

Interim Environmental Management Report

2010/2011

Reporting Period 1.7.10-31.12.10





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1. Introduction

1.1 Purpose

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

1.2 Scope

PKCT Major Project Approval 08_0009 which was granted on the 12th June 2009. The approval included a requirement of PKCT to prepare an annual AEMR. Accordingly, the first PKCT AEMR was submitted to the DoP applies to the period of 1st July 2009 – 30th June 2010 (the reporting period).

This report will be made available to the public via the PKCT website (www.pkct.com.au). Also note the aforementioned AEMR.

1.3 Methodology

Section 2 provides a description of the various environmental aspects monitored by PKCT under its EPL and DoP 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 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 $L_{Aeq}(15 \text{ min})$ dB(A)

Location	Time Period	Limits ($L_{Aeq,15 \text{ min}}$ 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:

- To determine compliance with the $L_{Aeq}(15 \text{ minute})$ 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.
- 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.

2.1.2 Monitoring and Results

Routine noise survey was undertaken in September 2010. 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 DoP 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 receipts and shiploading throughput data for the reporting period.

PKCT received 1,510,403 tonnes (annualised 3,020,806) 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 receipt.

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. During this reporting period, a meeting was held on 6th October 2010.

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 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.

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, adjacent port and residential areas as shown on Attachment “E”

Attachment “F” provides dust deposition results and trend graphs for PKCT’s residential sites. Dust deposition levels were within annual average of 4 grams per square metre per month for insoluble solids.

Attachment “G” provides a summary of continuous dust data.

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 continuous dust monitor: calibrated annually measures 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”

2.5 Surface Water

2.5.1 Assessment Criteria

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.

DoP 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.

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. Results indicate the excellent results in potable water reduction are continuing as is a reduction in total water usage.

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

(a) 100% compliance for total suspended solids and oil and grease. Attached “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 increased nutrient levels in collected water. Monitoring is continuing in consultation with DECCW 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.



2.6 Biodiversity

2.6.1 Assessment Criteria

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.

Objective	PKCT 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.

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. 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.

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"> • 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.

2.7.2 Monitoring and Results

GHG & Energy Efficiency

Neither EPL 1625 nor DoP 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. Attachment “M” and “N” provides data covering the reporting period. Data shows increased efficiency through higher throughput months.

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
<p>19. The Proponent shall:</p> <ul style="list-style-type: none"> (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.

Attachment “C” 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.

2.9 Hazards

2.9.1 Assessment Criteria

<p>Dangerous Goods</p> <p>20. The Proponent shall ensure that storage, handling and transport of dangerous goods are done in accordance with the relevant <i>Australian Standards</i>, particularly <i>AS1940</i> and <i>AS1596</i>, and the <i>Dangerous Goods Code</i>.</p>
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2.9.2 Monitoring and Results

PKCT has two underground hydro carbon tanks storing diesel and unleaded petrol. Integrity testing and ground water sampling testing was undertaken during the reporting period. The integrity of the tanks were confirmed. Final report is being prepared by PKCT’s consultants. Further information will be provided in AEMR due in July 11.

3. Community Relations

3.1.1 Assessment Criteria

	PKCT 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.

3.1.2 Monitoring and Results

Complaints received during the reporting period entail the following:

- (a) There were no community complaints received during the reporting period. There were a number of contacts from a Bellambi lane resident re. 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 company. 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 has met on 1st September and 1st December 2010.
- Consultant ,IRIS Research, was engaged in December 2010 to undertake a community perception survey. Survey was completed in December 2010. Report is due mid February 2011.
- PKCT web site (www.pkct.com.au) continues to include e-mail and phone contact details (communitylinks@pkct.com.au).

4. Conclusion

Monitoring undertaken during the reporting period didn't identify any notable adverse aspects. Work not finalised will be reported in the Annual Environmental Management Report due on 31st July 2011.

5. 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- September 2010

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

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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.



Attachment “B” Summary of PKCT Throughput and Receipts

Shiploading: 2010/11- July- December 2010

	Coal		Coke	Slag Sand	Total
	Coking	Steaming			
Berth 101: Bulk Products Berth			328,121	51288	176,744
Berth 102: Coal Berth	3,000,742	4,218,306			7,219,048
				Total (tonnes)	7,395,792

Receipts: 2010/11- July- December 2010

Deliveries	private road	public road	Total
road receipt	1,104,899	1,510,403	2,615,302
rail receipt			4,601,144
		Total (tonnes)	7,216,446



Attachment “C” Road Transport Complaints & Incidents Summary July-December 2010

INCIDENTS/ACCIDENTS	Minor Damage					Major Damage				
	Transport Provider									
	BT	LH	Br	TB	SC	BT	LH	Br	TB	SC
Westcliff/ PKCT (BHPB)										
Appin Road	1									
Bulli Tops	2									
Mt Ousley	1									
Masters Road										
Springhill Road										
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										
PKCT Road Receiving										
PKCT site										

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

COMPLAINTS	Noise				Dust				Speed				Other				total
	Transport Provider																
	BT	LH	Br	TB	BT	LH	Br	TB	BT	LH	Br	TB	BT	LH	Br	TB	
Westcliff/ PKCT (BHPB)																	1
Appin Road								2									2
Bulli Tops																	
Mt Ousley								1				1*					2
Masters Road																	
Springhill Road																	
NRE/ PKCT																	2
Bellambi Lane			1									1					
Northern distributor																	
Masters Road																	
Springhill Road																	
ICC/PKCT																	
Northern distributor																	
Masters Road																	
Springhill Road																	
Tom Thumb Road (private)																	4
Port Kembla Road																	4#
PKCT Road Receiving																	
PKCT Site																	1
Totals																	12

uncovered loads (private road) * spillage

Attachment "D" Road Transport Report- July-December 2010

Monthly Reports Summary	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	YTD
Tonnes - Public Road	270,960	173,377	261,952	217,194	264,834	322,086	1,510,403
Tonnes - Private Road	200,463	125,546	162,243	230,177	243,468	143,002	1,104,899
Total road tonnes	471,423	298,923	424,195	447,371	508,302	465,088	2,615,302
Spillage - Public Road	0	0	1	0	0	0	1
Incident - Other	0	0	0	0	0	0	0
Impact with other vehicle	0	0	0	0	2	2	4
Incidents Reported to RTA	0	0	0	0	2	2	4
Complaints	3	1	4	0	3	1	12
Inductions	100	100	100	100	100	100	100
Hours restrictions breach	0	0	0	0	0	0	0
Observations	128	143	56	N/A	N/A	N/A	327
Observations x No. of Drivers observed	705	824	332	523	111	468	2,963
PKCT CTO's	4	3	4	4	3	4	22

Attachment "E" Air Quality- Monitoring Sites



Location of EPL Air Quality Monitoring Sites

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



Attachment "F" Air Quality: Dust deposition

DUST DEPOSITION: July-December 2010

GAUGE NO.	Analysis qm ² month	2010/11												MEAN	MIN	MAX	RAN.						
		JUL		AUG		SEP		OCT		NOV		DEC						JAN	FEB	MAR	APR	MAY	JUN
		29-07-10 BA	26-08-10 JH	27-09-10 GH	27-10-10 JH	26-11-10 MH	24-12-10 BA																
P1	Insoluble Solids	8.8	9.7	3.1	2.7	4.7	3.8													5.5	2.7	9.7	7.0
25m South No.1 Coalberth	Ash	7.1	7.4	1.9	1.3	2.7	1.5													3.7	1.3	7.4	6.1
	Combustible Matter	1.7	2.3	1.2	1.4	2.0	2.3													1.8	1.2	2.3	1.1
P2	Insoluble Solids	7.0	8.4	3.3	5.2	8.8	0.7													6.7	0.7	9.3	3.2
40m South of Southern S/P Area	Ash	4.7	5.6	6.1	2.3	6.3	0.1													4.3	0.1	6.3	6.8
	Combustible Matter	2.3	2.8	3.8	2.3	1.3	0.6													2.4	0.6	3.8	3.2
P3	Insoluble Solids	10.6	14.9	16.5	5.9	BF	22.0													14.0	5.9	22.0	16.1
40m East of Southern S/P Area	Ash	7.9	7.2	13.9	4.0	BF	21.5													10.9	4.0	21.5	17.5
	Combustible Matter	2.7	7.7	2.6	1.3	BF	0.5													3.1	0.5	7.7	7.2
P4	Insoluble Solids	27.9	33.4	17.0	3.5	7.9	5.7													15.9	3.5	33.4	23.9
40m East No.2 Coalberth S/P Area	Ash	6.6	9.1	3.2	1.0	3.1	3.9													4.5	1.0	9.1	8.1
	Combustible Matter	21.3	24.3	13.8	2.5	4.8	1.8													11.4	1.8	24.3	22.5
P5	Insoluble Solids	3.4	17.6	11.3	10.5	18.1	26.1													14.5	3.4	26.1	22.7
Northern Settling Pond	Ash	1.4	8.2	2.3	2.5	3.6	11.5													5.0	1.4	11.5	10.1
	Combustible Matter	2.0	3.4	8.4	8.0	14.5	14.6													9.5	2.0	14.6	12.6
P6	Insoluble Solids	8.2	18.4	8.1	5.4	13.9	27.7													13.6	5.4	27.7	22.3
40m West No.2 Coalberth S/P Area	Ash	5.0	9.1	2.3	1.6	4.8	6.9													5.0	1.6	9.1	7.5
	Combustible Matter	3.2	9.3	5.8	3.8	9.1	20.8													8.7	3.2	20.8	17.6
P7	Insoluble Solids	BF	5.0	1.7	1.0	2.7	6.5													3.4	1.0	6.5	5.5
260m West No.2 Coalberth S/P Area	Ash	BF	2.5	0.9	0.5	1.8	4.2													2.0	0.5	4.2	3.7
	Combustible Matter	BF	2.5	0.8	0.5	0.9	2.3													1.4	0.5	2.5	2.0
P8	Insoluble Solids	11.1	19.9	17.4	11.1	4.2	4.7													11.4	4.2	19.9	15.7
PKCT. North Truckwash	Ash	3.3	6.0	3.4	1.8	0.9	1.5													2.8	0.9	6.0	5.1
	Combustible Matter	7.8	13.9	14.0	3.3	3.3	3.2													8.6	3.2	14.0	10.8
P9	Insoluble Solids	3.5	13.7	1.6	1.7	2.0	1.0													3.9	1.0	13.7	12.7
East Side of Water Board Property	Ash	2.2	11.0	0.8	0.8	1.2	0.5													2.8	0.5	11.0	10.5
	Combustible Matter	1.3	2.7	0.8	0.9	0.8	0.5													1.2	0.5	2.7	2.2
P10	Insoluble Solids	3.3	2.8	3.9	3.0	3.9	4.3													3.5	2.8	4.3	1.5
173 Corrimal St Wollongong	Ash	P	1.6	2.1	1.2	2.1	2.5													1.9	1.2	2.5	1.3
	Combustible Matter	P	1.2	1.8	1.8	1.8	1.8													1.7	1.2	1.8	0.6
P11	Insoluble Solids	1.1	3.6	1.0	0.7	0.7	0.5													1.3	0.5	3.6	3.1
Vikings Oval Wollongong	Ash	0.4	1.8	0.4	0.2	0.1	0.1													0.5	0.1	1.8	1.7
	Combustible Matter	0.7	1.8	0.6	0.5	0.6	0.4													0.8	0.4	1.8	1.4
P12	Insoluble Solids	2.5	1.8	1.6	0.6	1.1	3.3													1.8	0.6	3.3	2.7
157 Church St Wollongong	Ash	1.6	1.0	0.9	0.2	0.6	2.3													1.1	0.2	2.3	2.1
	Combustible Matter	0.9	0.8	0.7	0.4	0.5	1.0													0.7	0.4	1.0	0.8
P13	Insoluble Solids	4.4	5.8	2.7	2.7	3.6	BF													3.8	2.7	5.8	3.1
200m North of A.I.S. RO,RO Berth	Ash	3.4	4.7	1.8	1.9	2.7	BF													2.9	1.8	4.7	2.9
	Combustible Matter	1.0	1.1	0.9	0.8	0.9	BF													0.9	0.8	1.1	0.9
P15	Insoluble Solids	5.9	48.3	4.7	6.5	13.8	31.5													18.5	4.7	48.3	43.6
North of PKCT Canteen Building	Ash	2.1	22.2	1.1	1.6	3.0	8.3													6.4	1.1	22.2	21.1
	Combustible Matter	3.8	26.1	3.6	4.9	10.8	23.2													12.1	3.6	26.1	22.5

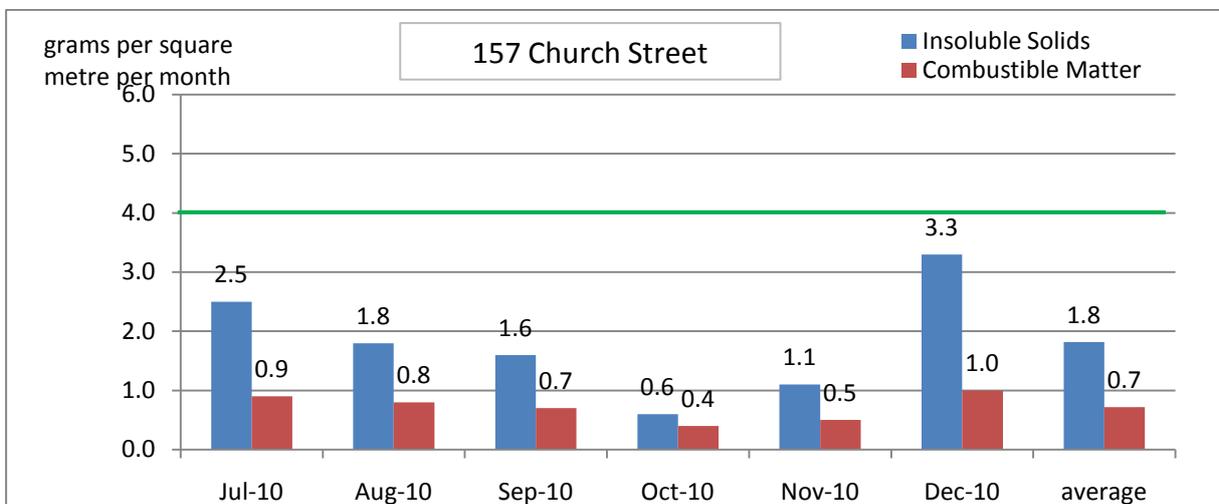
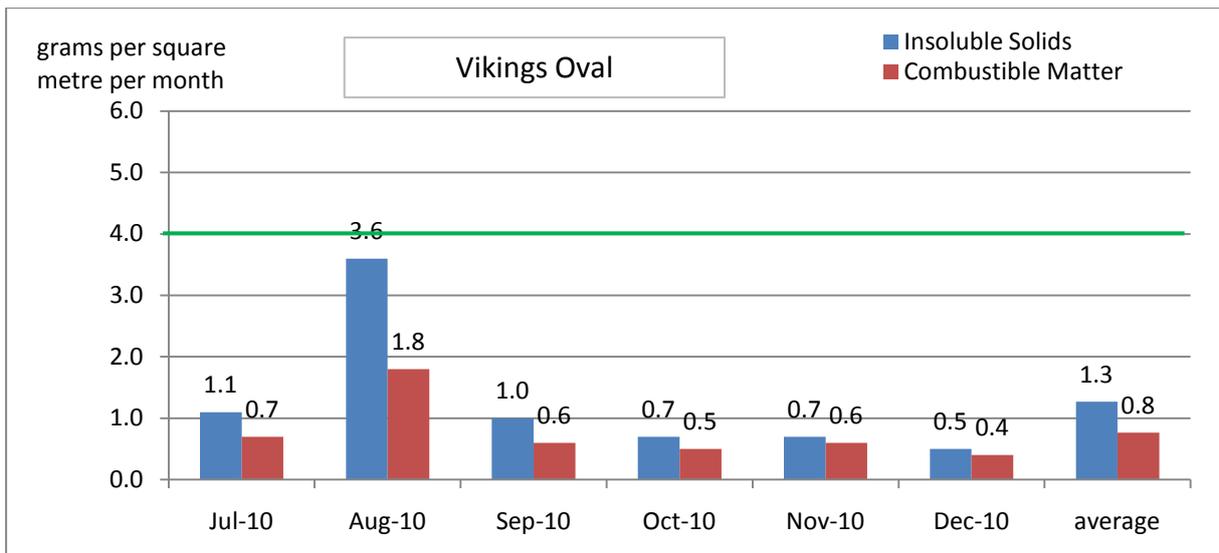
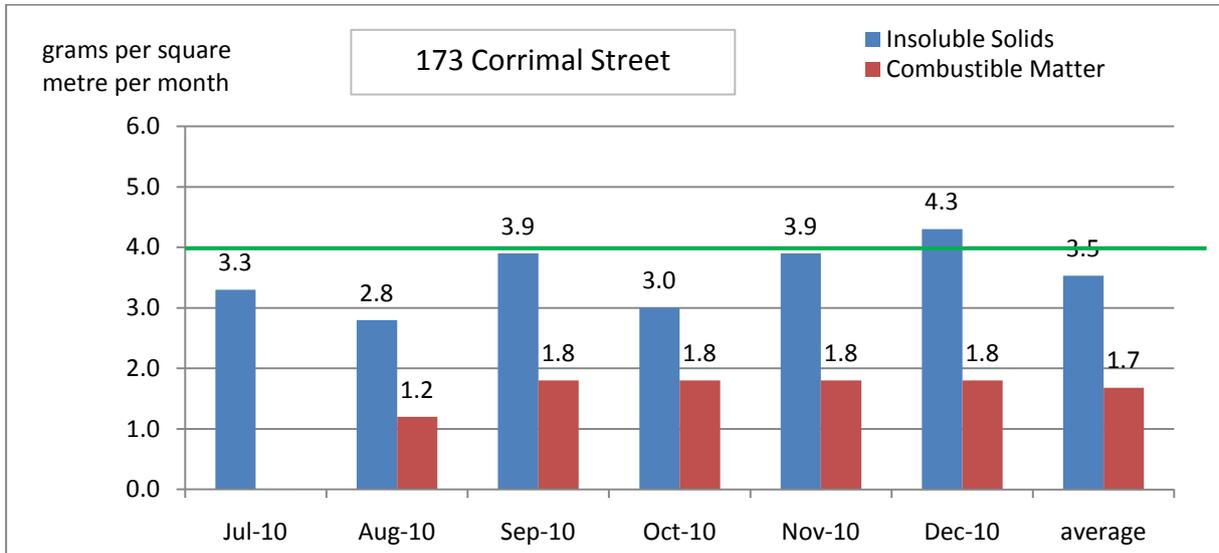
FM-Funnel Misting G/M-Gauge Misting O/F-Gauge Overflowed E/E-Empty Bottle G/R-Gauge Removed B/F-Blocked Funnel
 GCA-Gauge Contaminated with Algae B/O-Broken Crucible In-Inaccessible B/F-Broken Funnel G/C-Gauge Contaminated

Samplers	
JH	Justin Hughes
BA	Bon Arnold
GH	Glen Harrison
MH	Michael Moore

* gauge overflowed P-Petrographic

Attachment "F" Air Quality: Dust deposition (continued)

Residential Sites



Attachment "G" Air Quality: Continuous Dust Data
July- December 2010

Table 9 Trend data summary: Northern PKCT monitoring site

Variable	Averaging period	Value	Units	Standard	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-20	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	
TSP	24-hour	Max	µg/m ³	90	106.4	93.8	115.2	56.8	37.8	39.0	43.8	28.3	37.8	56.8	148.2	142.2	
		No. Exceedances	-	-	1	1	1	0	0	0	0	0	0	0	0	4	3
		Max % contribution to exceedance	%	-	0.7	2.8	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	1.2
		Mean	µg/m ³	90	41.4	48.5	48.0	33.4	20.9	19.4	16.7	16.2	13.8	27.8	46.2	48.2	
	Annual	Mean	µg/m ³	90	42.4	40.4	38.8	36.2	33.7	35.2	34.5	34.6	33.5	31.5	33.3	32.3	
PM ₁₀	24-hour	Max	µg/m ³	50	89.5	78.2	97.8	49.2	25.5	28.0	37.5	19.8	31.0	45.6	124.4	124.0	
		No. Exceedances	-	-	5	7	8	0	0	0	0	0	0	0	0	7	8
		Max % contribution to exceedance	%	-	10.7	2.5	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.7	15.5
		Mean	µg/m ³	50	33.5	38.8	39.2	26.5	14.9	14.1	12.0	11.0	9.8	21.2	37.7	40.9	
	Annual	Mean	µg/m ³	30	29.6	28.5	28.0	27.3	26.2	27.3	26.8	26.9	26.0	24.4	26.0	25.5	

Note 1: Review of December 10 data in progress; awaiting Bluescope data

Note 2: PKCT assessed as "minor" contributor for 24 hour TSP, PM10 exceedances; monitor site C1 is off site but not on a residential

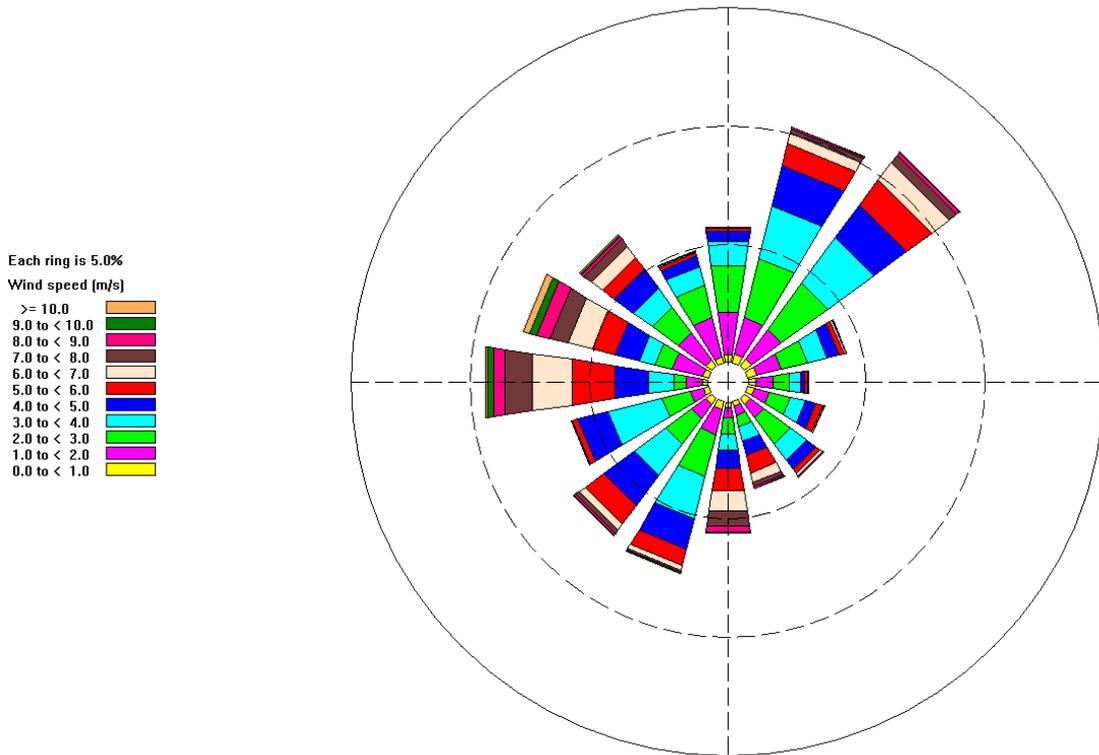


Attachment “H” Weather Monitoring Summary- July- December 2010

month	Total Rain (mm)	Max. Temp °C	Min. Temp °C	Rain Duration (sec)	max. wind speed (meters per second)	average wind speed (meters per second)
2010/07	35.52	19.9	9.7	72020	18.6	4.8
2010/08	58.56	22.7	9.3	67780	20.9	6.2
2010/09	79.28	27.2	0	113640	23.8	5.5
2010/10	74.32	27.2	10.6	98030	26.4	5.2
2010/11	153.59	24.9	12.1	164570	21.1	5.2
2010/12	97.36	30.6	13.4	83520	26.4	4.8
2011/01	5.08	23.7	16.7	6120	19.4	5.7
Grand Total	1615.84	39.9	0	1638700	29.1	5.2

Wind Rose- C2 (refer Attachment “E”)

Southern PKCT monitoring site



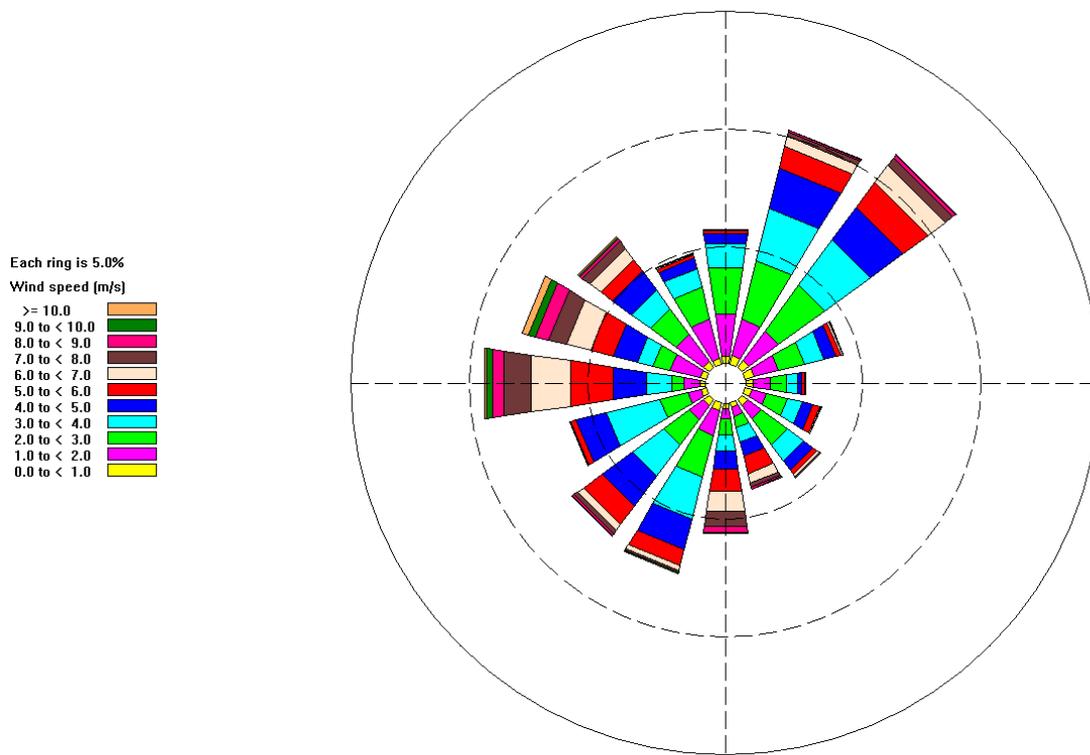
Calms = 0
 Missing = 0
 Total valid = 26496

Katestone Environmental Pty Ltd January 2011

Attachment "H" Weather Monitoring Summary: July-December 2010 (continued)

Wind Rose- C1 (refer Attachment "E")

Northern PKCT Monitoring Site



Calms = 0
Missing = 0
Total valid = 26496

Katestone Environmental Pty Ltd January 2011



Attachment “I” Water Usage Report

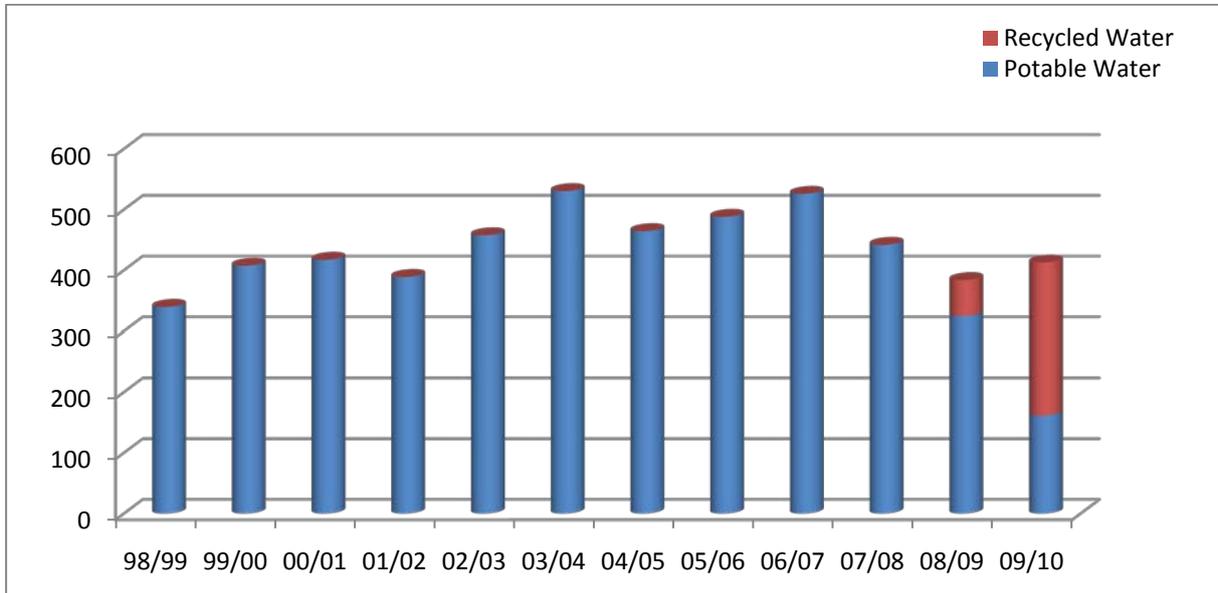


Chart “E1” Historical Water usage

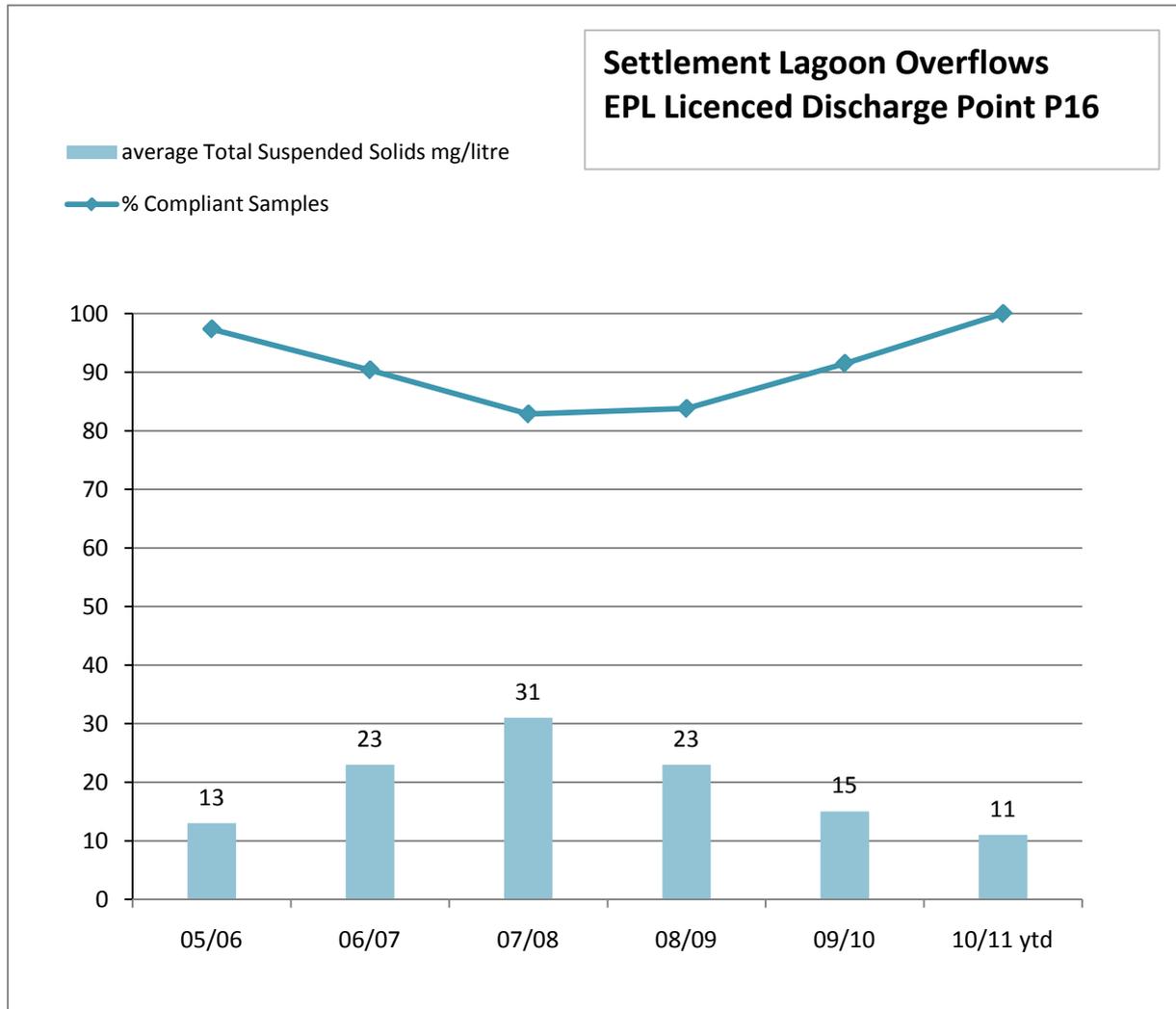
1. Chart shows the trend in potable water reduction.
2. Chart shows a trend in overall water usage reduction.

Usage- megalitres	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Total FY11 YTD	Total FY10
recycled water	16116	37378	27169	29692	22150	28,681	161,186	251209
potable water- process	6326	6526	4859	3370	71	6603	27755	143458
potable water- domestic	1347	926	1354	792	1851	1352	7622	17856
Total	23789	44830	33382	33854	24072	36636	196,563	412523
% recycled water/ total	71.8	85.1	84.8	89.8	99.7	81.3	% total usage FY11/FY10	

Chart “E2” Daily Water Usage: July-December 2010



Attachment “J” Discharge Point P16 Performance Trend- Total Suspended Solids





Attachment “K” Settlement Lagoon Discharges: July-December 2010

SETTLEMENT LAGOON OVERFLOW

DECCW EPL 1625

Monitoring Point 16

WATER QUALITY PARAMETER	DATE Time Sampler Report No	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	
		July	July	July	August	August	August	August	September	September		
		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 9:30AM A Chapman SE80736	10-8-10 13:00PM J Hennessey SE81500	14-9-10 7:00AM S di Genni SE81500	15-9-10 7:00AM S di Genni SE81500		
(pH)	EPL limit 6.5-8.5	8.1	7.4		7.5	7.3	7.2	7.3	7.7	7.3		
(TSS) mg/l	EPL limit less 50	7.0	5.5		<5.0	10	<5.0	<5.0	12.0	16.0		
OIL & GREASE mg/l	EPL limit less 10	<5	<5	<5	<5	<5	<5	<5	<5	<5		
AMMONIA mg/l	monitoring	0.06	0.099	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		1.94	1.99	2.27	2.15	1.93	2.05		
FILTERABLE PHOSPHORUS mg/l	monitoring	0.14	0.15		0.16	0.15	0.19	0.19	<0.005	<0.005		
PHOSPHORUS 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

WATER QUALITY PARAMETER	DATE Time Sampler Report No	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	
		October	November	November	November	November	November	November	November	November	November	November	November
		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	11-11-10 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 6.5-8.5	8.9	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 50	9.0	15.0	10	12	15	17.0	12.0	18.0	7.7	9.3	10	
OIL & GREASE mg/l	EPL limit less 10	<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	
FILTERABLE PHOSPHORUS 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	

WATER QUALITY PARAMETER	DATE Time Sampler Report No	2010	2010	2010	2010	2010	2010	2010	2010	2010	
		November	November	December	December	December	December	December	December	December	December
		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 6.5-8.5	7.7	7.4	7.4	7.2	7.3	7.2	7.6	7.6	7.5	
(TSS) mg/l	EPL limit less 50	11	8.0	8.0	6.0	<5.0	7.0	14	31	28	
OIL & GREASE mg/l	EPL limit less 10	<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	
FILTERABLE PHOSPHORUS mg/l	monitoring	0.19	0.12	0.12	0.066	0.064	0.17	0.25	0.15	0.15	
PHOSPHORUS mg/l	monitoring	0.27	0.13	0.12	0.08	0.09	0.18	0.25	0.16	0.17	

Nb introduction of recycled water use on site (in April 2009) has increased the nutrient levels in run off water together with algal growth particularly in the settlement lagoon. Increased pH has been detected during this period. Investigation is in progress and is being undertaken by PKCT in consultation with DECCW.

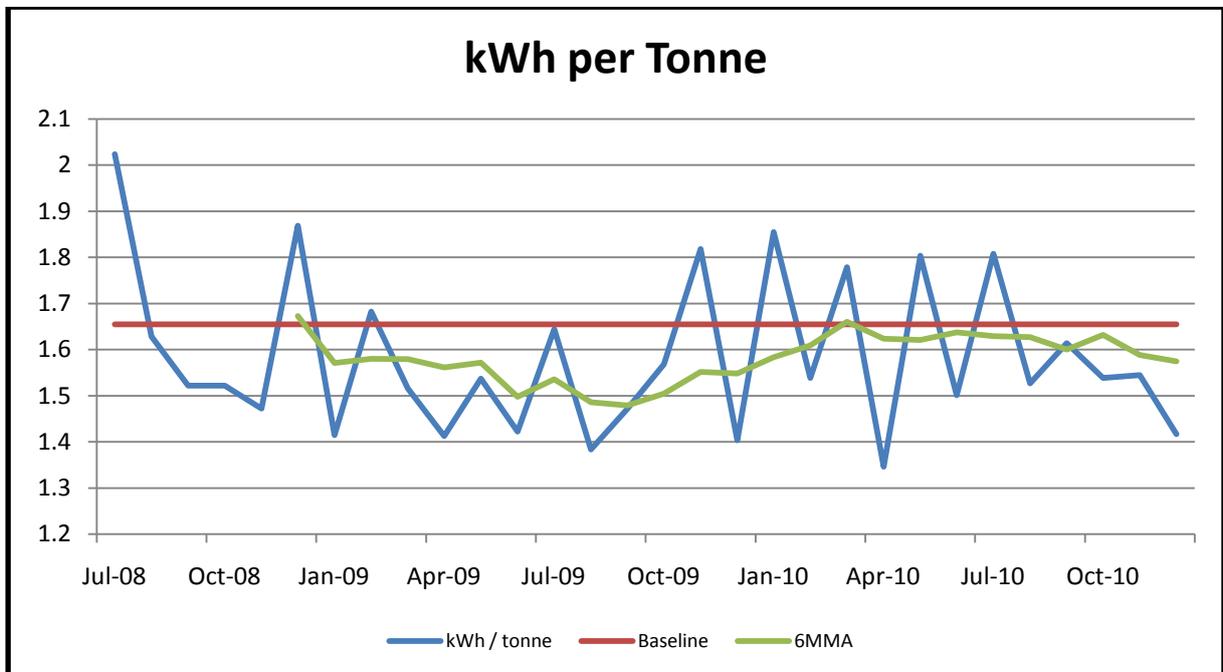
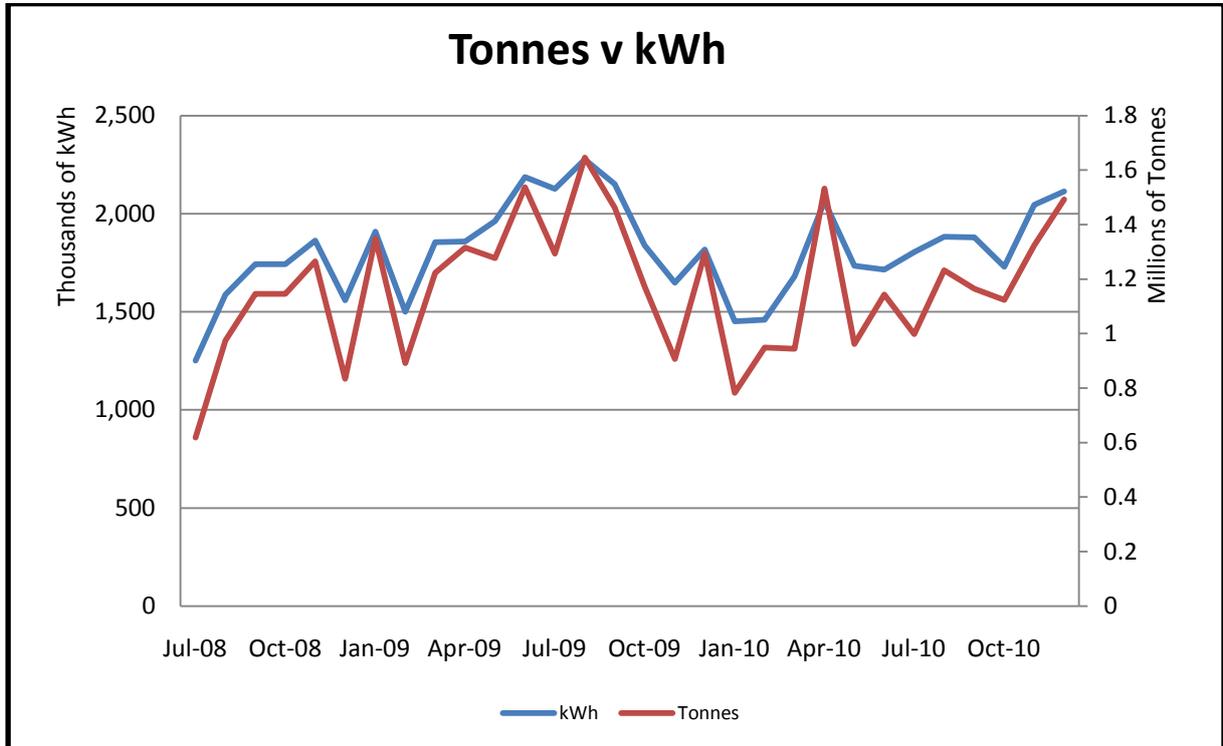


Attachment “M” Greenhouse Gas Report- July- December 2010

2010/2011 YTD (July-December)	Reporting unit	A	B	C	D	E
		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)
Scope 1 – direct emissions						
Diesel oil(transport)	kL	86	38.60	69.90	3320	232
Diesel oil(stationary energy)	kL	0	38.60	69.50	0	0
Petrol (transport)	kL	14	34.20	69.60	479	33
Petroleum based oils	kL		38.80	27.90	0	0
Petroleum based greases	kL		38.80	27.90	0	0
Acetylene	m3 *		0.0393	51.33	0	0
Scope 2 – indirect emissions						
	Reporting unit		Energy content (GJ per kWh)	Emissions factor (kg CO2-e per kWh)		
Electricity	kWh	11,453,679	0.0036	0.89	41233	10194
Total					45032	10459
Threshold					100,000	25,000



Attachment "N" Electricity Usage Report to December 2010





Attachment “P” Waste Report July-December 2010

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							25.2
Roll-on Bin - Rail Receival Shed	tonnes	Nil	Nil	Nil	Nil	Nil	Nil							0.0
Frontlift Bins - Main Workshop	tonnes	3	3.5	4	n/a	n/a	n/a							10.5
Frontlift Bin – Rear Administration Building	tonnes	4	3.5	3.5	n/a	n/a	n/a							11.0
Frontlift Bin – Contractors Shed	tonnes	3.5	3	3.5	n/a	n/a	n/a							10.0
Cardboard Recycling Bin – Main Store	tonnes	0.3	0.3	0.2	n/a	n/a	n/a							0.8
Cardboard Recycling Bin – IT Building	tonnes	0.2	0.2	0.4	n/a	n/a	n/a							0.6
Asbestos – all areas	tonnes	tba	tba	tba	tba	tba	tba							0.0
Copper Wire Bin	tonnes	tba	Nil	Nil	tba	tba	tba							0.0
Liquid waste	litres	16426	Nil	Nil	Nil	Nil	Nil							16426.0
Sewer Waste	litres	13,000	13,000	19,500	3580	2852	3056							54988.0
Waste steel removal – all areas	tonnes	tba	tba	tba	tba	tba	tba							0.0

Nb tba- to be advised