elevated results. The elevated results were caused by the presence of two dozers on the southern face of the Eastern Emplacement Area reshaping between the 120 and 135 RL. Once these results were received by ACOL, operations in this area were restricted to between 10.00am and 5.00pm to reduce the impact on residents.

3.10.2.3 Effectiveness of Noise Mitigation Measures

All operations were managed in accordance with the Operations Noise Management Plan for the reporting period. Major noise mitigation measures implemented during the reporting period include:

- The commencement of the Glennies Creek Road Environmental Bund construction, which is intended to mitigate the noise level received in Camberwell village from the open cut operations and provide a visual screen for the site;
- Reversing beepers on mobile plant have been replaced with broad frequency spectrum reversing alarms ("quacking duck" type beepers) and there have been ongoing initiatives with respect to enforcing the use of these beepers by contractors including 103 inspections, site surveys and education of ACOL site personnel to ensure vigilance;
- Communication between excavators and trucks is conducted by telemetry equipment to eliminate the intrusive effect of horns and this has been an ongoing process as the fleet is fitted out and new vehicles are added. There have also been modifications to the system over this period to ensure that the operators can operate safely without the use of horns.

Other noise mitigation measures that are planned for implementation include:

- The CPP has been clad on three sides to direct the noise away from sensitive receptors.
- ACOL is currently retesting all classes of equipment with respect to sound power levels in order to rerun the noise model for the site in the light of several exceedences of noise criteria through the reporting period.
- ACOL are investigating the purchase of a remote monitoring noise system to allow measurement of issues at residences. The system proposed is capable of recording 15minute sound bites to allow assessment of the mines contribution in a similar manner to attended monitoring.

3.11 VISUAL, STRAY LIGHT

Lighting issues on site are managed via the Lighting Management Plan (LMP).

Three types of lighting are utilised on site. They are:

- Fixed lighting utilised to illuminate the areas arrange the CHPP and open cut workshop;
- Mobile lighting plants utilised to illuminate the open cut, the overburden dump, the tailings disposal area and some maintenance operations; and
- Lighting equipped on mobile plant.

Fixed lighting is generally high pressure sodium vapour lights, which minimise the glare usually associated with "white" lights. Two lights (one at the CHPP and one at the open cut workshop) have been re-directed to minimise impact on traffic on the New England Highway.

Mobile lighting plants have been the source of most complaints, particularly the ones stationed on the Eastern Emplacement Area. These lighting plants were initially directed to the north (ie. away from the village of Camberwell), but complaints from residents in the Middle Falbrook area (located some 6 km to the north of the mine), required that these generally be directed in a north-westerly direction, consistent with the safe operation of the overburden dump. A process of site staff driving the roads surrounding the site when a light is potentially impacting motorists or residents to assess impact and redirect the light where necessary has been implemented. This process is also followed when a lighting complaint is received.

This action has reduced, but not eliminated, complaints regarding the direction of site lighting. Ongoing management of this issue will be required coupled with training of OCEs and leading hands.

3.12 ABORIGINAL HERITAGE

ACOL received approval under Section 90 of the National Parks and Wildlife Act, 1974 to collect Aboriginal relics. This approval only applies to relics located within the mine lease area north of the New England Highway. In accordance with Condition 3.33, the local Aboriginal community was involved in the collection of relics prior to any disturbance. Work was completed in August 2003. A total of 167 Aboriginal artefacts were recovered from the area. The Wonnarua Local Aboriginal Land Council was granted care and control of the collected relics.

No new artefacts were identified during the current reporting period.

In accordance with Condition 3.32, an initial contribution of $50,000 was made towards a trust fund established by the Public Trustee for the purposes of a regional study into Aboriginal cultural heritage.

Regular consultation with the local Aboriginal community has continued throughout the project. A Native Title Agreement has been established, Ashton assisted in the establishment of Wonnarua Mining Services and agreement has been reached to form a Liaison Committee with the Wonnarua People.

Consultation has also bee conducted with the Wonnarua People regarding the establishment of the Conservation Area south of the Highway.

Management of the remaining Aboriginal sites south of the New England Highway is detailed in the Archaeological and Cultural Heritage Management Plan that has been recently revised to encompass the underground mine in that area.

3.13 NATURAL HERITAGE

No items of natural or European heritage were identified during the EIS process as being likely to be disturbed by mining operations.

3.14 BUSHFIRE

A Bushfire Management Plan (BMP) has been developed and implemented on site. This BMP requires that a risk assessment be undertaken in consultation with the Singleton Rural Fire Service to assess the risks of fire breaking out, or entering on to the site, as well as the development of risk reduction measures. This risk assessment was completed prior to the commencement of the 2003 / 2004 fire season and all agreed actions have been implemented.

There were no outbreaks of bushfire on the project lands during this reporting period.

3.15 MINE SUBSIDENCE

Mining operations during the current reporting period were restricted to open cut mining techniques, so no subsidence impacts were encountered.

A Subsidence Management Plan for the First Workings of the first two panels in the Pikes Gully seam of the proposed underground mine has been submitted.

3.16 HYDROCARBON CONTAMINATION

There have been several minor hydrocarbon spillages during the reporting period. All spillages were contained and promptly collected with appropriate absorbent products prior to any hydrocarbons moving offsite or out of immediate work areas. Any impacted soils were also collected.

3.17 METHANE DRAINAGE/VENTILATION

There were no methane drainage or ventilation activities undertaken at the Ashton Coal Project during the reporting period. None are planned for the next reporting period.

3.18 PUBLIC SAFETY

The boundary fence around the open cut operations with signs warning that the area is subject to mining is complete. Only one access road to the site is in general use and all visitors are directed to the ACOL office for further directions on the roads that they are permitted to access. All other vehicular access points are locked. A new gate system that remains closed outside normal office hours has been installed to prevent ad hoc public access.

The safety of public travelling along Glennies Creek Road and the New England Highway has been a major consideration during the reporting period, with numerous closures of the road when blasting occurs within 500 metres. The Glennies Creek Road Environmental Bund will further isolate mining activities from the publics view increasing safety levels along the road.

The safety of public travelling on trains or along the access roads alongside the railway has also been an area of focus. Procedures are in place to ensure the Main Northern Railway is clear of trains before blasting within 500 metres of the rail line, and to take possession of the rail line if blasting within 200 metres.

3.19 OTHER ISSUES AND RISKS

No other risks or issues have been identified during the reporting period.

4.0 COMMUNITY RELATIONS

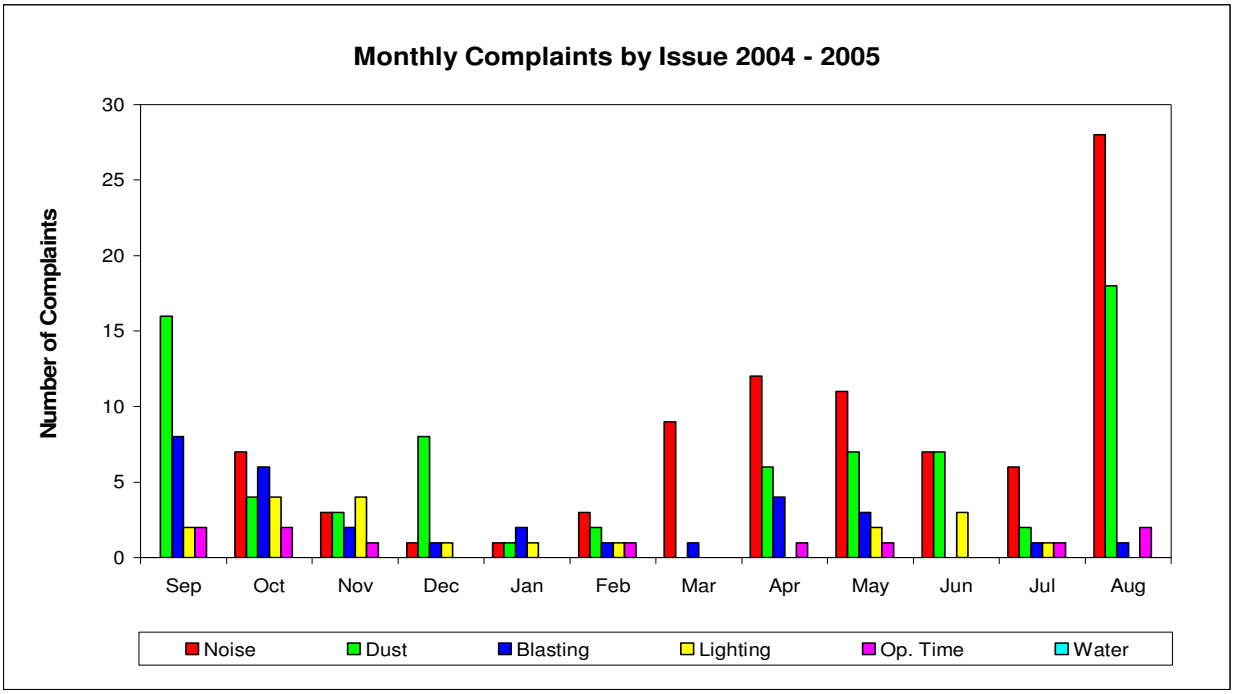
4.1 ENVIRONMENTAL COMPLAINTS

222 complaints were received during the reporting period. Community complaints are received via a dedicated telephone number (6576 1830), with each complaint recorded on a complaints listing, together with the action taken. An email is also sent to all operational personnel who may have the ability to address the source of the complaint. A toll-free telephone number (1800 657 639) has also been provided in response to community requests.

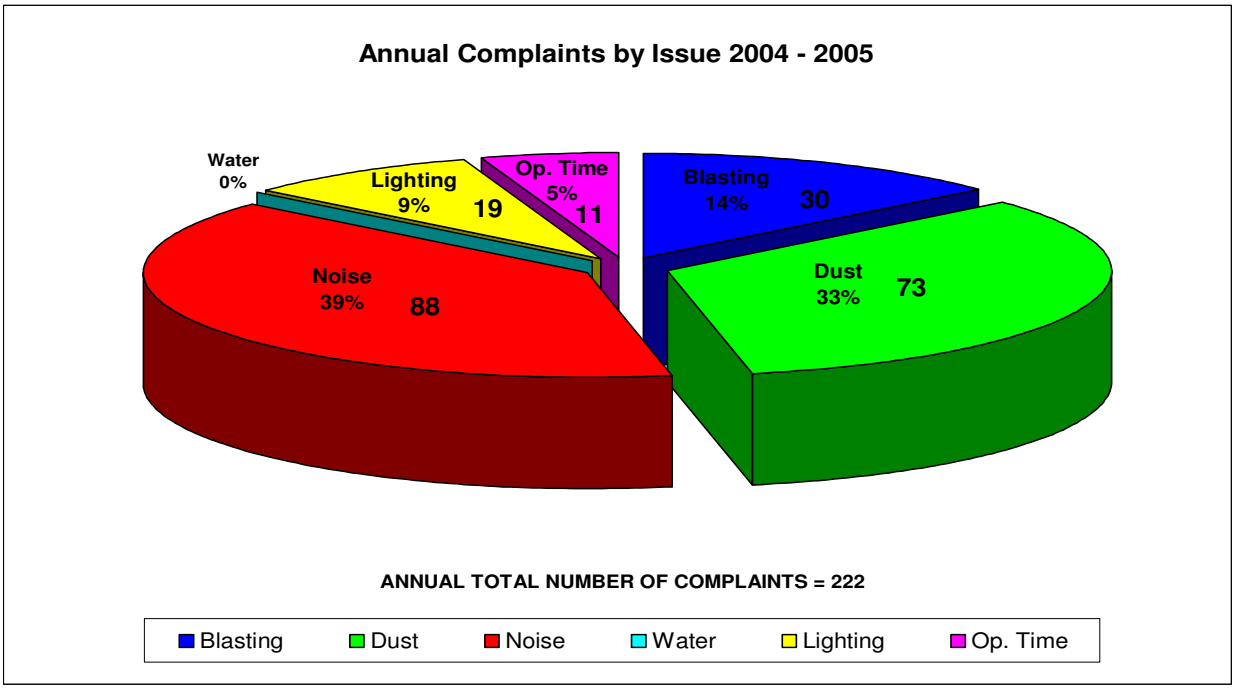
Complaints received during the reporting period were as follows:

SUMMARY OF COMPLAINTS RECIVED 2004 - 2005

MONTH	Blasting	Dust	Noise	Water	Lighting	Op. Time	TOTAL
September	8	16			2	2	**28**
October	6	4	7		4	2	**23**
November	2	3	3		4	1	**13**
December	1	8	1		1		**11**
January	2	1	1		1		**5**
February	1	2	3		1	1	**8**
March	1		9				**10**
April	4	6	12			1	**23**
May	3	7	11		2	1	**24**
June		7	7		3		**17**
July	1	2	6		1	1	**11**
August	1	18	28			2	**49**
TOTAL	**30**	**74**	**88**	**0**	**19**	**11**	**222**



The total number of complaints received in each classification is detailed in the following graph:

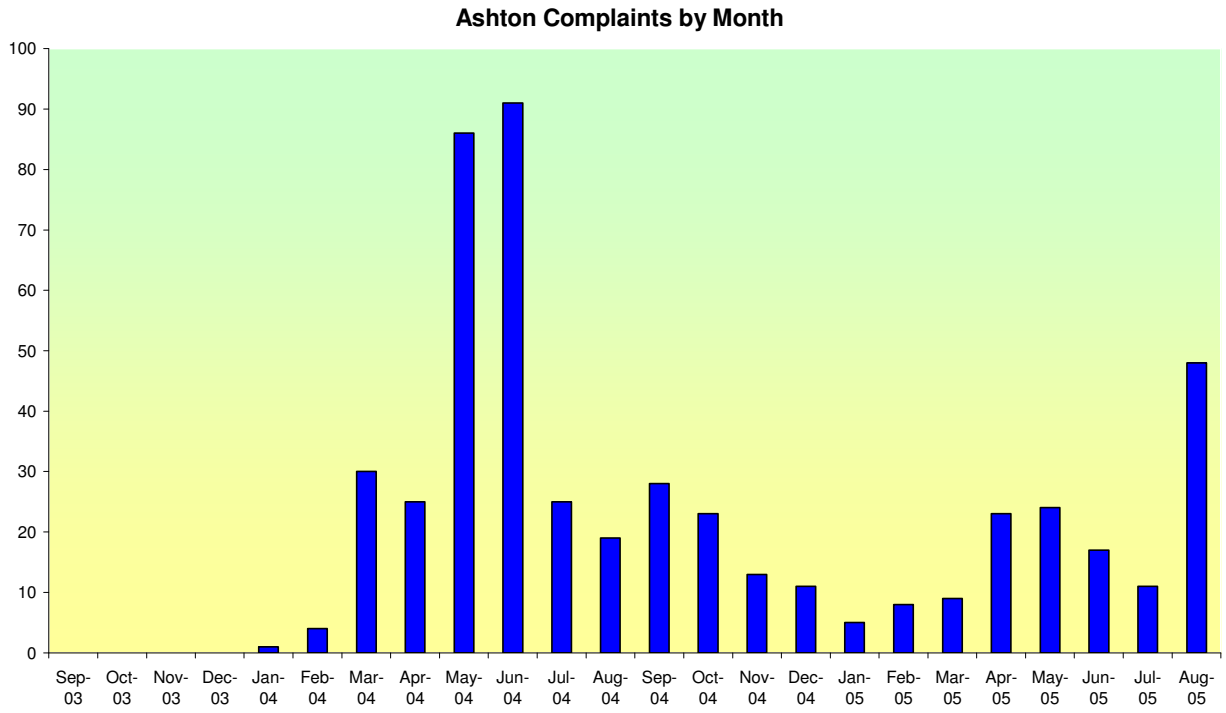


The complaints were classified in relation to the source of the complaint in order to assist in the development of mitigation measures. For instance:

- Blasting practices were changed to reduce the level of air overpressure and the directive effect of ground vibration particularly following the departure of the mining contractor (HWE);
- The level of dust suppression in the open cut was increased by the utilisation of a third and now fourth water cart (contractor owned and operated but managed by ACOL) on site;
- The commencement of the Glennies Creek Road Environmental Bund construction, which is intended to mitigate the noise level received in Camberwell village from the open cut operations and provide a visual screen for the site;
- Reversing beepers on mobile plant have been replaced with broad frequency spectrum reversing alarms (“quacking duck” type beepers) and there have been ongoing initiatives with respect to enforcing the use of these beepers by contractors;
- The traditional method of communication between excavators and trucks has been the use of horn signals. These have been replaced with telemetry equipment to eliminate the intrusive effect of the horns and this has been an ongoing process as the fleet is fitted out and new vehicles are added. There have also been modifications to the system over this period to ensure that the operators can operate safely without the use of horns.

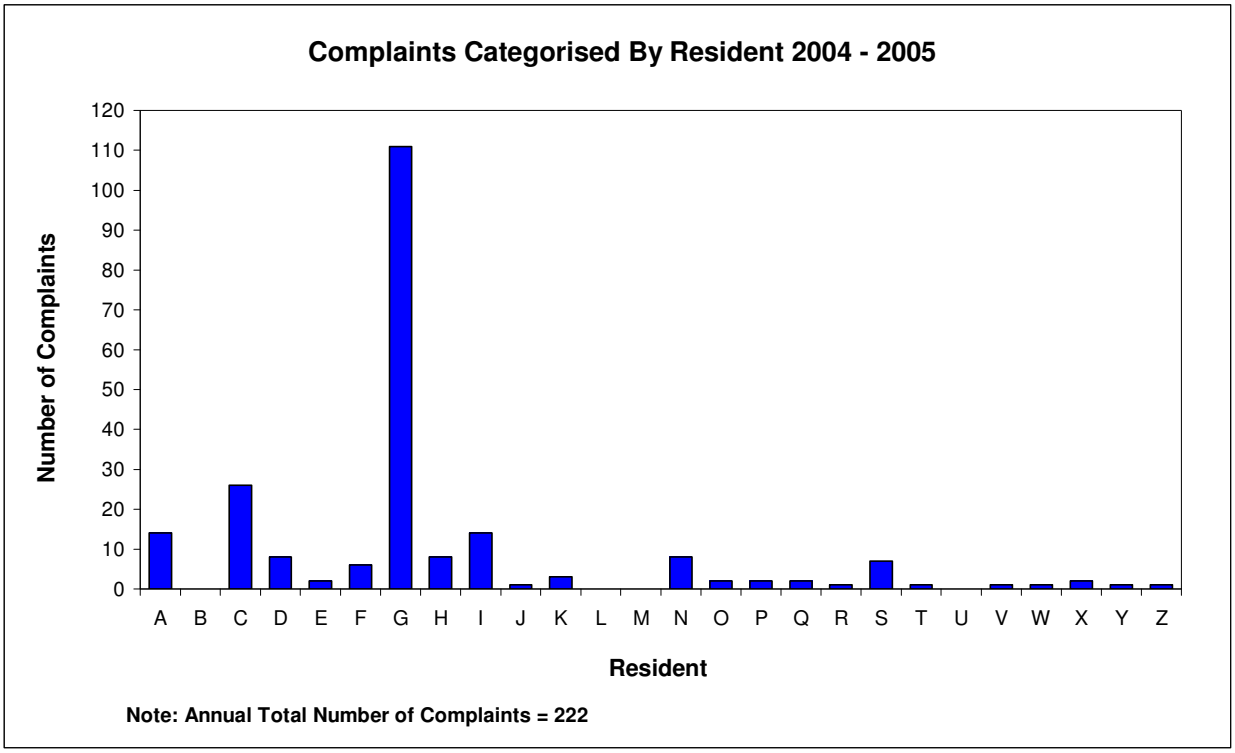
The communication strategy adopted to explain to local residents that the CHPP, as well as the dust suppression and maintenance activities in the open cut, are permitted to operate 24 hours per day has continued through the reporting period.

The adoption of these strategies has been reflected in the number of complaints being received at the mine, as indicated by the following graph:



During August 2005, a large percentage of complaints (56%) were received from residents at a single residence who were seeking a compensation agreement with ACOL.

It was also noticeable that a large number of complaints were concentrated amongst a few residents, as shown on the following graph:



The properties of Residents A and B were purchased by Ashton during the reporting period, whilst an offer has been made to Residents C and G.

It is our view that the residents at residence G have been actively using the complaints system as a means to further their case for a compensation agreement. This is evidenced by the number of complaints received from this residence when no other complaints were received from other residents and when ACOL were well within the consent and EPL criteria for the mine site.

The open offer that Ashton has made to purchase any property in Camberwell village at market value has been reaffirmed and, to date, a total of 29 properties have been purchased.

It is therefore evident that:

- Residents are well aware of the environmental contact protocols;
- The environmental contact protocols are being effectively used by residents; and
- The mine has adopted a wide range of amelioration strategies to effectively address the level of concerns expressed via the community complaints process.

4.2 COMMUNITY LIAISON

Extensive community consultation has continued throughout this reporting period via newsletters, the Community Consultative Committee (CCC) and directly with residents through one-on-one meetings.

ACOL have plans to improve it's Community Communications through more detailed newsletters, a revamp of the Ashton website, Community Christmas function and the pursuit of a suitable project for the use of S94 fund contributions. Ashton staff will also conduct a detailed survey of local resident's opinions and attempt to get some live data on community concerns.

The CCC met on the following dates:

- 16 November 2004
- 22 February 2005
- 24 May 2005
- 23 August 2005

The CCC has been actively involved in reporting dust impacts on the Village from blasting and in noise amelioration measures, addressing risks associated with closing the Camberwell Common, reviewing potential community project for S94 funding and other smaller issues.

A series of newsletters have also been distributed amongst the local community detailing progress on the Ashton site. The dates of these newsletters were as follows:

Community Newsletters

Newsletter No	Issued	Contents
15	December 2004	Christmas operating times, Xmas wishes etc
16	February 2005	Glennies Creek Rd Environmental Bund, personnel updates
17	May 2005	Tree planting in Moir Screen, weed control and ID

As a result of an early offer made by Ashton, a number of residents within the Village have also taken up the opportunity for Ashton to install a "first flush" system on their rainwater tanks to reduce the impact of dust. The offer was originally communicated in the Ashton Community Newsletter. This offer remains open and residents are still taking the offer up.

5.0 REHABILITATION

5.1 BUILDINGS / INFRASTRUCTURE

ACOL established a new store, a new hydrocarbon (fuel, oils and lubricants) storage facility and commenced the construction of some of the underground civil works.

5.2 REHABILITATION OF DISTURBED LAND

This reporting period covers the first full 12 months of mine operation, so there has been more opportunity to conduct rehabilitation operations than in the previous reporting period (2003-04). Progress has been made in the following areas:

- The environmental bund (Bund 6) along the New England Highway has been replanted with advanced tubestock and some areas that have not reached expectations have been spray-seeded. Further replanting will be necessary in the next reporting period due to poor survival rates on this bund;
- The area of the Eastern Emplacement that was topsoiled and grass seeded by the mining contractor (HWE) has been planted with tubestock and treated for *galenia spp*, areas of this will need more grass seed when conditions are favourable, a survey of tubestock survival will be conducted early in the next reporting period followed by maintenance planting of tubestock;
- The southern face of the Eastern Emplacement Area has been shaped to 120RL and some of the 120-135RL section has been bulk shaped;
- The southern face has been topsoiled and planted with tubestock to 110RL excluding an area of over-slope where tree seed is to be added directly to overburden the tubestock planted into it. Topsoil and spray seed have been applied to most of the southern face to 120RL;
- The northern and eastern sides of the Eastern Emplacement from 80-90RL have been bulk shaped, topsoiled and spray-seeded;
- In-pit dumping has started in the Barrett Pit and the Arties Pit backfill has commenced;
- The Glennies Creek Road Environmental Bund north south section is competed and the east west section is currently being constructed;
- The Glennies Creek Road Environmental Bund – north-south section has been topsoiled, spray seeded and planted with tubestock on the road side; and;
- The area along the rail siding has been spray mulched due to the failure of previous spray-seeding.

5.3 OTHER INFRASTRUCTURE

No additions or major repairs were made to infrastructure on-site.

5.4 REHABILITATION TRIALS AND RESEARCH

No rehabilitation research trials have been undertaken during the reporting period.

5.5 FURTHER DEVELOPMENT OF THE FINAL REHABILITATION PLAN

The final rehabilitation plan for the open cut mining area was outlined in the EIS. This will be reviewed and additional detailed provided in subsequent Mine Operations Plans.

5.6 REHABILITATION SUMMARY

Rehabilitation Summary 2004 - 2005			
	Area Affected / Rehabilitated (hectares)		
	To Date	Last Report	Next Report (estimated)
A: MINE LEASE AREA			
Mine Lease 1529	128.7	128.7	128.7
Mine Lease 1533 (part overlies ML 1529)	883.4	883.4	883.4
B: DISTURBED AREAS			
B1 Infrastructure area	37.31	37.53	43
B2 Active Mining Area (Excluding B3 – B5)	38.05	29.10	45
B3 Waste Emplacement (Active / unshaped)s	80.31	73.03	70
B4 Tailings emplacements (active / uncapped)	5.81	5.95	5.8
B5 Shaped waste emplacement (awaits final vegetation)	1.74	3.66	3
ALL DISURBED AREAS	163.22	149.27	166.8
C. REHABILITATION PROGRESS			
C1 Total Rehabilitated Area (except for maintenance)	17.09	2.75	25
D. REHABILITATION ON SLOPES			
D1 10 to 18 degrees	17.09	2.75	25
D2 Greater than 18 degrees	0	0	0

Rehabilitation Summary 2004 - 2005			
	Area Affected / Rehabilitated (hectares)		
	To Date	Last Report	Next Report (estimated)
E. SURFACE OF REHABILITATED LAND			
E1 Pasture and grasses	10.68	2.75	15
E2 Native forest / ecosystems	6.21	0	10
E3 Plantations and crops	0	0	0
E4 Other (includes nonvegetative outcomes)	0.2	0	0.5

Maintenance Activities on Rehabilitated Land			
NATURE OF TREATMENT	**Area Treated (ha)**		**Comment / control strategies / treatment detail**
	Report Period	**Next Period**	
Additional erosion control works (drains re-contouring, rock protection)	3.0	0.8	Rock lined spillway installed on process water dam. Drop structure on southern side of Eastern Emplacement Area commenced. Toe drains around eastern Emplacement completed and spraygrassed.
Re-covering (detail – further topsoil, subsoil sealing, etc)	0	3.2	Plan to re-cover the batter slope alongside the coal haul road where rilling is evident.
Soil treatment (detail – fertiliser, lime, gypsum, etc)	**12**	**10**	**Glennies Creek Road Environmental Bund and parts of the Eastern Emplacement Area treated with gypsum prior to sprayseeding**
Treatment / Management (detail – grazing, cropping, slashing, etc)	**0**	**0**	
Re-seeding / Replanting (detail – species density, season, etc)	**1.5**	**2**	**Replanted tubestock and re sprayseeded sections of Environmental Bund 6. Planted tubestock into previously grassed area on southern edge of Eastern Emplacement Area**
Adversely Affected by Weeds (detail – type and treatment)	**4**	**5**	***Galenia spp*. On Environmental Bund 6, Eastern Emplacement Area and around the infrastructure area**
Feral animal control (detail – additional fencing, trapping, baiting, etc)			**Shooting contractor culling Kangaroos, feral cats, feral dogs, rabbits.**

6.0 ACTIVITIES PROPOSED IN THE NEXT AEMR PERIOD

During the current reporting period, the open cut mine and CHPP facilities have been in full operation. During this period, Ashton has had the opportunity to assess the actual consequences of operations and to modify those operations to ensure compliance with the criteria defined in the development consent, EPL and MOP.

New development works focussing on the underground mine and expansion of CHPP facilities will also continue in the next AEMR period.

As a result, a significant number of activities are planned to occur in the period covered by the next AEMR. These include:

1. Gain approval for the MOP modification required for the underground mine;
2. Revise EPL to reflect the underground mine (basically this will require a change to the area licensed);
3. Install water spray system on ROM Hopper(currently underway);
4. Complete construction of a noise mitigation bund along Glennies Creek Road;
5. Rehabilitate the exposed southern face of the Eastern Emplacement Area up to RL 135;
6. Rehabilitate the east and northern faces of the Eastern Emplacement Area;
7. Conduct baseline monitoring along Bowmans Creek in preparation of assessment of underground mining impacts;
8. Continue the process required for declaration of a Conservation Area in the Southern Woodland; and
9. Finalise the generation of licences and approvals for the commencement of the underground mine.

APPENDIX 1

AMENDED LICENCE CONDITIONS

Protection of the Environment Operations Act 1997

Licence Variation

Section 58(5) Protection of the Environment Operations Act 1997

NSW EPA
ENVIRONMENT PROTECTION AUTHORITY

ASHTON COAL OPERATIONS LIMITED,

ABN 22 078 556 500,

PO BOX 699,

SINGLETON NSW 2330

Attention: Mr. Peter HORN

Notice Number 1051915

File Number 273142

Date

NOTICE OF VARIATION OF LICENCE NO. 11879

BACKGROUND

A. ASHTON COAL OPERATIONS LIMITED ("the licensee") is the holder of Environment Protection Licence No. 11879 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of Sched Dev Work/Prem Based Sched Activity at GLENNIES CREEK ROAD AND NEW ENGLAND HIGHWAY, CAMBERWELL, NSW.

B. On 9 September 2005 the EPA received an application for the variation of the licence requesting to increase the scale/capacity of coal production and amend the premises description to allow the commencement of underground coal mining. The request is consistent with the development consent (DA309-11-2001-I) granted for the coal mine.

C. The EPA agrees to amend the licence details as detailed in the licence variation application.

D. The EPA has also revised Licence Conditions M9 and R5 to clarify the licensee's requirements to submit an Noise Compliance Assessment report and a Blast Monitoring Report annually with the Annual Return.

E. The EPA understands that the Eastern Noise Bund has now been completed and conditions relating to the construction of this bund have been deleted.

F. The notice also updates references to legislation mentioned in the licence.

VARIATION OF LICENCE NO. 11879

1. By this notice the EPA varies licence No. 11879 as set out in the Appendix. *(for licences with a lot of changes and where the whole licence document will be in the appendix:* The Appendix is a copy of the licence marked with the variations that are made to it by this notice. *(for licences with a small number of changes where only the conditions will be printed:* The Appendix is a copy of the provisions of the licence which are varied by this notice, marked with the variations that are made to them.

2. The variations to the licence are indicated in the following way:
   - if a strike through mark appears through any word or other text (eg. ~~Solids or~~) this indicates that the word or other text is deleted from the licence by this notice; and
   - if a double underline appears under any word or other text (eg. must be treated) this indicates that the word or other text is added to the licence by this notice.
3. Except as provided by section 84(2) of the Act, the variations to the licence by this notice begin to operate at the expiry of the period of 21 days after you receive notice of the variations, unless another date is specified in this notice.
4. Section 84(2) of the Act provides that a variation to a licence does not operate:
   - until the expiry of the period of 21 days after you are given notice of the decision to vary the licence; or
   - if an appeal against the decision is lodged within that period, until the Land and Environment Court confirms the decision or the appeal is withdrawn; or
   - until you notify the EPA in writing that no appeal is to be made against the decision to vary the licence,

whichever first occurs.

.....

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- Section 287 of the Act enables appeals to be made in connection with decisions about licences within 21 days after you are given notice of the decision.
- Details provided in this notice will be available on the EPA's Public Register in accordance with section 308 of the Act.
- This notice is issued under section 58(5) of the Act .

Environment Protection Authority

Environment Protection Licence

Section 55 Protection of the Environment Operations Act 1997

- Licence number: 11879
- File number: 273142
- Licence Anniversary Date: 02-September
- Review date not later than 02-Sep-2006

Licence Type
Premises

Licensee
ASHTON COAL OPERATIONS LIMITED
PO BOX 699
SINGLETON NSW 2330

Licensed Premises
ASHTON COAL MINE
GLENNIES CREEK ROAD AND NEW ENGLAND HIGHWAY
CAMBERWELL NSW 2330

Fee Based Activity	Scale
Coal Mining (26)	> 500000 - 20000005000000 - T produced

EPA Region
Hunter
Ground Floor, NSW Govt Offices, 117 Bull Street
NEWCASTLE WEST NSW 2302
Phone: 02 49086800
Fax: 02 49086810

PO Box 488G NEWCASTLE
NSW 2300

Information about this licence

Dictionary

The licence contains a dictionary, which defines terms used in the licence. It is found at the end of the licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- Ensure persons associated with you comply with this licence, as set out in section 64 of the Act.
- Control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act).
- Report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Transfer of licence

Transfer of the licence to another person may be requested by the licensee using the form for this purpose available from the EPA.

Variation of licence conditions

Variations to the conditions of this licence may be requested by the licensee using the form for this purpose available from the EPA. The EPA may also vary a licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 3 years after the issue of the licence, as

set out in Part 3.6 of the Act. You will receive advance notice of the licence review. For licences held immediately before 1 July 1999, the first review will take place before 1 July 2002.

Fees and annual return to be sent to the EPA

The licence requires you to forward to the EPA an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints).

The Annual Return must be submitted within 60 days after the end of each reporting period. Where a licence is transferred, surrendered or revoked, a special reporting period applies.

For each licence fee period you must pay:
- an administrative fee; and
- a load-based fee (if applicable).

Usually the licence fee period is the same as the reporting period.

See condition R1 and the accompanying form regarding the Annual Return requirements.

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications
- licence conditions and variations
- statements of compliance

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

Licence anniversary date

02-September

This licence is issued to

ASHTON COAL OPERATIONS LIMITED
PO BOX 699
SINGLETON NSW 2330

subject to the conditions which follow:

1 Administrative conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2.
Coal mine and coal washery

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity
Coal Mines
Coal Works

Fee Based Activity	Scale
Coal Mining (26)	> 600000 - 20000095000000 - T produced

A1.3 The licensee must not carry on any scheduled activities until the scheduled development works are completed, except as elsewhere provided in this licence.

A2 Premises to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
ASHTON COAL MINE
GLENNIES CREEK ROAD AND NEW ENGLAND HIGHWAY
CAMBERWELL

Premises Details
NSW
2330
As shown on Figure 1 dated May 2003 titled "EPA Licenced Premises" ML 1533

A3 Other activities

A3.1 Not applicable.

A4 Information supplied to the EPA

A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
(a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
(b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to air and water and applications to land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
1	Dust monitoring		Locations shown on Figure 1B dated 10/1/05 titled "Air Monitoring - Dust Location Plan".

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA identi-fication no.	Type of monitoring point	Type of discharge point	Description of location
2	Ambient surface water monitoring		In Bowmans Creek upstream of the mine shown as point SM3 in Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites".
3	Ambient surface water monitoring		In Bowmans Creek near the New England Highway shown as point SM4 in Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites"
4	Ambient surface water monitoring.		In Bowmans Creek near the proposed longwall panels shown as point SM5 in Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites"
5	Ambient surface water monitoring		In Bowmans Creek at the Hunter River confluence shown as point SM6 in Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites"
6	Ambient surface water monitoring.		In the Hunter River upstream of Bowmans Creek shown as point SM9 on Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites".
7	Ambient surface water monitoring		In the Hunter River downstream of Bowmans Creek confluence shown as point SM10 on Figure 4 dated 8/8/03 titled "EPA Surface Water Monitoring Sites".
8	Groundwater monitoring		At 19 sites shown on Figure 5 dated 8/8/03 titled "Groundwater Monitoring Sites".

3 Limit conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 Not applicable.

L2.2 Not applicable.

L3 Concentration limits

L3.1 Not applicable.

L3.2 Not applicable.

L3.3 Not applicable.

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L6 Noise Limits

L6.1 Noise from the premises must not exceed the limits specified in the table below:

Location	Day	Evening	Night	
	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{Aeq(15\ minute)}$	$L_{A1(1\ minute)}$
Any residence not owned by the licensee or not subject to an agreement between the licensee and the residence owner as to an alternate noise limit.	38	38	36	46

L6.2 For the purpose of Condition 6.1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays,
- Evening is defined as the period from 6pm to 10pm

- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

L6.3 Noise from the premises is to be measured at the most affected point on or within the residential boundary or at the most affected point within 30m of the dwelling where the dwelling is more than 30m from boundary to determine compliance with the $L_{Aeq(15\ minute)}$ noise limits in condition L6.1. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.

L6.4 Noise from the premises is to be measured or computed at 1m from the dwelling facade to determine compliance with condition 6.1 (LA1 (1 minute) noise limit). .

L6.5 The noise emission limits identified in condition L6.1 apply under the following meteorological conditions:
(a) wind speeds up to 3m/s at 10m above ground level; and
(b) temperature inversion conditions up to 3°C/100m.

L6.6 Open cut mining activities must only be carried out between the hours of 0700 and 2200 Monday to Saturday, and 0800 and 2200 on Sundays and Public Holidays.

~~L6.7 Noise generated prior to 9 March 2004 by activities associated with the establishment of the Eastern Bund must not exceed the noise limits in the table below. Note that the works on the eastern bund are considered as operational noise from the mine premises.~~

~~**Noise Limit dB (A)**~~

~~Location~~	~~Day~~ ~~LAeq (15 minute)~~
~~Any residence not owned by the licensee or not subject to an agreement between the licensee and the residence owner as to alternate noise limits~~	~~43~~

~~Establishment of the Eastern Bund must only be conducted between 7am and 6pm Monday to Friday and between 7am and 1pm on Saturdays. Establishment work shall not be carried out on Sundays or Public Holidays.~~

L7 Blasting limits

L7.1 Blasting in or on the premises must only be carried out between 0900 hours and 1700 hours, Monday to Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.

L7.2 The overpressure level from blasting operations carried out in or on the premises must not:
(a) exceed 115 dB(L) for more than 5% of the total number of blasts carried out on the premises within the 12 months annual reporting period; and
(b) exceed 120 dB(L) at any time

at any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level.

L7.3 The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not:

(a) exceed 5mm/second for more than 5% of the total number of blasts carried out on the premises within the 12 months annual reporting period; and

(b) exceed 10mm/second at any time

at any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative ground vibration level.

4 Operating conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

(a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and

(b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

(a) must be maintained in a proper and efficient condition; and

(b) must be operated in a proper and efficient manner.

O3 Dust Control

O3.1 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O3.2 All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.

O4 Stormwater Management

O4.1 A Stormwater Management Scheme must be prepared for the development and must be implemented. Implementation of the Scheme must mitigate the impacts of stormwater runoff from and within the premises following the completion of construction activities. The Scheme should be consistent with the Stormwater Management Plan for the catchment. If a Stormwater Management Plan has not yet been prepared the Scheme should be consistent with the guidance contained in

Managing Urban Stormwater: Council Handbook (available from the EPA).

O4.2 Banks, channels and similar works must be constructed to divert stormwater away from disturbed or contaminated land surfaces such as mine workings, haul roads, overburden disposal areas, coal handling areas and wastewater treatment facilities. All diversion banks, channels and points of discharge must be constructed or stabilised so as to minimise erosion and scouring.

O5 Wastewater management

O5.1 A water management system must be constructed and utilised to manage the collection, storage, treatment, use and disposal of minewater, sewage effluent and other wastewater.

O5.2 Bund(s) must be installed around areas in which fuels, oils and chemicals are stored. Bunds must:
- have walls and floors constructed of impervious materials;
- be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
- have walls not be less than 250 millimetres high;
- have floors graded to a collection sump; and
- not have a drain valve incorporated in the bund structure.

O5.3 A wastewater treatment facility with oil separator and sediment trap must be installed to treat drainage from the hardstand, vehicle servicing and general workshop areas.

O5.4 An area must be provided for the use of effluent from the sewage treatment plant. The design of the system must be in accordance with the EPA's draft guideline "Utilisation of Treated Effluent by Irrigation".

O5.5 Wastewater utilisation areas must effectively utilise the wastewater applied to those areas. This includes the use for pasture or crop production, as well as ensuring the soil is able to absorb the nutrients, salts, hydraulic load and organic materials in the solids or liquids. Monitoring of land and receiving waters to determine the impact of wastewater application may be required by the EPA.

O6 Incineration or open burning

O6.1 There must be no incineration or open burning of any material(s) on the premises, except as specifically authorised by the EPA.

5 Monitoring and recording conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
(a) in a legible form, or in a form that can readily be reduced to a legible form;
(b) kept for at least 4 years after the monitoring or event to which they relate took place; and
(c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

(a) the date(s) on which the sample was taken;
(b) the time(s) at which the sample was collected;
(c) the point at which the sample was taken; and
(d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
PM10	ug/m3	Daily	Australian Standard 3580.9.8 - 2001
Particulates - Deposited Matter	g/m2/month	Monthly	Clean Air (Plant & Equipment) Regulation 1997 Method Number AM-19
Total suspended particles	ug/m3	Every 6 days	24 hour composite sample

POINTS 2,3,4,5,6,7

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	uS/cm	Monthly	A probe designed to measure the range 0 to 10,000 uS/cm

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	uS/cm	Every 6 months	Grab sample
Standing Water Level	m	Every 6 months	In line instrumentation

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:

(a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or

(b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or

(c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The Protection of the Environment Operations (Clean Air ~~(Plant & Equipment)~~ Regulation 1997**2002** requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Recording of pollution complaints

M4.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M4.2 The record must include details of the following:
(a) the date and time of the complaint;
(b) the method by which the complaint was made;
(c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
(d) the nature of the complaint;
(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
(f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M5 Telephone complaints line

M5.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M5.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
(a) the date of the issue of this licence or

(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.

M6 Requirement to monitor volume or mass

M6.1 Not applicable.

M7 Requirement to monitor weather

M7.1 The licensee must collect and analyse meteorological data at an on-site monitoring station for the parameters, at a frequency, averaging period and using a method as specified in the table below.

Meteorological Monitoring

Parameter	Units of measure	Frequency	Averaging Period	Sampling Method
Atmospheric inversion	0C/100m	Continuous		instrumental
Temperature @ 1.2m	C	Continuous	1 hour	AM-4
Rainfall	Mm		24 hours	Standard rain gauge
Wind direction @ 10m		Continuous	10 minutes	AM2 & AM-4
Wind speed @ 10m	m/sec	Continuous	10 minutes	AM2 & AM-4

Note: All methods are specified in the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* and all monitoring must be conducted strictly in accordance with the requirements outlined in this document.

M8 Requirement to monitor blasts

M8.1 In order to determine compliance with condition L7:

(a) Airblast overpressure and ground vibration levels must be measured at, or near, the nearest residence, or noise sensitive location, that is likely to be most affected by the blast and that is not owned by the licensee, or is the subject of a private agreement between the owner of the residence, or noise sensitive location, and the licensee, as to an alternative overpressure or ground vibration level for all blasts carried out in, or on, the premises; and

(b) Instrumentation used to measure the airblast overpressure and ground vibration levels meet the requirements of Australian Standard 2187.2 of 1993.

M9 Requirement to monitor noise

M9.1 A noise compliance assessment report must be submitted to EPA ~~within three months of commencement of normal operations at the premises and~~ on an annual basis ~~thereafter~~ with the Annual Return as set out in Condition R1. The report must be prepared by an accredited acoustical consultant and determine compliance with the noise limits in Condition L6.1.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
(a) a Statement of Compliance; and
(b) a Monitoring and Complaints Summary.
A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee,
(a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
(b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on
(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

Deadline for Annual Return

R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

Notification where actual load can not be calculated

R1.6 Not applicable.

Licensee must retain copy of Annual Return

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
(a) the licence holder; or
(b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.

R2 Notification of environmental harm

Note: The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
(a) where this licence applies to premises, an event has occurred at the premises; or
(b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
(a) the cause, time and duration of the event;
(b) the type, volume and concentration of every pollutant discharged as a result of the event;
(c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; and
(d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
(e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

(f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event;
(g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Reporting of exceedance of blasting limits

R4.1 The licensee must report any exceedence of the licence blasting limits to the regional office of the EPA as soon as practicable after the exceedence becomes known to the licensee or to one of the licensee's employees or agents.

R5 Blast monitoring reporting

R5.1 The licensee must supply ~~with the Annual Return~~ annually a Blast Monitoring Report with the Annual Return which must include the following information relating to each blast carried out within the premises during the respective reporting period:
(a) the date and time of the blast;
(b) the location of the blast;
(c) the blast monitoring results at each blast monitoring station; and
(d) an explanation for any missing blast monitoring readings.

General conditions

G1 Copy of licence kept at the premises

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Contact number for incidents and responsible employees

G2.1 The licensee must operate one 24-hour telephone contact line for the purpose of enabling the EPA:
(a) to contact the licensee or a representative of the licensee who can respond at all times to incidents relating to individual premises, and
(b) to contact the licensee's senior employees or agents authorised at all times to:

(i) speak on behalf of the licensee, and
(ii) provide any information or document required under licence.

Pollution studies and reduction programs

U1 Not applicable.

Special conditions

E1 Not applicable.

Dictionary

General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
BOD	Means biochemical oxygen demand
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 1998.
flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
industrial waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
inert waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
reprocessing of	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

waste	1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
treatment of waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TSP	Means total suspended particles
TSS	Means total suspended solids
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste code	Means the waste codes listed in Appendix 5 of the EPA document A Guide to Licensing Part B.
waste type	Means Group A, Group B, Group C, inert, solid, industrial or hazardous waste

Mr Mitchell Bennett

Environment Protection Authority

(By Delegation)

Date of this edition - 25-Mar-2005

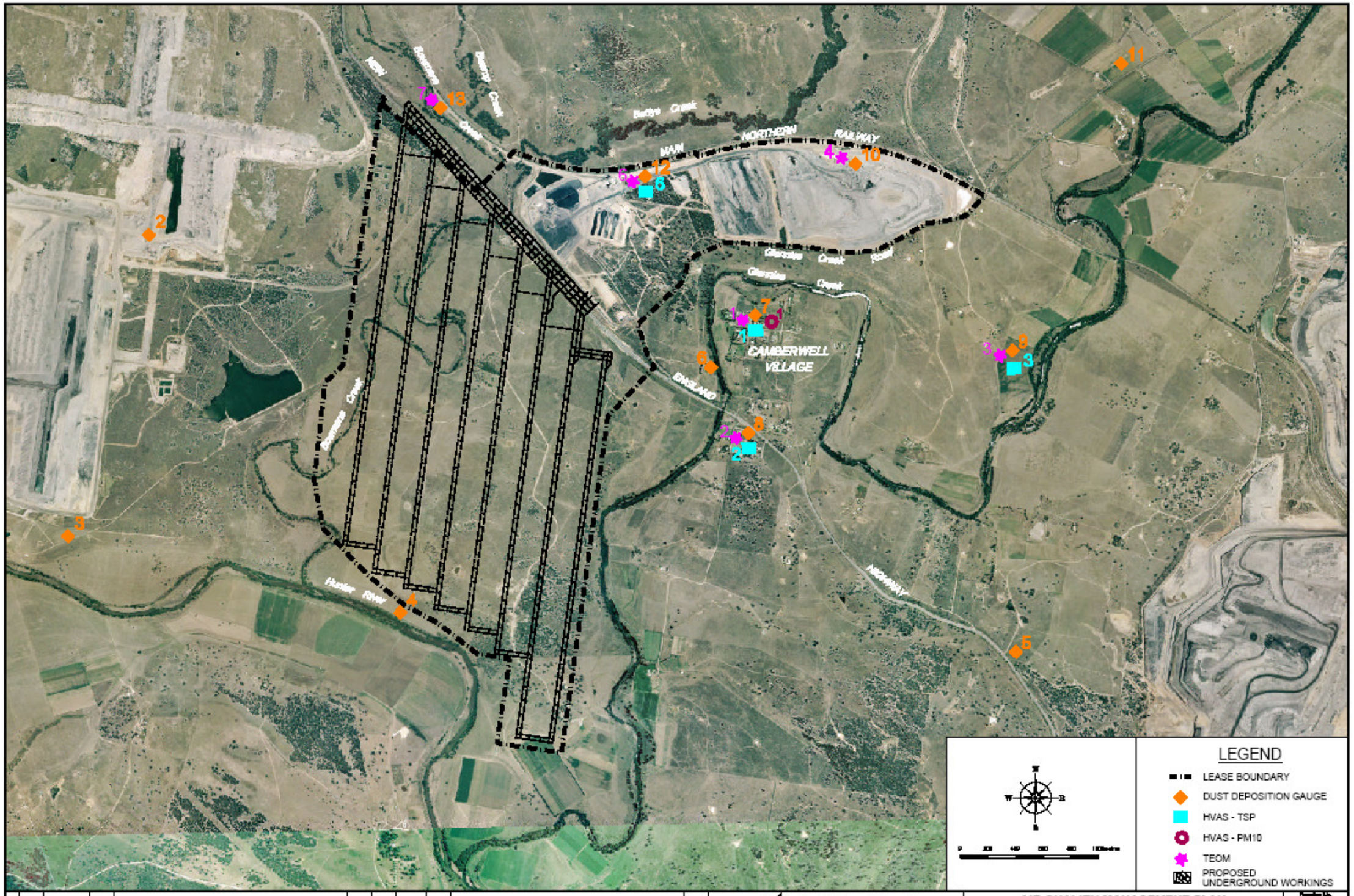
End Notes

1 Licence varied by notice 1032190, issued on 10-Nov-2003, which came into effect on 05-Dec-2003.

2 Licence varied by notice 1043742, issued on 28-Feb-2005, which came into effect on 25-Mar-2005.

APPENDIX 2

AIR QUALITY MONITORING DATA



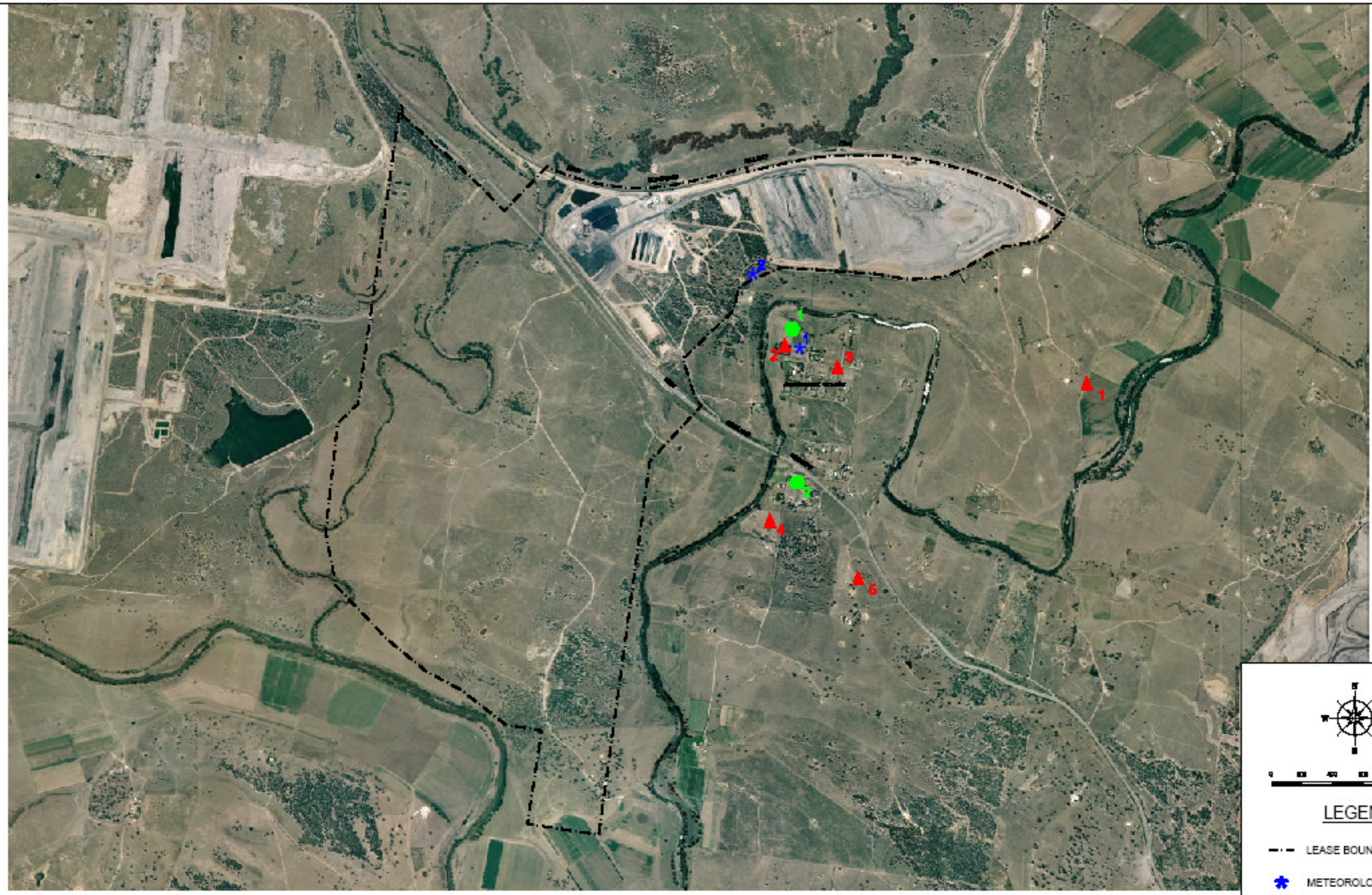
REVISIONS										
REV.	DATE	BY	DESCRIPTION	CHK.	REV.	DATE	BY	DESCRIPTION	CHK.	

AshtonCoal
PO Box 898 Singleton NSW 2330
Phone (02) 6575 1111 Fax (02) 6578 1132
Prepared by Co-Resources Pty Ltd Ph: (02) 49 [illegible] Fax: (02) 49 [illegible]

AIR QUALITY MANAGEMENT PLAN
FIGURE 1
AIR QUALITY MONTORING LOCATIONS

Drawing No. 00770
Revision No. A

Date	Scale	Drawn	Checked	Approved	Sheet Size
10.08.05	1: 25,000	MM	JF	PH	A3



REVISIONS											
REV.	DATE	BY	DESCRIPTION	CHK.	REV.	DATE	BY	DESCRIPTION	CHK.		

AshtonCoal
PO Box 699 Singleton NSW 2330
Prepared by Co-Resources Pty Ltd

FIGURE 2
AIR MONITORING - METEOROLOGICAL LOCATION PLAN

Date	Scale	Drawn	Checked	Approved	Drawing No.	Revision No.	Sheet Size
26.07.05	1:25,000	NM	JR	JF	ADHHHHHHH	A	A3

ASHTON COAL OPERATIONS PTY LIMITED
TSP AIR QUALITY RECORDS

Sampling Date	Sample Event	Site 1 - TSP			Site 2 - TSP			Site 3 - TSP			Site 6 - TSP		
		Site 1 - TSP Result	Site 1 - YTD average	Site 1 - Data %	Site 2 - TSP Result	Site 2 - YTD average	Site 2 - Data %	Site 3 - TSP Result	Site 3 - YTD average	Site 3 - Data %	Site 6 - TSP Result	Site 6 - YTD average	Site 6 - Data %
5/09/2004	1	29	29.0	100.0	37	37.0	100.0	65	65.0	100.0	70	70.0	100.0
11/09/2004	2	36	32.5	100.0	46	41.5	100.0	112	88.5	100.0	55	62.5	100.0
17/09/2004	3	79	48.0	100.0	95	59.3	100.0	188	121.7	100.0	155	93.3	100.0
23/09/2004	4	100	61.0	100.0	134	78.0	100.0	180	136.3	100.0	198	119.5	100.0
29/09/2004	5	117	72.2	100.0	125	87.4	100.0	176	144.2	100.0	156	126.8	100.0
5/10/2004	6	63	70.7	100.0	67	84.0	100.0	118	139.8	100.0	107	123.5	100.0
11/10/2004	7	104	75.4	100.0	103	86.7	100.0	144	140.4	100.0	117	122.6	100.0
17/10/2004	8	34	70.3	100.0	47	81.8	100.0	53	129.5	100.0	108	120.8	100.0
23/10/2004	9	39	66.8	100.0	55	78.8	100.0	91	125.2	100.0	69	115.0	100.0
29/10/2004	10	66	66.7	100.0	82	79.1	100.0	74	120.1	100.0	285	132.0	100.0
4/11/2004	11	105	70.2	100.0	95	80.5	100.0	101	118.4	100.0	144	133.1	100.0
10/11/2004	12	28	66.7	100.0	37	76.9	100.0	57	113.3	100.0	101	130.4	100.0
16/11/2004	13	93	68.7	100.0	100	78.7	100.0	100	112.2	100.0	126	130.1	100.0
22/11/2004	14	75	69.1	100.0	61	77.4	100.0	110	112.1	100.0	115	129.0	100.0
28/11/2004	15	155	74.9	100.0	154	82.5	100.0	106	111.7	100.0	92	126.5	100.0
4/12/2004	16	43	72.9	100.0	108	84.1	100.0	61	108.5	100.0	98	124.8	100.0
10/12/2004	17	23	69.9	100.0	23	80.5	100.0	51	105.1	100.0	99	123.2	100.0
16/12/2004	18	61	69.4	100.0	78	80.4	100.0	101	104.9	100.0	189	126.9	100.0
22/12/2004	19	106	71.4	100.0	104	81.6	100.0	103	104.8	100.0	139	127.5	100.0
28/12/2004	20	56	70.6	100.0	57	80.4	100.0	56	102.4	100.0	214	131.9	100.0
3/01/2005	21	60	70.1	100.0	67	79.8	100.0	76	101.1	100.0	174	133.9	100.0
9/01/2005	22	64	69.8	100.0	33	77.6	100.0	63	99.4	100.0	160	135.0	100.0
15/01/2005	23	95	70.9	100.0	95	78.4	100.0	85	98.7	100.0	184	137.2	100.0
21/01/2005	24	111	72.6	100.0	141	81.0	100.0	129	100.0	100.0	198	139.7	100.0
27/01/2005	25	30	70.9	100.0	39	79.3	100.0	51	98.0	100.0	160	140.5	100.0
2/02/2005	26	56	70.3	100.0	65	78.8	100.0	72	97.0	100.0	148	140.8	100.0
8/02/2005	27	159	73.6	100.0	151	81.4	100.0	131	98.3	100.0	178	142.2	100.0
14/02/2005	28	68	73.4	100.0	85	81.6	100.0	127	99.3	100.0	200	144.3	100.0
20/02/2005	29	35	72.1	100.0	36	80.0	100.0	92	99.1	100.0	86	142.2	100.0
26/02/2005	30	91	72.7	100.0	86	80.2	100.0	94	98.9	100.0	168	143.1	100.0
4/03/2005	31	72	72.7	100.0	75	80.0	100.0	83	98.4	100.0	95	141.5	100.0
10/03/2005	32	79	72.9	100.0	96	80.5	100.0	70	97.5	100.0	217	143.9	100.0
16/03/2005	33	132	74.7	100.0	158	82.9	100.0	132	98.5	100.0	234	146.6	100.0
22/03/2005	34	33	73.4	100.0	32	81.4	100.0	30	96.5	100.0	151	146.8	100.0
28/03/2005	35	57	73.0	100.0	127	82.7	100.0	67	95.7	100.0	244	149.5	100.0
3/04/2005	36	128	74.5	100.0	99	83.1	100.0	136	96.8	100.0	127	148.9	100.0
9/04/2005	37	32	73.4	100.0	84	83.2	100.0	46	95.4	100.0	153	149.0	100.0
15/04/2005	38	63	73.1	100.0	65	82.7	100.0	75	94.9	100.0	289	152.7	100.0
21/04/2005	39	70	73.0	100.0	71	82.4	100.0	147	96.2	100.0	442	160.1	100.0
27/04/2005	40	77	73.1	100.0	90	82.6	100.0	66	95.5	100.0	613	171.5	100.0
3/05/2005	41	58	72.7	100.0	57	82.0	100.0	96	95.5	100.0	393	176.9	100.0
9/05/2005	42	59	72.4	100.0	69	81.6	100.0	66	94.8	100.0	194	177.3	100.0
15/05/2005	43	27	71.3	100.0	49	80.9	100.0	29	93.3	100.0	120	175.9	100.0
21/05/2005	44	116	72.4	100.0	166	82.8	100.0	93	93.3	100.0	186	176.2	100.0
27/05/2005	45	109	73.2	100.0	130	83.9	100.0	153	94.6	100.0	224	177.2	100.0
2/06/2005	46	91	73.6	100.0	125	84.8	100.0	89	94.5	100.0	316	180.2	100.0
8/06/2005	47	88	73.9	100.0	188	87.0	100.0	92	94.4	100.0	281	182.4	100.0
14/06/2005	48	52	73.4	100.0	54	86.3	100.0	28	93.0	100.0	51	179.6	100.0
20/06/2005	49	154	75.1	100.0	99	86.5	100.0	93	93.0	100.0	138	178.8	100.0
26/06/2005	50	29	74.1	100.0	29	85.4	100.0	40	92.0	100.0	125	177.7	100.0
2/07/2005	51	37	73.4	100.0	28	84.3	100.0	30	90.7	100.0	504	184.1	100.0
8/07/2005	52	56	73.1	100.0	63	83.8	100.0	106	91.0	100.0	401	188.3	100.0
14/07/2005	53	105	73.7	100.0	49	83.2	100.0	50	90.3	100.0	128	187.2	100.0
20/07/2005	54	68	73.6	100.0	95	83.4	100.0	56	89.6	100.0	287	189.0	100.0
26/07/2005	55	190	75.7	100.0	100	83.7	100.0	99	89.8	100.0	259	190.3	100.0
1/08/2005	56	113	76.4	100.0	120	84.4	100.0	123	90.4	100.0	358	193.3	100.0
7/08/2005	57	60	76.1	100.0	101	84.6	100.0	70	90.0	100.0	136	192.3	100.0
13/08/2005	58	102	76.5	100.0	95	84.8	100.0	70	89.7	100.0	84	190.4	100.0
19/08/2005	59	173	78.2	100.0	216	87.1	100.0	132	90.4	100.0	538	196.3	100.0
25/08/2005	60	54	77.8	100.0	98	87.2	100.0	70	90.1	100.0	310	198.2	100.0
31/08/2005	61	174	79.3	100.0	257	90.0	100.0	187	91.7	100.0	485	202.9	100.0

Monthly Averages				
September	61.0	78.0	136.3	119.5
October	71.4	79.4	116.4	111.4
November	73.4	75.0	88.4	154.2
December	77.6	93.4	84.4	123.4
January	77.2	78.6	81.8	186.0
February	69.6	75.2	94.6	154.4
March	81.4	89.4	81.8	173.0
April	70.0	89.2	94.2	251.0
May	67.4	86.2	70.0	301.2
June	98.8	119.2	91.0	202.0
July	80.8	60.7	63.5	284.0
August	112.7	147.8	108.7	318.5

ASHTON COAL OPERATIONS PTY LIMITED
TEOMs - PM10 Results

	Loc 1 - J Richards		Loc 2 - Barton		Loc 3 - B Richards		Loc 4 - East Rail		Loc 6 - Centre Rail		Loc 7 - West Rail		Site 1 and Site 4 Ashton Contribution	Site 1 and Site 6 Ashton Contribution	Site 1 and Site 7 Ashton Contribution
Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
1/09/2004	11	11.0	13	13.0	10	10.0	23	23.0	18	18.0	13	13.0	-12	-7	-2
2/09/2004	10	10.5	12	12.5	8	9.0	20	21.5	20	19.0	10	11.5	-10	-10	0
3/09/2004	15	12.0	15	13.3	12	10.0	21	21.3	17	18.3	14	12.3	-6	-2	1
4/09/2004	11	11.8	11	12.8	11	10.3	29	23.3	15	17.5	12	12.3	-18	-4	-1
5/09/2004	12	11.8	15	13.2	16	11.4	29	24.4	20	18.0	11	12.0	-17	-8	1
6/09/2004	18	12.8	20	14.3	20	12.8	42	27.3	33	20.5	16	12.7	-24	-15	2
7/09/2004	17	13.4	18	14.9	16	13.3	33	28.1	23	20.9	19	13.6	-16	-6	-2
8/09/2004	8	12.8	8	14.0	9	12.8	28	28.1	5	18.9	7	12.8	-20	3	1
9/09/2004	8	12.2	9	13.4	9	12.3		28.1	8	17.7	8	12.2	8	0	0
10/09/2004	13	12.3	15	13.6	19	13.0		28.1	16	17.5	12	12.2	13	-3	1
11/09/2004	10	12.1	11	13.4	21	13.7		28.1	13	17.1	9	11.9	10	-3	1
12/09/2004	11	12.0	12	13.3	12	13.6		28.1	31	18.3	8	11.6	11	-20	3
13/09/2004	19	12.5	26	14.2	22	14.2		28.1	27	18.9	16	11.9	19	-8	3
14/09/2004	21	13.1	25	15.0	28	15.2		28.1	30	19.7	17	12.3	21	-9	4
15/09/2004	22	13.7	22	15.5	42	17.0	132	39.7	45	21.4	19	12.7	-110	-23	3
16/09/2004	28	14.6	32	16.5	33	18.0	51	40.8	34	22.2	23	13.4	-23	-6	5
17/09/2004	21	15.0	20	16.7	34	18.9	33	40.1	41	23.3	19	13.7	-12	-20	2
18/09/2004	23	15.4	23	17.1	21	19.1	38	39.9	35	23.9	24	14.3	-15	-12	-1
19/09/2004	18	15.6	18	17.1	16	18.9	40	39.9	25	24.0	20	14.6	-22	-7	-2
20/09/2004	12	15.4	16	17.1	13	18.6	20	38.5	33	24.5	17	14.7	-8	-21	-5
21/09/2004	28	16.0	27	17.5	25	18.9	32	38.1	34	24.9	23	15.1	-4	-6	5
22/09/2004	30	16.6	35	18.3	45	20.1		38.1	38	25.5	28	15.7	30	-8	2
23/09/2004	25	17.0	29	18.8	33	20.7	10	36.3	37	26.0	23	16.0	15	-12	2
24/09/2004	16	17.0	15	18.6	18	20.5	29	35.9	64	27.6	19	16.1	-13	-48	-3
25/09/2004	20	17.1	23	18.8	21	20.6	33	35.7	154	32.6	22	16.4	-13	-134	-2
26/09/2004	43	18.1	40	19.6	41	21.3	37	35.8		32.6	32	17.0	6	43	11
27/09/2004	28	18.4	29	20.0	41	22.1	53	36.7	33	32.7	29	17.4	-25	-5	-1
28/09/2004	25	18.7	26	20.2	29	22.3	50	37.3	38	32.9	29	17.8	-25	-13	-4
29/09/2004	35	19.2	38	20.8	49	23.2	74	39.0	54	33.6	28	18.2	-39	-19	7
30/09/2004	9	18.9	9	20.4	7	22.7	13	37.8	16	33.0	10	17.9	-4	-7	-1
1/10/2004	6	18.5	5	19.9	5	22.1	9	36.6	9	32.2	5	17.5	-3	-3	1
2/10/2004	11	18.3	11	19.6	9	21.7	16	35.8	12	31.5	9	17.2	-5	-1	2
3/10/2004	12	18.1	11	19.4	14	21.5	20	35.2	17	31.1	10	17.0	-8	-5	2
4/10/2004	17	18.0	18	19.3	20	21.4	26	34.9	25	30.9	14	16.9	-9	-8	3
5/10/2004	26	18.3	22	19.4	31	21.7	30	34.7	38	31.1	16	16.9	-4	-12	10
6/10/2004	24	18.4	23	19.5	24	21.8	48	35.1	33	31.2	35	17.4	-24	-9	-11
7/10/2004	37	18.9	37	20.0	33	22.1	43	35.4	46	31.6	25	17.6	-6	-9	12
8/10/2004	36	19.4	31	20.3	30	22.3	49	35.8	42	31.9	25	17.8	-13	-6	11
9/10/2004	16	19.3	24	20.4	15	22.1	29	35.6	27	31.7	19	17.8	-13	-11	-3
10/10/2004	22	19.4	22	20.4	23	22.1	31	35.5	31	31.7	20	17.9	-9	-9	2
11/10/2004	41	19.9	41	20.9	52	22.9	79	36.8	60	32.4	36	18.3	-38	-19	5
12/10/2004	47	20.5	56	21.7	70	24.0	90	38.3	66	33.2	46	19.0	-43	-19	1
13/10/2004	54	21.3	59	22.6	73	25.1	89	39.7	70	34.1	50	19.7	-35	-16	4
14/10/2004	45	21.8	52	23.3	55	25.8	81	40.8	65	34.8	46	20.3	-36	-20	-1
15/10/2004	19	21.8	19	23.2	22	25.7		40.8	34	34.8	17	20.2	19	-15	2
16/10/2004	17	21.7	18	23.1	19	25.6		40.8	26	34.6	23	20.3	17	-9	-6
17/10/2004	12	21.5	13	22.9	13	25.3		40.8	19	34.3	14	20.1	12	-7	-2
18/10/2004	8	21.2	6	22.5	11	25.0	10	40.0	16	33.9	15	20.0	-2	-8	-7
19/10/2004	10	21.0	11	22.3	12	24.7	15	39.4	10	33.4	9	19.8	-5	0	1
20/10/2004	5	20.6	7	22.0	5	24.3	7	38.6	5	32.8	5	19.5	-2	0	0
21/10/2004	9	20.4	10	21.7	9	24.0	14	38.0	12	32.4	10	19.3	-5	-3	-1
22/10/2004	15	20.3	17	21.6	21	24.0	42	38.0	22	32.2	16	19.3	-27	-7	-1
23/10/2004	14	20.2	15	21.5	22	23.9	27	37.8	19	31.9	14	19.2	-13	-5	0
24/10/2004	12	20.0	11	21.3	12	23.7	18	37.3	12	31.6	19	19.2	-6	0	-7
25/10/2004	13	19.9	15	21.2	13	23.5	19	36.9	26	31.5	16	19.1	-6	-13	-3
26/10/2004	20	19.9	23	21.2	18	23.4	37	36.9	51	31.8	22	19.2	-17	-31	-2
27/10/2004	41	20.3	43	21.6	57	24.0	75	37.7	86	32.8	32	19.4	-34	-45	9
28/10/2004	25	20.4	28	21.7	23	24.0	32	37.6	43	33.0	30	19.6	-7	-18	-5
29/10/2004	16	20.3	17	21.6	16	23.9	48	37.8	48	33.2	22	19.6	-32	-32	-6
30/10/2004	14	20.2	14	21.5	13	23.7	27	37.6	22	33.0	16	19.6	-13	-8	-2

Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
31/10/2004	21	21.0	20	20.0	15	15.0	30	30.0	23	23.0	16	16.0	-9	-2	5
1/11/2004	27	24.0	23	21.5	23	19.0	63	46.5	34	28.5	19	17.5	-36	-7	8
2/11/2004	25	24.3	25	22.7	30	22.7	116	69.7	31	29.3	21	18.7	-91	-6	4
3/11/2004	22	23.8	21	22.3	25	23.3	78	71.8	34	30.5	15	17.8	-56	-12	7
4/11/2004	27	22.2	28	23.4	26	23.8	62	69.8	35	31.4	28	19.8	-35	-8	-1
5/11/2004	11	21.0	11	21.3	8	21.2	6	59.2	10	27.8	9	18.0	5	1	2
6/11/2004	14	21.0	17	20.7	14	20.1	1	50.9	23	27.1	10	16.9	13	-9	4
7/11/2004	14	19.2	15	20.0	14	19.4	22	47.3	24	26.8	15	16.6	-8	-10	-3
8/11/2004	12	18.3	12	19.1	14	17.9	18	44.0	18	25.8	16	16.6	-6	-6	-6
9/11/2004	10	17.8	8	18.0	10	17.6	18	41.4	12	24.4	10	15.9	-8	1	3
10/11/2004	13	17.6	14	17.6	15	17.4	22	39.6	22	24.2	17	16.0	-7	-7	-2
11/11/2004	15	17.6	18	17.7	15	17.5	28	38.7	21	23.9	15	15.9	-10	-3	3
12/11/2004	18	18.0	19	17.8	19	18.2	59	40.2	32	24.5	15	15.8	-40	-9	8
13/11/2004	23	18.0	25	18.3	27	18.9	91	43.9	67	27.6	21	16.2	#REF!	#REF!	#REF!
14/11/2004	19	18.1	22	18.5	29	19.8	39	43.5	30	27.7	15	16.1	-59	-11	4
15/11/2004	25	18.5	27	19.1	32	19.9	57	44.4	42	28.6	23	16.6	-37	-17	2
16/11/2004	22	18.7	22	19.2	23	20.8	40	44.1	32	28.8	23	16.9	16	-10	-1
17/11/2004	31	19.4	34	20.1	36	22.4	50	44.4	52	30.1	30	17.7	30	-21	1
18/11/2004	52	21.1	45	21.4	50	22.2	45	44.5	50	31.2	35	18.6	30	2	17
19/11/2004	38	22.0	23	21.5	19	21.7	23	43.4	29	31.1	21	18.7	15	9	17
20/11/2004	13	21.5	12	21.0	12	21.3	18	42.2	15	30.3	13	18.4	-5	-2	0
21/11/2004	11	21.0	10	20.5	13	21.3	23	41.3	17	29.7	11	18.1	-12	-6	0
22/11/2004	23	21.1	20	20.5	24	21.4	31	40.9	29	29.7	23	18.3	-8	-6	0
23/11/2004	16	20.9	18	20.4	16	21.2	27	40.3	33	29.8	15	18.2	-11	-17	1
24/11/2004	15	20.7	13	20.1	12	20.8	30	39.9	26	29.6	16	18.1	-15	-11	-1
25/11/2004	17	20.5	18	20.0	17	20.7	42	40.0	35	29.8	20	18.2	-25	-18	-3
26/11/2004	22	20.6	22	20.1	22	20.7	32	39.7	40	30.2	21	18.3	-10	-18	1
27/11/2004	26	20.8	26	20.3	28	21.0	37	39.6	47	30.8	25	18.5	-11	-21	1
28/11/2004	44	21.6	42	21.0	30	21.3	46	39.8	36	31.0	28	18.8	-2	8	16
29/11/2004	40	22.2	34	21.5	37	21.8	80	41.1	50	31.6	36	19.4	-40	-10	4
30/11/2004	67	23.6	59	22.7	95	24.2	165	45.1	95	33.7	45	20.2	-98	-28	22
1/12/2004	54	24.6	55	23.7	77	25.8	127	47.7	62	34.6	48	21.1	-73	-8	6
2/12/2004	20	24.5	18	23.5	21	25.7	23	46.9	23	34.2	21	21.1	-3	-3	-1
3/12/2004	14	24.1	16	23.3	13	25.3	18	46.1	30	34.1	18	21.0	-4	-16	-4
4/12/2004	12	23.8	11	22.9	12	24.9	18	45.3	19	33.7	13	20.8	-6	-7	-1
5/12/2004	22	23.8	18	22.8	17	24.7	35	45.0	32	33.6	19	20.7	-13	-10	3
6/12/2004	17	23.6	18	22.7	19	24.6	26	44.5	40	33.8	20	20.7	-9	-23	-3
7/12/2004	15	23.3	13	22.4	18	24.4	26	44.0	42	34.0	13	20.5	-11	-27	2
8/12/2004	18	23.2	18	22.3	18	24.2	20	43.4	33	34.0	19	20.5	-2	-15	-1
9/12/2004	15	23.0	15	22.1	14	24.0	21	42.8	39	34.1	15	20.3	-6	-24	0
10/12/2004	6	22.6	6	21.7	7	23.6	8	42.0	7	33.4	6	20.0	-2	-1	0
11/12/2004	15	22.4	15	21.6	21	23.5	23	41.5	114	35.4	11	19.8	-8	-99	4
12/12/2004	17	22.3	15	21.4	17	23.3	22	41.1	28	35.2	13	19.6	-5	-11	4
13/12/2004	18	22.2	18	21.3	18	23.2	25	40.7	24	34.9	16	19.5	-7	-6	2
14/12/2004	18	22.1	16	21.2	21	23.2	81	41.6	40	35.0	15	19.4	-63	-22	3
15/12/2004	25	22.2	24	21.3	22	23.2	1581??	41.6	43	35.2	28	19.6	#VALUE!	-18	-3
16/12/2004	25	22.2	27	21.4	26	23.2	74	42.3	41	35.3	23	19.7	-49	-16	2
17/12/2004	25	22.3	24	21.5	23	23.2	51	42.5	56	35.8	35	20.0	-26	-31	-10
18/12/2004	21	22.2	20	21.4	21	23.2	31	42.3	39	35.8	18	20.0	-10	-18	3
19/12/2004	32	22.4	27	21.5	31	23.3	61	42.6	40	35.9	21	20.0	-29	-8	11
20/12/2004	32	22.6	32	21.7	26	23.4	43	42.6	47	36.1	32	20.2	-11	-15	0
21/12/2004	33	22.8	34	22.0	31	23.5	62	43.0	40	36.2	27	20.3	-29	-7	6
22/12/2004	41	23.2	36	22.2	38	23.8	41	43.0	44	36.4	32	20.6	0	-3	9
23/12/2004	33	23.4	32	22.4	28	23.9	36	42.8	27	36.2	29	20.7	-3	6	4
24/12/2004	18	23.3	17	22.3	15	23.7	20	42.4	18	35.9	15	20.6	-2	0	3
25/12/2004	21	23.2	18	22.3	16	23.6	22	42.1	18	35.5	19	20.6	-1	3	2
26/12/2004	19	23.1	18	22.2	17	23.5	23	41.7	19	35.2	18	20.5	-4	0	1
27/12/2004	15	23.0	14	22.0	16	23.3	23	41.4	25	35.1	15	20.4	-8	-10	0
28/12/2004	18	22.9	16	21.9	16	23.2	20	41.0	38	35.1	18	20.4	-2	-20	0
29/12/2004	21	22.9	20	21.9	15	23.1	23	40.7	37	35.2	16	20.3	-2	-16	5
30/12/2004	17	22.8	21	21.9	14	22.9	32	40.6	31	35.1	21	20.3	-15	-14	-4
31/12/2004	23	22.8	21	21.9	22	22.9	29	40.4	32	35.0	23	20.4	-6	-9	0
1/01/2005	30	22.9	31	22.0	36	23.1	37	40.3	44	35.2	25	20.5	-7	-14	5
2/01/2005	34	23.1	31	22.2	38	23.3	39	40.3	38	35.2	29	20.6	-5	-4	5
3/01/2005	32	23.2	30	22.3	30	23.4	39	40.3	44	35.4	34	20.8	-7	-12	-2
4/01/2005	23	23.2	20	22.2	19	23.4	25	40.0	27	35.2	20	20.8	-2	-4	3
5/01/2005	30	23.3	28	22.3	31	23.5	79	40.6	49	35.4	26	20.9	-49	-19	4

Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
6/01/2005	22	22.0	20	20.0	25	25.0	43	43.0	35	35.0	18	18.0	-21	-13	4
7/01/2005	29	25.5	28	24.0	25	25.0	32	37.5	41	38.0	31	24.5	-3	-12	-2
8/01/2005	18	23.0	18	22.0	17	22.3	36	37.0	30	35.3	21	23.3	-18	-12	-3
9/01/2005	18	21.8	13	19.8	20	21.8	35	36.5	30	34.0	18	22.0	-17	-12	0
10/01/2005	20	21.4	19	19.6	23	22.0	35	36.2	44	36.0	27	23.0	-15	-24	-7
11/01/2005	21	21.3	20	19.7	20	21.7	30	35.2	32	35.3	18	22.2	-9	-11	3
12/01/2005	38	23.7	36	22.0	38	24.0	58	38.4	64	39.4	19	21.7	-20	-26	19
13/01/2005	57	27.9	30	23.0	42	26.3	58	40.9	61	42.1	48	25.0	-1	-4	9
14/01/2005	45	29.8	42	25.1	38	27.6	50	41.9	74	45.7	74	30.4	-5	-29	-29
15/01/2005	27	29.5	39	26.5	26	27.4	38	41.5	35	44.6		30.4	-11	-8	27
16/01/2005	24	29.0	36	27.4	22	26.9	43	41.6	40	44.2		30.4	-19	-16	24
17/01/2005	14	27.8	15	26.3	14	25.8	32	40.8	15	41.8	12	28.6	-18	-1	2
18/01/2005	18	27.0	21	25.9		25.8	33	40.2	28	40.7		28.6	-15	-10	18
19/01/2005	17	26.3	20	25.5	19	25.3	42	40.4	23	39.4	18	27.6	-25	-6	-1
20/01/2005	34	26.8	34	26.1	31	25.7	43	40.5	35	39.1	26	27.5	-9	-1	8
21/01/2005	39	27.6	41	27.0	36	26.4	61	41.8	50	39.8	39	28.4	-22	-11	0
22/01/2005	32	27.8	33	27.4	30	26.6	35	41.4	38	39.7	37	29.0	-3	-6	-5
23/01/2005	15	27.1	14	26.6	15	25.9	20	40.2	25	38.9		29.0	-5	-10	15
24/01/2005	12	26.3	13	25.9	12	25.2	10	38.6	15	37.6		29.0	2	-3	12
25/01/2005	14	25.7	16	25.4	14	24.6	11	37.3	21	36.8		29.0	3	-7	14
26/01/2005	13	25.1	15	24.9	17	24.2	14	36.1	25	36.2		29.0	-1	-12	13
27/01/2005	11	24.5	11	24.3	12	23.6	6	34.8	27	35.8	18	28.3	5	-16	-7
28/01/2005	12	23.9	12	23.7	12	23.1		34.8	22	35.2		28.3	12	-10	12
29/01/2005	13	23.5	13	23.3	11	22.6		34.8	21	34.6		28.3	13	-8	13
30/01/2005	20	23.3	19	23.1	18	22.4		34.8	28	34.4		28.3	20	-8	20
31/01/2005	19	23.2	20	23.0	18	22.2		34.8	35	34.4		28.3	19	-16	19
1/02/2005	18	23.0	18	22.8	16	22.0		34.8	35	34.4	17	27.6	18	-17	1
2/02/2005	31	23.3	36	23.3	33	22.4		34.8	50	35.0	34	27.9	31	-19	-3
3/02/2005	39	23.8	41	23.9	40	23.0		34.8	48	35.4		27.9	39	-9	39
4/02/2005	40	24.3	38	24.4	37	23.5		34.8	45	35.7	42	28.7	40	-5	-2
5/02/2005	18	24.1	26	24.4	21	23.4		34.8	25	35.4		28.7	18	-7	18
6/02/2005	27	24.2	27	24.5	24	23.4		34.8	32	35.3		28.7	27	-5	27
7/02/2005	37	24.6	34	24.8	37	23.8		34.8	48	35.7	31	28.8	37	-11	6
8/02/2005	58	25.6	58	25.8	54	24.8		34.8	86	37.1	42	29.5	58	-28	16
9/02/2005	80	27.1	101	27.9	75	26.2		34.8	88	38.6	67	31.3	80	-8	13
10/02/2005	13	26.8	15	27.6	6	25.7		34.8	17	38.0	12	30.4	13	-4	1
11/02/2005	16	26.5	18	27.3	16	25.4		34.8	21	37.5	15	29.7	16	-5	1
12/02/2005	23	26.4	24	27.2	22	25.3		34.8	24	37.2	25	29.5	23	-1	-2
13/02/2005	21	26.2	21	27.1	24	25.3		34.8	26	36.9		29.5	21	-5	21
14/02/2005	19	26.1	23	27.0	20	25.1		34.8	33	36.8	20	29.2	19	-14	-1
15/02/2005	47	26.6	43	27.3	38	25.5		34.8	48	37.1	29	29.2	47	-1	18
16/02/2005	31	26.7	33	27.5	31	25.6		34.8	40	37.1	33	29.3	31	-9	-2
17/02/2005	21	26.5	23	27.4	26	25.6		34.8	45	37.3	36	29.5	21	-24	-15
18/02/2005	20	26.4	21	27.2	19	25.4		34.8	28	37.1	16	29.1	20	-8	4
19/02/2005	25	26.4	16	27.0	38	25.7		34.8	23	36.8		29.1	25	2	25
20/02/2005	14	26.1	10	26.6	11	25.4		34.8	14	36.3		29.1	14	0	14
21/02/2005	21	26.0		26.6	26	25.4		34.8	31	36.2	26	29.0	21	-10	-5
22/02/2005	19	25.8	11	26.3	22	25.3		34.8	41	36.3		29.0	19	-22	19
23/02/2005	20	25.7	19	26.1	22	25.3		34.8	38	36.3	29	29.0	20	-18	-9
24/02/2005	32	25.8	38	26.4	29	25.3		34.8	53	36.7	37	29.2	32	-21	-5
25/02/2005	37	26.1	40	26.6	32	25.5		34.8	48	36.9		29.2	37	-11	37
26/02/2005	29	26.1	41	26.9	26	25.5		34.8	35	36.8		29.2	29	-6	29
27/02/2005	21	26.0	24	26.9	21	25.4		34.8	26	36.6	20	28.9	21	-5	1
28/02/2005	17	25.9	21	26.8	18	25.3		34.8	23	36.4	31	29.0	17	-6	-14
1/03/2005	23	25.8	32	26.9	23	25.2		34.8	32	36.3	32	29.1	23	-9	-9
2/03/2005	30	25.9	31	26.9	26	25.2		34.8	45	36.5	36	29.3	30	-15	-6
3/03/2005	21	25.8	28	26.9	27	25.3		34.8	26	36.3		29.3	21	-5	21
4/03/2005	30	25.9	30	27.0	29	25.3		34.8	35	36.3	68	30.3	30	-5	-38
5/03/2005	15	25.7	17	26.8	16	25.2		34.8	21	36.0		30.3	15	-6	15
6/03/2005	13	25.5	16	26.6	18	25.1		34.8	21	35.8	23	30.1	13	-8	-10
7/03/2005	27	25.5	29	26.7	28	25.1		34.8	32	35.7		30.1	27	-5	27
8/03/2005	21	25.4	25	26.7	20	25.0		34.8	34	35.7	21	29.9	21	-13	0
9/03/2005	29	25.5	30	26.7	27	25.0	31	34.6	35	35.7		29.9	-2	-6	29
10/03/2005	25	25.5	26	26.7	20	25.0	22	34.1	43	35.8	27	29.8	3	-18	-2
11/03/2005	16	25.3	18	26.6	16	24.8	21	33.6	30	35.7	17	29.5	-5	-14	-1
12/03/2005	13	25.1	15	26.4	12	24.6	17	32.9	16	35.4	14	29.1	-4	-3	-1
13/03/2005	15	25.0	24	26.3	14	24.5	18	32.4	21	35.2	18	28.9	-3	-6	-3

Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
14/03/2005	21	21.0	25	25.0	20	20.0	23	23.0	31	31.0	20	20.0	-2	-10	1
15/03/2005	37	29.0	44	34.5	39	29.5	53	38.0	81	56.0	35	27.5	-16	-44	2
16/03/2005	35	31.0	37	35.3	33	30.7	43	39.7	46	52.7	46	33.7	-8	-11	-11
17/03/2005	5	24.5	6	28.0	5	24.3	8	31.8	5	40.8	5	26.5	-3	0	0
18/03/2005	10	21.6	11	24.6	9	21.2	14	28.2	9	34.4	11	23.4	-4	1	-1
19/03/2005	13	20.2	12	22.5	9	19.2	18	26.5	19	31.8	11	21.3	-5	-6	2
20/03/2005	9	18.6	11	20.9	10	17.9	17	25.1	19	30.0	11	19.9	-8	-10	-2
21/03/2005	13	17.9	14	20.0	12	17.1	23	24.9	37	30.9	13	19.0	-10	-24	0
22/03/2005	7	16.7	9	18.8	8	16.1	22	24.6	23	30.0	9	17.9	-15	-16	-2
23/03/2005	9	15.9	10	17.9	10	15.5	14	23.5	22	29.2	9	17.0	-5	-13	0
24/03/2005	14	15.7	17	17.8	17	15.6	19	23.1	24	28.7	17	17.0	-5	-10	-3
25/03/2005	17	15.8	22	18.2	17	15.8	23	23.1	28	28.7	18	17.1	-6	-11	-1
26/03/2005	10	15.4	16	18.0	12	15.5	16	22.5	19	27.9	12	16.7	-6	-9	-2
27/03/2005	21	15.8	19	18.1	16	15.5	27	22.9	18	27.2	15	16.6	-6	3	6
28/03/2005	15	15.7	22	18.3	15	15.5	21	22.7	33	27.6	17	16.6	-6	-18	-2
29/03/2005	13	15.6	15	18.1	13	15.3	19	22.5	21	27.2	15	16.5	-6	-8	-2
30/03/2005	9	15.2	10	17.6	9	14.9	18	22.2	17	26.6	13	16.3	-9	-8	-4
31/03/2005	15	15.2	15	17.5	11	14.7	20	22.1	22	26.3	18	16.4	-5	-7	-3
1/04/2005	20	15.4	24	17.8	21	15.1	42	23.2	29	26.5	26	16.9	-22	-9	-6
2/04/2005	26	16.0	27	18.3	29	15.8	41	24.1	34	26.9	23	17.2	-15	-8	3
3/04/2005	47	17.4		18.3	41	17.0	44	25.0	41	27.5	33	18.0	3	6	14
4/04/2005	13	17.2		18.3	15	16.9	19	24.7	11	26.8	15	17.8	-6	2	-2
5/04/2005	20	17.3		18.3	20	17.0	22	24.6	23	26.6	23	18.0	-2	-3	-3
6/04/2005	18	17.4	19	18.3	21	17.2	25	24.6	21	26.4	20	18.1	-7	-3	-2
7/04/2005	19	17.4	19	18.4	21	17.3	24	24.6	21	26.2	22	18.3	-5	-2	-3
8/04/2005	12	17.2	13	18.1	12	17.1	17	24.3	21	26.0	17	18.2	-5	-9	-5
9/04/2005	11	17.0	21	18.3	10	16.9	14	23.9	14	25.5	13	18.0	-3	-3	-2
10/04/2005	21	17.1	20	18.3	18	16.9	26	24.0	30	25.7	20	18.1	-5	-9	1
11/04/2005	30	17.6	34	18.9	30	17.3	39	24.5	48	26.4	34	18.7	-9	-18	-4
12/04/2005	11	17.4	14	18.7	14	17.2	22	24.4	20	26.2	15	18.5	-11	-9	-4
13/04/2005	17	17.4	18	18.7	17	17.2	30	24.6	24	26.2	17	18.5	-13	-7	0
14/04/2005	21	17.5	24	18.9	20	17.3	32	24.8	59	27.2	23	18.6	-11	-38	-2
15/04/2005	17	17.5	14	18.7	16	17.3	30	25.0		27.2	27	18.9	-13	17	-10
16/04/2005		17.5	19	18.7		17.3		25.0		27.2		18.9	0	0	0
17/04/2005	22	17.6		18.7		17.3		25.0		27.2		18.9	22	22	22
18/04/2005	48	18.5	49	19.7	62	18.6	64	26.1		27.2	34	19.3	-16	48	14
19/04/2005	39	19.0	37	20.2	40	19.2	111	28.6		27.2	33	19.7	-72	39	6
20/04/2005	18	19.0	20	20.2	21	19.3	16	28.2	44	27.7	28	19.9	2	-26	-10
21/04/2005	18	19.0	19	20.2	21	19.3	27	28.2	55	28.5	23	20.0	-9	-37	-5
22/04/2005	18	18.9	18	20.1	13	19.1	16	27.9	57	29.3	19	20.0	2	-39	-1
23/04/2005	14	18.8	12	19.9	11	18.9	13	27.5	33	29.4	14	19.8	1	-19	0
24/04/2005	20	18.9	22	19.9	15	18.8	21	27.3	37	29.6	20	19.9	-1	-17	0
25/04/2005	42	19.4	42	20.5	29	19.1	42	27.7	62	30.5	30	20.1	0	-20	12
26/04/2005	30	19.7	35	20.9	25	19.2	27	27.7	70	31.5	36	20.5	3	-40	-6
27/04/2005	20	19.7	23	20.9	18	19.2	19	27.5	76	32.6	24	20.6	1	-56	-4
28/04/2005	36	20.0	41	21.4	31	19.5	54	28.1	119	34.7	29	20.8	-18	-83	7
29/04/2005	61	20.9	59	22.3	57	20.3	44	28.4	169	37.9	42	21.2	17	-108	19
30/04/2005	29	21.1	35	22.6	30	20.5	33	28.5	51	38.2	24	21.3	-4	-22	5
1/05/2005	27	21.2	28	22.7	30	20.7	27	28.5	56	38.6	26	21.4	0	-29	1
2/05/2005	14	21.1	19	22.6	13	20.5	15	28.2	32	38.5	17	21.3	-1	-18	-3
3/05/2005	17	21.0	19	22.5	14	20.4	25	28.1	64	39.0	21	21.3	-8	-47	-4
4/05/2005	14	20.8	15	22.4	11	20.2	13	27.8	30	38.8	16	21.2	1	-16	-2
5/05/2005	15	20.7	17	22.3	8	20.0	12	27.5	29	38.6	19	21.1	3	-14	-4
6/05/2005	35	21.0	20	22.2	16	19.9	19	27.4	34	38.5	22	21.2	16	1	13
7/05/2005	10	20.8	16	22.1	7	19.7	10	27.0	15	38.1	11	21.0	0	-5	-1
8/05/2005	23	20.8	19	22.0	20	19.7		27.0	20	37.7	19	20.9	23	3	4
9/05/2005	21	20.8	23	22.1	16	19.6	20	26.9	31	37.6	17	20.9	1	-10	4
10/05/2005	31	21.0	32	22.2	20	19.6	20	26.8	38	37.6	25	20.9	11	-7	6
11/05/2005	30	21.2	32	22.4	26	19.7	31	26.9	41	37.6	27	21.0	-1	-11	3
12/05/2005	12	21.0	12	22.2	9	19.5	11	26.6	13	37.2	13	20.9	1	-1	-1
13/05/2005	17	21.0	19	22.2	12	19.4	17	26.4	20	36.9	15	20.8	0	-3	2
14/05/2005	14	20.8	18	22.1	10	19.3		26.4	21	36.6	13	20.7	14	-7	1
15/05/2005	18	20.8	19	22.1	13	19.1	18	26.3	31	36.5	16	20.6	0	-13	2
16/05/2005	10	20.6	12	21.9	7	19.0	8	26.0	25	36.3	12	20.5	2	-15	-2
17/05/2005	7	20.4	8	21.7	5	18.7	12	25.7	12	35.9	7	20.2	-5	-5	0

Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
18/05/2005	11	11.0	14	14.0	6	6.0	14	14.0	16	16.0	10	10.0	-3	-5	1
19/05/2005	12	11.5	14	14.0	6	6.0	23	18.5	24	20.0	10	10.0	-11	-12	2
20/05/2005	12	11.7	14	14.0	9	7.0	8	15.0	33	24.3	10	10.0	4	-21	2
21/05/2005	31	16.5	40	20.5	21	10.5		15.0	37	27.5	16	11.5	31	-6	15
22/05/2005	24	18.0	28	22.0	22	12.8	32	19.3	43	30.6	16	12.4	-8	-19	8
23/05/2005	29	19.8	32	23.7	24	14.7	28	21.0	67	36.7	40	17.0	1	-38	-11
24/05/2005	42	23.0	44	26.6	31	17.0	30	22.5	55	39.3	29	18.7	12	-13	13
25/05/2005	33	24.3	31	27.1	30	18.6	21	22.3	63	42.3	21	19.0	12	-30	12
26/05/2005	22	24.0	24	26.8	16	18.3	15	21.4	50	43.1	13	18.3	7	-28	9
27/05/2005	32	24.8	31	27.2	33	19.8	26	21.9	60	44.8	20	18.5	6	-28	12
28/05/2005	24	24.7	28	27.3	25	20.3	21	21.8	37	44.1	17	18.4	3	-13	7
29/05/2005	15	23.9	19	26.6	12	19.6	15	21.2	40	43.8	12	17.8	0	-25	3
30/05/2005	32	24.5	38	27.5	29	20.3		21.2	75	46.2	24	18.3	32	-43	8
31/05/2005	29	24.9	41	28.4	24	20.6	28	21.8	51	46.5	22	18.6	1	-22	7
1/06/2005	19	24.5	31	28.6	16	20.3	20	21.6	36	45.8	18	18.5	-1	-17	1
2/06/2005	24	24.4	28	28.6	19	20.2	26	21.9	41	45.5	21	18.7	-2	-17	3
3/06/2005	28	24.6	37	29.1	17	20.0	25	22.1	39	45.1	20	18.8	3	-11	8
4/06/2005	34	25.2	27	28.9	22	20.1	24	22.3	44	45.1	16	18.6	10	-10	18
5/06/2005	32	25.5	33	29.2	28	20.5	37	23.1	53	45.5	34	19.4	-5	-21	-2
6/06/2005	23	25.4	25	29.0	17	20.4		23.1	54	45.9	27	19.8	23	-31	-4
7/06/2005	29	25.6	37	29.3	25	20.6	25	23.2	18	44.6	25	20.0	4	11	4
8/06/2005	30	25.8	49	30.2	20	20.5	31	23.6	44	44.5	30	20.5	-1	-14	0
9/06/2005	45	26.6	51	31.1	38	21.3	33	24.1	52	44.9	28	20.8	12	-7	17
10/06/2005	32	26.8	36	31.3	31	21.7	27	24.2	32	44.3	33	21.3	5	0	-1
11/06/2005	26	26.8	27	31.2	24	21.8	22	24.1	26	43.6	21	21.3	4	0	5
12/06/2005	11	26.2	14	30.5	10	21.3	9	23.5	10	42.3	11	20.9	2	1	0
13/06/2005	17	25.9	21	30.1	16	21.1	17	23.2	20	41.5	20	20.9	0	-3	-3
14/06/2005	13	25.4	14	29.6	10	20.8	10	22.7	11	40.4	9	20.5	3	2	4
15/06/2005	42	26.0	37	29.8	30	21.1	34	23.1	37	40.3	25	20.6	8	5	17
16/06/2005	34	26.2	23	29.6	25	21.2	39	23.7	46	40.5	17	20.5	-5	-12	17
17/06/2005	34	26.5	28	29.5	26	21.4	27	23.8	54	40.9	19	20.5	7	-20	15
18/06/2005	20	26.3	18	29.2	18	21.3	16	23.6	16	40.1	12	20.2	4	4	8
19/06/2005	11	25.8	17	28.8	12	21.0	8	23.0	8	39.2	6	19.8	3	3	5
20/06/2005	41	26.3	24	28.7	27	21.1	24	23.1	33	39.0	15	19.6	17	7	26
21/06/2005	25	26.2	36	28.9	21	21.1	22	23.0	34	38.8	17	19.5	3	7	8
22/06/2005	16	25.9	19	28.6	11	20.9	12	22.7	18	38.3	10	19.3	4	2	6
23/06/2005	13	25.6	16	28.3	10	20.6	11	22.4	14	37.6	9	19.0	2	-5	4
24/06/2005	14	25.3	16	27.9	14	20.4	15	22.1	18	37.1	14	18.9	-1	1	0
25/06/2005	10	24.9	11	27.5	9	20.1	10	21.8	13	36.5	11	18.7	0	-6	-1
26/06/2005	10	24.5	13	27.2	11	19.9	10	21.5	16	36.0	13	18.5	0	-5	-3
27/06/2005	10	24.2	9	26.7	15	19.8	14	21.3	15	35.4	13	18.4	-4	-3	-3
28/06/2005	11	23.9	10	26.3	14	19.6	14	21.1	13	34.9	13	18.3	-3	2	-2
29/06/2005	7	23.5	8	25.9	7	19.3	8	20.8	9	34.3	8	18.0	-1	-2	-1
30/06/2005	5	23.0	6	25.4	4	19.0	6	20.4	9	33.7	7	17.8	-1	5	-2
1/07/2005	13	22.8	18	25.3	11	18.8	11	20.2	16	33.3	10	17.6	2	0	3
2/07/2005	11	22.6	8	24.9	8	18.6	9	19.9	13	32.9	7	17.4	2	-6	4
3/07/2005	14	22.4	19	24.8	11	18.4	15	19.8	17	32.6	10	17.2	-1	-9	4
4/07/2005	18	22.3	21	24.7	18	18.4	19	19.8	23	32.4	13	17.1	-1	-10	5
5/07/2005	16	22.2	22	24.6	12	18.3	13	19.7	28	32.3	12	17.0	3	-22	4
6/07/2005	21	22.1	25	24.6	19	18.3	22	19.7	38	32.4	15	17.0	-1	-17	6
7/07/2005	22	22.1	30	24.7	20	18.3	24	19.8	38	32.5	21	17.1	-2	-13	1
8/07/2005	18	22.1	18	24.6	23	18.4	23	19.9	35	32.5	18	17.1	-5	18	0
9/07/2005	17	22.0	11	24.4	13	18.3	25	20.0	19	32.3	9	16.9	-8	-6	8
10/07/2005	17	21.9	13	24.1	13	18.2	13	19.8	23	32.1	11	16.8	4	-10	6
11/07/2005	17	21.8	19	24.1	16	18.2	17	19.8	27	32.0	18	16.8	0	-30	-1
12/07/2005	26	21.9	26	24.1	20	18.2	22	19.8	47	32.3	22	16.9	4	13	4
13/07/2005	11	21.7	10	23.8	10	18.1	9	19.6	13	31.9	7	16.8	2	-16	4
14/07/2005	16	21.6	14	23.7	12	17.9	12	19.5	27	31.9	10	16.6	4	-8	6
15/07/2005	12	21.4	11	23.5	8	17.8	8	19.3	24	31.7	6	16.5	4	-15	6
16/07/2005	17	21.3	17	23.4	19	17.8	15	19.2	27	31.7	11	16.4	2	17	6
17/07/2005	25	21.4	24	23.4	23	17.9	20	19.2	42	31.8	17	16.4	5	-21	8
18/07/2005	26	21.5	31	23.5	17	17.9	21	19.2	46	32.0	20	16.4	5	-16	6
19/07/2005	24	21.5	30	23.6	18	17.9	20	19.3	42	32.2	20	16.5	4	-6	4
20/07/2005	19	21.5	21	23.5	14	17.8	14	19.2	30	32.2	18	16.5	5	19	1

Date	Site 1 - PM10 24hr AVE	Site 1 - PM10 Rolling Ave	Site 2 - PM10 24hr AVE	Site 2 - PM10 Rolling Ave	Site 3 - PM10 24hr AVE	Site 3 - PM10 Rolling Ave	Site 4 - PM10 24hr AVE	Site 4 - PM10 Rolling Ave	Site 6 - PM10 24hr AVE	Site 6 - PM10 Rolling Ave	Site 7 - PM10 24hr AVE	Site 7 - PM10 Rolling Ave	Site 1 - Site 4	Site 1 - Site 6	Site 1 - Site 7
21/07/2005	16	16.0	17	17.0	13	13.0	13	13.0	22	22.0	13	13.0	3	-33	3
22/07/2005	26	21.0	26	21.5	20	16.5	18	15.5	49	35.5	14	13.5	8	-19	12
23/07/2005	27	23.0	24	22.3	21	18.0	19	16.7	45	38.7	14	13.7	8	-8	13
24/07/2005	27	24.0	21	22.0	18	18.0	22	18.0	35	37.8	15	14.0	5	-7	12
25/07/2005	61	31.4	29	23.4	36	21.6	40	22.4	60	42.2	16	14.4	21	19	45
26/07/2005	42	33.2	25	23.7	26	22.3		22.4	42	42.2	16	14.7	42	-3	26
27/07/2005	22	31.6	26	24.0	16	21.4	20	22.0	45	42.6	15	14.7	2	-14	7
28/07/2005	36	32.1	28	24.5	19	21.1	16	21.1	36	41.8	16	14.9	20	3	20
29/07/2005	31	32.0	32	25.3	21	21.1	18	20.8	33	40.8	16	15.0	13	-2	15
30/07/2005	24	31.2	25	25.3	19	20.9	17	20.3	33	40.0	14	14.9	7	-22	10
31/07/2005	29	31.0	33	26.0	25	21.3	24	20.7	46	40.5	21	15.5	5	-16	8
1/08/2005	28	30.8	30	26.3	25	21.6	27	21.3	45	40.9	25	16.3	1	-22	3
2/08/2005	33	30.9	40	27.4	30	22.2	32	22.2	50	41.6	27	17.1	1	2	6
3/08/2005	48	32.1	42	28.4	32	22.9	36	23.2	31	40.9	27	17.8	12	37	21
4/08/2005	8	30.5	8	27.1	5	21.7	7	22.1	11	38.9	5	16.9	1	-13	3
5/08/2005	11	29.3	14	26.3	10	21.0	9	21.2	21	37.8	9	16.4	2	-24	2
6/08/2005	21	28.8	21	25.9	16	20.7	14	20.8	35	37.6	10	16.1	7	-9	11
7/08/2005	19	28.3	25	25.9	21	20.7	14	20.4	30	37.2	9	15.7	5	-37	10
8/08/2005	24	28.1	28	26.0	16	20.5	17	20.2	56	38.2	14	15.6	7	-33	10
9/08/2005	26	28.0	30	26.2	23	20.6	21	20.2	57	39.1	13	15.5	5	-41	13
10/08/2005	33	28.2	46	27.1	36	21.3	14	19.9	67	40.4	16	15.5	19	-18	17
11/08/2005	30	28.3	29	27.2	30	21.7	21	20.0	51	40.9	16	15.5	9	-30	14
12/08/2005	22	28.0	19	26.9	14	21.4	17	19.8	60	41.7	12	15.3	5	-11	10
13/08/2005	23	27.8	24	26.8	23	21.5	28	20.2	33	41.4	17	15.4	-5	-23	6
14/08/2005	27	27.8	29	26.8	26	21.6	25	20.4	46	41.6	17	15.5	2	-101	10
15/08/2005	47	28.5	52	27.8	45	22.5	29	20.7	128	44.9	21	15.7	18	-4	26
16/08/2005	22	28.3	25	27.7	23	22.6	21	20.7	51	45.1	20	15.9	1	-30	2
17/08/2005	23	28.1	27	27.7	27	22.7	24	20.9	52	45.4	25	16.2	-1	-75	-2
18/08/2005	39	28.4	50	28.4	36	23.2	38	21.5	98	47.2	27	16.6	1	-42	12
19/08/2005	50	29.2	56	29.4	33	23.5	48	22.4	81	48.3	29	17.0	2	29	21
20/08/2005	11	28.6	14	28.9	11	23.1	9	21.9	21	47.4	8	16.7	2	-18	3
21/08/2005	16	28.2	16	28.5	19	23.0	11	21.6	29	46.8	9	16.4	5	-26	7
22/08/2005	24	28.1	25	28.4	20	22.9	32	21.9	42	46.7	14	16.4	-8	-33	10
23/08/2005	21	27.9	24	28.2	21	22.8	20	21.8	57	47.0	20	16.5	1	-33	1
24/08/2005	24	27.7	31	28.3	23	22.8	20	21.8	54	47.2	21	16.6	4	-27	3
25/08/2005	23	27.6	29	28.3	19	22.7	20	21.7	51	47.3	22	16.8	3	-63	1
26/08/2005	28	27.6	29	28.4	29	22.9	26	21.9	86	48.4	29	17.1	2	-90	-1
27/08/2005	16	27.3	17	28.1	18	22.8	17	21.7	118	50.2	24	17.3	-1	-72	-8
28/08/2005	22	27.2	29	28.1	20	22.7	23	21.8	88	51.2	27	17.5	-1	-49	-5
29/08/2005	35	27.4	40	28.4	31	22.9	28	21.9	71	51.7	25	17.7	7	-66	10
30/08/2005	45	27.8	58	29.1	30	23.1	29	22.1	101	52.9	31	18.0	16	-72	14
31/08/2005	67	28.7	92	30.6	61	24.0	40	22.5	117	54.4	38	18.5	27	67	29
	Site 1		Site 2		Site 3		Site 4		Site 6		Site 7				
Average	29	28	31	27	24	22	23	21	54	43	19	16			
Min	8	16	8	17	5	13	7	13	11	22	5	13			
Max	67	33	92	31	61	24	48	23	128	54	38	19			
No samples	42		42		42		41		42		42				
Monthly averages															
	Site 1		Site 2		Site 3		Site 4		Site 6		Site 7				
Jan-04	18		20		22		37		32		17				
Feb-04	22		23		25		39		34		22				
Mar-04	24		23		24		45		34		20				
Apr-04	22		21		22		36		37		20				
May-04	24		24		24		36		35		28				
Jun-04	28		30		28		#DIV/0!		38		30				
Jul-04	18		20		17		23		28		20				
Aug-04	25		26		24		32		47		24				

APPENDIX 3

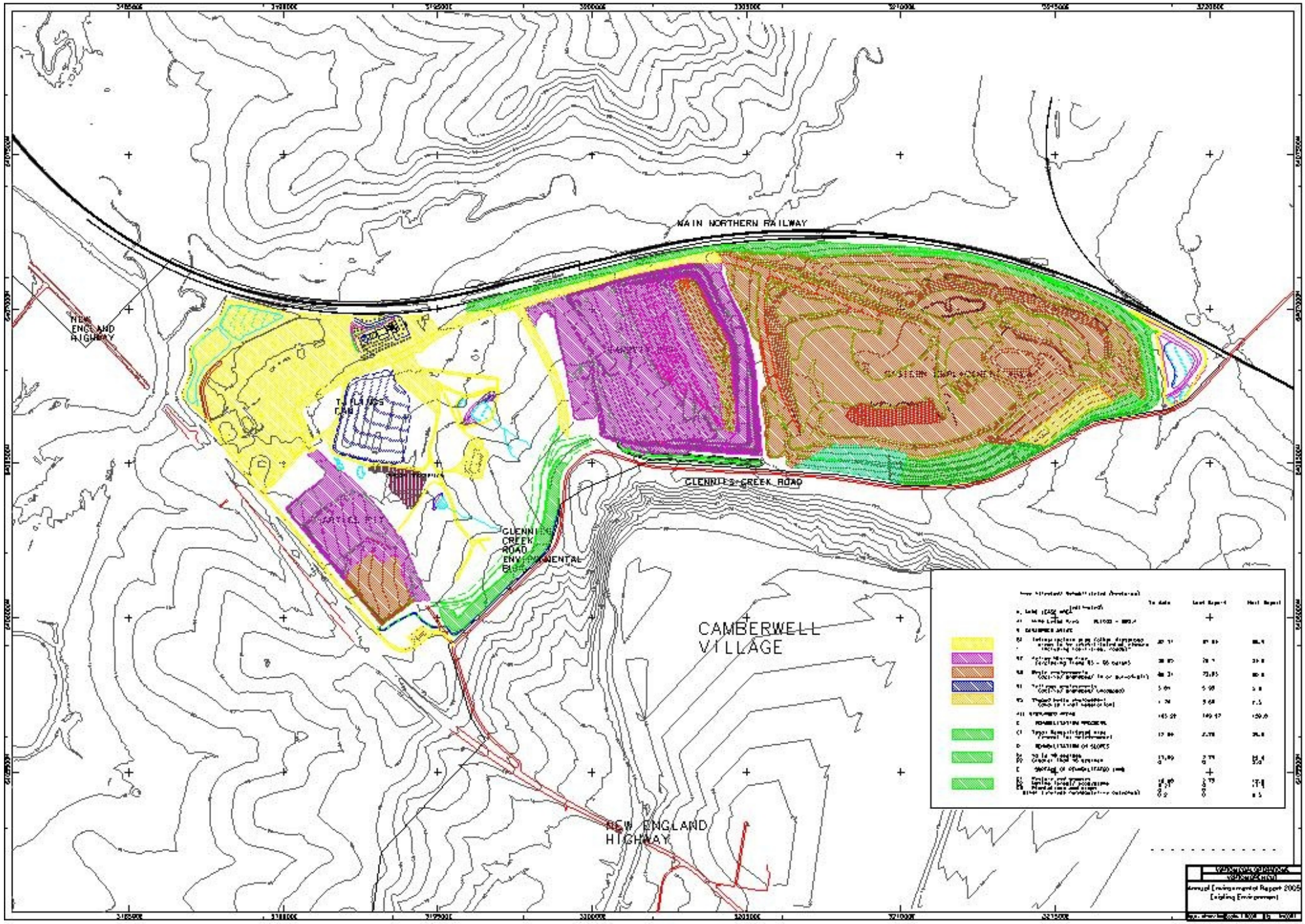
BLAST MONITORING DATA

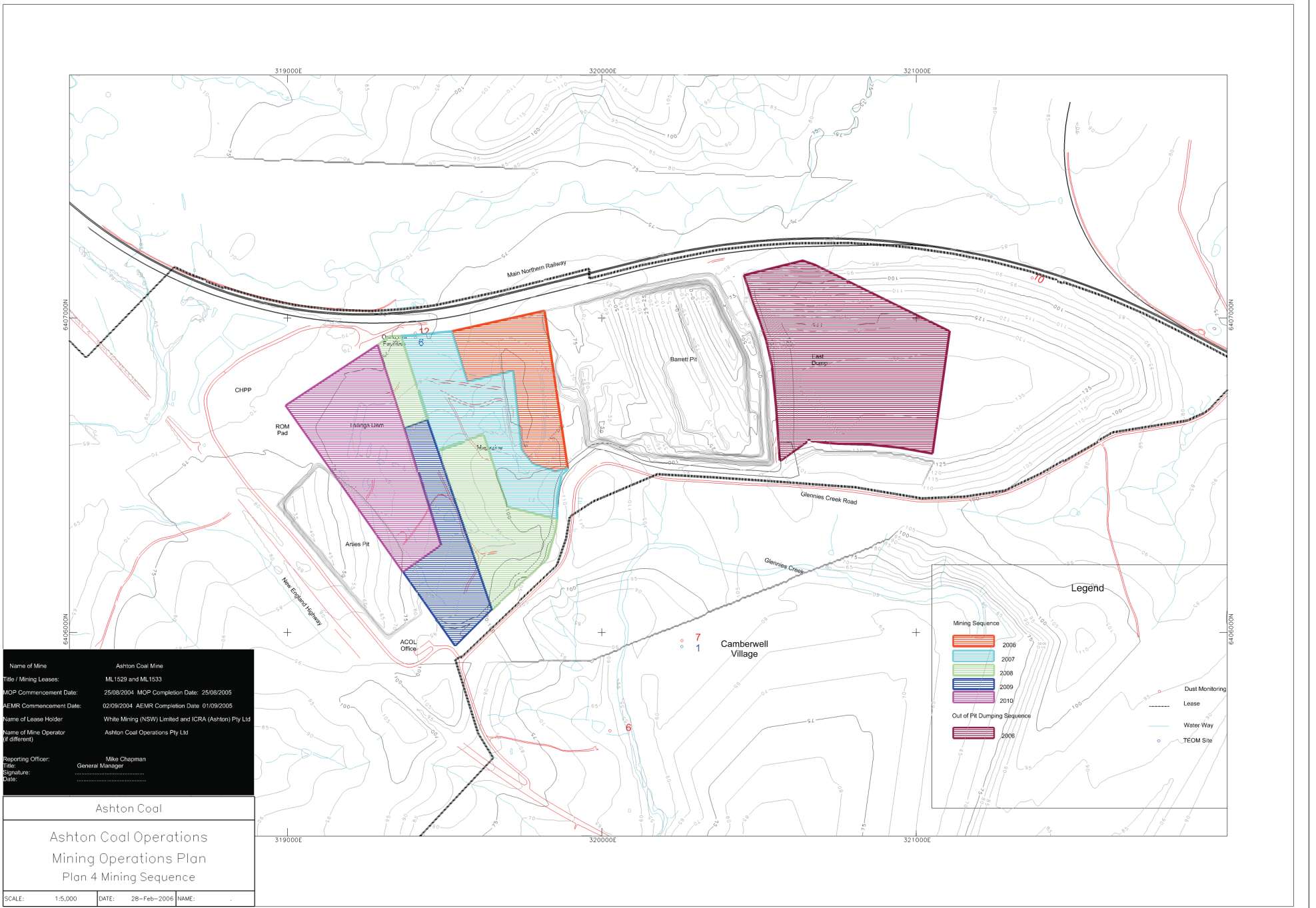
SHOT DETAILS				Ashton					
				CHURCH		VILLAGE		RAILWAY	
Shot No	DATE	TIME	LOCATION	Vib	OP	Vib	OP	Vib	OP
44	25-November-2004	11:11	25-0113	0.49	101.0	0.93	105.1	0.49	104.5
45	26-November-2004	11:16	25-009 + Ramp	0.20	101.7	0.31	103.7	0.17	100.4
46	30-November-2004	11:03	25/005 NE	1.50	104.3	2.05	106.9	0.80	108.6
47	03-December-2004	10:27	EB/2/75/001	0.84	105.3	2.17	105.4	0.33	105.1
48	03-December-2004	14:27	EB/1/25/005C	1.35	108.3	2.04	112.2	0.56	107.5
49	07-December-2004	14:15	EB/1/25/008	1.11	101.9	1.78	104.5	0.35	105.3
50	10-December-2004	11:34	25-005S	1.52	MIC U/S	3.00	111.2	0.75	105.2
51	13-December-2004	10:58	Misfire	0.29	97.1	0.40	100.4	0.21	103.4
52	14-December-2004	10:59	25/010			0.46	105.9		
53	16-December-2004	11:23	EB/1/25/007	0.73	103.2	1.40	107.5		
54	21-December-2004	10:56	25/006	0.77	107.1	1.23	111.5		
55	22-December-2004	10:57	Sump			1.20	105.8		
56	22-December-2004	11:07	EB/2/55/003	1.10	101.5	0.26	101.9	0.64	103.8
57	24-December-2004	10:41	EB/1/16/001			2.08	107.0	0.31	103.1
58	24-December-2004	10:49	EB/2/55/004			1.12	108.5	0.72	106.8
59	31-December-2004	10:53	EB/1/16/002	1.15	103.7	0.70	107.6	0.55	108.5
60	04-January-2005	10:59	25/011			0.42	104.6	0.29	103.7
61	05-January-2005	12:07	EB/1/16/003			0.66	105.1		
62	06-January-2005	14:15	EB/1/16/004						
63	10-January-2005	14:11	16-005	0.40	110.4	0.39	115.0		
64	12-January-2005	10:56	40-026	0.64	109.1	1.23	113.1		
65	18-January-2005	14:19	55-005	0.47	103.0	1.45	108.4		
66	20-January-2005	14:07	16-006, 16-007, 16-008	0.86	104.9	1.14	110.4		
67	21-January-2005	14:19	73-002, 25-013	0.67	101.9	1.41	109.0	1.41	109.0
68	21-January-2005	14:19	PS 037	0.67	101.9	1.41	109.0	1.41	109.0
69	25-January-2005	14:39	ULLD30, ULLD31			1.02	114.3		
70	31-January-2005		ULLD32			0.03	90.2		
71	01-February-2005	11:09	37-001	1.12	105.2	2.40	113.6		
72	05-February-2005	14:18	16-009	0.92	115.6	1.49	117.0		
73	10-February-2005	9:09	16-011	0.52	105.7	0.84	108.8		
74	10-February-2005	9:18	ULLD34	0.17	113.4	0.28	116.1		
75	10-February-2005	10:48	PS 16SE			0.64	116.4		
76	10-February-2005		75-003						
77	12-February-2005	11:04	ULLD37	0.33	115.8	0.70	117.3		
78	16-February-2005	14:07	16-012 + EXT	1.30	111.5	1.04	113.6		
79	18-February-2005	11:08	UB-01-02, LLLD-02, 37-004			2.11	109.3		
80	23-February-2005	14:11	16-014, LLLD-04A	0.90	97.0				
81	25-February-2005	16:30	LLLA-03A, 80-001						
82	01-March-2005	11:15	16-015	DNR	DNR	1.15	104.0	NA	NA
83	01-March-2005	11:20	LLLD-06A	blast vibration too low to be recorded/weak signal					
84	02-March-2005	11:05	16-016	0.35	MIC U/S	1.15	104.0	NA	NA
85	04-March-2005	11:00	55BERM	blast vibration too low to be recorded/weak signal					
86	04-March-2005	11:05	LLLD-03B	0.19	99.4	0.91	99.6	NA	NA
87	04-March-2005	11:10	LLLD-04B	0.12	99.3	0.62	98.4	NA	NA
88	08-March-2005	11:05	80-002, 80-004	DNR	DNR	1.37	109.0	NA	NA
89	11-March-2005	14:15	LLLD-06B, 37-005	0.85	105.0	0.36	103.6	NA	NA
90	15-March-2005	14:21	UB-02TOE	0.21	102.3	0.69	107.4	NA	NA
91	15-March-2005	14:06	05-005, 16-010	1.06	112.2	1.04	112.3	NA	NA
92	17-March-2005	9:02	LLLD-07A	0.15	102.3	0.20	104.7	NA	NA
93	22-March-2005	14:18	80-005	1.13	110.1	2.13	113.7	0.20	108.9
94	23-March-2005	14:15	ULLD-038	0.13	110.8			0.27	106.8
95	24-March-2005	14:15	ULLD-07B	0.33	102.4				
96	30-March-2005	11:44	UB-05, 05-006	0.69	106.8	1.01	105.2	0.8	106.5
97	31-March-2005	14:15	67-001	0.65	106.0	1.32	111.7	0.23	107.1
98	02-April-2005	10:09	80-006	0.41	100.6			0.19	107.6
99	04-April-2005	15:12	05-008					0.35	106.7
100	06-April-2005	17:00	05-002, 05-003, 05-004	0.88	108.9			0.70	105.1
101	08-April-2005		90-001	1.64	104.4			0.15	107.8
102	11-April-2005		05-009					0.07	102.3
103	13-April-2005	11:37	UB/06						
104	13-April-2005	11:37	UB/07	0.16	95.6	0.43	98.6	0.09	103.0
105	13-April-2005	11:37	UB/08						
106	15-April-2005		05-002-03	blast vibration too low to be recorded/weak signal					
107	16-April-2005	11:46	05-001B	0.36	103.6	0.61	106.1		
108	19-April-2005	14:22	05-007	0.71	101.1	1.18	103.0	0.60	103.5
109	21-April-2005	16:13	05 SUMP BRIDGE	0.46	103.4	0.39	104.9	0.40	99.1
110	22-April-2005	11:04	AP-43	1.81	112.3	1.08	114.4	0.12	102.4
111	22-April-2005	15:59	67-02	0.83	103.3	1.27	105.3	0.21	99.9
112	27-April-2005	16:13	ULLD-07-08, TERRACE			0.37	101.3	0.09	101.3
113	28-April-2005	11:00	AP-45 & RAMP	blast vibration too low to be recorded/weak signal					
114	02-May-2005	11:32	LLLD8						
115	02-May-2005	11:32	ULLD RAMP	0.78	109.6	0.92	116.7	0.20	114.8
116	02-May-2005	11:32	90-001B						
117	05-May-2005	11:12	ARTIES RAMP 2-3						
118	05-May-2005	11:12	APS-43						
119	05-May-2005	11:12	PRESPLIT 1	1.42	114.8	0.92	111.0	0.04	112.2
120	05-May-2005	11:12	ARTIES S.W						
121	10-May-2005	14:00	BARRET PIT 1.4 UB	blast vibration too low to be recorded/weak signal					
122	11-May-2005	14:14	LLLD WEST						
123	11-May-2005	14:14	LLLD 10			0.34	97.3	0.16	92.6
124	12-May-2005	16:24	LLLD 10	0.78	Microphone malfunction	1.10	110.6	Unit removed from service	
125	12-May-2005	16:24	BP 1.4 N						
126	13-May-2005	14:30	AP-WEST	blast vibration too low to be recorded/weak signal					
127	13-May-2005	14:30	P/S2	blast vibration too low to be recorded/weak signal					
128	17-May-2005	14:20	LLLD 9-11	0.20	104.8	0.35	97.3		
129	18-May-2005	14:16	ULLD-1	0.60	99.9	0.79	105.6		

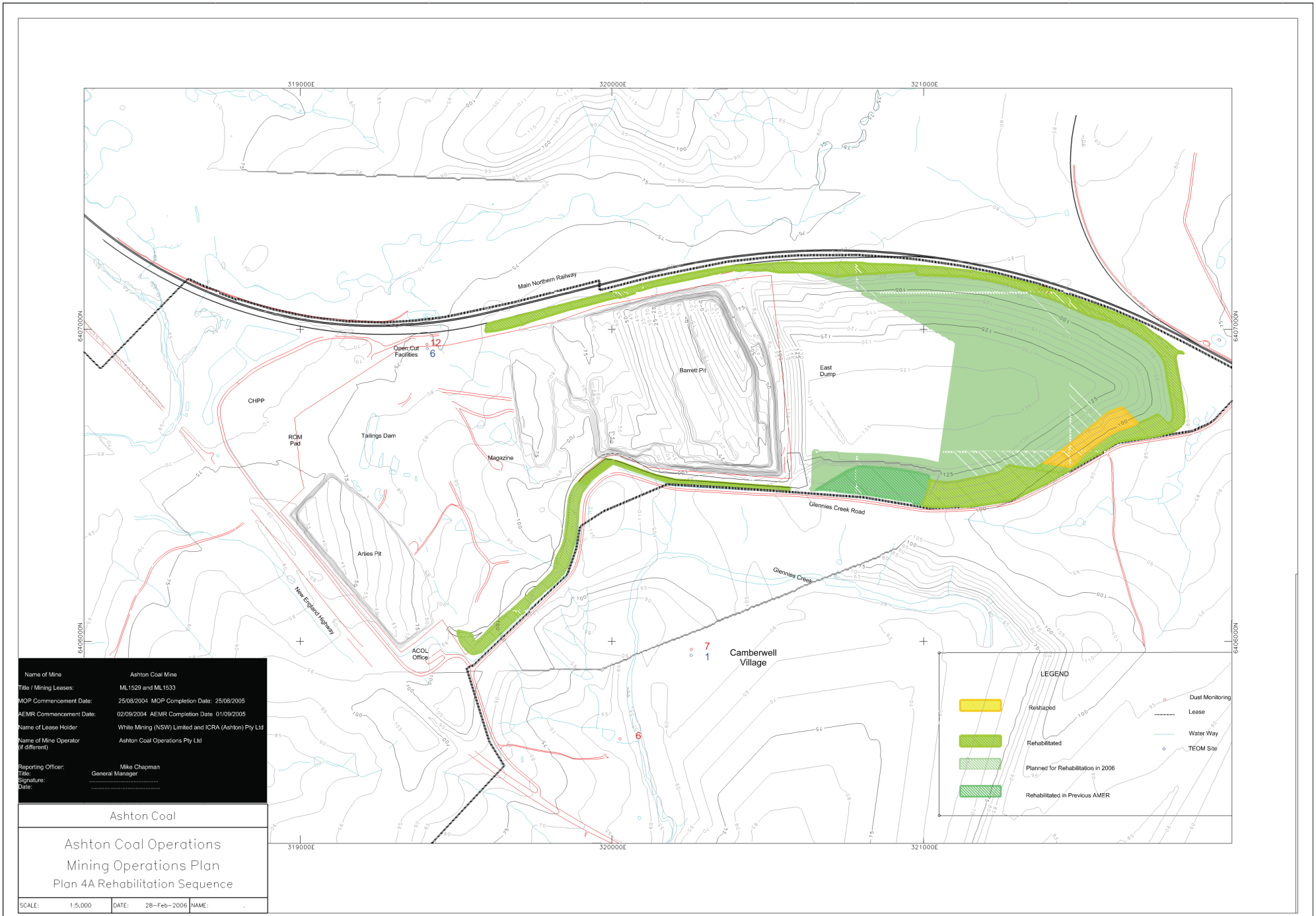
SHOT DETAILS				Ashton					
				CHURCH		VILLAGE		RAILWAY	
Shot No	DATE	TIME	LOCATION	Vib	OP	Vib	OP	Vib	OP
130	19-May-2005	14:00	ULLD-1 SUMP						
131	19-May-2005	14:00	BAR 1.4 NTH	0.80	103.5				
132	20-May-2005	11:00	misfire FROM 05-05-05	blast vibration too low to be recorded/weak signal					
133	26-May-2005	11.04.00 am				0.88	116.4		
134	26-May-2005	2.09pm		0.75	105.6	0.14	91.6		
135	27-May-2005	2.11.15pm		OS - Microphone repairs		0.39	104.4		
136	02-June-2005	10.58.46 am				0.38	106.9		
137	02-June-2005	2.18.54 pm				0.35	102.0		
138	09-June-2005	2.04pm	Art Strip3 - west	1.69	111.8	2.21	113.9		
139	09-June-2005	10.05am	UB 1.6 nth	1.39	112.8	2.87	116.6		
140	10-June-2005	4.01pm	UBSC - 1A	0.67	103.5	0.76	107.0		
141	11-June-2005	9.08am	UB80	1.07	108.9	1.67	112.7		
142	15-June-2005	11.12am	UB/SCIB	0.66	104.3	1.10	108.8		
143	17-June-2005	9.09am	UB-Knob	0.20	104.8	0.43	106.1		
144	21-June-2005	9.03am	AP Art Strip 2	0.74	116.1	0.38	114.7		
145	21-June-2005	2.11pm	ULLD Bench	0.62	113.5	0.73	112.1		
146	23-June-2005	11.28am	Bar 1.6	0.16	105.9				
147	23-June-2005	11.36am	LLL-12	0.83	111.3	1.87	113.7		
148	24-June-2005	11.16am	AP Strip 2	0.43	113.2	0.47	107.1		
149	25-June-2005	9.53am	ULLD Bench	0.07	86.8	0.46	95.8		
150	27-June-2005	11.12am	UBSL 1C	0.67	98.0	1.41	105.2		
151	04-July-2005	11.13am	AP-ST3 Ramp	1.31	107.8	1.30	109.9		
152	05-July-2005	12.25pm	LLLD Ramp West	0.20	98.0	0.50	100.9		
153	06-July-2005	11.14am	UB-SLIC	0.74	98.8	1.68	100.7		
154	06-July-2005	11.19am	UB-67	0.52	103.7	1.49	106.2		
155	11-July-2005	11.16am	AP-ST4	0.67	111.3	0.56	107.7		
156	11-July-2005	4.01pm	LB-SL1	1.02	100.5	1.60	105.3		
157	13-July-2005	11.13am	Bar 1.6 West B	1.11	103.4	1.79	108.8		
158	15-July-2005	11.28am	LLLD West Ramp	0.52	108.7	0.43	106.4		
159	18-July-2005		AP ST4						
160	19-July-2005	11.16am	AP-S3-ART	0.62	109.3	0.38	106.7		
161	20-July-2005	11.6am	Bar 1.6	0.95	105.9	1.94	110.2		
162	21-July-2005	10.00am	UB West Ramp	0.47	100.7	1.06	103.2		
163	22-July-2005	11.15am	AP S3 Art	0.42	105.7	0.26	107.6		
164	22-July-2005	11.21am	UB37	0.19	100.1	0.28	106.0		
165	28-July-2005	10.04am	UBWR Nth	0.32	100.1	1.17	104.0		
166	28-July-2005	2.09pm	UBWR Sth	0.27	106.3	0.53	101.6		
167	29-July-2005	11.15am	UBWR Mid	0.24	104.8	0.56	106.9		
168	02-August-2005	11.15am	AP-PS5	0.90	97.8	0.95	93.5		
169	04-August-2005	10.06am	UB - SL1/E Nth	0.68	105.5	1.18	107.8		
170	04-August-2005	2.01pm	UB SL1/E Mid	0.55	103.9	1.29	106.3		
171	05-August-2005	11.15am	Bar 1.6	1.10	102.5	1.23	105.6	Unit placed back in ser	
172	09-August-2005	11.23am	UB West Bridge	0.05	108.5	0.15	89.7	0.11	99.9
173	12-August-2005	11.20am	AP Strip 5 PG & West Bridge	0.82	108.3	0.70	108.4	5.95	115.1
174	12-August-2005	2.31pm	UBWR	0.42	96.6	0.76	98.4	0.90	100.1
175	16-August-2005	11.15am	UB West Bridge Ext	0.46	100.1	0.51	102.3	0.64	102.1
176	18-August-2005	10.05am	UB SL 1/E	0.44	100.1	0.77	105.1	1.18	105.4
177	19-August-2005	12.47pm	AP ST5 PG & AP Pikes Gully K	1.41	109.5	0.77	108.1	10.45	117.2
178	24-August-2005	10.58am	AP S4 ART	0.05	94.5	0.53	103.6	5.53	111.9
179	25-August-2005	10.02am	UB LSE 1/E	0.70	104.1	0.77	104.1	1.11	109.3
180	26-August-2005	11.13am	UB SL 1/E	0.54	99.9	0.85	102.3	1.47	104.5
181	01-September-2005	9.03am	UB	0.63	105.9	0.92	109.4	1.34	115.4
182	01-September-2005	11.17am	AP	1.25	105.7	0.75	108.4	4.34	115.0
			Maximum	2.00	118.60	5.13	123.40	10.45	120.80
			Average	0.87	103.83	1.51	106.94	0.92	106.55
			Minimum	0.08	83.50	0.15	87.60	0.04	92.60
			No > 2 mm/s	1.00		23			
			% > 2 mm/s	0.55%		12.64%			
			No > 5 mm/s	0		1			
			% > 5 mm/s	0.00%		0.55%			
			No > 20mm/s					0	
			% > 20mm/s					0.00%	
			No > 115 dBL		4		10		
			% > 115 dBL		2.20%		5.49%		
			No >120 dBL				1		
			Total	182					
					2 115				
					5 120				

APPENDIX 4

AEMR Plans


MAIN NORTHERN RAILWAY
NEW ENGLAND HIGHWAY
GLENNIES CREEK ROAD
CAMBERWELL VILLAGE
NEW ENGLAND HIGHWAY


319000E
320000E
321000E
6407000N
6406000N
Main Northern Railway
CHPP
ROM Pad
Tailings Dam
Arties Pit
Barrett Pit
East Dump
Glennies Creek Road
Glennies Creek
New England Highway
ACOL Office
Camberwell Village
Legend
Mining Sequence
2006
2007
2008
2009
2010
Out of Pit Dumping Sequence
2006
Dust Monitoring
Lease
Water Way
TEOM Site
Name of Mine Ashton Coal Mine
Title / Mining Leases: ML1529 and ML1533
MOP Commencement Date: 25/08/2004 MOP Completion Date: 25/08/2005
AEMR Commencement Date: 02/09/2004 AEMR Completion Date 01/09/2005
Name of Lease Holder White Mining (NSW) Limited and ICRA (Ashton) Pty Ltd
Name of Mine Operator (if different) Ashton Coal Operations Pty Ltd
Reporting Officer: Mike Chapman
Title: General Manager
Signature: .....
Date: .....
Ashton Coal
Ashton Coal Operations
Mining Operations Plan
Plan 4 Mining Sequence
SCALE: 1:5,000
DATE: 28-Feb-2006
NAME: .


319000E
320000E
321000E
6407000N
6406000N
Main Northern Railway
Open Cut Facilities
12
6
CHPP
ROM Pad
Tailings Dam
Magazine
Barrett Pit
East Dump
Glennies Creek Road
Arlies Pit
New England Highway
Glennies Creek
ACOL Office
7
1
Camberwell Village
LEGEND
Reshaped
Rehabilitated
Planned for Rehabilitation in 2006
Rehabilitated in Previous AMER
Dust Monitoring
Lease
Water Way
TEOM Site
Name of Mine Ashton Coal Mine
Title / Mining Leases: ML1529 and ML1533
MOP Commencement Date: 25/08/2004 MOP Completion Date: 25/08/2005
AEMR Commencement Date: 02/09/2004 AEMR Completion Date 01/09/2005
Name of Lease Holder White Mining (NSW) Limited and ICRA (Ashton) Pty Ltd
Name of Mine Operator (if different) Ashton Coal Operations Pty Ltd
Reporting Officer: Mike Chapman
Title: General Manager
Signature: .....
Date: .....
Ashton Coal
Ashton Coal Operations
Mining Operations Plan
Plan 4A Rehabilitation Sequence
SCALE: 1:5,000
DATE: 28-Feb-2006
NAME: .

DISTRIBUTION

Ashton Coal Operations Pty Limited
Annual Environmental Management Report 2004 - 2005

23 March 2006

3 Copies	Department of Infrastructure Planning and Natural Resources
1 Copy	Department of Mineral Resources
1 Copy	Department of Conservation and Environment
1 Copy	NSW Fisheries
1 Copy	National Parks and Wildlife Service
1 Copy	Singleton Shire Council
1 Copy	Community Consultative Committee
13 Copies	Ashton Coal Operations Pty Limited