

Annual Environmental Management Report



1st July 2015 to 30th June 2016

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AUTHORISED BY John Gorman, Operations Manager

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Annual Environment Management Report (AEMR) is to provide the Department of Planning and Environment (DP&E) and other stakeholders a report of Port Kembla Coal Terminal's (PKCT's) environmental performance together with actions taken in relation to environmental control and regulatory compliance across the July 2015 to June 2016 reporting period.

1.2 Scope

This AEMR provides information on PKCT's compliance with the requirements of the PKCT Major Project Approval 08_0009 which was granted on the 12th June 2009. The approval requires PKCT to prepare an annual AEMR. By letter of 25th March 2010, The DP&E (formerly the Department of Planning and Infrastructure (DP&I)) 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 Guidelines and Format for Preparation of an Annual Environmental Management Report dated January 2006.

This report will be submitted to the DP&E. Following DP&E feedback, it will be forwarded to the Environment Protection Authority (EPA) and the Department of Trade and Investment (DT&I) or as required by the respective agencies. A copy of this AEMR will also be made available to the public via the [PKCT website](#).

1.3 Background

PKCT is located on Lot 22 in DP 1128396 on the northern side of the Inner Harbour of Port Kembla, Wollongong. On the 31st May 2013, NSW Ports acquired a long term lease for Port Kembla and Port Botany through which the current leasing arrangement with PKCT remains. Land 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 Illawarra Services Proprietary Limited (South 32), Oakbridge Proprietary Limited (Glencore), Centennial Coal Company Limited, Tahmoor Coal Pty Limited and Metropolitan Collieries Proprietary Limited (Peabody) and Wollongong Coal Limited (formerly Gujarat NRE), form the Board of PKCT. South 32, reporting to the PKCT Board, manages PKCT under a management contract. PKCT is the major coal intermodal facility in southern NSW for the transfer of coal from rail and road to ship.

PKCT is responsible for receiving, assembling and loading coal from the southern and western NSW 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. See Figure 1.



Figure 1: PKCT Site plan and land uses

The Bulk Products Berth was constructed in the early 1960’s after construction of Port Kembla Inner Harbour, see Figure 2. The Coal Berth was constructed in the early 1980s.



Figure 2: Early image of Port Kembla Inner Harbour. Image referenced 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 (WCC) and EPA Environment Protection Licence (EPL) number 1625.

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

Consultation with the DP&E 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 included an assessment of all environmental impacts associated with the current and ongoing PKCT activities.

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

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 July 2015 to June 2016 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 14001:2004 and is supported by policies, standards, an environment management strategy, management plans and procedures. Key documents of the EMS include the following:-

- [Sustainable Development Policy PO.BM.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](#)
- [Green and Golden Bell Frog Management Plan MP.HS.109](#)
- [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](#). Management Plans required under Project Approval 08_0009 are also published once DP&E approval is obtained.

1.6 Terminal Contact

Figure 3 below identifies relevant contacts at PKCT.

PKCT Employee & Position	Contact Details
Mr. John Gorman Operations Manager	(02) 4221 1802 John.Gorman@pkct.com.au
Mr. Alex Chalk Risk Manager	(02) 4221 1877 Alex.Chalk@pkct.com.au
Mr. Luke Pascot Environmental Specialist	(02) 4221 1155 Luke.Pascot@pkct.com.au
Community Hotline	1800 111 448 communitylinks@pkct.com.au

Figure 3: PKCT contacts

1.7 Actions Arising From Previous AEMR Review

Following submission of the 2012/2013 AEMR, the DP&E requested some changes to the format of the following AEMR be made. The format was updated and the new report structure was submitted in 2013/2014.

The 2014/2015 AEMR was submitted to the DP&E as required on 28th July 2015.

2.0 ADMINISTRATIVE CONDITIONS

Under Schedule 2 of PKCT's Major Project Approval 08_0009, PKCT has 14 Administrative Conditions. The Administrative Conditions are listed under the headings outlined in Figure 4. The following section outlines PKCT's compliance with these across the reporting period.

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

Figure 4: Administrative conditions

2.1 Obligation to minimize harm to the Environment

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

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

PKCT has in place an Environmental Aspects and Impacts Register. This document provides a framework whereby PKCT identifies, records, risk-ranks and provides controls for activities associated with the operation that have the potential to cause harm to the environment.

2.2 Terms of Approval

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.

The requirements of this condition were met across the reporting period. The Environment Management Strategy (EMS) has been developed to facilitate the means by which DP&E approval conditions are met. The AEMR provides an annual compliance report.

2.3 Limits on Approval

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 are 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.

PKCT did not receive more than 7.5 million tonnes of coal and bulk products by public road during the 2015 calendar year.

With regard, Schedule 2, Condition 6, PKCT application to the Director General to receive 10 million tonnes per annum (mtpa) was approved on the 29th September 2013 subject to conditions.

2.4 Management Plans / Monitoring Programs

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

The PKCT Water Management Plan, Drivers Code of Conduct and Drivers Code of Conduct Implementation Plan were revised and submitted to the DP&E in August 2014.

2.5 Surrender of Consents

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.

Applicable consents have been surrendered. No action was required in this reporting period.

2.6 Structural Adequacy

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.

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

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.

In the 2015/2016 reporting period, PKCT completed the demolition and removal of PKCT's Conveyors "C3", "C6" (half), "NC15" head end gantry, "NC16", Transfer Tower "T1", Old Road Dump Station shed and Control Room, Coke Screener and Feed Hopper and Reclaim Hopper.

The works were undertaken to allow the replacement of the yard machines as part of PKCT's Restoration and Compliance Project, particularly the replacement of the existing stackers and Reclaimers.

All completed works were carried out in accordance with *Australian Standard AS2601-2001*.

During the 2016/2017 reporting period, PKCT plans to complete demolition of "Reclaimer 1" and "Reclaimer 2" as well as planning for the demolition of "Stacker 1", "Stacker 2" and Stacker 4".

2.8 Operation of Plant & Equipment

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 efficient manner.

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 that equipment is operated in a proper and efficient manner.

2.9 Dispute Resolution

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.

PKCT accepts the dispute resolution process. This condition is referenced in the PKCT Environment Management Strategy.

There were no disputes during the reporting period.

3.0 SPECIFIC ENVIRONMENTAL CONDITIONS

This section provides a summary of the Specific Environmental Conditions outlined in Schedule 3 of the PKCT Major Project Approval 08_0009 and, how PKCT complies with these requirements.



Figure 5 below provides an overview of each of the Specific Environmental Conditions and a reference to their location in the AEMR.

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

Figure 5: Specific environmental condition overview

3.1 Noise

3.1.1 Noise Standards and Performance Measures

EPL 1625 and Major Project Approval 08_0009 pertain to noise emissions from PKCT’s premises. Noise criteria are outlined as follows;

Impact Assessment Criteria

- 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) LAeq (15 min)

Location	Time Period	Limits(LA _{eq,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:

- To determine compliance with the LA_{eq, (15 min)} 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.

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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:
 - o combination of attended and unattended noise monitoring measures;
 - o noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval; and
 - o 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 Noise Monitoring

3.1.2.1 Noise Monitoring Methodology

PKCT utilises a noise consultant, Wilkinson Murray, for noise monitoring surveys associated with its operations. Due to the complex nature of the noise environment, which involves numerous industrial sources, sub-arterial roadways and close proximity to the Wollongong town centre, traditional noise monitoring with a sound level meter cannot adequately measure the noise contribution from PKCT due to elevated background noise levels. Wilkinson Murray utilises a BarnOwl® directional noise monitoring system to conduct attended noise monitoring. Directional noise monitoring provides source detection and analysis of noise from PKCT and excludes operator discretion in the attended monitoring.

Noise monitoring is undertaken three times across the day, Day (7:00am to 6:00pm), Evening (6:00pm to 10:00pm) and Night (10:00pm to 7:00am), and utilising the BarnOwl®, at three off-site monitoring locations. One on-site location is used. Monitoring locations utilised in the PKCT Noise Monitoring Program are presented in Appendix A.

3.1.2.2 Noise Monitoring Results and Compliance 2015/2016

Two routine noise monitoring surveys were undertaken during the 2015/2016 reporting period. These occurred on 8th December 2015 and 27th April 2016. Monitoring was



undertaken across day, evening and night time periods as stipulated in Project Approval 08_0009, Schedule 3, Condition 1. A summary of the estimated LAeq noise levels measured using the BarnOwl® in the direction of PKCT from the three surveys is presented below in Figure 6.

Monitoring Period	Range of directional Noise Levels Measured 8 th Dec 2015	Range of directional Noise Levels Measured 27 th Apr 2016	Noise Impact Criteria
Day	All <35dBA	All <32dBA	51-55dBA
Evening	All <25dBA	All <24dBA	49-50dBA
Night	All <25dBA	All <26dBA	45-49dBA

Figure 6: Estimated noise levels from PKCT direction using BarnOwl - December 2015 and April 2016.

The monitoring was undertaken during “typical” operations with road and rail receipt and ship loading occurring in most of the monitoring periods.

Conclusions from the two noise surveys indicated that noise generated from PKCT was essentially inaudible at the off-site monitoring locations for the December 2015 and April 2016 surveys. The measured noise levels from the direction capturing PKCT were within criteria for all times at all locations.

A full summary of monitoring results for the December 2015 and April 2016 surveys is presented in Appendix B.

3.1.3 Trends in Noise Emissions

PKCT has undertaken fourteen noise surveys since September 2009. On all occasions, the consultant has concluded that “noise from PKCT was below the Noise Impact Criteria”. Figure 7 below compares the overall noise monitoring compliance for each of the noise monitoring surveys beginning in September 2009.

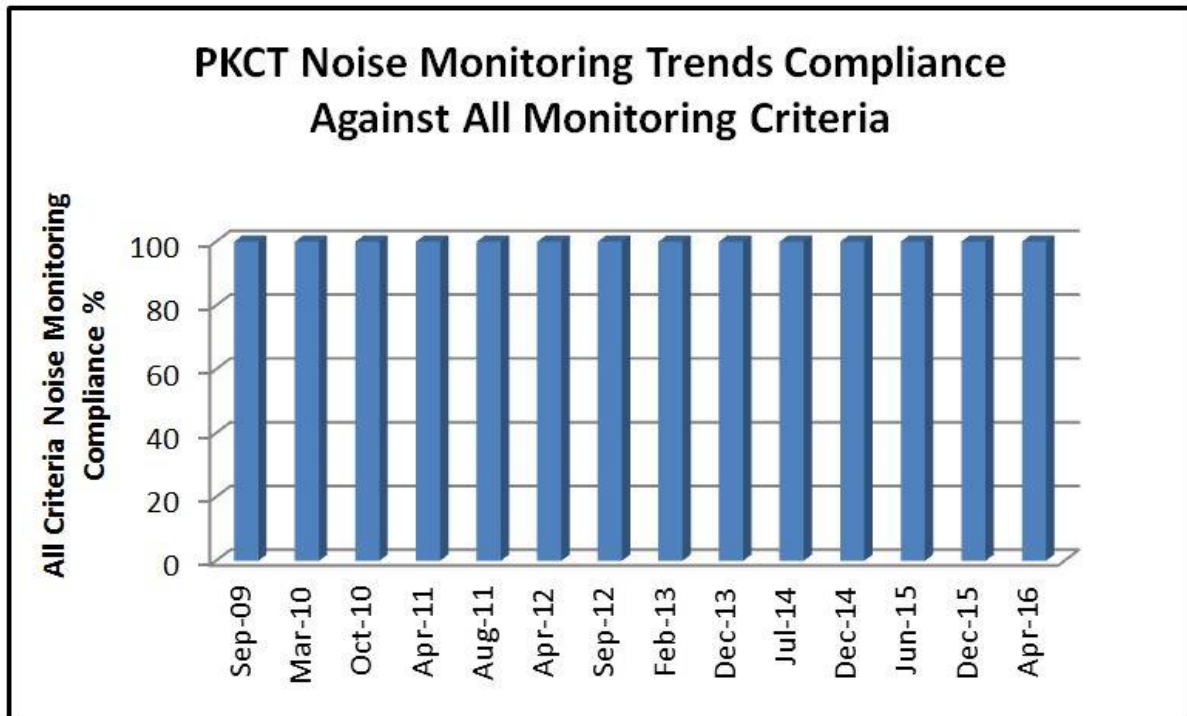


Figure 7: PKCT noise monitoring trends, compliance against all monitoring criteria.

3.1.4 Noise –Activities undertaken during 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to noise is presented below. PKCT continues to look for opportunities to improve noise levels across its operations.

- Two routine noise monitoring surveys were undertaken during the 2015/2016 reporting period. These occurred on 8th December 2015, 27th April 2016.
- As part of the Upgrade Project, PKCT engineers have a system in place to investigate and consider best practice noise mitigation options during the design and purchase of new equipment. These processes have been utilised across the reporting period while planning replacement Stackers and Reclaimers.

3.1.5 Noise - Activities Planned for 2016/2017 Reporting Period

A summary of the actions proposed to be undertaken in the 2016/2017 reporting period is presented below.

- PKCT will continue to undertake noise surveys as required.

3.2 Transport

3.2.1 Transport Standards and Performance Measures

Monitoring of Coal Transport

3. 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

4. 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

5. 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 Transport Monitoring

3.2.2.1 Transport Monitoring Methodology

Shippers to PKCT are signatories to the PKCT Drivers Code of Conduct (DCC). This document was developed in consultation with the PKCT road receipt customers, and their associated road transport providers, Roads and Traffic Authority (now Roads and Maritime Services), EPA, and the PKCT Community Consultative Committee (CCC).

The document outlines specific measures focusing on opportunities to minimise, mitigate and manage traffic volume, traffic safety and acoustic impacts. Among others, it specifically covers items such as haulage routes, compression braking, road delivery standards, truck washing, queuing on Springhill Road, load covering and incident management and reporting.

A Heavy Haulage Induction manual and induction program and a Drivers Code of Conduct Implementation Plan are in place to support DCC implementation.

PKCT monitors compliance against the DCC via an audit program. The monitoring of road transport operations is undertaken by PKCT personnel, by the shippers and their associated road transport providers. Audits are undertaken at the mine site, on route and at PKCT. Monthly compliance reports are supplied to PKCT. Road transport providers also undertake driver observations.

3.2.2.2 Transport Monitoring Results and Compliance 2015/2016

In accordance with Schedule 3, Condition 4, PKCT is required to keep records of the amount of coal and bulk products received at the site each year. Figure 8 below provides a summary of throughput and receipt over the reporting period.



Shiploading July to June 2016	Coal		Coke	Iron Ore	Total
	Coking	Steaming			
Berth 101: Bulk Products Berth (Tonnes)	0	153,922	0	0	153,922
Berth 102: Coal Berth (Tonnes)	8,012,655	2,679,132	0	0	10691787
Total (tonnes)					10,845,709

Receivals July to June 2016	Private Road	Public Road	Total
Road Receival (Tonnes)	2,862,922	3,764,770	6,627,692
Rail Receival (Tonnes)			3,906,756
Total Tonnes			10,534,448

Figure 8: Summary of PKCT throughput 2015/2016

Across the 2015/2016 reporting period 1164 driver observations, 41 audits and 416 Trucksafe audits were completed. Driver observations included monitoring of at least 7,124 individual drivers.

A summary of the auditing results is presented in Appendix C.

As part of the monitoring regime, PKCT records and responds to complaints and incidents associated with coal transport to and from PKCT where required. PKCT did not receive any complaints across the reporting period, nor were any complaints reported by PKCT’s Road Transport Providers to PKCT.

3.2.3 Trends in Transport

Road receival at PKCT has decreased by approximately 230 thousand tonnes compared to last year with a total of 6,627,692 million tonnes of combined private and public road receivals across 2015/2016, Figure 9.

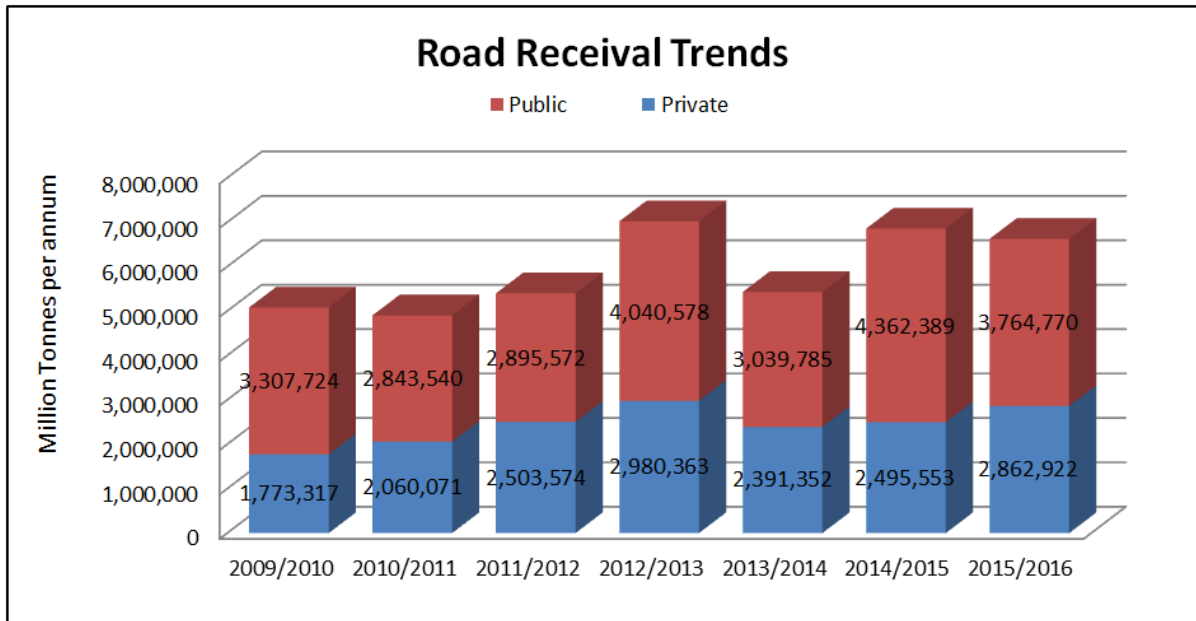


Figure 9: Road receipt trends

3.2.4 Traffic –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to traffic is presented below.

- Routine task observations and audits have continued, focussing on compliance against the Driver’s Code of Conduct and PKCT’s approval conditions.

3.2.5 Traffic - Activities Planned for 2016/2017 Reporting Period

A summary of the planned actions related to the 2016/2017 reporting period related to Traffic is presented below.

- Continue to monitor the effectiveness of the completed North Truckwash installation.

3.3 Air Quality

3.3.1 Air Quality Standards and Performance Measures

EPL 1625 and Major Project Approval 08-0009 pertain to air quality and emissions from PKCT’s premises. Air quality criteria are outlined as follows;

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/m3
Particulate matter < 10 µm (PM10)	Annual	30 µg/m3

Table 4: Short term impact assessment criteria for particulate matter



Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM10)	24 hour	50 µg/m3

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 Air Quality Monitoring and Compliance

3.3.2.1 Air Quality Monitoring Methodology

PKCT has an Air Quality Management Plan (AQMP) in place and is operational as follows;

- The AQMP, developed in consultation with the EPA, was submitted to DP&E by the due date of 9th December 2009. The DP&E approved the AQMP by letter of 25th March 2010.
- The EPA assisted in developing the AQMP though did not add any new air quality criteria to EPL 1625. In the 2014 EPL review, the EPA included new obligations on PKCT to report on continuous dust against the DP&E Impact Assessment Criteria and this commenced in the 2014/15 EPL Annual Return.
- PKCT's AQMP contains dust monitoring, assessment, reporting and mitigation and management provisions to ensure necessary actions are undertaken and that dust from PKCT's premises does not exceed the criteria in the Impact Assessment Criteria outlined above.
- PKCT provides 24/7 site operational control via the Main Control Room (MCR). MCR operators monitor site conditions and weather forecasts. If dust is observed, action is taken through the 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, dust associated with truck movements and the assessment of associated controls.
- PKCT has a total of 14 depositional dust gauges (11 Industrial and 3 residential) located on site and on adjacent port and residential areas, and two continuous dust monitors located to the north and south of the site, see Figure 10 below. These locations are specified in the EPL and Project Approval 08_0009. Dust Samples from each dust deposition gauge are collected on a monthly basis by an environmental contractor and sample analysis is performed at a NATA accredited laboratory. Results from the residential depositional gauges are analysed on a monthly basis and compared to the EPA amenity criteria of 4 grams/m²/month. The results are reported on the [PKCT website](#).

**PORT KEMBLA COAL TERMINAL
DUST & WEATHER MONITOR LOCATIONS**

30th October 2012



EPL No.	PKCT No.	Dust Monitor Location Description
1	P1	25m south of Bulk Products Berth (BPB)
2	P2	40m south of Bulk Products Berth stockyard
3	P3	40m east of Bulk Products Berth stockyard
4	P4	40m east Coal Berth stockyard
5	P5	Northern Pond (Pond No.1)
6	P6	40m west Coal Berth stockyard
7	P7	250m west of Coal Berth stockyard
8	P8	PKCT north truckwash
9	P9	Wollongong Wastewater Treatment Plant
15	P10	North of PKCT Planning Office
17	P11	Entry Gate to BlueScope Ro Ro (Berth 109)
12	R1	157 Church Street (two gauges)
19	R2	Vikings Oval, Wollongong (two gauges)
TBA	R3	Linkside Apartments, Ross Street
	C1	Continuous Dust Monitor 1
	C2	Continuous Dust Monitor 2

- # refer PKCT Environment Protection Licence(EPL) No. 1625 (EPA ID No.)
- Dust Gauges- Environment Protection Licence monitoring sites
Sites denoted "P": industrial; "R": residential
- Continuous Dust Monitor Sites- additional
- (a) BlueScope High Volume Sampler & dust gauge
(b) PKCT EPL Monitoring Site R2 (2 gauges)
- Weather stations
 - (a) at each continuous dust monitor site ●
 - (b) PKCT Main Control Room ●

Figure 10: PKCT air quality monitoring sites

3.3.2.2 Air Quality Monitoring Results and Compliance 2015/2016

PKCT collects monthly depositional dust records at three residential sites and 11 industrial sites located on or near the PKCT premises. Monthly dust deposition results for the three residential dust gauges are presented in Figure 11 below.

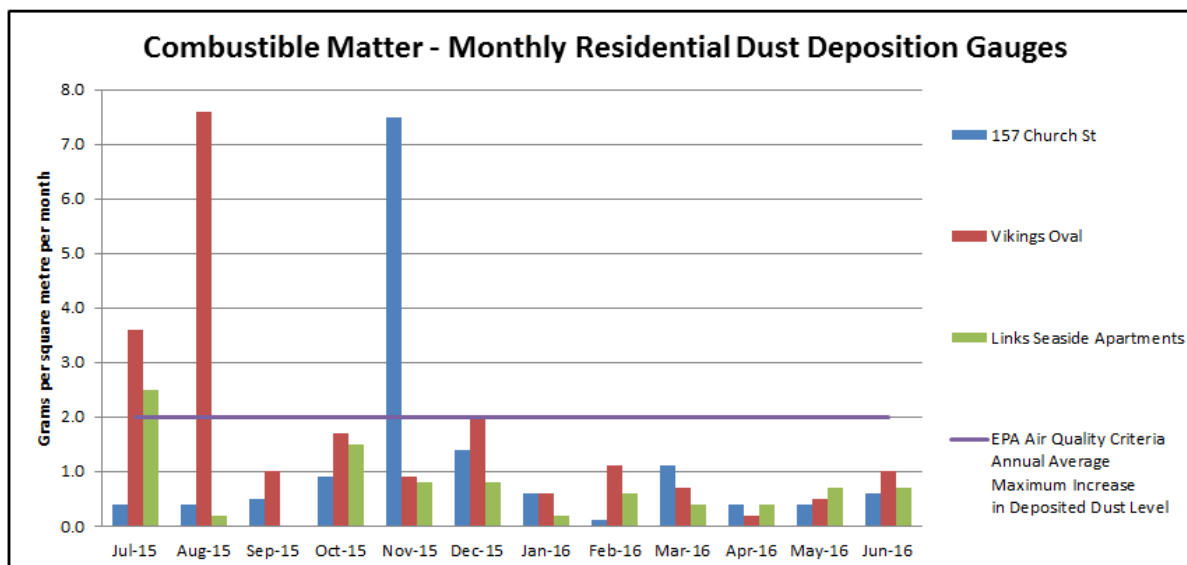
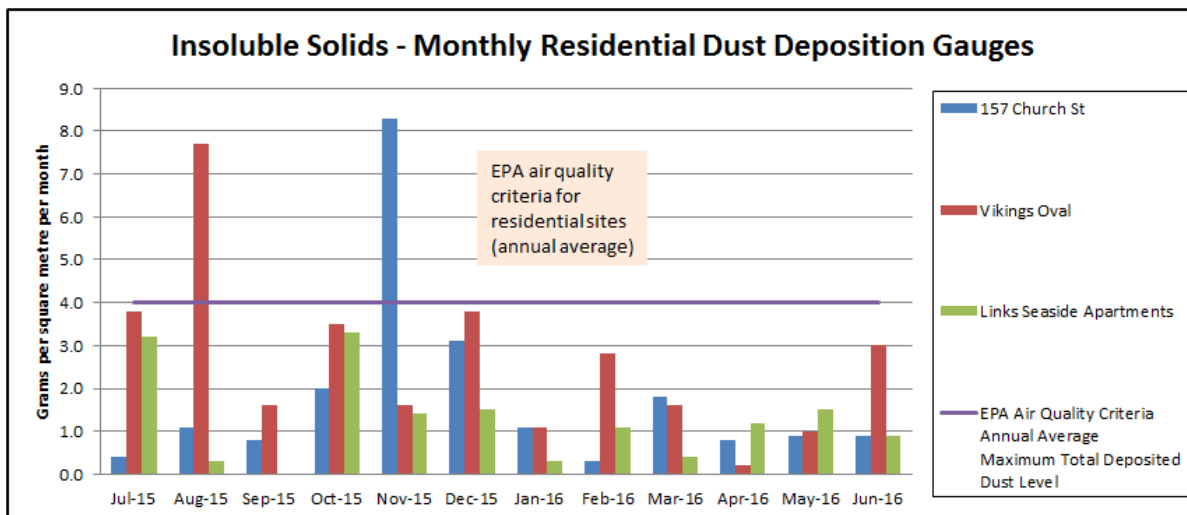


Figure 11: PKCT residential depositional dust gauges

Across the reporting period, there were three months (July, August and November) where residential gauges exceeded the monthly combustible matter criteria of 2 Grams/m²/month for that month. In these instances, PKCT undertook additional microscopic analysis of the samples.

In July 2015, elevated combustible matter was recorded at Vikings Oval. Subsequent microscopic analysis of the sample found that Soil and Minerals comprised 80-85% of the sample, coal comprised 10 to 15% of the sample and insects and plants comprised 3 to 5%.

In August 2015, elevated combustible matter was recorded in the Vikings Oval depositional Gauge. Subsequent microscopic analysis of the deposit identified high levels of Coke (40-50%) and Soil and Minerals (30-40%) were the main constituents. Coal was only a minor component. PKCT’s stockpile spray systems were operational during August. While still below the EPA Air Quality Criteria of 2 Grams/m²/month, the high levels recorded during



August have increased and skewed the 12 monthly averages for the remainder of the reporting period.

In November 2015, elevated combustibile matter was recorded at the Church Street residential gauge. Further analysis identified that Insect and Plant remains comprised >95% of the sample, Soil and Minerals comprised 2 to 3% of the sample and coal and coke <1%.

Twelve month rolling average Insoluble Solids results for the 11 PKCT industrial dust gauges are presented below in Figure 12. Results for all of the monitoring sites recorded fell within the assessment criteria throughout the reporting period.

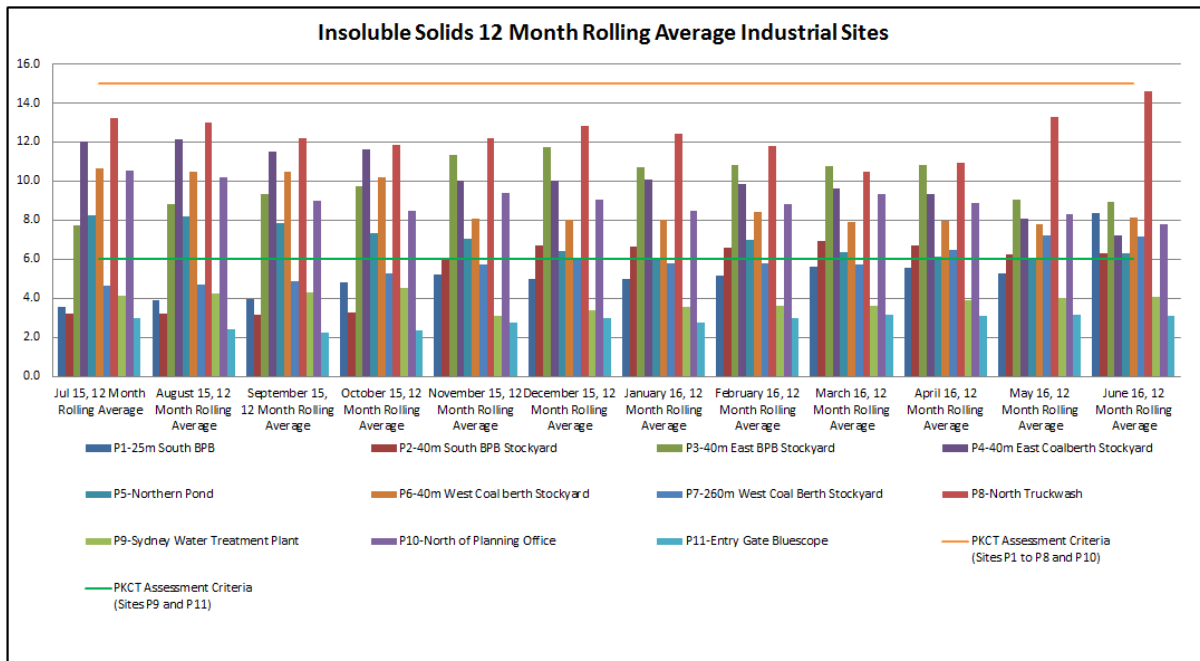


Figure 12: PKCT industrial dust deposition gauges insoluble solids 12 month rolling average.

Twelve month rolling average Combustible Matter results for the 11 PKCT industrial dust gauges are presented below in Figure 13. All results were within the PKCT assessment criteria for the reporting period. Combustible matter is considered an indicator of coal related dust particulate.

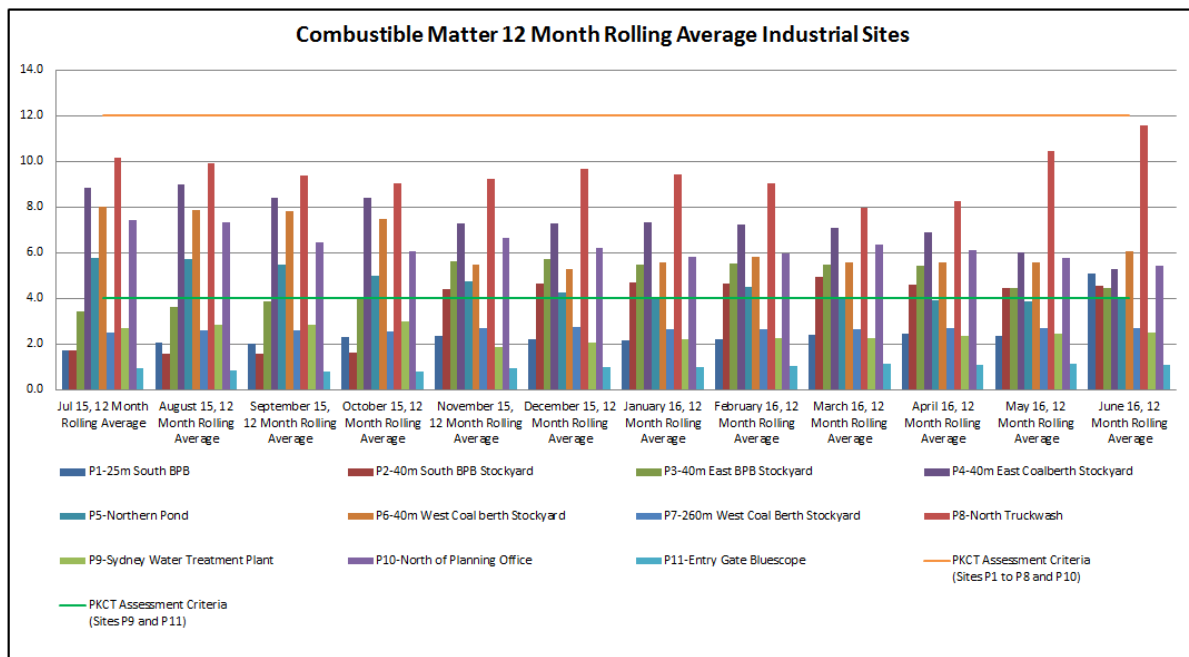


Figure 13: PKCT industrial dust deposition gauges combustible matter 12 month rolling average.

PKCT has two continuous dust monitors. One monitor is located at the southern end of PKCT’s premises. The other monitor is located north of PKCT’s premises, midway to the residential boundary. Data from these monitors is captured and analysed by specialist air quality consultants for PKCT. Data and exceedances related to the northern monitor are presented with wind data in Appendix E and in Figure 14 below. A summary of the air quality data at the northern dust monitor from PKCT’s Air Quality consultant is provided below.

The annual average concentration of TSP at the PKCT northern monitoring site was 48.3 µg/m³ which is below the trigger level of 90 µg/m³.

The annual average PM₁₀ concentration of 31.6 µg/m³ at the northern monitoring site was marginally above the trigger level of 30 µg/m³.

At the northern PKCT monitoring site, the trigger level of 90 µg/m³ for the 24 hour average TSP concentration was exceeded on 34 occasions, while the 24 hour average PM₁₀ air quality standard of 50 µg/m³ was exceeded on 60 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 30 of the 34 exceedances of the 24 hour average TSP trigger level at the PKCT northern monitoring site. The PKCT contribution was unable to be quantified on three TSP exceedance days due to missing data. PKCT was identified as having made a moderate contribution (30% to 70%) on the remaining exceedance day.

PKCT was identified as having made, at most a minor contribution (i.e. less than 30%) to 54 of the 60 exceedances of the 24 hour average PM₁₀ objective at the PKCT northern



monitoring site. The PKCT contribution was unable to be quantified on five PM₁₀ exceedance days due to missing data. PKCT was identified as having made a moderate contribution (30% to 70%) on the remaining exceedance day.

PKCT contribution rating	Number of TSP exceedance days	Number of PM ₁₀ exceedance days
None	10	23
Minimal (0% to 10%)	17	22
Minor (10% to 30%)	3	9
Moderate (30% to 70%)	1	1
Major (70% to 100%)	0	0
Unclassified (missing data)	3	5
Total exceedance days	34	60

Figure 14: PKCT contribution ratings for exceedance days during July to June 2015

On average, PKCT was estimated to have contributed 5% to TSP levels at the PKCT northern monitoring site on days when exceedances of the TSP trigger level occurred.

On average, PKCT was estimated to have contributed 5% to PM₁₀ levels at the PKCT northern monitoring site on days when exceedances of the PM₁₀ standard occurred.

3.3.3 Trends in Air Quality

Comparative data for the PKCT residential depositional dust gauges is presented in Figure 15 below. Each year, 12 samples are collected at each gauge. As is shown in the Figure, the number of exceedances occurring across each year is low and no significant trend is observable in the current data set.

Of the four combustible matter exceedances recorded in this reporting period, none were attributed to elevated coal particulate. Petrographic testing indicated the major components of the samples were other sources i.e. Soil and Minerals, Coke and Plant remains.

Residential Air Quality Criteria Number of Exceedances - Insoluble Solids						
		2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Links Seaside Apartments	Criteria 4 g/m ² /month	0	0	1	0	0
Vikings Oval	Criteria 4 g/m ² /month	0	2	0	0	1
157 Church Street	Criteria 4 g/m ² /month	0	0	0	0	1

Residential Air Quality Criteria Number of Exceedances -Combustible Matter						
		2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Links Seaside Apartments	Criteria 2 g/m ² /month	0	0	0	0	1
Vikings Oval	Criteria 2 g/m ² /month	0	2	0	0	2
157 Church Street	Criteria 2 g/m ² /month	0	0	0	0	1

Figure 15: Annual residential depositional dust gauge trends



A summary of the 2015/2016 depositional and continuous dust gauge data compared to historical records is presented below in Figure 16.

PKCT’s Environmental Assessment on Air Quality undertaken in 2008 predicted that impacts to air quality from PKCT would be well below relevant DECC criteria based on existing PKCT operations and the proposal to receive coal by road over a 24/7 period up to a maximum of 10mtpa. Annual average results for the three depositional dust gauges show that for both total insoluble solids and for combustible matter, levels are well within the DECC guidelines on all occasions, see Figure 16. This aligns with the predictions in the Environmental Assessment.

Annual average results for TSP and PM₁₀ recorded at the continuous dust gauges are within the relevant DECC guidelines on all occasions except for the PM₁₀ annual average in FY2012/2013, and marginally in FY2014/2015 and FY2015/2016, see Figure 16. The continuous dust monitors used to record this information cannot discern where the dust source is from, however the data is analysed by a consultant on behalf of PKCT and assesses the likely contribution by PKCT to the results.

PKCTs consultant’s analysis of the data identified that there were 14 exceedance days at the PKCT northern monitoring site during the July 2015 to June 2016 period for which one or more of the regional OEH monitors recorded elevated concentrations above 40 µg/m³, but below the criterion. The coinciding elevated concentrations indicate that regional particulate levels may have been elevated during these exceedance periods.

PKCT continues to utilise the collected data to minimise and manage dust from its operations.

Location	Standard	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
		Annual Average	Annual Average	Annual Average	Annual Average	Annual Average	Annual Average
Residential Depositional Gauges							
Total Insoluble Solids							
Vikings Oval (d)	4 g/m ² month	1.4	1.4	1.6*	1.2	1.1	2.6
Church Street (d)	4 g/m ² month	3.5	1.5	1.3	1.6	1.1	1.8
Ross Street (d)	4 g/m ² month	-	1.6	1.4	1.4	1.1	1.4
Combustible Matter							
Vikings Oval (d)	2 g/m ² month	0.8	0.8	0.8*	0.7	0.8	1.7
Church Street (d)	2 g/m ² month	0.8	0.6	0.6	0.6	0.6	1.2
Ross Street (d)	2 g/m ² month	-	0.8	0.6	0.7	0.6	0.8
Continuous Dust Monitor							
TSP							
Northern (c)	90 ug/m ³	32.2	34	62	44.3	45.8	48.3
PM10							
Northern (c)	30 ug/m ³	25.8	27	47	24.8	30.8	31.6

Data for FY 2013 (July 2012 and January 2013) has been omitted for the residential depositional gauge at Vikings Oval. The results received were well outside normal values for this location. Subsequent petrographic analysis confirmed that the main constituents of the sample were plant matter and not related to PKCT operations.

Figure 16: Summary of continuous dust data for 2015/2016

3.3.4 Air Quality –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to Air Quality is presented below.

- A number of glass depositional bottles were found to be broken when collected at various sites and at various times throughout the reporting period. After discussion with PKCT's consultant, it appears that the bottles were breaking as a result of fatigue and age. PKCT replaced all bottles with new bottles to minimise the likelihood of future breakages.
- To improve the identification of particulate in depositional dust samples, PKCT has been involved in the trial of an improved microscopic analysis process with the CSIRO. PKCT received two sets of results within this reporting period from dust samples collected in deposition gauges and continuous dust monitors over the past few years. The methodology used by the CSIRO is not yet commercially viable, however, initial results have been promising and PKCT will continue to utilise this service as the need arises.
- In December 2015, following consultation with the NSW EPA and other NSW coal terminals, PKCT volunteered to participate in an Environmental Improvement Program (EIP) focussing on rail wagon monitoring and reporting. PKCT has been submitting weekly reports to the EPA and rail shippers since 1st March 2016. This will continue through to September 2016. Monitoring to date has indicated that incoming trains are conforming to the required criteria.
- In addition to the EIP, PKCT has undertaken further monitoring and collection of dust along the rail corridor via a "track Matt" program, results of the monitoring are still to be evaluated.
- PKCT's NC14 conveyor on Berth 102 has historically been a problematic area for coal spillage, which when dry has the potential to generate dust. Across the reporting period, PKCT's Project Team has progressively been implementing upgrades in line with best practice belt scraping methods to reduce coal spillage using wet scrapers, squeegee rollers and launder systems.
- PKCT has been investigating new track cleaning methods with consultants to improve the existing track cleaning process.
- PKCT completed a review of the existing Dust Management Strategy as part of the 2016 Business Plan.
- PKCT has continued to benchmark against and work with other east coast coal Terminals to understand best practice dust mitigation methods.

3.3.5 Air Quality - Activities Planned for 2016/2017 Reporting Period

A summary of the planned actions related to the 2016/2017 reporting period related to air quality is presented below.

- Continue rail monitoring program. The EIP requires PKCT to monitor incoming trains looking for rail wagon overloading or uneven loading which may result in spills during rail transport from coal mines to PKCT.

- PKCT will continue to work on improving the effectiveness of its existing dust mitigation infrastructure and will continue the work already undertaken with expert consultants on this matter.
- Complete NC14 belt washing station

3.4 Meteorological

3.4.1 Meteorological Monitoring Standards and Performance Measures

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 Meteorological Monitoring

3.4.2.1 Meteorological Monitoring Methodology

PKCT primarily utilises an on-site weather station to measure, monitor and record weather variables. The station measures wind speed and direction, rainfall, air pressure, temperature and humidity continuously at the site.

Additionally, PKCT operates two continuous dust monitors which measure PM10, PM2.5, TSP, wind speed and wind direction.

Data from the monitoring stations is used by PKCT personnel to assist with environmental management on site.

3.4.2.2 Meteorological Monitoring Results and Compliance 2015/2016

A summary of the meteorological data recorded at PKCT across the 2015/2016 reporting period is presented below in Figure 17 and Figure 18. An annual wind summary from the northern and southern continuous dust monitors is presented in Appendix E.



Year/Month	Rainfall (mm)	Temperature Mean °C	Wind Max Speed metres/ sec	Wind Average Speed metres/ sec
Jul-15	53.7	12.7	17.4	5.1
Aug-15	68.3	14.1	18.5	5.3
Sep-15	23.9	15.3	24.5	5.6
Oct-15	24.5	19.7	26.1	5.1
Nov-15	39.4	19.7	30.2	5.3
Dec-15	44.3	20.2	26.0	5.1
Jan-16	145.8	21.7	26.4	5.1
Feb-16	31.5	22.6	23.5	5.3
Mar-16	73.6*	21.6	22.5	4.9
Apr-16	23.0*	20.2	18.4	4.2
May-16	44.0*	18.1	30.0	5.2
Jun-16	284.2*	15.0	18.6	5.6

* New rain gauge installed at Southern Pond in February 2016. Data sourced from new gauge.

Figure 17: PKCT weather station monitoring data 2015/2016

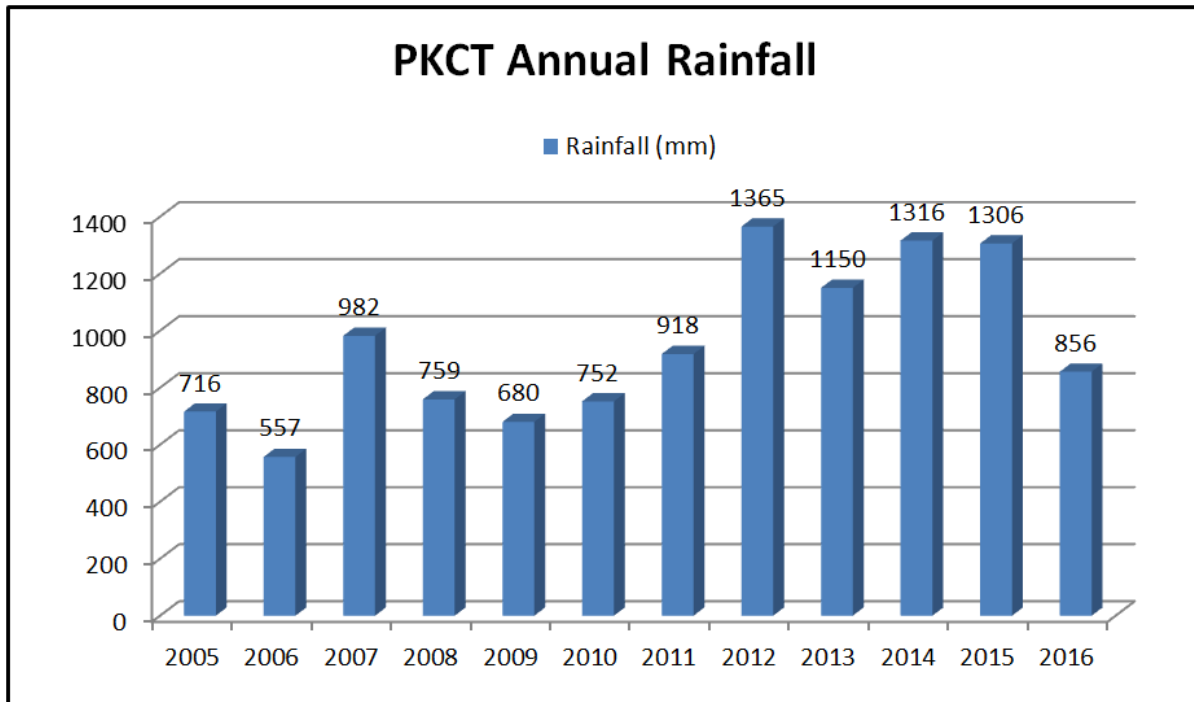


Figure 18: PKCT annual rainfall (financial year)

3.4.3 Trends in Weather

As is shown in Figure 18 above, the 2015/2016 reporting period was considered a dry year with drier “El-Niño” weather patterns dominating. A rainfall total of 856mm for the financial year is significantly less than the past four years.

3.5 Surface Water

3.5.1 Surface Water Standards and Performance Measures

EPL 1625 and Major Project Approval 08-0009 pertain to water quality and discharge limits from PKCT's premises. Water quality criteria are outlined as follows;

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:
 - 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;
 - 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);
 - 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 Surface Water Monitoring

3.5.2.1 Surface Water Monitoring Methodology

PKCT has a Water Management Plan MP.HS.462 (WMP) which is in operation and DP&E approved. This plan was submitted to the DP&E within 12 months of Project Approval 08_0009.

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 DP&E approval conditions.

The WMP includes reference to PKCT's Water Savings Action Plan (WSAP). This Plan has been in place since 2006 and has most recently been revised in June 2012. PKCT has now met its regulatory obligations and no further reporting is required. PKCT will continue the process internally as a management tool to seek further water savings.

PKCT also operates under EPL 1625. Under this licence, PKCT is required to measure water quality at its Licenced Discharge Point 16 (LDP16). Daily grab samples are taken from LDP16 when harbour discharges occur.



On a monthly basis, PKCT collates and reviews water usage across the site and discharge water quality. LDP16 discharge monitoring data is uploaded to the [PKCT website](#) as required under Schedule 4, Condition 9 of Project Approval 08_0009.

In September 2014, PKCT completed a five-yearly review of EPL 1625 with the EPA. Related to water monitoring, the review process added an additional monitoring requirement to sample overflows from PKCT’s satellite ponds and to report the data via the Annual Return process. PKCT’s pH limits for LDP16 were removed and replaced with a monitoring and reporting requirement and LDP16’s Oil and Grease limit was removed and changed to a “visible/not visible” reporting requirement.

3.5.2.2 Surface Water Monitoring Results 2015/2016

PKCT’s revised licence conditions and limits for LDP16 are presented below in Figure 19.

Monitoring Parameter	100 percentile limits
pH	Monitoring only
TSS	50 mg/litre
Oil and Grease	Visible

Figure 19: EPL 1625 water quality parameter limits and compliance.

Across the FY2015/2016 reporting period, PKCT recorded a total of 72 discharges from LDP16. Of these discharges, 72 were compliant for TSS and 72 were compliant for Oil and Grease. pH was monitored as required, see Figure 20 below.

Monitoring Parameter	Number of Overflows	Maximum recorded value	Minimum recorded value	Mean recorded value	Compliant Samples (%)
pH	72	10.1	6.4	8.3	n/a
TSS (mg/l)	72	45	<5	14	100
Oil and Grease (mg/l)	72	<5	<5	<5	100

Figure 20: Water quality monitoring summary for LDP16 discharges

PKCT monitors water usage across the site on a monthly basis. A summary of the water usage for the site compared to the WSAP is presented below in Figure 21.

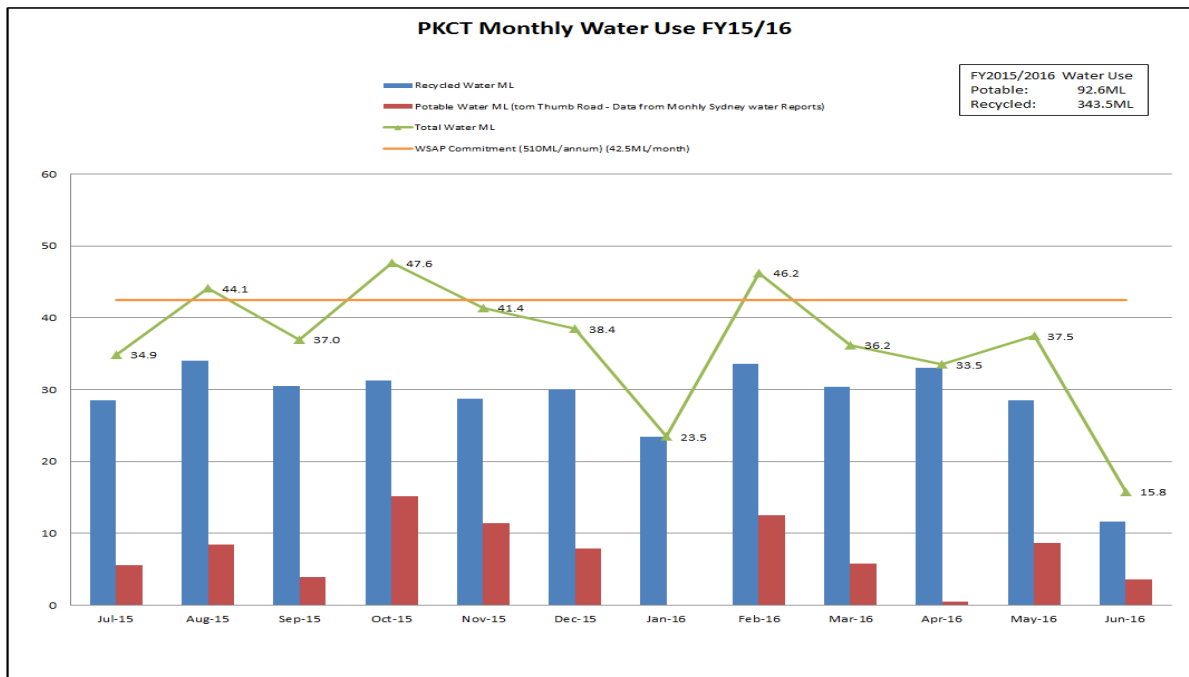


Figure 21: PKCT monthly water use for 2015/2016 reporting period

3.5.2.3 Surface Water Monitoring Compliance

Of the 72 discharges from LDP16 recorded during the 2015/2016 reporting period, PKCT was compliant for 72 (100%) Oil and Grease samples and 72 (100%) TSS samples.

PKCT has been working on numerous projects to improve the quality of water at LDP16 including a completion of a dredging program in the Settlement Lagoon, upgrading of the Central Pond, installation of transfer pipeline systems enabling water transfer between ponds if required and development of a coagulant dosing system to assist with water clarification. A combination of all these works has enabled PKCT to realise 100% compliance of discharge water through LDP16 in the 2015/2016 reporting period.

3.5.3 Trends in Surface Water Monitoring

Figure 22 below highlights the trends in compliance measured at LDP16 for EPL 1625 water quality parameters of pH, TSS and Oil and Grease. As is shown in Figure 22, compliance has remained stable at 100% for Oil and Grease and improved from 94% to 100% compliance for TSS during this reporting period. pH is now monitoring and reporting only. PKCT has attributed the improvement in TSS compliance to a number of infrastructure improvements, installation of a coagulant dosing system, completion of a dredging program and a change to the management practices used in the storm water collection system.



Monitoring Parameter	2011/2012		2012/2013		2013/2014		2014/2015		2015/2016	
	Number of Overflows	Compliant Samples %	Number of Overflows	Compliant Samples %	Number of Overflows	Compliant Samples %	Number of Overflows	Compliant Samples %	Number of Overflows	Compliant Samples %
pH		100		96		93		Reporting only		Reporting only
TSS (mg/l)	97	87	68	91	91	95	143	94	72	100
Oil and Grease (mg/l)		98		100		100		100		100

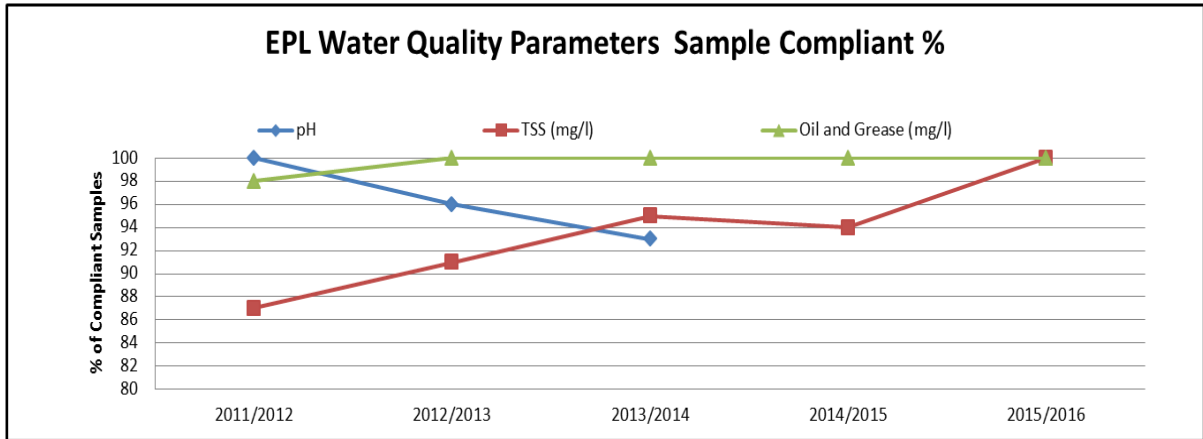


Figure 22: Trends in water EPL water quality data at LDP16

Site water use as a whole has decreased across the 2015/2016 reporting period compared to the 2014/2015 reporting period, see Figure 23 below. Total water used decreased from 464 ML (2014/2015) to 436 ML (2015/2016). Potable water used at PKCT in the 2015/2016 reporting period fell compared to last reporting period. A large portion of the reduced water use realised at PKCT can be attributed to significant rainfall events across January and June 2016. The amount of rainfall that fell in short duration events in these months saturated the site to a level where stockpile sprays were rarely required.

Recycled water as a percentage of the total water used increased from 70% (2014/2015) to 80% (2015/2016).

Overall, the use of recycled water is considered a benefit to the environment in its provision of significant potable water savings. PKCT continues to look for water savings across its operations.

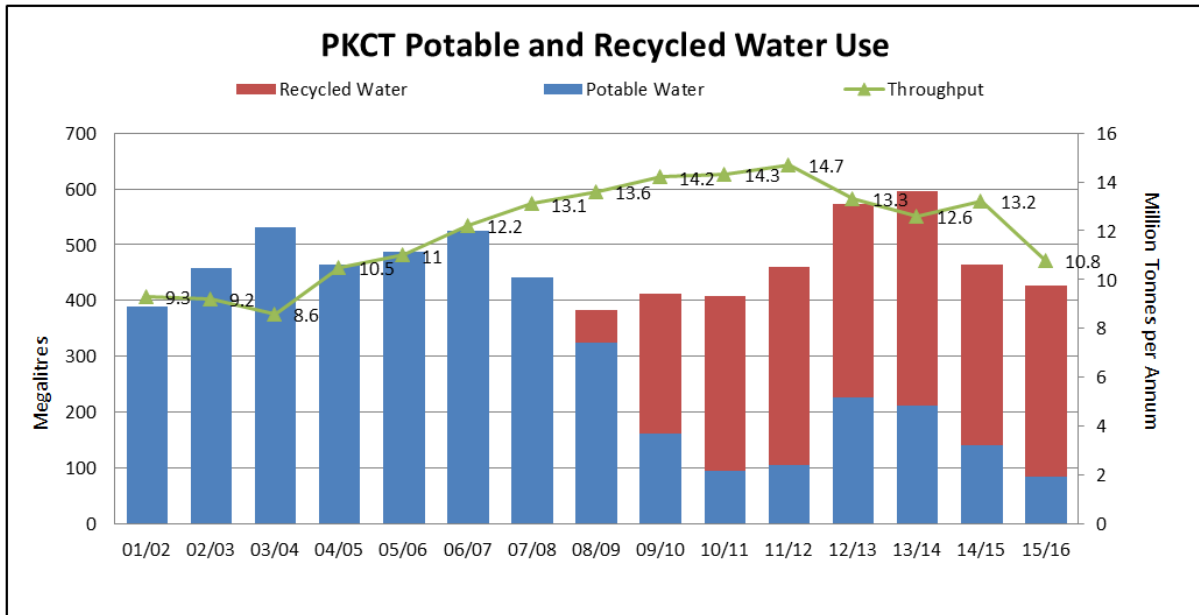


Figure 23: Trends in Potable and Recycled water use at PKCT

3.5.4 Surface Water –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to surface water is presented below.

- Installation of a coagulant dosing system was completed at the Central Pond in August 2015. The system was installed following investigations into turbid water issues experienced across the last 18 months. The system uses a coagulant injected into the Central Pond which mixes with the water as it is transferred through to the Settlement Lagoon. Once in the Settlement Lagoon, the mixture assists with removal of ultrafine particles that are not removed by the existing polymer dosing system at the Settlement Lagoon. Turbid water events have been limited since the introduction of the system, however initial results show an improvement in water quality when the system is used. See Figure 24 below.



Figure 24: Coagulant dosing system installed at the Central Pond to assist with clarification of water entering the Settling Lagoon.

- A dredging program was undertaken across late August into early September 2015 in PKCT’s Settlement Lagoon. The program utilised a suction cutter dredge feeding a wet-slurry into a network of geotextile bags. The bags allowed water to escape while trapping and storing sediment for later removal. Effectiveness monitoring is ongoing however a measureable improvement in water clarity has occurred as well as a reduction in the TSS levels of the discharge water since dredging was completed. The development of the technique allows cleaning of the Settlement Lagoon when planned as opposed to waiting for very specific weather conditions to occur. See Figure 25 below.



Figure 25: Dredging of Settlement Lagoon

- A pipework system was installed in the eastern end of PKCT’s Settlement Lagoon in August 2015 and allows transfer of water from the Settlement Lagoon back into the Northern Pond. Prior to this installation, PKCT had no simple method of transferring water out of the Settlement Lagoon if it were to become tainted. The pipework was utilised during the dredging program to assist with managing the discharge water at LDP16.
- In January 2016, PKCT completed the construction phase of PRP12, upgrading of the Central Pond. The upgrade has allowed for safer, more efficient method of cleaning the lagoon as well as reducing dust via drag out.

3.5.5 Surface Water - Activities Planned for 2016/2017 Reporting Period

The 2014 AECOM Independent Audit identified 4 minor non-conformances associated with surface water. These were related to pH and TSS exceedances measured in the Settlement Lagoon. Due to a number of management tools being implemented, PKCT has not had any non-compliant discharges from LDP16 across the reporting period. PKCT will continue to utilise the existing tools and measures to ensure non-compliances are avoided.

- Complete work on PRP12 – “Implement upgrades to stormwater pollution control system”. Completion of the Central Pond upgrade works was completed in January 2016.

Effectiveness monitoring is required under the PRP and this will be undertaken during the coming reporting period.

- Continue to identify and implement opportunities for improvement related to surface water at PKCT as they arise.

3.6 Biodiversity

3.6.1 Biodiversity Standards and Performance Measures

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 Biodiversity Monitoring

3.6.2.1 Biodiversity Monitoring, Results and Compliance

A Green and Golden Bell Frog Management Plan MP.HS.109 (GGBFMP) is implemented, in operation and DP&E approved. The GGBFMP has been developed in consultation with the EPA and PKCT is continuing to work closely with the authority as matters arise. Actions include:-

- Maintenance and monitoring by Wollongong City Council of its Greenhouse Park frog ponds.
- Periodic surveys involving an expert consultant. Surveys to include PKCT premises and Wollongong City Council's greenhouse Park frog ponds.
- Monitoring and reporting by site personnel as part of site operations.
- Ongoing awareness for site personnel through inductions and site communications.

3.6.3 Trends in Biodiversity

PKCT undertakes GGBF surveys and records all sightings in a register. PKCT personnel have not identified any GGBF during normal operations or as a result of focused surveys since 2011. Figure 26 below shows the trend in GGBF sightings at PKCT back to the 2007/2008 financial year.

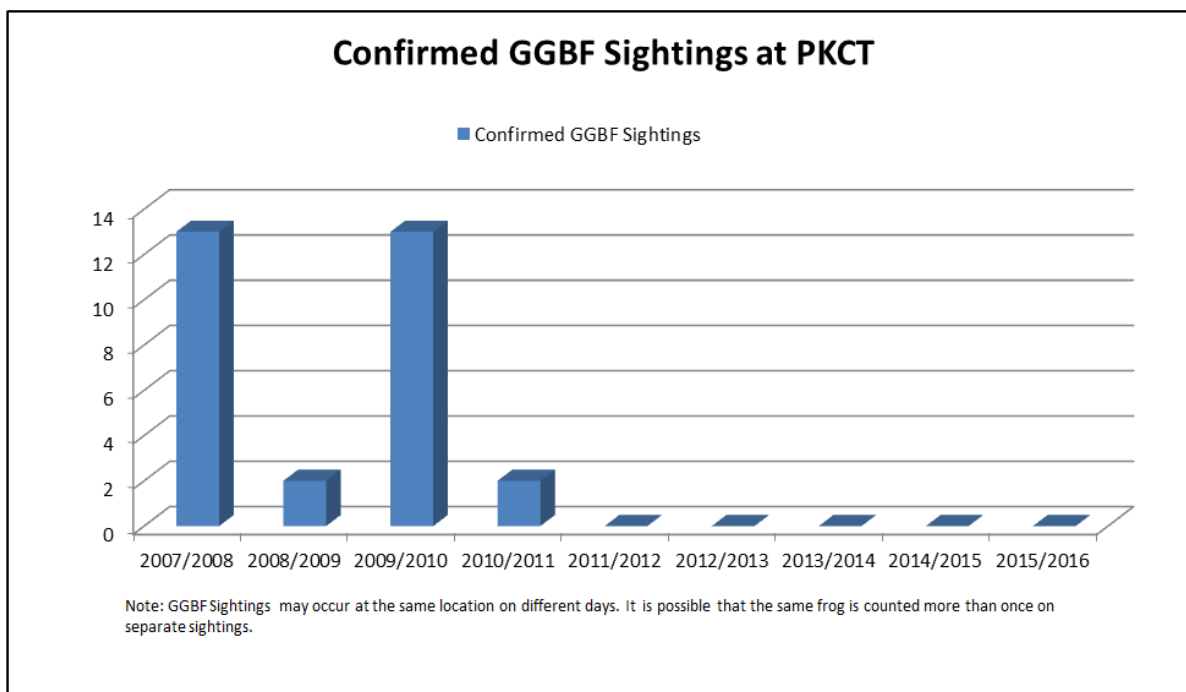


Figure 26: GGBF sightings at PKCT

3.6.4 Biodiversity –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to biodiversity is presented below.

- PKCT undertook a GGBF survey on the 15th February 2016. The survey was supervised by an expert consultant from NICHE Environment and Heritage, with assistance provided by the PKCT Environmental Specialist. Evening and night surveys confirmed that GGBFs are not currently present on site. The Peron’s tree frog was the only species of frog found on site during the survey and the striped marsh frog was recorded at Greenhouse Park. It was noted that some clearing of vegetation and weeds had been undertaken at the Greenhouse Park frog ponds.
- Workers at PKCT are instructed to report and record any GGBF (or other frog) sightings throughout the year. Refresher training on the requirements of PKCT’s Green and Golden Bell Frog Management Plan was provided to the workforce during the February and March 2016 monthly Team Meetings. Any frog sightings are recorded in a site database. No GGBFs were identified by the PKCT site personnel in the 2015/2016 reporting period.
- As recommended in the 2014 AECOM Independent Audit, an annual review of the GGBFMP was undertaken and updated where necessary in November 2015.

3.6.5 Biodiversity - Activities Planned for 2016/2017 Reporting Period

PKCT will continue to ensure that the biodiversity standards and performance measures are considered during any planning for future restoration and improvement works. A summary

of the planned actions related to the 2016/2017 reporting period related to biodiversity is presented below.

- Continued monitoring for GGBF populations at PKCT during site operations and Project Works.
- The annual GGBF survey undertaken in February 2015 and February 2016 did not identify any GGBF on site. The reports recommended PKCT liaise with the Environment Protection Authority to determine if the annual survey continues, see Appendix G. PKCT will progress this recommendation with the relevant authorities during the coming reporting period.
- Undertake further surveys when deemed necessary.

3.7 Visual Amenity

3.7.1 Visual Amenity Standards and Performance Measures

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;
 - details of screening trees to be planted on the road receival earth bund and along the northern site boundary; and
 - an implementation program.

3.7.2 Visual Amenity Monitoring

3.7.2.1 Visual Amenity Monitoring, Results and Compliance.

Lighting - A consultant, Lightpoint Consulting Services, undertook a review of site lighting and assessment against the standard in 2011. A report of 4th October 2011 concluded that PKCT was in compliance with AS 4282 and no evidence of any detrimental impact was found on residential areas.

Obligations associated with lighting emissions have been communicated to personnel involved in plant modifications and upgrades and the requirements are taken into account in project development.

PKCT is currently undertaking a major restoration and compliance project on site. As part of the project, all new lighting will be assessed and will comply with AS4282. Additionally, the project has generally used LED lighting and ensured light emission is either local to access and stairway areas or, elevated and directed towards the ground or stockpiles in other areas. The lights have been designed so that they are easily accessible allowing for quick adjustment if required.

Landscaping - PKCT's Landscape Management Plan MP.HS.470 (LMP) is in operation and DP&E approved. This document includes details of proposed tree planting. Implementation is staged and processed through PKCT's project approval process.

PKCT utilises a landscaping contractor to maintain lawns and gardens and control weeds on site. Landscape contractor staff are trained in chemical application and use non-residual herbicides (Glyphosate 360 – trademark Roundup). All weed spraying undertaken considers prevailing weather conditions and locations and PKCT is provided with a Weed Spraying Notification Form (WSNF) each time an herbicide is used on site. See Appendix H for an example of a WSNF.

3.7.3 Trends in Visual Amenity

PKCT's lighting survey in 2011 did not identify any offsite lighting impacts associated with the PKCT operation. There have been no recorded community complaints relating to lighting since PKCT commenced operations in 1990.

Chemical is applied on site to control weeds. Figure 27 below shows the volume of herbicide used on site across respective reporting periods. The 2015/2016 reporting period saw a decrease in the volume of neat herbicide used at PKCT. PKCT's landscaping contractor are licenced and utilise glyphosate to manage weeds when weather conditions allow. Wet and windy conditions limit the ability to safely spray chemicals and volumes of herbicide used at the terminal often are governed by weather.

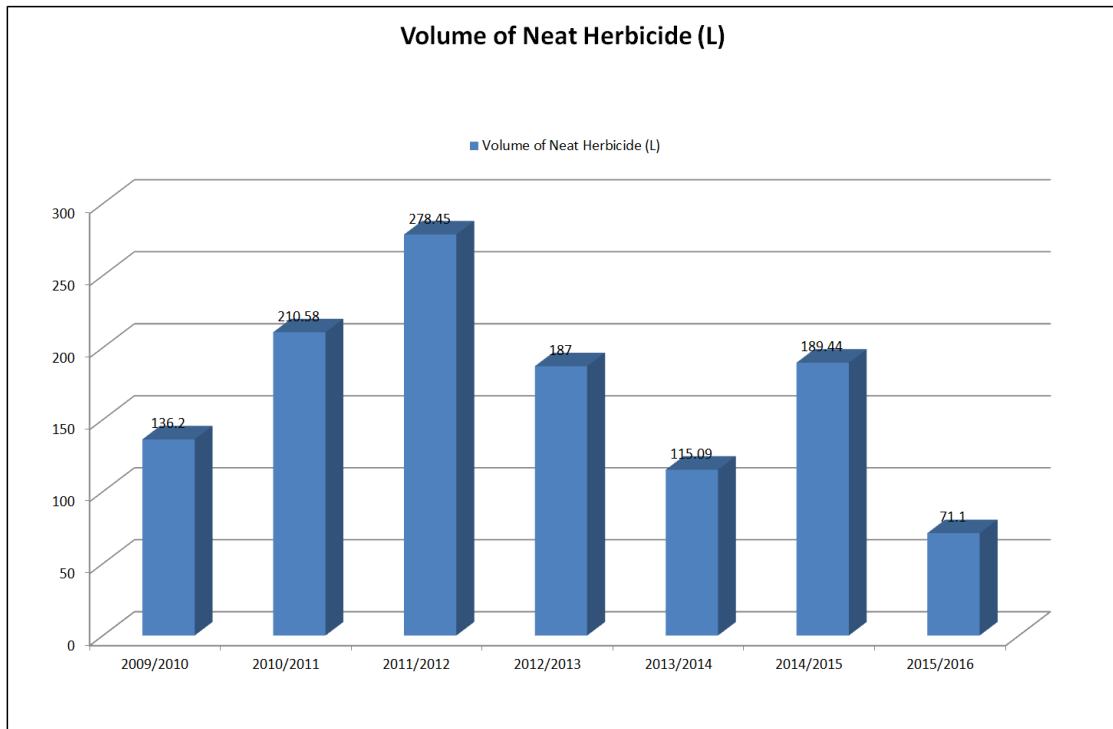


Figure 27: Volume of neat herbicide used for weed spraying at PKCT (does not include volumes for June)

3.7.4 Visual Amenity –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to visual amenity is presented below.

- Ongoing maintenance of the landscaped area near the northern transfer station. The garden is now well established in this area, see Figure 28 below.



Figure 28: Landscaped area near Northern Transfer Station, July 2016

- Landscaping works were undertaken at the Central Pond following the completion of major structural upgrade works. PKCT’s Landscaping contractor replanted the surrounds to the ponds with native vegetation including lamandra and leptospermum. See Figure 29 below.



Figure 29: Landscaped area near Central Pond, May 2016

- There were no community complaints relating to lighting across the 2015/2016 reporting period.

3.7.5 Visual Amenity - Activities Planned for 2016/2017 Reporting Period

The 2014 AECOM independent Audit identified one Opportunity for Improvement associated with visual amenity. PKCT will continue to ensure that visual amenity and landscape management is considered during any planning for future restoration and improvement works.

- As identified in the 2014 AECOM independent Audit, PKCT undertook an annual review and updated where necessary the LMP. This review was completed in October 2015.

3.8 Greenhouse and Energy Efficiency

3.8.1 Greenhouse and Energy Efficiency Standards and Performance Measures

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 Greenhouse and Energy Efficiency Monitoring

3.8.2.1 Greenhouse and Energy Efficiency Monitoring Methodology

In accordance with Condition 18, a Greenhouse Gas and Energy Efficiency Management Plan MP.HS.461 (GGEEMP) was included in the 0910 AEMR submission to DP&E. It 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 EPA).

The GGEEMP remains in operation and is DP&E approved.

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. Figure 30 below outlines the volumes of reportable emissions from PKCT operations across the reporting period.

2015/2016 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)	Reportable energy (GJ)	Reportable emissions (tonnes CO2-e)	Gigajoules	tonnes
Scope 1 – direct emissions								
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	107	30.88	69.51	3308	230		
Petrol (transport)	kL	15	34.20	69.60	518	36		
Petroleum based oils	kL	0.98	38.80	27.90	38	1		
Petroleum based greases	kL	2.61	38.80	27.90	101	3		
Acetylene	m3 *	14	0.0393	51.33	1	0		
Scope 2 – indirect emissions								
Electricity	Reporting unit kWh	18,706,449	Energy content (GJ per kWh) 0.0036	Emissions factor (kg CO2-e per kWh) 0.89	67343	16649		
Total					71309	16919		
Threshold					100,000	25,000		

Figure 30: Greenhouse gas report 2015/2016

3.8.2.1 Greenhouse and Energy Efficiency Monitoring, Results and Compliance.

Energy use is measured at PKCT on a monthly basis. Energy use generally follows the same trend as throughput at the site, i.e. when there is an increase in throughput, energy use also increases. Figure 31 below provides monthly energy consumption and tonnes for the 2015/2016 reporting period.

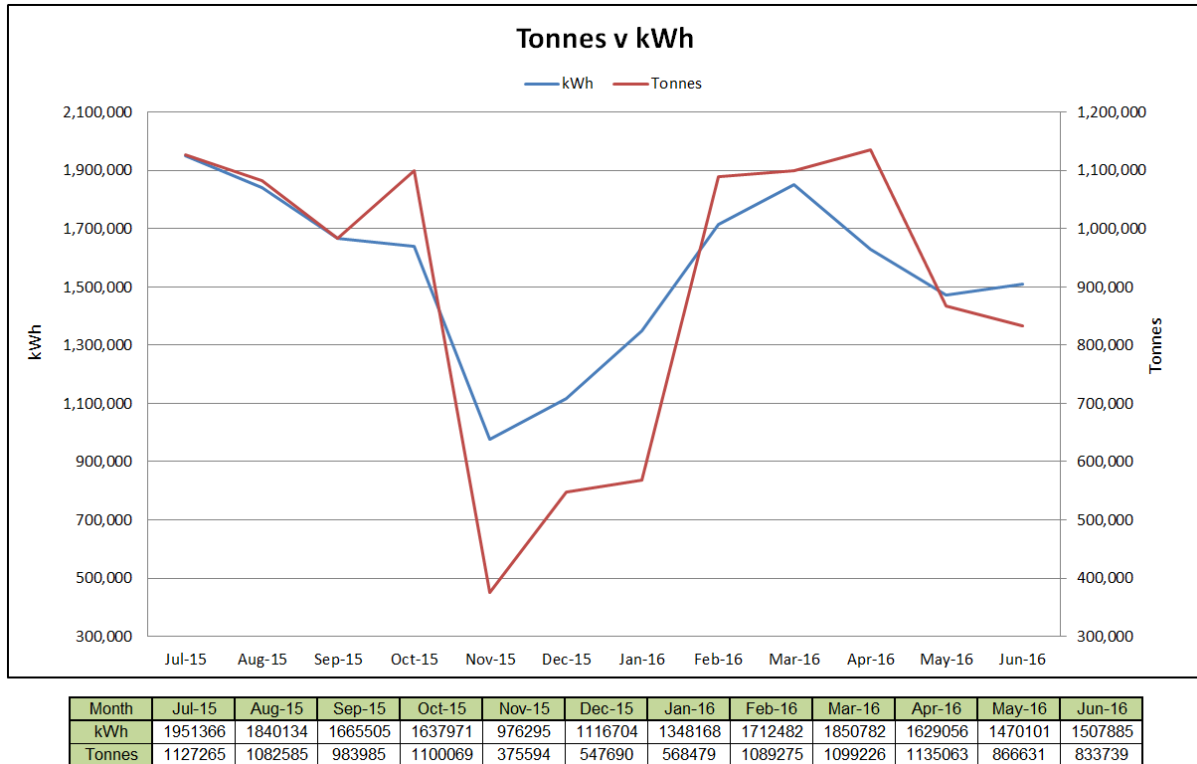


Figure 31: PKCT tonnes v kWh

3.8.3 Trends in Energy Efficiency

PKCT measures energy efficiency against its baseline energy efficiency target of 1.655 kWh/tonne. This figure is calculated by dividing the energy used at the premises (kWh) by throughput (tonnes). The 2015/2016 reporting period saw nine months where monthly kWh/tonne exceeded the baseline energy efficiency target, see Figure 32 below. These records correspond with low throughput months, in particular during the months of November, December and January.

Overall, the kWh/tonnes for the 2015/2016 reporting period was above the baseline energy efficiency target of 1.655kWh/tonne (1.82kWh/tonne). This result is directly related to the drop in tonnes through the Terminal experienced across the reporting period.

A negative trend (i.e. above the baseline energy efficiency target) has been observed in energy efficiency in recent years relating to the operating ship loading and receival rates of material handling equipment. PKCT’s business improvement process is tracking these parameters seeking to reverse the trend through remedial and upgrade works.

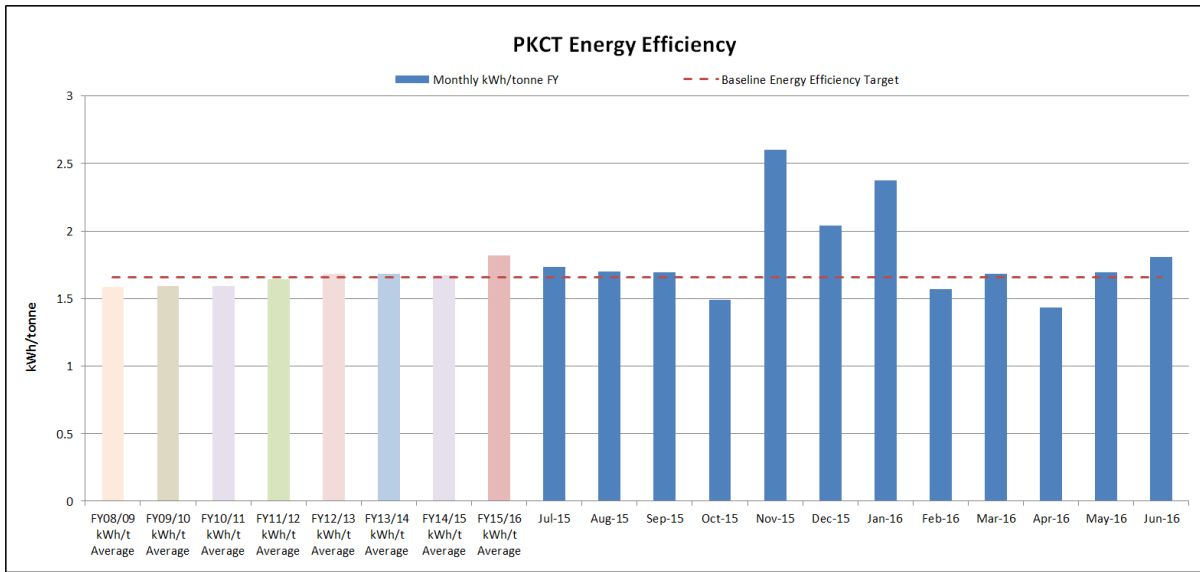


Figure 32: PKCT energy efficiency trends

PKCT monitors greenhouse gas generated by the site annually. At this stage, greenhouse gas emissions and reportable energy are below the legislated reporting thresholds, see Figure 30. Reportable energy consumption and greenhouse gas emissions have slightly decreased at PKCT this reporting period. Energy use and therefore emissions follow throughput. Figure 33 below shows this emissions trend.

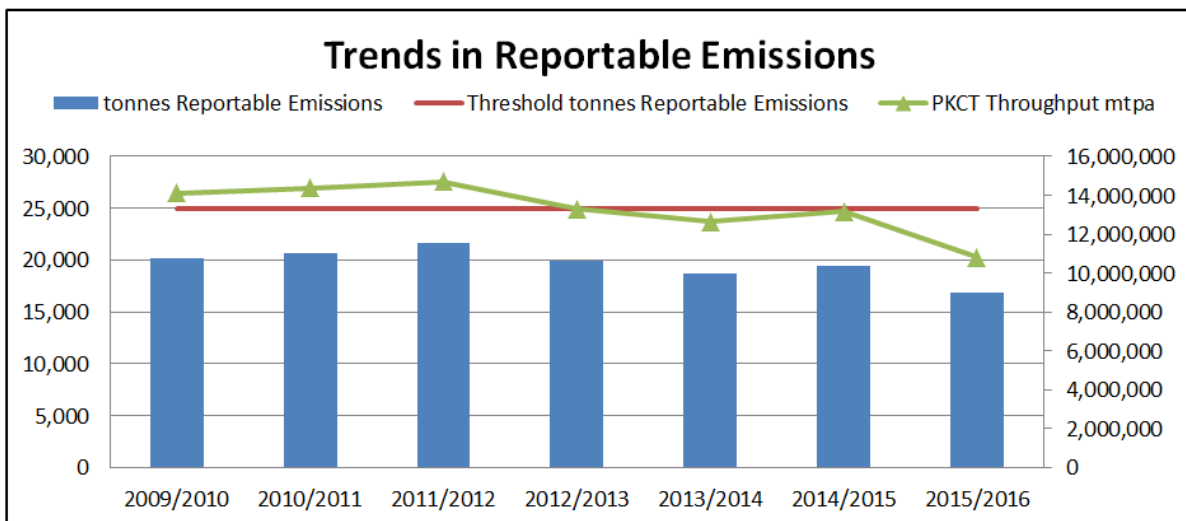
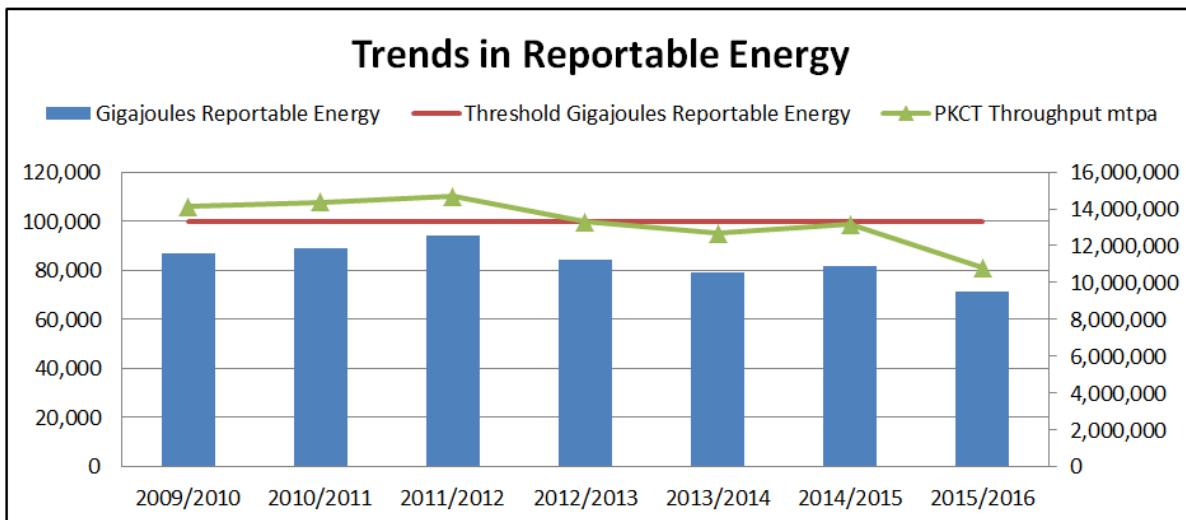


Figure 33: Trends in reportable energy and greenhouse gas emissions

3.8.4 Energy Efficiency –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to Energy Efficiency is presented below.

- PKCT continues to hold regular review meetings to monitor energy usage trends and to assess energy use at the site.
- The 2014 AECOM Independent Audit identified one Opportunity for Improvement associated with energy efficiency, “review and update the GGEE Management Plan”. The plan was reviewed and updated where necessary in November 2015.
- PKCT has continued to progressively upgrade its older lighting systems to energy efficient LED lights. At the end of the reporting period, PKCT’s electrical team has upgraded lighting in TS1, NC2, TS2 top floor, TS3, NC5 and some areas of road lighting. In most areas the old style fittings of 2 x 36 watt have been replaced by LED fittings of 36 watts, equating to a 50% energy saving. Using NC5 as an example, 120 old-style 72 watt fittings drawing 8.64KWh have been replaced with 120 36 watt LED fittings drawing

4.32KWh. In addition to energy savings, the upgrade program will reduce landfill as the LED lights require replacing less frequently.

3.8.5 Energy Efficiency - Activities Planned for 2016/2017 Reporting Period

A summary of the actions planned for the 2016/2017 reporting period is presented below.

- PKCT will continue to upgrade its lighting system with energy efficient LED lights.
- PKCT will continue to ensure that energy efficiency is considered during any planning for future restoration works.

3.9 Waste

3.9.1 Waste Standards and Performance Measures

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.

3.9.2 Waste Monitoring

3.9.2.1 Waste Monitoring Methodology

PKCT's Waste Management Plan MP.HS.460 (WSMP) was submitted to DP&E with the 0910 AEMR. The plan is in operation. The WSMP contains waste monitoring, assessment, reporting, and mitigation and management provisions to ensure necessary actions are undertaken and that waste from PKCT premises comply with the criteria in the condition above.

The objectives of the WSMP 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 the WSMP 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.

3.9.2.2 Waste Monitoring Results and Compliance 2015/2016

PKCT records and tracks waste as it is generated across the site. Waste streams at PKCT are tracked via normal operations and through project specific operations. A summary of the waste generated through various projects at PKCT is presented below in Figure 34.

Waste Volumes by Project - July 2015 to June 2016			
Project	Type	Quantity	Disposal method
Berth Rails 1 and 2	Steel	35.88 t	Recycled
Central Pond Upgrade	Concrete	91.81 t	Recycled
HV Distribution	Transformer Oil	42,000	Recycled
Southern Demolition Project	Steel	132.45 t	Recycled
Southern Demolition Project	Asbestos Soil	7.20 t	Landfill
Southern Demolition Project	Concrete	854.21 t	Recycled
Southern Demolition Project	General Waste	5.66 t	Landfill
Southern Demolition Project	Rubber	10.73	Recycled
Stockyard Rails Phase 2	General Waste	18.04 t	Landfill
Stockyard Rails Phase 2	Concrete	910.74 t	Recycled
Stockyard Rails Phase 2	Steel	40.00 t	Recycled
Stockyard Rails Phase 2	Asbestos	26.44 t	Landfill
Stockyard Rails Phase 3	Construction Waste	9.96	Landfill
Stockyard Rails Phase 3	Steel	233.6 t	Recycled
Stockyard Rails Phase 3	Concrete	313.5 t	Recycled
Stockyard Rails Phase 3	Untreated timber	2.18 t	Recycled
Fire Substation	Concrete	13.76 t	Recycled
Fire Substation	Asphalt	5.34 t	Recycled

Figure 34: Project generated waste 2015/2016

General site waste is managed by a waste contractor. An annual summary of the waste generated at PKCT across the reporting period is presented below in Figure 35. PKCT transitioned to a new waste service provider in late May 2014.



Annual Waste Volumes	July 2015 to June 2016		
General Waste	113,777	kg	Landfill
Cardboard Recycling	4,680	kg	Recycled
Waste Rags	3,360	L	Recycled
Waste Grease Cartridges	480	L	Recycled
Waste Oil Filters	480	L	Recycled
Waste Pressure Packs	2,160	L	Recycled
J120 Waste (oil and hydrocarbons mixed with water)	36,880	L	Off Site Treatment
Black Iron	43	tonne	Recycled
Copper	10	tonne	Recycled

Figure 35: Waste Summary FY2015/2016

3.9.3 Trends in Waste

Figure 36 below shows trends in three different waste streams generated at PKCT, steel, general waste and cardboard. The 2015/2016 reporting period saw a decrease in two of three waste streams generated through PKCT’s operations.

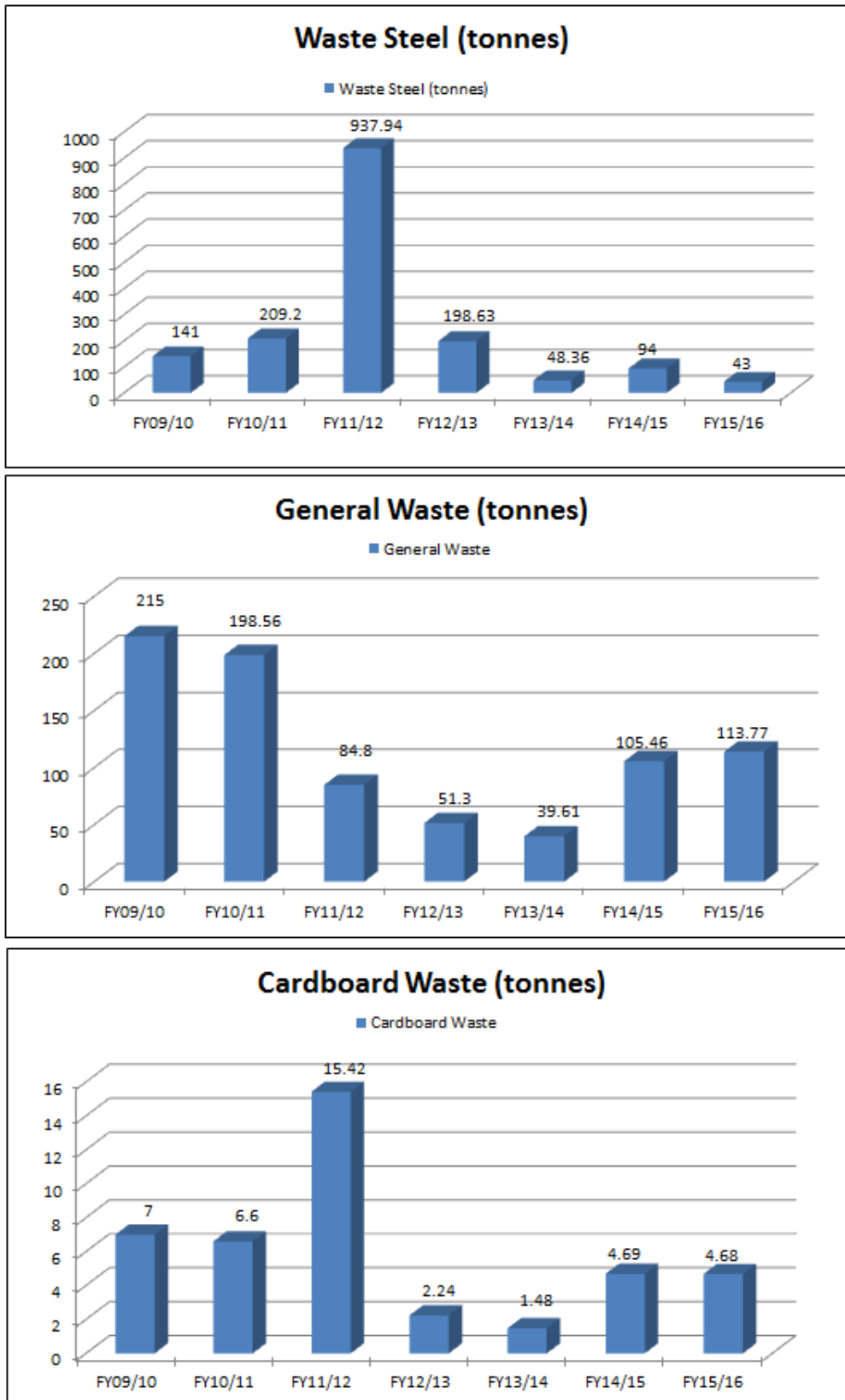


Figure 36: Waste trends at PKCT

3.9.4 Waste –Activities Undertaken During 2015/2016 Reporting Period

A summary of the actions undertaken for the 2015/2016 reporting period related to waste is presented below.

- 35,787 tonnes of spillage coal was returned to customers as part of spillage screening and recycling activities during the reporting period.
- PKCT undertook a review of its spill response process and has implemented improvements whereby consumables used to clean up spills can be packaged, stored and removed from site in a safer manner, more environmentally sensitive manner. {PKCT now has a dedicated, bunded storage area for used oily consumables to be placed prior to removal from site by a licence contractor. See Figure 37 below.



Figure 37: Contaminated waste drums on bunded pallet

- As part of the upgrade of the Stockyard Rails project the existing ballast was excavated and hauled to a processing area where it was screened through a mobile screening plant and washed to remove coal and allow re-use within the project. See Figure 38 below. The screened ballast was tested for conformity with the relevant specification prior to re-use. As part of this screening and washing process surplus undersize and oversize material was captured and stockpiled separately to allow this material to be further processed for re-use within the temporary roads. In addition, an allowance was made within the scope of the stockyard rail works to salvage existing rail and sleepers for re-use within the temporary berm extensions to allow removal of the old machines and installation of the new machines. As of February 2016, 772 sleepers and 1,531m of rail had been reused.
- An annual review of the WSMP was undertaken in August 2015. Updates were made where deemed necessary.



Figure 38: Ballast screening plant during rail upgrade project.

3.9.5 Waste - Activities Planned for 2016/2017 Reporting Period

The AECOM Independent Audit did not identify any actions associated with waste. A summary of the actions planned for the 2016/2017 reporting period is presented below.

- As part of PKCT’s Restoration and Compliance Project, PKCT has been progressively making redundant six 40 year old transformers. As part of a joint environmental and cost saving strategy, PKCT has tested the oil in each of the transformers to certify that they are PCB free and is scheduled to remove the transformers from site over the next six months. Oil, metal and copper from each of the transformers will be recycled/reprocessed.
- PKCT will undertake an annual review of the Waste Management Plan.
- PKCT will continue to identify areas of waste reduction across its operations.

3.10 Hazards

3.10.1 Hazards Standards and Performance Measures

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 Hazards Monitoring

3.10.2.1 Hazards Monitoring, Results and Compliance.

PKCT is aware of all dangerous goods onsite and ensures personnel are suitably trained to handle these. Any substances onsite are stored in accordance with AS1940 & AS1596.



PKCT utilises a proprietary chemical database system called ChemAlert to record information on chemicals at the site. Safety Data Sheets (SDS) and substance evaluation forms are available electronically from ChemAlert and PKCT's intranet systems.

Regular environmental auditing is undertaken in the Main Store and Workshop areas to ensure compliance with relevant standards.

PKCT continues to look for opportunities to improve the storage of dangerous or hazardous goods on site. During the 2015/2016 reporting period, PKCT engaged a consultant to identify and assess PKCT's current dangerous goods storage and handling processes for operational effectiveness and compliance to current legislation. The audit identified some improvement opportunities around storage/bundling of empty oil drums and a flocculent container. PKCT will assess the findings and actions where deemed necessary.

PKCT continues to utilise a mobile refuelling system for its plant machinery and does not store any fuel on site. In February 2014, PKCT decommissioned the underground fuel storage tanks and completed remediation of the site.

3.11 Fire Control

3.11.1 Fire Control Standards and Performance Measures

Fire Control

- 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 Hazards Monitoring

3.11.2.1 Fire Control Monitoring, Results and Compliance.

PKCT has a Fire Management Plan MP.HS.459 (FMP) in place which outlines the processes in place pertaining to fire management associated with the PKCT operations.

3.11.3 Fire Control –Activities Undertaken During 2015/2016 Reporting Period

PKCT had one minor fire across the reporting period. Figure 39 below outlines the events and PKCT's response.

Date	EMS number	Summary	Description of action
02/02/2016	EV-01978	Fire in waste bin at NC11	Used welding kits were placed in bin. Cardboard caught fire. Fire extinguished with fire hose.

Figure 39: Fires recorded at PKCT in the 2015/2016 reporting period



A summary of further activities undertaken associated with fire control across the reporting period is presented below.

- In May 2016, a major work package on PKCT’s Fire Suppression System was completed with final commissioning to be completed during June. The project objective was to reduce the risk of fire damage/loss of critical electrical infrastructure within PKCT’s North and South Substations. Upgrade works included installation of a new fire detection gaseous (Inergen) fire suppression system to AS ISO 14250.1 and building modifications to house the suppression system. The total cost of the Project was \$1.27M.
- Ongoing servicing and compliance checks of fire-fighting systems in line with relevant standards, is undertaken by certified external service providers.

3.11.4 Fire Control - Activities Planned for 2016/2017 Reporting Period

The AECOM Independent Audit did not identify any actions associated with fire control. PKCT will continue to utilise its FMP and ensure it complies with the stipulated fire control standards and performance measures.

- PKCT will continue to ensure ongoing servicing and compliance checks of fire-fighting systems remain in line with relevant standards and is undertaken by certified external service providers.

4.0 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

4.1 Environmental Management Performance Measures and Compliance

Environmental Management (Schedule 4, Condition 1)	Relevant section of PKCT EMS
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 EMS
a) be submitted to the Director-General for approval within 12 months of this project approval or otherwise agreed by the Director-General	EMS was submitted to the DP&E with eth 2009/2010 AEMR by the due date of 31 st July 2010
b) provide for the strategic context for the environmental management of the project;	Refer to Section 5
c) identify the statutory requirements that apply to the project;	Refer to Section 6
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 Section 11 Refer to Section 11 Refer to Section 11.3 Refer to Section 7.6 Refer to Section 7.3 Refer to Section 8.1
e) include an environmental monitoring program for the project that includes all the monitoring requirements of the approval;	Refer to Section 9



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
a) describe the role, responsibility, authority and accountability of all the key personnel involved in the environmental management of the project.	Refer to Section 4

Figure 40: EMS compliance in the AEMR

PKCT has in place an approved Environmental Management Strategy (EMS). The EMS was submitted with the 2009/2010 AEMR to the DP&E. The EMS details how PKCT complies with each line item of Schedule 4, Condition 1, Environmental Management of Project Approval 08_0009. Figure 40 above references the specific EMS Sections that PKCT utilises for compliance with Schedule 4, Condition 1.

4.2 Reporting - Incident Reporting

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.

Requirements associated with Schedule 4, Conditions 2 and 3 are referenced in PKCT’s EMS and Event Management Procedure. There were no reportable incidents of “material harm” across the 2015/2016 reporting period.

4.3 Reporting - Annual Reporting

Annual Reporting

4. 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:
 - a) Identify the standards and performance measures that apply to the project
 - b) Describe the works carried out in the last 12 months;
 - c) Describe the works planned to be carried out in the next 12 months;
 - d) Include a summary of the complaints received during the past year; and compare this to complaints received in the previous years;
 - e) Include a summary of the monitoring results for the project during the past year;
 - f) Include an analysis of these monitoring results against the relevant:
 - Impact assessment criteria/limits;
 - Monitoring results from previous years; and

- Predictions in the EA or other documents listed in condition 2 of schedule 2;
- g) Identify and discuss all exceedances of approval and licence conditions and other applicable standards and performance measures;
- h) Identify any trends in the monitoring results over the life of the project;
- i) Identify any non-compliance during the previous year; and
- j) Describe what actions were, or are being, taken to ensure compliance.

Following feedback from the DP&E on the format of the 2012/2013 AEMR, PKCT revised the structure of the 2013/2014 AEMR to better align with the requirements of Schedule 4, Condition 4. Submission of this AEMR, with its changes satisfies the requirements of the Condition.

4.4 Independent Environmental Audit

Independent Environmental Audit

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 suitable 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.

As required under Schedule 4, Condition 5 of Project Approval 08_0009, PKCT undertook its Triennial Independent External Audit on 28th March 2014. The auditor, AECOM, was approved by the Director-General by letter dated 27th February 2014.

PKCT completed the audit and submitted an audit report to the DP&E on 9th May 2014. By email of 29th May 2014, the DP&E provided a response to the audit submission raising a number of matters requiring PKCT's attention. PKCT sought to address these matters and by email of 10th June 2014, PKCT submitted a revised audit report (Version 3) together with a requested PKCT Action Plan.

The DP&E provided further feedback by two emails on 16th June 2014. Clarification on some items was sought together with suggested changes to the AECOM Audit Report. A revised

action plan and clarification of the requested points was submitted to the DP&E by the due date of 23rd June 2014.

Of the 96 conditions contained in the MCoA (including Statement of Commitments), 85 conditions applied to the audit, of which PKCT complied with 84 conditions. There was one non-compliance (classified as minor) and 20 opportunities for improvement.

Of the 84 conditions contained in the EPL, 47 conditions applied to the audit, of which PKCT complied with 43 conditions. There were four non-compliances (classified as minor) and five opportunities for improvement.

The final, revised Action Plan with further details on the minor non-compliances is presented in Appendix D.

4.5 Access to Information

Access to Information

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 publically available on its website; and
 - b) Update these results on a regular basis (at least every 6 months).

Actions arising from the 2014 Triennial Independent Audit included updating of a number of PKCT Management Plans, refer to Appendix D.

As required under Condition 9, PKCT makes a summary of its monitoring results publically available on its website. Both the PKCT 2014/2015 AEMR and the 2015/2016 interim EMR can be found on www.pkct.com.au.

5.0 STATEMENT OF COMMITMENTS

PKCT prepared and submitted a Statement of Commitments as part of the Environmental Assessment submitted to the DP&E for the 08_0009 Major Project Application. The DP&E accepted these commitments and they now form "Appendix 2" of the Approval.

PKCT's compliance with these commitments across the 2015/2016 reporting period is outlined in the following sections.



5.1 Statement of Commitments -Traffic and Transportation

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 minimize 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 tonnes 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 truckwash 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.

A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below. Further details related to the Traffic and Transportation Statement of Commitments can be found under Section 3.2 of the AEMR.

- Public road receivals for the reporting period were 3.76mtpa.
- An interim Environment Management Report and AEMR are published on the PKCT website every 6 months, making throughput records publically available.
- PKCT and its associated road transport providers utilise an auditing program to ensure compliance with the PKCT DCC. This includes monitoring of trucks adherence to the specified travel routes.
- The Northern Truckwash upgrade project was completed. An effectiveness review was completed and a final report "Northern Truck Wash 2013 Upgrade – Effectiveness Review" was submitted as required to the EPA on 6th February 2015.
- PKCT receives monthly DCC compliance reports from Brindles who provide coal haulage for Wollongong Coal. Wollongong Coal must ensure that coal is dispatched within the designated dispatch hours. The reports highlight any breaches to the designated dispatch hours. No breaches were reported to PKCT, or observed in the 2015/2016 reporting period.



5.2 Statement of Commitments -Air Quality

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 on site to effectively manage dust both on stockpiles and roadways.

A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below. Further details related to the Air Quality Statement of Commitments are found under Section 3.3 of the AEMR.

- PKCT has two continuous dust monitors. These remained operational throughout the reporting period.
- 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, stockpile sprays, truck wash and water cart. Operations shift teams monitor and operate the equipment and, where necessary, provide a breakdown response.

5.3 Statement of Commitments -Water Management

Objective	Commitment
<ul style="list-style-type: none"> Minimise use of potable water on site. Effective management of on-site stormwater. 	<ul style="list-style-type: none"> Reduction of freshwater use on site 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 washdown, conveyor sprays. Staged approach to be implemented which will result in a 360 Megalitre per annum reduction by the end of 2010.

A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below. Further details related to the Water Management Statement of Commitments are found under Section 3.5 of the AEMR.

- Recycled water use has continued at PKCT across the reporting period. Full details and summary of volumes are presented in Section 3.5.

5.4 Statement of Commitments -Noise Management

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 NSW Industrial Noise policy. Development and implementation of a noise management plan for the PKCT site.



A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below. Further details related to the Noise Management Statement of Commitments are found under Section 3.1 of the AEMR.

- PKCT has developed and implemented Noise Management Plan MP.HS.387. The plan references the NSW Industrial Noise Policy. Relevant PKCT personnel have been made aware of the compliance requirement.
- Two noise monitoring surveys were undertaken across the reporting period. All monitoring data was within the noise criteria at all locations.

5.5 Statement of Commitments -Community Relations

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.

A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below.

- PKCT utilises its Community Consultative Committee (CCC) as a forum for updating the community on its operations and receiving and providing feedback from local residents. PKCT held two meetings across the reporting period on 15th October 2015 and 4th March 2016. An additional meeting was held on 29th June 2016. PKCT will continue to hold these forums at least on a 4 monthly basis.
- PKCT received no community complaints associated with the operation during the reporting period.
- PKCT continues to utilise its telephone hotline. The hotline and general contact details for the site are located on the PKCT website, www.pkct.com.au. Following a CCC member request in the October 2015 meeting, PKCT increased the size of the telephone hotline number on its website.

5.6 Statement of Commitments – Environmental monitoring

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 requirement of PKCT.

PKCT has in place Environmental Monitoring Strategy MP.HS.464. The Strategy outlines the various monitoring requirements together with references to applicable management plans. General descriptions of PKCT monitoring and monitoring methodology are found throughout the AEMR. Figure 41 below outlines the sections of the AEMR describing Environmental Monitoring.



<i>Environmental Monitoring Area</i>	<i>Section of AEMR</i>
Noise	Section 3.1
Transport	Section 3.2
Air Quality	Section 3.3
Meteorological	Section 3.4
Surface Water	Section 3.5
Biodiversity	Section 3.6
Visual Amenity	Section 3.7
Greenhouse Gas and Energy Efficiency	Section 3.8
Waste	Section 3.9
Hazards	Section 3.10
Fire Control	Section 3.11

Figure 41: Environmental monitoring area and reference in AEMR

5.7 Statement of Commitments – Environmental Management System

Objective	Commitment
<ul style="list-style-type: none"> PKCT to maintain certification o ISO 140001. 	<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.

A summary of actions undertaken across the 2015/2016 reporting period specific to this Statement of Commitments is presented below.

- PKCT participated in one combined ISO 14001 and ISO 9001 external audit across the reporting period. The audit was undertaken by Lloyds over 5 days from 19th to 23rd October 2015, as planned for the purpose of recertification. The auditors recommended PKCT be given recertification to both Standards and PKCT received its certificate on the 4th December 2015. See Appendix I for Certification Certificate.
- On 28th March 2014, PKCT completed its triennial independent audit. Findings from the audit are presented in the Action Plan in Appendix D.

5.8 Statement of Commitments – Greenhouse Gases

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.

PKCT undertook a greenhouse gas emission and energy use assessment of the Terminal following the Major Project Approval. The report found that PKCT’s use of electricity for powering 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.

Opportunities for energy reduction are pursued when purchasing new equipment and considered when developing improvements.

Further details related to the Greenhouse Gas and Energy Efficiency Statement of Commitments can be found under Section 3.8 of the AEMR.

5.9 Statement of Commitments – Landscaping

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

With reference to the Landscape Management Plan MP.HS.460 (LMP), PKCT has developed a Landscape Concept Plan along the northern boundary. During this reporting period, maintenance of Stage 2 has continued and the area is now well established, see Figure 28 in Section 3.7 for progress of landscaping.

The nature and timing of further landscaping works requires consideration of major remedial works in development and PKCT’s strategic planning to ensure their compatibility. Stage 3 Road Receival landscaping remains on hold currently.

5.10 Statement of Commitments – Flora and Fauna

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.

A Green and Golden Bell Frog Management Plan MP.HS.109 (GGBFMP) is in place. It was developed in consultation with the EPA and is DP&E approved.

A GGBF survey was undertaken by specialist consultants on 15th February 2016. No GGBF’s were found on site.

Further details related to the Flora and Fauna Statement of Commitments are found under Section 3.6 of the AEMR.



5.11 Statement of Commitments – Waste

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.

PKCT has a Waste Management Plan MP.HS.459 (WSMP) which identifies the various waste streams generated at PKCT. The Plan outlines the methods used to minimise waste via reuse, recycling and suitable disposal of waste when necessary.

Further details related to the Waste Statement of Commitments are found under Section 3.9 of the AEMR.

6.0 ENVIRONMENTAL PROTECTION LICENCE 1625

PKCT holds EPL 1625 under the Protection of the Environment Operations Act 1997. This stipulates the emission criteria that PKCT must not exceed. Criteria are outlined for water, noise and dust. Pollution Reduction Programs (PRPs) are attached to the EPL to identify aspects which may require improvement.

PKCT is required to submit an Annual Return to the EPA reporting performance against licence requirements. The 2015/2016 Annual Return was submitted to the EPA via registered post on the 24th May 2016.

As the specific criteria for water, noise and dust are common to both the EPL and Project Approval 08_0009, all data and discussion associated with these criteria are outlined in other sections in the AEMR.

Figure 42 below provides a summary of the EPL conditions, Project Approval 08_0009 requirements and the section of the AEMR that discusses the criteria.



Component	Reference area in Project Approval 09_0009	Reference area in EPL 1625	Relevant Section of AEMR
Noise	Schedule 3, Condition 1, Condition 2 and Condition 3.	Limit Condition L4, L4.1	Section 3.1
Air	Schedule 3, Condition 7, Condition 8, Condition 9 and Condition 10.	Monitoring and Recording Conditions M2, M2.1, M2.2	Section 3.3
Water	Schedule 3, Condition 12 and Condition 13.	Limit Condition L2, L2.1, L2.2, L2.3, L2.4 And Monitoring and Recording Condition M2.3.	Section 3.5

Figure 42: Common requirements of Project Approval 08_0009 and EPL1625

6.1 Other EPL Matters in the 2015/2016 Reporting Period

- PKCT’s personnel were re-familiarised on PKCT’s Pollution Incident Response Management Plan and participated in mock emergency drills as part of the 2015 Safety Training Day during September and October. PKCT also participated in the Port of Port Kembla’s emergency exercise on May 24th 2016. The exercise tested emergency response to a major oil spill and involved port stakeholders and emergency services in a desktop drill. Field deployment of floating booms and oil spill equipment was also undertaken as part of the exercise.
- PKCT has continued to update its website with monthly monitoring data summaries throughout the reporting period.
- On 30th May 2014, the EPA undertook a legal compliance audit of PKCT’s rail receipt operation focusing on rail wagon dust and coal residue drag out. In December 2014, PKCT received the final audit report. The report identified a single non-compliance related to fine dust deposition on the exterior of wagons. In response to the audit findings, PKCT developed an Action Program. The Action Program was submitted to the EPA on the 31st March 2015. On the 28th August 2015, the EPA undertook a follow up inspection of PKCT’s rail receipt process to assess the implementation status of corrective actions identified during the 2014 audit. Observations were made on the status of PKCT’s actions, with no further non-compliances or actions identified. Following consultation with the EPA and other NSW Coal Terminals, PKCT agreed to an Environmental Improvement Program (EIP) focused on monitoring parasitic coal and overloading on incoming rail wagons. The monitoring component of this EIP commenced on 1st February 2016 and will continue through until 1st September 2016. Results of the monitoring are reported through to both PKCT’s load

points and the EPA. Track matt monitoring has been undertaken to understand the deposition of coal along the rail corridor, see Figure 43 below.



Figure 43: Track - matt monitoring program

- During the 2015/2016 reporting period, PKCT had 12 instances where dust deposition bottles were found to be broken on the collection date. The broken bottles were varied in their location and were broken as a result of in-situ glass fatigue, vandalism and in some instances broken during transit. PKCT has rectified this issue by minimising the potential for fatigue breakages. PKCT has directed its contracting company to renew all bottles on an annual basis and to report in detail the cause of breakage within the monthly reports.
- On 28th July 2015, during routine cleaning of Shiploader 2 on PKCT's Coal Berth 102, a volume of wash-down water containing coal fines flowed into the harbour causing a black plume to form. The event was considered not-material and, as a precaution, was reported to the EPA Environment Line on 28th July 2015, Event Number: C10033-2015. The plume was small and dissipated quickly. Actions were developed and submitted to the EPA via email "PKCT Shiploader Washdown Event 28/07/2015" as presented below;
 - A person has been added to the wash-down team to be used as a spotter to monitor the wash-down process and the wharf deck below.
 - It was noted that clearing blockages using wash down hoses can be difficult and, as in this case, unsuccessful. Shift and daywork teams will not persevere if a blockage doesn't easily clear and arrange for proprietary drain/ pipe clearing equipment e.g. electric eel or specialist service provider.

- Communication of event will be undertaken through the next round of Team Meetings.
- A filter sock/ sand bag system was developed in recent months and was scheduled for installation to trial. It is envisaged that the filter socks will act as an additional control measure in the drainage hole to filter water. Following the event, filter socks with sandbag covers were installed on 30th July 2015 at various locations across Coal Berth 102.

All actions were completed.

On 4th August 2015, PKCT received an email from Mr. William Dove of the NSW EPA titled "RE. PKCT Shiploader Wash-down Event 28/07/2015" indicating that the EPA would not be taking any further action in relation to the outlined event.

- At 10:30am on the 28th August 2015, while loading vessel C Atlas, water on the conveyor belt came off the belt of Shiploader 1 and deposited on the ship's deck. One of the ship's drain plugs were not in and some water entered the harbour. Some water also fell from the shiploader as some coal came off the belt blocking a drainage launder.

The event was observed and operations immediately stopped. The ship's drain plug was replaced. Discoloration was localised, of short duration and quickly dissipated. The event was discussed with the ship's mate and reported to the Ship's Master through the Shipping Agent. The event was considered not - material and, as a precaution, logged on the EPA's Pollution Line, Event Number: C11819-2015.

An email titled "PKCT Coal Berth – harbour discharge while shiploading – 28/08/2015 – PKCT EMS Action: EV-01806" was sent to Mr. Ian Kennedy and Ms. Jen Byrne on 30th September 2015. This email outlined three follow up actions from the event which are listed below;

- Establish correct wet weather mode settings i.e. 900 mm above lowest reclaim bench level for both reclaimers.
- Communicate the event and wet weather mode feature to operations personnel to ensure it is understood and used when needed.
- Communicate to shipboard supervisors and auditing personnel the need to check ship drain plugs and ensure they are in place to prevent accidental harbour discharges from ship.

All corrective actions had been completed by the time of the email.

- On 25th August 2015 during a storm event, four of PKCT's collection ponds overflowed. The transfer pump at one pond, Tower 3, failed to initiate as a result of a PLC upgrade fault. While a portable pump was being installed, the pond overflowed.

The rain event commenced at approximately 12:00pm, site inspections identified that the pond transfer pump had failed to initiate at approximately 12:30pm. Arrangements were immediately made to install a portable pump at Tower 3 Pond which was completed by approximately 1:00pm. The PLC fault was rectified and the pond transfer pump returned to normal operation at approximately 2:00pm.

PKCT notified the EPA via email sent on the 24th August 2015 “PKCT Water Collection – Tower 3 Pond Overflow” with further information and proposed actions sent via email on 16th October 2015 “Storm Event 24-26th August 2015”.

As a result of the Tower 3 Pond overflow, PKCT committed to undertake the following action;

“Verify PLC upgrade to ensure water collection system is operating correctly”

Via email dated 22nd December 2015 “PKCT Update @ 22/12/15 re. Storm Event 24-26th August 2015”, PKCT reported to the EPA that the action had been completed.

The PLC Upgrade Project incorporates a commissioning and testing process provided to ensure equipment is returned to service. The complexity of the work involved means that verification is often only possible when equipment is back in service.

- On 18/03/15 during routine cleaning of Shiploader 1 on PKCT’s Coal Berth 102, a volume of washdown water containing coal fines flowed into the harbour causing a black plume to form. The plume extended for approximately 50m under the berth in a southerly direction. Investigation into the event identified the cause as a blocked launder pipe which led to a backup of water and spillage from the Shiploader. The event was reported to the EPA incident line, Event Number C03857, and following advice from the EPA, an Action Plan was developed and all actions were subsequently closed out. Details of the event were reported in the 2014/2015 Annual Return. On 3rd September 2015, PKCT received a Formal Warning from the EPA in relation to this event.

7.0 RESULTS COMPARED TO THE ENVIRONMENTAL ASSESSMENT 2008

An environmental assessment was undertaken as part of PKCT’s application associated with Project Approval 08_0009 and submitted to the DPE in a report titled “Environmental Assessment- Existing Operations and increased Road Reveal Hours for Port Kembla Coal Terminal 2008” (EA) .

This EA focussed on the key environmental issues of PKCT proposal to increase road deliveries to 24/7 for a maximum of 10mtpa. It has also addressed secondary environmental issues to ensure there was a rigorous review of PKCT’s existing and proposed operations. It showed that existing and proposed PKCT operations have a small environmental footprint, which is minimised through existing environmental impact mitigation measures. The assessment included predications for environmental aspects such as noise and dust.



Monitoring results obtained over the 2015/2016 reporting period align with predications made in the EA. Traffic and noise studies undertaken associated with PKCT’s application to the DPE for 7.5 MTPA to 10 MTPA approval also aligned.

Air quality monitoring results are compared to the predictions of the EA in Section 3.3 of the AEMR.

8.0 COMPLAINTS

Schedule 4, Condition 4d requires PKCT to include a summary of the complaints received during the past year, and compare this to complaints received in previous years. Figure 44 below provides a summary of complaints recorded at PKCT and reported to PKCT by road transport providers.

PKCT received no complaints across the 2015/2016 reporting period.

One community enquiry was received in April regarding trucks using compression braking as they approach the entrance to PKCT. PKCT investigated the enquiry by undertaking targeted noise monitoring at the residential boundary. The noise monitoring results concluded that noise associated with trucks entering PKCT was below the sleep disturbance gals and below the noise from other nearby traffic. As can be seen in Figure 44, total complaints made to PKCT have remained relatively consistent over the past five reporting periods. PKCT continues to record all complaints in its Event Management System and responds appropriately when a complaint is received. PKCT continues to work with its shippers and road transport providers to ensure complaints are recorded and handled appropriately.

Complaints	Number of Complaints recorded by PKCT					
	FY10/11	FY11/12	FY12/13	FY13/14	FY14/15	FY15/16
General (PKCT) Drivers Code of Conduct related	2	2	3	0	2	0
	19	19	20	5	3	0
Total	21	21	23	5	5	0

Figure 44: PKCT and DCC complaints.

9.0 CONCLUSION

This Annual Environmental Management Report (AEMR) identifies PKCT’s approval and licence conditions and explains how PKCT complies with these requirements. It 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 DP&E and other stakeholders using information taken from environmental monitoring, assessment and reporting activities undertaken on a regular basis through the reporting period.

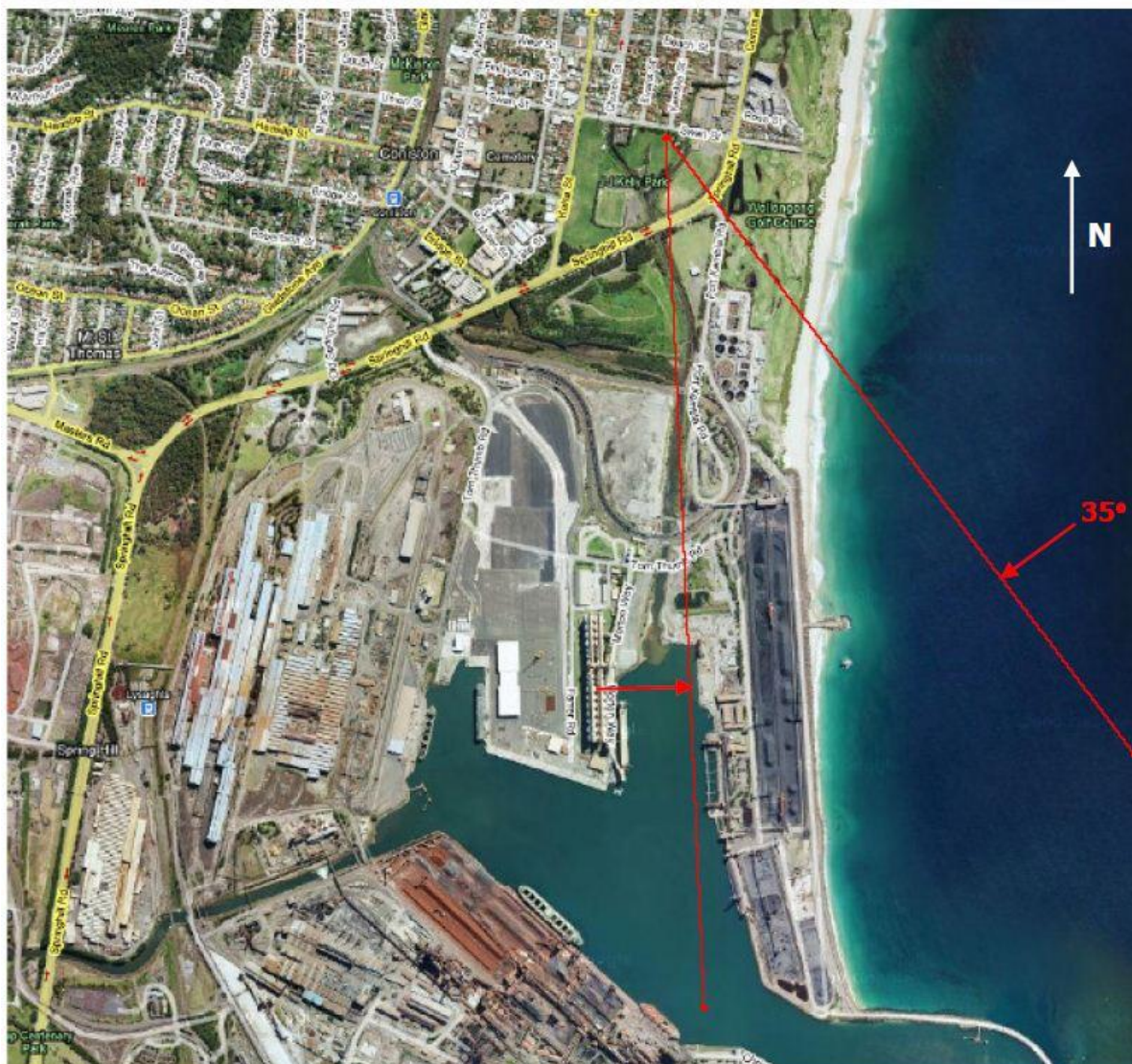


This AEMR does not raise any concerns regarding the ongoing ability of PKCT to comply with environmental requirements in the Major Project Approval, Environment Protection Licence 1625 and other regulatory requirements. Further, this AEMR confirms PKCT's commitment to continual improvement in the mitigation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

10.0 APPENDIX

10.1 Appendix A

Figure 4-1 Monitoring Location 1 – Corner Swan & Kembla Streets



The angle of 35° is obtained by setting BarnOwl[®] to measure between angles 140° to 175°.

Figure 4-2 Monitoring Location 2 – Corner Swan & Corrimal Streets



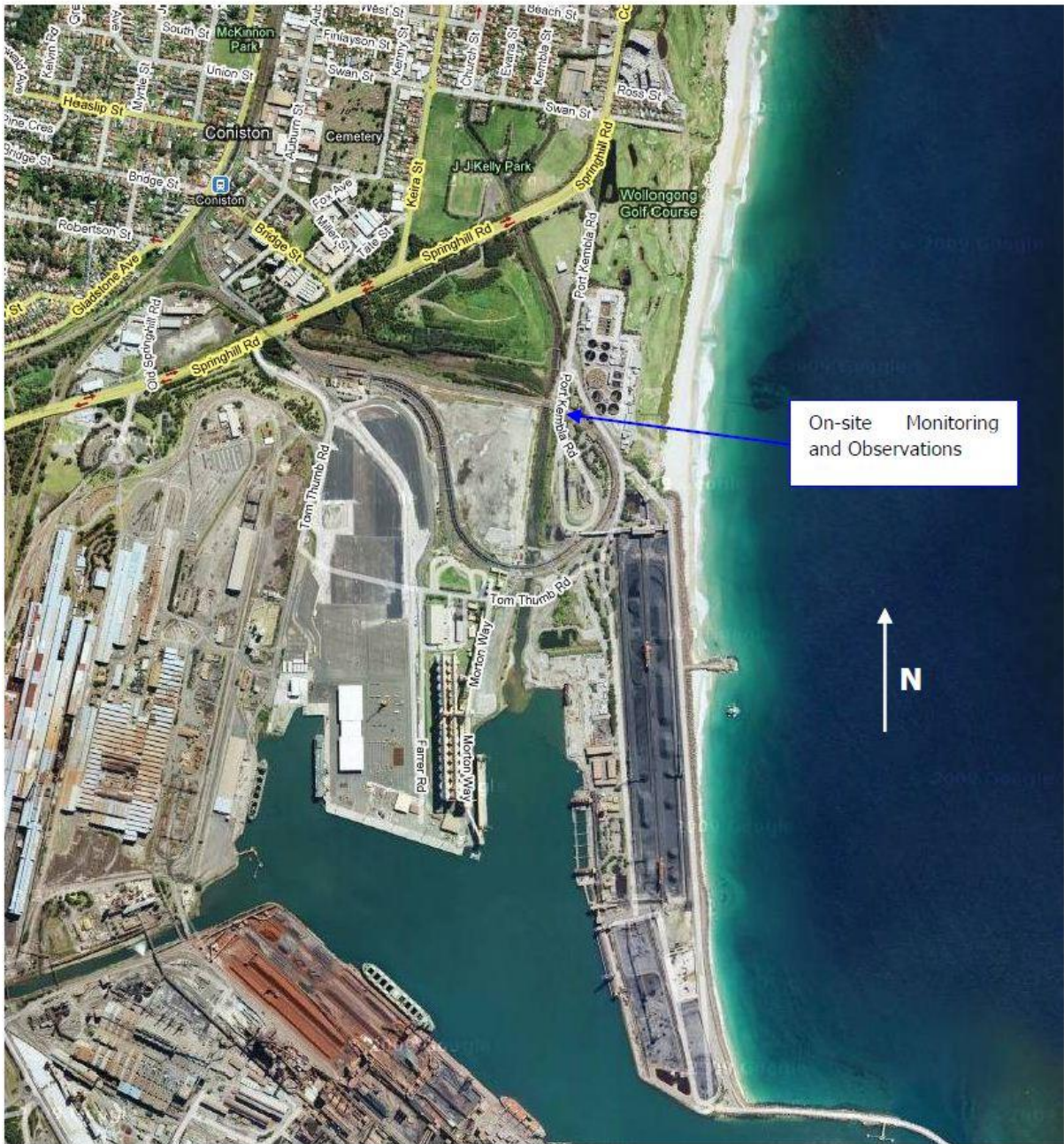
The angle of 25° is obtained by setting BarnOwl® to measure between angles 170° to 195°.

Figure 4-3 Monitoring Location 3 – Corner Keira & Fox Streets



The angle of 40° is obtained by setting BarnOwl® to measure between angles 125° to 165°.

Figure 4-4 Monitoring Location – Receivals





10.2 Appendix B

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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® LAeq (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
08/12/15 4.35-4.50pm	Day	51	46 [<25]	62	2.8 22°	C	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and train. Number of truck movements 6.
08/12/15 9.10-9.25pm	Evening	50	41 [<25]	54	2.7 24°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck wash. Number of truck movements 0.
08/12/15 10.45-11pm	Night	49	39 [<25]	54	3.1 16°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck wash. Number of truck movements 0.
08/12/15 11-11.15pm	Night	49	39 [<25]	54	3.6 3°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from train shed. Number of truck movements 0.



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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® LAeq (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
08/12/15 4-4.15pm	Day	51	38 [<25]	56	2.2 26°	C	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and train. Number of truck movements 6.
08/12/15 9.35-9.50pm	Evening	50	44 [<25]	58	3.5 30°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck wash and train. Number of truck movements 0.
08/12/15 10-10.15pm	Night	49	38 [<25]	52	3.7 26°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from train and train shed. Number of truck movements 0.
08/12/15 10.15-10.30pm	Night	49	42 [<25]	54	4.0 19°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from berthed ship. Number of truck movements 0.



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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® L _{aeq} (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
08/12/15 5.05-5.20pm	Day	55	56 [<35]	66	2.1 24°	C	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and train. Number of truck movements 6.
08/12/15 8.45-9pm	Evening	49	42 [<25]	61	3.5 23°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck wash and train unloading. Number of truck movements 0.
08/12/15 11.30-11.45pm	Night	45	46 [<25]	58	3.3 17°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck wash and a front end loader. Number of truck movements 0.
08/12/15 11.45pm-12am	Night	45	46 [<25]	56	3.4 18°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and a pump. Number of truck movements 4.



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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® LAeq (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
27/04/16 5.35-5.50pm	Day	51	42 [<32]	56	5.5 28°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and train unloading. Number of truck movements 5.
27/04/16 9.13-9.28pm	Evening	50	45 [<22]	51	1.3 319°	F	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements. Number of truck movements: 15.
28/04/16 12.08-12.23pm	Night	49	32 [<22]	44	2.5 28°	E	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 5.
28/04/16 12.23-12.38pm	Night	49	32 [<22]	43	2.7 33°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 5.



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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® LAeq (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
27/04/16 5.15-5.30pm	Day	51	38 [<28]	52	5.7 32°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements, truck wash and train unloading. Number of truck movements 8.
27/04/16 8.45-9.00pm	Evening	50	45 [<22]	55	1.5 319°	F	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and truck wash. Number of truck movements: 8.
27/04/16 11.25-11.40pm	Night	49	36 [<22]	49	3.0 8°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 13.
27/04/16 11.40-11.55pm	Night	49	37 [<25]	49	4.0 19°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 6



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

Date & Start Time	Period	Criteria (dBA)	BarnOwl® L _{Aeq} (dBA)		Wind Speed (m/s) and Direction	Stability Class	Compliance	Observations
			PKCT Direction [Est. PKCT Contribution]	All Noise				
27/04/16 5.55-6.10pm	Day	55	40 [<30]	67	4.4 29°	D	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and truck wash. Number of truck movements: 8.
27/04/16 9.44-9.59pm	Evening	49	52 [<24]	61	1.6 341°	F	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise dominated by truck movements and truck wash. Number of truck movements: 8.
28/04/16 12.52-1.07am	Night	45	48 [<23]	55	1.8 26°	F	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 12.
28/04/16 1.07-1.22am	Night	45	49 [<26]	57	1.5 24°	F	YES Not Audible	At residential location: Noise dominated by road traffic and local activities. PKCT activities not audible. On-site: Noise emanating from truck movements and truck wash. Number of truck movements: 5.



10.3 Appendix C

Monthly Reports Summary FY 15/16	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	FY15/16 Total	Comment
Tonnes - Public Road	410,726	302,964	410,200	287,465	126,183	145,570	255,788	326,961	369,573	339,249	409,131	380,960	3,764,770	
Tonnes - Private Road	257,598	258,461	302,274	238,373	28,564	52,861	251,659	265,494	261,075	334,736	288,709	323,118	2,862,922	nb primarily rail delivered tonnes to BlueScope then internal road to PKCT
Total road tonnes	668,324	561,425	712,474	525,838	154,747	198,431	507,447	592,455	630,648	673,985	697,840	704,078	6,627,692	
Spillage - Public Road	0	0	0	0	0	0	0	0	0	0	0	0	0	No spills reported by shippers or road transport providers
Incident - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	No incidents reported by shippers or road transport providers
Impact with other vehicle	0	0	0	0	0	0	0	0	0	0	0	0	0	No impacts with other vehicles reported by shippers or road transport providers
Incidents Reported to RTA	0	0	0	0	0	0	0	0	0	0	0	0	0	No incidents reported by shippers or road transport providers
Complaints	0	0	0	0	0	0	0	0	0	0	0	0	0	Note: complaints related to DCC only
EPL/ regulatory breaches	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inductions (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	
Hours restrictions breach	0	0	0	0	0	0	0	0	0	0	0	0	0	
Road Transport Providers (RTP): Observations	113	84	130	115	61	109	62	71	108	129	97	85	1,164	
RTP: Number of drivers observed	439	452	518	507	261	332	571	733	818	924	807	762	7,124	
RTP: Trucksafe/NHVAS/Other Audits	31	76	45	54	33	46	45	23	21	16	14	12	416	
CTO / Audits at minesites (Shippers & PKCT)	0	0	0	1	0	0	1	0	0	1	0	0	3	Includes data from Shippers and PKCT
CTO / Audits: At PKCT (Shippers & PKCT)	3	2	1	2	3	1	2	1	2	5	0	2	24	Includes data from Shippers and PKCT
CTO / Audits: Mine to PKCT (Shippers & PKCT)	1	2	1	1	0	1	0	0	2	4	2	0	14	Includes data from Shippers and PKCT
RTP system audits	0	0	0	0	0	0	0	0	0	0	0	0	0	

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10.4 Appendix D

**AECOM INDEPENDENT EXTERNAL AUDIT 2014: PKCT RESPONSE TO RECOMMENDATIONS AND ACTION PLAN PROGRESS
JUNE 2016**

Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
1	MCoA	Schedule 3, Condition 12	Discharge Limits 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.	Non-compliance (minor) Exceedances of pH and TSS criteria outlined in PKCT's EPL occurred over the reporting period, though they were minor and few. However, due to	It is recommended that PKCT: - Continue with undertaking controlled discharges after rain events. - Undertake sediment testing of sediment within the Settlement Lagoon to assess nutrient loading. Subject to test results, conduct maintenance of Settlement Lagoon to clear sediment. - Undertake further investigations into algae control options and trial. - If necessary and relevant, expand investigations regarding water quality controls	PKCT has been working with the EPA regarding measures and strategies to be implemented to reduce TSS and pH discharge exceedances at EPL Monitoring Point 16. In late 2013, two Pollution Reduction Programs (PRP), PRP 12 and PRP 13, were prepared in consultation with the EPA. These PRP's were approved and a licence variation was received on the 22 nd November 2013. The intent of PRP12 is to improve stormwater controls at PKCT which will ultimately reduce sediment reporting to EPL discharge Point 16, and reduce the likelihood of future TSS exceedances. Work is currently underway on the PRP with a completion date of 30 th June 2014. PRP13 was completed and a final	PRP12 – Upgrade of Central Pond is complete. Monitoring for effectiveness of upgrades is underway. PKCT reported no TSS exceedances during the 2015/2016 reporting period. Management measures including sediment testing in the Settlement Lagoon, controlled discharge, coagulant dosing and dredging has been undertaken. A consultant was engaged in 2014 to undertake a review on the cause of some of the TSS

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
				<p>these exceedances PKCT does not comply with this condition .</p>	<p>and treatment beyond algal controls (e.g. study the receiving environment to determine potential environmental impacts of alkaline water entering this system). - If further control options are exhausted and prove ineffective in lowering pH levels to within EPA-defined limits, engage in consultation with EPA regarding pH range and associated percentile compliance (noting permissible seasonal fluctuations if necessary). - Alternatively, engage in consultation with Sydney Water regarding potential water treatment options prior to distribution to PKCT.</p>	<p>report submitted to the EPA on 31st March 2014. The report identified a number of recommendations and further actions to reduce pH levels in site discharges. PKCT is awaiting a response from the EPA on the report and its recommendations.</p> <p>In the interim and noting the actions recommended in the Independent External Audit, PKCT has continued to undertake controlled discharges from the Settlement Lagoon after rain events.</p> <p>A specialist consultant has been engaged to review the available data and reports and to provide recommendations on methods to reduce pH levels in the discharge waters. Sediment testing has been undertaken in the Lagoon to assess the nutrient loading.</p> <p>Action by: PKCT Environmental Specialist</p>	<p>exceedances occurring at LDP16. The final report was received in July 2015 and recommendations, including coagulant dosing and cleaning of the Lagoon have been undertaken.</p> <p>Status – Action complete</p>

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
						Completed by: Specialist consultant report will be provided by the 8 th August 2014. It is expected further actions will ensue from the recommendations and associated EPA consultation.	
2	EPL	Schedule L1 Condition 1	Pollution of waters Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Non-compliance (minor) Refer to Item No.1 comment	Refer to Item No.1 recommendations	Refer to Item No.1 response and actions	See response to Item No.1 Status – Action complete
3	EPL	Schedule L2,	Concentration Limits	Non-compliance	Refer to Item No.1 recommendations	Refer to Item No.1 response and actions	See response to Item No.1

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
		Condition 1	For each monitoring/dischARGE point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	ce (minor) Refer to Item No.1 comment			Status – Action complete
4	EPL	Schedule	Concentration	Non-	Refer to Item No.1	Refer to Item No.1 response and	PKCT undertook a five

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
		L2, Condition 2	n Limits Where a pH quality limits specified in the table, the specified percentage of samples must be within the specified ranges.	compliance (minor) Refer to Item No.1 comment	recommendations	actions	yearly review of EPL 1625 in September 2014 with the EPA. An outcome of the review was that pH limits were removed from the EPL with monitoring and reporting of pH to continue. Based on the new licence conditions pH exceedances will no longer occur at LDP16. Status – Action complete.
5	EPL	Schedule M3, Condition 1	Testing Methods, Concentration Limits Monitoring for the concentration of a pollutant emitted to the air required to be	Non-compliance (minor) Monitoring method was confirmed to be appropriate. Only non-conforma	It is recommended that PKCT: - Install a locked cage at this monitoring site to avoid future tampering, and undertake regular monitoring at this site to verify tampering has not occurred and the device is still functional.	Public access to this dust monitoring site is recognised as an issue. PKCT accepts the recommendation by AECOM and will investigate options, including those recommended, for improving security. Action by: PKCT Environmental Specialist Completion Date: A solution to the security issue at this monitoring site will be determined by the 8 th August 2014 together with an	In December 2014, Dust Gauges P3 and P4 had locked fences erected around the gates to minimise the likelihood of vandalism at the sites. Status – Action complete.

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
			conducted by this licence must be done in accordance with: (a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant.	nce noted was due to a Dust Depositio n Gauge funnel at point P4 found not to be in the Dust Depositio n Gauge bottle when observed during the audit. This was investigat ed and was thought to be due to tamperin g by the public.		implementation date.	

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Item No.	Approval	Condition/ Number	Topic/ Requirement	Audit Finding/ Comment	Recommendation	Response/Action	Status as of end June 2016
				There has been anecdotal history of tampering and a locked cage has been recommended for this site.			

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
6	MCoA	Schedule 3, Condition 13	Water Management Plan (WMP)	<p>It is recommended that PKCT:</p> <ul style="list-style-type: none"> - Review and update the WMP at least annually so that the document reflects the current state of operations on site. - In particular, the WMP needs to include most recent EPL discharge criteria and exceedances, reference to new PRPs and investigations/trials undertaken to date. 	<p>In noting the non-compliance (minor) associated with pH and TSS, an initial WMP review will be undertaken within three months of the Independent Audit report submission date in accordance with Schedule 4, Condition 7.</p> <p>The document review will be tracked in PKCT's Event Management System (EMS) and is record "COR-00140".</p> <p>An annual review for this document has been entered into the EMS. The review is scheduled for 3rd March 2015 and is record "RR-00024".</p> <p>Action by: PKCT Risk Manager.</p> <p>Completion Date: 8th August 2014</p>	<p>Water Management Plan was reviewed and updated in September 2015. Only minor changes were made.</p> <p>Status – Action complete.</p>

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
7	MCoA	Schedule 3, Condition 14	Green and Golden Bell Frog Management Plan (GGBFMP)	It is recommended that PKCT: - Review and update the GGBF Management Plan at least annually so that the document reflects the current state of operations on site. If no changes are made to the document, review date at least should be noted on the document to track reviews.	Findings and recommendations noted. PKCT accepts that a periodic review of Management Plans is necessary. However the reviews should be appropriate to the specific Plan and the frequency of change. The current review process for the GGBF is bi-annual. Internal and external events can trigger an earlier review under change management. The next document review is scheduled for 3 rd October 2014. An action has also been entered in the EMS and is record "RR-00025" Action by: PKCT Risk Manager. Completion Date: 30 th November 2014.	GGBF Management Plan was reviewed and updated in November 2015. Minor updates only. Status – Action complete.

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
8	MCoA	Schedule 3, Condition 14	Landscape Management Plan (LMP)	It is recommended that PKCT: - Review and update the LMP at least annually so that the document reflects the current state of operations on site, including ongoing maintenance of landscaping on site.	<p>Findings and recommendations noted. PKCT accepts that a periodic review of Management Plans is necessary. However the reviews should be appropriate to the specific Plan and the frequency of change. The current review process for the LMP is bi-annual. Internal and external events can trigger an earlier review under change management.</p> <p>The next document review is scheduled for 29th August 2015. An action has also been entered in the EMS and is record "RR-00026".</p> <p>Action by: PKCT Risk Manager.</p> <p>Completion Date: 30th September 2015</p>	<p>LMP was reviewed and updated in October 2015.</p> <p>Status : Complete</p>

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
9	MCoA	Schedule 3, Condition 18	Greenhouse and Energy Efficiency Plan (GGEE)	<p>It is recommended that PKCT:</p> <ul style="list-style-type: none"> - Review and update the GGEE Management Plan at least annually so that the document reflects the current state of operation on site. - In particular, the GGEE needs to include reference to the most recent relevant legislation, NGERs data and a summary of information gathered through the ESAPs. 	<p>Findings and recommendations noted. PKCT accepts that a periodic review of Management Plans is necessary. However the reviews should be appropriate to the specific Plan and the frequency of change. The current review process for the GGEE is bi-annual. Internal and external events can trigger an earlier review under change management.</p> <p>The next review is scheduled for 31st July 2015. An action has also been entered in the EMS and is record "RR-00027".</p> <p>Action by: PKCT Risk Manager.</p> <p>Completion Date: 31st August 2015.</p>	<p>GGEE Management Plan was reviewed and updated in November 2015.</p> <p>Status : Complete</p>

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
10	EPL	Operating Conditions, O4.1	Sedimentation Ponds	<p>It is recommended that PKCT:</p> <ul style="list-style-type: none"> - Complete, finalise and implement Settlement Lagoon Cleanout Process document. Document/record implementation of document implementation (e.g. staff training and maintenance schedules). 	<p>Recommendation is accepted. An action has been entered in the EMS and the record is "COR-00138".</p> <p>Action by: PKCT Environmental Specialist.</p> <p>Completion Date: 25th September 2014.</p>	<p>Lagoon dredging process was completed in September 2015. Final survey to confirm sediment quantity was undertaken in June 2016. Procedure will be updated once results have been received and process evaluated.</p> <p>Status: In progress</p>

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
11	EPL	Pollution Studies and Reduction Programs U1.1	EIP - install northern truck wash upgrades	<p>It is recommended that PKCT ensure that the following part of the condition is completed by 30 June:</p> <p>By 30 June 2014 the licensee must carry out a review of the environmental performance of the Northern Truck Wash, and provide a written report describing the review to the EPA. This report must include information on how the issues identified in the PKCT Northern Truck Wash Review as per requirements in EPL 1625 PRP NO.10 Port Kembla Coal Terminal July 2011' and the EPA letter to the licensee dated 16 August 2011 have been addressed. In particular the review must include, but not be limited to, how the following key elements have been addressed:</p> <ul style="list-style-type: none"> - water treatment - spray pressure - spray volume 	<p>Draft report is complete. PKCT has met with the EPA and submitted a request for an extension to the 30.9.14. The upgrade is practically complete but some further modifications impacting on truck performance still need to be carried out.</p> <p>Action by: PKCT Risk Manager.</p> <p>Completion Date: 30th June 2014 subject to an extension to 30th September 2014.</p>	<p>A review of the effectiveness of the Northern Truckwash Upgrade was undertaken and an extension to the submission date was granted by the EPA. A report was submitted to the EPA in February 2015.</p> <p>Status – Action complete.</p>

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				<ul style="list-style-type: none">- spray orientation- spray drift- vehicle speed- truckwash management- truckwash maintenance- truck wash auditing, and- water/dust carryover		
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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
12	MCoA	Statement of Commitments	Community Relations	It is recommended that PKCT: - Include details of CCC on PKCT website.	<p>Recommendation is noted. An action has been entered in the EMS and the record is "COR-00139". Community information on the website will be reviewed and changes discussed with the Community Consultative Committee.</p> <p>Action by: PKCT Environmental Specialist.</p> <p>Completion Date: 31st October 2014</p>	<p>The PKCT CCC terms of reference were added to the PKCT website in September 2014.</p> <p>Status – Action complete.</p>

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
13	EPL	Operating Conditions, O3.1	Dust	<p>It is recommended that PKCT:</p> <ul style="list-style-type: none"> - Conduct an internal review relating to dust emissions beyond the boundary of the site. - Review the train receival system to ensure all reasonable and feasible measures are employed to prevent or minimise dust impacts beyond the rail loop. 	<p>Findings and recommendations are noted. Considerable effort is required for these undertakings and this is reflected in the completion date below.</p> <p>An internal review will be undertaken by PKCT relating to dust emissions beyond the boundary of the site.</p> <p>PKCT is participating in a NSW Minerals Council facilitated review of mine to port coal train operations in Newcastle and the Illawarra. The study's focus is on fugitive emissions from coal trains and includes an industry survey which will audit existing practices and identify potential improvements.</p> <p>EPA Compliance Audit of PKCT's rail receival in May 2014 resulted in PKCT submitting an Action Plan in response to a non-conformance finding.</p>	<p>Internal Review – Review has been undertaken entailing the collection of residential dust samples over two years. The samples were tested to categorise dust sources (refer section 3.3.4). Test results indicate that coal dust typically was 9 to 20% of the overall sample. Overall dust deposition levels at external sites have been found to be within air quality criteria.</p> <p>Status: Complete</p> <p>Review the train system – NSW Minerals Council review of mine to port operations has</p>

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					<p>Action by: PKCT Risk Manager.</p> <p>Completion Date: 30th June 2015</p>	<p>concluded that air quality around the rail corridor is good and coal trains are not having a significant impact on ambient air quality (refer www.nswmining.com.au). Though not significant, review has identified a scope for improvement with some implemented and some proposed actions. It has been noted that studies will be ongoing.</p> <p>Though the focus is Newcastle and the Hunter Valley Coal Industry, PKCT is participating and continues to work with rail shippers and rail transport companies to prevent/minimise impacts on the public rail network. Work</p>
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						<p>PKCT has undertaken across FY16 is as follows;</p> <ul style="list-style-type: none"> - Rail wagon monitoring program, refer to Section 3.3.4 and 6.1. - Train drag out monitoring – refer to Section 3.3.4: Data collected in FY16 needs to be evaluated. - Liaising with rail track service providers – Refer Section 3.3.4 on improved track cleaning methodology. <p>Status: In progress</p>
14	EPL	Operating Conditions, O3.2	Dust	As above	As above	Refer to Item 13.

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
15	MCoA	Schedule 3, Condition 6	Implementation Program for the Driver's Code of Conduct	<p>It is recommended that PKCT:</p> <ul style="list-style-type: none"> - Review and update the Implementation Program for the DCC at least annually, so that the document reflects the current state of operations on site. - Update the Implementation Program for the DCC to strengthen and specify PKCT's disciplinary process in instances of non-compliances. - Establish and implement a monitoring/auditing schedule for 	<p>Recommendation is accepted. In accordance with Schedule 4, Condition 7, the Implementation Plan for DCC will be reviewed and revised as appropriate.</p> <p>An action has been entered in the EMS and the record is "RR-0031". An annual review for DCC Implementation Plan has been entered into the EMS and the record is RR-00028.</p>	<p>A review and update of the DCC Implementation Plan was undertaken in August 2014. DP&E was notified of the changes via letter dated 8th August 2014.</p> <p>Status –Action complete.</p>

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				undertaking CTO's and intensive periods of monitoring of driver behaviour, within and external to the PKCT site, and document this monitoring program in the Implementation Program for DCC	<p>A monitoring schedule will be established and implemented as part of the review.</p> <p>Action By: PKCT Environment Specialist</p> <p>Completion Date: 8th August 2014</p>	
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
16	DCC	Driver Summary Sheet	Road Delivery Standards – Hold a valid driver's licence	It is recommended that PKCT: - Include in monthly reporting template an opportunity for road transport providers to confirm that all drivers hold valid licences for the reporting period.	<p>Recommendation is accepted. Action is complete.</p> <p>Monthly Reporting Template has been updated and distributed to relevant road transport providers via email on 3rd June 2014.</p>	<p>Driver summary sheet was updated and distributed to all shippers via email in June 2014.</p> <p>Status – Action complete.</p>
17	DCC	Driver Summary Sheet	Road Delivery Standards - Not apply compression brakes at Port	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this criteria be adequately covered and specifically referenced in their	<p>Recommendation is being progressed individually with relevant road transport providers.</p> <p>Action by: PKCT Environmental</p>	<p>Driver Audit forms were updated with relevant companies during September and November 2014.</p>

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			Kembla and Springhill Road	audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.	Specialist. Completion Date: 30 th September 2014	Status – Action complete.
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
18	DCC	Driver Summary Sheet	Road Delivery Standards – Utilise truckwash at PKCT after tipping.	It is recommended that PKCT: - Update DCC at least annually to ensure the document accurately reflects current operations and requirements. -Specifically update the DCC to include changed truckwash operations as a result of the upgrade. - Update the CTO to include specific criteria regarding the new truckwash (e.g. stops on signals, travels through truckwash at no	Recommendation is accepted. In accordance with Schedule 4, Condition 7, the DCC will be reviewed and revised, including the Driver Summary sheet as appropriate. An action has been entered in the EMS and the record is “RR-0030”. An annual review for DCC has been entered into the EMS and the record is “RR-00029”.	DCC was updated in August 2014 and DP&E was notified by letter dated 8 th August 2014. CTO was updated in to include specific criteria regarding new truckwash in June 2014. Status – Action complete.

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				more than 5km/hr etc.)	<p>CTO recommendation is accepted and the action is complete (3rd June 2014). PKCT CTO form updated to include reference to traffic signals and speed restrictions at new truckwash.</p> <p>Action by: PKCT Environmental Specialist</p> <p>Completion Date: 8th August 2014.</p>	
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
19	DCC	Driver Summary Sheet	Road Delivery Standards – Have the load covered from the mine to PKCT road receival area	It is recommended that PKCT: - Pass on recommendations to Bulktrans to complete audit forms in a thorough manner, including all criteria relevant at the time of the audit.	This recommendation accepted. An action has been entered in EMS and the record is “COR-00145”. Action by: PKCT Environmental Specialist. Completion Date: 8 th August 2014.	Email was sent to Bulktrans reminding them to complete audit forms in a thorough manner, including all criteria relevant at the time of the audit on 6 th August 2014. Status – Action complete.
20	DCC	Driver Summary Sheet	Road Delivery Standards – Operate the	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this	Recommendation is accepted. Refer to Item No. 17 response and	Driver Audit forms were updated with relevant companies

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			vehicle in a manner that minimises vehicle noise	criteria be adequately covered and specifically referenced in their audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.	actions.	during September and November 2014. Status – Action complete.
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
21	DCC	Driver Summary Sheet	Road Delivery Standards – All trucks are to pass through a truckwash at mine and at PKCT	It is recommended that PKCT: - Update DCC at least annually to ensure the document accurately reflects current operations and requirements. -Specifically update the DCC to include changed truckwash operations as a result of the upgrade. - Update the CTO to include specific criteria regarding the new truckwash (e.g. stops on signals, travels through truckwash at no more than 5km/hr etc.)	Recommendation is accepted. Refer to Item No. 18 response and actions.	DCC was updated in August 2014 and DP&E was notified by letter dated 8 th August 2014. CTO was updated in to include specific criteria regarding new truckwash in June 2014. Status – Action complete.

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22	DCC	Driver Summary Sheet	Road Delivery Standards – drivers must ensure tailgates are locked.	It is recommended that PKCT: - Stipulate to relevant road transport operators that this criterion be adequately covered and specifically referenced in their audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.	Recommendation is accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014. Status – Action complete.
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
23	DCC	Driver Summary Sheet	Road Delivery Standards – No queuing is permitted on Springhill road	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this criteria be adequately covered and specifically referenced in their audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.	Recommendation is accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014. Status – Action complete.
24	DCC	Routes	All trucks travelling to and from PKCT will do so by using major arterial	It is recommended that PKCT: - Stipulate to relevant road transport operators that this criteria be adequately covered and specifically referenced in their audit forms. This will allow PKCT to	Recommendation is accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014.

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
			roads as outlined in the PKCT Driver's Code of Conduct.	better monitor compliance with this aspect of the PKCT DCC.		Status – Action complete.
25	DCC	Routes	Appin Road - Special care should be taken when crossing Loddon River bridge which is narrow.	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this criteria be adequately covered and specifically referenced in their audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC	Recommendation is accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014. Status – Action complete.
26	DCC	Haulage Routes	Masters Rd - Compression braking on this route should be	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this criteria be adequately covered and specifically referenced in their	Recommendation is accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014.

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			avoided due to community disturbance.	audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.		Status – Action complete.
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
27	DCC	Haulage Routes	Springhill Rd - Compression brakes are not to be used on the approach to the lights at Springhill and Port Kembla Road.	It is recommended that PKCT: - Stipulate to relevant road road transport providers that this criteria be adequately covered and specifically referenced in their audit forms. This will allow PKCT to better monitor compliance with this aspect of the PKCT DCC.	Recommendation accepted. Refer to Item No. 17 response and actions.	Driver Audit forms were updated with relevant companies during September and November 2014. Status – Action complete.
28	MCoA	Schedule 3,	Noise	It is recommended that PKCT:	Recommendation is accepted.	Completed by 31 st

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		Condition 2		Update the Noise Management and Monitoring Plan to include discussion regarding the limitations posed by, and appropriateness of using the Barn Owl Noise Monitoring System. Conduct further analysis of the measurement results to verify whether the limitations of the Barn Owl system do not adversely impact the findings of the report.	PKCT’s noise consultant, Wilkinson Murray, will be engaged to address the matters raised. Action by: PKCT Risk Manager	October 2014.
Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
29	DCC	Driver Summary Sheet	Travel Time – Road haulage of coal is permitted to PKCT between 7am and 10pm Monday to Friday and 8am to 6pm on Saturday and Sunday	It is recommended that PKCT: Review the Driver Summary Sheet to ensure that all obligations within the DCC are included and provided to road transport companies and road transport providers, in the form of an updated DCC. Align the DCC obligations to the MCoA, in particular to truck dispatch times from NRE to PKCT.	Recommendation is accepted. Refer to Item No. 18 response and actions.	DCC was updated in August 2014 and DP&E was notified by letter dated 8 th August 2014. CTO was updated in to include specific criteria regarding new truckwash in June 2014. Status – Action complete.

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Item No.	Doc.	Condition	Topic	Opportunity for Improvement	PKCT Response/ Actions	Status as of end June 2016
30	EPL	Schedule R1, Condition 5	Deadline for Annual Return. The Annual Return for the reporting period must be supplied to the EPA by registered post no later than 60 days after the end of the reporting period	It is recommended that PKCT: Keep records of lodgement of Annual Returns for documentation and quality assurance purposes.	<p>Recommendation is accepted.</p> <p>Action complete.</p> <p>PKCT has recently submitted the 2013/2014 Annual Return. Records of lodgement have been filed.</p>	<p>PKCT has submitted the 2013/2014 and 2014/2015 Annual return since the 2014 AECOM Audit. Records of lodgement have been filed for both submissions.</p> <p>Status – Action complete.</p>

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Item No.	Doc.	Condition	Topic	Requirement	PKCT Response	Status as of end June 2016
31	P&I Letter reference 12/08896-1 Dated: 25/09/2013	Schedule 2, Condition 6	Limits on Approval	<p>PKCT is approved to increase road transportation of coal and bulk products up to 10 mtpa subject to;</p> <p>The DCC or where more appropriate, the DCC Implementation Plan being updated to include;</p> <ul style="list-style-type: none"> - The Code related recommendations in the document Port Kembla Coal Terminal – Independent Environmental Audit Report (AECOM, 2011) and - Measures for encouraging and facilitating drivers to report poor road conditions that may increase noise impacts on sensitive receivers and traffic light timing and sequencing that causes unnecessary braking noise along haulage routes 	<p>Requirements are noted.</p> <p>PKCT will ensure that any outstanding recommendations related to the Code are included in the revision of the DCC and/or DCC Implementation Plan during the review process.</p> <p>Measures for encouraging and facilitating drivers to report poor road conditions that may increase noise impacts on sensitive receivers and traffic light timing and sequencing that causes unnecessary braking noise haulage routes will be investigated and included in the DCC and DCC Implementation Plan review.</p> <p>Action by: Environmental Specialist Completion Date: 8th August 2014.</p>	<p>Various updates related to the DCC as recommended by the AECOM audit were accepted and included in the review of the DCC during August 2014.</p> <p>Measures for encouraging and facilitating drivers to report poor road conditions that may increase noise impacts on sensitive receivers and traffic light timing and sequencing that causes unnecessary braking noise haulage routes were included in the DCC Implementation Plan review under section 4.3</p> <p>Status – Action complete.</p>

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Item No.	Doc.	Condition	Topic	Requirement	PKCT Response	
32	P&I Letter reference 12/08896-1 Dated: 25/09/2013	Schedule 2, Condition 6	Limits on Approval	<p>PKCT is approved to increase road transportation of coal and bulk products up to 10 mtpa subject to;</p> <ul style="list-style-type: none"> - A copy of the document 10 Mtpa Road Transport Monitoring Trial, NSW DP&E Submission Report – Condition 6 of “Major Project Approval 08_0009” (Revision 3, dated May 2013, Port Kembla Coal Terminal/Cardno) being placed on Port Kembla Coal Terminal Limited’s website 	Requirement noted, action complete. Document has been placed on PKCT Website.	<p>Document has been placed on the PKCT website and is publically available.</p> <p>Status – Action complete.</p>

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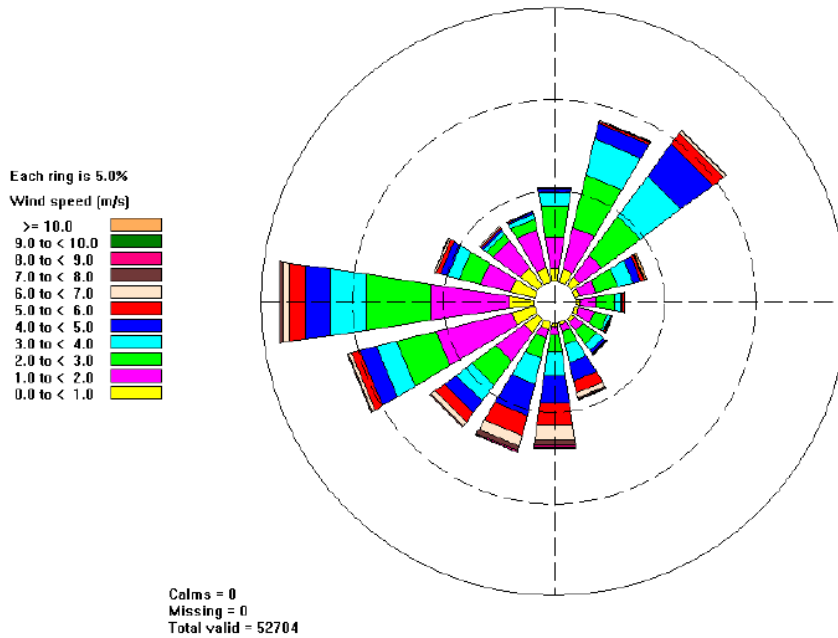
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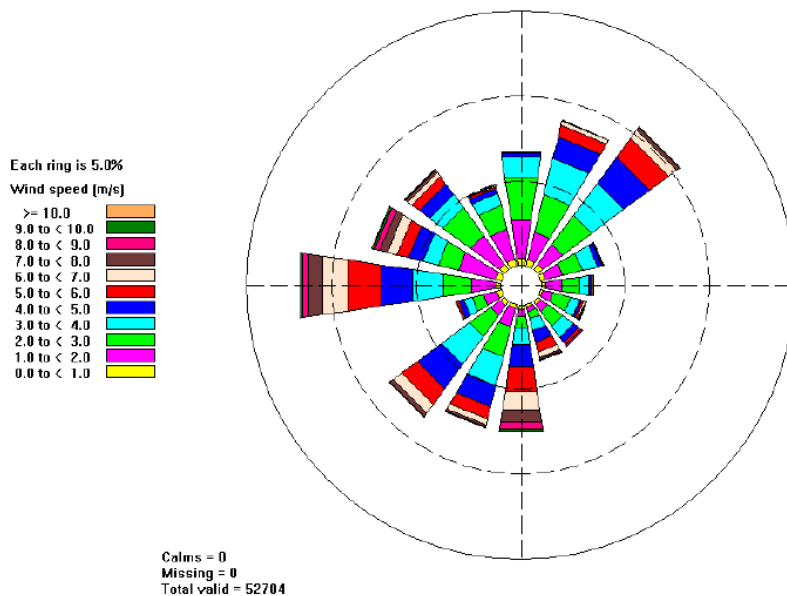
10.5 Appendix E

Northern Monitor



Wind rose for the 10-minute average winds recorded at PKCT northern monitoring site during the July 2015 to June 2016 period

Southern Monitor



Wind rose for the 10-minute average winds recorded at PKCT southern monitoring site during the July 2015 to June 2016 period



Table 10 Exceedances of the 24-hour average TSP trigger level of 90 µg/m³ at the northern PKCT monitoring site during the July 2015 to June 2016 period

Date of exceedance	24-hour average TSP concentration (µg/m ³)	Likelihood of PKCT contributing to exceedance levels ^a	Percentage of winds from direction of PKCT (south) during period	Contribution of PKCT to the exceeding 24-hour concentration ^b			Wind speed (m/s) ^c	
				µg/m ³	%	Rating	Maximum	Average
3 October	91.3	Unlikely	6.9%	0.6	1%	Minimal	4.5	1.8
5 October	153.3	Unlikely	2.8%	See table note e			5.1	1.5
16 October	162.0	Unlikely	9.7%	11.5	7%	Minimal	4.4	2.0
17 October	99.7	Possible	59.0%	21.1	21%	Minor	6.4	2.9
20 October	93.0	Unlikely	0.7%	0.7	1%	Minimal	5.0	2.5
21 October	98.3	Unlikely	10.4%	6.4	6%	Minimal	3.6	1.8
26 October	102.8	Unlikely	27.1%	0.5	0%	Minimal	10.2	3.0
26 November	126.8	Unlikely	38.2%	See table note d			9.0	4.3
29 November	91.1	Unlikely	6.9%	See table note d			6.9	3.3
1 December	137.4	Possible	32.6%	See table note d			7.5	2.7
10 December	141.9	Possible	23.6%	9.5	7%	Minimal	4.9	2.1
19 December	96.9	Unlikely	2.1%	0.7	1%	Minimal	6.8	2.8
20 December	122.7	Unlikely	2.1%	See table note e			6.9	3.0
11 January	141.4	Unlikely	2.8%	0.9	1%	Minimal	3.5	1.8
14 January	178.0	Unlikely	43.1%	8.7	5%	Minimal	9.4	3.8
20 January	115.2	Possible	34.0%	8.6	7%	Minimal	6.4	2.4
28 January	111.3	Unlikely	0.7%	0.4	0%	Minimal	4.7	2.3
29 January	124.2	Unlikely	17.4%	7.0	6%	Minimal	6.3	2.0
19 February	97.9	Unlikely	6.3%	0.9	1%	Minimal	4.6	2.7
25 February	248.5	Unlikely	3.5%	10.2	4%	Minimal	4.7	2.0
26 February	141.4	Possible	68.1%	19.5	14%	Minor	8.0	3.8
27 February	179.4	Possible	56.9%	62.3	35%	Moderate	5.3	2.3

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Date of exceedance	24-hour average TSP concentration (µg/m³)	Likelihood of PKCT contributing to exceedance levels ^a	Percentage of winds from direction of PKCT (south) during period	Contribution of PKCT to the exceeding 24-hour concentration ^b			Wind speed (m/s) ^c	
				µg/m³	%	Rating	Maximum	Average
28 February	130.2	Unlikely	2.8%	See table note e			4.3	1.8
7 March	153.1	Unlikely	1.4%	See table note e			4.2	2.1
8 March	213.3	Unlikely	0.0%	0	0%	None	4.2	2.1
9 March	135.6	Unlikely	0.0%	0	0%	None	4.9	2.6
10 March	153.0	Possible	54.9%	16.2	11%	Minor	7.0	2.2
11 March	126.5	Possible	11.8%	4.4	3%	Minimal	4.5	1.8
12 March	102.5	Unlikely	2.1%	See table note e			3.6	1.7
13 March	99.7	Unlikely	0.0%	0	0%	None	3.8	2.1
6 April	122.7	Possible	25.7%	6.7	5%	Minimal	6.5	2.4
29 April	94.2	Unlikely	9.0%	See table note e			3.5	1.6
5 June	418.5	Unlikely	0.7%	0.0	0%	Minimal	15.9	9.2

Table notes:

^a Identified using scatter plots of 10-minute average TSP concentration versus wind direction and wind speed

^b Identified using scatter plots, percentage of winds from direction of PKCT (south) during exceedance period, and comparison of northern and southern TSP concentrations over periods when the wind is from the south. Contribution based on percentage of total 24-hour average TSP concentration (0% = no cont, 0-10% = minimal, 10-30% = minor, 30-70% = moderate, >70% = major)

^c Maximum and average 10-minute average wind speed recorded at the northern PKCT monitoring site during 24-hour exceedance period

^d For this exceedance day there was no data from the southern monitor, so the contribution analysis could not be performed. See Section 0.

^e For this exceedance day the pollutant concentration decreased on average during periods when the wind passed from the south over the PKCT site

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Table 11 Exceedances of the 24-hour average PM₁₀ air quality standard of 50 µg/m³ at the northern PKCT monitoring site during the July 2015 to June 2016 period

Date of exceedance	24-hour average PM ₁₀ concentration (µg/m ³)	Likelihood of PKCT contributing to exceedance levels ^a	Percentage of winds from direction of PKCT (south) during period	Contribution of PKCT to the exceeding 24-hour concentration ^b			Wind speed (m/s) ^c	
				µg/m ³	%	Rating	Maximum	Average
3 October	57.8	Unlikely	6.9%	0.3	0%	Minimal	4.5	1.8
5 October	94.9	Unlikely	2.8%	See table note e			5.1	1.5
16 October	107.5	Unlikely	9.7%	6.7	6%	Minimal	4.4	2.0
17 October	68.6	Possible	59.0%	13.2	19%	Minor	6.4	2.9
18 October	56.8	Unlikely	41.7%	5.6	10%	Minimal	4.4	2.6
19 October	52.4	Unlikely	0.0%	0	0%	None	4.1	2.3
20 October	61.6	Unlikely	0.7%	0.4	1%	Minimal	5.0	2.5
21 October	61.8	Unlikely	10.4%	3.3	5%	Minimal	3.6	1.8
26 October	67.2	Unlikely	27.1%	See table note e			10.2	3.0
6 November	53.6	Unlikely	16.7%	0.1	0%	Minimal	4.6	1.9
19 November	58.3	Unlikely	13.2%	See table note e			4.0	1.7
25 November	52.4	Possible	9.7%	See table note d			5.9	2.4
26 November	73.7	Unlikely	38.2%	See table note d			9.0	4.3
28 November	52.2	Unlikely	36.8%	See table note d			6.4	2.6
29 November	64.4	Unlikely	6.9%	See table note d			6.9	3.3
1 December	90.6	Possible	32.6%	See table note d			7.5	2.7
6 December	51.3	Unlikely	23.6%	7.0	14%	Minor	4.8	2.3
8 December	54.5	Unlikely	0.0%	0	0%	None	3.9	2.5
9 December	55.3	Unlikely	20.8%	0.0	0%	Minimal	7.5	3.9
10 December	98.4	Unlikely	23.6%	5.7	6%	Minimal	4.9	2.1
11 December	55.0	Possible	29.2%	3.5	6%	Minimal	9.3	3.6
12 December	60.1	Unlikely	27.1%	6.6	11%	Minor	4.3	2.4

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Date of exceedance	24-hour average PM ₁₀ concentration (µg/m ³)	Likelihood of PKCT contributing to exceedance levels ^a	Percentage of winds from direction of PKCT (south) during period	Contribution of PKCT to the exceeding 24-hour concentration ^b			Wind speed (m/s) ^c	
				µg/m ³	%	Rating	Maximum	Average
13 December	51.7	Unlikely	0.0%	0	0%	None	6.4	2.9
15 December	56.1	Unlikely	5.6%	See table note e		None	4.2	2.1
16 December	56.7	Unlikely	19.4%	2.6	5%	Minimal	11.2	1.9
19 December	66.1	Unlikely	2.1%	0.7	1%	Minimal	6.8	2.8
20 December	85.5	Unlikely	2.1%	See table note e		None	6.9	3.0
26 December	55.1	Unlikely	9.0%	1.6	3%	Minimal	8.3	3.4
5 January	60.5	Possible	43.8%	10.7	18%	Minor	6.0	4.2
8 January	60.9	Possible	18.8%	8.1	13%	Minor	3.4	1.9
11 January	96.6	Unlikely	2.8%	0.9	1%	Minimal	3.5	1.8
14 January	110.3	Possible	43.1%	6.6	6%	Minimal	9.4	3.8
19 January	50.5	Unlikely	0.0%	0	0%	None	4.7	2.6
20 January	68.6	Possible	34.0%	4.4	6%	Minimal	6.4	2.4
21 January	58.7	Unlikely	9.7%	1.9	3%	Minimal	8.5	2.5
22 January	50.4	Possible	38.2%	4.8	10%	Minimal	5.3	2.2
28 January	76.1	Unlikely	0.7%	0.2	0%	Minimal	4.7	2.3
29 January	80.4	Unlikely	17.4%	4.8	6%	Minimal	6.3	2.0
15 February	53.8	Possible	56.9%	See table note e		None	6.2	3.0
19 February	64.8	Unlikely	6.3%	0.4	1%	Minimal	4.6	2.7
25 February	158.7	Possible	3.5%	6.5	4%	Minimal	4.7	2.0
26 February	98.2	Possible	68.1%	12.7	13%	Minor	8.0	3.8
27 February	124.0	Possible	56.9%	42.8	35%	Moderate	5.3	2.3
28 February	88.1	Unlikely	2.8%	See table note e		None	4.3	1.8
3 March	55.3	Unlikely	0.0%	0	0%	None	6.1	3.2
6 March	54.6	Unlikely	0.0%	0	0%	None	5.8	2.6

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Date of exceedance	24-hour average PM ₁₀ concentration (µg/m ³)	Likelihood of PKCT contributing to exceedance levels ^a	Percentage of winds from direction of PKCT (south) during period	Contribution of PKCT to the exceeding 24-hour concentration ^b			Wind speed (m/s) ^c	
				µg/m ³	%	Rating	Maximum	Average
7 March	100.8	Unlikely	1.4%	See table note e			4.2	2.1
8 March	142.7	Unlikely	0.0%	0	0%	None	4.2	2.1
9 March	90.1	Unlikely	0.0%	0	0%	None	4.9	2.6
10 March	104.0	Possible	54.9%	13.6	13%	Minor	7.0	2.2
11 March	85.3	Possible	11.8%	3.5	4%	Minimal	4.5	1.8
12 March	68.7	Unlikely	2.1%	See table note e			3.6	1.7
13 March	68.2	Unlikely	0.0%	0	0%	None	3.8	2.1
14 March	55.9	Possible	63.2%	See table note e			8.3	3.2
6 April	78.5	Possible	25.7%	3.1	4%	Minimal	6.5	2.4
29 April	62.4	Unlikely	9.0%	See table note e			3.5	1.6
22 May	57.3	Possible	16.0%	5.2	9%	Minimal	4.3	1.8
4 June	53.0	Unlikely	1.4%	See table note e			13.2	4.4
5 June	210.0	Unlikely	0.7%	See table note e			15.9	9.2

Table note:

^a Identified using scatter plots of 10-minute average PM₁₀ concentration versus wind direction and wind speed

^b Identified using scatter plots, percentage of winds from direction of PKCT (south) during exceedance period, and comparison of northern and southern PM₁₀ concentrations over periods when the wind is from the south. Contribution based on percentage of total 24-hour average PM₁₀ concentration (0% = no cont, 0-10% = minimal, 10-30% = minor, 30-70% = moderate, >70% = major)

^c Maximum and average 10-minute average wind speed recorded at the northern PKCT monitoring site during 24-hour exceedance period

^d For this exceedance day there was no data from the southern monitor, so the contribution analysis could not be performed. See Section 0.

^e For this exceedance day the pollutant concentration decreased on average during periods when the wind passed from the south over the PKCT site

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10.6 Appendix F

Date	pH (pH units)	TSS (mg/litre)	Oil and Grease (mg/litre)
23/07/2015	8.3	<5	Not visible
06/08/2015	7.7	<5	Not visible
12/08/2015	8.6	<5	Not visible
20/08/2015	8.6	17	Not visible
25/08/2015	7.4	22	Not visible
26/08/2015	6.8	7	Not visible
27/08/2015	6.9	5	Not visible
28/08/2015	7.0	8	Not visible
29/08/2015	7.2	<5	Not visible
26/09/2015	7.6	<5	Not visible
27/09/2015	7.5	<5	Not visible
21/10/2015	9.4	39	Not visible
22/10/2015	9.3	31	Not visible
27/10/2015	8.8	45	Not visible
28/10/2015	9.8	25	Not visible
29/10/2015	9.8	19	Not visible
30/10/2015	9.0	20	Not visible
01/11/2015	9.4	23	Not visible
02/11/2015	9.5	22	Not visible
03/11/2015	9.4	12	Not visible
04/11/2015	9.4	15	Not visible
05/11/2015	7.0	25	Not visible
06/11/2015	7.1	20	Not visible
07/11/2015	7.2	<5	Not visible
08/11/2015	7.2	10	Not visible
13/11/2015	8.9	19	Not visible
14/11/2015	8.5	18	Not visible
15/11/2015	8.1	11	Not visible
16/11/2015	6.4	10	Not visible
18/11/2015	8.3	20	Not visible
19/11/2015	6.4	13	Not visible
20/11/2015	8.4	22	Not visible
22/11/2015	8.3	26	Not visible
27/11/2015	8.9	8	Not visible
30/11/2015	9.5	18	Not visible
02/12/2015	8.7	11	Not visible
16/12/2015	9.5	12	Not visible
21/12/2015	8.7	23	Not visible

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Date	pH (pH units)	TSS (mg/litre)	Oil and Grease (mg/litre)
22/12/2015	8.5	14	Not visible
27/12/2015	8.3	6	Not visible
28/12/2015	8.7	7	Not visible
04/01/2016	9.8	13	Not visible
05/01/2016	9.3	15	Not visible
06/01/2016	9.2	12	Not visible
07/01/2016	8.4	13	Not visible
11/01/2016	10.1	15	Not visible
15/01/2016	8.4	19	Not visible
19/01/2016	9.8	15	Not visible
22/01/2016	7.9	12	Not visible
23/01/2016	7.8	13	Not visible
24/01/2016	8.2	12	Not visible
27/01/2016	9.9	11	Not visible
26/01/2016	9.3	13	Not visible
01/02/2016	9.4	13	Not visible
02/02/2016	8.8	13	Not visible
04/02/2016	8.7	15	Not visible
15/03/2016	7	<5	Not visible
17/03/2016	7.1	<5	Not visible
22/03/2016	7.6	8	Not visible
28/03/2016	7.6	<5	Not visible
29/03/2016	8.5	<5	Not visible
24/05/2016	9.0	9	Not visible
01/06/2016	7.8	17.0	Not visible
02/06/2016	8.4	18.0	Not visible
04/06/2016	8.7	19.0	Not visible
05/06/2016	7.7	<5	Not visible
06/06/2016	7.8	30.0	Not visible
07/06/2016	8.1	<5	Not visible
09/06/2016	7.3	<5	Not visible
19/06/2016	7.1	23.0	Not visible
20/06/2016	7.4	27.0	Not visible
27/06/2016	7.7	<5	Not visible

10.7 Appendix G

Executive summary

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by Port Kembla Coal Terminal to undertake a survey for the Green and Golden Bell Frog (*Litoria aurea*), which is potentially present in ponds located on its facility at Port Kembla. These surveys form part of its on-going monitoring as part of its Green and Golden Bell Frog Management Plan which was developed for this site as a result of a 2008 sighting of the Green and Golden Bell Frog.

On Monday the 15th of February 2016 a diurnal and nocturnal survey was undertaken of nine ponds covering sites located around the terminal facility and also four ponds created in Greenhouse Park, which is located immediately adjacent to the Port Kembla Coal Terminal.

No Green and Golden Bell Frogs or tadpoles were located during either the diurnal or nocturnal survey. Only one species of frog was located in the ponds on the Terminal, being the Perons Tree Frog. The Striped Marsh Frog was recorded at Greenhouse Park. The ongoing absence of records from the terminal facility and Greenhouse Park since 2011 indicates that the Green and Golden Bell Frog is no longer present on the site. It is advised that Port Kembla Coal Terminal liaise with OEH to determine if the annual monitoring program needs to be continued and, if not, under what circumstances monitoring surveys should be undertaken.



10.8 Appendix H

Notification of Weed Spraying

Johnsons Landscapes

Date	17/5/16
Person/s Responsible	MICK WEDD
Area to be sprayed	TS1 POND TS2 POND SOUTHERN STOCKPILE POND, CHALKYS
Start time	7:30 am
Estimated duration	6 HOURS
Weather	FINE SW WIND 25 km/h
Frog and Wildlife Inspection	<input checked="" type="radio"/> Yes / <input type="radio"/> No
General Comments	NO FROGS
Total amount of litres sprayed	300LTS
Type of spray used	Glyphosate 360 (Trademark Roundup) <input checked="" type="radio"/> Yes / <input type="radio"/> No
Other Type of spray used	N/A

SIGN OFF: WORK COMPLETED

Date: 17.5.16
 Time: 2-15pm
 Signature: *[Handwritten Signature]* Print Name: MICK WEDD

10.9 Appendix I



CERTIFICATE OF APPROVAL

This is to certify that the Quality & Environmental Management System of:

**Port Kembla Coal Terminal Limited
Port Kembla Road
Wollongong, New South Wales
Australia**

has been approved by Lloyd's Register Quality Assurance Limited to the following Quality & Environmental Management System Standards:

**AS/NZS ISO 9001:2008
AS/NZS ISO 14001:2004**

The Quality & Environmental Management System is applicable to:

Receiving, stockpiling and loading of coal, coke and other dry bulk materials for shipment.

Approval
Certificate No: MEL0928466

Original Approval: 02 February 1994

Current Certificate: 18 November 2015

Certificate Expiry: 14 September 2018



M. T. Lovato
Issued by: Lloyd's Register Quality Assurance Limited

Level 6 Fawkner Centre, 499 St Kilda Road, Melbourne, Vic, 3004
This approval is carried out in accordance with the LRQA assessment and certification procedures and monitored by LRQA.
To confirm the validity of the accreditation for this certificate please visit www.las-anz.com/register
March 2010/05/13

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