

### **Site Information**

**EPL No:** 3637

**EPA Website Link:** <a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637</a>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: January 2018

Obtained Date: 15<sup>th</sup> February 2018

Publication Date: 19<sup>th</sup> February 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/01/18	31/01/18	-	-	-	1.3
5	PM <sub>10</sub>	μg/m³	Every 6 days	6	Various	13/02/18	12.7	25.0	21.6	40.8
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	-	-	ı	-	-	1
12	PM <sub>10</sub>	μg/m³	Every 6 days	6	Various	13/02/18	13.4	21.9	22.1	26.9
	Conductivity	ms/cm		-	-	-	ı	-	-	-
	Oil and Grease	mg/L		-	-	-	ı	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	<b>Each overflow</b>	-	-	-	-	-	-	-
8	Total Suspended Solids	mg/L	event	-	-	-	ı	-	-	1
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1	7/02/18	15/02/18	-	-	-	2010
	Oil and Grease	mg/L		1	7/02/18	15/02/18	-	-	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1	7/02/18	15/02/18	-	-	-	4
	Total Suspended Solids	mg/L		1	7/02/18	15/02/18	ı	-	-	14



EPI ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	рН		1	7/02/18	15/02/18	-	-	-	8.6

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					1	1	-	-
	Conductivity	μs/cm		_			ı	1	-	-
	Lead	mg/L			-		ı	1	-	-
8	Magnesium	mg/L	Quarterly			_	-	-	-	-
0	Nitrate	mg/L	Quarterly	-		_	ı	1	-	-
	Potassium	mg/L					1	1	-	-
	Sodium	mg/L					ı	1	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
9	Bicarbonate	mg/L	Quartorly				-	-	-	-
9	Calcium	mg/L	Quarterly	-	-	-	-	-	-	-
	Chloride	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quartorly				-	-	-	-
10	Nitrate	mg/L	Quarterly	-	-	-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-



### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period		red levels – All rces – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
									compliance /breach
	-	-	15 mins		-	-	-	-	
NI1	-	-	15 mins		-	-	-	-	
N1	-	-	15 mins		-	-	-	-	-
	-	-	1 min	-		-	-	-	

When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





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Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: February 2018

Obtained Date: 15<sup>th</sup> February

Publication Date: 19<sup>th</sup> March 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/02/18	21/02/18	-	-	-	0.5
5	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	9/03/18	8.7	17.9	17.9	26.9
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	-	-	i	-	-	-
12	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	9/03/18	7.9	17.6	1 6.4	29.6
	Conductivity	ms/cm		-	1	-	1	1	-	-
	Oil and Grease	mg/L		-	-	-	1	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
	Total Suspended Solids	mg/L	event	-	1	-	ı	1	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1	7/02/18	15/02/18	-	-	-	2010
	Oil and Grease	mg/L		1	7/02/18	15/02/18	1	1	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1	7/02/18	15/02/18	1	1	-	4
	Total Suspended Solids	mg/L		1	7/02/18	15/02/18	-	-	-	14



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	рН		1	7/02/18	15/02/18	-	-	-	8.6

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					1	-	-	-
	Conductivity	μs/cm					1	-	-	-
	Lead	mg/L					1	-	-	-
8	Magnesium	mg/L	Quartorly	-		_	ı	-	-	-
•	Nitrate	mg/L	Quarterly		-	-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
9	Bicarbonate	mg/L	Quartorly				-	-	-	-
9	Calcium	mg/L	Quarterly	-	-	-	-	-	-	-
	Chloride	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quartorly				1	•	-	-
10	Nitrate	mg/L	Quarterly	-	_	_	•	ı	-	1
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	рН					-	-	-	-



### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period		red levels – All rces – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
									compliance /breach
	28/02/18	13:30	15 mins		<25	35	2.3		
N1	28/02/18	21:42	15 mins		<25	35	0.0		N-
INT	28/02/18	22:00	15 mins		<25	35	0.6		No
	28/02/18	22:00	1 min	25		45	0.6		

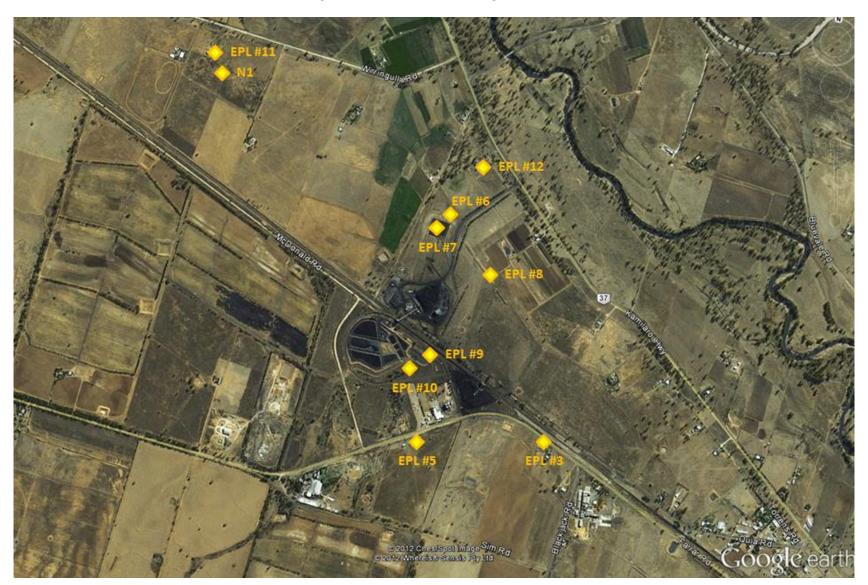
When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





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Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: March 2018

Obtained Date: 18<sup>th</sup> April 2018

Publication Date: 23<sup>rd</sup> April 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	21/03/18	4/04/18	-	-	-	1.7
5	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	18/04/18	8.8	26.2	18.9	49.6
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	-	-	-	-	-	-
12	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	18/04/18	6.0	20.5	16.0	47.8
	Conductivity	ms/cm		-	-	-	ı	1	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
0	Total Suspended Solids	mg/L	event	-	-	-	ı	1	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		-	-	-	-	-	-	
	Oil and Grease	mg/L		-	-	-	-	-	-	
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	-	-	-	-	-	-	
	Total Suspended Solids	mg/L		-	-	-	-	-	-	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	рН		-	1	ı	ı	-	-	-

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	0.03
	Bicarbonate	mg/L					-	-	-	1350
	Calcium	mg/L				19/03/18	ı	ı	-	33
	Chloride	mg/L					ı	ı	-	1250
	Conductivity	μs/cm					ı	ı	-	7430
	Lead	mg/L	Quarterly		13/03/18		ı	ı	-	0.003
8	Magnesium	mg/L	Quartorly	1			ı	ı	-	116
0	Nitrate	mg/L	Quarterly				ı	ı	-	1.37
	Potassium	mg/L					ı	ı	-	20
	Sodium	mg/L					1	1	-	1600
	Standing Water Level	m					-	-	-	8.36
	Sulphate	mg/L					-	-	-	652
	рН	рН					-	-	-	8.8
	Ammonia	mg/L					-	-	-	0.14
_	Bicarbonate	mg/L	Quarterly	1 :	12/02/19	10/02/10	-	-	-	907
9	Calcium mg/L Chloride mg/L	mg/L			13/03/18	3   19/03/18	-	-	-	273
						-	-	-	1100	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	6040
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	260
	Nitrate	mg/L					-	-	-	0.72
	Potassium	mg/L					-	-	-	126
	Sodium	mg/L					-	-	-	772
	Standing Water Level	m					-	-	-	2.38
	Sulphate	mg/L					-	-	-	938
	рН	рН					-	-	-	7.10
	Ammonia	mg/L					-	-	-	6.97
	Bicarbonate	mg/L					-	-	-	731
	Calcium	mg/L					-	-	-	174
	Chloride	mg/L					-	-	-	1330
	Conductivity	μs/cm					-	-	-	5870
	Lead	mg/L					-	-	-	0.004
10	Magnesium	mg/L	O a mt a ml	1	12/02/10	10/02/10	-	-	-	228
10	Nitrate	mg/L	Quarterly	1	13/03/18	19/03/18	-	-	-	1.27
	Potassium	mg/L					-	-	-	64
	Sodium	mg/L					-	-	-	744
	Standing Water Level	m					-	-	-	1.66
	Sulphate	mg/L					-	-	-	280
	pH	рН					-	-	-	7.8



### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period		Measured levels – All sources – dB(A)		Wind speed (m/s)	Observations	(Potential) Non-
									compliance /breach
	-	-	-		-	-	-	-	
N/4	-	-	-		-	-	-	-	1
N1	-	-	-		-	-	-	-	] -
	-	-	-	-		-	-	-	1

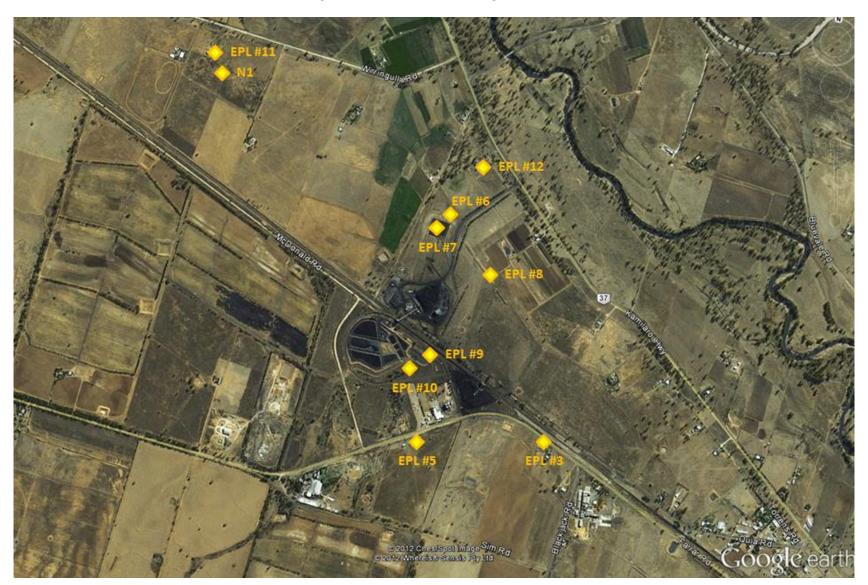
When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





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Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: April 2018
Obtained Date: 9<sup>th</sup> May 2018
Publication Date: 15<sup>th</sup> May 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/04/18	2/05/18	-	-	-	1.3
5	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	9/05/18	15.9	29.4	24.7	58.9
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	-	-	1	-	-	-
12	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	9/05/18	11.8	18.3	14.2	34.2
	Conductivity	ms/cm		-	-	-	1	1	-	-
	Oil and Grease	mg/L		-	-	-	1	1	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	1	1	-	-
6	Total Suspended Solids	mg/L	event	-	-	-	1	1	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		-	-	-	-	-	-	
	Oil and Grease	mg/L		-	-	-	-	-	-	
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	-	-	-	-	-	-	
	Total Suspended Solids	mg/L		-	-	-	-	-	-	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	рН		-	1	-	-	-	-	-

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	1
	Bicarbonate	mg/L					-	-	-	1
	Calcium	mg/L					-	-	-	ı
	Chloride	mg/L					ı	-	1	ı
	Conductivity	μs/cm					ı	-	1	ı
	Lead	mg/L					ı	-	1	ı
8	Magnesium	mg/L	Quartorly	0			ı	-	1	ı
0	Nitrate	mg/L	Quarterly 0	U	-	-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					•	-	-	ı
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pН	рН	Quarterly 0			-	-	-	-	
	Ammonia	mg/L					-	-	-	-
9	Bicarbonate	mg/L				-	-	-	-	
9	Calcium	mg/L		U	-	-	-	-	-	-
	Chloride	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quartarly	0			-	-	-	-
10	Nitrate	mg/L	Quarterly	U	-	-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-



### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period		Measured levels – All sources – dB(A)		Wind speed (m/s)	Observations	(Potential) Non-
									compliance /breach
	-	-	-		-	-	-	-	
NI4	-	-	-		-	-	-	-	
N1	-	-	-		-	-	-	-	-
	-	-	-	-		-	-	-	

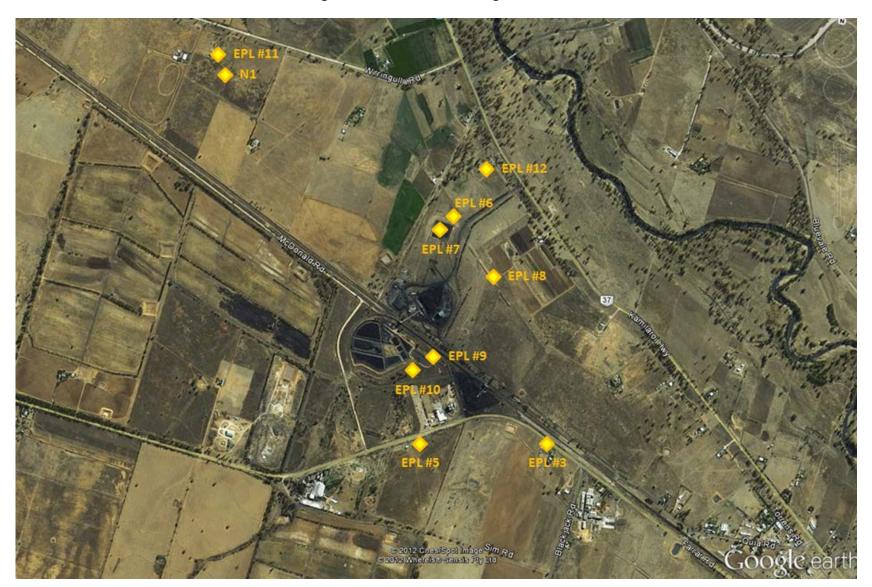
When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

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Figure 1 – EPL 3637 Monitoring Locations





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Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: May 2018

Obtained Date: 6<sup>th</sup> June 2018

Publication Date: 13<sup>th</sup> June 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	18/05/18	29/05/18	-	-	-	0.3
5	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	6/06/18	8.4	46.4	47	106
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	-	-	-	-	-	-
12	PM <sub>10</sub>	μg/m³	Every 6 days	6	Various	6/06/18	9.3	18.2	19.5	27.9
	Conductivity	ms/cm		-	1	-	-	-	-	-
	Oil and Grease	mg/L		-	1	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	1	-	-	-	-	-
8	Total Suspended Solids	mg/L	event	-	1	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1	7/05/18	-	-	-	-	1320
	Oil and Grease	mg/L		1	7/05/18	-	-	-	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1	7/05/18	-	-	-	-	4
	Total Suspended Solids	mg/L		1	7/05/18	-	-	-	-	17



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	рН		1	7/05/18	-	-	-	-	8.6

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					•	1	-	0.03
	Bicarbonate	mg/L					-	-	-	1260
	Calcium	mg/L					-	-	-	36
	Chloride	mg/L				6/06/18	ı	ı	-	1270
	Conductivity	μs/cm			31/05/18		ı	ı	-	7090
	Lead	mg/L	Quarterly				ı	ı	-	0.002
8	Magnesium	mg/L	Quartorly	1			ı	ı	-	113
0	Nitrate	mg/L	Quarterly				-	-	-	1.34
	Potassium	mg/L					-	-	-	22
	Sodium	mg/L					ı	ı	-	1540
	Standing Water Level	m					-	-	1	-
	Sulphate	mg/L					-	-	-	635
	рН	рН					-	-	-	8.8
	Ammonia	mg/L					-	-	-	0.02
0	Bicarbonate	mg/L	Quarterly	1 3	21/05/19	6/06/19	-	-	-	850
9		mg/L			31/05/18	6/06/18	-	-	-	244
	Chloride					-	-	-	1130	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	5700
	Lead	mg/L					-	-	-	0.001
	Magnesium	mg/L					-	-	-	232
	Nitrate	mg/L					-	-	-	0.39
	Potassium	mg/L					-	-	-	121
	Sodium	mg/L					-	-	-	704
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	763
	pН	рН					-	-	-	7.1
	Ammonia	mg/L					-	-	-	0.08
	Bicarbonate	mg/L					-	-	-	654
	Calcium	mg/L					-	-	-	178
	Chloride	mg/L					-	-	-	1350
	Conductivity	μs/cm					-	-	-	5560
	Lead	mg/L					-	-	-	0.003
10	Magnesium	mg/L	Quartarly	1	21/05/10	6/06/19	-	-	-	216
10	Nitrate	mg/L	Quarterly	1	31/05/18	6/06/18	-	-	-	5.22
	Potassium	mg/L					-	-	-	64
	Sodium	mg/L					-	-	-	715
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	267
	pH	рН					-	-	-	7.9



### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period		red levels – All rces – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
									compliance /breach
	-	-	-		-	-	-	-	
NI4	-	-	-		-	-	-	-	
N1	-	-	-		-	-	-	-	-
	-	-	-	-		-	-	-	

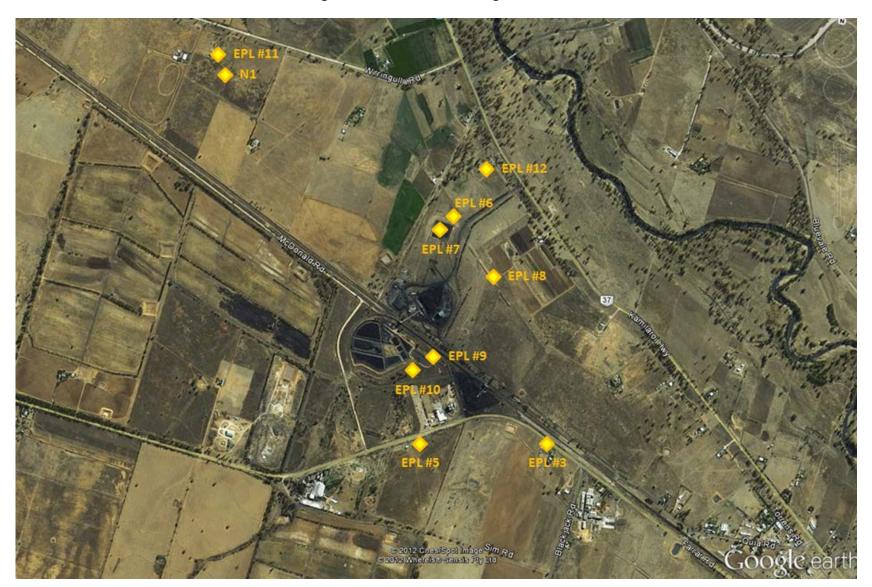
When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





### **Site Information**

**EPL No:** 3637

**EPA Website Link:** http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: June 2018
Obtained Date: 16<sup>th</sup> July 2018
Publication Date: 19<sup>th</sup> July 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/06/18	26/06/18	-	-	-	1.5
5	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	15/07/18	2.3	13.4	6.8	39.6
11	PM <sub>10</sub>	μg/m³	Every 6 days	0	ı	-	-	•	-	ı
12	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	15/07/18	2.9	10.5	7.0	21.8
	Conductivity	ms/cm		-	1	-	-	1	-	1
	Oil and Grease	mg/L		-	1	-	-	1	-	1
6	<b>Total Organic Carbon</b>	mg/L	<b>Each overflow</b>	-	1	-	-	1	-	1
8	Total Suspended Solids	mg/L	event	-	1	-	-	1	-	1
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	1	-	-	1	-	ı
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	-	1	-	-	1	-	1
	Total Suspended Solids	mg/L		-	-	-	-	-	-	-



EP IC	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	pН				-	-	-	-	

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					ı	-	-	ı
	Conductivity	μs/cm					ı	-	-	ı
	Lead	mg/L					ı	-	-	ı
8	Magnesium	mg/L	Quarterly				ı	-	-	ı
0	Nitrate	mg/L	Quarterly	-	_	-	•	-	-	ı
	Potassium	mg/L					•	-	-	ı
	Sodium	mg/L					•	-	-	ı
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
_	Bicarbonate	mg/L	Quartarly				-	-	-	-
9	Calcium	mg/L	Quarterly	-	-	-	-	-	-	-
	Chloride	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quartarly				-	-	-	-
10	Nitrate	mg/L	Quarterly	-	-	-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-



#### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measure	d levels – CHPP – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	, ,				compliance /breach
	19/06/18	7:31	15 mins		<25	35dBA	1.5	CHPP audible faintly at times, but not measurable	
N1	19/06/18	19:50	15 mins		28	35dBA	2.8	Dozer 'clang' noise identifiable 32 -44	No
	19/06/18	22:05	15 mins		<25	35dBA 2.5		Dozer 'whirl' noise identifiable - 31	
	19/06/18	22:05	1 mins	<25		45dBA	2.5	Dozer 'whirl' noise identifiable - 31	

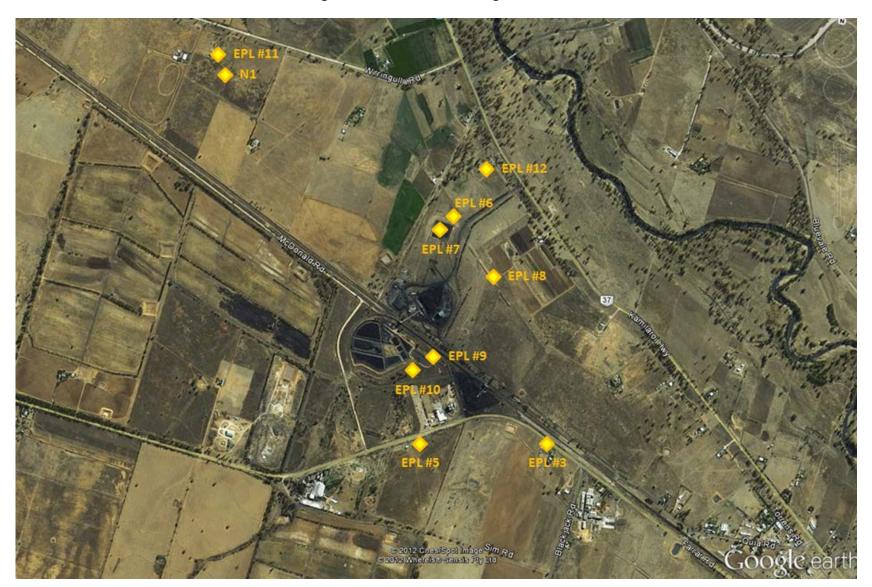
When site noise is noted as inaudible, no site noise was audible at the monitoring location. Not Measurable indicates that some site noise was audible, but indeterminate due to one of the following reasons:

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





### **Site Information**

**EPL No:** 3637

EPA Website Link: http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

**Sampling Period:** July 2018 **Obtained Date:** 16<sup>th</sup> August 2018 **Publication Date:** 17<sup>th</sup> August 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/07/18	34/07/18	-	-	-	1.0
11	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	16/08/18	12.6	29.12	24.2	49.8
12	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	16/08/18	14.5	26.2	20.6	39.5
	Conductivity	ms/cm		-	-	-	ı	1	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	1	1	-	-
8	Total Suspended Solids	mg/L	event	-	-	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
7	<b>Total Organic Carbon</b>	mg/L	Quartarly	-	-	-	-	-	-	-
,	Total Suspended Solids	mg/L	Quarterly	-	-	-	1	-	-	-
	рН	рН				-	-	1	-	



Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
8	Magnesium	mg/L	Quarterly				-	-	-	-
•	Nitrate	mg/L	Quarterly	-	-	-	-	-	-	-
	Potassium	mg/L					ı	-	-	ı
	Sodium	mg/L					•	-	-	1
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pH	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
9	Chloride	mg/L	Ouartarly				-	-	-	-
9	Conductivity	μs/cm	Quarterly	-	-	-	-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	ı
	рН	рН					-	-	-	ı
	Ammonia	mg/L					ı	-	-	ı
	Bicarbonate	mg/L					ı	-	-	ı
	Calcium	mg/L					1	-	-	ı
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quarterly	_	_	_	-	-	-	-
10	Nitrate	mg/L	Quarterly	-	_	_	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pН	рН					-	-	-	-

Table 3 – Monitoring (Quarterly Noise – Limits Apply)



EPL ID	Date	Start Time	Measurement Period	Measure	d levels – CHPP – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
	-	-	15 mins		-	35dBA	-	-	
N1	-	-	15 mins		-	35dBA	-	-	
INI	-	-	15 mins		-	35dBA	-	-	-
	-	-	1 mins	-		45dBA	-	-	

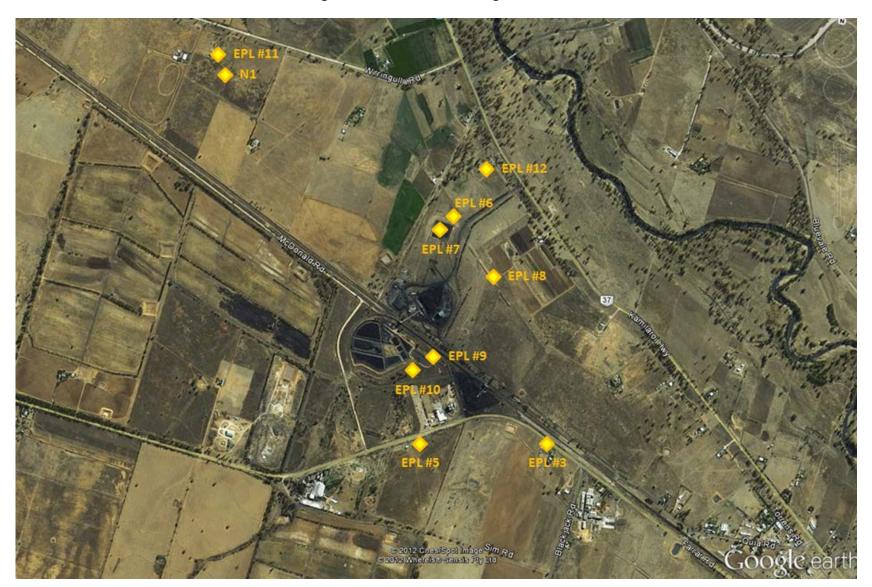
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<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





#### **Site Information**

**EPL No:** 3637

EPA Website Link: http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: August 2018

Obtained Date: 6<sup>th</sup> September 2018

Publication Date: 12<sup>th</sup> September 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	19/08/18	30/08/18	-	-	-	1.3
11	PM <sub>10</sub>	μg/m³	Every 6 days	3	Various	6/09/18	12.5	22.2	23.2	31.1
12	PM <sub>10</sub>	μg/m³	Every 6 days	3	Various	6/09/18	8.7	28	26.5	48.8
	Conductivity	ms/cm		-	-	-	-	1	-	-
	Oil and Grease	mg/L		-	-	-	-	ı	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	ı	-	-
8	Total Suspended Solids	mg/L	event	-	-	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
7	<b>Total Organic Carbon</b>	mg/L	Quartarly	-	-	-	-	-	-	-
'	Total Suspended Solids	mg/L	Quarterly	-	-	-	-	-	-	-
	рН	рН				-	-	1	-	



# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L			-		-	-	-	-
8	Magnesium	mg/L	Quartorly				-	-	-	-
•	Nitrate	mg/L	Quarterly	-		-	-	-	-	-
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	pН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
9	Chloride	mg/L	Quarterly				-	-	-	-
9	Conductivity	μs/cm		-	-	-	-	-	-	-
	Lead	mg/L					-	-	-	-
	Magnesium	mg/L					-	-	-	-
	Nitrate	mg/L					-	-	-	-



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	-
	Sodium	mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-
	Ammonia	mg/L					-	-	-	-
	Bicarbonate	mg/L					-	-	-	-
	Calcium	mg/L					-	-	-	-
	Chloride	mg/L					-	-	-	-
	Conductivity	μs/cm					-	-	-	-
	Lead	mg/L					-	-	-	-
10	Magnesium	mg/L	Quarterly	_	_	_	-	-	-	-
10	Nitrate	mg/L	Quarterly				-	-	-	-
	Potassium ı	mg/L					-	-	-	-
		mg/L					-	-	-	-
	Standing Water Level	m					-	-	-	-
	Sulphate	mg/L					-	-	-	-
	рН	рН					-	-	-	-

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

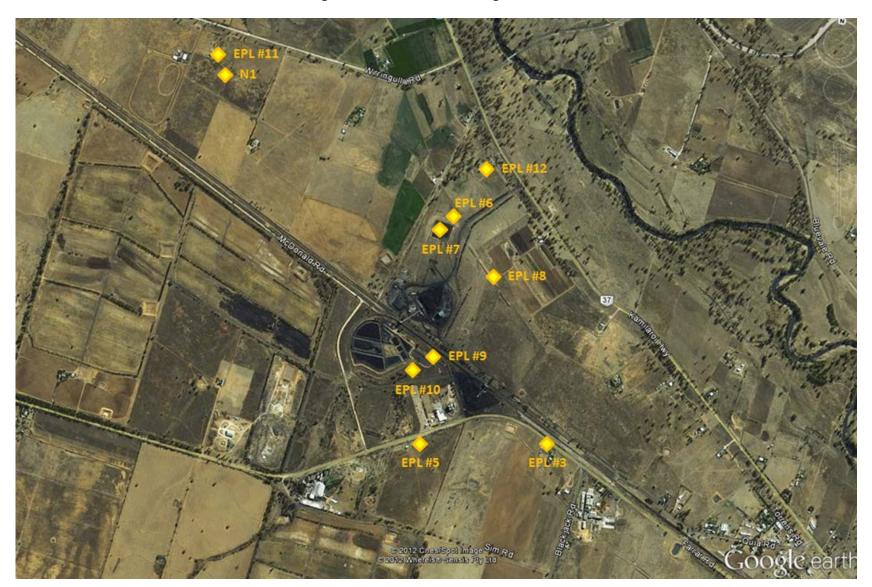


EPL ID	Date	Start Time	Measurement Period	Measure	d levels – CHPP – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
	-	-	15 mins		-	35dBA	-	-	
N1	-	-	15 mins		-	35dBA	-	-	
INT	-	-	15 mins		-	35dBA	-	-	_
	-	-	1 mins	-		45dBA	-	-	

- site noise levels were insignificant and unlikely, in many cases, to be even noticed; or
- site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





#### **Site Information**

**EPL No:** 3637

**EPA Website Link:** <a href="http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637">http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637</a>

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: September 2018

Obtained Date: 10<sup>th</sup> October 2018

Publication Date: 10<sup>th</sup> October 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	18/09/18	27/09/18	-	-	-	2.1
11	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	5/10/18	4.1	17.8	18.7	29.7
12	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	5/10/18	3.8	17.87	15.95	35.8
	Conductivity	ms/cm		-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
8	Total Suspended Solids	mg/L	event	-	-	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1	08/08/18	05/10/18	-	-	-	2240
	Oil and Grease	mg/L		1	08/08/18	05/10/18	-	-	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1	08/08/18	05/10/18	-	ı	-	3
	Total Suspended Solids	mg/L		1	08/08/18	05/10/18	-	-	-	<5



EF IC	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	рН	pН			08/08/18	05/10/18	-	-	1	8.19

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	0.08
	Bicarbonate	mg/L					-	-	-	1150
	Calcium	mg/L					-	-	-	33
	Chloride	mg/L				05/10/2018	-	ı	-	1440
	Conductivity	μs/cm			5/09/2018		-	ı	-	7220
	Lead	mg/L					-	ı	-	0.008
0	8 Magnesium Nitrate	mg/L	Quarterly	1			-	1	-	112
0	Nitrate	mg/L	Quarterly			03/10/2018	-	1	-	1.39
	Potassium	mg/L					-	1	-	21
	Sodium	mg/L					-	1	-	1570
	Standing Water Level	m					-	-	-	7.58
	Sulphate	mg/L					-	-	-	608
	рН	рН					-	-	-	8.61
_	Ammonia	mg/L	mg/L mg/L Ouarterly				-	-	-	0.08
9	Bicarbonate	mg/L		1 5	E /00 /2019	05/10/2019	-	-	-	1150
9	Calcium	mg/L			5/09/2018	05/10/2018	-	-	-	33
	Chloride	mg/L					-	-	-	1440



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	0.03
	Lead	mg/L					-	-	-	821
	Magnesium	mg/L					-	-	-	264
	Nitrate	mg/L					-	-	-	1230
	Potassium	mg/L					-	-	-	5760
	Sodium	mg/L					-	-	-	0.001
	Standing Water Level	m					-	-	-	227
	Sulphate	mg/L					-	-	-	0.2
	pH	рН					-	-	-	115
	Ammonia	mg/L					-	-	-	12.2
	Bicarbonate	mg/L					-	-	-	582
	Calcium	mg/L					-	-	-	159
	Chloride	mg/L					-	-	-	1530
	Conductivity	μs/cm					-	-	-	5640
	Lead	mg/L					-	-	-	0.002
10	Magnesium	mg/L	O. cambanler	1	E /00 /2010	05/10/2019	-	-	-	204
10	Nitrate	mg/L	Quarterly	1	5/09/2018	05/10/2018	-	-	-	12.2
	Potassium	mg/L					-	-	-	56
	Sodium	mg/L	-				-	-	-	671
	Standing Water Level	m					-	-	-	1.69
	Sulphate	mg/L	-				-	-	-	276
	pH	pН					-	-	-	7.6



#### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

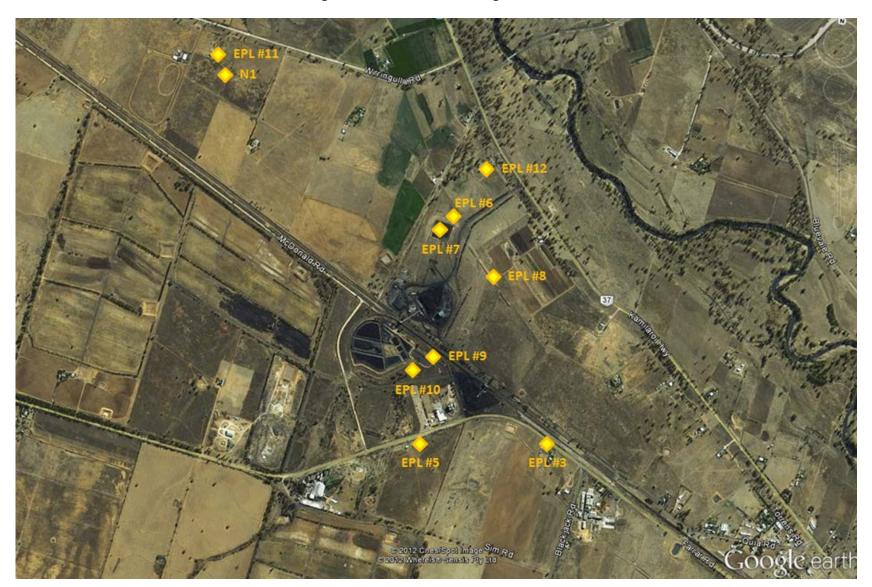
EPL ID	Date	Start Time	Measurement Period	Measure	d levels – CHPP – dB(A)	Limit(s)	Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
	5/09/18	12:00	15 mins		I/A	35dBA	3 m/s NE	Road Traffic 37-40 Birds 31-68 Dogs barking 52-54	
N1	5/09/18	19:41	15 mins		30	35dBA	3 m/s NE	Dozer 'clang' noise identifiable 33 -40 Dozer engine whirl 31 Other Noise Events: Road Traffic 40-45	None
	5/09/18	22:24	15 mins		29	35dBA	1.5 m/s SE	Dozer engine whirl – 28-32	
	5/09/18	22:24	1 mins	40		45dBA	1.5 m/s SE	-	

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





#### **Site Information**

**EPL No:** 3637

**EPA Website Link:** http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: October 2018

Obtained Date: 8<sup>th</sup> November 2018

Publication Date: 9<sup>th</sup> November 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	18/10/18	27/09/18	-	-	-	1.7
11	PM <sub>10</sub>	μg/m³	Every 6 days	6	Various	7/10/18	10.4	26.15	28.9	21.8
12	PM <sub>10</sub>	μg/m³	Every 6 days	6	Various	7/10/18	9.3	22.5	23.8	17.3
	Conductivity	ms/cm		-	-	-	-	-	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
8	Total Suspended Solids	mg/L	event	-	-	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1			-	ı	-	2550
	Oil and Grease	mg/L		1			-	1	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1			-	1	-	3
	Total Suspended Solids	mg/L		1			-	-	-	34



EP ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	pН	pН		1			-	-	-	8.42

# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	1	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	μs/cm					ı	ı	-	
	Lead	mg/L					ı	ı	-	
8	Magnesium	mg/L	Quartorly				ı	ı	-	
0	Nitrate	mg/L	Quarterly				-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	рН	рН					-	-	-	
	Ammonia	mg/L					-	-	-	
9	Bicarbonate	mg/L	Quartorly				-	-	-	
9	Calcium mg/L Qu	Quarterly				-	-	-		
	Chloride	mg/L					-	-	-	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Conductivity	μs/cm					-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	рН	рН					-	-	-	
	Ammonia	mg/L					-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
	Chloride	mg/L					-	-	-	
	Conductivity	μs/cm					-	-	-	
	Lead	mg/L					-	-	-	
10	Magnesium	mg/L	Quarterly				-	-	-	
10	Nitrate	mg/L	Quarterly				-	-	-	
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pH	рН					-	-	-	



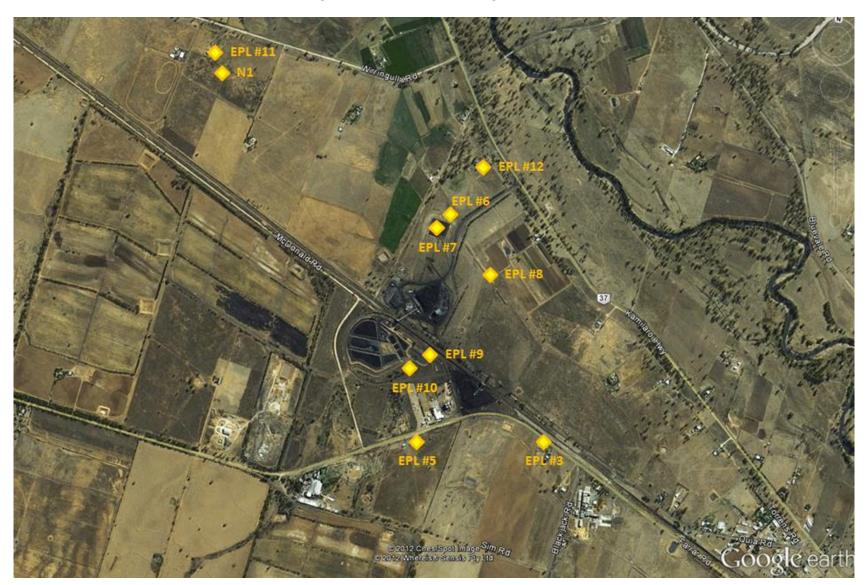
### Table 3 – Monitoring (Quarterly Noise – Limits Apply)

EPL ID	Date	Start Time	Measurement Period	Measure	Measured levels – CHPP – I dB(A)		Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
						35dBA			
N1						35dBA			None
INT						35dBA			None
						45dBA			

- site noise levels were insignificant and unlikely, in many cases, to be even noticed; or
- site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





#### **Site Information**

**EPL No:** 3637

**EPA Website Link:** http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: December 2018

Obtained Date: 5<sup>th</sup> December 2018

Publication Date: 6<sup>th</sup> December 2018

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	16/10/18	05/12/18	-	-	-	2.5
11	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	5/12/18	12	32.3	36.55	44.2
12	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	5/12/18	11.4	22.97	23.15	34.2
	Conductivity	ms/cm		-	-	-	-	1	-	-
	Oil and Grease	mg/L		-	-	-	-	-	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
	Total Suspended Solids	mg/L	event	-	-	-	1	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		1	02/11/18	8/11/2018	1	ı	-	2550
	Oil and Grease	mg/L		1	02/11/18	8/11/2018	1	ı	-	<5
7	<b>Total Organic Carbon</b>	mg/L	Quarterly	1	02/11/18	8/11/2018	1	ı	-	3
'	Total Suspended Solids	mg/L	Quarterly	1	02/11/18	8/11/2018	ı	-	-	34
	рН	рН		1	02/11/18	8/11/2018	-	-	-	8.42



# Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					1	-	-	
	Chloride	mg/L					1	-	-	
	Conductivity	μs/cm					-	-	-	
	Lead	mg/L					-	-	-	
8	Magnesium	mg/L	Quarterly				1	-	-	
0	Nitrate	mg/L	Quarterly				-	-	-	
	Potassium	mg/L					1	-	-	
	Sodium	mg/L					1	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	pН	рН					-	-	-	
	Ammonia	mg/L					-	-	-	
	Bicarbonate	mg/L					-	-	-	
	Calcium	mg/L					-	-	-	
9	Chloride	mg/L	Quartarly				-	-	-	
9	Conductivity	μs/cm	Quarterly				-	-	-	
	Lead	mg/L					-	-	-	
	Magnesium	mg/L					-	-	-	
	Nitrate	mg/L					-	-	-	



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					1	1	-	
	Sulphate	mg/L					-	-	-	
	рН	рН					1	ı	-	
	Ammonia	mg/L					•	1	-	
	Bicarbonate	mg/L					ı	ı	-	
	Calcium	mg/L					1	ı	-	
	Chloride	mg/L					-	-	-	
	Conductivity	μs/cm					-	-	-	
	Lead	mg/L					-	-	-	
10	Magnesium	mg/L	Quarterly				ı	ı	-	
10	Nitrate	mg/L	Quarterly				ı	ı	-	
	Potassium	mg/L					1	ı	-	
	Sodium	mg/L					-	-	-	
	Standing Water Level	m					-	-	-	
	Sulphate	mg/L					-	-	-	
	рН	рН					-	-	-	

Table 3 – Monitoring (Quarterly Noise – Limits Apply)

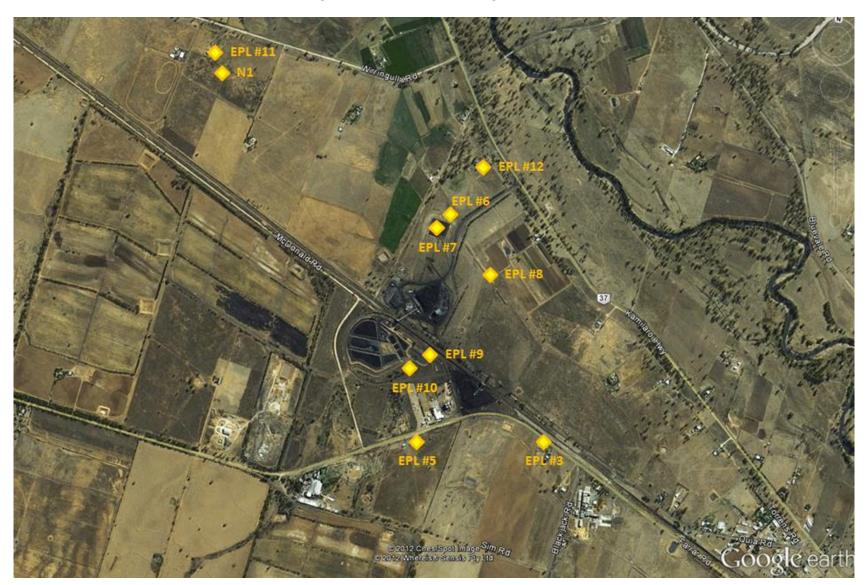


EPL ID	Date	Start Time	Measurement Period	Measure	Measured levels – CHPP – L dB(A)		Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
						35dBA			
N1						35dBA			None
INI						35dBA			None
						45dBA	·		

- site noise levels were insignificant and unlikely, in many cases, to be even noticed; or
- site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations





#### **Site Information**

**EPL No:** 3637

**EPA Website Link:** http://www.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=33514&SYSUID=1&LICID=3637

Licensee: Whitehaven Coal Mining Limited

Licensee Address: Boggabri Road, Gunnedah NSW 2380

**EPL Monitoring Points:** See Figure 1 below

Sampling Period: December 2018

Obtained Date: 11<sup>th</sup> January 2019

Publication Date: 14<sup>th</sup> January 2019

**Table 1 - No Pollutant Limits Apply** 

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Measurements for the Month	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
3	Solid Particles	g/m²/month	Continuous	1	16/10/18	18/12/18	-	-	-	4.0
11	PM <sub>10</sub>	μg/m³	Every 6 days	4	Various	5/12/18	23.3	66.34	29.7	219
12	PM <sub>10</sub>	μg/m³	Every 6 days	5	Various	11/01/19	14.8	51.82	18.1	183
	Conductivity	ms/cm		-	-	-	1	1	-	-
	Oil and Grease	mg/L		-	-	-	1	•	-	-
6	<b>Total Organic Carbon</b>	mg/L	Each overflow	-	-	-	-	-	-	-
6	Total Suspended Solids	mg/L	event	-	-	-	-	-	-	-
	рН	рН		-	-	-	-	-	-	-
	Conductivity	ms/cm		0						
	Oil and Grease	mg/L		0						
7	<b>Total Organic Carbon</b>	mg/L	Quartarly	0						
'	Total Suspended Solids	mg/L	Quarterly	0						
	рН	рН		0						



Table 2 – Groundwater Monitoring (Quarterly – No Limits apply)

EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Ammonia	mg/L					-	-	-	0.05
	Bicarbonate	mg/L					-	-	-	1,160
	Calcium	mg/L					-	-	-	27
	Chloride	mg/L	Quarterly				-	-	-	1,190
	Conductivity	μs/cm					-	-	-	6,780
	Lead	mg/L					-	-	-	0.001
8	Magnesium	mg/L		1	03/12/18	11/12/10	-	-	-	110
•	Nitrate	mg/L		1	05/12/16	11/12/18	-	-	-	1.28
	Potassium	mg/L					-	-	-	24
	Sodium	mg/L					•	-	-	1,590
	Standing Water Level	m					-	-	-	7.59
	Sulphate	mg/L					-	-	-	732
	pH	pН					-	-	-	8.61
	Ammonia	mg/L					-	-	-	0.05
	Bicarbonate	mg/L					-	-	-	872
	Calcium	mg/L					-	-	-	240
	Chloride	mg/L	O combonle	4	02/12/10	11/12/10	-	-	-	1,030
9	Conductivity	μs/cm	Quarterly	1	03/12/18	11/12/18	-	-	-	4,800
	Lead	mg/L					-	-	-	<0.001
	Magnesium	mg/L					-	-	-	238
	Nitrate	mg/L					-	-	-	0.31



EPL ID	Pollutant	Units of Measure	Monitoring Frequency	No. of Samples for the Period	Date Sampled	Date Obtained	Min Value	Mean Value	Median Value	Max or Only Value
	Potassium	mg/L					-	-	-	137
	Sodium	mg/L					-	-	-	737
	Standing Water Level	m					1	-	-	1.76
	Sulphate	mg/L					-	-	-	675
	рН	рН					-	-	-	7.71
	Ammonia	mg/L					-	-	-	0.04
	Bicarbonate	mg/L			03/12/18		-	-	-	642
	Calcium	mg/L					-	-	-	168
	Chloride	mg/L					-	-	-	1,230
	Conductivity	μs/cm					-	-	-	4,190
	Lead	mg/L					-	-	-	<0.001
10	Magnesium	mg/L	Quarterly	1		11/12/18	-	-	-	222
10	Nitrate	mg/L	Quarterly	1	03/12/18	11/12/10	-	-	-	11.4
	Potassium	mg/L					-	-	-	65
	Sodium	mg/L					-	-	-	773
	Standing Water Level	m					-	-	-	1.67
	Sulphate	mg/L					-	-	-	286
	рН	рН					-	-	-	8.06

Table 3 – Monitoring (Quarterly Noise – Limits Apply)



EPL ID	Date	Start Time	Measurement Period	Measure	Measured levels – CHPP – dB(A)		Wind speed (m/s)	Observations	(Potential) Non-
				L <sub>A1</sub> , 1 minute	L <sub>Aeq</sub> , 15 minute				compliance /breach
	11/12/18	12:47	15 min		N/M	35dBA	5.1 m/s, ESE	Dozer operations barely audible, Birds 45-56; Traffic 45-50	
N1	11/12/18	18:20	15 min		I/A	35dBA	8 m/s ESE	Wind 50-70; Birds 50-60, no audible site noise	None
	11/12/18	22:24	15 min		34	35dBA	3.5 m/s ESE	Dozer Operation 33-37, Train horn 53, wind 40-	
	11/12/18	22:24	1 min	45		45dBA	3.5 m/s ESE	45, traffic 45-50	

<sup>•</sup> site noise levels were insignificant and unlikely, in many cases, to be even noticed; or

<sup>•</sup> site noise levels were masked by another relatively loud noise source, but were estimated to be less than LAeq 30 dB, which is insignificant in terms of any applicable criterion.



Figure 1 – EPL 3637 Monitoring Locations

