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Project: Kerosene Vale Ash Repository Stage 2

Ongoing operational noise measurements

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1. Introduction

Aurecon was engaged by EnergyAustralia NSW to carry out ongoing operational noise monitoring for the Kerosene Vale Stage 2 Ash Repository (KVAR) located in Wallerawang, NSW. The noise measurements were carried out on Sunday 30th March and Monday 31st March 2014, during the early morning and evening periods as per the requirements outlined in the KVAR Stage 2 Operations, Operational Noise and Vibration Management Plan (ONVMP).

1.1 Site details

The project site consists of an Ash Repository which services the nearby Wallerawang Power Station (WPS). The major noise emissions associated with the Stage 2 KVAR works are:

- Unloading of ash from trucks at the repository.
- Placement and handling of ash at the repository site.
- Operation of trucks on the private haulage road; this includes trucks leaving WPS loaded with ash (travelling north) and returning from the repository empty (travelling south)

Figure 1 shows the site layout and location of sensitive receivers relative to the major noise sources including WPS as well as major roads in the area. Table 1 outlines the most affected sensitive receivers and their distance to the haulage road.

Table 1: Representative noise measurement locations

Representative sensitive receiver	Distance to haulage road (meters)*
60 Skelly Road	300
10 Skelly Road	270
21 Neubeck Street	145

Note * - distance relates to the property boundary or a point 30 m from the dwelling location

It should be noted that coal supply trucks also utilise the private haulage road. Their noise impacts are not considered to be part of the Stage 2 KVAR works and thus their noise impact is outside the scope of this report. On site it is extremely difficult to visually distinguish between coal supply trucks and ash trucks, therefore, for the purpose of prediction of noise emissions from ash trucks alone, EnergyAustralia NSW provides truck movement numbers during the assessment periods.

Figure 1 | Site details

2. Noise criteria

The applicable operational noise criteria are outlined in the Project Approval, Application No. 07_0005. The criteria are summarised in condition 2.15 as follows:

> *2.15 The cumulative operational noise from the ash placement area and ash haulage activity shall not exceed a* $L_{Aeq\ (15\ minute)}$ ***of 40 dBA*** *at the nearest most affected sensitive receiver during normal operating hours as defined in condition 2.8.*
>
> *This criterion applies under the following meteorological conditions:*
>
> *a) Wind speeds up to 3 m/s at 10 meters above ground; and/or*
> *b) Temperature inversion conditions of up to 3°C/100 m and source to receiver gradient winds of up to 2 m/s at 10 m above ground level*

Normal operating hours in accordance with Conditions 2.8 are 7:00 am to 10:00 pm Monday to Sunday.

3. Noise measurements

3.1 Measurement methodology

Two types of measurements were carried out at the site: ambient noise measurements and sound exposure level measurements. The measurements were carried out on Sunday 30th March and Monday 31st March 2014, during the early morning and evening periods, when the noise impacts are likely to be the most significant.

The ambient compliance noise measurements were conducted using a Larson Davis 831 Type 1 sound level meter which was set to 'A' frequency weighting, 'F' time weighting, and was fitted with an approved windshield. Measurements were typically taken at a height of 1.2 metres and at least 3.5 metres from any reflecting structure other than the ground.

The measurement period at each location consisted of 15 minutes. A Larson Davis CAL200 was utilised to calibrate all sound level meters before and after each series of measurements with no significant calibration drift noted.

The weather during the noise logging ranged from overcast to sunny conditions, and wind speeds less than 3m/s at ground level. Measurements were typically taken in accordance with the Australian Standard *AS 1055 1997: Acoustics – Description and measurement of environmental noise*.

Meteorological data was referenced from Blackmans Flat Weather station for the duration of noise survey to establish stability conditions and wind speeds at 10 metres above ground level.

The Sound Exposure Level (SEL) measurements were also carried out using the Larson Davis 831 Type 1 sound level meter. SEL is the equivalent one second A-weighted sound level which would produce the same sound energy as the actual event. The measurement was commenced when the truck was observed to pass a consistent location and stopped when the end of the truck passed a second consistent location. The reference locations were identified where the truck could be visually observed.

During both types of measurements no rain periods were experienced. Minimal wind was induced on the microphone with light breeze periods being significantly below the 3 m/s threshold.

3.2 Measurement locations

The measurement locations were chosen to represent the three most affected sensitive receivers as outlined in the Operational Noise and Vibration Management Plan (ONVMP). The three most affected receivers prior to commencement of the measurements were identified based on the information in the Stage 2 Kerosene Vale Ash Repository operational noise review.

Due to the increased background noise level at each of the three noise monitoring locations it was difficult to assess individual truck noise events. A fourth noise monitoring location shown in Appendix C and identified as Location D, was selected closer to the haulage route to measure individual truck pass-by events. Table 2 and Figure 2 outline the noise measurement locations.

Table 2: Representative noise measurement locations

Measurement location	Measurement distance to haulage road (meters)	Representative sensitive receiver
A	300	60 Skelly Road
B	270	10 Skelly Road
C	145	21 Neubeck Street
D	80	-

Figure 2 | Noise measurement locations

3.3 Operating and meteorological conditions

EnergyAustralia NSW has provided the following information regarding the operations during the noise survey.

- The ash silos normally operate at approximately 85% capacity.
- Trucks were operating during all measurement periods moving from north to south and visa-versa on the haulage road east of Skelly Road. The truck movements observed during the measurement period included ash trucks, small commercial vehicles and coal trucks. Trucks were operating at a constant rate, with approximate 15 - 20 minute circuits for each truck from 7am – 10pm.

The meteorological conditions during the noise survey based on meteorological data provided at 15 minute intervals from the Mt Piper weather station are shown in Appendix D.

3.4 Results

3.4.1 Noise measurements

The results from the 15 minute ambient noise measurements at each of the measurement locations are shown in Table 3.

Noise measurements were conducted on Sunday 30th March and Monday 31st March 2014 when normal operations of haulage trucks and haulage activity at the ash repository site was evident.

Table 3: Noise measurement results (15 minute)

Location	Date of measurement	Time	Sound pressure level (dBA)					Number of truck Pass-bys and direction of travel[1]		
			L_{Aeq}	L_{Amax}	L_{Amin}	L_{A10}	L_{A90}	North	South	Total
60 Skelly Road (A)	30/03/2014	8:51	45	72	33	46	35	2	2	4
		19:15	42	59	34	47	35	1	0	1
	31/03/2014	8:41	40	56	33	42	35	2	1	3
		20:24	39	68	34	39	35	0	0	0
10 Skelly Road (B)	30/03/2014	8:33	38	51	27	42	30	1	1	2
		18:50	49	60	31	53	34	0	0	0
	31/03/2014	8:24	48	68	34	49	37	1	1	2
		20:05	41	69	36	41	38	0	1	1
21 Neubeck Street (C)	30/03/2014	8:14	46	63	29	48	37	0	1	1
		18:30	50	63	44	51	48	0	1	1
	31/03/2014	8:04	45	63	30	47	34	1	1	2
		19:45	49	64	29	51	45	1	1	2

Note : 1 - Truck counts include ash trucks and light commercial trucks.

The measured $L_{Aeq\ (15\ min)}$ is generally in excess of the assessment criteria of $L_{Aeq\ (15\ min)}$ of 40 dBA. The high background noise levels at many of the measured locations were not entirely contributed by KVAR operations. This is due to high noise levels associated with local noise events such as bird noise and traffic noise levels from surrounding roads as well as some truck pass-bys along the haulage route.

3.4.2 SEL measurements

The individual truck pass-by noise event (SEL) measurements at Location D (approximately 80 meters from the haulage road) were conducted on 7th November 2011, 21st April 2013 and 31st March 2014. The results are summarised in Table 4. Number of actual truck pass-bys were counted during the 2 day survey and are summarised in Table 5 which will be used to predict the noise impact from the truck movement on the sensitive receivers. Based on the visual site inspection the grade (slope) of the haulage road rises from south to north. The trucks moving in the northerly direction on the haulage

road appear to rev the engine more compared to the trucks moving in the opposite direction and thereby producing a marginally higher SEL as evident in the results summarised in Table 4.

Table 4: SEL noise measurement results at Location D

Date	Truck travelling direction	Average event duration (sec)	Average SEL (dBA)	No. of valid truck event measurements
7/11/2011	South	28.9	68	8
	North	18.1	70	9
21/04/2013	South	24.0	67	5
	North	19.5	70	7
31/04/2014	South	27.7	69	2
	North	28.3	70	2

4. Noise assessment

General observation regarding the ambient noise environment as well as the truck movements and ash repository operations are described as follows. Individual truck noise levels varied significantly between trucks. The noise emissions from the trucks were dependant on their respective travelled speeds, driving techniques, truck load, air brakes and direction of travel. The noise variances were apparent even between the same types of vehicles. Truck pass-by numbers were higher during the morning period on both measurement days when compared to the evening truck counts. Operational noise from the Kerosene Vale Ash Repository site other than the truck movements was usually inaudible at the noise sensitive receiver locations during all the attended noise measurements.

The noise levels at all locations were affected by ambient noise sources such as bird/insects, domestic animals and domestic noise. Background noise was dominated by the hum from Wallerawang Power Station as well as intermittent traffic noise from nearby Castlereagh Highway and Wolgan Road. While there was significant background noise contribution from the activities mentioned above, truck engine noise was clearly audible at all the measurement locations during pass-bys.

4.1.1 Location A (60 Skelly Road)

The background noise contributions at Location A were predominantly from the traffic noise from Castlereagh Highway and distant traffic. Faint traffic noise from Wolgan Road was also audible. The haulage road was clearly visible from this location and the trucks moving on the haulage road could be easily identified with the noise from the truck engines moving on the haulage road clearly audible.

Noise from the coal train was evident on one occasion during the evening measurement on 31/04/2014. Noise from birds and insects also contributed to the ambient noise at this location.

The background noise level (L_{A90}) was observed to be consistent (35dBA) for all 4 measurements conducted at this location.

4.1.2 Location B (10 Skelly Road)

The background noise contributions at Location B were predominantly from birds/ insects/ animals and traffic on Wolgan Road and Skelly Road. Traffic noise from Wolgan Road and Skelly Road was clearly audible at this location. The haulage road was clearly visible from this measuring location and the trucks moving on the haulage road could be easily identified with the noise from the truck engine moving on the haulage road clearly audible.

In the absence of truck pass-bys. background noise measurements on the evening of 30/04/2014 was relatively high due to insect noise at the measurement location.

4.1.3 Location C (21 Neubeck Street)

The background noise contributions at Location C were predominantly from birds/insects/animals and distant traffic. Traffic noise from Wolgan Road was clearly audible and substantially contributed to the ambient noise levels. Faint Wallerawang Power Station hum was audible during the all the measurements. The trucks moving on the haulage road were not clearly visible from this location because of an earth mound and heavy vegetation blocking the line of sight, although the truck engine noise was clearly audible. Background noise (L_{A90}) during the Monday morning measurement was observed to be lower than rest of the measurements predominantly due to negligible traffic on the nearby roads.

Ambient and background noise levels were relatively high during the 15 minute measurement period on Sunday evening due to the presence of insect noise at the measurement location.

4.1.4 Location D

The noise data collected at Location D (Figure 2 and Appendix C) measured the SEL of individual truck pass-by events on 07/11/2011, 22/04/2013 and 31/04/2014. This closer location was closest to the truck haulage road and as such, each truck pass-by was the dominant noise source (clearly audible above other ambient noise sources).

Individual SEL measurements were undertaken for trucks moving on haulage road on 31/04/2014 and results summarised in Section 5.1.

5. Analysis and recommendations

5.1 Data analysis

As can be observed from the results presented in Table 3, the existing ambient noise levels $L_{Aeq\ (15\ min)}$ exceed the assessment criteria of $L_{Aeq\ (15\ min)}$ of 40 dBA on most of the occasions. The background noise (L_{A90}) from the various noise sources only exceeded the noise criteria of 40dBA on two occasions.

High background noise mainly from traffic moving on Wolgan Road and Castlereagh Highway appears to mask the noise contribution from the ash repository activities. This indicates that the noise emissions from the truck movements and ash repository cannot be assessed independently based merely on ambient noise measurements.

To assess the impact of the ash truck noise emissions, the influence of individual truck pass-by noise events have to be taken into account. Based on the SEL measurement results (shown in Table 4) and

the number of truck movements provided by EnergyAustralia NSW, an $LA_{eq\ (15\ min)}$) noise level was predicted, which takes into account the total number of truck pass-bys (including ash trucks and small commercial vehicles), and the distance of the noise source from the receiver. The assessment does include calculated barrier effect (- 2dBA) at Location C due to the earth mound (which blocks the line of sight between 21 Neubeck Street and the haulage road) located on the northern side of the site attenuating the noise from haulage road. Trucks were operating at a constant rate, with approximate 15-20 minute circuits for each truck. Table 5 provides a summary of truck pass-bys based on information collected during the site visits.

Table 5: Truck movement data

Periods	Information collected during site visit on 30-31 March 2014	
	Total number of trucks pass bys	Average number of trucks pass bys/ 15 minute
Morning 30/03/2014	7	2.3
Evening 30/03/2014	2	0.7
Morning 31/03/2014	7	**2.3**#
Evening 31/03/2014	3	1.0

Note: Figure in **bold** is the worst-case truck movement (most frequent) used to predict the noise contribution from the truck movements (shown in Table 6)

Maximum number of truck pass- bys as per information collected during the site visit.

As shown in Table 5, the maximum number of truck pass-bys was during the morning period on both 30/03/2014 and 31/03/2014. The lowest truck pass-bys was during the evening period on 30/03/2014. The noise emissions from the ash repository are considered to be below the assessment criteria as they were predominantly inaudible during the noise survey and could not be distinguished.

Table 6 provides the noise predictions from haulage trucks alone at the nearest sensitive receivers based on SEL measurements. The prediction is calculated from the movement of ash trucks based on the worst case scenario (i.e. 2.3 truck pass bys during any 15 minute period).

Table 6: Noise predictions from truck movements based on SEL measurements

Sensitive receiver	Distance to haulage road (m)	No. of average truck movements per 15min	Predicted $L_{Aeq\ (15\ min)}$ (dBA)	Criteria $L_{Aeq\ (15\ min)}$ (dBA
60 Skelly Road	300	2.3	32	40
10 Skelly Road	270	2.3	33	40
21 Neubeck Street	145	2.3	37*	40

Note * - Include calculated barrier attenuation (-2dBA) provided by the earth mound blocking direct line of sight between the residence and haulage road.

It can be seen from the above results that the predicted $L_{Aeq\ (15\ min)}$ noise emissions based on the SEL measurements satisfy the required assessment criteria. Therefore the operational noise emissions from the Stage 2 KVAR are considered compliant with the Conditions of Approval.

5.2 Recommendations

During the site visit it was observed that the truck pass-by time (time taken by one truck to cross an arbitrary reference location twice on the haulage road) ranged between 7.5 – 8 minutes during peak operating time. This equates to a total of 4 truck pass-bys in a 15 minute period if two trucks are operating on the haulage road.

As noticed during the previous noise predictions conducted for KVAR, approximately ~4 truck movements is the absolute maximum before the predicted noise contribution exceeds the criterion at 21 Neubeck Street (Location C). Therefore it is recommended that four or less truck pass-by events ≤ 4 for any 15 minute period during the operations of haulage trucks is maintained.

6. Conclusion

Aurecon conducted ongoing operational noise monitoring for the Kerosene Vale Stage 2 Ash Repository (KVAR) located in Wallerawang, NSW. The noise measurements were carried out at the three most affected sensitive receiver locations on Sunday 30th March and Monday 31st March 2014. The assessment criteria are outlined in the Project Approval, Application No. 07_0005, with a criteria of $L_{Aeq\ (15\ minute)}$ of 40 dBA from all ash haulage and placement associated operational noise emissions at the nearest sensitive receivers.

The primary contributor to the background and ambient noise levels at all survey locations was the traffic noise on roads other than haulage road. The noise contribution from KVAR Stage 2 activities alone could not be determined based on ambient noise measurements due to contamination from other ambient noises.

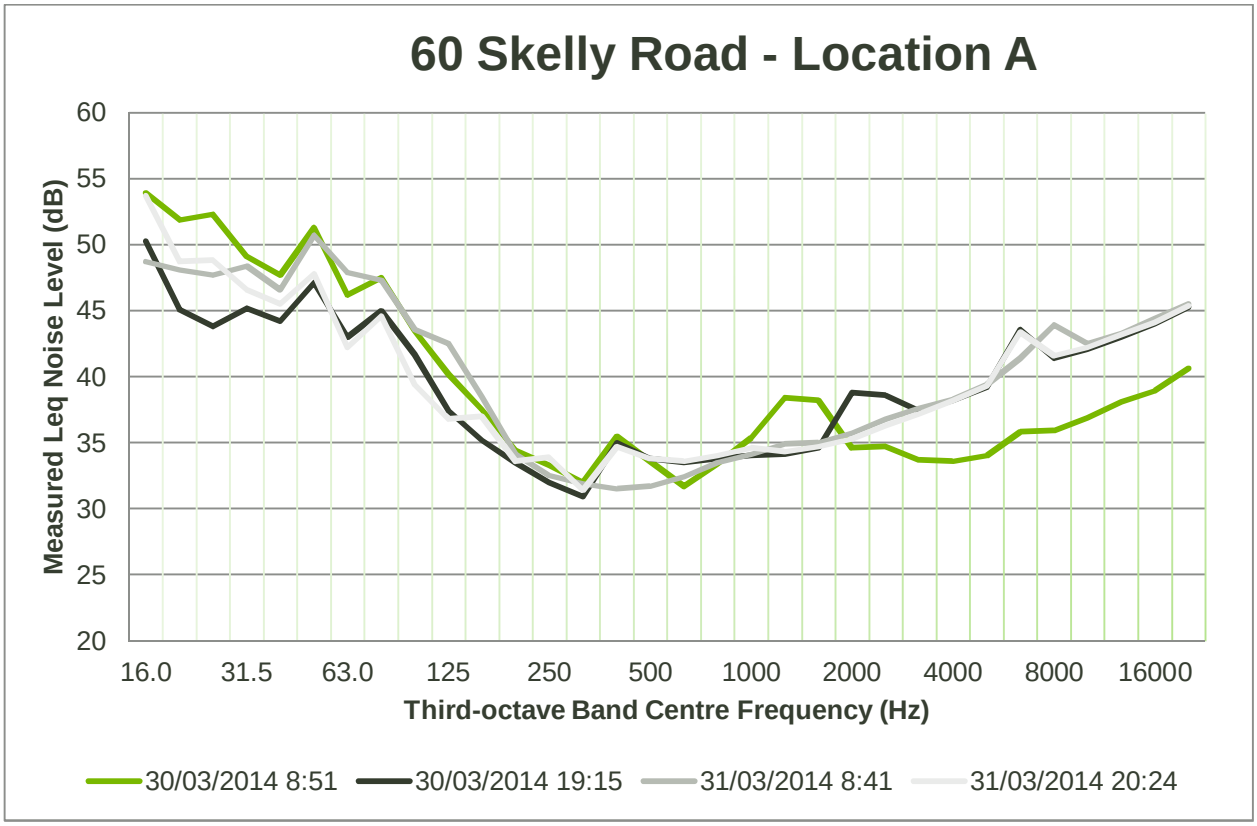
Additional SEL measurements of individual truck pass-by events at a closer distance to the truck haulage road were carried out on 31st March 2014. Based on the SEL measurement results and observations of truck movements on site, a $L_{Aeq\ (15\ min)}$ noise level was predicted at each of the assessment sensitive noise receivers. The predicted noise levels took into account ash trucks and light commercial vehicle movement associated with Stage 2 KVAR works and distance of the noise source from the receivers. The predicted noise level at each of the noise receivers showed compliance with assessment criteria, thus the operational noise emissions from the Stage 2 KVAR are considered compliant with the Conditions of Approval.

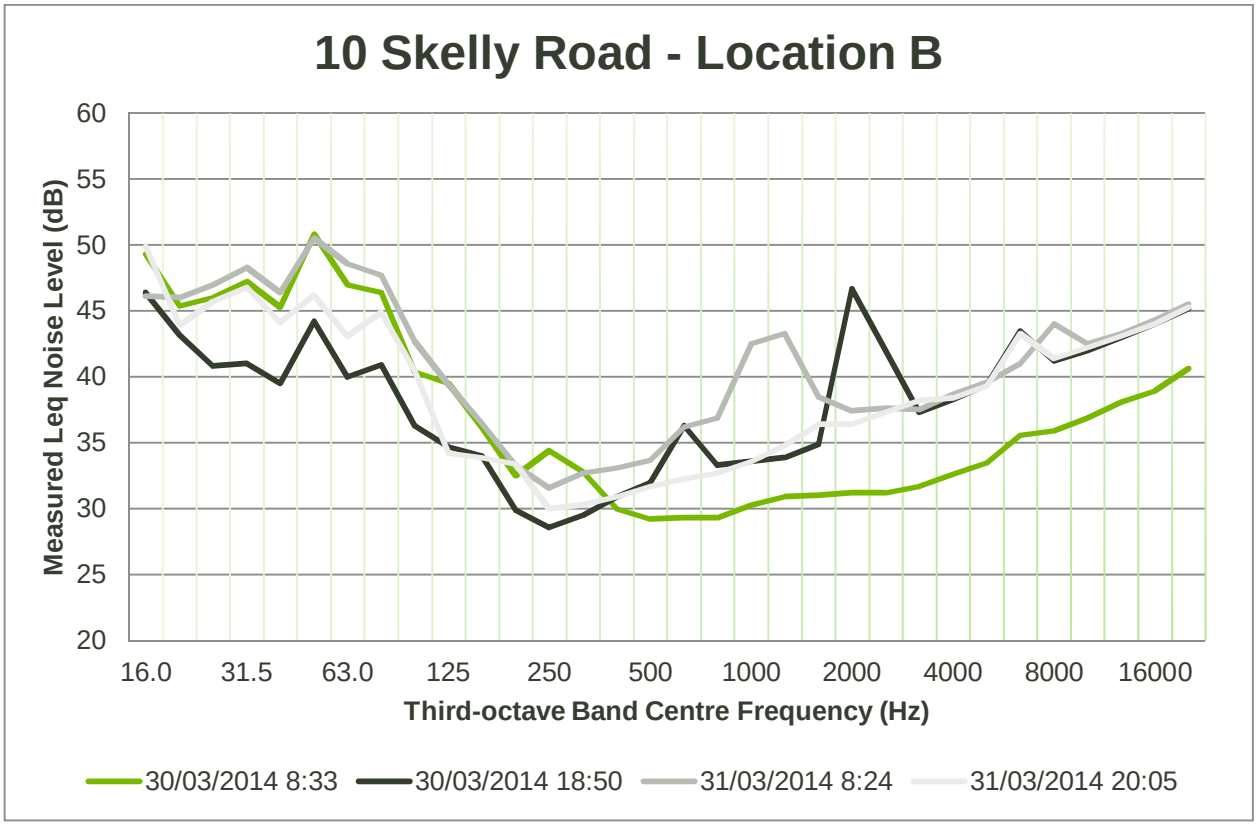
7. References

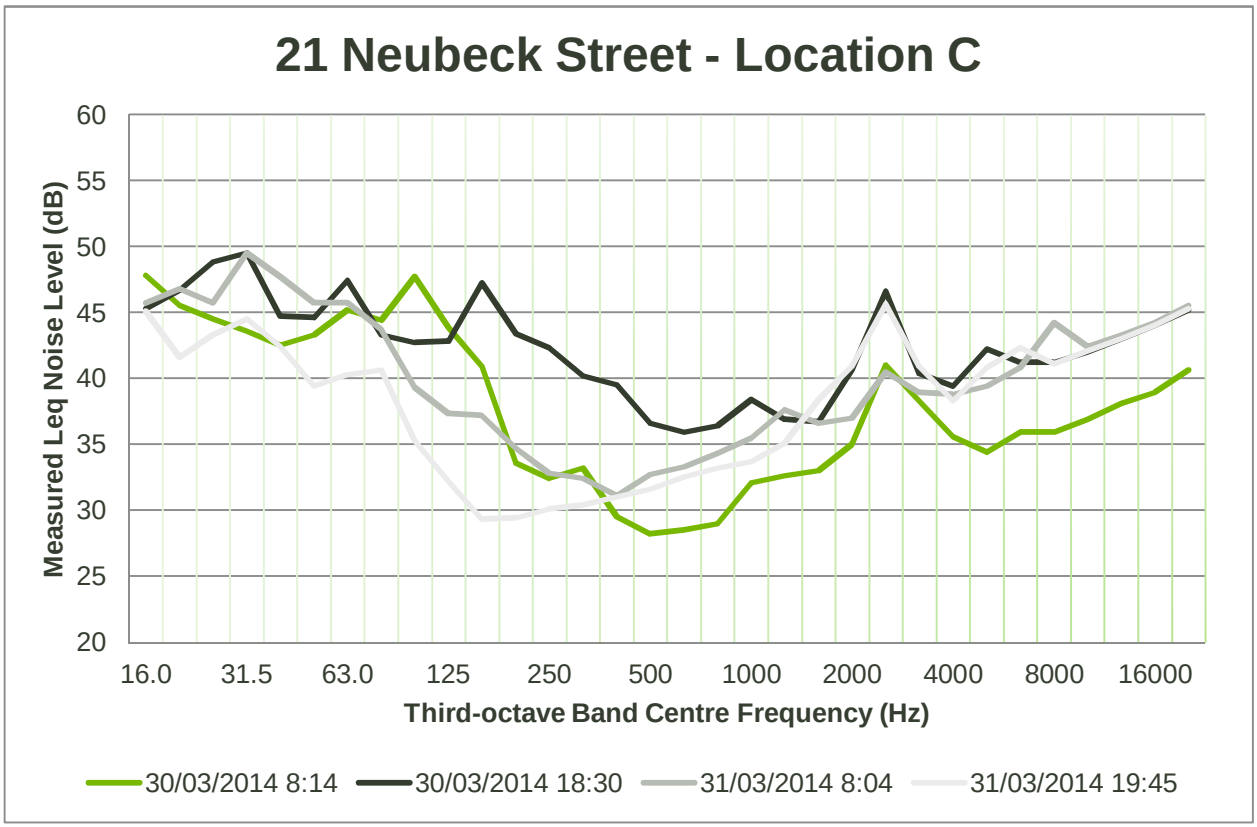
- Kerosene Vale Stage 2 Ash Repository, Operational Environmental Management Plan (OEMP), Parsons Brinckerhoff, April 2009, which includes:
  - Appendix A: KVAR Stage 2 Operations, Operational Noise and Vibration Management Plan (ONVMP), Parsons Brinckerhoff, April 2009
- Project Approval (PA), Application: No 07_0005, Delta Electricity, 26 November 2008, Department of Planning
- Stage 2 Kerosene Vale Ash Repository operational noise review, Parsons Brinckerhoff, September 2009.
- Office of Environment & Heritage (OEH) *Interim Construction Noise Guideline (ICNG).*
- Office of Environment & Heritage (OEH) *Industrial Noise Policy (INP)*.
- Australian Standard *AS 1055 1997: Acoustics – Description and measurement of environmental noise*.

Appendix A

Measured noise spectra


60 Skelly Road - Location A
Measured Leq Noise Level (dB)
60
55
50
45
40
35
30
25
20
16.0
31.5
63.0
125
250
500
1000
2000
4000
8000
16000
Third-octave Band Centre Frequency (Hz)
30/03/2014 8:51
30/03/2014 19:15
31/03/2014 8:41
31/03/2014 20:24


10 Skelly Road - Location B
Measured Leq Noise Level (dB)
60
55
50
45
40
35
30
25
20
16.0
31.5
63.0
125
250
500
1000
2000
4000
8000
16000
Third-octave Band Centre Frequency (Hz)
30/03/2014 8:33
30/03/2014 18:50
31/03/2014 8:24
31/03/2014 20:05


21 Neubeck Street - Location C
Measured Leq Noise Level (dB)
60
55
50
45
40
35
30
25
20
16.0
31.5
63.0
125
250
500
1000
2000
4000
8000
16000
Third-octave Band Centre Frequency (Hz)
30/03/2014 8:14
30/03/2014 18:30
31/03/2014 8:04
31/03/2014 19:45

Appendix B
Glossary of terms

Term	Definition
Sound Pressure Level	Sound or noise is the sensation produced at the ear by very small fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range (from 20 microPascals to 60 Pascals). A scale that compresses this range to a more manageable size and that is best matched to subjective response is the logarithmic scale, rather than a linear scale.
Sound Pressure Level (Lp)	Is defined as: $L_P = 10 \log_{10}\left(\frac{p^2}{p_{ref}^2}\right) dB$ In the above equation, p is the sound pressure fluctuation (above or below atmospheric pressure), and p_{ref} is 20 microPascals (2×10^{-5} Pa), the approximate threshold of hearing. To avoid a scale which is too compressed, a factor of 10 is included, giving rise to the decibel, or dB for short.
A-Weighted Decibel (dB(A)) & Loudness	In some circumstances, the sound pressure level is expressed as C-Weighted decibels, instead of the more common A-Weighted. The C-Weighting filter is designed to replicate the response of the human ear above 85 dB, and places a greater weighting on low frequency noise.
L_{Aeq}	The time averaged C-weighted sound pressure level for a time interval, as defined in AS1055.1. It is generally described as the equivalent continuous C-weighted sound pressure level that has the same mean square pressure level as a sound that varies over time. It can be considered as the average sound pressure level over the measurement period.
L_{Ceq}	The time averaged C-weighted sound pressure level for a time interval, as defined in AS1055.1. It is generally described as the equivalent continuous C-weighted sound pressure level that has the same mean square pressure level as a sound that varies over time. It can be considered as the average sound pressure level over the measurement period.
L_{An}	The sound level, which, for a specified time interval, in relation to an investigation of a noise, means the A-weighted sound pressure level that is equalled or exceeded for n% of the interval. Commonly used percentages are 1, 10, 90 & 99%.
L_{Cpk}	The peak C-weighted sound pressure level for a time interval.

$L_{Cmax,T}$	The average maximum C-weighted sound pressure level, which, for the specified time interval, means the C-weighted sound pressure level during the interval obtained by using the fast time weighting and arithmetically averaging the maximum sound levels of the noise during the interval. Under certain conditions the 10th percentile noise level, $L_{C10,T}$, can represent the average maximum C-weighted sound pressure level.
L_{A10}	A-weighted noise level which is exceeded for only 10% of the measuring period. It is usually used as the descriptor for intrusive noise level and represents ambient road traffic noise in general.
L_{A90}	A-weighted noise level which is exceeded for 90% of the measuring period. It is usually used as the descriptor for background noise level during the measurement period.
L_{Amin}	Minimum A-weighted noise level detected during the measuring period. It refers to the minimum background noise detected.
Octave	Frequency bands allow a representation of the spectrum associated with a particular noise. They are an octave wide, meaning that the highest frequency in the band is just twice the lowest frequency, with all intermediate frequencies included and all other frequencies excluded. Each octave band is described by its centre frequency.
Maximum Exposure Time (Hours)	The maximum possible time a person can be safely exposed to a specific noise level (L_{Aeq}).
Sound Exposure Level (SEL)	Sound exposure level abbreviated as SEL and L_{AE}, is the total noise energy produced from a single noise event. The Sound Exposure Level is a metric used to describe the amount of noise from an event such as an individual aircraft flyover. It is computed from measured dBA sound levels. The Sound Exposure Level is the integration of all the acoustic energy contained within the event.

Appendix C
Site photograph

Figure 3 | Location D

Appendix D
Weather data

Table 7: Meteorological conditions during noise survey

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	8:00	0.0	1.3	230	14.7
30/03/2014	8:05	0.0	0.4	244	14.8
30/03/2014	8:10	0.0	0.5	341	14.9
30/03/2014	8:15	0.0	0.2	102	15.0
30/03/2014	8:20	0.0	0.4	220	15.1
30/03/2014	8:25	0.0	0.7	210	15.4
30/03/2014	8:30	0.0	0.8	177	15.6
30/03/2014	8:35	0.0	0.4	222	15.7
30/03/2014	8:40	0.0	0.8	271	15.8
30/03/2014	8:45	0.0	0.5	292	16.0
30/03/2014	8:50	0.0	1.0	270	16.2
30/03/2014	8:55	0.0	1.1	237	16.3
30/03/2014	9:00	0.0	0.8	202	16.5
30/03/2014	9:05	0.0	0.7	146	16.8
30/03/2014	9:10	0.0	0.2	177	17.1
30/03/2014	9:15	0.0	0.4	98	17.4
30/03/2014	9:20	0.0	1.1	203	17.3
30/03/2014	9:25	0.0	0.7	177	17.3
30/03/2014	9:30	0.0	1.4	124	17.6
30/03/2014	9:35	0.0	1.5	123	17.7
30/03/2014	9:40	0.0	0.9	153	17.9
30/03/2014	9:45	0.0	1.0	133	18.3
30/03/2014	9:50	0.0	1.1	131	18.3
30/03/2014	9:55	0.0	0.8	181	18.6
30/03/2014	10:00	0.0	0.4	218	19.1

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	10:05	0.0	1.2	30	19.2
30/03/2014	10:10	0.0	0.5	79	19.9
30/03/2014	10:15	0.0	1.1	114	20.1
30/03/2014	10:20	0.0	0.9	77	20.1
30/03/2014	10:25	0.0	1.3	34	19.3
30/03/2014	10:30	0.0	0.3	157	19.6
30/03/2014	10:35	0.0	0.8	149	19.5
30/03/2014	10:40	0.0	0.9	148	19.5
30/03/2014	10:45	0.0	0.7	116	19.8
30/03/2014	10:50	0.0	1.0	13	20.0
30/03/2014	10:55	0.0	1.2	127	19.7
30/03/2014	11:00	0.0	1.4	124	19.5
30/03/2014	11:05	0.0	1.2	195	19.7
30/03/2014	11:10	0.0	0.7	195	20.3
30/03/2014	11:15	0.0	1.0	294	20.0
30/03/2014	11:20	0.0	1.8	248	19.1
30/03/2014	11:25	0.0	1.4	263	18.6
30/03/2014	11:30	0.0	0.9	244	18.5
30/03/2014	11:35	0.0	0.7	180	18.6
30/03/2014	11:40	0.0	0.2	261	19.0
30/03/2014	11:45	0.0	0.4	56	19.9
30/03/2014	11:50	0.0	1.3	226	19.8
30/03/2014	11:55	0.0	0.7	194	19.7
30/03/2014	12:00	0.0	0.7	77	19.8
30/03/2014	12:05	0.0	0.9	83	19.7
30/03/2014	12:10	0.0	0.5	128	20.2
30/03/2014	12:15	0.0	0.6	130	20.5
30/03/2014	12:20	0.0	0.3	13	20.7
30/03/2014	12:25	0.0	1.0	325	20.7
30/03/2014	12:30	0.0	0.6	286	20.4
30/03/2014	12:35	0.0	1.4	230	20.2
30/03/2014	12:40	0.0	1.3	179	20.1
30/03/2014	12:45	0.0	0.8	166	20.2
30/03/2014	12:50	0.0	0.3	40	20.6
30/03/2014	12:55	0.0	0.4	99	21.3
30/03/2014	13:00	0.0	1.1	41	21.7

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	13:05	0.0	1.7	21	21.8
30/03/2014	13:10	0.0	1.4	11	22.0
30/03/2014	13:15	0.2	1.4	15	22.1
30/03/2014	13:20	0.0	1.6	19	22.3
30/03/2014	13:25	0.0	1.3	5	22.4
30/03/2014	13:30	0.0	1.8	25	22.0
30/03/2014	13:35	0.0	1.5	3	22.0
30/03/2014	13:40	0.0	1.6	346	22.2
30/03/2014	13:45	0.0	1.3	321	22.1
30/03/2014	13:50	0.0	1.3	326	21.6
30/03/2014	13:55	0.0	1.2	304	21.6
30/03/2014	14:00	0.0	1.6	357	21.7
30/03/2014	14:05	0.0	2.1	10	21.7
30/03/2014	14:10	0.0	1.7	10	21.8
30/03/2014	14:15	0.0	1.2	340	22.1
30/03/2014	14:20	0.0	1.5	346	22.4
30/03/2014	14:25	0.0	1.9	316	22.3
30/03/2014	14:30	0.0	3.0	326	22.3
30/03/2014	14:35	0.0	2.2	335	22.0
30/03/2014	14:40	0.0	2.5	336	22.1
30/03/2014	14:45	0.0	3.1	347	22.0
30/03/2014	14:50	0.0	2.8	333	22.0
30/03/2014	14:55	0.0	2.2	328	22.0
30/03/2014	15:00	0.0	2.9	342	22.2
30/03/2014	15:05	0.0	2.6	350	22.1
30/03/2014	15:10	0.0	3.1	358	22.0
30/03/2014	15:15	0.0	2.6	343	22.0
30/03/2014	15:20	0.0	2.6	343	21.9
30/03/2014	15:25	0.0	3.0	354	21.9
30/03/2014	15:30	0.0	2.4	349	21.9
30/03/2014	15:35	0.0	2.4	349	22.2
30/03/2014	15:40	0.0	2.7	327	22.2
30/03/2014	15:45	0.0	1.8	350	22.1
30/03/2014	15:50	0.0	1.4	10	22.4
30/03/2014	15:55	0.0	1.1	337	22.7
30/03/2014	16:00	0.0	1.1	6	23.0

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	16:05	0.0	1.0	320	22.8
30/03/2014	16:10	0.0	0.7	131	22.8
30/03/2014	16:15	0.0	1.3	125	22.5
30/03/2014	16:20	0.0	2.1	75	21.3
30/03/2014	16:25	0.0	1.6	104	20.4
30/03/2014	16:30	0.0	1.1	92	20.0
30/03/2014	16:35	0.0	1.9	113	19.7
30/03/2014	16:40	0.0	2.1	140	19.5
30/03/2014	16:45	0.0	1.6	158	19.4
30/03/2014	16:50	0.0	1.4	145	19.4
30/03/2014	16:55	0.0	1.8	156	19.4
30/03/2014	17:00	0.0	2.4	142	19.3
30/03/2014	17:05	0.0	2.9	132	19.1
30/03/2014	17:10	0.0	3.3	141	18.9
30/03/2014	17:15	0.0	2.7	144	18.7
30/03/2014	17:20	0.0	1.3	139	18.6
30/03/2014	17:25	0.0	0.5	103	18.6
30/03/2014	17:30	0.0	1.0	139	18.6
30/03/2014	17:35	0.0	2.9	131	18.5
30/03/2014	17:40	0.0	2.5	120	18.3
30/03/2014	17:45	0.0	2.2	130	18.3
30/03/2014	17:50	0.0	2.0	129	18.3
30/03/2014	17:55	0.0	1.5	129	18.2
30/03/2014	18:00	0.0	0.3	313	18.2
30/03/2014	18:05	0.0	0.5	290	18.1
30/03/2014	18:10	0.0	0.4	9	18.1
30/03/2014	18:15	0.0	0.9	70	18.0
30/03/2014	18:20	0.0	1.0	19	17.9
30/03/2014	18:25	0.0	0.7	6	17.8
30/03/2014	18:30	0.0	0.7	317	17.7
30/03/2014	18:35	0.0	0.9	48	17.5
30/03/2014	18:40	0.0	1.0	10	17.4
30/03/2014	18:45	0.0	1.0	41	17.3
30/03/2014	18:50	0.0	0.9	33	17.2
30/03/2014	18:55	0.0	0.9	66	17.1
30/03/2014	19:00	0.0	1.2	22	17.1

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	19:05	0.0	1.5	36	17.0
30/03/2014	19:10	0.0	1.2	16	16.9
30/03/2014	19:15	0.0	1.4	24	16.8
30/03/2014	19:20	0.0	1.1	9	16.6
30/03/2014	19:25	0.0	0.6	14	16.5
30/03/2014	19:30	0.0	0.5	89	16.4
30/03/2014	19:35	0.0	1.7	118	16.4
30/03/2014	19:40	0.0	1.0	95	16.5
30/03/2014	19:45	0.0	0.6	0	16.5
30/03/2014	19:50	0.0	1.0	245	16.4
30/03/2014	19:55	0.0	1.1	202	16.5
30/03/2014	20:00	0.0	0.7	172	16.4
30/03/2014	20:05	0.0	0.5	319	16.3
30/03/2014	20:10	0.0	0.9	272	16.3
30/03/2014	20:15	0.0	0.4	306	16.3
30/03/2014	20:20	0.0	0.6	120	16.2
30/03/2014	20:25	0.0	0.4	106	16.3
30/03/2014	20:30	0.0	0.9	99	16.4
30/03/2014	20:35	0.0	1.8	126	16.5
30/03/2014	20:40	0.0	1.1	142	16.4
30/03/2014	20:45	0.0	0.6	169	16.3
30/03/2014	20:50	0.0	0.9	229	16.3
30/03/2014	20:55	0.0	0.3	295	16.3
30/03/2014	21:00	0.0	0.2	150	16.2
30/03/2014	21:05	0.0	0.3	155	16.2
30/03/2014	21:10	0.0	0.7	176	16.2
30/03/2014	21:15	0.0	1.4	156	16.1
30/03/2014	21:20	0.0	1.3	156	16.2
30/03/2014	21:25	0.0	1.6	155	16.1
30/03/2014	21:30	0.0	1.9	145	16.1
30/03/2014	21:35	0.0	2.8	154	16.1
30/03/2014	21:40	0.0	2.5	159	16.0
30/03/2014	21:45	0.0	1.6	176	16.0
30/03/2014	21:50	0.0	2.1	175	15.9
30/03/2014	21:55	0.0	1.1	174	15.7
30/03/2014	22:00	0.0	1.0	166	15.6

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
30/03/2014	22:05	0.0	1.3	171	15.6
30/03/2014	22:10	0.0	1.3	147	15.5
30/03/2014	22:15	0.0	1.9	133	15.3
30/03/2014	22:20	0.0	0.6	85	15.2
30/03/2014	22:25	0.0	1.3	141	15.1
30/03/2014	22:30	0.0	1.5	140	14.9
30/03/2014	22:35	0.0	1.8	136	14.7
30/03/2014	22:40	0.0	2.0	137	14.4
30/03/2014	22:45	0.0	1.7	132	14.3
30/03/2014	22:50	0.0	1.1	133	14.2
30/03/2014	22:55	0.0	1.3	140	14.1
30/03/2014	23:00	0.0	1.0	125	14.1
30/03/2014	23:05	0.0	1.0	140	14.0
30/03/2014	23:10	0.0	0.9	111	13.9
30/03/2014	23:15	0.0	0.3	64	13.8
30/03/2014	23:20	0.0	0.5	149	13.7
30/03/2014	23:25	0.0	0.6	53	13.7
30/03/2014	23:30	0.0	1.4	21	13.7
30/03/2014	23:35	0.0	1.5	33	13.8
30/03/2014	23:40	0.0	1.4	45	13.9
30/03/2014	23:45	0.0	1.2	23	13.9
30/03/2014	23:50	0.0	1.7	26	14.0
30/03/2014	23:55	0.0	1.3	9	13.9
31/03/2014	0:00	0.0	0.8	349	13.9
31/03/2014	0:05	0.0	0.6	17	13.8
31/03/2014	0:10	0.0	0.3	174	13.7
31/03/2014	0:15	0.0	0.8	196	13.7
31/03/2014	0:20	0.0	0.5	144	13.8
31/03/2014	0:25	0.0	0.4	46	13.8
31/03/2014	0:30	0.0	0.4	152	13.9
31/03/2014	0:35	0.0	1.4	103	14.0
31/03/2014	0:40	0.0	1.7	128	14.0
31/03/2014	0:45	0.0	1.3	139	13.9
31/03/2014	0:50	0.0	1.3	109	13.8
31/03/2014	0:55	0.0	0.8	40	13.9
31/03/2014	1:00	0.0	0.8	60	13.9

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	1:05	0.0	0.3	150	13.9
31/03/2014	1:10	0.0	1.0	119	13.9
31/03/2014	1:15	0.0	0.9	120	13.9
31/03/2014	1:20	0.0	0.3	190	13.8
31/03/2014	1:25	0.0	0.3	133	13.9
31/03/2014	1:30	0.0	0.7	108	13.9
31/03/2014	1:35	0.0	0.7	69	13.8
31/03/2014	1:40	0.0	0.4	61	13.9
31/03/2014	1:45	0.0	0.5	151	13.9
31/03/2014	1:50	0.0	0.5	166	13.9
31/03/2014	1:55	0.0	0.1	165	14.0
31/03/2014	2:00	0.0	0.3	234	13.9
31/03/2014	2:05	0.0	0.4	276	13.9
31/03/2014	2:10	0.0	0.8	297	14.0
31/03/2014	2:15	0.0	0.8	267	13.9
31/03/2014	2:20	0.0	0.6	251	13.9
31/03/2014	2:25	0.0	0.5	252	13.9
31/03/2014	2:30	0.0	0.3	284	13.8
31/03/2014	2:35	0.0	0.2	288	13.8
31/03/2014	2:40	0.0	0.1	266	13.7
31/03/2014	2:45	0.0	0.3	118	13.6
31/03/2014	2:50	0.0	0.1	206	13.5
31/03/2014	2:55	0.0	0.9	253	13.2
31/03/2014	3:00	0.0	1.0	255	12.9
31/03/2014	3:05	0.0	1.0	264	12.7
31/03/2014	3:10	0.0	1.2	270	12.5
31/03/2014	3:15	0.0	1.1	286	12.3
31/03/2014	3:20	0.0	0.7	256	12.1
31/03/2014	3:25	0.0	1.1	242	11.9
31/03/2014	3:30	0.0	1.1	261	11.9
31/03/2014	3:35	0.0	1.0	247	11.8
31/03/2014	3:40	0.0	1.0	235	11.7
31/03/2014	3:45	0.0	1.2	227	11.7
31/03/2014	3:50	0.0	1.0	236	11.5
31/03/2014	3:55	0.0	1.1	231	11.4
31/03/2014	4:00	0.0	0.9	273	11.3

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	4:05	0.0	0.9	252	11.1
31/03/2014	4:10	0.0	1.0	278	11.1
31/03/2014	4:15	0.0	1.0	271	10.9
31/03/2014	4:20	0.0	0.8	232	10.8
31/03/2014	4:25	0.0	0.6	243	10.8
31/03/2014	4:30	0.0	1.0	237	10.7
31/03/2014	4:35	0.0	1.2	249	10.5
31/03/2014	4:40	0.0	1.1	254	10.4
31/03/2014	4:45	0.0	1.0	250	10.4
31/03/2014	4:50	0.0	1.1	262	10.4
31/03/2014	4:55	0.0	1.1	274	10.4
31/03/2014	5:00	0.0	0.6	308	10.5
31/03/2014	5:05	0.0	0.2	307	10.6
31/03/2014	5:10	0.0	0.5	6	10.8
31/03/2014	5:15	0.0	0.6	245	11.0
31/03/2014	5:20	0.0	0.6	281	11.2
31/03/2014	5:25	0.0	0.6	347	11.4
31/03/2014	5:30	0.0	0.7	4	11.5
31/03/2014	5:35	0.0	1.3	18	11.7
31/03/2014	5:40	0.0	1.2	13	12.0
31/03/2014	5:45	0.0	1.0	14	12.1
31/03/2014	5:50	0.0	1.2	354	12.2
31/03/2014	5:55	0.0	0.7	335	12.3
31/03/2014	6:00	0.0	1.0	333	12.4
31/03/2014	6:05	0.0	1.1	352	12.4
31/03/2014	6:10	0.0	1.7	352	12.5
31/03/2014	6:15	0.0	2.2	352	12.6
31/03/2014	6:20	0.0	1.9	5	12.6
31/03/2014	6:25	0.0	2.1	7	12.6
31/03/2014	6:30	0.0	1.9	19	12.7
31/03/2014	6:35	0.0	1.9	357	12.9
31/03/2014	6:40	0.0	1.7	344	13.0
31/03/2014	6:45	0.0	1.7	357	13.0
31/03/2014	6:50	0.0	1.3	348	13.1
31/03/2014	6:55	0.0	1.2	19	13.1
31/03/2014	7:00	0.0	1.6	46	13.1

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	7:05	0.0	1.5	40	13.2
31/03/2014	7:10	0.0	1.8	31	13.2
31/03/2014	7:15	0.0	1.3	6	13.2
31/03/2014	7:20	0.0	1.5	357	13.3
31/03/2014	7:25	0.0	1.6	15	13.3
31/03/2014	7:30	0.0	1.4	358	13.4
31/03/2014	7:35	0.0	1.4	13	13.4
31/03/2014	7:40	0.0	1.3	42	13.5
31/03/2014	7:45	0.0	1.6	56	13.4
31/03/2014	7:50	0.0	1.6	25	13.5
31/03/2014	7:55	0.0	1.8	11	13.6
31/03/2014	8:00	0.0	2.1	358	13.6
31/03/2014	8:05	0.0	1.9	355	13.6
31/03/2014	8:10	0.0	1.8	11	13.7
31/03/2014	8:15	0.0	1.8	22	13.7
31/03/2014	8:20	0.0	1.8	12	13.8
31/03/2014	8:25	0.0	1.7	7	14.0
31/03/2014	8:30	0.0	1.8	15	14.2
31/03/2014	8:35	0.0	1.6	32	14.3
31/03/2014	8:40	0.0	1.5	40	14.3
31/03/2014	8:45	0.0	1.3	44	14.4
31/03/2014	8:50	0.0	1.9	32	14.5
31/03/2014	8:55	0.0	2.5	20	14.6
31/03/2014	9:00	0.0	2.1	29	14.8
31/03/2014	9:05	0.0	2.2	26	14.8
31/03/2014	9:10	0.0	2.6	34	14.9
31/03/2014	9:15	0.0	2.1	50	14.9
31/03/2014	9:20	0.0	1.7	45	15.1
31/03/2014	9:25	0.0	1.4	51	15.3
31/03/2014	9:30	0.0	2.3	22	15.3
31/03/2014	9:35	0.0	2.1	24	15.3
31/03/2014	9:40	0.0	1.8	33	15.5
31/03/2014	9:45	0.0	0.8	352	15.9
31/03/2014	9:50	0.0	1.3	7	16.4
31/03/2014	9:55	0.0	1.4	356	16.7
31/03/2014	10:00	0.0	1.8	353	16.9

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	10:05	0.0	1.8	12	16.7
31/03/2014	10:10	0.0	2.2	5	16.5
31/03/2014	10:15	0.0	2.6	10	16.8
31/03/2014	10:20	0.0	1.7	359	16.9
31/03/2014	10:25	0.0	1.5	291	16.8
31/03/2014	10:30	0.0	1.5	326	17.5
31/03/2014	10:35	0.0	2.7	9	17.9
31/03/2014	10:40	0.0	2.4	356	18.0
31/03/2014	10:45	0.0	1.2	20	18.6
31/03/2014	10:50	0.0	2.8	13	18.4
31/03/2014	10:55	0.0	1.9	336	18.0
31/03/2014	11:00	0.0	1.6	330	17.7
31/03/2014	11:05	0.0	1.4	10	18.7
31/03/2014	11:10	0.0	1.7	320	18.8
31/03/2014	11:15	0.0	2.0	339	18.5
31/03/2014	11:20	0.0	2.6	297	18.6
31/03/2014	11:25	0.0	1.6	317	18.6
31/03/2014	11:30	0.0	2.6	299	18.8
31/03/2014	11:35	0.0	1.7	306	18.9
31/03/2014	11:40	0.0	2.2	345	19.3
31/03/2014	11:45	0.0	2.1	320	19.1
31/03/2014	11:50	0.0	1.7	352	19.4
31/03/2014	11:55	0.0	2.4	2	19.7
31/03/2014	12:00	0.0	1.6	326	19.4
31/03/2014	12:05	0.0	2.5	315	19.8
31/03/2014	12:10	0.0	2.1	331	19.6
31/03/2014	12:15	0.0	2.3	359	20.0
31/03/2014	12:20	0.0	2.0	2	20.0
31/03/2014	12:25	0.0	2.7	18	19.8
31/03/2014	12:30	0.0	2.2	332	19.8
31/03/2014	12:35	0.0	1.8	12	20.3
31/03/2014	12:40	0.0	2.3	1	20.0
31/03/2014	12:45	0.0	1.9	355	20.1
31/03/2014	12:50	0.0	0.6	118	20.2
31/03/2014	12:55	0.0	1.7	138	20.0
31/03/2014	13:00	0.0	1.0	150	20.1

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	13:05	0.0	1.1	87	20.5
31/03/2014	13:10	0.0	2.0	42	20.7
31/03/2014	13:15	0.0	1.5	8	21.0
31/03/2014	13:20	0.0	0.6	3	21.1
31/03/2014	13:25	0.0	0.8	248	21.2
31/03/2014	13:30	0.0	0.5	177	21.4
31/03/2014	13:35	0.0	0.7	133	21.7
31/03/2014	13:40	0.0	1.3	161	21.8
31/03/2014	13:45	0.0	0.5	122	21.3
31/03/2014	13:50	0.0	2.4	274	21.1
31/03/2014	13:55	0.0	1.2	280	21.0
31/03/2014	14:00	0.0	2.4	306	20.9
31/03/2014	14:05	0.0	1.9	310	20.7
31/03/2014	14:10	0.0	1.7	347	21.0
31/03/2014	14:15	0.0	2.3	309	21.4
31/03/2014	14:20	0.0	2.6	316	21.4
31/03/2014	14:25	0.0	2.4	353	21.3
31/03/2014	14:30	0.0	2.4	285	21.4
31/03/2014	14:35	0.0	2.1	251	21.5
31/03/2014	14:40	0.0	1.8	278	21.6
31/03/2014	14:45	0.0	1.0	284	21.6
31/03/2014	14:50	0.0	0.5	348	22.1
31/03/2014	14:55	0.0	0.8	319	22.5
31/03/2014	15:00	0.0	2.8	28	22.1
31/03/2014	15:05	0.0	2.0	2	21.8
31/03/2014	15:10	0.0	2.1	326	21.9
31/03/2014	15:15	0.0	2.2	316	21.8
31/03/2014	15:20	0.0	1.1	320	22.3
31/03/2014	15:25	0.0	2.5	1	22.3
31/03/2014	15:30	0.0	1.4	307	22.1
31/03/2014	15:35	0.0	2.5	273	22.1
31/03/2014	15:40	0.0	2.5	13	22.0
31/03/2014	15:45	0.0	2.1	326	21.7
31/03/2014	15:50	0.0	1.1	339	22.2
31/03/2014	15:55	0.0	1.6	9	22.9
31/03/2014	16:00	0.0	2.0	12	22.1

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	16:05	0.0	2.1	292	22.3
31/03/2014	16:10	0.0	2.0	298	22.0
31/03/2014	16:15	0.0	2.0	305	22.2
31/03/2014	16:20	0.0	1.9	296	21.9
31/03/2014	16:25	0.0	0.7	314	21.5
31/03/2014	16:30	0.0	1.6	290	21.1
31/03/2014	16:35	0.0	2.4	292	21.0
31/03/2014	16:40	0.0	2.2	288	21.2
31/03/2014	16:45	0.0	1.7	281	20.7
31/03/2014	16:50	0.0	1.7	296	20.4
31/03/2014	16:55	0.0	1.2	292	20.3
31/03/2014	17:00	0.0	1.0	284	20.5
31/03/2014	17:05	0.0	1.4	278	20.4
31/03/2014	17:10	0.0	1.3	285	20.4
31/03/2014	17:15	0.0	1.1	266	20.5
31/03/2014	17:20	0.0	0.9	279	20.3
31/03/2014	17:25	0.0	1.4	270	19.4
31/03/2014	17:30	0.0	1.4	281	18.5
31/03/2014	17:35	0.0	1.3	266	18.1
31/03/2014	17:40	0.0	1.6	259	17.7
31/03/2014	17:45	0.0	1.4	260	17.4
31/03/2014	17:50	0.0	1.3	252	17.3
31/03/2014	17:55	0.0	1.4	209	17.2
31/03/2014	18:00	0.0	1.5	209	17.3
31/03/2014	18:05	0.0	1.5	184	17.5
31/03/2014	18:10	0.0	1.2	163	17.7
31/03/2014	18:15	0.0	2.0	152	17.9
31/03/2014	18:20	0.0	1.8	140	18.0
31/03/2014	18:25	0.0	1.6	140	18.0
31/03/2014	18:30	0.0	1.3	139	17.9
31/03/2014	18:35	0.0	0.4	129	17.8
31/03/2014	18:40	0.0	0.7	338	17.6
31/03/2014	18:45	0.0	0.1	182	17.5
31/03/2014	18:50	0.0	0.1	248	17.4
31/03/2014	18:55	0.0	0.2	55	17.4
31/03/2014	19:00	0.0	0.5	46	17.3

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	19:05	0.0	0.5	20	17.3
31/03/2014	19:10	0.0	0.6	272	17.2
31/03/2014	19:15	0.0	0.8	188	17.1
31/03/2014	19:20	0.0	0.8	139	17.1
31/03/2014	19:25	0.0	0.9	164	16.9
31/03/2014	19:30	0.0	0.9	172	16.8
31/03/2014	19:35	0.0	0.5	216	16.6
31/03/2014	19:40	0.0	0.5	179	16.5
31/03/2014	19:45	0.0	0.4	161	16.5
31/03/2014	19:50	0.0	0.7	186	16.4
31/03/2014	19:55	0.0	0.9	187	16.3
31/03/2014	20:00	0.0	1.1	171	16.2
31/03/2014	20:05	0.0	0.6	179	16.1
31/03/2014	20:10	0.0	1.1	276	16.1
31/03/2014	20:15	0.0	1.1	221	16.1
31/03/2014	20:20	0.0	0.9	209	16.0
31/03/2014	20:25	0.0	1.3	220	15.9
31/03/2014	20:30	0.0	1.0	200	15.8
31/03/2014	20:35	0.0	0.8	164	15.8
31/03/2014	20:40	0.0	0.9	145	15.7
31/03/2014	20:45	0.0	0.6	99	15.6
31/03/2014	20:50	0.0	0.3	162	15.5
31/03/2014	20:55	0.0	0.4	266	15.4
31/03/2014	21:00	0.0	0.8	261	15.2
31/03/2014	21:05	0.0	0.8	232	15.1
31/03/2014	21:10	0.0	1.1	244	15.2
31/03/2014	21:15	0.0	1.0	209	15.3
31/03/2014	21:20	0.0	0.9	177	15.2
31/03/2014	21:25	0.0	0.3	191	15.2
31/03/2014	21:30	0.0	0.5	110	15.1
31/03/2014	21:35	0.0	0.2	83	15.0
31/03/2014	21:40	0.0	0.8	260	14.9
31/03/2014	21:45	0.0	0.8	303	14.8
31/03/2014	21:50	0.0	1.0	231	14.8
31/03/2014	21:55	0.0	0.8	181	14.8
31/03/2014	22:00	0.0	0.5	333	14.7

Date	Time	Rainfall (mm)	Wind Speed 10m above ground (m/s)	Wind Direction (deg)	Temp (°C)
31/03/2014	22:05	0.0	0.6	27	14.6
31/03/2014	22:10	0.0	0.6	255	14.4
31/03/2014	22:15	0.0	1.0	247	14.1
31/03/2014	22:20	0.0	1.2	242	14.0
31/03/2014	22:25	0.0	1.2	247	13.8
31/03/2014	22:30	0.0	0.7	257	13.6

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