

Annual Environmental Management Report



1st July 2010 to 30th June 2011



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1. Introduction

1.1 Purpose

The purpose of this Annual Environment Management Report (AEMR) is to provide the Department of Planning and Infrastructure (DPI) and other stakeholders a report of Port Kembla Coal Terminal (PKCT)'s environmental performance, actions taken in relation to environmental control and regulatory compliance.

1.2 Scope

This AEMR provides information on PKCT's compliance with requirements of the PKCT Major Project Approval 08_0009 which was granted on the 12th June 2009. The approval includes a requirement of PKCT to prepare an annual AEMR. By letter of 25th March 2010, DPI approved a PKCT request for the submission date to be the 31st July annually to facilitate financial year reporting.

This report has been prepared with reference to the NSW Department of Primary Industries (now Department of Industry & Investment) Guidelines and Format for Preparation of an Annual Environmental Management Report dated January 2006.

This report will be submitted to the DPI, and following feedback, will be forwarded to the Office of Environment and Heritage (OEH) and the Department of Industry & Investment (DII). A copy of this AEMR will also be made available to the public via the PKCT website (www.pkct.com.au).

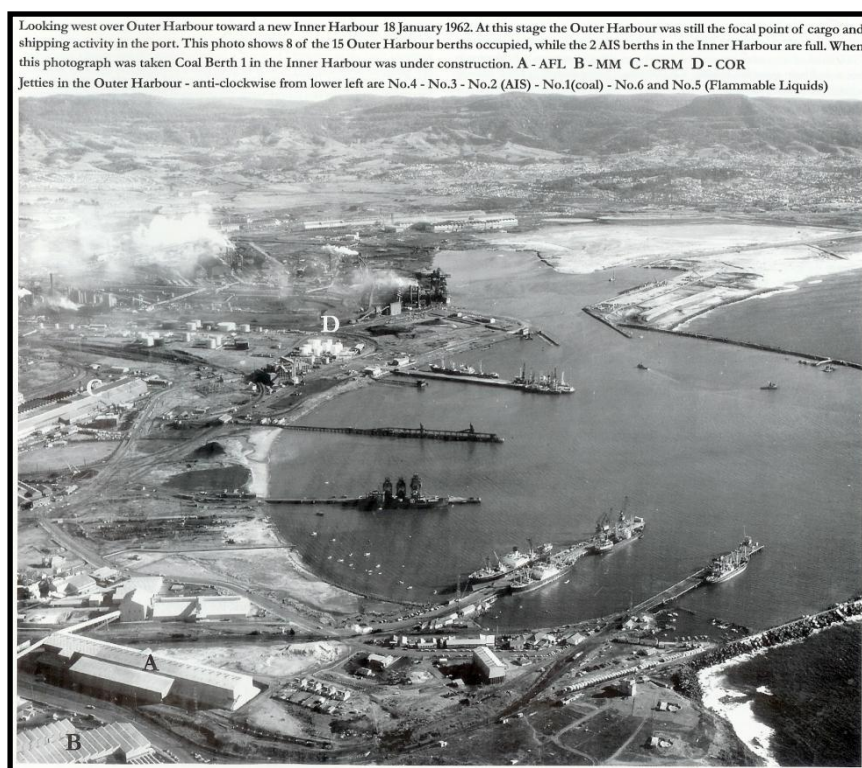
1.3 Background

PKCT is located on Lot 22 in DP 1128396 on the northern side of the Inner Harbour of Port Kembla, near Wollongong. PKCT land is owned by the Port Kembla Port Corporation (PKPC) and is leased to PKCT under a 20 year, plus 20-year option. The lease commenced in August 1990 and PKCT has executed this option taking the lease period to 2030.

Six equal shareholders, namely BHP Billiton Illawarra Coal, Oakbridge (Xstrata Coal), Centennial Coal, Tahmoor Coal and Metropolitan Collieries (Peabody) and Gujarat NRE, form the PKCT Board to operate the Terminal. BHPBIC has managed the Terminal since 1990. PKCT is the major coal intermodal facility in southern NSW for the transfer of coal from rail and road to ship.

The Terminal is responsible for receiving, assembling and loading coal from the Southern and Western New South Wales coalfields, for transport by ship to international and domestic markets. PKCT has two bulk handling facilities; a high capacity Coal Berth (Berth 102) that handles the loading of coal, and a Bulk Products Berth (Berth 101) that loads and unloads a range of bulk products (Refer to **Figure 1**).

The Bulk Products Berth was constructed in the early 1960's after construction of Port Kembla Inner Harbour (refer photo below). The Coal Berth was constructed in the early 1980's.



Reference: From "Roadstead to World Class Port", Port Centenary Committee 1999

PKCT entered the lease to operate the facility in accordance with a development consent from Wollongong City Council and an Office of Environment and Heritage Environment Protection Licence (EPL) number 1625.

In 2008, PKCT commenced preparation of a Major Project application under Part 3A of the Environmental Planning & Assessment Act (EPAA) 1979 seeking consent to alter coal receipt arrangements by public road.

Consultation with the Department of Planning and Infrastructure (DPI) resulted in the remit of the application with the scope being increased to include consent for PKCT’s existing operations. The Environmental Assessment (EA) submitted with the Major Project Application includes an assessment of all environmental impacts associated with the current and ongoing PKCT activities.

In June 2009, the DPI conditionally approved PKCT’s Major Project Application (08_0009) for Existing Operations & Increased Road Receival Hours. This consent replaces the previous development approval from Wollongong City Council (WCC) and sets new conditions for environmental impacts, management and reporting.

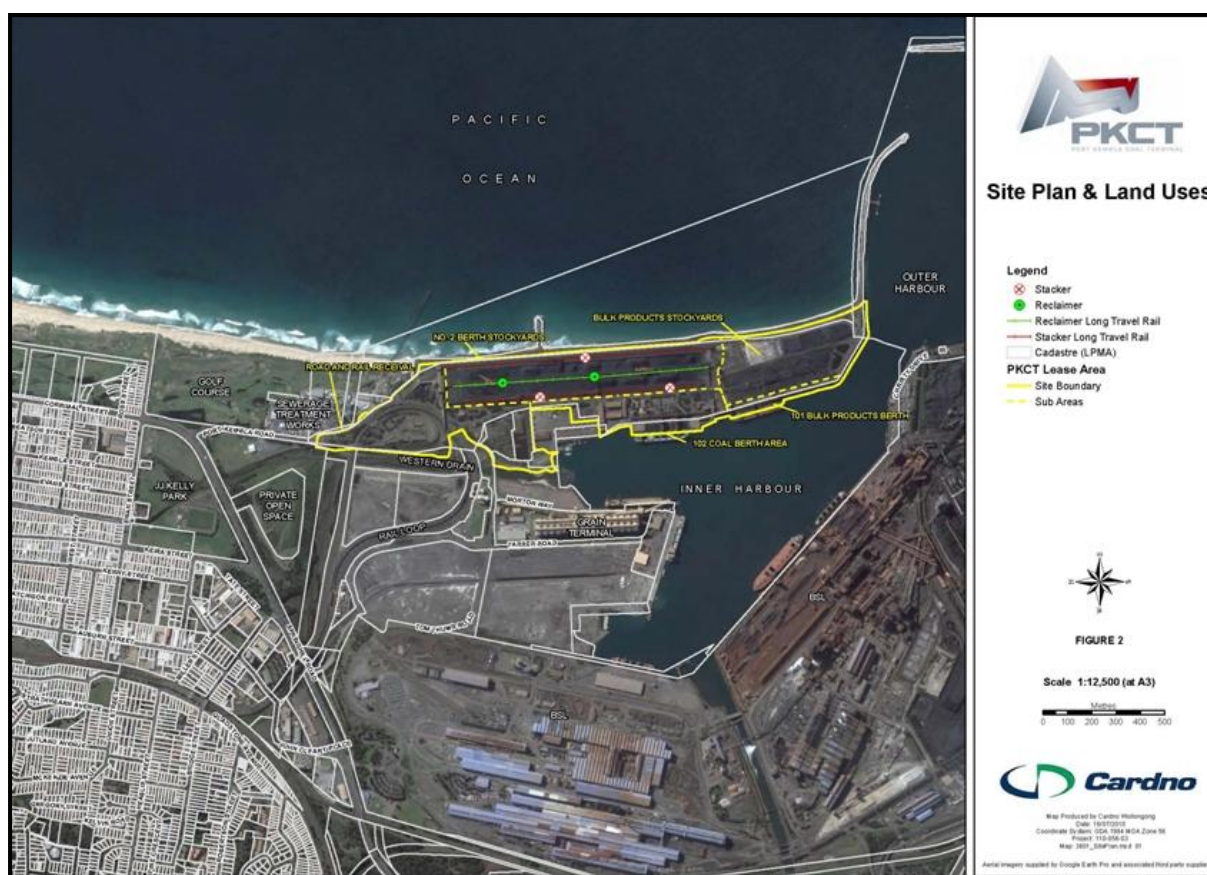


Figure 1

1.4 Objectives

The objective of this AEMR is to provide a report that outlines the environmental monitoring, mitigation, assessments and management actions undertaken by PKCT over the June 2010- July 2011 reporting period.



1.5 Environment Management

PKCT has an Environment Management System (EMS) in place to meet its environmental obligations. The EMS is certified to AS/NZS ISO 14001 and is supported by policies, standards, an Environment Management Strategy, management plans and procedures. Key documents include the following:-

- Sustainable Development Policy PO.HS.291
- Environment Policy PO.HS.85
- Quality Policy PO.BM.236
- Environment Management Strategy MP.HS.464
- Noise Management Plan MP.HS.387
- Air Quality Management Plan MP.HS.386
- Driver Code of Conduct Implementation Plan MP.BM.453
- Water Management Plan MP.HS.462
- Biodiversity Management Plan MP.HS.463
- Green and Golden Bell Frog Management Plan MP.HS.509
- Landscape Management Plan MP.HS.470
- Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461
- Waste Management Plan MP.HS.460
- Fire Management Plan MP.HS.459

Policies are published on PKCT’s web site (www.pkct.com.au). Management Plans required under Project Approval 08_0009 are also published once Department of Planning and Infrastructure approval is obtained.

1.6 Terminal Contact

Table 1.2 identifies relevant contacts at PKCT.

Table 1.2 – PKCT Contact Details

PKCT Employee & Position	Contact Details
Mr. Peter Green General Manager	(02) 4228 0288 Peter.Green@pkct.com.au
Mr. Alex Chalk Risk Manager	(02) 4221 1877 Alex.Chalk@pkct.com.au
Community Hotline	1800 111 448 communitylinks@pkct.com.au

1.7 Actions Required at Previous AEMR Review

This section reports on any actions arising from the DPI's review of the 09/10 AEMR submitted by PKCT. No actions arose from the AEMR.

With regard to the management plans submitted with the AEMR, DPI requested the following:-

- further work on the Water Management Plan MP.HS.462 on the 6th October 2010 (refer Section 3.5.2).
- advice on the status of the Green and Golden Bell Frog Management Plan MP.HS.509 and consultation with OEH (refer Section 3.6).

2. Administrative Conditions

This section identifies the Administrative Conditions in Schedule 2 of the PKCT Major Project Approval 08_0009 and describes how PKCT complies with these requirements.

Table 2.1 provides an overview of the administrative conditions and references the applicable section of this AEMR.

Table 2.1 – Administrative Condition Reference

Administrative Condition	AEMR Section
Obligation to Minimise Harm to the Environment	2.1
Terms of Approval	2.2
Limits on Approval	2.3
Management Plan / Monitoring Programs	2.4
Surrender of Consents	2.5
Structural Adequacy	2.6
Demolition	2.7
Operation of Plant & Equipment	2.8
Dispute Resolution	2.9

2.1 Obligation to Minimise Harm to the Environment

2.1.1 Consent Condition

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the operation of the project.

2.1.2 Compliance Statement

Consent condition is consistent with PKCT's policies and management standards including a commitment to meet legal and other requirements.

PKCT has identified the aspects associated with PKCT's operation which may result in environmental impacts and appropriate management plans and processes are in place providing monitoring, assessment and control.

In accordance with continual improvement, performance is monitored, reviewed and feasible improvement and mitigation measures are developed. PKCT implements reasonable and feasible measures within suitable time frames to minimise harm to the environment.

Environmental aspects including those referenced herein are considered and assessed in project development through PKCT's capital works program and business planning process.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

2.2 Terms of Approval

2.2.1 Consent Condition

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) Response to Submissions;
 - (c) Statement of Commitments (see Appendix 2); and
 - (d) conditions of this approval.
3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent shall prepare revisions of any strategies, plans or programs required under this consent if directed to do so by the Director-General. Such revisions shall be prepared to the satisfaction of, and within a timeframe approved by, the Director-General.
5. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
 - (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with this approval; and
 - (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.

2.2.2 Compliance Statement

The requirements pertaining to this condition were met over the reporting period. The Environment Management Strategy has been developed to facilitate the means by which DPI approval conditions are met. The AEMR will provide an annual compliance report.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

2.3 Limits on Approval

2.3.1 Consent Condition

6. The Proponent shall not receive more than 7.5 million tonnes of coal and bulk products at the site by public road in any calendar year without the written approval of the Director-General. In seeking this approval, the Proponent shall submit a report to the Director-General that:
 - (a) reviews the transport related impacts associated with the trucks being used to deliver coal and bulk products to the terminal;
 - (b) demonstrates that these impacts are generally consistent with the predicted and/or approved impacts; and
 - (c) examines whether there any other reasonable and feasible measures that could be implemented to minimise these impacts.

Once this approval has been obtained, the Proponent shall not receive more than 10 million tonnes of coal and bulk products at the site by public road in any calendar year.
7. The Proponent shall only receive coal dispatched from NRE No 1 Colliery at Russell Vale if that coal has been dispatched between the hours of:
 - (a) 7 am to 10 pm Monday to Friday; and
 - (b) 8 am to 6 pm Saturday and Sunday or Public Holidays

unless in accordance with a project approval granted to that Colliery under Part 3A of the EP&A Act.
8. Subject to conditions 6 and 7 of this schedule, coal and bulk products may be received by the Proponent at the site by road delivery twenty four hours per day, seven days per week.

2.3.2 Compliance Statement

PKCT road deliveries by public road totaled 2,843,540 tonnes across the reporting period (refer Attachment "D"). If it is expected that the 7.5 million tonnes per annum limit will be exceeded, the necessary approval from the Director-General will be sought before doing so. Coal from NRE No. 1 Colliery is only received by PKCT when it is dispatched during the specified hours.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

2.4 Management Plans / Monitoring Programs

2.4.1 Consent Condition

9. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

2.4.2 Compliance Statement

Under cover of letter of 29th July 2010, the following documentation was submitted to the DPI together with the 0910 AEMR:-

- Environment Management Strategy MP.HS.464
- Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461
- Water Management Plan MP.HS.462
- Landscape Management Plan MP.HS.470

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

2.5 Surrender of Consents

2.5.1 Consent Condition

10. Within 12 months of the date of this approval, the Proponent shall surrender all existing development consents and existing use rights associated with operations at the site in accordance with clause 97 of the EP&A Regulation.

2.5.2 Compliance Statement

Applicable development consents have been surrendered. No action required in the reporting period.

2.6 Structural Adequacy

2.6.1 Consent Condition

11. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

2.6.2 Compliance Statement

Condition noted. No new building works or significant alterations or additions have been undertaken. Facilities maintenance is carried out onsite in accordance with legal and other requirements including applicable Australian Standards and the Building Code of Australia.

2.7 Demolition

2.7.1 Consent Condition

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

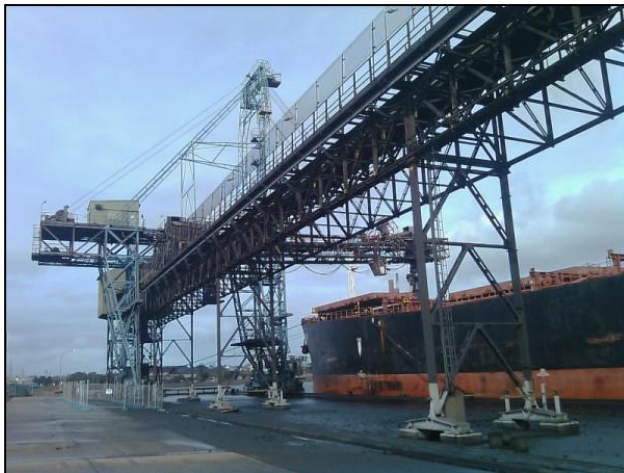
2.7.2 Compliance Statement

During the reporting period, PKCT assessed that the Bulk Products Berth shiploading system had reached the end of its life, was no longer safe to operate and demolition was required. It was decided that operations would continue through the Bulk Products Berth using a new mobile shiploading system.

In June 2011, demolition of the Bulk Products Berth Shiploader and sections of the associated conveyor system commenced. The work is being undertaken in accordance with AS 2601-2001. Key correspondence is referenced as follows:-

- Approval for the demolition was provided by the Port Kembla Port Corporation in its letter of 3rd June 2011.
- By letter of 3rd June 2011, Office of Environment and Heritage advised it had no objection to the demolition subject to environmental protection licence compliance.
- PKCT letter of 30th May 2011 to the Department of Planning and Infrastructure advised of the demolition and the approval process.

PKCT engaged Transfield to carry out the work. WorkCover notification was given and WorkCover provided approval no. 941R-00014850-01 on 15th March 2011.



Final ship Pontadamon- 14th April 2011



18th July 2011

2.8 Operation of Plant & Equipment

2.8.1 Consent Condition

13. The Proponent shall ensure that all plant and equipment used onsite is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

2.8.2 Compliance Statement

PKCT Management and Staff have a responsibility to maintain equipment to ensure correct operation and efficiency. PKCT ensures all personnel are suitably qualified, trained and competent to ensure equipment is operated in a proper and efficient manner.

2.9 Dispute Resolution

2.9.1 Consent Condition

14. In the event that the Proponent and the Council or a Government agency, other than the Department, cannot agree on the specification or requirements of this approval, the matter may be referred by either party to the Director-General for resolution, whose determination of the disagreement shall be final and binding on the parties.

2.9.2 Compliance Statement

PKCT accepts the dispute resolution process. This condition is also referenced in the Environment Management Strategy. There were no disputes during the reporting period.



3. Specific Environmental Conditions

This section identifies the Specific Environmental Conditions in Schedule 3 of the PKCT Major Project Approval 08_0009 and describes how PKCT complies with these requirements.

Table 3.1 provides an overview of the administrative conditions and references the applicable section of this AEMR.

Table 3.1 – Specific Environmental Conditions Reference

Specific Environmental Condition	AEMR Section
Noise	3.1
Transport	3.2
Air Quality	3.3
Meteorological Monitoring	3.4
Surface Water	3.5
Biodiversity	3.6
Visual Amenity	3.7
Greenhouse & Energy Efficiency	3.8
Waste	3.9
Hazards	3.10
Fire Control	3.11

3.1 Noise

3.1.1 Consent Condition

EPL 1625 & Major Project Approval 08_0009 pertains to noise emissions from PKCT’s premises. Noise criteria is outlined as follows:-

- The Proponent shall ensure that the noise generated by the project at any privately-owned residence does not exceed the criteria specified in Table 1 for the location nearest to that residence.

Table 1: Noise impact assessment criteria dB(A) L_{Aeq} (15 min)

Location	Time Period	Limits ($L_{Aeq,15\ min}$ dB(A))
Cnr Swan St/Kembla St	Day	51
	Evening	50
	Night	49
Cnr Swan St/Corrimal St	Day	51
	Evening	50
	Night	49
Cnr Keira St/Fox St	Day	55
	Evening	49
	Night	45

Notes:

- (a) *To determine compliance with the L_{Aeq} (15 minute) noise level limits in the above table, noise from the project is to be measured at the most affected point within the residential boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.*
- (b) *The noise emission limits identified in the above table apply under meteorological conditions of:*
- *wind speeds of up to 3 m/s at 10 metres above ground level; or*
 - *temperature inversion conditions of up to 3°C/100m, plus a 2 m/s source-to-receiver component drainage flow wind at 10 metres above ground level for those receivers where applicable in accordance with the NSW Industrial Noise Policy.*

However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 1, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the noise limits in Table 1 in accordance with the negotiated noise agreement.

Noise Monitoring Program

2. The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must:
- (a) be developed in consultation with DECC;
- (b) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General; and
- (c) include a:
- combination of attended and unattended noise monitoring measures;
 - noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval; and
 - reasonable and feasible best practice noise mitigation measures to ensure project specific noise criteria are met.

Continuous Improvement

3. The Proponent shall:
- (a) continue to implement all reasonable and feasible best practice noise mitigation measures;
- (b) continue to investigate ways to reduce the noise generated by the project, including maximum noise levels which may result in sleep disturbance; and
- (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR to the satisfaction of the Director-General.

3.1.2 Compliance Statement

Routine noise surveys were undertaken in September 2010 and April 2011. Summary of monitoring data is provided in the Attachment 'A'. Noise surveys determined that PKCT noise levels were within the noise criteria in EPL 1625 and DPI Approval 08_0009.

There were no noise related community complaints made during the reporting period associated with PKCT's site operations.

No notable noise reduction projects were undertaken during the reporting period. In accordance with Section 2.1.2, noise was included in project assessment criteria most notably as follows:-

- (a) Bulk Products Berth demolition- work was undertaken during day work hours with consideration to off site impacts. Demolition work method entailed using cranes to dismantle the ship loader and conveyor structures in large sections. An environmental assessment was carried out by PKCT's consultant, Cardno P/L and submitted to PKPC as part of PKCT's application requesting approval to demolish.
- (b) Bulk Products Berth mobile ship loading system- noise was included in the assessment criteria for the procurement of the new equipment.
- (c) Rail receipt pneumatic vibrator- 3rd unit installed; noise study carried out for the original units which concluded associated noise would not adversely impact on noise limits applicable to PKCT's operations. Assessment of the third unit concluded it would not increase noise beyond current levels.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.2 Transport

3.2.1 Consent Condition

Monitoring of Coal Transport

4. The Proponent shall keep records of the amount of coal and bulk products received at the site each year, and include these records in the AEMR.

Traffic Management

5. The Proponent shall ensure that vehicles waiting to deliver coal or bulk products to the site do not queue or park on public roads other than Port Kembla Road.

Driver's Code of Conduct

6. The Proponent shall, in consultation with affected mines and principal haulage operators, develop a program to implement the Driver's Code of Conduct (see Appendix 3) to the satisfaction of the Director-General. This program must:
 - (a) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General;
 - (b) include a driver induction program to cover (but not be limited to) speed limits, compression braking, truck washing, load covering and queuing on local roads; and
 - (c) include measures to ensure the Driver's Code of Conduct is enforced.



3.2.2 Compliance Statement

In accordance with Condition 4, Attachments “B” and “D” provide a summary of throughput and receipt over the reporting period.

In accordance with Condition 5, this requirement has been included in Drivers Code of Conduct Implementation Plan MP.BM.453 and is monitored operationally and reviewed as required during the quarterly road user meetings.

The Drivers Code of Conduct Implementation Plan is implemented and includes driver inductions. The Driver’s Code of Conduct(DCC) is enforced through the monitoring of trucks by PKCT and road transport companies and shippers. During the reporting period, a new Heavy Haulage Induction manual was developed and implemented to support DCC implementation. Reviews are undertaken as required through the road user meetings (refer “D” Road Transport Report). During this reporting period, meetings were held on 6th October 2010, 19th January 2011, 24th February 11 (truck wash upgrade proposal syndication) and 11th April 2011.

Attachments “C” and “D” provide a summary of monitoring results pertaining to road transport and the Drivers Code of Conduct. A Road Users Group (PKCT, truck companies and relevant coal and bulk products shippers) meet quarterly to review implementation and monitoring results.

Findings/ recommendations made in AECOM P/L’s independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.3 Air Quality

3.3.1 Consent Condition

Impact Assessment Criteria

- 7. The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the criteria listed in Tables 3 to 5 at any residence.

Table 3: Long term impact assessment criteria for particulate matter

Pollutant	Averaging Period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m ³
Particulate matter < 10 µm (PM10)	Annual	30 µg/m ³

Table 4: Short term impact assessment criteria for particulate matter

Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM10)	24 hour	50 µg/m ³



Table 5: Long term impact assessment criteria for deposited dust

Pollutant	Averaging Period	Maximum Increase in Deposited Dust Level	Maximum Total Deposited Dust Level
Deposited Dust	Annual	2 g/m ² /month	4 g/m ² /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.

However, if the Proponent has a written negotiated air quality agreement with any landowner to exceed the air quality limits in Table 3, 4 and/or 5, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the air limits in Table 3, 4 and/or 5 in accordance with the negotiated air quality agreement.

Operations

8. The Proponent shall:
 - (a) ensure any visible air pollution generated by the project is both minimised and recorded, and that operations are modified as required to minimise any resultant air quality impacts on nearby residences;
 - (b) ensure that the real-time air quality monitoring and meteorological monitoring data is assessed regularly; and
 - (c) where dust is generated by the project, that operations are modified and/or stopped as required to ensure compliance with the relevant air quality criteria to the satisfaction of the Director-General.
9. During carrying out of the project, the Proponent shall ensure that:
 - (a) all loaded trucks entering or leaving the site have their loads covered; and
 - (b) trucks associated with the project pass through a truck wash before entering the public road network to the satisfaction of the Director-General.

Air Quality Monitoring Program

10. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program must:
 - (a) be developed in consultation with DECC;
 - (b) be submitted to the Director-General for approval within 6 months from the date of this approval, or as otherwise agreed by the Director-General; and
 - (c) include:
 - o real-time sampling to monitor the dust emissions of the project;
 - o an air quality monitoring protocol for evaluating compliance with the air quality impact assessment criteria in this approval; and
 - o reasonable and feasible best practice emissions mitigation measures to ensure project specific assessment criteria are met.

3.3.2 Compliance Statement

PKCT has an Air Quality Monitoring and Management Plan in place and operational as follows:-

- The Plan, developed in consultation with OEH, was submitted to DPI by the due date of 9th December 2009. The DPI approved the plan by letter of 25th March 2010.

- OEH assisted in developing the plan though did not add any new air quality criteria to EPL 1625.
- Air quality monitoring methodology has been implemented and data is being assessed on a monthly basis. Dust deposition and continuous dust monitoring data is collected. Monitor locations are shown in Attachment “E”.

PKCT's Air Quality Management Plan contains dust monitoring, assessment, reporting, mitigation and management provisions to ensure necessary actions are undertaken and that dust from PKCT's premises does not exceed the criteria in the condition outlined above.

PKCT provides 24/7 site operational control via the Main Control Room. Main Control Room operators monitor site conditions and weather forecasts. If dust is observed, action is taken through operation of sprays or other available controls. Dust events observed which emanate beyond the immediate source with a potential to have off site impacts are entered into PKCT's event management system, requiring investigation and corrective action. PKCT also has an auditing process in place which includes site observations of dust and the assessment of associated controls.

The requirement that loads must be covered and that use of the truck wash is mandatory prior to leaving site forms part of the Drivers Code of Conduct Implementation Plan and associated inductions. Audits are undertaken and findings reviewed (refer Attachment “D”).

PKCT monitors air quality using dust deposition gauges and continuous dust monitors located on site, adjacent port and residential areas as shown on Attachment “E”.

Attachments “F” and “P” provides a summary of findings, dust deposition results and trend graphs for PKCT's residential sites. Attachment “G” provides a summary of continuous dust and dust deposition data. PKCT's air quality consultant, Katestone P/L's analysis of the air quality data concluded the following:-

(a) Northern continuous monitoring site

- The annual average concentrations of TSP and PM10 were below the air quality criteria.
- On the 5th December 2010, standard analysis indicated PKCT had a moderate contribution to TSP and PM10 24-hour exceedances on that day; detailed analysis indicated PKCT's contribution may have been lower.
- On average, PKCT was assessed as having a 6 to 6.5 % contribution to exceedances against the 24 hour TSP and PM10 standard for the days when exceedances occurred across the reporting period.

(b) Residential dust deposition

- Vikings Oval- annual average dust deposition was below the air quality criteria.
- 157 Church Street-annual average dust deposition was below the air quality criteria.
- 173 Corrimal Street- annual average dust deposition was above the air quality criteria but was skewed by a small number of very high readings which may have been influenced by localised dust sources. This is illustrated in Attachment “G” which compares the deposition results for residential sites including a new gauge (Ross St) near the Corrimal St site.

Findings/ recommendations made in AECOM P/L’s independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.4 Meteorological Monitoring**3.4.1 Consent Condition**

11. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station on or in the vicinity of the site that generally complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline.

3.4.2 Compliance Statement

PKCT was compliant with this Condition during the reporting period. Meteorological monitoring is undertaken as follows:-

- Northern continuous dust monitor: monitors are calibrated annually and measure PM10, PM2.5, TSP, wind speed and wind direction.
- PKCT also has an anemometer on the Central Control Tower. It measures wind speed and direction as well as rainfall, pressure, temperature and humidity.
- Summary data is provided in Attachment “H”

3.5 Surface Water**3.5.1 Consent Condition****Discharge Limits**

12. Except as may be expressly provided in an EPL for the project, the Proponent shall comply with Section 120 of the *Protection of the Environment Operations Act 1997*.

Water Management Plan

13. The Proponent shall prepare and implement a Water Management Plan to the satisfaction of the Director-General. This Plan must:
- (a) be prepared in consultation with DECC;
 - (b) be submitted to the Director-General for approval within 12 months of this approval or as otherwise agreed by the Director-General; and
 - (c) include:
 - o a site water balance, which includes details of sources of water supply, on-site water use and management and off-site water discharges and investigates and describes measures to minimise water use by the project;
 - o a sediment control plan for surface works on the site that is consistent with the requirements of the *Managing Urban Stormwater: Soils and Construction Manual* (Landcom 2004, or its latest version);
 - o a surface water monitoring program that includes:
 - stormwater effluent discharge criteria;
 - a monitoring protocol for evaluating compliance with the stormwater effluent discharge criteria; and
 - reasonable and feasible mitigation measures to ensure the stormwater effluent discharge criteria are met.

3.5.2 Compliance Statement

PKCT has a Water Management Plan MP.HS.462 which was included in the 09/10 AEMR submission. Following receipt of DPI feedback, a revised plan was submitted to DPI on 25th October 2010. Though the plan is implemented, DPI approval remains to be obtained. Audit referenced below made some recommendations to strengthen document management.

This plan outlines the processes operating currently with regard to water monitoring, assessment, reporting, mitigation and management provisions to ensure necessary actions are undertaken in accordance with DPI approval conditions.

Plan includes reference to PKCT's Water Savings Action Plan 2006. The plan was revised and resubmitted to OEH on 15th May 2007. PKCT's Recycled Water project was the primary water saving initiative and OEH received status reports as the project progressed. PKCT submitted a Water Savings Action Plan status report to OEH on the 17th December 2010.

Work undertaken during the reporting period is outlined in Section 4.3.2 and Attachment "p".

Attachment "l" provides data on potable and recycled water usage. Excellent results in potable water reduction are continuing, as is a reduction in total water usage. 89 megalitres of potable water used across the reporting period is the lowest annual usage recorded since PKCT commenced operations.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.6 Biodiversity

3.6.1 Consent Condition

Green and Golden Bell Frog Management Plan

14. The Proponent shall prepare and implement a Green and Golden Bell Frog Management Plan for the project to the satisfaction of the Director-General. This program must:
 - (a) be developed in consultation with DECC; and
 - (b) be submitted to the Director-General for approval within 12 months from the date of this approval, or as otherwise agreed by the Director-General.

3.6.2 Compliance Statement

A Green and Golden Bell Frog (GGBF) Management Plan MP.HS.509 is implemented and was submitted to the OEH on 30th June 2009 in accordance with Pollution Reduction Plan U4 attached to PKCT's EPL 1625. PKCT further revised the plan in January 2011 and forwarded a draft to the OEH on 27th January 2011. During this period, formal OEH feedback had not been received though OEH/PKCT liaison has continued.

As the consultation process hadn't concluded, PKCT didn't include a copy of the plan in the 0910 AEMR submission. In response to a DPI enquiry, a draft copy was supplied to the DPI on the 7th September 2010 together with advice on the status of OEH consultation.

OEH provided feedback on the plan on the 2nd May 2011 together with some positive recognition of PKCT efforts in the ongoing management of this aspect. Under OEH letter of 11th March 2011 (draft notice of Variation of EPL Licence 1625), PRP U4 was closed.

At present, a new draft of the management plan is with OEH together with a June 2011 report from PKCT's consultant, Biosphere P/L.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.7 Visual Amenity

3.7.1 Consent Condition

Lighting Emissions

15. The Proponent shall:

- (a) ensure no external lights shine above the horizontal;
- (b) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version, and
- (c) take all reasonable and feasible measures to mitigate off-site lighting impacts from the project to the satisfaction of the Director-General.

Landscape Management Plan

16. The Proponent shall prepare and implement a Landscape Management Plan to the satisfaction of the Director-General. This Plan must:

- (a) be submitted to the Director-General for approval within 12 months of this approval, or as otherwise agreed by the Director-General; and
- (b) include;
 - o details of screening trees to be planted on the road receive earth bund and along the northern site boundary; and
 - o an implementation program.

3.7.2 Compliance Statement

PKCT is not aware of any off site lighting impacts. Since PKCT commenced operations in 1990, there has been no community complaints made associated with lighting. Should any reports or complaints be received on this topic, PKCT will take immediate action to assess and resolve the matter. A consultant, Lightpoint Consulting Services, was engaged In June 2011 to undertake a review of site lighting and an assessment against the standard.

A Landscape Management Plan was included in the AEMR submission to DPI in July 2010. This document included details of proposed tree planting. Implementation is staged and processed through PKCT's project approval process. Work undertaken in the reporting period is outlined in Section 4.3.2 herein.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.8 Greenhouse & Energy Efficiency

3.8.1 Consent Condition

Operating Conditions

17. The Proponent shall implement all reasonable and feasible measures to minimise:

- (a) energy use onsite; and
- (b) greenhouse gas emissions from the project to the satisfaction of the Director-General.

Greenhouse and Energy Efficiency Plan

18. Within 12 months of this approval or as otherwise agreed by the Director-General, the Proponent shall prepare and implement a Greenhouse and Energy Efficiency Plan for the project. This plan must:

- (a) be prepared generally in accordance with the *Guidelines for Energy Savings Action Plans* (DEUS 2005, or its latest version);
- (b) be submitted to the Director-General for approval;
- (c) include a program to estimate/monitor greenhouse gas emissions and energy use generated by the project;
- (d) include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the project;
- (e) describe how the performance of these measures would be monitored over time; and
- (f) report on the project's greenhouse gas emissions and minimisation measures in the AEMR to the satisfaction of the Director-General.

3.8.2 Compliance Statement

In accordance with Condition 18, a Greenhouse Gas & Energy Efficiency Management Plan MP.HS.461 was included in the 0910 AEMR submission to DPI. The plan outlines the monitoring and management processes in place, including PKCT's Energy Savings Action Plan (established under the Energy Administration (Water and Energy Savings) Act 2005 and regulated by OEH).

The management plan also includes requirements under the National Greenhouse and Energy Reporting Act 2007 regulated by Department of Climate Change (federal). In this regard, key actions undertaken in the reporting period are as follows:-

- In accordance with legal advice, PKCT, having operational control, is deemed to be the reporting entity under the referenced legislation. Accordingly, PKCT is currently under the reporting threshold.
- A consultant was engaged to advise on applicable site activities and energy aspects and to develop a monitoring format. The format developed has been implemented. Though not reporting at this stage, PKCT is recording data and monitoring energy use and greenhouse gas generation (refer Attachment "M" & "N").

Neither EPL 1625 nor DPI Approval 08_0009 specifies criteria for GHG emissions or energy reduction. However, it is noted that Greenhouse Gases - Scope 1 and Scope 2 emissions are below the National Greenhouse and Energy Reporting (NGER) scheme reporting threshold. Attachments “M” and “N” provide data covering the reporting period. Data shows increased efficiency through higher throughput months. There was an incremental increase in calculated green house gas emissions (2.5%) comparable to a 1.6% increase in activity (tonnes loaded) over the reporting period (compared to the previous reporting period).

Findings/ recommendations made in AECOM P/L’s independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.9 Waste

3.9.1 Consent Condition

Operating Conditions

19. The Proponent shall:
- monitor the amount of waste generated by the project;
 - investigate ways to minimise waste generated by the project;
 - implement reasonable and feasible measures to minimise waste generated by the project; and
 - report on waste management and minimisation in the AEMR to the satisfaction of the Director-General.

3.9.2 Compliance Statement

PKCT’s Waste Management Plan MP.HS.460, submitted to DPI with 0910 AEMR, is in operation. The plan contains waste monitoring, assessment, reporting, mitigation and management provisions to ensure necessary actions and that waste from PKCT premises comply with the criteria in the condition above.

The objectives of this Management Plan are to:-

- Identify waste streams from PKCT normal operations.
- Review waste streams to identify opportunities to reduce waste generation.
- Categorise identified waste streams into reuse, recycle, recovery or disposal.
- Provide a framework for managing waste and educating staff to reduce disposal.
- Provide methodology for waste handling to ensure implementation of framework.
- Ensure availability of waste related data for the PKCT AEMR.

- Monitor the success of this management plan and continually improve it based on results.
- Ensure suitable PKCT Managerial review of the waste management process leading to consideration and/or implementation of suitable improvement opportunities.

Attachment “O” reports on the types and quantities of waste generated in the reporting period. The table shows there are a number of waste streams segregated for general or special disposal or recycling. Waste management activities undertaken in this reporting period and proposed are outlined in Section 4.3.2 and Section 4.3.3 respectively.

Findings/ recommendations made in AECOM P/L’s independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.10 Hazards

3.10.1 Consent Condition

Dangerous Goods

20. The Proponent shall ensure that storage, handling and transport of dangerous goods are done in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

3.10.2 Compliance Statement

PKCT is aware of all dangerous goods onsite and ensures personnel are suitably trained to handle these and that there is suitable site storage in accordance with AS1940 & AS1596. Actions which were reported in 0910 AEMR were as follows:-

- AS/NZS ISO 14001 surveillance audit carried out in February 2010 (undertaken by Lloyd’s Register Quality Assurance (LRQA) Ltd).
- Legal Compliance Audit carried out in June 2010 (undertaken by Environment Essentials P/L).
- Environmental Protection Plan has been developed generally in accordance with the Protection of the Environment (Underground Petroleum Storage Systems) Regulation 2008.
- Audits have identified some non conformances. Actions undertaken in this reporting period are referenced in Section 4.3.2

- During the reporting period ground water wells were installed and testing carried out together with testing to confirm tank integrity. A Dangerous Goods audit was also carried out. Further actions will be required in the next reporting period (refer Section 4.3.2 and 4.3.3).

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

3.11 Fire Control

3.11.1 Consent Condition

21. During the project, the Proponent shall:
 - (a) ensure that it maintains suitable equipment to respond to any fires onsite; and
 - (b) assist the fire and emergency services as much as possible if there is a fire onsite.
22. The Proponent shall ensure that it maintains a Fire Management Plan for the site.

3.11.2 Compliance Statement

PKCT has a Fire Management Plan in place which outlines the processes in place pertaining to fire management associated with PKCT operations.

Actions carried out in this reporting period and proposed relating to fire management are outlined in Section 4.3.2 and Section 4.3.3.

Findings/ recommendations made in AECOM P/L's independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009 (refer Section 4.4).

4. Environmental Management, Monitoring, Auditing and Reporting

4.1 Environmental Management

Condition 1 of Schedule 4 in the PKCT Major Project Approval 08_0009 contains requirements for environmental management. Table 4.1 identifies these and explains how PKCT complies.



Table 4.1 – Environmental Management Compliance

Environmental Management (Condition 1, Sch. 4)	Reference/Comment
The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:	Refer to the PKCT Environmental Management Strategy (EMS).
(a) be submitted to the Director-General within 12 months of this project approval or otherwise agreed by the Director-General;	EMS was submitted to DPI by 31.7.10 as part of 0910 AEMR; also refer Section 9.2 of EMS.
(b) provide for the strategic context for the environmental management of the project;	Refer to Section 5 of the PKCT EMS.
(c) identify the statutory requirements that apply to the project;	Refer to Section 6 of the PKCT EMS.
(d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> • keep the local community and relevant agencies informed about the operation and environmental performance of the project; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the project; • respond to any non-compliance; • manage cumulative impacts; and • respond to emergencies; 	Refer to EMS Sections as follows: 11 11 11.3 7.6 7.3 8.1
(e) include an environmental monitoring program for the project that includes all the monitoring requirements of this approval;	Refer to Section 9 of the PKCT EMS.
(f) describe how the various incident and approval reporting requirements of the project would be integrated into a single reporting system; and	Refer to Section 9 of the PKCT EMS.
(g) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project.	Refer to Section 4 of the PKCT EMS.

4.2 Reporting

4.2.1 Consent Condition

Incident Reporting

2. Within 24 hours of detecting the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall notify the Department and other relevant agencies of the incident.
3. Within 21 days of notifying the Department and other relevant agencies of such an incident, the Proponent shall provide the Department and these agencies with a written report that:
 - (a) describes the date, time, and nature of the incident;
 - (b) identifies the cause (or likely cause) of the incident;
 - (c) describes what action has been taken to date; and
 - (d) describes the proposed measures to address the incident.



4.2.2 Compliance Statement

Requirements associated with this condition have been referenced in the Environment Management Strategy MP.HS.64 and PKCT’s Event Management procedure. There were no reportable incidents in the reporting period.

4.3 Annual Reporting

Condition 4 of Schedule 4 in the PKCT Major Project Approval 08_0009 contains requirements for annual reporting. Table 4.2 identifies these requirements and explains how PKCT complies.

Table 4.3 – Environmental Management Compliance

AEMR Consent Condition (Condition 4, Schedule 4)	AEMR Section
Within 12 months of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and all relevant agencies. This report must:	N/A
(a) identify the standards and performance measures that apply to project;	4.3.1
(b) describe the works carried out in the last 12 months;	4.3.2
(c) describe the works planned to be carried out in the next 12 months;	4.3.3
(d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;	4.3.4
(e) include a summary of the monitoring results for the project during the past year;	4.3.5
(f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> • impact assessment criteria/limits; • monitoring results from previous years; and • predictions in the EA or other documents listed in condition 2 of schedule 2; 	4.3.6
(g) identify and discuss all exceedances of approval and licence conditions and other applicable standards and performance measures;	4.3.7
(h) identify any trends in the monitoring results over the life of the project;	4.3.8
(i) identify any non-compliance during the previous year; and	4.3.9
(j) describe what actions were, or are being, taken to ensure compliance.	4.3.10

4.3.1 Environmental Standards & Performance

The environmental standards and performance requirements applicable to PKCT’s operations are specified in the Environment Management Strategy and associated management plans.

PKCT’s EPL 1625 and DPI Approval 08_0009 are the primary statutory instruments.

Noise

EPL 1625 & Major Project Approval 08_0009 control noise emissions from PKCT’s premises. Noise criteria is outlined in Section 3.1.1.



Air Quality

EPL 1625 contains a requirement for dust monitoring but there are no specified limits for dust, or other air quality, emissions. The EPL does require the following:

- O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- O3.2 Activities occurring in or on the premises must be carried out in a manner that will minimise the generation or emission, of wind blown or traffic generated dust.

Major Project Approval 08_0009 does contain air quality criteria which are outlined in Section 3.3.1.

Surface Water

The Protection of the Environment Operation (POEO) Act 1997 sets requirements and controls regarding pollution of the environment. Section 120 of this Act confirms it is an offence to cause or permit pollution of any waters. PKCT is required to comply with this requirement, however PKCT’s EPL 1625 provides site specific water pollution permissions and requirements relating to their activities.

EPL 1625 Water Quality Limits

Pollutant	Unit of Measure	100 Percentile Concentration Limit
Oil and Grease	Milligrams per litre	10
pH	pH	6.5-8.5
Total Suspended Solids (TSS)	Milligrams per litre	50

However, in the event that rainfall, at the PKCT premises, exceeds a total of 90mm over a consecutive 5 day period the EPL permits exceedance of the TSS limit in Table 5.1 but only if the TSS discharge does not exceed a 5 day average of 100mg/l. Condition 12 of Schedule 3 of Major Project Approval 08_0009 also specifies a surface water standard for PKCT activities. The following extract identifies the control.

DPI Approval 08_0009 Water Quality Condition

SURFACE WATER

Discharge Limits

12. Except as may be expressly provided in an EPL for the project, the Proponent shall comply with Section 120 of the *Protection of the Environment Operations Act 1997*.

This replicates PKCT’s surface water requirement under the POEO Act and is therefore controlled by EPL 1625.

The Water Management Plan MP.HS.462 references applicable legal and other requirements.

Attachment “J” and “K” provide water quality results from PKCT’s EPL licenced discharge point. The results indicate the following:-

(a) 98% compliance for total suspended solids (one sample of sixty recorded a marginal exceedance). Attachment “J” highlights an improvement trend with water quality well within the EPL limit.

(b) Since commencement of recycled water use at PKCT, pH has been found, at times, to be outside EPL limits potentially due to the increased nutrient levels in collected water. Monitoring is continuing in consultation with OEH to ascertain the cause and determine appropriate actions. Consultant advice indicates that periodic discharge, usually during storm conditions, of water with elevated pH doesn’t adversely impact on receiving waters (refer Attachment “P”).

GHG & Energy Use

EPL 1625 does not include any requirements relating to GHG emissions or energy use.

Major Project Approval 08_0009 has requirements relating to GHG and energy efficiency but does not set any prescriptive controls. Condition 18 of Schedule 3 requires the following.

Include a framework for investigating and implementing measures to reduce greenhouse gas emissions and energy use at the project.

Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461 references applicable legal and other requirements.

Waste

EPL 1625 does not include any standards or performance measures relating to waste.

Major Project Approval 08_0009 has requirements relating to waste but does not set any prescriptive controls. Condition 19 of Schedule 3 requires the following.

Implement reasonable and feasible measures to minimise waste generated by the project.

Waste Management Plan MP.HS.460 references applicable legal and other requirements.



4.3.2 Activities During Reporting Period

N.b this section reports on actions referenced in the previous AEMR for this reporting period.

1011 AEMR Action	Action Status
Environmental Monitoring	
Carry out the required environmental monitoring as outlined in the Environmental Management Strategy.	Complete- monitoring carried out over period (n.b. MP.HS.464 Table 9.1) <ul style="list-style-type: none"> • air quality- EPL dust deposition (refer Attachment “G”) • air quality- continuous dust monitors (refer Attachment “G”) • water discharges- EPL water quality limits (refer Attachment “K”) • recycled water- water quality (refer Attachment “I”) • recycled water- water usage (refer Attachment “I”) • electricity- usage (refer Attachment “N”) • greenhouse gas- generation (refer Attachment “M”) • noise- DPI Approval 08_0009 and EPL (refer Attachment “A”) • activity- shiploading and receivals data (refer Attachment “B”) • rainfall- EPL (refer Attachment “H”) • national pollution inventory report(submitted to OEH on 29th September 2011) • Green and Golden Bell Frogs- (refer Attachment “R”) • Complaints-(refer Attachment “C” &”P”) • Incidents-(refer Attachment “C”) • Cooling Tower- (refer Attachment “Q”)
Noise	
Continue noise surveys in accordance with the Noise Management Plan.	Noise surveys- refer Attachment “A”
Traffic and Transportation	
Continue to monitor application of Drivers Code of Conduct Implementation Plan.	Refer Attachments “C” and “D” and Section 3.3.2
Continue the truck wash effectiveness review, develop and implement improvements action through a staged process.	With reference to Section 6.1.2, a project scope has been developed to upgrade the north truck wash and is proceeding through the project approval process.

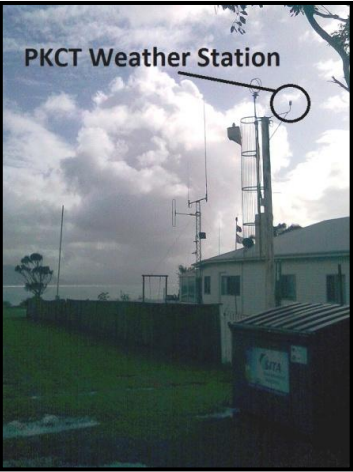
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Air Quality	
Further refine the air quality methodology as it is implemented in the Air Quality Management Plan.	Investigative work has proceeded during the reporting period with some improvement options identified and to be progressed in the next reporting period.
Progress PKCT's Dust Management Improvement project, which is included in the 2010/11 Business Plan.	Dust Improvement Management Strategy was developed during the reporting period which involved the following:- <ul style="list-style-type: none"> • Benchmarking with other coal terminals • Reviewing previous dust studies which have been undertaken • Reviewing air quality data • Reviewing agglomeration chemicals available on the market and their suitability for use as a dust control. • Considering site dust sources and developing a methodology for ranking improvement options • Developing a staged improvement plan entailing some immediate works to be progressed in FY12 together with further investigative work to develop further stages.
Continue to participate in Port Users Group investigating dust fallout from the industrial precinct.	A study into particulate fallout was carried out by air quality consultants (Ecoengineers, NH2 Dispersion Scientists and Prominco P/L) and completed in August 2010. PKCT is continuing to liaise directly with car industry port users operating adjacent to PKCT's premises.
Upgrade Early Warning Wind System. 	<ul style="list-style-type: none"> • Early wind warning system has been upgraded with work completed in July 11. • Upgrade entailed installation of a weather station replacing the existing anemometer at Crook haven Heads, Nowra. • System will now convey weather data continuously to PKCT's computer control system and will provide an hour warning of severe southerly fronts travelling up the coast. • Data will be available to Main Control Room personnel monitoring site operations and controlling dust suppression spray systems.


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<p>Obtain a replacement, improved water cart.</p>	<p>New water cart purchased and delivered in April 2010</p> 
<p>Surface Water</p>	
<p>Develop improvement actions from the Water Collection System review carried out in accordance with OEH EPL Pollution Reduction Plan and implement.</p>	<p>With reference to Section 3.5.1 and Attachment "P", work carried out in the reporting period includes:</p> <ul style="list-style-type: none"> • Water quality monitoring undertaken on potable water and recycled water supplies and surface water runoff to check for any adverse impacts. • Consultant, Cardno P/L, carried out a Surface Water Systems review to assist PKCT in identifying performance improvements to the water collection system. • A study (PKCT Aquatic Plants and Algae Study) was undertaken by consultant, Cardno Ecology Lab, in December/ January 2011 to investigate algae which is appearing in some collection ponds, most notably in the settlement lagoon. Algae levels was identified as a possible cause of elevated pH in settlement lagoon discharges. • Ultrasonic algae control device was installed in March 2011 as a trial. This trial is continuing together with associated algae and pH testing to assess effectiveness. • PKCT's investigation of algae, pH and system reliability is being progressed in consultation with OEH. A pollution reduction program PRP 9 (refer Attachment "P") has been established to cover this work. At present, these aspects aren't causing harm to harbour environs. The algae is a fresh water algae and elevated pH is periodic, generally occurs during storm conditions and is mitigated by the buffering effect of receiving waters.


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<p>Progress further potable water savings through PKCT's Water Savings Action Plan and submit an annual Water Savings Action Plan status report in December 2010.</p>	<p>Water Savings Action Plan December 2011 report submitted to OEH on 17th December 2011. PKCT is continuing to consolidate potable water usage through the effective use of recycled water and further gains were achieved across the reporting period (refer Section 3.5.1).</p>
<p>Review recycled water quality monitoring results since commencement of use and check against the initial risk assessment to evaluate control effectiveness and identify any further actions required.</p>	<p>A review of Recycled Water use is being undertaken by consultant, Water Futures, to assess implementation and to validate effectiveness of controls. This review has verified the successful implementation of the recycled water project. This work included a review of the PKCT's Recycled Water Quality Management Plan and was carried out with Sydney Water's involvement (the recycled water supplier). A draft report is currently under review and includes some improvement recommendations.</p>
<p>Biodiversity</p>	
<p>Revise and finalise Green and Golden Bell Frog Management Plan with OEH.</p>	<p>Refer Section 3.6.2</p>
<p>Carry out spring surveys onsite and at the Greenhouse Park habitat to monitor frog activity.</p>  <p>Extract from Illawarra Mercury March 11</p>	<p>Further to the above, work has progressed during the reporting period as follows:-</p> <ul style="list-style-type: none"> • Internal and external (with consultant) surveys are undertaken periodically by PKCT. An internal survey on 14.10.10 identified croaking in a reed clump in the settlement lagoon but there were no sightings. An external survey on 16.12.10 included a tadpole trawl and site inspection. No tadpoles were found though one GGBF was sighted. • Symbio Wildlife Park has continued to promote GGBF conservation and increase community awareness through its GGBF display. • OEH facilitated a frog husbandry training day on the 21st June 2011 at Symbio Wildlife Park. The course was attended by port user representatives including PKCT personnel. Information was provided on GGBF and frogs in general, their habitat, legal framework, precautions for frog handling. • First sighting of a GGBF was made at the Greenhouse Park habitat (PKCT/Wollongong City Council project) in March 2011.



<p>Visual Amenity/Landscaping</p>		
<p>Progress the landscaping improvement concept plan - scope the work and obtain approval for staged implementation.</p>	<p>Work progressing associated with stage to the northern area.</p> <div style="display: flex; justify-content: space-around;">   </div>	
<p>Greenhouse Gas and Energy Efficiency</p>		
<p>Progress energy savings through PKCT's Energy Savings Action Plan.</p> 	<p>With reference to Section 2.7.2, the new mobile ship loading system for the Bulk Products Berth has been assessed as being more efficient than the old system which has been demolished. A 15% energy saving has been estimated, in the order of 20,000 KWhrs per annum. Though this is a small reduction across overall plant usage, it illustrates the opportunities available when procuring new equipment and undertaking upgrades.</p>	
<p>Continue to check operations and greenhouse gas emissions versus threshold for reporting to the OEH.</p>	<p>Refer Attachment "M". PKCT remains below the OEH reporting threshold.</p>	

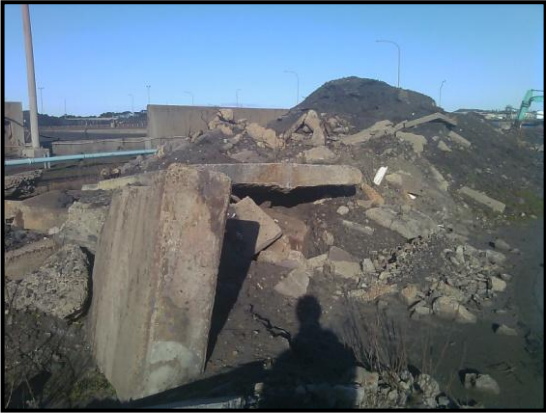

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Waste	
<p>Review historical waste data, evaluate trends and the adequacy of current data capture.</p>	<p>Capital and remedial project work has been increasing in scale in recent years and together with the associated wastes. Attachment “O” includes these waste streams. Review of waste data indicates improvement is needed in tracking some waste streams. This will be addressed in the next reporting period.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>before- accumulated project waste</p> </div> <div style="text-align: center;">  <p>after- collection, recycling, disposal</p> </div> </div>
<p>Complete coal spillage screening projects and return to coal shipper for despatch.</p>	<p>9,373 tonnes of coal spillage screened for reuse in the first quarter of the reporting period. Spillage screening scheduled for the last quarter was deferred due to operational conflicts and wet weather.</p>
<p>Building alterations including removal of materials containing asbestos.</p>	<p>Two projects carried out during the reporting period entailed asbestos removal as follows:-</p> <ul style="list-style-type: none"> • Amenities Building and Projects Office modifications- 3.2 tonnes removed • Bulk Products Berth demolition- 8.5 cubic metres removed <p>Quantities of waste removed are included in Attachment “O”</p>

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Engage a consultant with necessary expertise to assist PKCT in implementing improvements in hydrocarbon management in the area of spill avoidance and sound site practices, maintenance of spill equipment and developing instructions on associated site requirements.

Transpacific carried out a comprehensive site audit of waste management practices in November 2011 and identified a number of improvement opportunities. Recommendations have been reviewed and actions prioritised.

Initial cleanup of workshop and store surrounds undertaken.

Installation of 3R waste management system entailing additional recycling bins to segregate oil filters, grease cartridges and fluorescent lights.



Continue spillage reduction review.



A facility assessment was carried out by Consultant, MHO (Materials Handling Optimisation), to identify causes of spillage associated with the materials handling system and potential solutions for reducing the causes of the spillage events. This assessment has facilitated preparation of a project initiation application to progress work in FY12 focussing on the following identified areas:-

- Control of peak surging in out load stream to eliminate spillage from overloaded belts
- Reduction of Carry Back Material (including the wharf) of NC14 Conveyor
- Site wide Belt Cleaning Inefficiencies including accessibility, serviceability and fit for service components
- Ship Loader On Board Water
- Ship Loader Boom Conveyor Head End Sealing and Belt Cleaning Improvements

During the reporting period a profile plate was installed on NC11/NC12 transfer to control material flow, prevent overloading and reduce spillage (see photo adjacent).



Fire Control Improvements	
Develop a project for continued improvement of fire panel communications to increase the operator's ability to monitor the fire system and undertake system isolations.	Consultant, Acor Consultants P/L, has undertaken a market review of equipment/ system options and provided a report with recommendations. A project approval document is in preparation and will be progressed in the next reporting period.
Develop a project to upgrade fire detection for the water deluge system in Transfer Station 2.	Transfer Station 2 complete. Upgrade was extended to TS4 which is 90% complete.
Continue gas suppression Inergen cylinder 10 year replacement.	10 year Inergen cylinder replacement program was completed during the reporting period. The gas suppression services PKCT's electrical equipment rooms.
Dangerous Goods	
Audits have identified some non conformances. Actions are in progress and will be completed in the first quarter of 2010/11 reporting period.	<p>Signage / spill kits upgraded and an emergency shut off switch installed.</p> <p>Further work undertaken as follows:-</p> <p>Consultant, GHD, carried out the following work covering the underground fuel storage tanks:-</p> <ul style="list-style-type: none"> • Contamination assessment of PKCT's underground tanks- completed in January 2011. • Installation of ground water monitoring wells and testing. • Development of a new Environment Protection Plan for the tanks to meet regulatory requirements. <p>Consultant, Advitech, carried out a Dangerous Goods audit to check against compliance against the Dangerous Goods regulations.</p>
Independent External Audit	
Engage consultant for March 2011 and complete audit to schedule.	AECOM P/L carried out an independent external audit in accordance with DPI approval conditions (refer Section 4.4).
EPL Administration	
Continue to administer the EPL, complete annual return, progress pollution reduction programs.	EPL Annual Return forwarded to OEHL on the 26 th May 2011 (n.b. extract in Attachment "P")

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Community Relations	
Continue Community Consultative Committee actions.	<p>PKCT Community Consultative Committee is in operation. Meetings were held on the 1st September 2010, 1st December 2010 and the 13th April 2011 during the reporting period. Work is progressing with the northern Landscaping project (Stage 2) (refer above). Committee members were involved in determining the scope.</p> <p>A community survey was conducted in December 2010 by Iris Research Ltd.</p>
PKCT Strategic Planning	
PKCT planning to ensure PKCT has the capacity and capability to meet customers' future needs.	<p>During the reporting period, a Preliminary Environmental Assessment (PEA) was carried out by Cardno on PKCT's behalf as part of future planning and submitted to DPI under cover of PKCT's letter of 15th June 2011. This assessment identified and reported on the key environmental aspects. Primary aspects were identified as follows:-</p> <ul style="list-style-type: none"> • Noise • Air Quality • Dredging • Contamination • Greenhouse Gas and Energy Efficiency <p>The PEA provided information on options for potential upgrades and concluded that environmental impacts would be satisfactorily managed. These studies also provide useful baseline information in managing environmental obligations.</p>



4.3.3 Activities Proposed for the Next Reporting Period

1112 AEMR Action	
Independent External Audit- March 11	
<ul style="list-style-type: none"> • Report to DPI by 10th August 2011 on audit findings recommendations; advise of proposed and completed actions. • Progress implementation of audit actions to completion. N.B many of the actions will pertain to the aspects listed below. 	
Environmental Monitoring	
<ul style="list-style-type: none"> • Carry out the required environmental monitoring as outlined in the Environmental Management Strategy MP.HS.464. 	
Noise	
<ul style="list-style-type: none"> • Continue noise surveys in accordance with the Noise Management Plan MP.HS.387. 	
Traffic and Transportation	
<ul style="list-style-type: none"> • Continue to monitor application of Drivers Code of Conduct Implementation Plan MP.BM.453. • Progress the truck wash upgrade through the project approval process and complete OEH Pollution Reduction Program 10- Environmental Improvement Program: Evaluate Truck Wash Performance. 	
Air Quality	
<ul style="list-style-type: none"> • Further refine the air quality methodology as it is implemented in the Air Quality Management Plan MP.HS.387 giving consideration to the following: <ul style="list-style-type: none"> ○ Replacing the Corrimal St residential site with another less vulnerable to local dust sources and compliant with the applicable Australian Standard for siting dust deposition gauges. ○ Establishing another continuous dust monitor on the residential boundary. ○ Continuing to investigate petrographic and other techniques for differentiating dust sources impacting on residential areas. ○ Revising dust gauge locations to improve data capture of dust fallout impacting on the car industry operating adjacent to PKCT's site. ○ Enhancing site operational controls by using the continuous dust monitors to raise alerts when dust levels approach air quality triggers. ○ Investigating use of dust monitors to better evaluate on site dust sources and quantify emissions e.g. exhaust from ventilation systems. • Progress PKCT's Dust Management Improvement project, which is included in the 2011/12 Business Plan, through the project approval process with consideration to the following:- <ul style="list-style-type: none"> ○ Installation of moisture meters on the road and rail receival streams as the initial stage for implementation of dust extinction moisture management. 	

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- Continue to collect coal and bulk product data from shippers to determine material handling properties such as dust extinction moisture and dustiness.
- Progress the north truck wash upgrade project as described above.
- Pave the northern transfer station area (currently unsealed) and a potential source of fugitive dust emissions.
- Investigate use of a weather station (wind speed and evaporation) to control stockpile spray operations.

- Continue to participate in Port User Group investigating dust fallout from the industrial precinct and liaise with car industry neighbours.

Surface Water

- Progress actions under OEH EPL Pollution Reduction Program PRP9- Performance Upgrades to the Stormwater Pollution Control System, the key aspects of which are as follows:-
 - Continue to monitor pH and algae and assess the value of the ultrasonic algae controller in operation in the settlement lagoon.
 - Progress dosing unit improvements identified in FY11 reporting period through the project approval stage and implement.
 - Investigate improvements in stockyard and spillage management to reduce the sediment load on collection ponds.
 - Investigate improvements to collection pond infrastructure to facilitate easier sediments removal.

- Progress further potable water savings through PKCT's Water Savings Action Plan and submit an annual Water Savings Action Plan status report in December 2011.

- Implement actions identified by consultant, Water Futures, in its review of the implementation of the Recycled Water Project.

Biodiversity

- In consultation with OEH, finalise the Green and Golden Bell Frog Management Plan MP.HS.502 and verify the agreed strategy for the northern port precinct. Actions which pertain are as follows:-
 - Remove reed clumps in the settlement lagoon and confirm alternative arrangements.
 - Confirm arrangements for frog removal, if sighted and at risk.
 - Investigate options for establishing on site support from Symbio Wildlife Park if needed e.g. Bell frog microchipping.
- Undertake frog surveys, in particular spring surveys at Greenhouse Park to follow up on the bell frog sighting in March 2011.

- Carry out spring surveys onsite and at the Greenhouse Park habitat to monitor frog activity.

Visual Amenity/Landscaping

- Progress landscaping improvements as follows:-
 - Further progress northern landscaping improvements (Transfer Station 2 area)- Stage 2
 - Review Stage 3 once Stage 2 is completed.

- Review the findings/ recommendation of consultant, Lightpoint Consulting Services, and undertake actions as appropriate.

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Greenhouse Gas and Energy Efficiency

- Progress energy savings through PKCT’s Energy Savings Action Plan as follows:-
 - Continue to consider energy savings and green house gas reduction opportunities when developing improvement and remedial projects.
 - Consider saving opportunities in the project scope for the Administration Building refurbishment/air conditioning upgrade.
 - Investigate use of bio fuels for mobile plant operations.
 - As part of PKCT strategic planning which is giving consideration to growth options and plant upgrades, undertake a Greenhouse Gas and Energy Savings Review.
- Continue to check operations and greenhouse gas emissions versus the threshold for reporting to the OEH.
- Investigate and identify actions and arrangements which will need to be put in place if the threshold is reached.

Waste

- Continue the staged review and implementation of waste improvements identified in Transpacific’s review of PKCT’s waste management.
- Monitor waste data, evaluate trends and the adequacy of current data capture.
- Complete coal spillage screening projects and return to coal shipper for despatch.
- Continue spillage reduction review.

Fire control improvements

- Progress the fire panel communications project to increase the operator’s ability to monitor the fire system and undertake system isolations.
- Progress fire protection upgrade for the north and south sub station.
- Complete upgrade of the fire detection for the water deluge system in Transfer Station 4.
- Consult with the NSW Fire Brigade to introduce an annual PKCT/ Fire Brigade review of the adequacy of site coordination and interface arrangements in case of a fire.

Dangerous Goods

- Finalise the new Environmental Protection Plan developed by consultant, GHD, during the reporting periods and carry out recommended actions associated with PKCT’s underground storage tanks.
- Consider the findings of consultant, Advitech, from the firm’s review of site’s dangerous goods storage against applicable legal standards and associated guidelines and implement actions as appropriate.

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EPL Administration

- Continue to administer the EPL, complete annual return, progress pollution reduction programs.

Community Relations

- Continue Consultative Committee actions.

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4.3.4 Summary of Complaints

Complaints received during the reporting period entail the following:

- (a) Complaints associated with PKCT site operations are outlined in Attachment "P".
- (b) Complaints to road transport providers are outlined in Attachment "C" and "D".

4.3.5 Summary of Monitoring Results

This section references data in response to consent condition 4(e) in Schedule 4 of 08_0009 Major Project Approval.

Summary of monitoring data is provided in the Attachments. Table of Contents provides a list and page references. A list cross referencing various environmental aspects with results is provided as follows:-

- Noise - refer Attachment "A", Noise Surveys provided as separate documents.
- Coal & Bulk Products Road Transport - refer Attachments "B", "C" and "D".
- Air Quality - refer Attachments "G" and "P"; summary data from Katestone Air Quality Report: July 010-June 2011 provided therein.
- Meteorological Monitoring - refer Attachment "H".
- Surface Water - refer Attachments "J", "K" and "P".
- Biodiversity (GGBF) - refer Attachment "R".
- GHG & Energy Efficiency - refer Attachments "M" and "N".
- Waste - refer Attachment "O".
- Water Savings - refer Attachment "I".

4.3.6 Analysis of Results

Noise

Noise surveys determined that PKCT noise levels were within the noise criteria in EPL 1625 and DPI Approval 08_0009. As these criteria are taken from predictions in the Environmental Assessment (EA) for Major Project 08_0009, PKCT noise emissions were in accordance with predictions in the EA.

Coal & Bulk Products

PKCT did not receive more than 7.5 million tonnes of coal and bulk products by public road during the reporting period. This accords with approval thresholds in Major Project Approval 08_0009 and the EA. EPL 1625 has no criteria for product receipt.

Air Quality

With reference to Section 3.3 and Attachments “F”, “G” and “P”, comparison of air quality measures at residential sites against the air quality criteria in the DPI Approval 08_0009 indicated the following:-

(a) Continuous dust

- annual average for PM10 and TSP was within the air quality criteria.
- 24 hour average exceedances occurred for both PM10 and TSP. PKCT’s contribution was generally assessed from no to minor contribution.

(b) Dust deposition-

- Annual average dust deposition at the Vikings Oval and Church St site were within the air quality criteria.
- Annual average dust deposition at the Corrimal St site exceeded the air quality criteria but the results are questionable as outlined herein.

As PKCT is a minor contributor to these exceedances, the actual air quality impacts accord with the predictions in the EA. EPL 1625 does not contain any air quality criteria.

Surface Water

As outlined in Attachment “P”, EPL exceedances occurred from the settlement lagoon licenced discharge point and corrective actions are progressing through the referenced Pollution Reduction Plan PRP 9.

Attachment “K” provides water quality data for settlement lagoon discharges which occurred over the July 2010 - June 2011 (Note: Attachment “P” reports to 31.3.2011). Test results over this period indicated the following:-

- Apart from a marginal exceedance from one sample, total suspended solids and oil and grease were well within EPL limits.
- 16 samples recorded a pH reading outside the EPL range (26%).



Major Project Approval 08_0009 does not contain any criteria for water quality as it relies on the EPL 1625 controls. The EA identifies that the PKCT water management system is appropriate for its onsite activities and uses EPL 1625 controls as the primary document for water quality predictions. Therefore, the actual water quality results accord well with the DPI Approval and EA predictions as there were only minor exceedances.

GHG & Energy Efficiency

Neither EPL 1625 nor DPI Approval 08_0009 specifies criteria for GHG emissions or energy reduction. However, it is noted that:

- Greenhouse Gases - Scope 1 and Scope 2 emissions were below the National Greenhouse and Energy Reporting (NGER) scheme reporting threshold.
- Electricity – PKCT continue to seek opportunities to reduce electricity use, refer Section 4.3.8
- Whilst GHG emission calculations are not exact, the Scope 1 and Scope 2 emissions calculated by the August 2009 PKCT NGER report correspond with that calculated.
- GHG predictions in Attachment “M” of the EA compared against emissions across the reporting period indicate the following:-
 - Increased emissions associated with increased throughput
 - Improved efficiency (KWhr per tonne)

Financial Year	Annual KWhrs	Annual Throughput	KWhrs per tonne
2005/06 (EA)	17,919,579	10,982,265	1.63
2010/11	22,667,573	14,365,693	1.58

Water Savings

Neither EPL 1625 nor DPI Approval 08_0009 contains quantitative criteria for potable water use or reduction. However, the DPI Approval requires PKCT to investigate opportunities to reduce water use. Attachment “I” and “P” shows the significant reduction in potable water achieved through the commencement of recycled water use. A reduction in overall water usage was also recorded.

This outcome is consistent with water use predictions in the EA and accords with the DPI Approval condition.

4.3.7 Justification of Exceedances

Air Quality

With reference to Section 3.3 and Attachments “F”, “G” and “P”, analysis of the air quality data indicated that PKCT was a minor contributor to 24 hr exceedances. Dust deposition at the Corrimal Street site continues to be out of step with other residential sites including a new one which is located at Ross St and is in close proximity.

The air quality methodology used to assess PKCT’s compliance with DPI TSP and PM10 criteria is new and entails an assessment which involves differentiating PKCT from other dust sources. Also, data from PKCT’s northern continuous dust monitor is used in this assessment. This monitor is located midway between PKCT and the nearest residential boundary.

Water Quality

pH exceedances are considered a minor negative when viewed in terms of the significant environmental improvement associated with the introduction of recycled water use which would otherwise have formed part of Sydney Water’s ocean discharges.

4.3.8 Monitoring Trends

Water Savings - introduction of recycled water use has established a significant improvement trend of reduced potable water consumption (refer Attachment “I”). This has continued over the reporting period. This reporting period resulted in a further reduction in potable water usage (the lowest on record).

Settlement Lagoon Discharges (EPL limits) - improvement trend observed over the reporting period associated with total suspended solids though still not 100% compliant (refer Attachments “K” and “P”). Average total suspended solids over all samples taken are 14 milligrams per litre which is well with the EPL limit (50 mg/litre). The number of pH exceedance has significantly increased as have algal counts.

Electricity Usage - Attachment “N” shows that electricity usage follows throughput closely at high throughputs though it does not drop off proportionally at lower throughputs. At lower throughputs, times when conveyor systems are running with less or no product on the belt may be more frequent. This may be more likely for the road receipt system if truck deliveries are light.

Data collection associated with the Drivers Code of Conduct Implementation Plan included complaints. Attachment “C” shows that community complaints were primarily to do with truck speed. The number of complaints reported by road transport companies was less for FY11 compared to the previous (39 to 19).

4.3.9 Identification of Non-Compliances

EPL non compliances are referenced in Attachment “P” and are primarily associated with pH exceedances. Attachment “K” provides pH results from settlement lagoon overflow samples and the times when pH was found to be outside the OEH EPL range (also refer Section 4.3.8 - Surface Water).

4.3.10 Actions to Reduce Exceedances

- Surface Water - EPL settlement lagoon discharges - refer Attachment “P” which outlines actions, which are progressing.
- Dust Emissions - PKCT assessed as being a minor contributor; Dust management project forms part of the 2015 strategic Business Plan (Note: Section 3.3.2 and 4.3.3 seeking to achieve dust improvement).

4.4 Independent External Audit

4.4.1 Consent Condition

5. By 31 March 2011, and every 3 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Director-General;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant EPL (including any strategy, plan or program required under these approvals); and
 - (d) review the adequacy of strategies, plans and/or programs required under these approvals; and, if appropriate,
 - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy, plan or program required under these approvals.

Note: This audit team should be led by a suitably qualified auditor, and include experts in the field of noise, air quality and traffic management.

6. Within 6 weeks of completing this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General with a response to any recommendations contained in the audit report.
7. Within 3 months of submitting the audit report to the Director-General, the Proponent shall review and if necessary revise the strategies/plans/programs required under this approval, to the satisfaction of the Director-General.

4.4.2 Compliance Statement

In accordance with Schedule 4, Condition 5 of DPI approval, an independent external audit was undertaken by AECOM P/L in March 2011. A report was submitted to the DPI on the 10th May 2011 under cover of PKCT’s letter of the 10th May 2011. PKCT is reviewing the

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audit findings and recommendations and is required to submit a report to DPI by 10 August 2011 advising on actions (completed and proposed).

4.5 Access to Information

4.5.1 Consent Condition

8. Within 3 months of the approval of any strategy/plan/program required under this approval (or any subsequent revision of these strategies/plans/programs), or the completion of the audits or AEMR, required under this approval, the Proponent shall:
 - (a) provide a copy of the relevant document/s to the relevant agencies;
 - (b) place a copy of the document/s on its website; and
 - (c) remove superseded copies of strategies/plans/programs from its website.
9. During the project, the Proponent shall:
 - (a) make a summary of monitoring results required under this approval publicly available on its website; and
 - (b) update these results on a regular basis (at least every 6 months).

4.5.2 Compliance Statement

Condition 8 - Documents were published to PKCT's web site during the reporting period as follows:-

- 0910 Annual Environment Management Report
- Interim Environment Management Report December 2010
- Water Management Plan MP.HS.462
- Environment Management Strategy MP.HS.464
- Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461
- Landscape Management Plan MP.HS.470
- Green and Golden Bell Frog Management Plan MP.HS.461

Condition 9 – 1011 AEMR and an Interim Environment Management Report (covering the first six months of the reporting period) will be published within 3 months of the 30th June and 31st December respectively.

5. Environmental Protection Licence

PKCT hold Environmental Protection Licence 1625 under the Protection of the Environment Operations Act 1997. This stipulates emission criteria that PKCT must not exceed relating to applicable environmental aspects, in particular, water, noise and dust. Pollution Reduction



Studies and Programs (PRPs) are attached to the EPL to identify aspects which may require improvement. PKCT is required to submit an annual return to the Office of Environment and Heritage analysing performance against relevant criteria. 1011 EPL Annual Return was forwarded to OEH on the 26th May 2011.

5.1 EPL Annual Return Summary

Appendix “P” contains an extract from PKCT’s annual return for 10/11 (reporting period 1.4.10-31.3.11) reporting on compliance over the period. In summary, the following is noted:

- (a) there were some exceedances from PKCT’s Settlement lagoon EPL discharge point primarily associated with pH and the introduction of recycled water use to the site.
- (b) Work under PRP U3: Identify Options to Improve the Performance of the Stormwater Pollution Control System was completed and closed as PRP 8. A new PRP 9 Performance Upgrades to the Stormwater Pollution Control System was established under which further work is proceeding to establish the necessary controls (refer Attachment “P”). Work is progressing in consultation with OEH.
- (c) 2 complaints were received relating to dust.
- (d) PRP U2: PRP7 Green and Golden Bell Frog Management Plan MP.HS.509 was closed with associated actions complete. Following OEH feedback and site observations, the Green and Golden Bell Frog Management Plan was revised and submitted to OEH and is currently under consideration (refer Section 3.6 herein).
- (e) Noise surveys were compliant. Attachment “A” provides a summary of results.

6. PKCT Commitments

PKCT prepared a Statement of Commitments which forms part of the Environmental Assessment submitted to the DPI for the 08_0009 Major Project Application. The DPI accepted these commitments and they now form Appendix 2 of the consent for this Major Project approval. Table 6.1 identifies the PKCT commitments and the section of this AEMR, which describes how PKCT will comply.

Table 6.1 – PKCT Commitments & AEMR Section

Specific Environmental Condition	AEMR Section
Traffic & Transportation	6.1
Air Quality	6.2
Water Management	6.3
Noise Management	6.4



Community Relations	6.5
Environmental Monitoring	6.6
Environmental Management System	6.7
Greenhouses Gases	6.8
Landscaping	6.9
Flora & Fauna	6.10
Waste	6.11

6.1 Traffic & Transportation

6.1.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Transport of coal and bulk products to PKCT to be conducted in a manner which does not adversely impact on public safety or amenity of road users. Safety standards to be maintained by trucks following designated routes procedures. Internal PKCT roadways to be maintained to minimise coal and bulk products spillage and carry over onto public roadways. 	<ul style="list-style-type: none"> Public road haulage of coal and bulk products to PKCT will not exceed 10 million tonnes per annum. Publication of annual throughput tonnages, including in-loading method (i.e. road and rail received coal and bulk products). All trucks delivering coal and bulk products to PKCT must follow designated heavy vehicle transport routes. A driver's code of conduct will be utilised for all transport companies delivering product to PKCT. Review effectiveness of truck wash facilities to be undertaken. Unless further or alternative Approval for NRE No 1 Colliery at Russell Vale is in place, PKCT will only receive coal from the NRE No 1 Colliery if that coal has been dispatched from that Colliery by public road between the hours of 7am to 10pm Monday to Friday and 8am to 6pm Saturday and Sunday or Public Holidays.

6.1.2 Compliance Statement

Actions undertaken during the reporting period as follows:

- Public road deliveries of coal and bulk products did not exceed 7.5 mtpa and the details are included in this AEMR (refer Attachment 'B').
- The coal truck delivery route is as described and mapped in the Environmental Assessment for Major Project 08_0009. Trucks to PKCT do not deviate from this route.
- A Drivers Code of Conduct Implementation Plan MP.BM.453 approved by the DPI, is in place and operational.



- During the reporting period, a review of truck wash effectiveness was carried out by consultant, Renewed Water Solutions P/L. PKCT’s consultant, Portfolio Project Management has followed on from this work and developed an improvement strategy which is being progressed through PKCT’s project approval process. It has been found that the truck wash and road receival practices could be improved to further clean trucks and reduce dust and drag out onto exit roads. This work will be progressed in FY12 (refer Section 4.3.3).
- In accordance with Major project Approval 08_0009 and, as indicated in the Drivers Code of Conduct Implementation Plan, PKCT did not receive any coal from NRE No 1 Colliery at Russell Vale outside the approved hours. One complaint was received from a Bellambi Lane resident which was referred to Gujarat NRE. Gujarat NRE investigated the incident and reported that the truck was on personal business. Gujarat NRE took action to follow up with the resident and indicated that the incident would be included in a quarterly report to OEH.

Findings/ recommendations made in AECOM P/L’s independent audit undertaken in March 2011 are noted and actions are being progressed with the DPI in accordance with Project Approval 08_0009.

6.2 Air Quality

6.2.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> • Minimise dust emissions from activities carried out on the PKCT site. 	<ul style="list-style-type: none"> • Installation of two continuous dust monitors to monitor airborne dust emissions. • Maintain appropriate dust suppression systems onsite to effectively manage dust both on stockpiles and roadways.

6.2.2 Compliance Statement

PKCT’s two continuous dust monitors remain operational and these provide data used in air quality assessment.

PKCT has a preventative maintenance system in place (Works and Assets) which provides for the routine inspection and maintenance of environmental equipment including existing dust suppressions systems such as the stockpile sprays, truck wash and water cart. Operations shift teams monitor and operate the equipment and, where necessary, provide a breakdown response.



6.3 Water Management

6.3.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Minimise use of potable water onsite. Effective management of onsite stormwater. 	<ul style="list-style-type: none"> Reduction in freshwater use onsite to be achieved through the implementation of recycled water (Tertiary Treated Effluent) for dust suppression on stockpiles and other non domestic uses e.g. fire, spillage wash down, conveyor sprays. Staged approach to be implemented which will result in a 360 Megalitre per annum reduction by the end of 2010.

6.3.2 Compliance Statement

Recycled water use has continued during the reporting period. Attachment "I" provides water usage details. The target referenced in the commitment was based on a total annual usage of 510 megalitres (70% reduction) which was adopted in the 2006 Water Savings Action Plan.

Excellent results in 2011 have continued as follows:

- Total potable water usage was 89 megalitres, the lowest usage since PKCT commenced operation.
- Total water usage was 404 megalitres.
- Comparing to baseline total water usage of 510, 421 megalitres less potable water was used during the reporting period.

6.4 Noise Management

6.4.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Responsible management of PKCT site operational noise. 	<ul style="list-style-type: none"> Ensure that ongoing compliance is maintained to the New South Wales Industrial Noise Policy. Development and implementation of a noise management plan for the PKCT site.

6.4.2 Compliance Statement

Section 3.1.2 outlines actions taken during the reporting period. Noise Management Plan MP.HS.387 is in place which references the NSW Industrial Noise policy. Relevant PKCT site personnel have been made aware of the compliance requirement.



6.5 Community Relations

6.5.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> PKCT to be regarded as a responsible corporate citizen by the community. 	<ul style="list-style-type: none"> Continued operation of the PKCT Community Consultative Committee. Continued advertisement and operation of the telephone hotline.

6.5.2 Compliance Statement

Complaints received during the reporting period entail the following:

(a) There were two community complaints received during the reporting period (refer Attachment "P"). There were a number of contacts from a Bellambi Lane resident regarding trucks and the Drivers Code of Conduct pertaining to coal trucks leaving a coal shipper's mine site. Matters raised were conveyed to the coal shipper and truck transport provider. PKCT participated in communications with the complainant to address matters raised.

(b) Complaints to road transport providers are outlined in Attachment "C" and "D".

The following actions occurred during the reporting period:

- Community Consultative Committee met on 1st September, 1st December 2010 and the 13th April 2011.
- Consultant, IRIS Research, carried out a community perception survey in December 2010.
- PKCT web site (www.pkct.com.au) continues to include e-mail and phone contact details (communitylinks@pkct.com.au).

6.6 Environmental Monitoring

6.6.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> To ensure compliance to the conditions of PKCT's Department of the Environment and Climate Change licence. 	<ul style="list-style-type: none"> Development and implementation of a management plan which documents the environmental monitoring requirements for PKCT.

6.6.2 Compliance Statement

Environmental Management Strategy MP.HS.464 is in place and outlines monitoring requirements together with references to applicable management plans.



6.7 Environmental Management System

6.7.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> PKCT to maintain certification to ISO 14001. 	<ul style="list-style-type: none"> PKCT will continue to be certified to ISO 14001 and will be externally audited against the certification criteria on an annual basis.

6.7.2 Compliance Statement

During the reporting period, Lloyds carried out a surveillance audit (in December 2011). PKCT continues to hold certification to ISO 4001:2008 (refer Attachment “L”).

6.8 Greenhouse Gases

6.8.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Minimise the production of greenhouse gas emissions associated with PKCT operations. 	<ul style="list-style-type: none"> PKCT to review onsite electricity use and identify and implement economically viable opportunities for reduced electricity usage.

6.8.2 Compliance Statement

PKCT has the results of a greenhouse gas (GHG) emission and energy use assessment of the Terminal which was prepared following the Major Project Approval. This identifies the GHG emissions from the various onsite activities allowing PKCT to understand which factors relate to electricity use. The report finds that PKCT’s use of electricity for powering the coal handling infrastructure is by far the largest energy user. As a result, 97% of PKCT GHG emissions are Scope 2 emissions associated with electricity generated by power stations.

PKCT has an Energy Savings Action Plan in place. Options for significant reductions are limited as electricity usage relates closely to throughput. Opportunities for energy reduction are pursued when purchasing new equipment and considered when developing upgrades. The trend reported in Section 4.3.8 may also provide an opportunity for improvement by reducing the time running empty belts.

Section 4.3.2. and 4.3.3 outlines work carried out in the reporting period and work proposed respectively.



6.9 Landscaping

6.9.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Improve the visual amenity of PKCT on surrounding community. 	<ul style="list-style-type: none"> Improve onsite soft landscaping through the planting of trees on the road receiveal earth bund and along the northern site boundary.

6.9.2 Compliance Statement

With reference to the Landscape Management Plan, PKCT has developed a Landscape concept plan along the northern boundary. During this reporting period, further earthworks have been carried out on the northern boundary (refer Section 4.3.2).

6.10 Flora & Fauna

6.10.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Management of Green and Golden Bell Frogs (GGBF). 	<ul style="list-style-type: none"> Implement Interim Management Plan. Undertake a GGBF Survey and then develop a Long Term Plan of Management.

6.10.2 Compliance Statement

PKCT implemented an interim plan of management for the GGBF prior to the Major Project Approval issue, which included GGBF surveys. A GGBF management plan is now in place and actions are progressing. Section 3.6.2 provides further details of current status.

6.11 Waste

6.11.1 Commitment

Objective	Commitment
<ul style="list-style-type: none"> Minimise waste generated at the site to reduce the volume of waste requiring disposal to landfill. Prevent dispersal of waste from the site to receiving environments. 	<ul style="list-style-type: none"> Develop a Waste Management Plan for the site.

6.11.2 Compliance Statement

PKCT has prepared a Waste Management Plan which identifies the various waste streams from PKCT and explains the methods used to firstly reuse, secondly recycle and thirdly suitably dispose of the waste.

Attachment “O” provides a summary of wastes handled during the reporting period. The table lists the applicable waste streams and identifies the waste treatment employed.

7. Conclusion

This Annual Environmental Management Report (AEMR) identifies PKCT’s approval and licence conditions and explains how PKCT complies with these requirements. It also meets the specific AEMR requirements in Major Project Approval 08_0009 Condition 4 of Schedule 4.

This AEMR demonstrates that PKCT has undertaken appropriate actions to manage its environmental impacts with the overall aim of minimising harm to the environment. This report forms part of PKCT’s environmental management system which is directed by PKCT’s Environmental Management Strategy. PKCT provides this AEMR to the Department of Planning and Infrastructure and other stakeholders using information taken from environmental monitoring, assessment and reporting activities undertaken on a regular basis through the reporting period.

Reference is made at various locations in this AEMR to the independent external audit undertaken by AECOM P/L. The firm’s audit was comprehensive and PKCT is addressing the audit findings and associated recommendations.

This AEMR does not raise any concerns regarding the ongoing ability of PKCT to comply with environmental requirements in the Major Project Approval, Environmental Protection Licence 1625 and other regulatory requirements. Further, this AEMR confirms PKCT’s commitment to continual improvement in the mitigation of environmental impacts.

8. References

Australian / New Zealand Standard ISO 9001:2008 Quality Management Systems
Australian / New Zealand Standard ISO 14001:2004 Environmental Management Systems
Environmental Protection Licence 1625 – Port Kembla Coal Terminal
Major Project Approval 08_0009 for the Port Kembla Coal Terminal Project



Attachment “A” Noise Monitoring Reports - 2010/11

Table 5-1 Summary of Monitoring Results – Cnr Swan and Kembla Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®	BarnOwl®	BarnOwl®L _{A90} (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions L _{Aeq} (dBA)	PKCT Direction L _{Aeq} (dBA)					
1/10/10 11.30am	Day	51	56	36	49	NE	D	YES	PKCT inaudible. Noise environment was dominated by traffic on Swan Street. Trucks entering and exiting PKCT were audible on Springhill Road were audible at up to 53 dBA L _{Amax} . PKCT segment was noticeably affected by traffic on Springhill Road.
30/9/10 9.45pm	Evening	50	49	30	44	W	F	YES	PKCT inaudible. Audible noise environment was dominated by traffic on Swan Street and also distant urban hum from Wollongong CBD. Trucks entering and leaving Port Kembla Road audible at up to 53 dBA L _{Amax} . Trucks within PKCT inaudible.
30/9/10 10.00pm	Night	49	49	38	44	WSW	F	YES	PKCT inaudible. Audible noise environment was dominated by traffic on Swan Street and also distant urban hum from Wollongong CBD. Trucks entering and leaving Port Kembla Road audible at up to 55 dBA L _{Amax} . Trucks within PKCT inaudible.

30th September/ 1st October 2010

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Attachment “A” Noise Monitoring Report – 2010/11 (Cont’d)

Table 5-2 Summary of Monitoring Results – Cnr Swan and Corrimal Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®	BarnOwl®	BarnOwl® L _{A90} (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions L _{Aeq} (dBA)	PKCT Direction L _{Aeq} (dBA)					
1/10/10 11.00am*	Day	51	47	33	45	NE	D	YES	PKCT generally inaudible. Infrequent noise from PKCT direction audible at up to 52 dBA L _{Amax} ; believed to be trucks unloading (not tailgate but possibly passing over grates). Surf noise and traffic noise dominated the noise environment.
30/9/10 9.15pm	Evening	50	61	41	49	SW	F	YES	PKCT inaudible. Noise environment was dominated by traffic on Springhill Road & Corrimal Street.
30/9/10 11.15pm*	Night	49	52	39	50	SW	D	YES	PKCT inaudible. Noise environment was dominated by traffic surf noise. Surf noise appeared to influence noise level in PKCT segment. Trucks entering and exiting Port Kembla Road were audible at up to 52 dBA L _{Amax} near the intersection of Springhill Road (off site).

* Measurements conducted at the alternative location toward the eastern end of Swan Street (Location B).

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Attachment “A” Noise Monitoring Report – 2010/11 (Cont’d)

Table 5-3 Summary of Monitoring Results – Cnr Keira and Fox Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®	BarnOwl®	BarnOwl® L _{A90} (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions L _{Aeq} (dBA)	PKCT Direction L _{Aeq} (dBA)					
1/10/10 12.00pm	Day	55	55	42	51	NE	D	YES	PKCT inaudible. PKCT segment clearly affected by traffic noise on Springhill Road. Noise environment was dominated by traffic on Swan Street and Keira Street. Coal trucks audible entering and exiting Port Kembla Road on Springhill Road (up to 50 dBA L _{Amax}).
30/9/10 8.45pm	Evening	49	51	36	48	E	D	YES	PKCT inaudible. PKCT segment clearly affected by traffic noise on Springhill Road. Noise environment was dominated by traffic on Swan Street and Keira Street. Coal truck audible leaving Port Kembla Road.
30/9/10 10.30pm	Night	45	50	35	48	SW	D	YES	PKCT inaudible. PKCT segment clearly affected by traffic noise on Springhill Road. Noise environment was dominated by traffic on Swan Street and Keira Street.

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Attachment “A” Noise Monitoring Report – 2010/11 (Cont’d)

Table 5-1 Summary of Monitoring Results – Cnr Swan and Kembra Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®	BarnOwl®	SLM L _{A90} (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions L _{Aeq} (dBA)	PKCT Direction L _{Aeq} (dBA)					
7/4/11 10.00pm	Night	49	52	47	49	SW	F	YES	Industrial noise audible from PKCT direction (potentially beyond PKCT). Noise environment was influenced by traffic on Swan Street. PKCT segment was noticeably affected by traffic on Springhill Road. Train noise was audible (approx 50 dBA at times).
8/4/11 12.30am	Night	49	48	41	45	W	E	YES	Industrial noise audible from PKCT direction (potentially beyond PKCT). Noise environment was influenced by traffic on Swan Street. PKCT segment was noticeably affected by traffic on Springhill Road. Train departing PKCT (off-site) was audible - approx 50-51 dBA wagons, 61 dBA horn).
8/4/11 9.10am	Day	51	52	39	48	S	C	YES	Industrial noise audible from PKCT direction (potentially beyond or beside PKCT). Noise environment was dominated by traffic on Swan Street. PKCT segment was noticeably affected by traffic on Springhill Road. Coal trucks at the intersection of Port Kembra Road and Springhill Road were audible (off-site).

7th and 8th April 2011

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Attachment “A” Noise Monitoring Report – 2010/11 (Cont’d)

Table 5-2 Summary of Monitoring Results – Cnr Swan and Corrimal Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®	BarnOwl®	SLM LA90 (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions LAeq (dBA)	PKCT Direction LAeq (dBA)					
7/4/11 9.15pm	Evening	50	53	40	48	S	D	YES	Industrial noise audible from PKCT direction (potentially beyond/adjacent PKCT). Noise environment was influenced by traffic on Springhill Road. PKCT segment was noticeably affected by traffic on Springhill Road. Train unloading at PKCT (on site) was audible - approx 46 dBA loco for short periods).
7/4/11 11.55pm	Night	49	49	44	47	W	E	YES	Industrial noise audible from PKCT direction (potentially beyond/adjacent PKCT). Noise environment was influenced by traffic on Springhill Road. PKCT segment was noticeably affected by traffic on Springhill Road. Train arriving/departing PKCT generally inaudible by produced periods of suspected wheel squeal in 2.5kHz third-octave.
8/4/11 8.40am	Day	51	52	42	47	S	C	YES	Industrial noise from PKCT direction audible at times (potentially beyond/adjacent PKCT). Noise environment was dominated by traffic on. PKCT segment was noticeably affected by traffic on Springhill Road. Infrequent bangs from PKCT direction – possibly trucks unloading – slightly audible.

7th and 8th April 2011

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Attachment “A” Noise Monitoring Report – 2010/11 (Cont’d)

Table 5-3 Summary of Monitoring Results – Cnr Keira and Fox Streets

Start Date & Time	Period	Criteria (dBA)	BarnOwl®		SLM L _{A90} (dBA)	Wind Direction	Stability Class	Compliance	Subjective Assessment
			All Directions	PKCT Direction					
			L _{Aeq} (dBA)	L _{Aeq} (dBA)					
7/4/11 10.55pm	Night	45	52	23 ¹	49	SE	B	YES	PKCT inaudible Industrial source to west of PKCT audible. PKCT segment clearly affected by traffic noise on Springhill Road. Significant wheel squeal from train arriving/departing PKCT (off-site). Train wagons audible to south of monitoring location (off-site).
7/4/11 11.10pm	Night	45	51	28 ¹	48	SE	B	YES	PKCT inaudible Industrial source to west of PKCT audible. PKCT segment clearly affected by traffic noise on Springhill Road. Train wagons bunching (50 dBA) and horn (55 dBA) audible to south of monitoring location (off-site).

Note: 1. BarnOwl® reported 23 and 28 dBA in PKCT direction; however elevated ambient noise levels made the accurate determination of noise levels from this direction impossible. Compliance was demonstrated.

7th and 8th April 2011



Attachment “B” Summary of PKCT Throughput and Receipts - 2010/11

Shiploading: 2010/11

	Coal		Coke	Total
	Coking	Steaming		
Berth 101: Bulk Products Berth			359050	359050
Berth 102: Coal Berth	6328522	7678121		14006643
			Total (tonnes)	14,365,693

Receipts: 2010/11

Deliveries	Private Road	Public Road	Total
Road Receipt	2,060,071	2,843,540	4,903,611
Rail Receipt			9,192,690
		Total (tonnes)	14,096,301



Attachment “C” Road Transport Complaints & Incidents Summary – 2010/11

Incidents/Accidents	Minor Damage					Major Damage					Total	
	Transport Provider											
	BT	LH	Br	TB	SC	BT	LH	Br	TB	SC		
Westcliff/(PKCT (BHPB))												
Appin Road	1											1
Bulli Tops	3											3
Mt Ousley	2											2
Masters Road												
Springhill Road	1											1
NRE/PKCT												
Bellambi Lane												
Northern Distributor												
Masters Road												
Springhill Road												
ICC/PKCT												
Northern Distributor												
Masters Road												
Springhill Road												
Tom Thumb Road (private)												
Port Kembla Road						1						1
PKCT Road Reveal		1										1
PKCT Site	1				1	1						3
Totals	8	1			1	2						12

Key: BT: Bulk Trans LH: Lodehaul Br: Brindles TB: Trazblend SC: South Coast Equipment

Complaints	Noise					Dust				Speed				Other				Totals
	Transport Provider																	
	B	L	B	T	C	B	L	B	T	B	L	B	T	B	L	B	T	
T	H	r	B	P	T	H	r	B	T	H	r	B	T	H	r	B		
Westcliff/(PKCT (BHPB))																		
Appin Road										3						3		6
Bulli Tops															1			1
Mt Ousley										1					2			3
Masters Road																		
Springhill Road																		
NRE/PKCT																		
Bellambi Lane			1												1			2
Northern Distributor																		
Masters Road																		
Springhill Road																		
ICC/PKCT																		
Northern Distributor																		
Masters Road																		
Springhill Road																		
Tom Thumb Road (private)																		
Port Kembla Road					1										2			3
PKCT Road Reveal															4			4
PKCT Site																		
Totals										4				1			12	19

Key: BT: Bulk Trans LH: Lodehaul Br: Brindles TB: Trazblend CP: Camsons Pty Ltd

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Attachment "D" Road Transport Report- 2010/11

Monthly Reports Summary	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	Mag-11	Jun-11	Total	Avg per mth
Tonnes - Public Road	270,960	173,377	261,952	217,194	264,834	322,086	227,658	254,488	292,736	61,495	254,850	241,910	2,843,540	236,962
Tonnes - Private Road	200,463	125,546	162,243	230,177	243,468	143,002	103,176	142,024	176,462	60,963	167,283	305,264	2,060,071	171,673
Total road tonnes	471,423	298,923	424,195	447,371	508,302	465,088	330,834	396,512	469,198	122,458	422,133	547,174	4,903,611	408,634
Spillage - Public Road	0	0	1	0	0	0	0	0	0	0	0	0	1	
Incident - Other	0	0	0	0	0	0	1	1	0	0	1	1	4	
Impact with other vehicle	0	0	0	0	2	2	0	1	2	0	0	0	7	
Incidents Reported to RTA	0	0	0	0	2	2	0	0	2	0	0	0	6	
Complaints	3	1	4	0	3	1	2	2	1	1	0	1	19	
Inductions	100	100	100	100	100	100	100	100	100	100	100	100	0	
Hours restrictions breach	0	0	0	0	0	0	0	0	0	0	0	0	0	
Observations	128	143	56	indeterminable	indeterminable	indeterminable	indeterminable	indeterminable	indeterminable	indeterminable	indeterminable	indeterminable	327	82
Observations x No. of Drivers observed	705	824	332	523	111	468	547	620	677	670	759	750	6,986	465
PKCT CTO's	4	3	4	4	3	4	4	0	2	2	5	2	37	9

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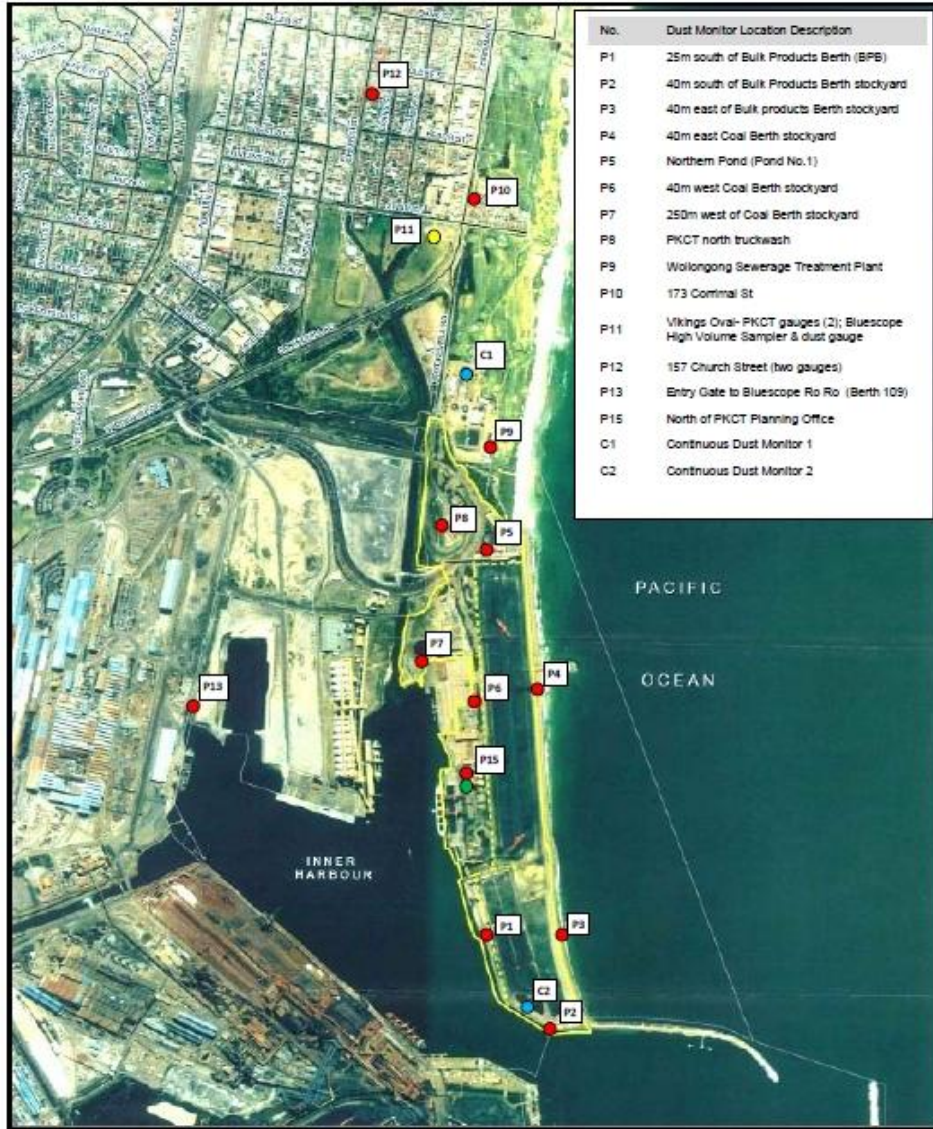
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Attachment “E” Air Quality- Monitoring Sites

PORT KEMBLA COAL TERMINAL
DUST & WEATHER MONITOR LOCATIONS

14 March 2011



- Dust Gauges- DECCW EPL sites ●
- Continuous Dust Monitor Sites ●
- (a) Bluescope High Volume Sampler & dust gauge (b) PKCT DECCW EPL Dust Gauge P11 ●
- PKCT Site Boundary —
- Weather stations (a) at each continuous dust monitor site ● (b) PKCT south control tower: ●

Attachment "F" Air Quality Executive Summary – PKCT AEMR July 10 – June 11

Executive Summary

Katestone Environmental has been commissioned by Port Kembla Coal Terminal Limited (PKCT) to report the results of the air quality monitoring during each 12-month (July – June) period and to assess the compliance of the Port Kembla Coal Terminal with the Approval Conditions as outlined in the Monitoring Protocol. The Port Kembla Coal Terminal is located in the Inner Harbour at Port Kembla, NSW. This Annual Environmental Monitoring Report (AEMR) reports the results of ambient air monitoring and the compliance of the PKCT during the July 2010 to June 2011 period. This AEMR will be required for submission to the Department of Planning (DOP) by 31 July 2011 as part of the PKCT's Approval.

The current monitoring network includes the following:

- Continuous measurements of wind speed and wind direction, and concentrations of TSP, PM₁₀, PM_{2.5} and PM_{1.0} at locations to the north and south of the PKCT (northern and southern monitoring sites)
- The northern monitoring station is located at the Wollongong sewage treatment plant and is approximately 400 metres north of the PKCT train unloading facility. Residences are about 700 metres north of the monitoring station and, consequently, the monitoring results will overstate the influence of PKCT on dust levels at residences.
- A network of residential dust deposition gauges
- Offsite measurements of TSP and PM₁₀ concentration provided by Bluescope and the OEH

The following conclusions can be drawn from the analysis of the air quality monitoring data during the July 2010 to June 2011 period:

- The annual average concentrations of TSP and PM₁₀ at the PKCT northern monitoring site are below the air quality criteria of 90 µg/m³ and 30 µg/m³, respectively.
- At the northern PKCT monitoring site the trigger level of 90 µg/m³ for the 24-hour average TSP concentration was exceeded on 16 occasions during the July 2010 to June 2011 period
- The standard analysis identified PKCT as having a moderate (30% to 70%) contribution to the exceedance of the 24-hour average TSP trigger level during 5 December 2010; however, a detailed analysis of the data indicated that the contribution may have been significantly lower than this
- PKCT was identified as having minimal contribution (i.e. less than 10 percent) to the exceedance of the 24-hour average TSP trigger level at the PKCT northern monitoring site on twelve days:
 - 5, 13 and 31 October 2010
 - 13, 14 and 28 November 2010
 - 3, 4 and 9 December 2010
 - 15 January 2011
 - 1 and 2 February 2011

Attachment "F" Air Quality Executive Summary – PKCT AMER July 10 – June 11 (Cont'd)

- *PKCT was identified as having no contribution to the exceedance of the 24-hour average TSP trigger level at the PKCT northern monitoring site on three days:*
 - 4 October 2010
 - 13 January 2011
 - 22 March 2011
- *On average, PKCT was estimated to have contributed 6.5% to TSP levels at the PKCT northern monitoring site on days when exceedances of the TSP trigger occurred*
- *At the northern PKCT monitoring site the air quality standard of 50 µg/m³ for the 24-hour average PM₁₀ concentration was exceeded on 40 occasions during the July 2010 to June 2011 period*
- *The standard analysis identified PKCT as having a moderate (30% to 70%) contribution to the exceedance of the 24-hour average PM₁₀ air quality standard during 5 December 2010; however, a detailed analysis of the data indicated that the contribution may have been significantly lower than this*
- *PKCT was identified as having a minor contribution (i.e. 10% to 30%) to the exceedance of the 24-hour average PM₁₀ air quality standard at the PKCT northern monitoring site on six days:*
 - 14 October 2010
 - 11 and 27 November 2010
 - 9 December 2010
 - 3 February 2011
 - 31 May 2011
- *PKCT was identified as having minimal contribution (i.e. less than 10 percent) to the exceedance of the 24-hour average PM₁₀ air quality standard at the PKCT northern monitoring site on 19 days:*
 - 5, 13 and 31 October 2010
 - 13, 14, 15, 26 and 28 November 2010
 - 1, 3 and 4 December 2010
 - 15, 16, 26 and 31 January 2011
 - 1, 2 and 19 February 2011
 - 21 March 2011
- *PKCT was identified as having no contribution to the exceedance of the 24-hour average PM₁₀ air quality standard at the PKCT northern monitoring site on 14 days:*
 - 4, 11 and 12 October 2010
 - 25 November 2010
 - 2, 7 and 8 December 2010
 - 11, 12, 13 and 14 January 2011
 - 4 February 2011
 - 9 and 22 March 2011

Attachment “F” Air Quality Executive Summary – PKCT AMER July 10 – June 11 (Cont’d)

- *On average, PKCT was estimated to have contributed 6.0% to PM₁₀ levels at the PKCT northern monitoring site on days when exceedances of the PM₁₀ standard occurred*
- *Exceedances of the trigger level at the Bluescope site correlated with exceedances at the onsite northern PKCT monitoring site on 9 December 2010 (137.9 µg/m³) and 1 February 2011 (133.0 µg/m³); however, an analysis of the continuous monitoring data showed that the coal terminal contributed less than 9% to the levels recorded at the northern PKCT monitoring site during these periods.*
- *The 24-hour average PM₁₀ air quality standard was exceeded at the OEH sites at Kembla Grange and Albion Park South during 1 February 2011, with 24-hour average PM₁₀ concentrations of 55.5 µg/m³ and 51.0 µg/m³ (respectively) recorded at the sites during this period.*
- *The annual average insoluble solids did not exceed the threshold of 2 g/m³/month at Site H (Bluescope, Vikings Oval) and P11 (PKCT, Vikings Oval) during the July 2010 to June 2011 period.*
- *The annual average insoluble solids exceeded the threshold of 2 g/m³/month at Site P12 (PKCT, 157 Church Street) during the July 2010 to June 2011 period; however, the combustible matter (including coal) was below the threshold of 2 g/m³/month.*
- *Results of dust characterisation of the sample from Site P10, 173 Corrimal Street during July 2010 showed that coal was not a significant contributor to the dust deposition rate (2.3% to 4.0% of the sample).*
- *Results of dust characterisation of the sample from Site P11, Vikings Oval during June 2011 showed that coal was not a significant contributor to the dust deposition rate (6.0% to 8.0% of the sample).*



Attachment “G” Air Quality: Continuous Dust Data & Dust Deposition

Continuous Dust Data

Table A1 Trend data summary: Northern PKCT monitoring site

Variable	Averaging period	Value	Units	Standard	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
TSP	24-hour	Max	µg/m ³	90	28.3	37.8	56.8	148.2	142.2	137.9	129.0	133.0	136.0	27.6	55.2	56.1
		No. Exceedances	-	-	0	0	0	4	3	4	2	2	1	0	0	0
		Max % contribution to exceedance	%	-	0.0	0.0	0.0	6.0	1.2	52.2	7.4	6.2	0.0	0.0	0.0	0.0
	Annual	Mean	µg/m ³	90	16.2	13.8	27.8	46.2	48.2	45.9	53.6	46.4	36.4	15.0	18.1	19.8
PM ₁₀	24-hour	Max	µg/m ³	90	34.6	33.5	31.5	33.3	32.3	32.7	33.2	33.0	33.3	32.8	32.0	32.2
		No. Exceedances	-	-	0	0	0	7	8	8	8	5	3	0	1	0
		Max % contribution to exceedance	%	-	0.0	0.0	0.0	14.7	15.5	54.2	10.0	16.1	0.4	0.0	27.1	0.0
	Annual	Mean	µg/m ³	90	11.0	9.8	21.2	37.7	40.9	39.0	45.1	37.5	28.8	11.0	13.5	14.9
	Annual	Mean	µg/m ³	50	26.9	26.0	24.4	26.0	25.5	26.0	26.6	26.4	26.6	26.3	25.7	25.8

Table A2 Trend data summary: Southern PKCT monitoring site

Variable	Averaging period	Value	Units	Standard	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
TSP	24-hour	Max	µg/m ³	90	89.4	99.3	68.7	139.6	136.0	253.5	148.0	145.3	168.1	74.8	126.9	81.1
		Mean	µg/m ³	90	51.2	32.2	35.7	57.3	57.7	71.7	67.9	75.4	61.1	39.0	62.1	46.3
	Annual	Mean	µg/m ³	90	62.0	59.4	54.6	55.9	54.3	55.0	55.7	55.7	55.4	54.0	54.7	54.7
PM ₁₀	24-hour	Max	µg/m ³	50	61.2	70.7	55.4	120.4	112.2	191.2	111.4	110.8	134.4	54.9	87.0	56.4
		Mean	µg/m ³	50	36.9	24.0	28.4	45.7	46.5	55.3	53.5	55.3	46.0	28.7	43.8	33.5
	Annual	Mean	µg/m ³	30	46.0	44.2	40.8	42.0	41.1	41.8	42.4	42.2	42.0	41.0	41.5	41.4

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Attachment "G" Air Quality: Continuous Dust Data & Dust Deposition (Cont'd)

Continuous Dust Data (Cont'd)

Table A3 Trend data summary: Bluescope dust deposition gauge and high volume air sampler at Vikings Oval

Variable	Averaging period	Value	Units	Standard	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
TSP	24-hour	Maximum	µg/m ³	90	37.2	31.9	61.7	67.1	116.0	129.0	123.4	165.4	69.2	57.4	53.6	93.4
		Date of maximum	-	-	12-Jul	29-Aug	22-Sep	14-Oct	27-Nov	9-Dec	28-Jan	1-Feb	9-Mar	2-Apr	20-May	1-Jun
Dust deposition	Monthly	Insoluble solids	g/m ² /month	2.0	1.7	NA ¹	1.6	0.5	1.1	3.4	1.7	1.6	2.5	0.8	0.6	3.3
		Ash	g/m ² /month	2.0	1.1	NA ¹	0.7	0.1	0.5	1.5	0.5	0.5	1.3	0.4	0.0	1.9
		Combustible matter	g/m ² /month	2.0	0.6	NA ¹	0.9	0.4	0.6	1.9	1.2	1.1	1.2	0.4	0.6	1.4

Table note:
¹ Monitoring data from the dust gauge operated by Bluescope at Vikings Oval not available for August 2010 as the sample bottle was broken on collection

Table A4 Trend data summary: Monthly average dust deposition from PKCT residential dust deposition gauges

Sample matter	Standard	Jul 2010	Aug 2010	Sep 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	Jun 2011	Annual average ¹
Site P12 – 157 Church Street														
Insoluble solids	2.0	2.5	1.8	1.6	0.6	1.1	3.3	6.2	3.4	2.2	2.4	1.6	15.7	3.5
Ash	2.0	1.6	1.0	0.9	0.2	0.6	2.3	4.7	2.2	1.4	1.7	1.0	14.8	2.7
Combustible matter	2.0	0.9	0.8	0.7	0.4	0.5	1.0	1.5	1.2	0.8	0.7	0.6	0.9	0.8
Site P10 – 173 Corrimal Street														
Insoluble solids	2.0	3.3 ¹	2.8	3.9	3.0	3.9	4.3	20.9	3.4	8.5	3.4	20.3	6.8	7.0
Ash	2.0	GO	1.6	2.1	1.2	2.1	2.5	1.0	1.1	4.9	1.8	10.3	2.2	2.8
Combustible matter	2.0	GO	1.2	1.8	1.8	1.8	1.8	19.9	2.3	3.6	1.6	10.0	4.6	4.6
Site P11 – Vikings Oval														
Insoluble solids	2.0	1.1	3.6	1.0	0.7	0.7	0.5	1.0	0.5	0.6	0.8	2.0	4.0 ¹	1.4
Ash	2.0	0.4	1.8	0.4	0.2	0.1	0.1	0.6	0.1	0.1	0.2	0.8	1.8 ¹	0.6
Combustible matter	2.0	0.7	1.8	0.6	0.5	0.6	0.4	0.4	0.4	0.5	0.6	1.2	2.2 ¹	0.8

Table note:
 BF - Broken Funnel, GO - Gauge overflowed
¹ Twelve-month average July 2010 to June 2011
² Sample sent for stereomicroscopic analysis

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Attachment "G" Air Quality: Continuous Dust Data & Dust Deposition (Cont'd)

Dust Deposition: July 10 – June 11

		Financial Year 2010/11															
MONTH	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	No. samples collected	MIN	MEAN	MAX	
DATE	*****	26-08-10	*****	27-10-10	26-11-10	24-12-10	27-1-11	25-2-11	25-3-11	27-4-11	27-5-11	27-6-11					
Sample	BA	JH	ba	JH	MH	BA	BA	MH	BA	BA	JH	DV					
GAUGE NO.	Analysis g/m ² month																
P1 25m South No.1 Coalberth	Insoluble Solids Ash Combustible Matter	8.8 7.1 1.7	9.7 7.4 2.3	3.1 1.8 1.2	2.7 1.3 1.4	4.7 2.7 2.0	3.8 1.5 2.3	13.7 11.2 2.5	11.0 6.0 5.0	5.6 2.7 2.9	6.4 4.3 2.1	6.8 4.7 2.1	12.3 9.0 3.3	12 12 12	2.7 1.3 1.2	7.4 5.0 2.4	13.7 11.2 5.0
P2 40m South of Southern SIP Area	Insoluble Solids Ash Combustible Matter	7.0 4.7 2.3	8.4 5.6 2.8	3.9 6.1 3.8	5.2 2.3 2.9	8.8 6.9 1.3	0.7 0.1 0.6	3.1 1.2 1.3	5.8 0.3 5.5	7.4 4.3 3.1	4.5 2.9 1.6	4.7 3.1 8.7	12.4 8.7 12	12 12 12	0.7 0.1 0.6	6.5 3.9 2.6	12.4 8.7 5.5
P3 40m East of Southern SIP Area	Insoluble Solids Ash Combustible Matter	10.6 7.9 2.7	14.3 7.2 7.7	16.5 13.9 2.6	5.9 4.0 1.9	BF BF BF	22.0 21.5 0.5	BF BF BF	8.3 5.4 2.9	BB BB BB	10.7 7.1 3.6	14.5 10.4 4.1	42.1 30.7 11.4	9 9 9	5.9 4.0 0.5	16.2 12.0 4.2	42.1 30.7 11.4
P4 40m East No.2 Coalberth SIP Area	Insoluble Solids Ash Combustible Matter	27.9 6.6 21.3	33.4 3.1 24.3	17.0 3.2 13.8	3.5 1.0 2.5	7.9 3.1 4.8	5.7 3.9 1.8	7.7 4.3 3.4	7.3 1.4 5.9	22.7 4.5 18.2	3.8 3.9 5.9	21.9 5.2 16.7	22.1 10.9 11.2	12 12 12	3.5 1.0 1.8	15.6 4.8 10.8	33.4 10.9 24.3
P5 Northern Settling Pond	Insoluble Solids Ash Combustible Matter	3.4 1.4 2.0	17.6 8.2 9.4	11.3 2.9 8.4	10.5 2.5 8.0	18.1 3.6 14.5	26.1 11.5 14.6	46.4 18.1 28.3	8.2 1.2 7.0	14.2 4.8 9.4	10.8 4.0 6.8	10.5 4.6 5.9	11.7 5.2 6.5	12 12 12	3.4 1.2 2.0	15.7 5.7 10.1	46.4 18.1 28.3
P6 40m West No.2 Coalberth SIP Area	Insoluble Solids Ash Combustible Matter	8.2 5.0 3.2	18.4 3.1 9.3	8.1 2.3 5.8	5.4 1.6 3.8	13.9 4.8 9.1	27.7 6.9 20.8	23.9 7.8 16.1	13.7 5.7 8.0	19.5 6.7 12.8	11.0 6.4 4.6	13.3 8.5 4.8	4.5 1.7 2.8	12 12 12	4.5 1.6 2.8	14.0 5.5 8.4	27.7 6.9 20.8
P7 260m West No.2 Coalberth SIP Area	Insoluble Solids Ash Combustible Matter	BF BF BF	5.0 2.5 2.5	1.7 0.9 0.8	1.0 0.5 0.5	2.7 1.8 0.9	6.5 4.2 2.3	3.0 1.4 1.6	17.0 13.0 4.0	6.0 4.1 1.9	10.2 1.0 3.2	3.4 6.5 2.9	43.4 37.9 5.5	11 11 11	1.0 0.5 0.5	3.6 6.7 2.9	43.4 37.9 5.5
P8 PKCT, North Trackwash	Insoluble Solids Ash Combustible Matter	11.1 3.3 7.8	19.9 6.0 13.9	17.4 3.4 14.0	11.1 1.8 3.3	4.2 0.9 3.3	4.7 1.5 3.2	11.5 5.8 5.7	13.6 6.4 7.2	9.7 3.4 6.3	9.1 3.2 5.9	18.5 6.3 12.2	44.4 3.4 35.0	12 12 12	4.2 0.9 3.2	14.6 4.3 10.3	44.4 3.4 35.0
P9 East Side of Water Board Property	Insoluble Solids Ash Combustible Matter	3.5 2.2 1.3	13.7 11.0 2.7	1.6 0.8 0.8	1.7 0.8 0.9	2.0 1.2 0.8	1.0 0.5 0.5	5.9 2.1 3.8	5.7 3.2 2.5	6.9 3.9 3.0	3.8 2.4 1.4	6.1 4.1 2.0	6.6 4.1 2.5	12 12 12	1.0 0.5 0.5	4.9 3.0 1.9	13.7 11.0 3.8
P10 173 Corrimal St Wollongong	Insoluble Solids Ash Combustible Matter	3.3 P P	2.8 1.6 1.2	3.9 2.1 1.8	3.0 1.2 1.8	3.9 2.1 1.8	4.3 2.5 1.8	20.9 1.0 19.9	3.4 1.1 2.3	8.5 4.9 3.6	3.4 1.8 1.6	20.3 10.3 10.0	6.8 2.2 4.6	12 11 11	2.8 1.0 1.2	7.0 2.8 4.6	20.9 10.3 19.9
P11 Vikings Oval Wollongong	Insoluble Solids Ash Combustible Matter	1.1 0.4 0.7	3.6 1.8 1.8	1.0 0.4 0.6	0.7 0.2 0.5	0.7 0.1 0.6	0.5 0.1 0.4	1.0 0.6 0.4	0.5 0.1 0.4	0.6 0.1 0.5	0.8 0.2 0.6	2.0 0.8 1.2	4.0 1.8 2.2	12 12 12	0.5 0.1 0.4	1.4 0.6 0.8	4.0 1.8 2.2
P12 157 Church St Wollongong	Insoluble Solids Ash Combustible Matter	2.5 1.6 0.9	1.8 1.0 0.8	1.6 0.9 0.7	0.6 0.2 0.4	1.1 0.6 0.5	3.3 2.3 1.0	6.2 4.7 1.5	3.4 2.2 1.2	2.2 1.4 0.8	2.4 1.7 0.7	1.6 1.0 0.6	15.7 14.8 0.9	12 12 12	0.6 0.2 0.4	3.5 2.7 0.8	15.7 14.8 1.5
P13 200m North of A.I.S. RO/RO Berth	Insoluble Solids Ash Combustible Matter	4.4 3.4 1.0	5.8 4.7 1.1	2.7 1.8 0.9	2.7 1.9 0.9	3.6 2.7 BF	BF BF BF	11.9 3.2 2.7	5.9 4.1 1.8	3.2 2.3 0.9	7.3 5.9 1.4	5.2 4.0 1.2	7.9 6.1 1.8	11 11 11	2.7 1.8 0.8	5.5 4.2 1.3	11.9 3.2 2.7
P14 Ross Street Wollongong	Insoluble Solids Ash Combustible Matter											1.8 1.1 0.7	1.2 0.7 0.5	2 2 2	1.2 0.7 0.5	1.5 0.9 0.6	1.8 1.1 0.7
P15 North of PKCT Canteen Building	Insoluble Solids Ash Combustible Matter	5.9 2.1 3.8	48.3 22.2 26.1	4.7 1.1 3.6	6.5 1.6 4.9	13.8 3.0 10.8	31.5 8.3 23.2	31.4 12.0 19.4	16.8 6.1 10.7	19.2 8.2 11.0	26.5 12.3 14.2	5.9 3.3 2.6	15.1 7.8 7.3	12 12 12	4.7 1.1 2.6	18.8 7.3 11.5	48.3 22.2 26.1

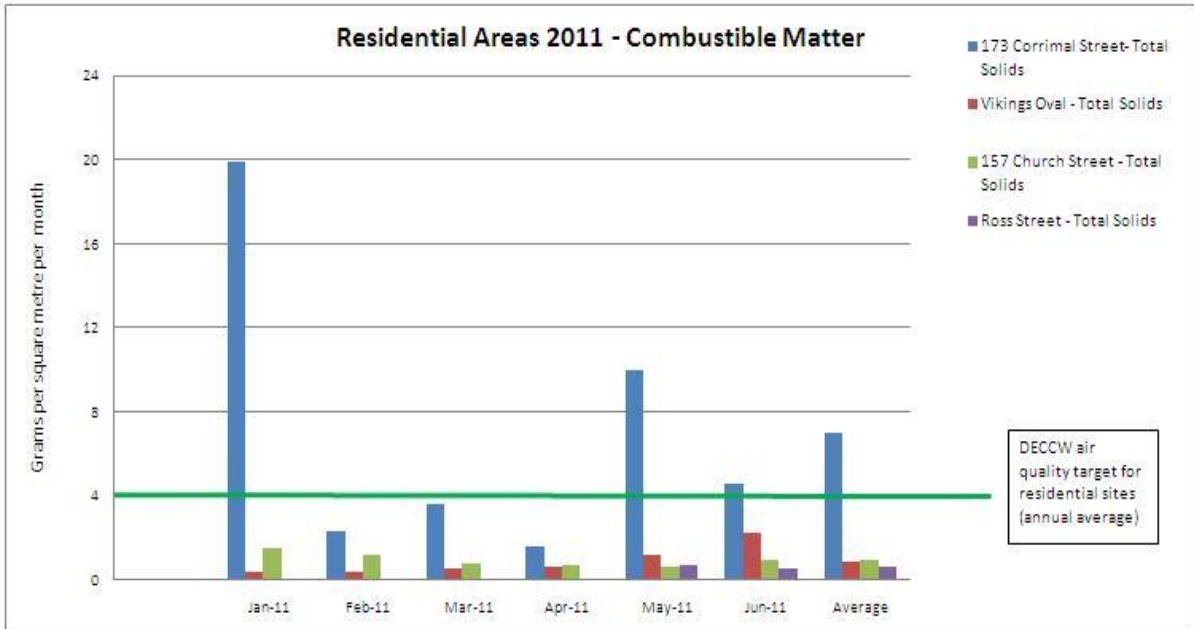
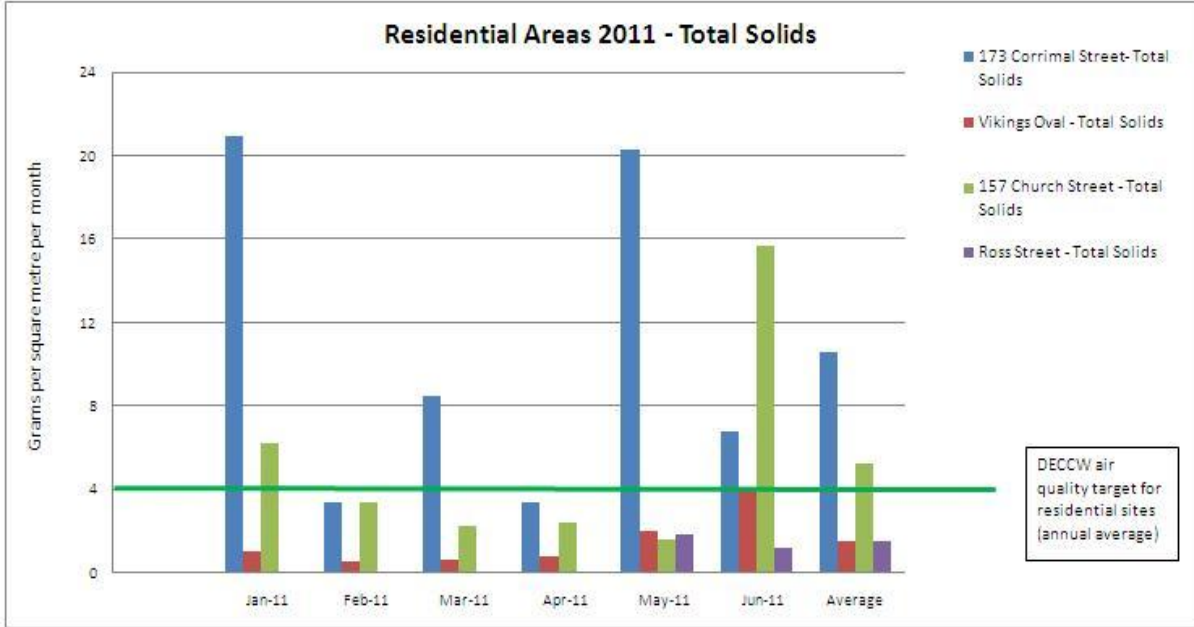
FM- Funnel Missing G/M-Gauge Missing O/F-Gauge Overflowed E/B-Empty Bottle G/R-Gauge Removed B/F-Blocked Funnel
 GCA-Gauge Contaminated with A B/C-Broken Crucible In- In-accessible B/F-Broken Funnel G/C - Gauge Contaminated

Samplers	
JH	Justin Hughes
BA	Ben Arnold
GH	Glen Harrison
MH	Micheal Hoare

* gauges overflowed P- Petrographics



Attachment "G" Air Quality: Continuous Dust Data & Dust Deposition (Cont'd)





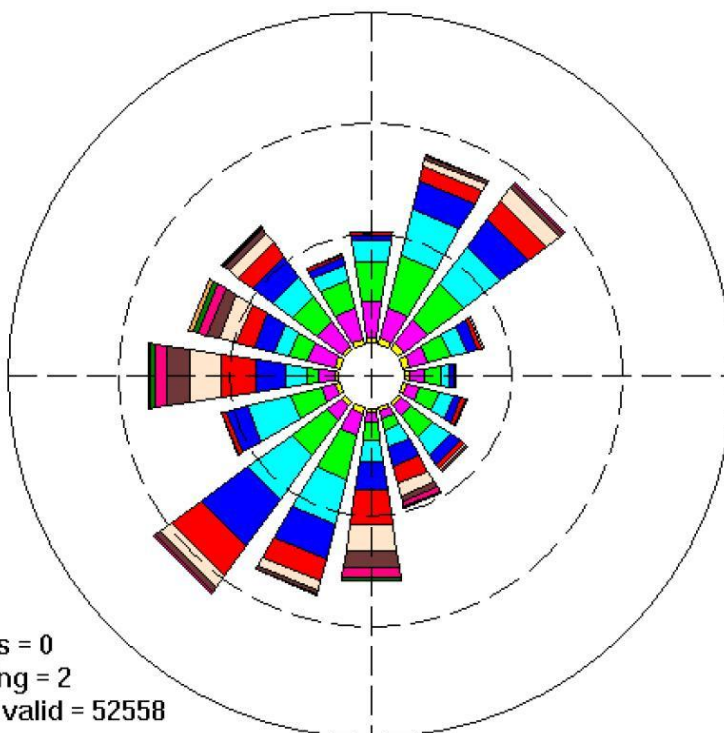
Attachment "H" Weather Monitoring Summary- 2011

Month/Year	Total Rain (mm)	Max. Temp °C	Min. Temp °C	Rain Duration (sec)	Max. wind speed (meters per second)	Average wind speed (meters per second)
Jul-10	35.52	19.9	9.7	72,020	18.6	4.8
Aug-10	58.56	22.7	9.3	67,780	20.9	6.2
Sep-10	79.28	27.2	0	113,640	23.8	5.5
Oct-10	74.32	27.2	10.6	98,030	26.4	5.2
Nov-10	153.59	24.9	12.1	164,570	21.1	5.2
Dec-10	97.36	30.6	13.4	83,520	26.4	4.8
Jan-11	27.02	31.2	16.7	25,510	19.7	5.1
Feb-11	18.84	40	16.2	37,290	23.4	4.9
Mar-11	213.41	31.2	15.4	105,670	21.6	5.0
Apr-11	36.24	25.7	12.9	49,940	19.6	5.2
May-11	88.83	23.5	9.5	71,350	25.9	5.4
Jun-11	35.47	20.8	8.5	42,410	31.2	6.9
Grand Total	918.44			931,730		64.0
Average		27.1	11.2	77,644	23.2	5.3

Wind Rose

Southern PKCT Monitoring Site

Each ring is 5.0%
 Wind speed (m/s)
 >= 10.0
 9.0 to < 10.0
 8.0 to < 9.0
 7.0 to < 8.0
 6.0 to < 7.0
 5.0 to < 6.0
 4.0 to < 5.0
 3.0 to < 4.0
 2.0 to < 3.0
 1.0 to < 2.0
 0.0 to < 1.0



Calms = 0
 Missing = 2
 Total valid = 52558



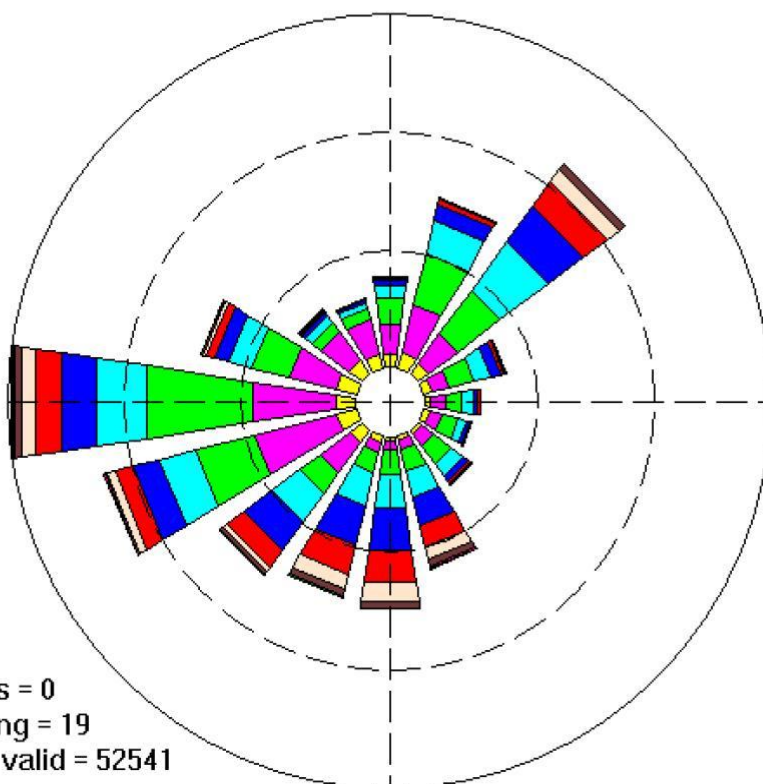
Attachment "H" Weather Monitoring Summary- 2011 (Cont'd)

Wind Rose

Northern PKCT Monitoring Site

Each ring is 5.0%
Wind speed (m/s)

>= 10.0	Orange
9.0 to < 10.0	Dark Green
8.0 to < 9.0	Light Green
7.0 to < 8.0	Pink
6.0 to < 7.0	Light Blue
5.0 to < 6.0	Red
4.0 to < 5.0	Dark Blue
3.0 to < 4.0	Cyan
2.0 to < 3.0	Light Green
1.0 to < 2.0	Pink
0.0 to < 1.0	Yellow





Attachment "I" Water Usage Report

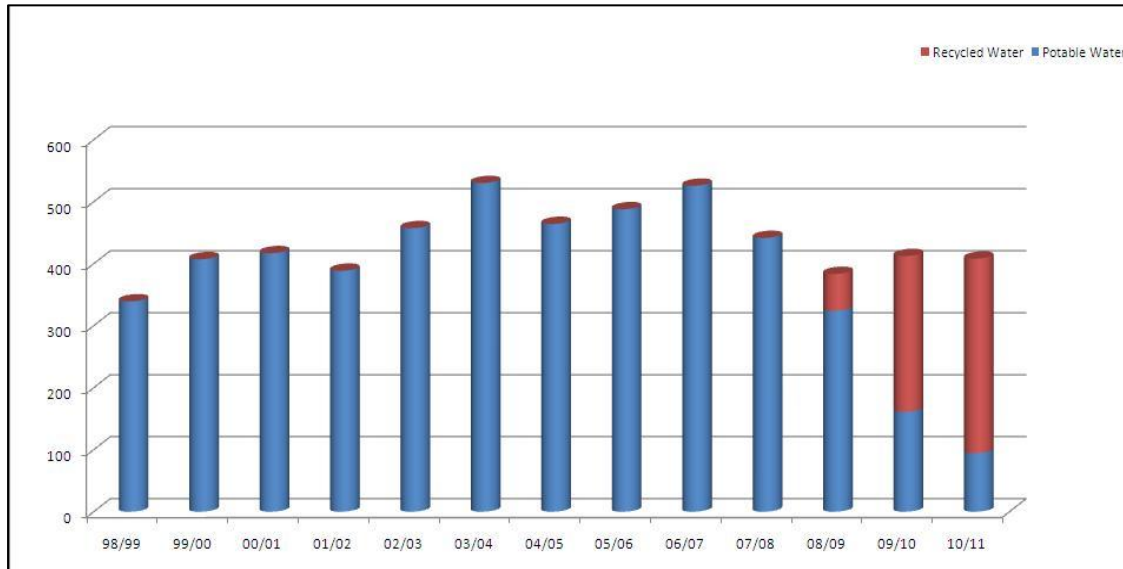


Chart 1 - Historical Water Usage

1. Chart shows the trend in potable water reduction.
2. Chart shows a trend in overall water usage reduction.

Usage - Megalitres	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Total F11 YTD	Total FY10
Recycled Water	16,116	37,378	27,169	29,692	22,150	28,681	19,438	34,970	23,573	21,650	27,807	26,823	315,447	251,209
Potable Water - Process	6,322	6,526	4,859	3,370	71	3,885	16,555	5,185	6,461	86	5,497	14,239	73,056	143,458
Potable Water - Domestic	1,347	926	1,354	792	1,851	1,352	1,564	1,200	1,780	1,644	1,026	1,017	15,851	17,856
Total	23,784	44,829	33,382	33,854	24,072	33,918	37,557	41,355	31,813	23,380	34,330	42,079	404,354	412,523
% Recycled Water/Total	71.8	85.1	84.8	89.8	99.7	88.1	54.0	87.1	78.5	99.6	83.5	65.3		
													% Total Usage FY11/FY10	98

Chart 2 - Monthly Water Usage FY11

*Usage figures reported in 10/11 Interim Environment Management Report revised after reference to ecoLogIT data

Attachment "J" Discharge Point P16 Performance Trend- Total Suspended Solid

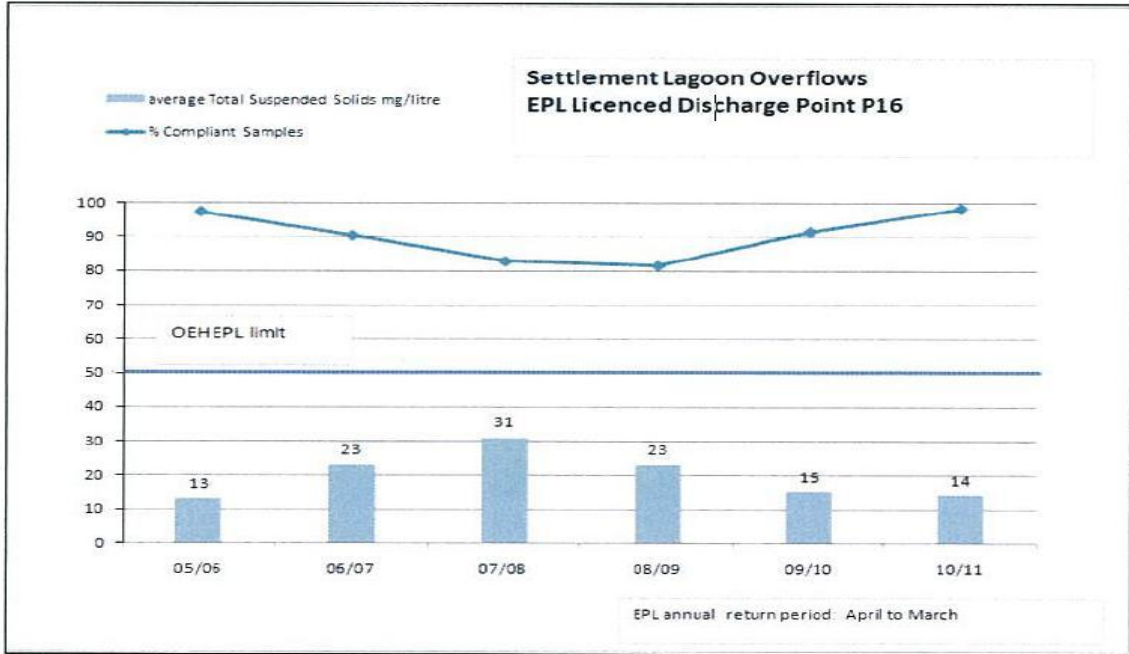
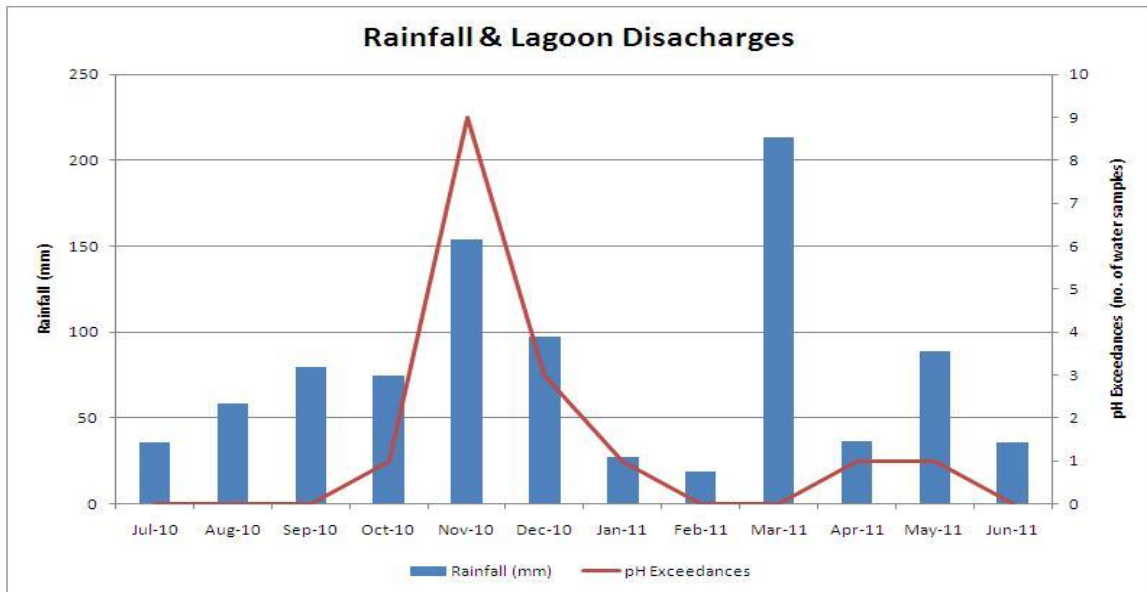


Chart 4.1 TSS Performance Trend





Attachment "K" Settlement Lagoon Discharges: July 2010 – June 2011

DECCV EPL 1625

Monitoring Point 16

		2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010
		July	July	July	August	August	August	August	September	September		
WATER QUALITY PARAMETER	DATE Time Sampler Report No	28-7-10 3.30PM T.WAINE SE80234	29-7-10 7.00AM T.WAINE SE80234	30-7-10 T.LYNCH SE80501	3-8-10 8.15AM A Chapman SE80419	4-8-10 10.25AM A Chapman SE80419	5-8-10 3.30AM A Chapman SE80736	10-8-10 13.00PM J Hennessey SE80736	14-9-10 7.00AM S di Genni SE81500	15-9-10 7.00AM S di Genni SE81500		
(pH)	EPL limit 6.5	8.1	7.4		7.5	7.3	7.2	7.3	7.7	7.3		
(TSS) mg/l	EPL limit less	7.0	5.5		<5.0	10	<5.0	<5.0	12.0	16.0		
OIL & GREASE mg/l	EPL limit less	<5	<5	<5	<5	<5	<5	<5	<5	<5		
AMMONIA mg/l	monitoring	0.06	0.093	0.04	0.06	<0.01	0.13	0.15	0.17	0.15		
TOTAL NITROGEN mg/l	monitoring	3.3	2.7		2.0	2.0	2.4	2.3	2.1	2.2		
TKN mg/l	monitoring	0.9	1.2	0.5	0.3	0.5	0.8	0.6	1.3	1.3		
TON mg/l	monitoring	3.24	2.601		1.34	1.99	2.27	2.15	1.93	2.05		
mg/l	monitoring	0.14	0.15		0.16	0.15	0.19	0.19	<0.005	<0.005		
mg/l	monitoring	0.24	0.17	0.17	0.13	0.16	0.17	0.19	0.14	0.12		

wrong bottle used in sampling

		2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010
		October	November	November	November	November	November	November	November	November	November	November
WATER QUALITY PARAMETER	DATE Time Sampler Report No	28-10-10 10.50AM F.Fox SE82639	2-11-10 11.00AM J Hennessey SE82795	5-11-10 6.30AM K Grach SE82986	7-11-10 7.00AM T.Waine SE83181	9-11-10 6.30AM S di Genni SE83181	11-11-10 7.45AM S di Genni SE83181	14-11-10 2.45PM F.Fox SE83181	15-11-10 11.00AM T.Waine SE83265	16-11-10 7.00AM T.Waine SE83265	17-11-10 7.00AM T.Waine SE83265	19-11-10 9.00AM J Hennessey SE83397
(pH)	EPL limit 6.5	8.3	9.1	8.8	8.4	9.2	9.3	9.97	10.2	9.0	8.9	9.0
(TSS) mg/l	EPL limit less	9.0	15.0	10	12	15	17.0	12.0	16.0	7.7	9.3	10
OIL & GREASE mg/l	EPL limit less	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
AMMONIA mg/l	monitoring	0.46	0.03	0.18	0.09	0.29	0.25	0.05	0.04	0.52	0.53	0.24
TOTAL NITROGEN mg/l	monitoring	3.10	2.3	2.3	1.9	1.7	2.2	1.6	2.2	2.9	3.0	2.4
TKN mg/l	monitoring	2.2	1.40	1.40	1.10	1.60	1.90	1.60	1.90	2.00	2.20	1.70
TON mg/l	monitoring	2.64	2.27	2.12	1.81	1.41	1.95	1.55	2.16	2.38	2.47	2.16
mg/l	monitoring	0.23	0.12	0.15	0.13	0.066	0.035	0.015	<0.005	0.12	0.130	0.075
TOTAL PHOSPHORUS mg/l	monitoring	0.34	0.24	0.28	0.23	0.25	0.25	0.16	0.18	0.19	0.19	0.15

		2010	2010	2010	2010	2010	2010	2010	2010	2010		
		November	November	December	December	December	December	December	December	December		
WATER QUALITY PARAMETER	DATE Time Sampler Report No	29-11-10 12.00NOON J Hennessey SE83792	30-11-10 9.00AM J Hennessey SE83792	1-12-10 15.00PM J Hennessey SE83792	2-12-10 13.00PM J Hennessey SE83792	5-12-10 9.00AM K Grach SE83841	6-12-10 09.30AM S di Genni SE83841	7-12-10 7.30AM S di Genni SE83998	8-12-10 6.30AM S di Genni SE83998	9-12-10 15.00PM S di Genni SE83998		
(pH)	EPL limit 6.5	7.7	7.4	7.4	7.2	7.3	7.2	7.6	7.6	7.5		
(TSS) mg/l	EPL limit less	11	8.0	8.0	6.0	<5.0	7.0	14	31	28		
OIL & GREASE mg/l	EPL limit less	<5	<5	<5	<5	<5	<5	<5	<5	<5		
AMMONIA mg/l	monitoring	0.77	0.13	0.14	0.17	0.16	0.50	0.27	0.03	0.21		
TOTAL NITROGEN mg/l	monitoring	3.3	1.2	1.2	1.2	1.3	1.6	2.1	2.2	2.0		
TKN mg/l	monitoring	2.40	0.530	0.530	0.630	0.670	0.770	0.721	0.738	0.777		
TON mg/l	monitoring	2.53	1.07	1.06	1.03	1.14	1.1	1.83	2.17	1.89		
mg/l	monitoring	0.19	0.12	0.12	0.066	0.064	0.17	0.25	0.15	0.15		
mg/l	monitoring	0.27	0.13	0.12	0.08	0.09	0.18	0.25	0.16	0.17		



Attachment "K" Settlement Lagoon Discharges: July 2010 – June 2011 (Cont'd)

		2010	2010	2010	2011	2011	2011	2011	2011	2011	2011	2011
		DECEMBER	DECEMBER	DECEMBER	JANUARY	JANUARY	JANUARY	JANUARY	JANUARY	MARCH	MARCH	MARCH
WATER QUALITY PARAMETER	DATE Time Sampler Report No	22-12-10 4.35AM AC SE84385	26-12-10 8.00AM SDG SE84385	27-12-10 9.00AM JH SE84385	8-1-11 10.00AM TC SE84561	9-1-11 10.00AM TC SE84561	11-1-11 6.30AM KG SE84887	12-1-11 6.45AM KG SE84887	13-1-11 13.00PM KG SE84887	19-3-11 10.45AM SDG SE86354	20-3-11 10.00AM SDG SE86354	22-3-11 9.00AM JH SE86418
(pH)		9.2	9.6	9.4	8.9	8.3	7.0	7.00	7.1	7.6	7.4	6.3
(TSS)mg/L		12	52	27	12	37	61	41	23	<5.0	42.0	13
OIL & GREASE		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
AMMONIA		0.01	0.01	0.07	0.13	0.13	0.01	0.01	<0.01	0.16	0.07	0.04
TOTAL NITROGEN		2.2	2.2	2.3	1.4	3.1	3.0	3.0	2.5	2.9	1.3	0.50
TKN		1.90	2.20	2.20	1.40	1.90	1.50	1.50	1.20	1.70	0.820	0.458
TON		1.89	2.19	2.13	1.27	1.77	1.49	1.49	1.19	1.5	0.7	0.4
FILTERABLE PHOSPHORUS		<0.005	<0.005	<0.005	<0.005	0.10	0.15	0.12	0.11	0.19	0.10	0.077
TOTAL PHOSPHORUS		0.25	0.23	0.22	0.15	0.20	0.15	0.14	0.12	0.22	0.11	0.08

		2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	2011
		MARCH	APRIL	APRIL	APRIL	APRIL	APRIL	APRIL	APRIL	MARCH	APRIL	MAY
WATER QUALITY PARAMETER	DATE Time Sampler Report No	22-3-11 3.00PM JH SE86418	CT TO ADV 11AM JH SE86891	5-4-11 10.15AM KG SE86732	6-4-11 6.15AM KG SE87237	16-4-11 11.00AM AB SE87237	17-4-11 2.00PM AB SE87237	25-4-11 00.30AM AC SE88002	26-4-11 9.00AM AB SE87237	27-3-11 21.00PM AC SE88002	29-4-11 7.00AM AC SE88002	30-5-11 6.15AM KG SE88002
(pH)		7.0	6.8	8.7	7.8	7.6	7.4	7.3	7.8	6.9	7.0	8.7
(TSS)mg/L		11	40	7.0	<5.0	5.5	<5.0	8	9	7.0	6.0	23
OIL & GREASE		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
AMMONIA		0.05	0.08	0.04	0.04	0.04	0.04	0.03	0.17	0.02	0.03	0.030
TOTAL NITROGEN		0.48	1.3	2.3	2.8	3.3	3.0	4.9	2.8	1.1	3.1	2.2
TKN		0.424	0.954	0.370	0.390	1.60	1.30	2.73	1.30	0.420	1.40	1.40
TON		0.4	0.90	0.93	0.95	1.5	1.2	2.7	1.2	0.4	1.4	1.3
FILTERABLE PHOSPHORUS		0.078	0.067	0.07	0.14	0.056	0.038	0.062	<0.005	0.11	0.089	<0.005
TOTAL PHOSPHORUS		0.08	0.08	0.14	0.11	0.1	0.07	0.17	0.08	0.14	0.16	0.10

		2011	2011	2011	2011	2011	2011	2011	2011	2011	2011	
		MAY	JUNE	JUNE	JUNE	JUNE	JUNE	JUNE	JUNE	JUNE	JUNE	
WATER QUALITY PARAMETER	DATE Time Sampler Report No	31-5-11 6.10AM KG SE88002	1-6-11 6.30AM KG SE88003	2-6-11 6.30AM KG SE88246	7-6-11 10.40AM AC SE88246	8-6-11 10.00AM AC SE88246	10-6-11 10.00AM AB SE88246	14-6-11 14.45PM RG SE88246	16-6-11 7.30AM G SE88311	20-6-11 11.00AM AB SE88467	26-6-11 13.45AM AC SE88519	
(pH)		7.4	7.4	7.1	7.3	7.2	7.3	7.4	7.8	7.7	7.7	
(TSS)mg/L		10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
OIL & GREASE		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
AMMONIA		0.13	0.092	<0.01	0.07	0.06	0.12	<0.01	0.04	0.18	0.06	
TOTAL NITROGEN		1.6	1.2	1.5	1.9	2.3	2.7	2.3	2.1	2.8	3.1	
TKN		0.490	0.260	0.360	0.300	0.450	0.620	0.490	0.460	0.880	0.760	
TON		0.4	<0.2	0.40	0.20	0.40	0.50	0.50	0.4	0.7	0.7	
FILTERABLE PHOSPHORUS		0.072	0.091	0.10	0.11	0.11	0.15	0.12	0.11	0.13	0.13	
TOTAL PHOSPHORUS		0.12	0.14	0.10	0.14	0.16	0.18	0.15	0.24	0.16	0.15	



Attachment "L" AS/NZ ISO 14001 Certification Renewal





Attachment “M” Greenhouse Gas Report - 2010/11

2010/2011 YTD (July-December)	A		B	C	D	E
	Reporting unit	consumed (reporting unit)	Energy content (GJ per reporting unit)	Emissions factor (kg CO2-e per GJ)	Gigajoules Reportable energy (GJ)	tonnes emissions (tonnes CO2-e)
Scope 1 – direct emissions						
Diesel oil(transport)	kL	169	38.60	69.90	6523	456
Diesel oil(stationary energy)	kL	0	38.60	69.50	0	0
Petrol (transport)	kL	29	34.20	69.60	1001	70
Petroleum based oils	kL		38.80	27.90	0	0
Petroleum based greases	kL		38.80	27.90	0	0
Acetylene	m3 *		0.04	51.33	0	0
Scope 2 – indirect emissions						
	Reporting unit		Energy content (GJ per kWh)	Emissions factor (kg CO2-e per kWh)		
Electricity	kWh	22,667,563	0.0036	0.89	81603	20174
Total					89127	20700
Threshold					100,000	25,000

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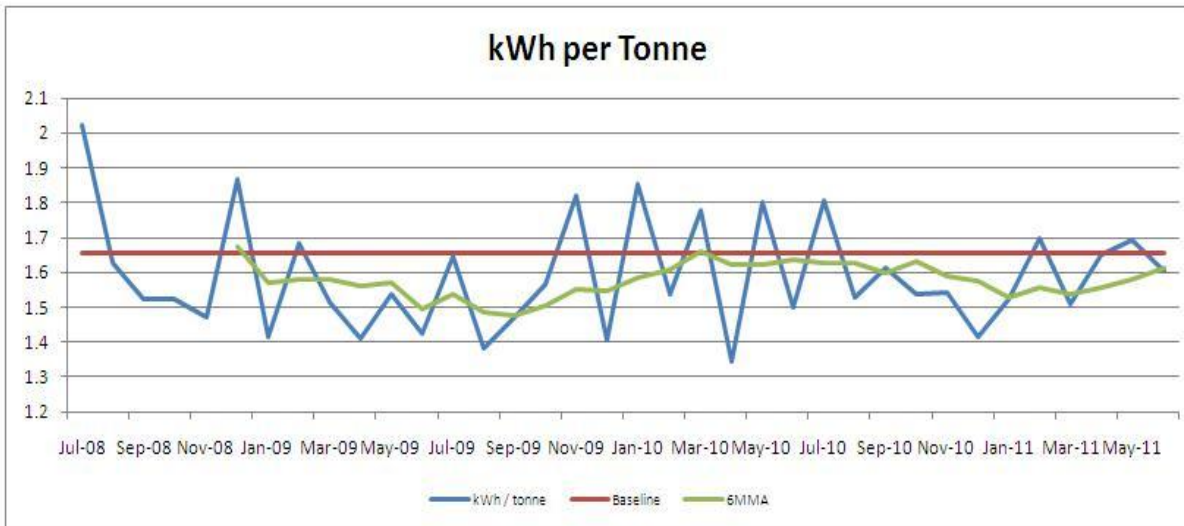
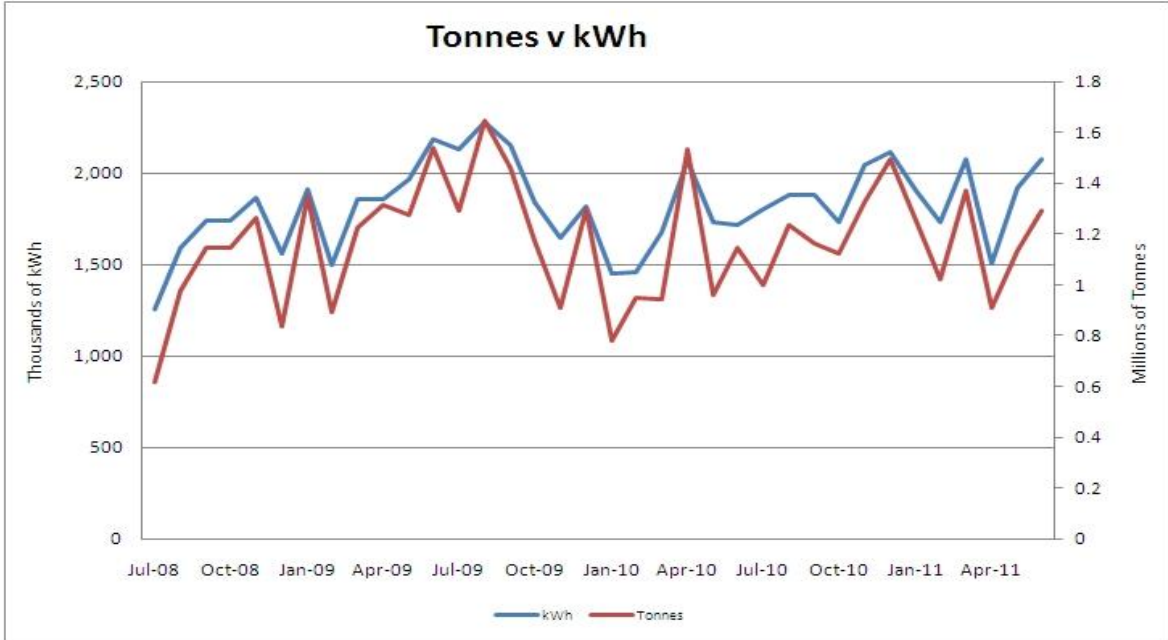
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AUTHORISED BY Peter Green, General Manager

Date Authorised: 28.7.11



Attachment "N" Electricity Usage Report





Attachment "O" Waste Report

Waste	Unit	2010						2011						Total
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Roll-on Bin - Main Store	tonnes	7.24	8.68	1.56	2.92	2.32	2.52	19.45	8.54	9.58	17.68	5.64	11.98	98.11
Roll-on Bin - Rail Receiving Shed	tonnes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Frontlift Bins - Main Workshop/Rear Administration Building/ Contractors Shed	tonnes	10.50	10	11	n/a	n/a	n/a	10.50	11.20	10.75	12.80	12.10	11.60	100.45
Cardboard Recycling Bin - Main Store & IT Building	tonnes	0.50	0.50	0.60	n/a	n/a	n/a	0.80	1.10	0.75	0.85	0.80	0.70	6.60
Asbestos - all areas	tonnes	Nil	3.20	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	3.20
Copper Wire Bin	tonnes	tba	Nil	Nil	0.87	0.00	0.00	Nil	1.96	0.62	2.04	0.95	Nil	6.44
Liquid Waste	tonnes	16,426	Nil	Nil	Nil	Nil	Nil	28,285	0	0	0	16,185	3,187	64,083
Sewer Waste	tonnes	13000	13000	19500	3580	2852	3056	30,681	0	60,301	0	28,201	31,541	205,712
Waste steel removal - all areas	tonnes	18.22	10.00	5.38	13.86	4.14	23.14	19.32	19.22	24.20	13.66	7.78	25.28	184.20

n/a not available

Project Waste						
Project	Waste Type	Unit	Project Total	On Site	Recycled	Disposal
Berth 101 Stockpad 31/32 Refurbishment	Excavated Spoil	tonnes	4500.0	4500.0		
NC8 Structural Refurbishment	Concrete	tonnes	25.0		25.0	
NC8 Structural Refurbishment	steel	tonnes	10.0		10.0	
NC8 GTU Replacement	Steel	tonnes	15.0		15.0	
Berth 102 Pile Refurbishment	Concrete	tonnes	120.0		120.0	
Other Miscellaneous Project Works (Stacker repairs, rail kwik-drop, guarding works etc)	Steel	tonnes	50.0	50.0		
Stockyard Wall Remediation Work	Concrete	tonnes	23.0		23.0	
Berth 101: Asbestos Removal	asbestos	m3	8.5			8.5
Total concrete removed off site	concrete		168.0	0.0	168.0	
Total steel removed off site	steel		75.0	50.0	15.0	8.5

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AUTHORISED BY Peter Green, General Manager

Date Authorised: 28.7.11

Attachment "P" Extract from OEH EPL Annual Return: 1.4.10 to 31.3.11

PKCT Annual Return Report 2010/2011

1. Statement of Compliance –C2: Details of Non Compliance with Licence

1.1 Non Compliance Description: Water quality limit exceedance
(a) Licence condition number not complied with:
L3.3, Point 16 i.e. settlement lagoon
(b) Summary of the particulars of the non-compliance.
Total suspended solids (TSS) result of 61 mg/litre exceeded EPL limit of 50 mg/litre.
(c) Further details on particulars of the non compliance
Daily grab sample of settlement lagoon overflow returned a total suspended solids result of 61 mg/litre. Overflow occurred during a period of wet weather. Daily rainfall across the 9 th , 10 th , 11 th of January 2011 was 14 mm, 1 mm, 3 mm. Water sample results either side of the subject sample were all compliant i.e. 12, 37, 41, 23 mg/litre.
(d) Dates when the non compliances occurred
11 th January 2011.
(e) Causes of the non compliance
Water collection system, in particular the chemical dosing unit, was operational over the wet weather period. The exceedance was marginal and couldn't be directly linked to a cause. A fault on the dosing unit in the days prior did occur though it was of short duration and was promptly rectified. Algae in the settlement lagoon may also have contributed to total suspended solids content.
(f) Actions taken or will be taken to mitigate any adverse effects of the non –compliance.
Exceedance was marginal and not significant when considered the volume and water quality of receiving waters during wet weather events.
(g) Actions taken or will be taken to prevent recurrence of the non-compliance.
Action to improve system performance is progressing via the pollution reduction program referenced in Section 5 herein.

Attachment "P" Extract from OEH EPL Annual Return: 1.4.10 to 31.3.11

PKCT Annual Return Report 2010/2011

1.2 Non Compliance Description: Overflow grab sample not taken

(a) Licence condition number not complied with:

M2.1; Point 16 i.e. settlement lagoon

(b) Summary of the particulars of the non-compliance.

Requirement to take a daily grab sample from Point 16 when the settlement lagoon is overflowing. Sample wasn't taken on Monday, 21st March 2011.

(c) Further details on particulars of the non compliance

Non compliance occurred during an extended period of rainfall during which water quality through Point 16 was excellent as follows:-

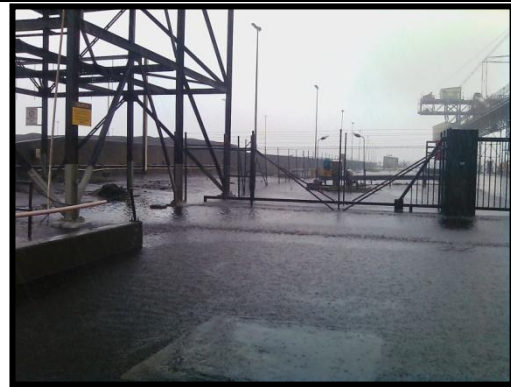
Date	TSS(mg/l)	pH	rainfall (mm)
19/3/11	5	7.6	72
20/3/11	42	7.4	40
21/3/11	no sample		69
22/3/11	13	6.9	12
22/3/11	11	7.0	

(d) Dates when the non compliances occurred

21st March 2011

(e) Causes of the non compliance

On the day of the non compliance, significant, intense rainfall fell causing widespread plant faults, coal slumps and localised flooding. The Team Co-ordinator was involved in inspections and rectification works. Inspections included pond, pump and dosing unit checks verifying equipment was operational. The Team Co-ordinator was aware of the need to take the sample, received a reminder from the Main Control Room but was distracted during the course of the shift.



(f) Actions taken or will be taken to mitigate any adverse effects of the non-compliance.

Two samples were taken on the following day, each indicating excellent water quality.

(g) Actions taken or will be taken to prevent recurrence of the non-compliance.

Sampling arrangements have been strengthened to include Main Control Room verification that sample was taken. Additional shift personnel to be trained on sampling requirements enabling Team Co-ordinator to delegate if operations require.

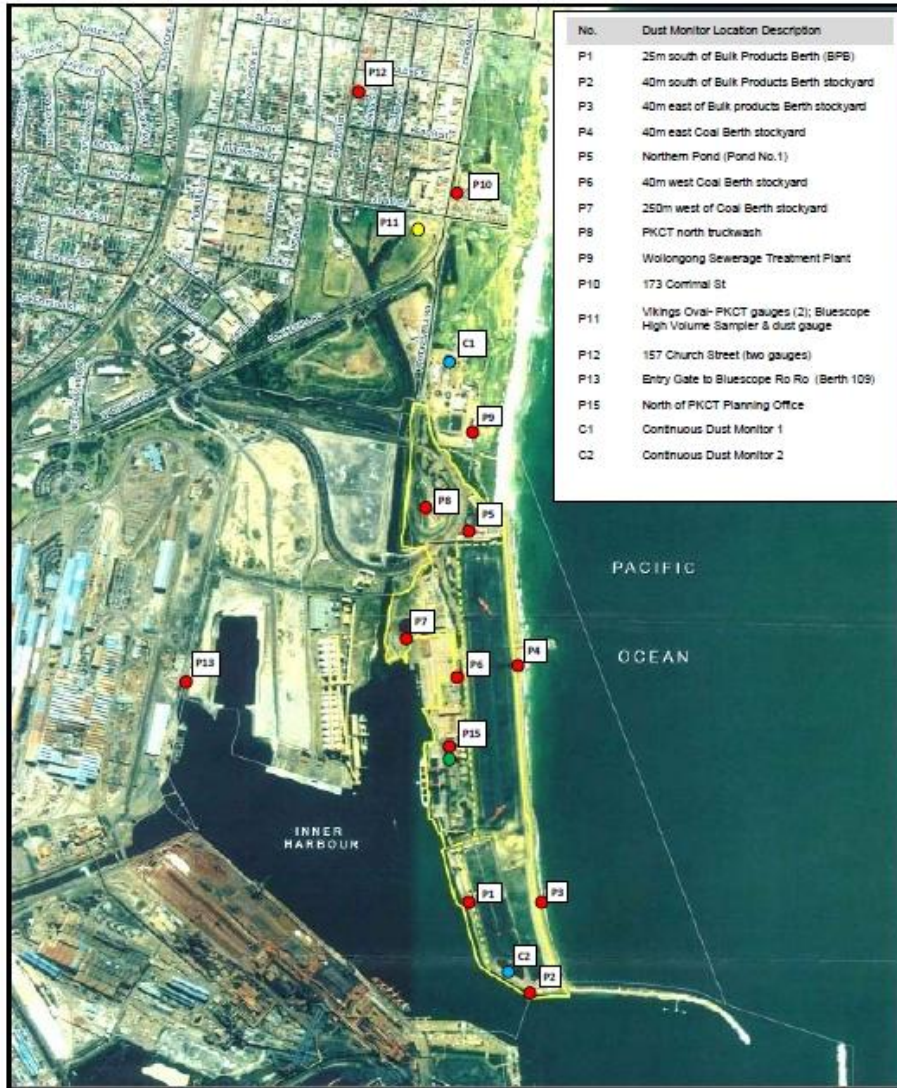
Attachment “P” Extract from OEH EPL Annual Return (continued)

PKCT Annual Return Report 10/11

2. Air Quality Monitoring Sites

PORT KEMBLA COAL TERMINAL
DUST & WEATHER MONITOR LOCATIONS

14 March 2011



- Dust Gauges- DECCW EPL sites ●
- Continuous Dust Monitor Sites ●
- (a) Bluescope High Volume Sampler & dust gauge ● (b) PKCT DECCW EPL Dust Gauge P11 ●
- PKCT Site Boundary
- Weather stations (a) at each continuous dust monitor site ● (b) PKCT south control tower: ●

N.b. during the annual return period, a dust gauge was installed at Vikings Oval site denoted “P11” on the above plan (Monitoring Point 19 in EPL). Gauge was installed in May 2011 and 11 samples were taken across the annual return period.



Attachment "P" Extract from OEHL EPL Annual Return (continued)

PKCT Annual Return Report 10/11

2.2 Dust Deposition Data

AIRBORNE DUST DEPOSITION DETAILS

MONTH DATE Sampler	GAUGE NO. Analysis g/m ² month	2010											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		27-1-10 BA	24-2-10 BA	20-3-10 BA	20-4-10 JH	27-5-10 BA	23-6-10 NH	20-7-10 BA	26-08-10 JH	27-Sep-10 ba	27-10-10 JH	26-11-10 MH	24-12-10 BA
P1 25m South No.1 Coalberth	Insoluble Solids Ash Combustible Matter	6.0 3.5 2.5	3.6 1.4 2.2	6.8 3.8 3.0	7.0 4.2 2.8	9.5 6.8 2.7	9.7 7.9 1.8	8.8 7.1 1.7	9.7 7.4 2.3	3.1 1.8 1.2	2.7 1.3 1.4	4.7 2.7 2.0	3.8 1.5 2.3
P2 40m South of Southern S/P Area	Insoluble Solids Ash Combustible Matter	6.0 3.0 3.0	1.4 0.3 1.1	4.9 3.0 1.9	7.7 5.7 2.0	9.8 7.2 2.6	6.3 4.4 1.9	7.0 4.7 2.3	8.4 5.6 2.8	9.9 6.1 3.8	5.2 2.3 2.9	8.8 6.9 1.9	0.7 0.1 0.6
P3 40m East of Southern S/P Area	Insoluble Solids Ash Combustible Matter	4.8 3.1 1.7	BF BF BF	4.0 2.6 1.4	9.2 6.8 2.4	32.1 25.0 4.1	20.5 16.6 3.9	10.6 7.9 2.7	14.9 7.2 7.7	15.5 4.0 2.6	5.9 4.0 1.9	BF BF BF	22.0 21.5 0.5
P4 40m East No.2 Coalberth S/P Area	Insoluble Solids Ash Combustible Matter	8.3 3.2 5.1	20.1 4.4 15.7	8.9 3.8 5.1	7.4 3.5 3.9	25.6 9.1 16.5	0.5 0.0 0.5	27.9 6.6 21.3	33.4 9.1 24.3	17.0 3.2 13.8	3.5 1.0 2.5	7.9 3.1 4.8	5.7 3.9 1.8
P5 Northern Settling Pond	Insoluble Solids Ash Combustible Matter	19.1 5.9 13.2	10.3 3.4 6.9	14.7 5.2 9.5	13.7 6.0 7.7	16.5 8.9 7.6	3.4 2.4 1.0	3.4 1.4 2.0	17.6 8.2 9.4	11.3 2.9 8.4	10.5 2.5 8.0	18.1 3.6 14.5	26.1 11.5 14.6
P6 40m West No.2 Coalberth S/P Area	Insoluble Solids Ash Combustible Matter	11.1 3.0 8.1	10.6 3.4 7.2	18.9 6.3 12.6	8.3 4.4 3.9	15.0 8.9 6.3	13.1 7.8 6.3	8.2 5.0 3.2	18.4 9.1 9.3	8.1 2.3 5.8	5.4 1.6 3.8	13.9 4.8 9.1	27.7 6.9 20.8
P7 260m West No.2 Coalberth S/P Area	Insoluble Solids Ash Combustible Matter	27.3 17.5 9.8	24.9 21.1 3.8	16.8 8.4 8.4	12.7 11.5 1.2	18.2 16.0 2.2	7.4 2.8 4.6	BF BF BF	5.0 2.5 2.5	1.7 0.9 0.8	1.0 0.5 0.5	2.7 1.8 0.9	6.5 4.2 2.3
P8 PKCT, North Truckwash	Insoluble Solids Ash Combustible Matter	5.9 2.5 3.4	3.3 1.2 2.1	11.9 4.4 7.5	13.6 0.7 12.9	29.8 8.0 21.8	13.0 4.9 8.1	11.1 3.3 7.8	19.9 6.0 13.9	17.4 3.4 14.0	11.1 1.8 9.3	4.2 0.9 3.3	4.7 1.5 3.2
P9 East Side of Water Board Property	Insoluble Solids Ash Combustible Matter	1.6 0.8 0.8	2.7 1.3 1.4	3.2 1.9 1.3	5.4 3.8 1.6	5.8 3.9 1.9	5.5 4.1 1.4	3.5 2.2 1.3	13.7 11.0 2.7	1.6 0.8 0.8	1.7 0.8 0.9	2.0 1.2 0.8	1.0 0.5 0.5
P10 173 Cornimal St Wollongong	Insoluble Solids Ash Combustible Matter	0.7 0.4 0.3	2.7 1.4 1.3	0.9 0.0 0.9	9.5 2.5 7.0	0.2 P P	0.2 P P	3.3 P P	2.8 1.6 1.2	3.9 2.1 1.8	3.0 1.2 1.8	3.9 2.1 1.8	4.3 2.5 1.9
P11 Vikings Oval Wollongong	Insoluble Solids Ash Combustible Matter	4.3 2.7 1.6	3.1 1.9 1.2	2.3 1.3 1.0		1.9 0.9 1.0	2.4 1.5 0.9	1.1 0.4 0.7	3.6 1.8 1.8	1.0 0.4 0.6	0.7 0.2 0.5	0.7 0.1 0.6	0.5 0.1 0.4
P12 157 Church St Wollongong	Insoluble Solids Ash Combustible Matter	2.6 1.7 0.9	2.1 1.3 0.8	2.8 2.0 0.8	2.6 1.9 0.7	2.1 1.4 0.7	1.8 1.3 0.6	2.5 1.6 0.9	1.8 1.0 0.8	1.6 0.9 0.7	0.6 0.2 0.4	1.1 0.6 0.5	3.3 2.3 1.0
P13 200m North of A.I.S. ROAD Berth	Insoluble Solids Ash Combustible Matter	11.0 8.0 3.0	3.9 2.7 1.2	5.3 3.9 1.4	7.8 6.3 1.5	9.1 7.3 1.8	6.6 5.4 1.2	4.4 3.4 1.0	5.8 4.7 1.1	2.7 1.8 0.9	2.7 1.9 0.8	3.6 2.7 0.9	BF BF BF
P15 North of PKCT Canteen Building	Insoluble Solids Ash Combustible Matter	50.2 12.8 37.4	17.8 5.1 12.7	20.3 5.9 14.4	25.3 9.9 15.4	BF BF BF	14.5 2.8 11.7	5.9 2.1 3.8	48.3 22.2 26.1	4.7 1.1 3.6	6.5 1.6 4.9	13.8 3.0 10.8	31.5 8.3 23.2
P17 19 Rotwald St	Insoluble Solids Ash Combustible Matter	GR GR GR	GR GR GR	GR GR GR	GR GR GR	GR GR GR	GR GR GR	GR GR GR	GR GR GR	GR GR GR			

FM-Funnel Missing
GCA-Gauge Contaminated with Algae
G/M-Gauge Missing
B/C-Broken Crucible
O/F-Gauge Overflowed
In-Inaccessible
E/B-Empty Bottle
B/F-Broken Funnel
G/R-Gauge Removed
G/C - Gauge Contaminated
B/F-Blocked

GR - Gauge Removed
G/C - Gauge Contaminated
B/F-Blocked

* gauges overflowed
P - Petrographic

P11-Blue results for Jan, Feb and March are for Keny Street

Samplers	
JH	Justin Hughes
BA	Ben Arnold
GH	Glen Harrison
MH	Nichael Hare

Attachment “P” Extract from OEH EPL Annual Return (continued)**PKCT Annual Return Report 10/11**

Dust deposition results are provided as follows:-

- refer Section B2 of the annual return
- Attachments “D” & “E” provide SGS P/L reports from PKCT’s service provider covering the reporting period.

2.3 Sampling

With regard to Section B2 of the annual return, 161 samples were taken from the 14 monitoring point referenced therein.

6 samples were lost due to broken funnels as follows:-

- Monitoring Point 3: “P3”- 3 samples: Nov.10, Jan.11, Mar.11
- Monitoring Point 7: “P7”- 1 sample: Jul.10
- Monitoring Point 15: “P15”- 1 sample: May 10
- Monitoring Point 17: “P13” – 1 sample: Dec.10

Monitoring Point 19: “P11”: 1 sample wasn’t available in the transition from the Kenny Street monitoring site (resident requested removal) to the Vikings Oval site.

2.4 Dust Deposition Results

Though PKCT is a potential dust source, there are a variety of sources contributing to the air quality within Wollongong’s air shed. Dust sources exist within the district and may also be external. Sources also extend beyond the industrial precinct e.g. traffic, construction activities, domestic combustion and incineration, sea spray.

Dust deposition testing includes a determination of ash and combustible matter. Combustible matter is taken as a guide relating to coal and coke dust though combustible particulates may also emanate from a variety of sources other than PKCT. Dust deposition results may also be affected by local effects from residential activities.

With reference to the charts herein, dust deposition recorded at PKCT’s residential monitoring sites indicate the following:-

(a) Vikings Oval- all monthly results and the annual average were below the annual average target of 4 grams per square metre per month.

(b) 157 Church Street- annual average is below the annual average target; one month exceeded the target. Ash was the primary component of total insoluble solids.



Attachment “P” Extract from OEH EPL Annual Return (continued)

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(c) 173 Corrimal Street- this site has continued to provide variable results including two very high monthly results which didn’t correlate to results at other monitoring sites. Though the January 2011 result at Church Street was also above the annual average, a high ash component was recorded which differed from the Corrimal Street site.

To better understand the nature of dust deposited at this site, petrographic (or microscopic) tests were completed over a 3 month period after the April 2010 high result in lieu of ash/combustible matter make up. Dust levels over the 3 months were quite low unlike the previous and it was difficult to form any conclusions relating to the high results. Petrographic test results are provided in Attachment “H” and in Table 2.4 below.

Month	Insoluble Solids gm/m2/month	Coal and Coke			Magnetics	Soil, minerals,	Insects, plant remains
		coal	coke	metallics/ iron oxides			
May 10	0.2	40-50%			0	40-50%	5-10%
		34%	66%	0			
June 10	0.2	20-30%			10-20%	50-60%	3-5%
		30-35%	0	65-70%			
July 10	3.0	15-20%			5-10%	70-80%	1-2%
		30-35%	0	65-70%			

Table 2.4 Petrographic Results: 173 Corrimal Street

Table illustrates the following:-

- Very low dust levels in May and June
- July dust level more typical, below the annual average target of 4, low proportion of coal/ coke (20%)

PKCT offered to install a second dust gauge for further petrographic testing which wasn’t accepted by the resident. A second gauge was installed, however, at Vikings Oval and Church Street monitoring sites which will enable petrographic testing to continue in parallel to the deposition testing required under the EPL. It is envisaged that an “annual sample” will be collected and then .



**Attachment "P" Extract from OEH EPL Annual Return (continued)
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analysed. PKCT is seeking a better understanding of dust deposition make up and sources. The benefits of the testing will be evaluated to determine whether it is worthwhile to continue.

The residence is located near a high traffic thoroughfare and may be impacted by local effects. An alternate site at Ross Street nearby is under consideration (gauge installed in May 2011)

Residential Dust Deposition Charts

Charts illustrate residential dust trends over the annual return period and compares against Department of Planning assessment criteria for residential sites of 4 grams per square metre per month which forms part of Project Approval 08_0009. It is also noted that this is an OEH guide for an average annual dust level at which residents may detect an impact on amenity.

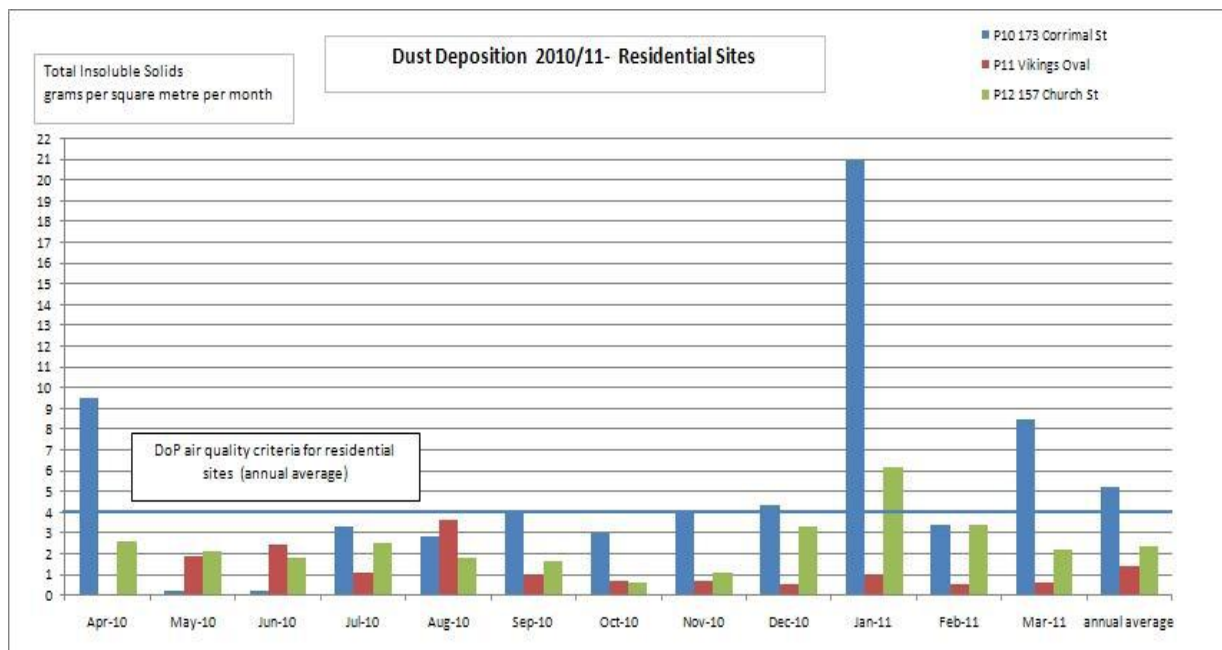


Chart 2.4 (a)



Attachment "P" Extract from OEH EPL Annual Return (continued)

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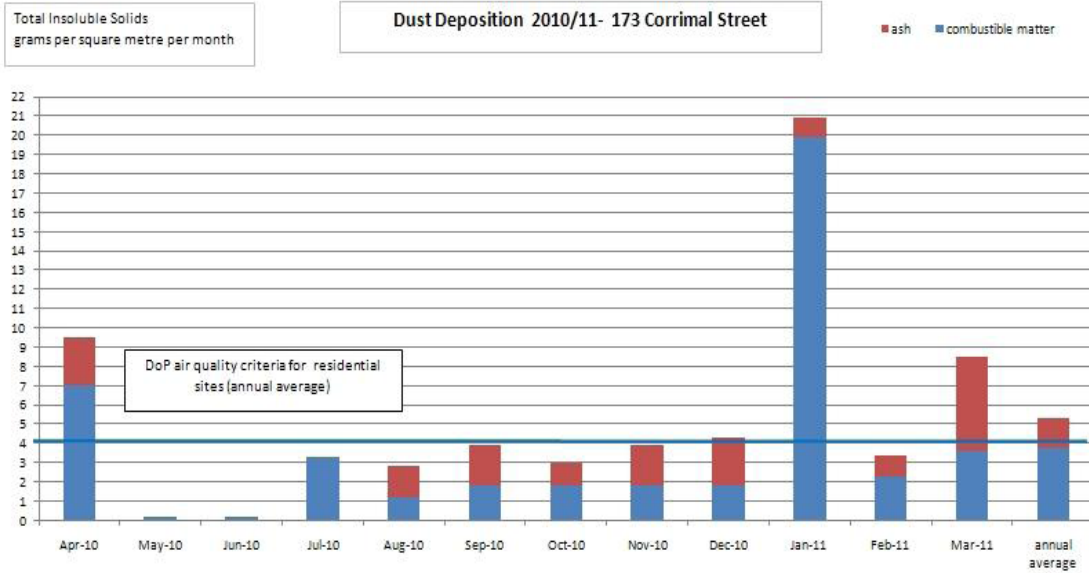


Chart 2.4 (b)

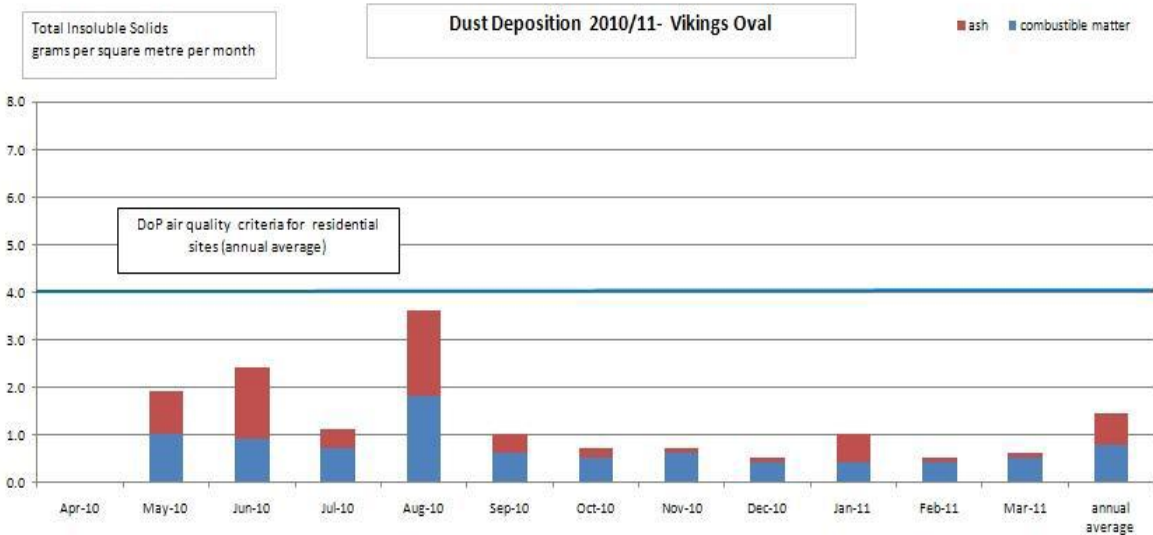


Chart 2.4 (c)



Attachment “P” Extract from OEH EPL Annual Return (continued)

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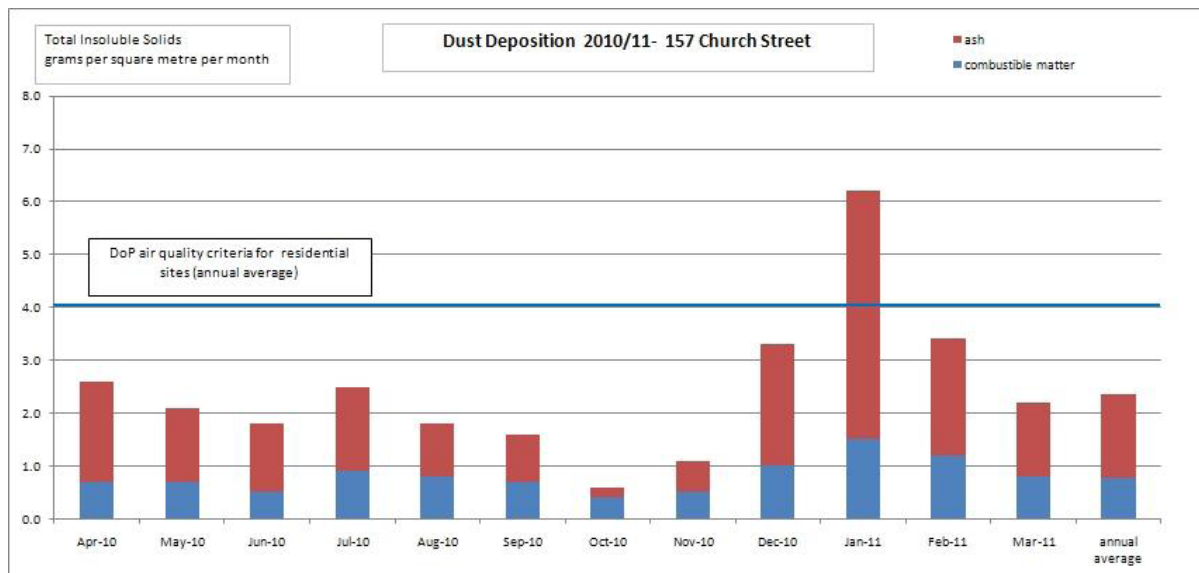


Chart 2.4 (d)

3. Noise Monitoring

In accordance with PKCT’s Noise Monitoring Management Plan, two noise surveys have been completed in September 10 and April 11 and noise results were within the specified limits. Associated reports are provided in Attachment “F” & “G” herein.

4. Water Collection and Discharge Monitoring

4.1 General

Water quality sampling and testing was undertaken during the reporting period of overflows from Point 16 specified in the EPL together with pond sampling and testing, as requested by OEH (refer Attachment “C”), associated with the use of recycled water on site. Test results are provided in Attachments “D” and “E”.

4.2 Point 16

Over the annual return period, 61 samples were taken of overflows from PKCT’s EPL discharge point 16 (Settlement Lagoon) into Port Kembla Harbour. One sample was lost due to sampler error. Table 4.1 provides a summary of the results. Key points are noted as follows:-

(a) pH exceedances have occurred associated with nutrients and algae related to the introduction of recycled water use on site in April 2009. The Recycled Water project was developed and



Attachment "P" Extract from OEH EPL Annual Return (continued)

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implemented in consultation with OEH and significant potable water savings have been achieved. It was recognised that the recycled water had higher nutrient levels and that the introduction of recycled water to site would need to be monitored to identify any changes in runoff and harbour discharges characteristics. Elevated pH was reported on in the 0910 EPL annual return and has been the subject of further monitoring and assessment in consultation with OEH during the reporting period. Reference is made to Section 8 herein.

(b) TSS- one exceedance occurred and is referenced in Section 1.1 herein. Chart 4.1 demonstrates continued improvement in reliability and system performance over the reporting period.

(c) oil/ grease- all results were compliant.

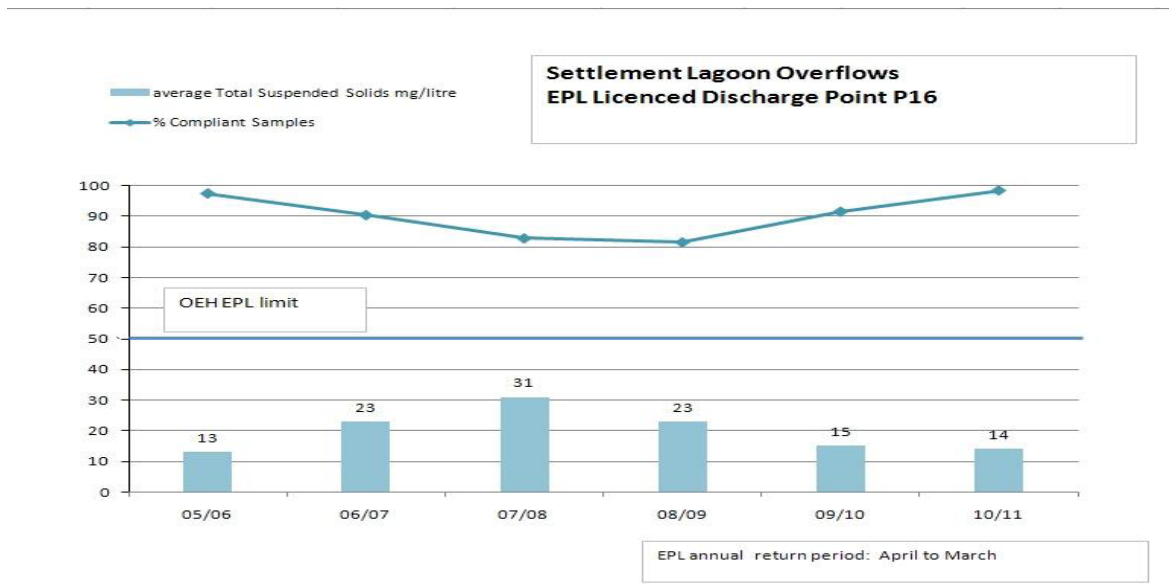


Chart 4.1 TSS Performance Trend



Attachment “P” Extract from OEH EPL Annual Return (continued)

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	EPL Limit	Unit	Compliant Samples	Total Samples	% Compliance	Average
pH	6.5-8.5		43	60	72	not applicable
Total Suspended Solids	less 50	mg/litre	59	60	98	14
Oil/grease	less 10	mg/litre	60	60	100	less 5

Table 4.1 Summary of Results

4.3 Collection Pond Monitoring

Prior to the commencement of recycled water use on site, OEH requested that PKCT undertake additional water quality sampling and testing at various locations on site (refer Attachment “C”). This monitoring has continued and is contained in the reports referenced in Section 4.1 herein.

5. PRP U3: PRP8 Identify Options to Improve the Performance of the Stormwater Pollution Control System.

Completion date for this PRP was 31st August 2010.

System review required under this PRP was undertaken by consultant, Cardno, and a report submitted to DECCW on the 12th August 2010.

Submission of the report was followed up by a meeting (PKCT/OEH) held on the 24th August 2010 to report on PRP action status, discuss the Cardno report, improvement options and how they may be progressed.

By letter of 10 September 2010, PKCT referenced discussions held at 24th August 2010 meeting, confirmed PRP U3 status and submitted a new draft PRP to progress identified improvement action. Apart from desilting the settlement lagoon, all PRP actions were complete. Desilting wasn’t favoured as follows:-

- Full clean (emptying the lagoon) not practical in winter months.
- Loss of water which otherwise would be available for reuse on site.

Attachment “P” Extract from OEH EPL Annual Return (continued)**PKCT Annual Return Report 10/11**

- Water quality of discharges had been very good and there was no evidence silt build up was affecting system performance. This has been confirmed in TSS results across the annual return period (n.b. Section 4.2 herein).
- Further monitoring was proposed including verification of lagoon capacity.

- PKCT confirmed there was adequate capacity (within 80% EPL requirement) in the lagoon through hydrographic survey and submitted a report to DECWW on 7th October 2010. Alternate to a full clean, the inlet to the lagoon was cleaned out in December 2010.

OEH Notice of Variation of Licence No.1625 (Notice Number 1118754) denotes “PRP8 Identify Options to Improve the Performance of the Storm Water Pollution Control System” as complete (completion date: 30 June 2010).

PRP Status: Complete**6. PRP U1: PRP6 Dust Management Improvement.**

Actions under U1.3 and U1.4 denoted in EPL as complete.

With regard to U1.2, PKCT submitted a report by letter of 29th June 2010 advising OEH on dust management improvement work undertaken. Further information was provided on 16th July 2010 in submission of a report PKCT Report: Study into Dust Control Methodology.

OEH Notice of Variation of Licence No.1625 (Notice Number 1118754) denotes “PRP6 Dust Management Improvement PRP6 as complete (completion date: 30th June 2010).

PRP Status: Complete**7. PRP U2: PRP7 Green and Golden Bell Frog Management Plan.**

In accordance with this PRP, a Green and Golden Bell Frog Management Plan MP.HSEC.570 was submitted to OEH on 30th June 2010 (due date under the PRP).

The plan is implemented and liaison is continuing with OEH

- PKCT maintains a sightings log, there has been only one sighting at PKCT over the reporting period.
- Symbio Wildlife Park display remains in operational.
- The first sighting of GGBF has occurred at the Greenhouse Park habitat which attracted positive media coverage.
- OEH has arranged a GGBF training day at Symbio

**Attachment “P” Extract from OEH EPL Annual Return (continued)
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With regard to the note in the 0910 annual return i.e. “Discussions with DECCW on 21st May 2010 indicate the DECCW is seeking to keep the Pollution Reduction Program (PRP) open and intend to extend the completion date”, the following is noted:-

(a) OEH Notice of Variation of Licence No.1625 (Notice Number 1118754) denotes “PRP7 Green and Golden Bell Frog Management Plan” as complete (completion date: 30th June 2010).

(b) OEH provided feedback to PKCT on the submitted management plan on 2nd May 2011. OEH’s comments will be reviewed and the management plan revised as appropriate.

PRP Status: Complete

8. Draft PRP9 Performance Upgrades to the Stormwater Pollution Control System

Discussions with OEH have occurred on the outcomes of PRP8 and the matters pertaining to algae/ ph referenced in Section 4.2 and total suspended solids exceedances which have occurred in recent years (one in this return period- refer Section 1.1 herein.)

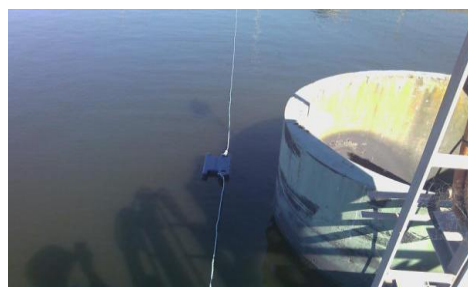
By letter of 10th September 2010 (refer Attachment “B”) to OEH, PKCT proposed a new pollution reduction program to progress improvements.

By letter of 11th March 2011, OEH submitted to PKCT a draft Notice of Variation of Licence No.1625 (Notice Number 1118754) which included “PRP 9- Performance Upgrades to the Stormwater Pollution Control System”. PKCT has submitted a response and the PRP is being finalised currently. In the variation, OEH has extended the pH range from 6.5-8.5 to 6.5-9.5 while monitoring and assessments continue and improvements works are undertaken.

With regard to algae control and management, PKCT has had an algae study completed by Cardno Ecology Lab. Report was forwarded to OEH by e mail on 9th February 2011. PKCT also installed an ultrasonic algae control device in the settlement lagoon in April 2011 and monitoring is progressing to assess its effectiveness.



Ultrasonic control box



Ultrasonic unit installed

Attachment "P" Extract from OEH EPL Annual Return (continued)

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9. Complaints


8.1

Date and Time of the Complaint:
31st January 2011 at 9:22 am
Method by which the complaint was made:
Complaint made to OEH.
Personal details provided (or note advising otherwise):
Resident from View Street Wollongong; no details provided
The nature of the complaint:
Complaint re. dust fall out across 28, 29, 30th January 2011. OEH advised complaint related to "coal dust fallout from Port Kembla coal loader over Friday, Saturday and Sunday, southerly blowing on Friday and Saturday. Hand rails at callers home are covered black coal dust".
Action taken by the licensee in relation to the complaint, including any follow up contact with the complainant:
<p>Upon receipt of OEH advice of the complaint, PKCT arranged for a consultant review of PKCT continuous dust monitoring data. A report was provided and forwarded to OEH on 8.2.11. This report indicated the following:-</p> <p>(a) dust levels were within the air quality guidelines for residential areas; i.e. 24 hr PM10, TSP.</p> <p>(b) predominant wind direction over the 29th, 30th January was from north east.</p> <p>(c) predominant wind direction over the 28th was from the south; in comparing data upstream and down steam from PKCT's site, PKCT possible contribution was minimal.</p> <p>With regard to PKCT's site operations, there were no reports of visual dust emissions or observed dust problems and PKCT's spray systems were operational.</p> <p>It is not known whether there was further communications between OEH and the complainant.</p>
If no action taken by the licensee, the reasons why no action was taken.
Not Applicable.

Attachment "P" Extract from OEH EPL Annual Return (continued)

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8.2

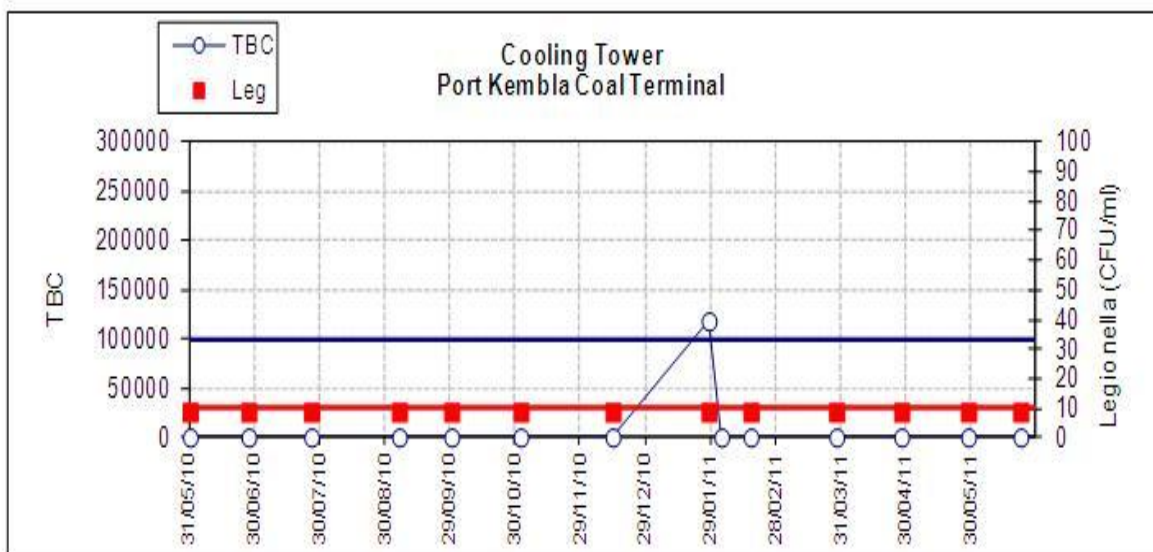
Date and Time of the Complaint:
4th March 2011.
Method by which the complaint was made:
Telephone call from resident to OEH. OEH e mail to PKCT on 7th March 2011
Personal details provided (or note advising otherwise):
Provided and held by OEH and PKCT; resident from Links Seaside Apartments, Ross St.
The nature of the complaint:
Complaint from the resident pertained to general dust fall out perceived to be coal dust and was not related to a specific incident or observation.
Action taken by the licensee in relation to the complaint, including any follow up contact with the complainant:
The resident was contacted by PKCT and a personnel visit undertaken on 17th March 2011. Discussions in visit entailed the following <ul style="list-style-type: none"> • Resident's concerns re. dust fallout. • Advice on air quality in general, various dust sources and the industrial precinct. • Information was provided on PKCT's operation, dust controls and improvement strategies. • PKCT undertaking was provided to carry out some dust deposition monitoring and dust analysis near the premises.
Further actions have been undertaken as follows:-
(a) OEH advised of PKCT follow up and proposed monitoring (18.3.11 & 11.5.11).
(b) Dust gauge installed at the Links Seaside Apartments
Liaison with the resident will continue as monitoring data becomes available.

If no action taken by the licensee, the reasons why no action was taken.
Not applicable



Attachment "Q" Cooling Tower Data

Port Kembla Coal Terminal Cooling Tower Data



Date	pH	Cond uS/cm	PO4 mg/l	Chlorides mg/l	TBC CFU/ml	Legionella CFU/ml
<i>Max</i>	9.5	1000	10	350	100,000	10
<i>Min</i>	7.0	600	3			
29/01/11	7.8	1100	1	220	120,000	<10
3/02/11					<200	
17/02/11	9.2	1252	1	220	<200	<10
29/03/11	7.8	1245	3	250	<200	<10
28/04/11	7.8	780	0	220	<200	<10
30/05/11	9.2	230	0	280	1,700	<10
23/06/11	8.5	1247	0	220	<200	<10
Average	8.4	976	0.8	235	17,456	<10



Nb high plate count identified on the 31st January11 resulted in an inspection by Nalco, the service provider. Nalco verified that the dosing equipment was operating correctly. A remedial dose of biocide was added on the 1st February 2011 and the Total Bacteria Count was reduced to below the required level .

Attachment “R” Extract - Green and Golden Bell Frog Sightings Log FY11

Green and Golden Bell Frog Sightings Log

	14.10.10	Settlement lagoon survey Greenhouse Park	Mid day; no sightings but croaking heard in reed clumps on the south side of lagoon- A Chalk Mid day- no sightings or croaking heard	
	28.10.10	Settlement lagoon survey	Mid afternoon; no sightings or croaking heard- A Chalk	
	16.12.10	Settlement lagoon survey Settlement Lagoon Greenhouse Park	Mid afternoon- no sightings or croaking heard- A Chalk Dusk (8 pm) – no frog sightings, no croaking heard- A Chalk Dusk (8 pm) - no frog sightings, no croaking heard- A Chalk	 Greenhouse Park
	17.12.10	Settlement lagoon survey	Mid afternoon- survey with Arthur White (Biosphere P/L); <u>one sighting</u> by Biosphere. Tadpole inspection done but none found. Greenhouse Park pond was also inspected; no sightings or evidence of <u>GGBFs</u>	
	19.4.11	Greenhouse Park Pond	Sue McGregor from Wollongong City Council reported a sighting; one female frog found and photos taken. DECCW (<u>Jen Byrne</u>) notified.	
	22.6.11	Rail <u>receiving</u> basement	Peron tree frog found (Craig Taylor) near sump while hosing in progress; identity confirmed by Biosphere P/L; frog release on PK Rd adjacent to golf course in evening same day.	