

# Interim Environmental Management Report

## 2013/2014

Reporting Period 1.7.13-31.12.13



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## **1. Introduction**

### **1.1 Purpose**

The purpose of the Interim Environment Management Report (IEMR) is to provide the community, Department of Planning and Infrastructure (DPI) and other stakeholders a summary of Port Kembla Coal Terminal (PKCT)'s monitoring results in accordance with Schedule 4 Condition 9(a) of DPI Approval 08\_0009.

### **1.2 Scope**

PKCT Major Project Approval 08\_0009 was granted on the 12<sup>th</sup> June 2009. The approval included a requirement of PKCT to prepare an Annual Environment Management Report (AEMR). Approval also requires an interim report covering the initial 6 months of the reporting period. Accordingly, the first PKCT AEMR was submitted to the DPI applies to the period of 1<sup>st</sup> July 2009 – 30<sup>th</sup> June 2010 (the reporting period).

PKCT also has an Environment Protection Authority (EPA) Environment Protection Licence 1625. EPA requires licencees to make monitoring results available to the public.

Accordingly, this IEMR will be published on PKCT website ([www.pkct.com.au](http://www.pkct.com.au)).

### **1.3 Methodology**

Section 2 provides a description of the various environmental aspects monitored by PKCT under its EPL and DPI approval conditions. Each aspect references applicable assessment criteria and provides a commentary on the monitoring undertaken. Monitoring results are included in the attachments herein.

## 2. Monitoring

### 2.1 Noise

#### 2.1.1 Assessment Criteria

EPL 1625 & Major Project Approval 08\_0009 control noise emissions from PKCT's premises. Noise criteria are outlined as follows:-

1. 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:
  - o wind speeds of up to 3 m/s at 10 metres above ground level; or
  - o 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.

#### 2.1.2 Monitoring and Results

A routine noise survey was undertaken in December 2013. 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.

## 2.2 Transport

### 2.2.1 Assessment Criteria

#### 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.

### 2.2.2 Monitoring and Results

Attachment "B" provides a summary of receivals and shiploading throughput data for the reporting period.

PKCT received 1,352,976 tonnes (annualised 2,705,952 tonnes) by public road during the first half of reporting period which is less than 7.5 million. This accords with approval thresholds in Major Project Approval 08\_0009 and the EA. EPL 1625 has no criteria for product receival.

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 to review implementation and monitoring results. During this reporting period, meetings were held on 20<sup>th</sup> November 2013 and 22<sup>nd</sup> January 2014. Weekly Shippers meetings are also held to coordinate shipping and receival plans. This is facilitated by PKCT with shippers in attendance and is a forum whether any issues can be raised. Outside of meetings, PKCT has communications with road transport providers where road and Drivers Code of Conduct matters can be raised and actioned.

## 2.3 Air Quality

### 2.3.1 Assessment Criteria

#### 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 <sup>3</sup>
Particulate matter < 10 µm (PM10)	Annual	30 µg/m <sup>3</sup>

*Table 4: Short term impact assessment criteria for particulate matter*

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

*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 <sup>2</sup> /month	4 g/m <sup>2</sup> /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.

EPL 1625 contains a requirement for dust monitoring but 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.

### 2.3.2 Monitoring and Results

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

Dust deposition data is reported on PKCT’s web site [www.pkct.com.au](http://www.pkct.com.au) in a monthly Environment Protection Licence Monitoring Report.

Attachment “F” provides trend graphs for PKCT’s residential sites. Dust deposition levels across the reporting period were within the assessment criteria for insoluble solids (4 Grams/m<sup>2</sup>/month) and combustible matter (2 Grams/m<sup>2</sup>/month) at residential sites.

A summary of the data recorded at the northern continuous dust monitor is presented below;

The annual average (rolling average for January to December 2013) and six-month average (July to December 2013) concentrations of TSP at the PKCT northern monitoring site were below the trigger level of 90 µg/m<sup>3</sup>

The annual average (rolling average for January to December 2013) PM10 concentration of 37.1 µg/m<sup>3</sup> at the PKCT northern monitoring site was above the trigger level of 30 µg/m<sup>3</sup>

The six-month average (July to December 2013) concentration of PM10 at the PKCT northern monitoring site was below the trigger level of 30 µg/m<sup>3</sup>

At the northern PKCT monitoring site the trigger level of 90 µg/m<sup>3</sup> for the 24-hour average TSP concentration was exceeded on 15 occasions during the July to December 2013 period, while the 24-hour average PM10 air quality standard of 50 µg/m<sup>3</sup> was exceeded on 16 occasions. Each TSP exceedance day was also a PM10 exceedance day.

PKCT was identified as having made, at most, a minor contribution (i.e. less than 30%) to 14 of the 15 exceedances of the 24-hour average TSP trigger level at the PKCT northern monitoring site. PKCT was identified as having made a moderate contribution (30% to 70%) on the remaining exceedance day, 21 December 2013.

PKCT was identified as having made, at most, a minor contribution (i.e. less than 30%) to 15 of the 16 exceedances of the 24-hour average PM10 objective at the PKCT northern monitoring site. PKCT was identified as having made a moderate contribution (30% to 70%) on the remaining exceedance day, 21 December 2013.

The dust results recorded across PKCT’s network across the monitoring period were generally good. On the 21<sup>st</sup> December, the one date where the recorded data indicates that PKCT made a moderate contribution to the levels measured at the northern dust monitor, this coincided with significant slumping of a stockpile and high winds. Water sprays were moderated at the slumping location due to safety concerns and this likely led to the measured dust levels.

Attachment “G” provides a summary of continuous dust data. Table 9 compares annual PM10 and TSP with assessment criteria. TSP and PM10 levels at the northern monitor were within the annual average assessment criteria of 90 and 30 µg/m<sup>3</sup> respectively.

Tables 6 and 7 provide a report of 24 hour TSP and PM10 exceedances compared against the assessment criteria. Exceedances were recorded for TSP and PM10 on 15 and 16 days respectively. This is a positive trend when compared to 31 and 54 days respectively during the same period last year.

It is noted that the northern monitor is not located on the northern residential boundary so that exceedance results are considered conservative.

Analysis of wind direction, up wind and district effects indicated that PKCT is predominantly a minor contributor.

## **2.4 Meteorological Monitoring**

### **2.4.1 Assessment Criteria**

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.

### **2.4.2 Monitoring and Results**

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

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

## **2.5 Surface Water**

### **2.5.1 Assessment Criteria**

The Protection of the Environment Operations (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.

Energy Administration (Water and Energy Savings) Act 2005 sets out obligations for water use and conservation and requires PKCT to have a Water Savings Action Plan. PKCT has a Water Savings Action Plan in place and is continuing efforts to minimize overall and potable water usage.

**2.5.2 Monitoring and Results**

PKCT has a Water Management Plan which covers the use of water, collection of process and stormwater, treatment and control of water for reuse and discharge to harbour waters.

Attachment “I” provides data on potable and recycled water usage. Potable water usage has increased across the reporting period from 301ML (July to Dec 12) to 327ML (July to Dec 13). The increase is primarily due to a significant hot, dry and windy period during October 2013 combined with almost no precipitation across the month. Without this significant event, water usage would be comparable to the same period last Financial Year.

The proportion of recycled water used as a percentage of total water used across the site has increased from 52% (July to Dec 12) to 64% (July to Dec 13).

Attachment “K” provides water quality results from PKCT’s EPL Licenced Discharge Point 16. The results indicate the following:-

- (a) 100% compliance for Total Suspended Solids and Oil and Grease.
- (b) There were three periods where pH of the discharge water was marginally outside of our EPL limits. These periods occurred on 3<sup>rd</sup> September 2013, 9<sup>th</sup> to 12<sup>th</sup> October 2013 and 4<sup>th</sup> November 2013. pH is known to fluctuate in the Settlement Lagoon due to increased algae levels which themselves are associated with nutrient loads. PKCT has been liaising with the EPA and is currently trialing a water treatment program to address the algae (PRP13). Consultant advice indicates that periodic discharge, usually during storm conditions, of water with elevated pH doesn’t adversely impact on receiving waters.

## 2.6 Biodiversity

### 2.6.1 Assessment Criteria

<b>Green and Golden Bell Frog Management Plan</b>	
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:	
<ul style="list-style-type: none"> <li>(a) be developed in consultation with DECC; and</li> <li>(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.</li> </ul>	

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

### 2.6.2 Monitoring and Results

PKCT has a Green and Golden Bell Frog (GGBF) management plan in place. Internal and external (with consultant) surveys are undertaken periodically by PKCT. PKCT’s consultant, Biosphere, undertook a review of PKCT’s management plan in July 2011. Site inspections associated with the review failed to detect any GGBF on site, any signs of tadpole activity or croaking. The management plan has been reviewed and submitted to the Environment Protection Authority. Opportunities to further develop Greenhouse Park frog habitat are under consideration. A consultant has been engaged to undertake a frog survey at PKCT in February 2014.

There have been no onsite sightings of Green and Golden Bell Frogs in this reporting period.

## 2.7 Greenhouse & Energy Efficiency

### 2.7.1 Assessment Criteria

#### 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.

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.

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

### 2.7.2 Monitoring and Results

#### GHG & Energy Efficiency

Neither EPL 1625 nor DPI Approval 08\_0009 specifies criteria for GHG emissions or energy reduction. Data for petroleum based oils, greases and acetylene was not available for this report and hence the data has not been included in Attachment L, "Greenhouse Gas Report". Based on historical use at PKCT, petroleum based oils, greases and acetylene do not account for significant Reportable Emissions or Reportable Energy. Data will be supplied in the 2013/2014 AEMR. It is noted that Greenhouse Gases - Scope 1 and Scope 2 emissions are below the National Greenhouse and Energy Reporting (NGER) scheme reporting threshold.

Attachment “L” and “M” provides data covering the reporting period.

Energy Efficiency - The data indicates that energy efficiency has generally been good YTD with four of six months below the energy efficiency target of 1.655. Two months, August 13 and December 13 were above the kWh/tonne efficiency target and have therefore decreased the yearly average energy efficiency for the YTD. The poor results during August and December are directly related to low throughput during these months. Opportunities are being continually sought to improve efficiency through proposed plant/ equipment replacements and upgrades.

GHG - Use of soya biodiesel has continued across the reporting period primarily for front end loader operations.

## **2.8 Waste**

### **2.8.1 Assessment Criteria**

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.

#### **Operating Conditions**

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

### **2.8.2 Monitoring and Results**

PKCT has a Waste Management Plan in place. 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.

Waste data was not available during the compilation of this report as service arrangements are in the process of change. A detailed report will be provided in the 2014 Annual Environment Management Report providing a breakdown of waste into waste streams.

## 2.9 Hazards

### 2.9.1 Assessment Criteria

#### 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*.

### 2.9.2 Monitoring and Results

PKCT has two underground hydrocarbon tanks storing diesel and unleaded petrol. Routine ground water sampling and testing across 2012 occurred and no evidence of leaks was found. Use of the tanks has discontinued and a mobile fuel tanker is being used for refueling on site. In accordance with the regulations, the tanks are scheduled to be removed in February 2014.

## 3. Community Relations

### 3.1.1 Assessment Criteria

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

### 3.1.2 Monitoring and Results

Complaints received during the reporting period entail the following:

- No complaints related to PKCT general operations were received during the reporting period.
- No complaints to road transport providers.

The following actions occurred during the reporting period:

- Community Consultative Committee met on 31<sup>st</sup> July and 27<sup>th</sup> November 2013.
- PKCT web site ([www.pkct.com.au](http://www.pkct.com.au)) continues to include e-mail and phone contact details ([communitylinks@pkct.com.au](mailto:communitylinks@pkct.com.au)).

#### **4. Independent External Audit 2011- Status of Actions**

Audit was carried out by consultant, AECOM P/L, in March 2011 and an audit report was submitted to the DPI on 10<sup>th</sup> May 2011.

PKCT submitted a report to the DPI on 10<sup>th</sup> August 2011 providing feedback on the audit findings and an action plan. Overall, audit findings were accepted. Some clarification was sought from the DPI on the interpretation of some aspects of the approval conditions. Clarification was provided by the DPI on 27<sup>th</sup> November 2011.

##### Actions

- Water collection system's settlement lagoon dosing unit upgrade to address current EPL compliance issues is complete. pH monitoring and algae controls are being trialled.
- Underground fuel tanks- consultant review of the fuel system was completed by consultant, GHD, in December 2011. Integrity tests and routine ground water tests indicate the tanks are sound and no leaks have been detected. Mobile refuelling has been instigated in place of the underground tanks. Tanks were removed in February 2013.
- North truckwash upgrade is in progress and due for completion by August 2013.
- North transfer station area has been paved providing a positive dust control improvement.
- Drivers Code of Conduct improvement actions are continuing and improvement opportunities are being investigated with road transport companies.

#### **5. Conclusion**

Monitoring undertaken during the reporting period did not identify any notable adverse aspects. Further work to be finalised will be reported in the Annual Environmental Management Report due on 31<sup>st</sup> July 2014.

#### **6. References**

Environmental Protection Licence 1625 – Port Kembla Coal Terminal  
Major Project Approval 08\_0009 for the Port Kembla Coal Terminal Project

## Attachment "A" Noise Monitoring Report - December 2013

Port Kembla Coal Terminal  
December 2013 Compliance Monitoring

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**Table 5-1 Summary of Monitoring Results – Location 1 – Corner Swan & Kembla Streets**

Date & Start Time	Period	Criteria (dBA)	BarnOwl® PKCT Direction L <sub>Aeq</sub> (dBA)	BarnOwl® All Noise L <sub>Aeq</sub> (dBA)	SLM L <sub>A90</sub> (dBA)	Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
19/12/13 12.15-12.30pm	Day	51	< 49 (≈ 41)	64	55	6.1 - 6.4 m/s 38 - 43 Deg	C	YES Not Audible	At measurement location noise dominated by road traffic and wind. PKCT activities not audible. On-site typically 7 truck movements. No other notable site noise.
18/12/13 18.35-18.50pm	Evening	50	< 55 (≈ 47)	70	48	3.4 - 3.6 m/s 34 - 36 Deg	D	YES Not Audible	At measurement location noise dominated by road traffic. PKCT activities not audible. On-site typically 8 truck movements. Train arrival during measurement and remained idling throughout.
19/12/13 12.30-12.45am	Night	49	≈ 31	45	38	0.8 - 1.1 m/s 303 - 330 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 13 truck movements. No other notable site noise.
19/12/13 2.40-2.55am	Night	49	< 29 (≈ 28)	44	36	1.6 - 1.9 m/s 346 - 349 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 11 truck movements. Slow moving train and intermittent clangs from shed measured at 65dBA on site.



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**Table 5-2 Summary of Monitoring Results – Location 2 – Corner Swan & Corrimal Streets**

Start Date & Time	Period	Criteria (dBA)	BarnOwl® PKCT Direction L <sub>Aeq</sub> (dBA)	BarnOwl® All Noise L <sub>Aeq</sub> (dBA)	SLM L <sub>A90</sub> (dBA)	Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
19/12/13 1.00-1.15pm	Day	51	< 46 (≈ 43)	61	54	6.2m/s 35 - 38 Deg	C	YES Not Audible	At measurement location noise dominated by road traffic and wind. PKCT activities not audible. On-site typically 23 truck movements. Entering trucks backed up in a queue for long periods.
18/12/13 19.15- 19.30pm	Evening	50	< 44 (≈ 41)	59	50	3.2 - 3.6m/s 34 - 36 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 4 truck movements. Slow train pass by throughout.
19/12/13 1.10-1.25am	Night	49	< 34 (≈ 32)	49	37	1.2 - 1.3m/s 344 - 357 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 17 truck movements. No other notable site noise.
19/12/13 3.05-3.20am	Night	49	< 34 (≈ 29)	46	37	3.2 - 3.6m/s 339 - 347 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 6 truck movements. Slow moving train and intermittent clangs from shed measured at 65dBA on site.



## Attachment "A" Noise Monitoring Report - December 2013 (continued)

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**Table 5-3 Summary of Monitoring Results – Location 3 – Corner Keira & Fox Streets**

Start Date & Time	Period	Criteria (dBA)	BarnOwl® PKCT Direction L <sub>Aeq</sub> (dBA)	BarnOwl® All Noise L <sub>Aeq</sub> (dBA)	SLM L <sub>A90</sub> (dBA)	Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
19/12/13 1.40-1.55pm	Day	51	≈ 53 <sup>1</sup>	64	55	5.9 – 6.8m/s 34 – 37 Deg	D	YES Not Audible	At measurement location noise dominated by road traffic and wind. PKCT activities not audible. On-site typically 18 truck movements. No other notable site noise.
18/12/13 19.50- 20.05pm	Evening	50	≈ 51 <sup>2</sup>	61	46	2.8 – 3.1m/s 28 – 31 Deg	D	YES Not Audible	At measurement location noise dominated by road traffic. PKCT activities not audible. On-site typically 11 truck movements. No other notable site noise.
19/12/13 1.55-2.10am	Night	49	≈ 46	53	34	1.3 – 1.4m/s 351 – 357 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 11 truck movements. Slow moving train and intermittent clangs from shed measured at 65dBA on site.
19/12/13 3.30-3.45am	Night	49	≈ 39	46	35	1.7 – 2.1m/s 342 – 352 Deg	D	YES Not Audible	At measurement location noise primarily from road traffic. PKCT activities not audible. On-site typically 5 truck movements. Train arrival during measurement and remained idling throughout.

<sup>1</sup> Measurement impacted by heavy winds and significant traffic in the direction of Port Kembla Terminal.

<sup>2</sup> Measurement impacted by significant traffic noise in the direction of Port Kembla Terminal.



**Attachment “B” Summary of PKCT Throughput and Receipts**

**Shiploading and Receipts: July- December 2013**

Shiploading July to December 2013	Coal		Coke	Iron Ore	Total
	Coking	Steaming			
Berth 101: Bulk Products Berth (Tonnes)	-		24,425	26,920	51,345
Berth 102: Coal Berth (Tonnes)	3,163,152	2,576,534			5,739,686
<b>Total (tonnes)</b>					<b>5,791,031</b>

Receipts July to December 2013	Private Road	Public Road	Total
Road Receipt (Tonnes)	1,009,777	1,352,976	2,362,753
Rail Receipt (Tonnes)			3,408,176

**Attachment "C" Road Transport Complaints & Incidents Summary**

**Incidents: July-December 2013**

Incident Summary July to December 2013							
Company	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	
Bulktrans	1	0	0	1	0	1	
Brindles	0	0	0	0	0	1	
ME	0	0	0	0	0	0	
Trazblend	0	0	0	0	0	0	
Consolidated Mining and Civil	0	0	0	0	0	0	
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	
							<b>Total</b>
							<b>4</b>

Incident Summary
<b>July</b> - Trailer separated at turntable on road hopper on a contract vehicle. Internal incident.
<b>October</b> - tailgate popped open on trailer and caused some spillage on corner of Springhill and Masters Roads
<b>December</b> - Hoist stuck in up position after tipping, hoist then free fell to chassis position, driver received jolt within cabin of truck. Internal incident.
<b>December</b> - Driver drove through red light at Northern Truckwash. Internal Incident.



**Attachment “D” Road Transport Report- July-December 2013**

Monthly Reports Summary FY 13/14	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	FY14 Total	Comment
Tonnes - Public Road	208,503.58	133,500.84	245,472.22	277,253.47	236,991.95	251,254.32	1,352,976.38	nb primarily rail delivered tonnes to BlueScope then internal road to PKCT
Tonnes - Private Road	230,679.00	84,746.00	103,412.00	255,748.00	158,924.00	176,268.00	1,009,777.00	
Total road tonnes	439,182.58	218,246.84	348,884.22	533,001.47	395,915.95	427,522.32	2,362,753.38	
Spillage - Public Road	0	0	0	1	0	0	1	
Incident - Other	1	0	0	0	0	2	3	
Impact with other vehicle	0	0	0	0	0	0	0	
Incidents Reported to RTA	0	0	0	1	0	0	1	
Complaints	0	0	0	0	0	0	0	
EPL/ regulatory breaches	0	0	0	0	0	0	0	
Inductions (%)	100	100	100	100	100	100	100	
Hours restrictions breach	0	0	0	0	0	0	0	
Road Transport Providers (RTP): Observations/ Audits	47	51	55	55	67	110	385	
RTP: Number of drivers observed	257	271	347	305	333	674	2187	
RTP: Trucksafe/NHVAS/Other Audits	68	102	16	11	26	19	242	
RTP system audits	0	0	0	0	0	2	2	

**Attachment "E" Air Quality- Monitoring Sites**

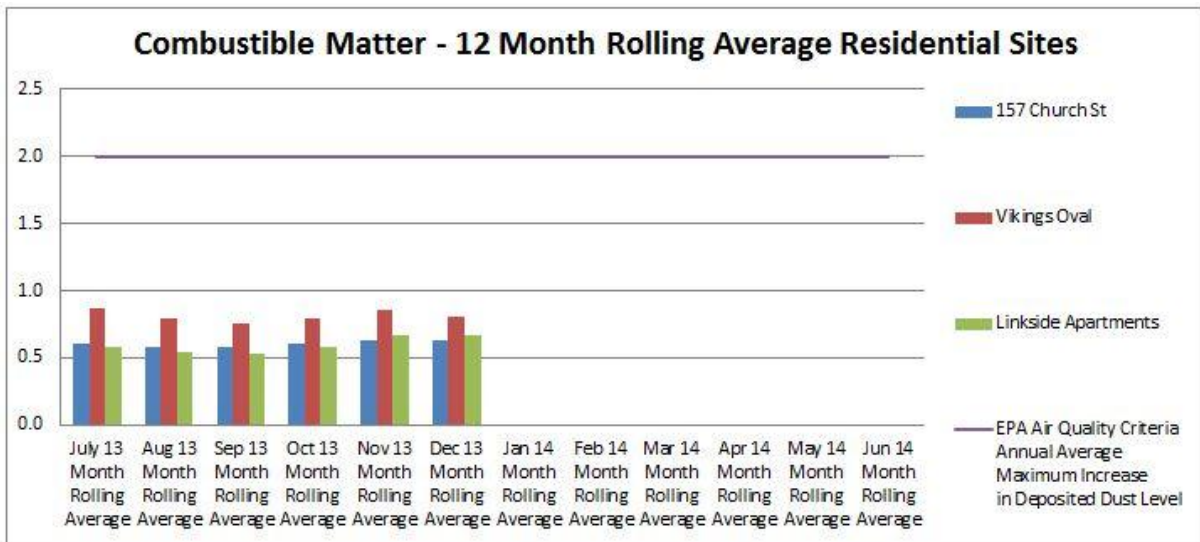
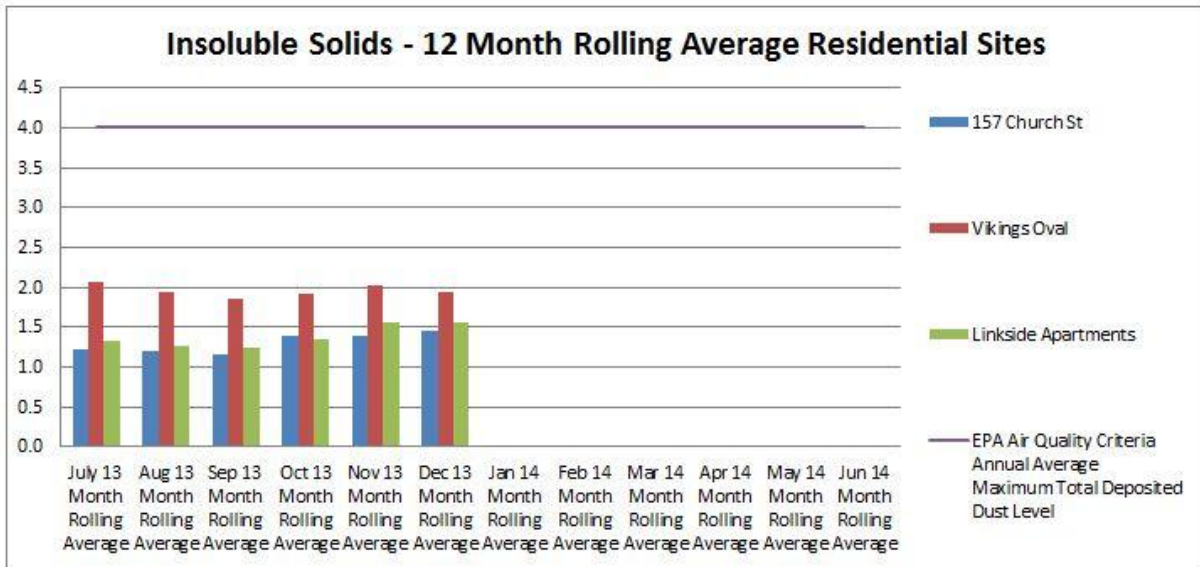


**Location of EPL Air Quality Monitoring Sites**

- Dust Gauges- EPA EPL sites ● Bluescope High Volume Sampler/ EPA EPL P11 ●
- Continuous Dust Monitor Sites ●
- PKCT Site Boundary

**Attachment “F” Air Quality: Dust Deposition**

**Residential Sites – 12 month rolling average July to December 2013**





**Attachment “G” Air Quality: Continuous Dust Data**

**July- December 2013**

**Table 6** Maximum recorded 24-hour average TSP concentrations at the northern PKCT monitoring site during July to December 2013 by month (trigger level of 90 µg/m<sup>3</sup>)

Monitoring period	Maximum concentration (µg/m <sup>3</sup> )	Number of exceedances
July 2013	64.3	0
August 2013	65.9	0
September 2013	134.9	1
October 2013	198.0	3
November 2013	130.5	4
December 2013	193.9	7
<i>Total exceedances</i>		15

**Table 7** Maximum recorded 24-hour average PM<sub>10</sub> concentrations at the northern PKCT monitoring site during July to December 2013 by month (air quality standard of 50 µg/m<sup>3</sup>)

Monitoring period	Maximum concentration (µg/m <sup>3</sup> )	Number of exceedances
July 2013	34.3	0
August 2013	37.1	0
September 2013	74.4	1
October 2013	110.5	3
November 2013	73.1	4
December 2013	112.3	8
<i>Total exceedances</i>		16

**Table 8** Annual average concentrations of TSP and PM<sub>10</sub> recorded at the PKCT northern monitoring site during July to December 2013

Pollutant	Standard/ trigger level (µg/m <sup>3</sup> )	Rolling annual average January – December 2013 (µg/m <sup>3</sup> )	Six-month average July – December 2013 (µg/m <sup>3</sup> )
TSP	90	54.6	45.1
PM <sub>10</sub>	30	37.1	25.3



**Attachment “G” Air Quality: Continuous Dust Data (continued)**

**Table 9 PKCT contribution ratings for exceedance days during July 2013 to December 2013**

<b>PKCT contribution rating</b>	<b>Number of TSP exceedance days</b>	<b>Number of PM<sub>10</sub> exceedance days</b>
None	1	2
Minimal (0% to 10%)	8	10
Minor (10% to 30%)	5	3
Moderate (30% to 70%)	1	1
Major (70% to 100%)	0	0
Unclassified (missing data)	0	0
<b>Total exceedance days</b>	<b>15</b>	<b>16</b>



**Attachment “G” Air Quality: Continuous Dust Data (continued)**

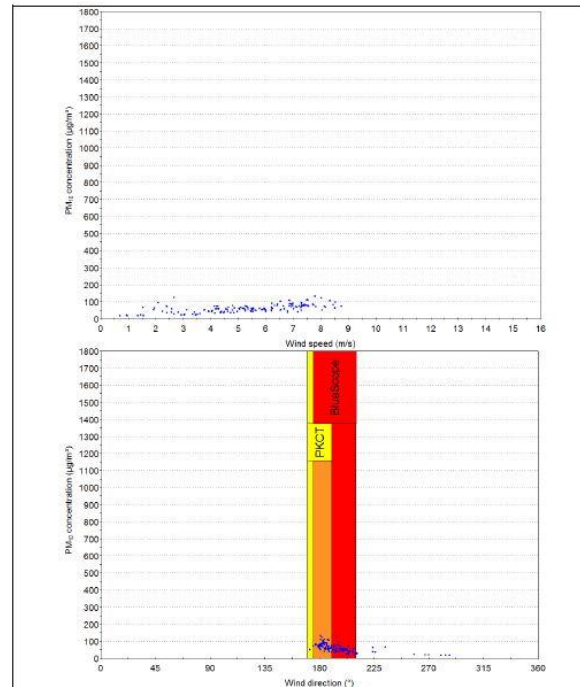


Figure 18 Plots for 21 December 2013 at the PKCT northern monitoring site of 10-minute average PM<sub>10</sub> concentration (µg/m<sup>3</sup>) versus wind speed in m/s (top) and wind direction in degrees (bottom)

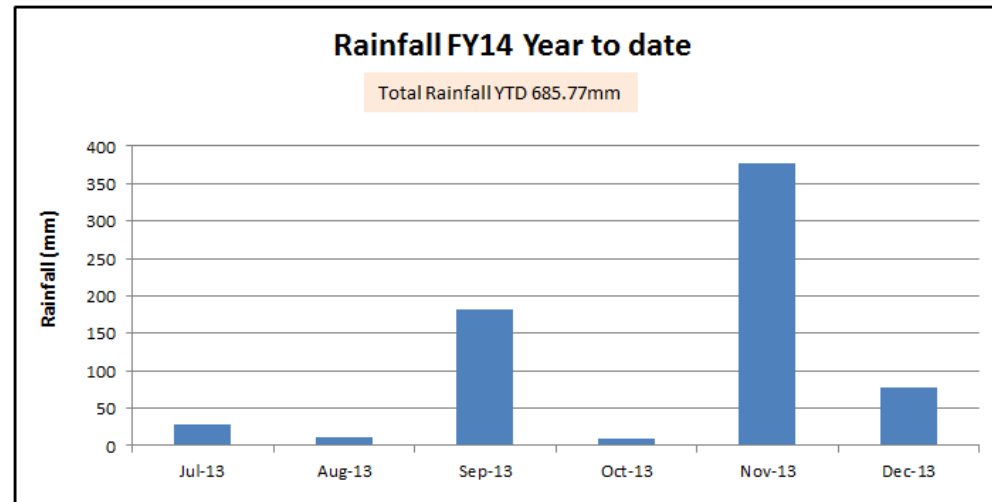
Location: PKCT northern	Period: 21 December 2013	Data source: PKCT	Units: µg/m <sup>3</sup> , m/s and °
Type: Scatter plot	144 10-minute average records	Prepared by: Adam Thomas	Date: February 2014

Note 1: PKCT assessed as “moderate” contributor for 24 hour TSP, PM10 exceedances; continuous monitor site C1 is located off site approximately midway between PKCT and the residential boundary.





### Attachment “H” Weather Monitoring Summary- July- December 2013



With the exception of November, the rainfall pattern experienced across the reporting period has generally been extended periods of minimal precipitation, followed by a high intensity, short duration downpour. During the month of November, moderate rainfall was consistent across the month.



**Attachment “H”- Weather Monitoring Summary- July- December 2013 (continued)**

Date	Rainfall (mm)	Max Temperature (deg C)	Maximum Wind Speed (m/sec)	Average Wind Speed (m/sec)
Jul-13	28.91	21.2	21.1	4.1
Aug-13	11.16	23.8	24.8	5.8
Sep-13	182.14	30.3	28.4	4.9
Oct-13	9.48	35.3	27.1	5.5
Nov-13	376.97	31.9	24.6	6.0
Dec-13	77.11	32.2	27.6	5.6

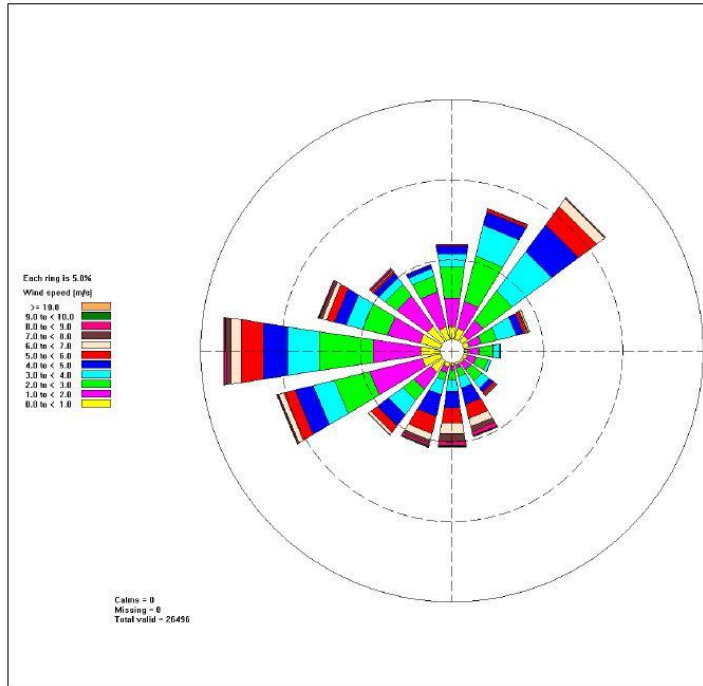
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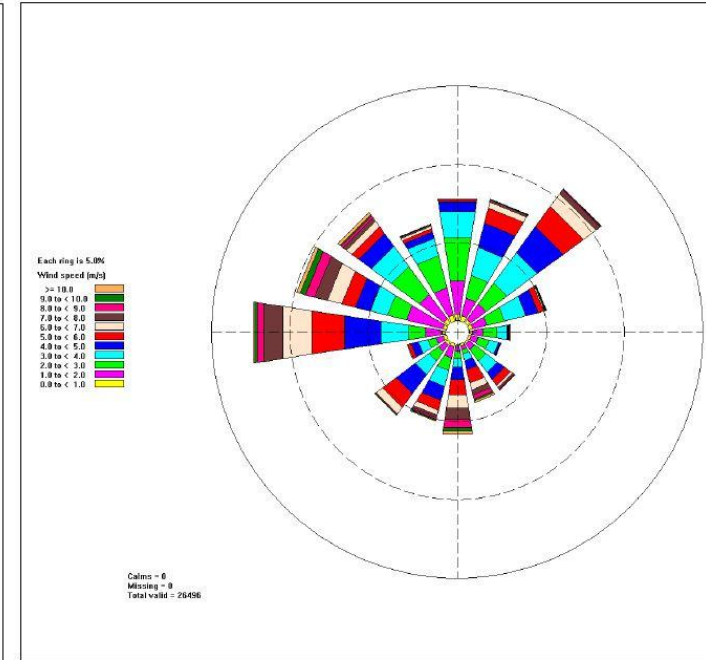
Date Authorised: 11.3.13

**Wind Rose – Monitors C1 &C2 (refer Attachment “E” for locations)**



**Figure 2** Wind rose for the 10-minute average winds recorded at PKCT northern monitoring site during the July to December 2013 period

<b>Location:</b> PKCT northern	<b>Period:</b> July 2013 to December 2013	<b>Data source:</b> PKCTL	<b>Units:</b> m/s and °
<b>Type:</b> Annual wind rose	26,496 10-minute average records	<b>Prepared by:</b> Adam Thomas	<b>Date:</b> February 2014

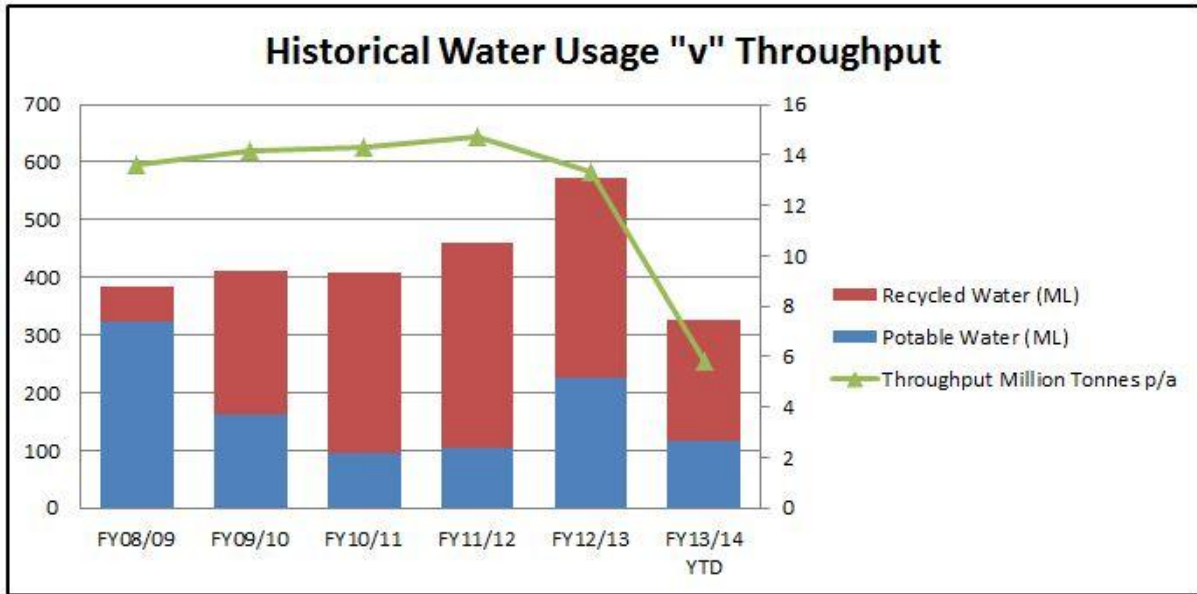


**Figure 4** Wind rose for the 10-minute average winds recorded at PKCT southern monitoring site during the July to December 2013 period

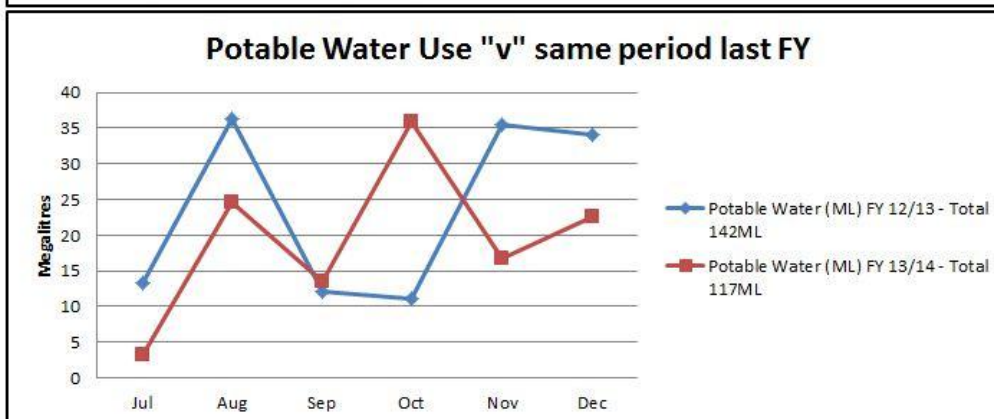
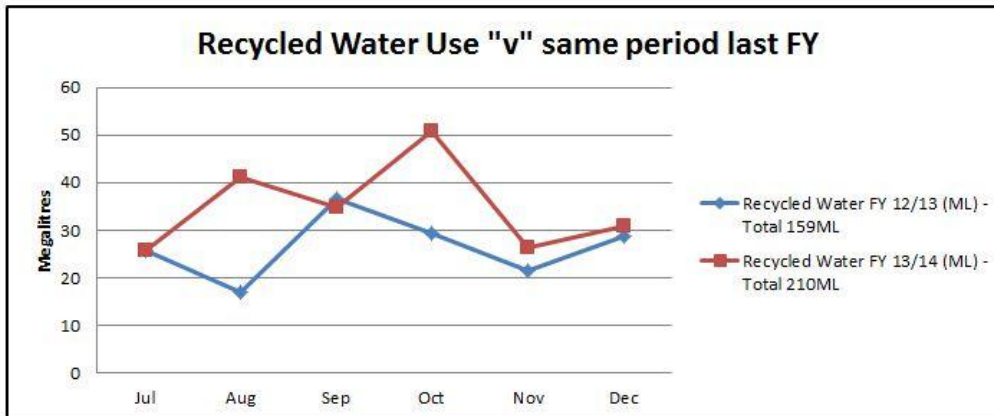
<b>Location:</b> PKCT southern	<b>Period:</b> July 2013 to December 2013	<b>Data source:</b> PKCTL	<b>Units:</b> m/s and °
<b>Type:</b> Annual wind rose	26,496 10-minute average records	<b>Prepared by:</b> Adam Thomas	<b>Date:</b> February 2014

**Attachment "I" Water Usage Report**

Historical Water usage



Water usage compared to same period last FY





**Attachment "K" Settlement Lagoon Discharges: July-December 2013**

SETTLEMENT LAGOON OVERFLOW: ENVIRONMENT PROTECTION LICENCE MONITORING: POINT 16..... Continued						
Environment Protection Licence: 1625 Type of Monitoring: water quality Frequency: daily grab sample when discharging			water quality parameter		EPL Limit (100 percentile)	
Sample Date	Date Results Obtained	Date Published	pH		6.5-9.5* less than 50 less than 10	
			pH (pH units)	total suspended solids (milligrams per litre)	oil/ grease (milligrams per litre)	Commentary on Results
15/07/2013	12/08/2013	15/08/2013	7	<5	<5	EPL compliant
21/07/2013	12/08/2013	15/08/2013	6.8	<5	<5	EPL compliant
31/07/2013	12/08/2013	15/08/2013	7.1	5	<5	EPL compliant
01/08/2013	13/09/2013	17/09/2013	7.6	5	<5	EPL compliant
05/08/2013	13/09/2013	17/09/2013	7.3	<5	<5	EPL compliant
13/08/2013	13/09/2013	17/09/2013	8.5	<5	<5	EPL compliant
15/08/2013	13/09/2013	17/09/2013	7.8	6	<5	EPL compliant
16/08/2013	13/09/2013	17/09/2013	8.1	6	<5	EPL compliant
17/08/2013	13/09/2013	17/09/2013	8.4	<5	<5	EPL compliant
19/08/2013	13/09/2013	17/09/2013	8.0	<5	<5	EPL compliant
29/08/2013	13/09/2013	17/09/2013	9.4	11	<5	EPL compliant
03/09/2013	09/10/2013	14/10/2013	9.7	10	<5	marginal pH exceedance, influenced by algae in lagoon.
14/09/2013	09/10/2013	14/10/2013	8.7	12	<5	EPL compliant
15/09/2013	09/10/2013	14/10/2013	8.8	10	<5	EPL compliant
16/09/2013	09/10/2013	14/10/2013	8.6	10	<5	EPL compliant
17/09/2013	09/10/2013	14/10/2013	8.6	21	<5	EPL compliant
18/09/2013	09/10/2013	14/10/2013	8.2	23	<5	EPL compliant
19/09/2013	09/10/2013	14/10/2013	6.5	<5	<5	EPL compliant
01/10/2013	04/11/2013	11/11/2013	9.3	11	<5	EPL compliant
03/10/2013	04/11/2013	11/11/2013	9.0	8	6	EPL compliant
05/10/2013	04/11/2013	11/11/2013	9.0	<5	<5	EPL compliant
06/10/2013	04/11/2013	11/11/2013	9.2	<5	<5	EPL compliant
07/10/2013	04/11/2013	11/11/2013	9.4	<5	<5	EPL compliant
08/10/2013	04/11/2013	11/11/2013	9.3	<5	<5	EPL compliant
09/10/2013	04/11/2013	11/11/2013	9.6	8	<5	marginal pH exceedance, influenced by algae in lagoon.
10/10/2013	04/11/2013	11/11/2013	9.8	8	<5	marginal pH exceedance, influenced by algae in lagoon.
11/10/2013	04/11/2013	11/11/2013	9.6	<5	<5	marginal pH exceedance, influenced by algae in lagoon.
12/10/2013	04/11/2013	11/11/2013	9.6	8	<5	marginal pH exceedance, influenced by algae in lagoon.
04/11/2013	09/12/2013	16/12/2013	9.8	23	<5	marginal pH exceedance, influenced by algae in lagoon.

\* "Date Published" refers to data being published to PKCT website.

NB TSS (total suspended solids)- under EPL, a TSS water quality limit of 50mg/litre pertains. Exceedance of this limit is permitted provided a 5 day average of 100 mg/litre isn't exceeded providing this occurs solely due to excessive rainfall of at least 90mm over any consecutive 5 day period. With regard to the storm event commencing 27th January 2013, 264 mm of rain was recorded and the average TSS across the period was 96 mg/litre. The event identified some further commissioning adjustments to the settlement lagoon dosing unit which was needed and carried out.

SETTLEMENT LAGOON OVERFLOW: ENVIRONMENT PROTECTION LICENCE MONITORING: POINT 16..... Continued						
Environment Protection Licence: 1625 Type of Monitoring: water quality Frequency: daily grab sample when discharging			water quality parameter		EPL Limit (100 percentile)	
Sample Date	Date Results Obtained	Date Published	pH		6.5-9.5* less than 50 less than 10	
			pH (pH units)	total suspended solids (milligrams per litre)	oil/ grease (milligrams per litre)	Commentary on Results
10/11/2013	09/12/2013	16/12/2013	8.5	24	<5	EPL compliant
11/11/2013	09/12/2013	16/12/2013	8.3	16	<5	EPL compliant
12/11/2013	09/12/2013	16/12/2013	7.7	7	<5	EPL compliant
14/11/2013	09/12/2013	16/12/2013	7.5	11	<5	EPL compliant
15/11/2013	09/12/2013	16/12/2013	7.6	<5	<5	EPL compliant
17/11/2013	09/12/2013	16/12/2013	7.4	22	<5	EPL compliant
18/11/2013	09/12/2013	16/12/2013	7.5	13	<5	EPL compliant
19/11/2013	09/12/2013	16/12/2013	6.7	8	<5	EPL compliant
19/11/2013	09/12/2013	16/12/2013	6.7	12	<5	EPL compliant
21/11/2013	09/12/2013	16/12/2013	7.3	11	<5	EPL compliant
25/11/2013	09/12/2013	16/12/2013	7.1	<5	<5	EPL compliant
27/11/2013	09/12/2013	16/12/2013	6.5	<5	<5	EPL compliant
29/11/2013	09/12/2013	16/12/2013	6.9	8	<5	EPL compliant
30/11/2013	09/12/2013	16/12/2013	6.9	5	<5	EPL compliant
04/12/2013	13/01/2014	15/01/2014	8.1	<5	<5	EPL compliant
05/12/2013	13/01/2014	15/01/2014	7.8	<5	<5	EPL compliant
06/12/2013	13/01/2014	15/01/2014	8.2	6	<5	EPL compliant
10/12/2013	13/01/2014	15/01/2014	7.5	7	<5	EPL compliant
11/12/2013	13/01/2014	15/01/2014	8.6	11	<5	EPL compliant
17/12/2013	13/01/2014	15/01/2014	8.6	14	<5	EPL compliant
25/12/2013	13/01/2014	15/01/2014	9.2	9	<5	EPL compliant
26/12/2013	13/01/2014	15/01/2014	8.7	9	<5	EPL compliant
27/12/2013	13/01/2014	15/01/2014	8.1	<5	<5	EPL compliant
28/12/2013	13/01/2014	15/01/2014	7.5	12	<5	EPL compliant
30/12/2013	13/01/2014	15/01/2014	8.2	<5	<5	EPL compliant
31/12/2013	13/01/2014	15/01/2014	7.7	11	<5	EPL compliant

\* "Date Published" refers to data being published to PKCT website.

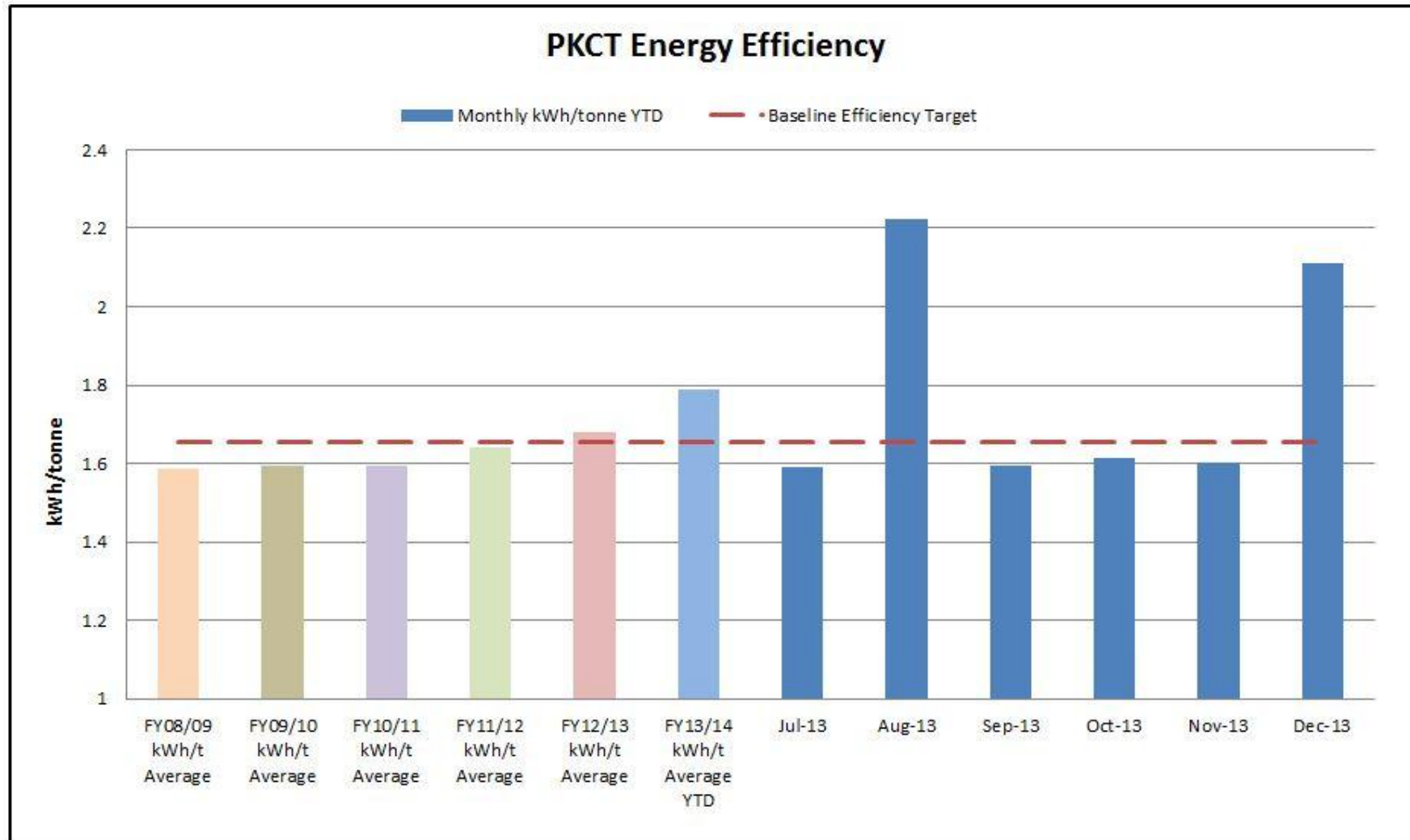
NB TSS (total suspended solids)- under EPL, a TSS water quality limit of 50mg/litre pertains. Exceedance of this limit is permitted provided a 5 day average of 100 mg/litre isn't exceeded providing this occurs solely due to excessive rainfall of at least 90mm over any consecutive 5 day period. With regard to the storm event commencing 27th January 2013, 264 mm of rain was recorded and the average TSS across the period was 96 mg/litre. The event identified some further commissioning adjustments to the settlement lagoon dosing unit which was needed and carried out.

**Attachment "L" Greenhouse Gas Report- July- December 2013**

2013/2014 FY (July-June)	A		B	C	D	E
	Reporting unit	Amount consumed (reporting unit)	Energy content (GJ per reporting unit)	Emissions factor (kg CO2-e per GJ)	Gigajoules Reportable energy (GJ)	tonnes Reportable emissions (tonnes CO2-e)
<b>Scope 1 – direct emissions</b>						
Diesel oil(transport)	kL	0	38.60	69.90	0	0
Diesel oil (stationary energy)	kL	0	38.60	69.50	0	0
Biodiesel B20 (Transport)	kL	56	30.88	69.51	1744	121
Petrol (transport)	kL	10	34.20	69.60	340	24
Petroleum based oils	kL	TBA	38.80	27.90		
Petroleum based greases	kL	TBA	38.80	27.90		
Acetylene	m3 *	TBA	0.0393	51.33		
<b>Scope 2 – indirect emissions</b>						
Electricity	Reporting unit kWh	10,050,894	Energy content (GJ per kWh) 0.0036	Emissions factor (kg CO2-e per kWh) 0.89	36183	8945
<b>Total</b>					38267	9090
<b>Threshold</b>					100,000	25,000



Attachment “M” Energy Efficiency YTD



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**Attachment "N" Waste Report July-December 2013**

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