



PORT KEMBLA COAL TERMINAL LTD.



Licencee:	Port Kembla Coal Terminal Limited
Environment Protection Licence:	1625
Licence URL:	http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=106587&SYSUID=1&LICID=1625
Location:	Port Kembla Road, Port Kembla Inner Harbour, Wollongong
Postal Address:	PO Box 823, Wollongong East 2502

PORT KEMBLA COAL TERMINAL DUST & WEATHER MONITOR LOCATIONS

16th October 2015



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	Links Seaside Apartments
20	C1	Continuous Dust Monitor 1
21	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 ●



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EPL MONITORING SITES- INDUSTRIAL			Calendar Year 2017												Annual average: grams per square metre.month					
MONTH			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	rolling 12 month average	PKCT assessment criteria				
EPL No.	Location Gauge Number	analysis: gram/square metre.month	Samples collected												MIN	MEAN	MAX	rolling 12 month average	PKCT assessment criteria	
1	P1 25m South BPB Coal Berth	Insoluble Solids	2.7	bb	3.0	0.7	2.5	0.5	1.1	1.8	3.4	2.4	2.4	2.4	11	0.5	2.1	3.4	2.1	15.0
		Ash	1.3	bb	1.3	0.0	1.4	0.4	0.7	1.1	2.1	1.3	2.1	1.4	11	0.0	1.2	2.1		
		Combustible Matter	1.4	bb	1.7	0.7	1.1	0.1	0.4	0.7	1.3	1.1	1.6	1.0	11	0.1	1.0	1.7	1.0	12.0
2	P2 40m South of BPB Stockyard	Insoluble Solids	5.5	5.3	5.2	11.7	1.9	3.0	1.3	2.0	0.7	6.3	2.4	3.6	12	0.7	4.1	11.7	4.1	15.0
		Ash	2.8	2.7	2.4	0.4	1.2	2.2	1.0	1.3	0.5	3.6	1.3	1.9	12	0.4	1.8	3.6		
		Combustible Matter	2.7	2.6	2.8	11.3	0.7	0.8	0.3	0.7	0.2	2.7	1.1	1.7	12	0.2	2.3	11.3	2.3	12.0
3	P3 40m East of BPB Stockyard	Insoluble Solids	5.1	7.4	7.5	13.1	6.5	7.7	35.1	25.0	9.4	7.0	4.3	6.7	12	4.3	11.2	35.1	11.2	15.0
		Ash	3.5	4.4	4.1	1.2	4.4	5.6	26.7	19.9	6.6	4.8	2.8	5.1	12	1.2	7.4	26.7		
		Combustible Matter	1.6	3.0	3.4	11.9	2.1	2.1	8.4	5.1	2.8	2.2	1.5	1.6	12	1.5	3.8	11.9	3.8	12.0
4	P4 40m East Coal Berth Stockyard	Insoluble Solids	2.3	8.2	7.5	20.9	8.0	5.4	15.5	85.0	21.6	7.6	3.9	2.5	12	2.3	15.7	85.0	15.7	15.0
		Ash	0.7	3.0	1.9	0.7	2.2	1.8	3.3	18.8	5.6	2.9	1.4	1.2	12	0.7	3.6	18.8		
		Combustible Matter	1.6	5.2	5.6	20.2	5.8	3.6	12.2	66.2	16.0	4.7	2.5	1.3	12	1.3	12.1	66.2	12.1	12.0
5	P5 Northern Pond (No.1)	Insoluble Solids	7.0	8.3	9.5	24.6	3.2	4.9	3.8	3.8	1.1	5.5	3.3	5.9	12	1.1	6.7	24.6	6.7	15.0
		Ash	2.4	3.1	3.1	0.3	1.3	2.1	1.4	1.8	0.5	2.5	1.2	1.6	12	0.3	1.8	3.1		
		Combustible Matter	4.6	5.2	6.4	24.3	1.9	2.8	2.4	2.0	0.6	3.0	2.1	4.3	12	0.6	5.0	24.3	5.0	12.0
6	P6 40m West Coal Berth Stockyard	Insoluble Solids	5.6	12.5	11.4	28.4	7.2	3.9	4.8	5.6	7.6	6.9	8.0	14.2	12	3.9	9.7	28.4	9.7	15.0
		Ash	2.9	3.2	2.8	0.4	2.9	1.8	2.3	3.5	4.4	3.6	3.1	7.1	12	0.4	3.2	7.1		
		Combustible Matter	2.7	9.3	8.6	28.0	4.3	2.1	2.5	2.1	3.2	3.3	4.9	7.1	12	2.1	6.5	28.0	6.5	12.0
7	P7 260m West No.2 Coalberth	Insoluble Solids	17.5	37.1	27.7	30.7	4.6	15.1	3.3	2.0	1.6	4.0	1.9	2.4	12	1.6	12.3	37.1	12.3	15.0
		Ash	15.3	32.1	23.5	0.5	3.5	12.7	2.1	1.3	1.2	2.5	1.0	1.5	12	0.5	8.1	32.1		
		Combustible Matter	2.2	5.0	4.2	30.2	1.1	2.4	1.2	0.7	0.4	1.5	0.9	0.9	12	0.4	4.2	30.2	4.2	12.0
8	P8 PKCT North Truckwash	Insoluble Solids	6.3	9.7	5.8	4.1	7.3	5.0	17.0	17.6	4.5	7.4	13.5	3.3	12	3.3	8.5	17.6	8.5	15.0
		Ash	2.2	2.3	1.8	0.4	1.9	1.5	5.4	5.7	1.2	2.5	4.5	1.3	12	0.4	2.6	5.7		
		Combustible Matter	4.1	7.4	4.0	3.7	5.4	3.5	11.6	11.9	3.3	4.9	9.0	2.0	12	2.0	5.9	11.9	5.9	12.0
9	P9 Wollongong Wastewater TP.	Insoluble Solids	3.4	3.5	2.5	0.4	2.2	2.1	2.7	1.9	1.9	5.1	3.7	3.4	12	0.4	2.7	5.1	2.7	6.0
		Ash	1.7	1.9	1.1	0.1	1.2	1.2	1.4	1.0	0.8	2.6	1.5	1.7	12	0.1	1.4	2.6		
		Combustible Matter	1.7	1.6	1.4	0.3	1.0	0.9	1.3	0.9	1.1	2.5	2.2	1.7	12	0.3	1.4	2.5	1.4	4.0
15	P10 North of PKCT Planning Office	Insoluble Solids	9.9	9.7	3.4	3.5	8.4	5.2	9.6	10.4	4.4	8.2	14.9	7.1	12	3.4	7.9	14.9	7.9	15.0
		Ash	3.6	2.3	0.6	0.7	3.1	2.2	3.6	5.3	1.9	4.3	4.3	3.1	12	0.6	2.9	5.3		
		Combustible Matter	6.3	7.4	2.8	2.8	5.3	3.0	6.0	5.1	2.5	3.9	10.6	4.0	12	2.5	5.0	10.6	5.0	12.0
17	P11 Entry Gate BlueScope RORO Berth (109)	Insoluble Solids	3.1	4.2	2.8	0.5	2.5	1.4	1.7	1.4	0.4	4.5	4.2	3.5	12	0.4	2.5	4.5	2.5	6.0
		Ash	2.1	3.3	1.9	0.1	1.9	0.9	1.3	1.1	0.3	3.4	2.9	2.7	12	0.1	1.8	3.4		
		Combustible Matter	1.0	0.9	0.9	0.4	0.6	0.5	0.4	0.3	0.1	1.1	1.3	0.8	12	0.1	0.7	1.3	0.7	4.0

MONTHLY REPORT- COMMENTARY ON RESULTS

Note 1: there are no EPL air quality limits in the EPL for industrial monitoring sites. Historical information provides baseline data and assessment criteria has been adopted to assess against actual results to facilitate performance

SAMPLE PERIOD	Date Sampled	Date Results Obtained	Date Published	COMMENTARY ON RESULTS
January 2017	06/02/2017	14/02/2017	14/02/2017	One Site "P8" marginally outside annual average assessment criteria for insoluble solids and combustible matter. January dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
February 2017	06/03/2017	16/03/2017	20/03/2017	One Site "P8" marginally outside annual average assessment criteria for insoluble solids and combustible matter. February dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period. Broken bottle was found when collected at Site P1, possible vandalism.
March 2017	31/03/2017	13/04/2017	20/04/2017	Site "P7" dust level above assessment criteria though not combustible suggesting possible external non PKCT dust sources. Annual average for all other sites remain within criteria.
April 2017	01/05/2017	05/05/2017	05/05/2017	One Site "P8" marginally outside annual average assessment criteria for insoluble solids and combustible matter. April dust levels were low. Annual average remains outside criteria as a result of some high monthly readings earlier in the 12 month averaging period.
May 2017	01/06/2017	19/06/2017	19/06/2017	All sites within assessment criteria.
June 2017	30/06/2017	17/07/2017	17/07/2017	All sites within assessment criteria.
July 2017	01/08/2017	21/08/2017	23/08/2017	All sites within assessment criteria.
August 2017	01/09/2017	20/09/2017	20/09/2017	One site, "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. High winds from the west during August.
September 2017	03/10/2017	20/10/2017	23/10/2017	One site, "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. High winds from the west during September.
October 2017	02/11/2017	20/11/2017	20/11/2017	One site, "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. High results due to high reading in August carrying over through the annual average.
November 2017	04/12/2017	15/12/2017	15/12/2017	One site, "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. High results due to high reading in August carrying over through the annual average.
December 2017	04/01/2018	22/01/2018	22/01/2018	One site, "P4" marginally outside annual average assessment criteria for insoluble solids and combustible matter. High results due to high reading in August carrying over through the annual average.



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EPL MONITORING SITES- RESIDENTIAL			Calendar Year 2017												annual average: grams per square metre.month					
MONTH			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	No. samples collected	MIN	MEAN	MAX	rolling 12 month average	PKCT assessment criteria
EPL No.	Location Gauge Number	Analysis: grams/square metre.month																		
12	R1	Insoluble Solids	2.6	1.4	1.1	0.4	0.5	0.5	0.8	0.6	0.6	1.8	1.2	1.3	12	0.4	1.1	2.6	1.1	4.0
	157 Church St	Ash	1.5	0.7	0.5	0.1	0.3	0.3	0.7	0.5	0.1	1.0	0.7	0.8	12	0.1	0.6	1.5		
	Wollongong	Combustible Matter	1.1	0.7	0.6	0.3	0.2	0.2	0.1	0.1	0.5	0.8	0.5	0.5	12	0.1	0.5	1.1	0.5	2.0
19	R2	Insoluble Solids	1.9	2.4	4.7	0.9	0.6	0.6	0.3	0.6	0.2	1.8	0.5	1.2	12	0.2	1.3	4.7	1.3	4.0
	Vikings Oval	Ash	1.0	1.5	2.4	0.1	0.4	0.3	0.3	0.4	0.2	1.2	0.3	0.6	12	0.1	0.7	2.4		
	Wollongong	Combustible Matter	0.9	0.9	2.3	0.8	0.2	0.3	<0.1	0.2	<0.1	0.6	0.2	0.6	10	0.2	0.7	2.3	0.7	2.0
TBA	R3	Insoluble Solids	2.7	2.0	1.3	0.5	0.6	0.7	0.8	1.3	0.7	1.5	0.9	1.0	12	0.5	1.2	2.7	1.2	4.0
	Ross Street	Ash	1.1	1.2	0.6	0.1	0.5	0.4	0.6	0.8	0.5	1.0	0.5	0.6	12	0.1	0.7	1.2		
	Wollongong	Combustible Matter	1.6	0.8	0.7	0.4	0.1	0.3	0.2	0.5	0.2	0.5	0.4	0.4	12	0.1	0.5	1.6	0.5	2.0

MONTHLY REPORT: COMMENTARY ON RESULTS

Note 1: Assessment criteria is based on an EPA guideline of annual average of 4 grams per square metre per month for residential areas. PKCT has adopted a level of 2 grams per square metre for combustible matter for assessment purposes.

SAMPLE PERIOD	Date Sampled	Date Results Obtained	Date Published	COMMENTARY
January 2017	06/02/2017	14/02/2017	14/02/2017	All sites within assessment criteria
February 2017	06/03/2017	16/03/2017	20/03/2017	All sites within assessment criteria
March 2017	31/03/2017	13/04/2017	20/04/2017	R2 within assessment criteria but further testing being undertaken due to high monthly reading
April 2017	01/05/2017	05/05/2017	05/05/2017	All sites within assessment criteria for April. Further analysis of Site R2 from March indicated coal fraction of sample was <2% with clay accounting for 90%. Results indicate high measured level of dust was not associated with PKCT.
May 2017	01/06/2017	19/06/2017	19/06/2017	All sites within assessment criteria
June 2017	30/06/2017	17/07/2017	17/07/2017	All sites within assessment criteria
July 2017	01/08/2017	21/08/2017	23/08/2017	All sites within assessment criteria
August 2017	01/09/2017	20/09/2017	20/09/2017	All sites within assessment criteria
September 2017	03/10/2017	20/10/2017	23/10/2017	All sites within assessment criteria
October 2017	02/11/2017	20/11/2017	20/11/2017	All sites within assessment criteria
November 2017	04/12/2017	15/12/2017	15/12/2017	All sites within assessment criteria
December 2017	04/01/2018	22/01/2018	22/01/2018	All sites within assessment criteria



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SETTLEMENT LAGOON OVERFLOW: ENVIRONMENT PROTECTION LICENCE MONITORING: POINT 16						
Environment Protection Licence: 1625			water quality parameter		EPL Limit (100 percentile)	
Type of Monitoring: water quality			pH		monitoring only	
Frequency: daily grab sample when discharging			total suspended solids (mg/L)		less than 50	
			oil/ grease		not visible	
Sample Date	Date Results Obtained	Date Published	pH (pH units)	total suspended solids (milligrams per litre)	oil/ grease (milligrams per litre)	Commentary on Results
05/01/2017	14/02/2017	14/02/2017	7.8	8	not visible	EPL compliant
07/02/2017	16/03/2017	20/03/2017	8.5	12	not visible	EPL compliant
08/02/2017	16/03/2017	20/03/2017	8.7	9	not visible	EPL compliant
18/02/2017	16/03/2017	20/03/2017	8.4	27	not visible	EPL compliant
25/02/2017	16/03/2017	20/03/2017	9.4	13	not visible	EPL compliant
26/02/2017	16/03/2017	20/03/2017	9.2	30	not visible	EPL compliant
27/02/2017	16/03/2017	20/03/2017	8.6	33	not visible	EPL compliant
28/02/2017	13/04/2017	20/04/2017	7.2	28	not visible	EPL compliant
01/03/2017	13/04/2017	20/04/2017	7.1	12	not visible	EPL compliant
02/03/2017	13/04/2017	20/04/2017	7.0	18	not visible	EPL compliant
03/03/2017	13/04/2017	20/04/2017	7.3	25	not visible	EPL compliant
04/03/2017	13/04/2017	20/04/2017	7.1	14	not visible	EPL compliant
05/03/2017	13/04/2017	20/04/2017	7.2	<5	not visible	EPL compliant
15/03/2017	13/04/2017	20/04/2017	7.9	10	not visible	EPL compliant
16/03/2017	13/04/2017	20/04/2017	8.5	7	not visible	EPL compliant
17/03/2017	13/04/2017	20/04/2017	7.8	17	not visible	EPL compliant
18/03/2017	13/04/2017	20/04/2017	7.3	13	not visible	EPL compliant
19/03/2017	13/04/2017	20/04/2017	7.3	11	not visible	EPL compliant
23/03/2017	13/04/2017	20/04/2017	7.3	8	not visible	EPL compliant
24/03/2017	13/04/2017	20/04/2017	7.3	31	not visible	EPL compliant
26/03/2017	13/04/2017	20/04/2017	7.2	21	not visible	EPL compliant
30/03/2017	13/04/2017	20/04/2017	7.5	<5	not visible	EPL compliant
31/03/2017	13/04/2017	20/04/2017	7.3	18	not visible	EPL compliant
02/04/2017	05/05/2017	05/05/2017	7.3	16	not visible	EPL compliant
03/04/2017	05/05/2017	05/05/2017	7.3	5	not visible	EPL compliant
04/04/2017	05/05/2017	05/05/2017	7.3	34	not visible	EPL compliant
10/04/2017	05/05/2017	05/05/2017	6.9	<5	not visible	EPL compliant
21/04/2017	05/05/2017	05/05/2017	9.1	<5	not visible	EPL compliant
23/04/2017	05/05/2017	05/05/2017	9.2	<5	not visible	EPL compliant
04/05/2017	19/06/2017	19/06/2017	8.6	<5	not visible	EPL compliant
20/05/2017	19/06/2017	19/06/2017	7.3	18.0	not visible	EPL compliant
07/06/2017	17/07/2017	17/07/2017	8.3	15.0	not visible	EPL compliant
10/06/2017	17/07/2017	17/07/2017	7.3	24.0	not visible	EPL compliant
11/06/2017	17/07/2017	17/07/2017	7.2	10.0	not visible	EPL compliant
22/06/2017	17/07/2017	17/07/2017	7.3	9.0	not visible	EPL compliant
No overflows from LDP16 during July 2017						
01/08/2017	20/09/2017	20/09/2017	9.3	18.0	not visible	EPL compliant

* "Date Published" refers to this report.

NB TSS (total suspended solids) - under EPL, a TSS water quality limit of 50mg/litre pertains. Exceedance of this limit is permitted when discharge occurs solely as a result of rainfall measured at the premises. For discharge to be considered to occur solely as a result of rainfall, the rainfall must exceed a 5 day rainfall depth value of 90 mm over a consecutive 5 day period.

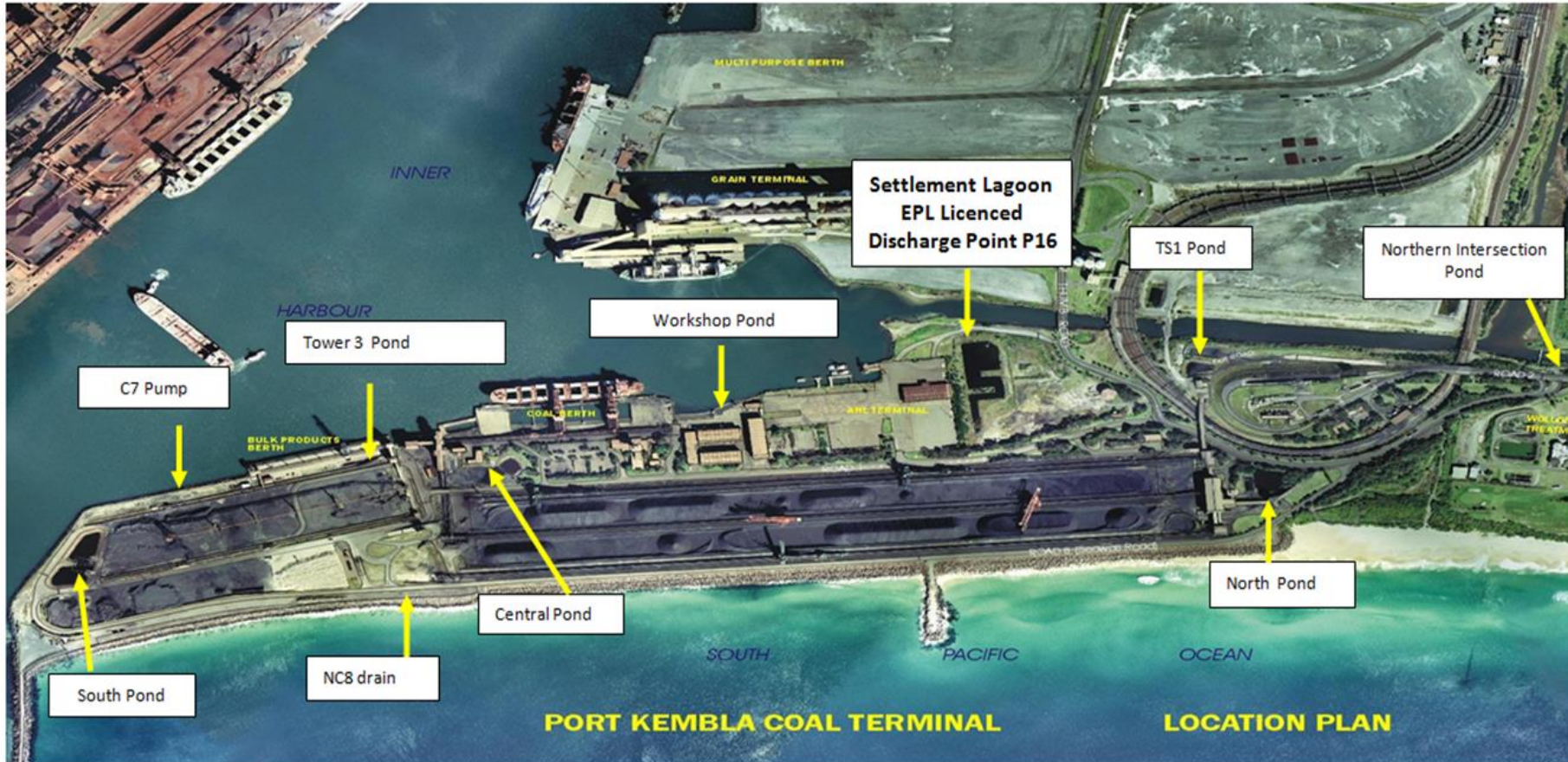


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PKCT Sedimentation Pond Overflows - EPL 1625							
Ponds location/names: TS1 pond: DP22, Central Pond: DP23, Tower 3 pond: DP24, South Pond: DP25, Workshop Pond DP26.							
Type of Monitoring: Water quality							
Frequency: Daily when discharging							
Sample Location	Sample Date	Date Results Obtained	Date Results Published	pH (pH units) Criteria: Monitoring only	Total Suspended Solids (milligrams per litre) Criteria: Monitoring only	Oil/ Grease (milligrams per litre) Criteria: Monitoring only	Commentary on Results
Central Pond: DP23	03/03/2017	16/03/2017	19/06/2017	8.2	450	Not visible	No equipment failures, sediment level within licence limits. Overflow as a result of excessive rain event. Overflow permitted under EPL conditions
Central Pond: DP23	16/03/2017	25/03/2017	19/06/2017	8.5	2100	Not visible	No equipment failures, sediment level within licence limits. Overflow as a result of excessive rain event. Overflow permitted under EPL conditions
South Pond: DP25	16/03/2017	25/03/2017	19/06/2017	8.6	770	Not visible	No equipment failures, sediment level within licence limits. Overflow as a result of excessive rain event. Overflow permitted under EPL conditions

Water Collection System- Aerial View



Nb South, Tower 3, Central, Workshop, North, TS1 pond and C7 pump collect site runoff for transfer to the settlement lagoon for treatment, reuse and harbour discharge.

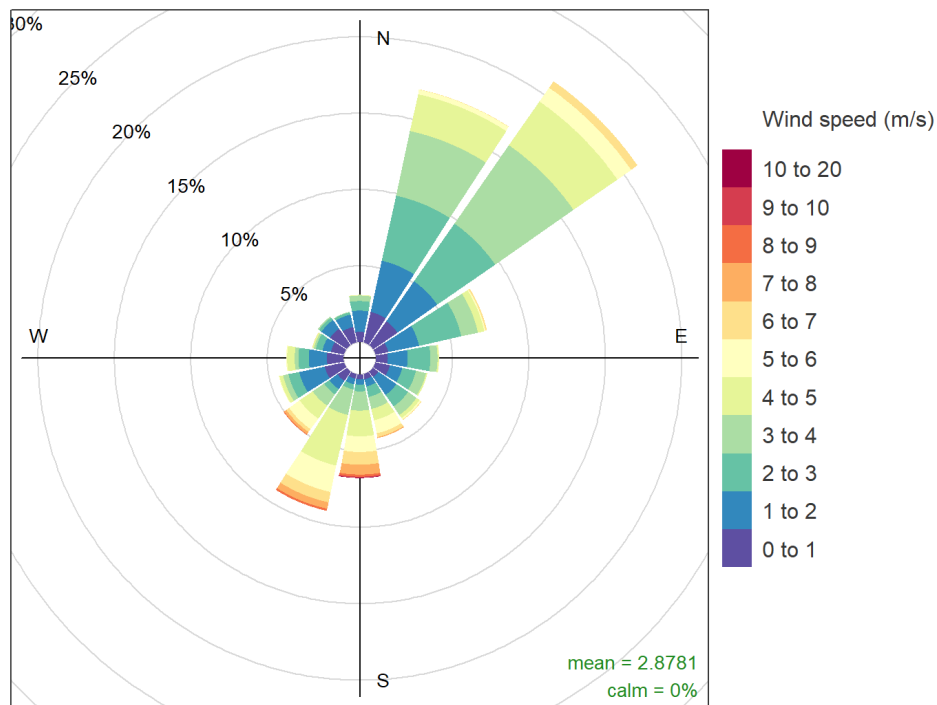


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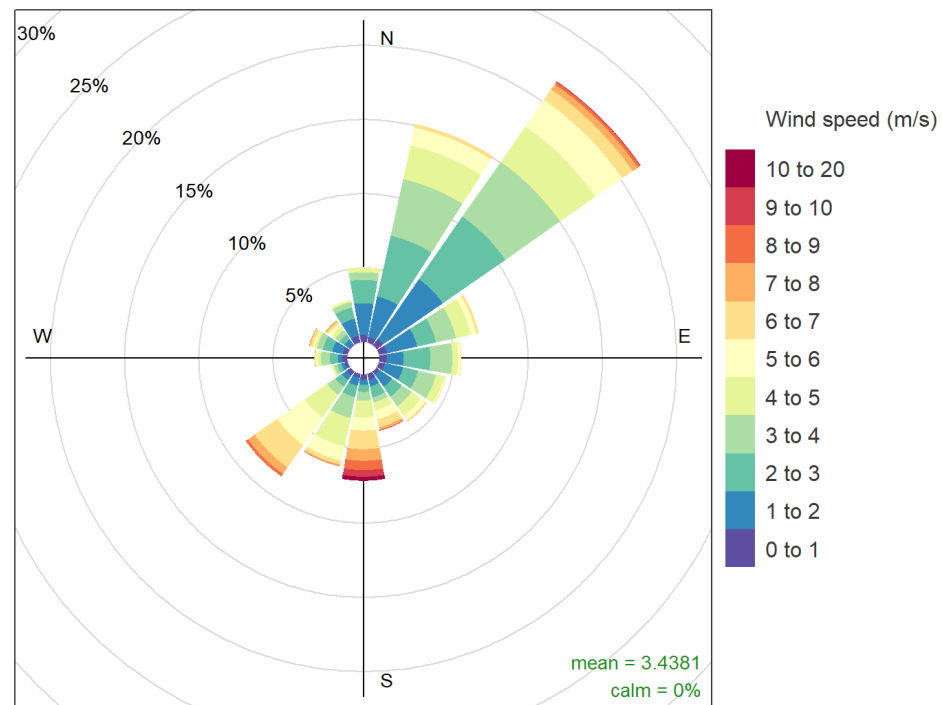
WIND ROSES – December 2017

Northern monitor



Frequency of counts by wind direction (%)

Southern monitor



Frequency of counts by wind direction (%)



PORT KEMBLA COAL TERMINAL LTD.



RAINFALL (PKCT site gauge)

