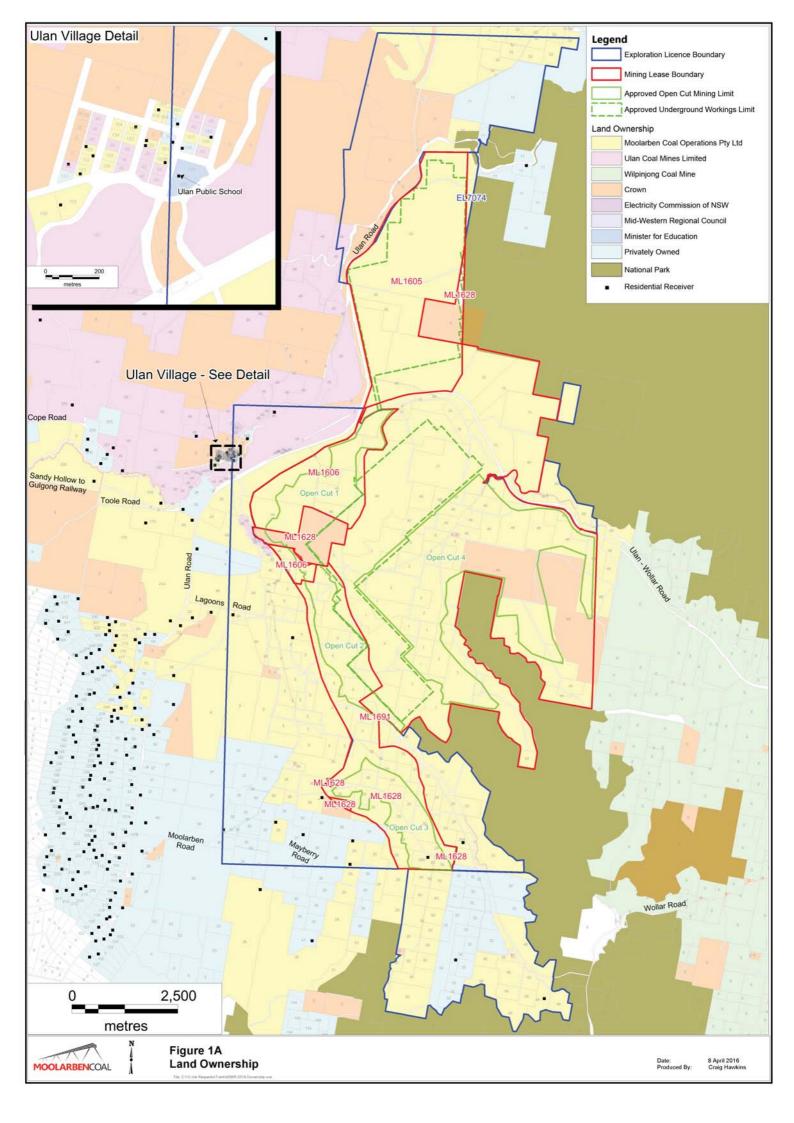
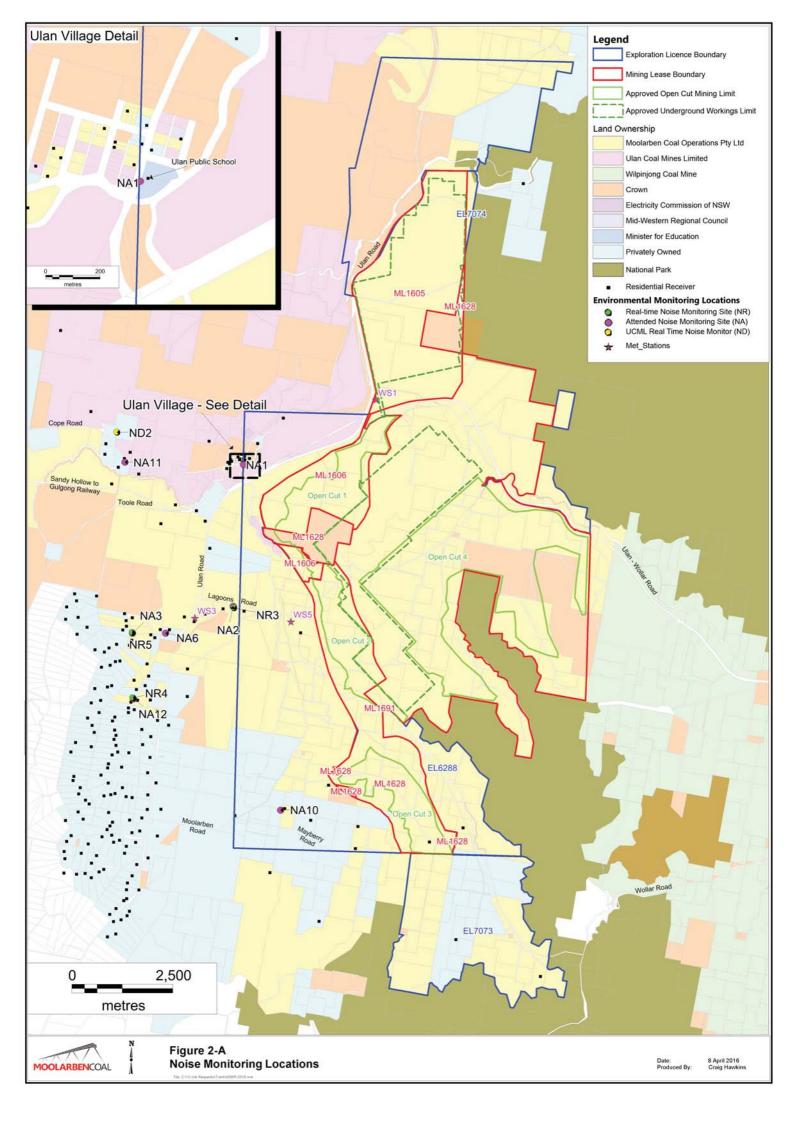
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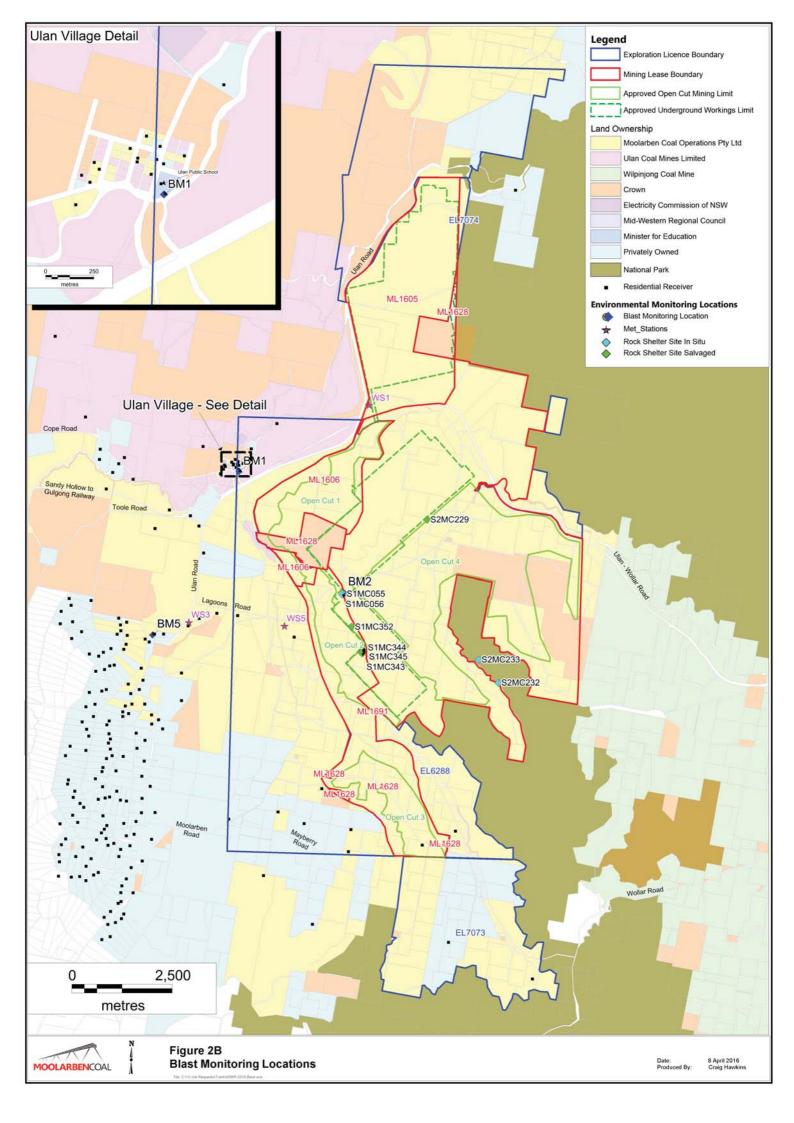
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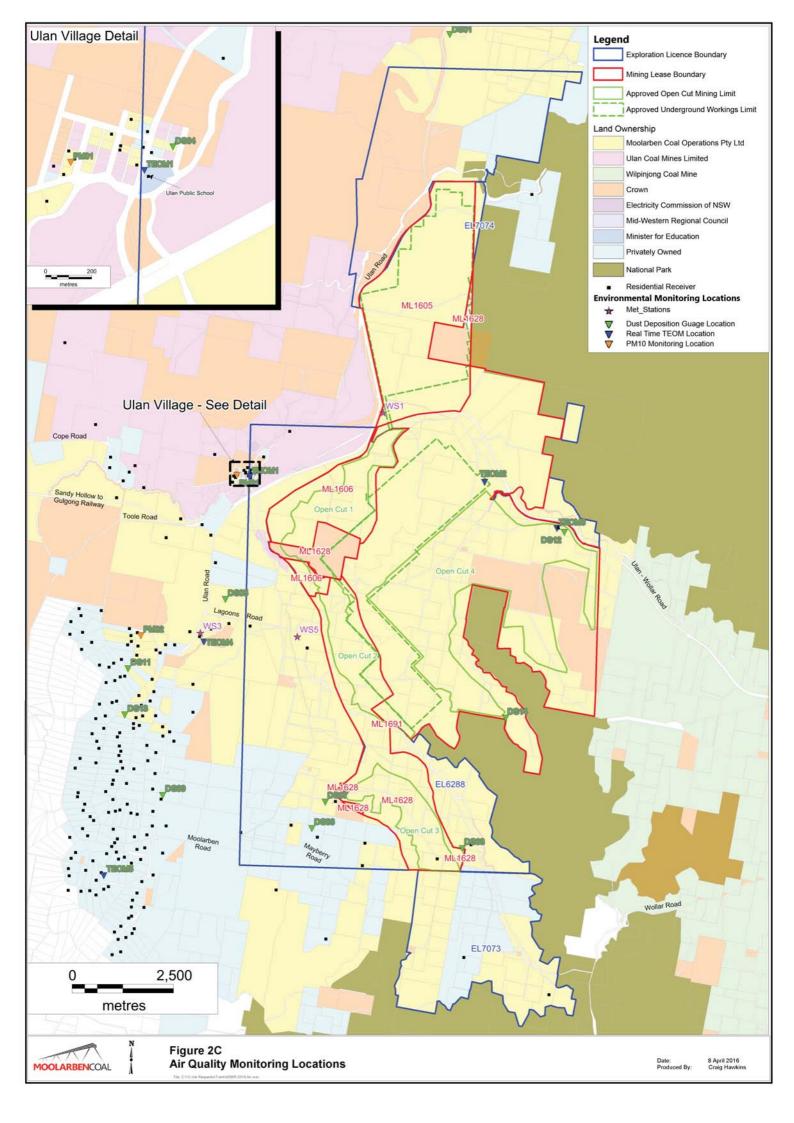
APPENDIX 1. LAND OWNERSHIP



APPENDIX 2. MONITORING LOCATIONS







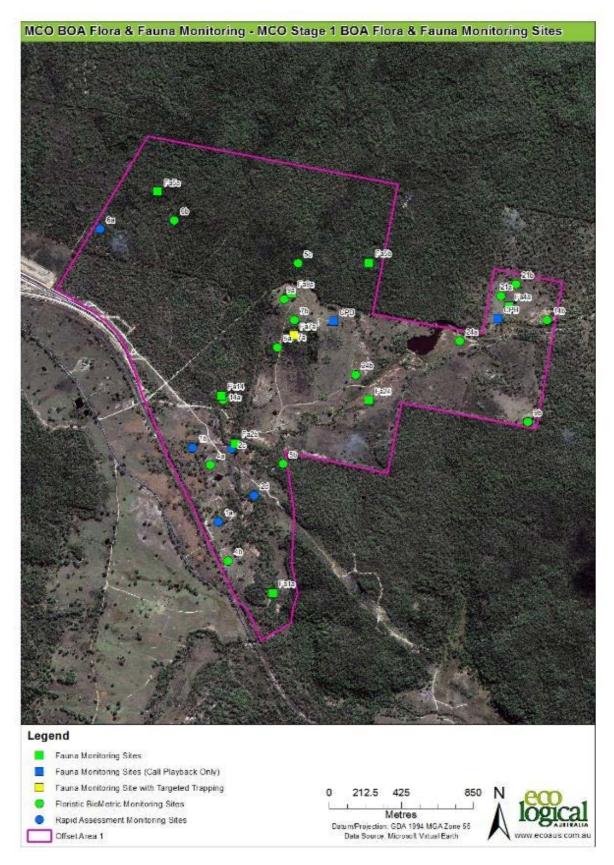


Figure 2-d MCO Stage 1 Offset Area 1 monitoring site locations

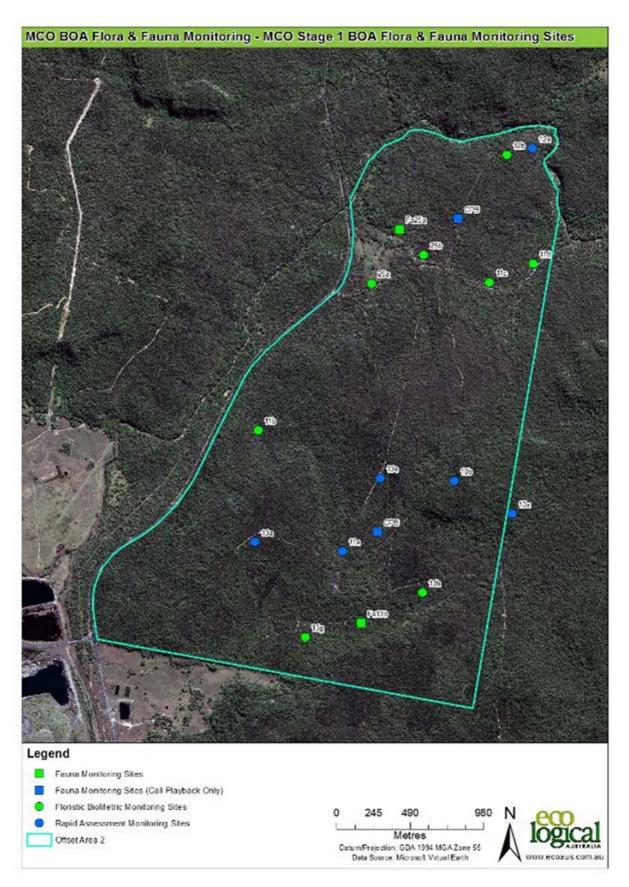


Figure 2-e MCO Stage 1 Offset Area 2 monitoring site locations

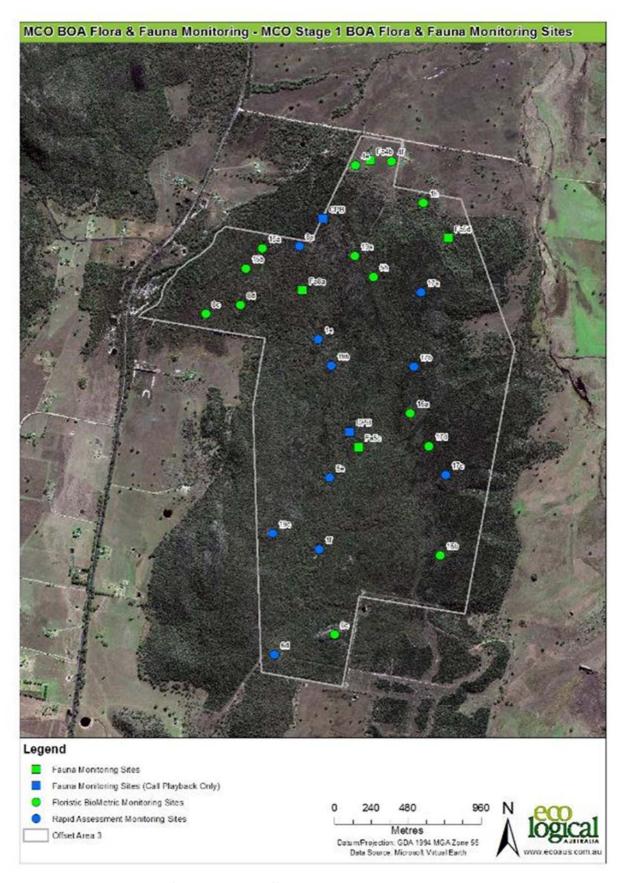


Figure 2-f MCO Stage 1 Offset Area 3 monitoring site locations



Figure 2-g MCO Stage 1 Bora Creek monitoring site locations

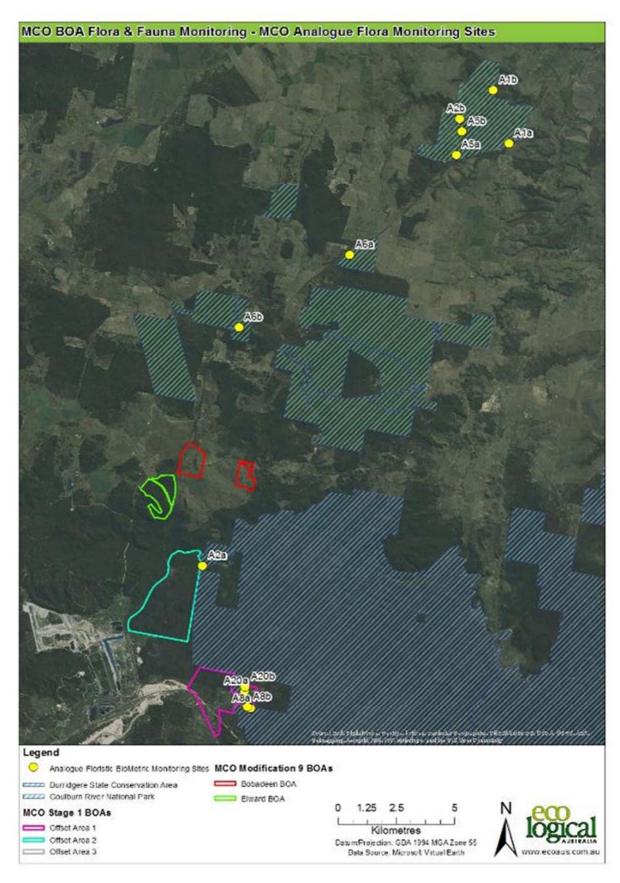
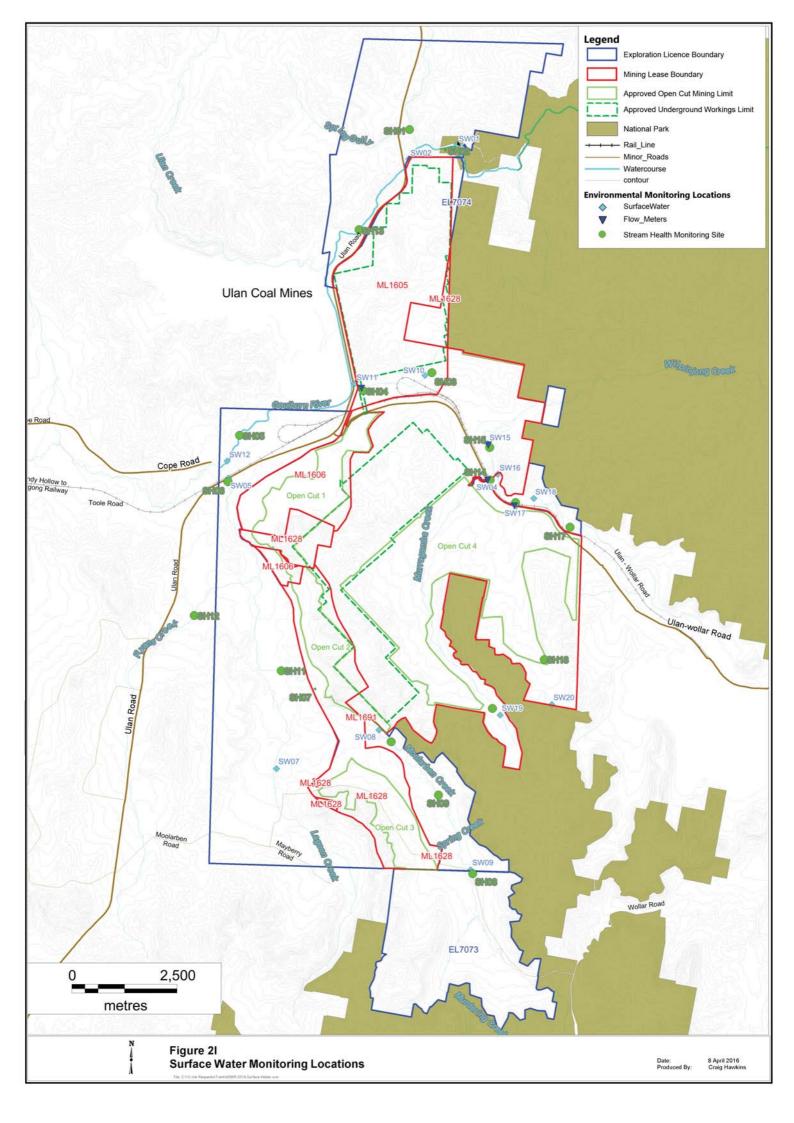
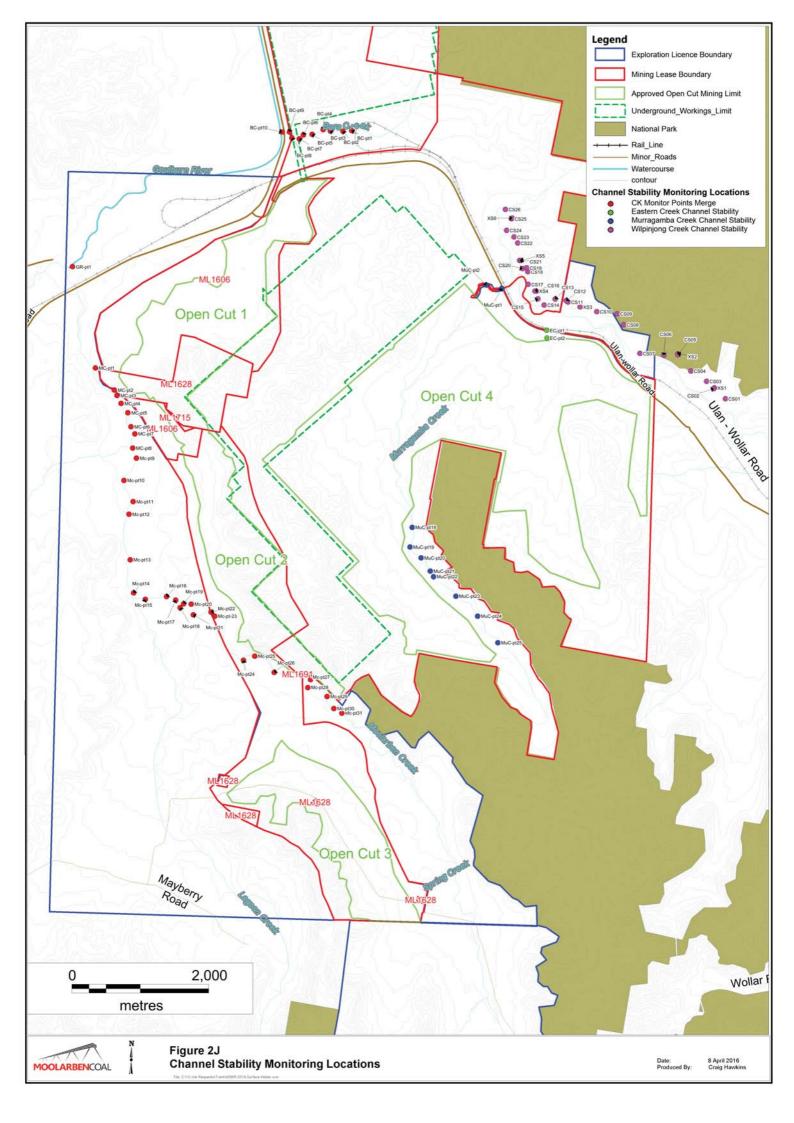


Figure 2-h MCO Stage 1 analogue monitoring site locations





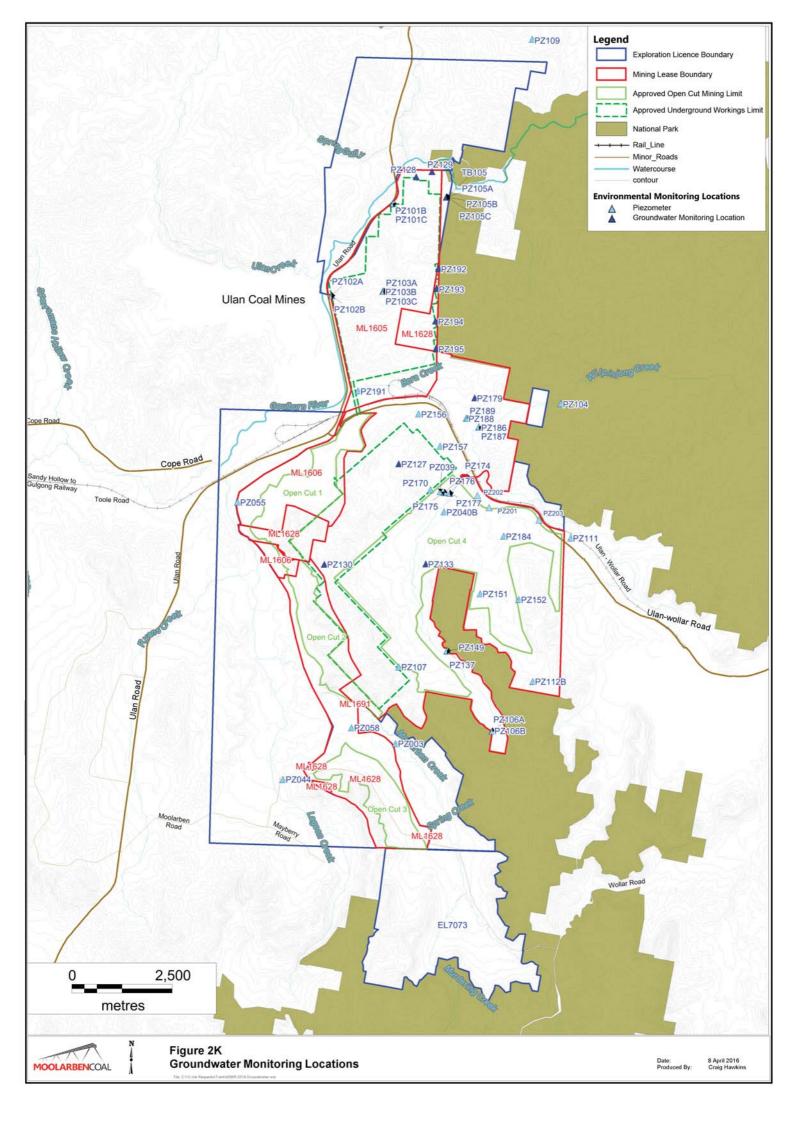




Figure 2-I Location of EFA and floristic monitoring sites



Figure 2-m Location of fauna monitoring sites

APPENDIX 3. MONITORING DATA

APPENDIX 3A. METEOROLOGICAL DATA (WS03)

Data	Temperatu	Temperature (2m) (°C)		Temperature (10m) (°C)		RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
01/01/15	17.3	34.9	17.6	34.7	57.9	2.2
02/01/15	14.8	32.7	16.2	31.1	62.1	0.0
03/01/15	17.3	34.2	18.5	32.5	57.7	0.0
04/01/15	18.4	33.4	18.6	32.5	66.3	16.0
05/01/15	15.6	25.6	16.4	25.7	73.9	0.0
06/01/15	15.6	30.7	16.7	30.1	66.5	0.0
07/01/15	15.4	30.7	16.5	30.3	60.5	0.0
08/01/15	18.5	32.0	18.5	31.3	65.0	2.2
09/01/15	20.0	32.5	20.7	31.2	59.7	1.0
10/01/15	19.3	31.8	19.3	30.5	75.8	4.6
11/01/15	17.4	21.0	17.4	20.7	95.4	19.2
12/01/15	17.4	24.5	17.5	24.3	78.6	1.2
13/01/15	18.1	25.5	18.2	25.3	84.6	14.0
14/01/15	15.6	28.3	16.2	27.4	73.1	0.0
15/01/15	11.6	28.3	12.6	27.3	61.1	0.0
16/01/15	10.7	28.7	12.1	27.6	56.0	0.0
17/01/15	9.4	30.5	10.4	29.6	52.4	0.0
18/01/15	13.4	30.4	15.0	29.3	48.2	0.0
19/01/15	14.7	25.8	14.7	25.1	74.0	27.0
20/01/15	15.1	26.1	14.9	25.7	75.4	0.0
21/01/15	16.0	28.2	17.0	28.2	70.3	0.4
22/01/15	17.0	28.8	18.0	28.5	68.9	0.0
23/01/15	18.1	32.5	18.6	30.2	81.8	4.0
	17.5	ł	1		73.1	14.0
24/01/15		33.8	18.1	32.4		
25/01/15	15.0	32.1	16.5	31.2	73.1 76.4	0.0
26/01/15	15.0	32.1	15.0	32.1		0.0
27/01/15	15.8	20.2	16.0	19.9	86.7	24.0
28/01/15	8.0	19.7	8.9	19.5	83.7	1.2
29/01/15	9.2	24.1	10.7	23.2	66.2	0.0
30/01/15	7.3	26.2	8.9	25.3	58.8	0.0
31/01/15	13.1	27.2	11.1	26.3	42.9	0.0
01/02/15	12.1	29.2	12.8	27.9	60.8	0.0
02/02/15	14.4	25.1	14.7	24.9	62.8	0.0
03/02/15	10.1	25.7	11.2	25.0	66.1	0.0
04/02/15	13.8	26.5	12.9	25.3	65.0	0.0
05/02/15	11.0	23.9	12.8	23.5	71.0	0.0
06/02/15	11.5	25.0	12.8	24.3	64.8	0.0
07/02/15	11.8	30.2	12.9	29.3	63.9	0.0
08/02/15	14.5	34.4	14.5	33.7	49.2	0.0
09/02/15	17.6	30.1	18.2	29.2	62.9	0.0
10/02/15	17.4	29.0	18.0	28.6	63.9	0.0
11/02/15	14.7	29.7	15.4	29.1	61.6	0.0
12/02/15	18.0	31.7	17.6	29.6	62.3	0.0
13/02/15	13.2	28.9	14.2	26.9	76.0	1.2
14/02/15	12.5	30.0	13.7	28.3	76.3	0.6
15/02/15	13.1	31.7	14.1	30.4	66.8	0.0
16/02/15	14.6	31.9	14.9	30.9	60.5	0.0
17/02/15	14.2	31.5	15.8	29.9	57.1	0.0
18/02/15	13.1	30.6	14.2	29.6	57.6	0.0
19/02/15	14.6	29.9	15.8	29.0	64.1	0.0
20/02/15	15.1	27.2	16.3	26.2	72.8	0.0
21/02/15	18.0	28.5	18.3	27.4	69.1	0.0

	Temperatu	ıre (2m) (°C)	Temper	rature (10m) (°C)	Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
22/02/15	18.5	29.7	18.6	28.8	66.3	0.0
23/02/15	17.2	31.4	17.9	30.1	67.3	0.0
24/02/15	18.2	32.4	18.5	31.4	64.5	0.8
25/02/15	16.1	29.4	16.2	27.9	77.0	37.6
26/02/15	13.6	29.2	14.2	28.8	75.1	0.0
27/02/15	14.4	30.1	15.1	29.4	67.6	0.0
28/02/15	15.1	32.9	15.5	31.7	57.9	0.0
01/03/15	15.9	34.1	16.3	32.5	72.8	10.8
02/03/15	13.1	25.5	14.1	24.5	67.9	0.0
03/03/15	14.6	33.2	14.7	32.5	60.0	0.0
04/03/15	14.0	33.9	17.0	33.1	45.5	0.0
05/03/15	4.6	25.7	5.4	25.0	47.3	0.0
06/03/15	6.1	25.9	6.5	25.3	45.6	0.0
07/03/15	8.8	30.7	9.6	29.5	57.2	0.0
08/03/15	10.8	31.2	12.2	30.2	55.2	0.0
09/03/15	11.7	32.4	13.2	31.6	47.1	0.0
10/03/15	12.8	29.9	13.9	28.7	76.9	13.4
11/03/15	17.0	32.4	17.4	31.0	74.3	9.4
12/03/15	17.6	31.1	17.7	30.3	67.3	0.2
13/03/15	9.3	21.6	10.4	21.0	77.0	0.0
14/03/15	9.5	26.8	10.5	26.7	66.9	0.0
15/03/15	9.2	28.8	10.7	27.9	63.0	4.0
16/03/15	9.2	25.1	10.6	24.0	58.6	0.0
17/03/15	12.0	23.4	12.1	22.7	72.0	0.0
18/03/15	10.7	33.6	12.2	33.3	54.9	0.0
19/03/15	11.0	32.9	13.5	32.5	52.9	0.0
20/03/15	12.5	35.0	14.9	34.3	49.5	0.0
21/03/15	16.3	21.9	16.5	21.3	69.7	0.0
22/03/15	13.8	26.5	15.0	25.8	70.4	0.0
23/03/15	14.1	30.3	15.6	29.7	67.2	0.0
24/03/15	6.0	28.4	7.2	26.9	79.2	5.8
25/03/15	6.2	26.2	6.9	25.5	79.2	0.0
26/03/15	6.2	26.2	6.2	26.2	51.4	0.0
27/03/15	2.7	22.7	4.0	22.1	52.1	0.0
28/03/15	2.8	26.1	4.5	25.2	56.4	0.0
29/03/15	10.3	27.5	10.9	26.9	50.3	0.0
30/03/15	13.6	27.6	14.4	26.0	59.7	0.0
31/03/15 01/04/15	14.6 12.5	24.2 27.9	15.6 13.4	23.7 26.4	64.0 71.0	0.0
		28.7	†		-	
02/04/15 03/04/15	12.6 15.1	21.1	14.0 15.2	27.5 20.5	59.3 81.9	0.0 3.2
04/04/15	13.4	17.4	13.4	17.2	94.7	13.6
05/04/15	8.5	22.7	9.3	21.8	86.3	1.6
06/04/15	8.5	22.7	9.5	21.3	92.2	19.6
07/04/15	9.3	17.2	9.3	15.7	74.5	3.8
08/04/15	5.8	16.0	6.9	15.3	79.6	0.0
09/04/15	5.2	22.3	6.5	21.7	69.0	0.0
10/04/15	5.3	20.4	6.6	19.6	73.0	0.0
11/04/15	6.7	22.6	7.5	22.7	79.5	0.0
12/04/15	7.8	23.0	8.3	22.0	73.7	0.0
13/04/15	8.5	22.7	10.0	22.0	71.9	0.0
14/04/15	7.9	24.3	8.9	23.4	71.2	0.0
15/04/15	7.9	29.1	9.3	27.8	68.7	0.0
16/04/15	11.3	29.3	12.6	28.6	67.1	0.0
17/04/15	14.7	26.7	15.9	25.6	77.9	0.0
18/04/15	14.4	24.9	14.9	24.0	78.5	14.6
19/04/15	10.1	20.6	10.1	19.9	77.2	4.6
20/04/15	10.1	14.6	10.2	14.7	86.7	17.2
21/04/15	8.5	12.6	8.7	12.7	88.3	12.8

5.	Temperatu	re (2m) (°C)	Temper	rature (10m) (°C)	Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
22/04/15	8.4	19.2	8.6	18.8	81.0	0.0
23/04/15	9.6	22.8	10.3	21.8	82.6	0.0
24/04/15	6.3	22.9	7.5	21.7	77.0	0.0
25/04/15	6.1	22.9	7.1	21.4	68.2	2.4
26/04/15	4.5	12.6	5.7	12.2	85.8	0.2
27/04/15	2.2	17.5	3.3	16.8	76.7	0.0
28/04/15	2.0	17.8	2.8	17.4	76.7	0.0
29/04/15	4.7	19.0	6.4	18.2	74.8	0.0
30/04/15	8.2	8.5	9.5	9.6	99.1	0.0
01/05/15	12.8	18.0	12.9	17.8	74.2	0.0
02/05/15	11.8	20.7	13.4	20.4	83.4	0.0
03/05/15	13.1	22.6	13.9	22.0	83.6	0.2
04/05/15	7.0	21.1	7.8	20.1	88.7	0.0
05/05/15	3.6	24.1	6.1	23.3	59.4	0.0
06/05/15	2.3	15.9	4.7	15.4	65.6	0.0
07/05/15	1.8	15.3	3.7	14.7	68.2	0.0
08/05/15	2.1	16.1	3.5	15.5	70.6	0.0
09/05/15	2.6	16.2	4.8	114.0	74.0	0.0
10/05/15	6.0	16.9	5.8	16.2	55.7	0.0
11/05/15	8.3	15.8	9.2	15.3	76.7	0.0
12/05/15	6.1	18.1	8.8	17.5	68.6	0.0
13/05/15	-0.1 -0.7	11.8 13.9	1.9 0.0	10.9 13.2	63.4 75.8	0.0
14/05/15 15/05/15	0.9	18.6	1.6	18.2	74.2	0.0
16/05/15	2.5	17.1	3.4	16.4	81.4	0.0
17/05/15	6.3	17.7	7.7	17.4	84.0	0.0
18/05/15	10.3	17.7	10.5	17.5	88.4	0.0
19/05/15	10.7	20.8	11.4	20.2	86.5	20.0
20/05/15	10.8	20.6	11.2	19.7	89.7	3.0
21/05/15	9.2	18.1	9.4	17.3	87.1	24.0
22/05/15	7.3	16.3	8.0	15.8	78.4	0.0
23/05/15	1.2	18.1	2.4	17.2	83.4	0.0
24/05/15	1.9	16.3	2.7	15.7	83.7	0.2
25/05/15	0.7	17.5	1.7	16.7	83.7	1.4
26/05/15	0.7	17.5	0.7	17.5	87.8	0.0
27/05/15	2.7	15.8	3.8	15.2	83.4	0.0
28/05/15	10.6	17.3	10.8	16.7	86.7	1.8
29/05/15	6.9	16.9	7.4	16.3	93.1	0.4
30/05/15	7.9	17.0	8.2	16.3	85.6	2.2
31/05/15	4.8	13.1	5.9	12.5	90.9	1.6
01/06/15	-3.6	12.0	-2.8	11.3	72.1	0.0
02/06/15	-3.8	12.9	-3.1	12.7	77.7	0.0
03/06/15	-3.3	13.4	-2.5	12.1	81.6	0.0
04/06/15	-2.8 1.2	13.7	-2.1	13.0	78.9	1.8
05/06/15 06/06/15	-1.2 -0.9	11.1 16.3	-0.4 0.1	10.4 15.7	88.2 84.7	0.0
07/06/15	0.8	18.2	2.2	17.9	85.5	0.0
08/06/15	2.6	18.7	4.4	18.2	80.9	0.2
09/06/15	-0.1	17.9	1.3	17.5	75.3	0.2
10/06/15	0.3	15.4	1.6	15.0	76.9	0.0
11/06/15	4.3	15.6	6.6	15.2	80.9	0.0
12/06/15	2.9	14.6	3.8	14.4	85.7	0.0
13/06/15	1.7	16.5	2.6	16.3	86.5	0.2
14/06/15	2.0	19.1	3.1	18.9	82.5	0.0
15/06/15	4.7	14.3	6.5	14.2	86.5	10.0
16/06/15	11.3	12.2	11.2	12.3	99.2	32.0
17/06/15	7.3	15.7	8.2	15.3	91.2	7.4
18/06/15	4.9	12.5	6.1	12.1	88.7	0.4
19/06/15	3.0	13.4	3.8	12.8	89.1	0.6

Data	Temperatu	re (2m) (°C)	Tempei	rature (10m) (°C)	Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
20/06/15	-1.3	12.5	-0.5	12.4	87.1	0.0
21/06/15	-1.1	13.7	0.0	13.5	86.8	0.0
22/06/15	-0.8	16.0	-0.1	15.1	84.9	0.2
23/06/15	0.3	17.9	1.9	17.4	81.8	0.0
24/06/15	5.0	15.4	5.7	14.3	93.6	3.4
25/06/15	4.7	16.6	5.8	16.3	89.0	0.6
26/06/15	-0.6	15.2	-0.1	14.8	85.9	0.0
27/06/15	-1.8	15.6	-1.3	15.3	85.2	0.0
28/06/15	-1.4	14.9	-1.2	14.7	82.9	0.2
29/06/15	-1.4 5.1	15.5 13.7	0.0 5.9	15.5 12.9	87.4 92.0	0.0
30/06/15 01/07/15	-1.0	14.5	0.6	13.5	82.1	0.6 0.0
02/07/15	-3.7	10.7	-2.6	10.4	79.7	0.0
03/07/15	-3.7	13.4	-3.2	12.7	80.6	0.0
04/07/15	-3.7	12.6	-2.4	11.9	74.1	0.0
05/07/15	-4.5	14.7	-3.7	14.0	74.6	0.0
06/07/15	-4.3	11.7	-3.6	11.2	78.6	0.0
07/07/15	-1.4	13.0	1.0	13.4	80.7	0.0
08/07/15	-1.0	13.0	0.5	12.7	85.1	0.0
09/07/15	-0.1	14.1	0.4	14.1	85.2	0.0
10/07/15	3.1	15.8	3.6	14.8	92.4	8.8
11/07/15	2.6	16.4	2.4	15.4	87.7	9.2
12/07/15	3.6	6.4	3.7	6.3	92.2	6.8
13/07/15	5.0	8.8	5.0	8.6	93.9	3.8
14/07/15	-0.5	9.5	0.3	8.9	79.5	0.8
15/07/15	3.3	11.8	3.6	10.7	86.5	6.8
16/07/15	1.7	6.7	1.7	6.1	87.2	1.2
17/07/15	-2.0	9.6	-1.4	9.0	86.8	0.0
18/07/15	-2.1	13.4	-1.2	13.2	81.2	0.0
19/07/15	-1.6	13.1	-0.6	12.7	86.8	0.2
20/07/15	1.9	13.8	4.0	13.7	90.1	0.0
21/07/15	2.9	15.5	5.0	15.5	88.1	0.2
22/07/15	5.8	16.0	6.6	14.9	88.9	6.0
23/07/15	5.9	16.1	7.5	15.5	90.9	0.0
24/07/15	6.5	15.2	7.2	14.6	90.3	0.8
25/07/15	2.8	15.1	4.5	14.7	90.3	0.2
26/07/15 27/07/15	2.8 -1.7	15.1 9.6	2.8 0.2	15.1 9.0	73.4 72.5	0.0
28/07/15	-3.2	13.4	-2.4	13.1	77.2	0.0
29/07/15	-2.7	15.4	-2.4	14.6	79.8	0.0
30/07/15	-1.1	15.6	-0.2	14.9	77.7	0.0
31/07/15	0.7	16.8	2.3	16.2	66.8	0.0
01/08/15	0.1	19.9	1.0	19.1	65.3	0.0
02/08/15	2.2	22.7	2.8	21.6	64.5	0.0
03/08/15	1.2	12.6	2.1	12.0	70.8	0.0
04/08/15	1.5	10.0	2.2	9.3	57.0	0.0
05/08/15	3.1	9.9	3.6	9.5	77.2	1.4
06/08/15	-1.1	10.6	0.6	10.1	76.2	0.0
07/08/15	0.0	13.6	0.8	13.1	70.9	0.0
08/08/15	-0.8	14.4	0.2	13.8	76.1	0.0
09/08/15	-0.5	16.6	0.6	15.5	76.6	0.0
10/08/15	0.3	16.9	2.1	16.3	66.0	0.0
11/08/15	-2.3	17.1	-1.2	16.3	69.3	0.0
12/08/15	-0.8	14.2	-0.2	13.1	77.6	1.8
13/08/15	3.0	12.4	4.3	11.7	70.1	0.0
14/08/15	-1.3	14.7	-0.6	14.3	75.8	0.0
15/08/15	0.5	16.8	0.9	16.6	77.9	0.0
16/08/15	2.3	18.2	3.9	17.4	79.5	0.0
17/08/15	0.4	15.0	3.1	14.4	76.3	0.0

	Temperatu	re (2m) (°C)	Temper	rature (10m) (°C)	Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
18/08/15	-2.9	13.1	-2.1	12.5	78.4	0.2
19/08/15	-1.7	16.4	-0.6	15.3	73.0	0.0
20/08/15	0.0	19.2	1.5	18.7	72.8	0.0
21/08/15	2.8	21.0	2.7	19.6	73.1	0.0
22/08/15	7.5	23.2	9.0	22.3	75.5	11.8
23/08/15	11.7	15.1	12.0	14.9	97.8	25.0
24/08/15	10.3	15.2	10.3	15.2	97.2	5.6
25/08/15	8.5	13.0	8.3	12.4	97.2	1.2
26/08/15	8.5	13.0	8.5	13.0	86.3	0.2
27/08/15	4.2	15.1	4.6	14.3	86.4	1.0
28/08/15	-1.1	12.4	-0.4	11.6	85.8	0.0
29/08/15	-2.4	14.0	-1.8	13.6	79.7	0.0
30/08/15	0.9	15.6	0.8	15.0	71.9	0.0
31/08/15	2.8	15.1	2.4	14.4	72.1	0.0
01/09/15	-0.4	14.9	0.2	14.3	76.1	0.0
02/09/15	3.5	19.9	3.9	18.8	67.2	4.0
03/09/15	3.1	13.0	4.2	12.0	86.1	1.8
04/09/15	3.2	17.0	3.8	16.3 17.4	84.9	0.0
05/09/15 06/09/15	3.7 4.1	17.8 16.3	4.9 5.3	17.4	82.2 87.2	0.2
06/09/15	0.0	20.5	2.4	19.7	69.0	0.0
08/09/15	3.5	13.6	5.2	13.0	74.5	0.2
09/09/15	1.3	16.0	2.6	15.5	72.4	0.0
10/09/15	4.1	19.3	6.3	18.0	75.6	0.0
11/09/15	3.0	21.8	4.1	21.1	73.7	0.0
12/09/15	3.5	21.9	4.5	21.7	70.9	0.0
13/09/15	4.9	23.8	6.4	23.1	68.4	0.0
14/09/15	5.8	23.9	7.7	23.2	67.2	0.0
15/09/15	2.0	25.0	3.0	24.5	63.4	0.0
16/09/15	1.3	19.6	2.5	19.0	63.2	0.0
17/09/15	4.2	18.4	5.4	17.7	63.9	0.0
18/09/15	1.8	17.9	3.0	17.8	73.4	0.0
19/09/15	7.6	17.2	6.5	17.2	73.7	0.0
20/09/15	5.4	20.0	6.8	18.8	82.1	3.2
21/09/15	8.0	21.5	8.6	21.1	69.3	1.2
22/09/15	2.0	15.3	3.4	14.8	62.3	0.0
23/09/15	-1.8	16.0	-0.5	15.5	59.0	0.0
24/09/15	1.9	16.9	4.2	16.4	58.5	0.0
25/09/15	4.1	17.1	6.0	16.5	68.0	0.0
26/09/15	1.5	16.4	2.9	16.1	74.2	0.0
27/09/15	1.5	20.1	3.6	19.4	67.2	0.0
28/09/15	1.5	20.6	2.8	20.3	64.2	0.0
29/09/15	4.2	23.2	6.3	22.6	57.2	0.0
30/09/15 01/10/15	13.2 4.6	25.6 26.6	13.2 5.9	24.5 26.2	41.0 61.5	1.0 0.0
02/10/15	5.7	26.6	7.0	26.6	66.1	0.0
02/10/15	7.1	28.6	9.1	28.3	56.0	0.0
04/10/15	6.9	30.4	8.0	30.1	50.2	0.0
05/10/15	8.3	32.2	10.3	31.8	46.2	0.0
06/10/15	9.4	33.2	11.7	32.8	41.7	0.0
07/10/15	12.0	30.0	12.2	29.6	55.2	0.0
08/10/15	8.7	20.3	10.0	20.2	73.6	0.0
09/10/15	9.8	27.0	11.8	26.8	68.0	0.0
10/10/15	9.9	28.6	10.4	27.3	77.5	5.2
11/10/15	9.0	25.4	9.8	24.9	75.0	0.8
12/10/15	11.2	29.1	12.8	28.7	51.1	0.2
13/10/15	15.3	26.3	15.5	25.8	67.5	0.0
14/10/15	8.6	25.8	10.0	25.6	70.1	0.0
15/10/15	8.8	28.5	10.2	27.8	62.2	0.0

D.t.	Temperatu	ıre (2m) (°C)	Temper	rature (10m) (°C)	Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
16/10/15	10.1	30.6	11.7	29.9	48.9	0.0
17/10/15	17.7	32.1	17.9	31.6	44.8	0.0
18/10/15	15.8	24.8	16.2	24.2	72.5	0.0
19/10/15	11.5	26.7	12.3	26.4	83.2	32.0
20/10/15	12.5	29.6	14.3	28.5	63.9	0.0
21/10/15	13.6	27.0	13.5	25.4	74.7	22.6
22/10/15	11.8	20.9	12.6	20.2	84.2	4.8
23/10/15	9.9	19.2	10.8	18.9	69.6	0.0
24/10/15	9.0	25.7	10.3	25.2	66.3	0.0
25/10/15	10.3	27.1	11.3	26.1	66.3	0.0
26/10/15	10.3	27.1	10.3	27.1	82.2	10.4
27/10/15	8.3	17.6	9.3	17.3	68.5	0.0
28/10/15	7.1	21.8	8.2	21.5	68.1	0.0
29/10/15	8.1 15.1	24.2	9.2 14.3	23.4 24.8	66.6 58.1	0.0 2.2
30/10/15		25.8	1			
31/10/15 01/11/15	13.5 14.5	15.5 27.4	13.4 14.4	15.2 25.6	95.9 82.9	12.2 10.2
02/11/15	15.4	27.4	16.6	26.9	79.7	0.0
03/11/15	16.1	24.2	16.2	23.5	89.2	5.4
04/11/15	14.4	21.1	14.4	20.7	90.3	9.0
05/11/15	14.4	24.3	14.4	23.9	90.7	4.8
06/11/15	12.3	26.4	13.0	25.6	75.1	0.2
07/11/15	14.4	27.0	14.4	26.6	60.2	0.0
08/11/15	12.5	20.3	12.8	19.9	70.7	0.0
09/11/15	9.4	24.8	10.4	24.6	63.8	0.0
10/11/15	14.4	30.9	14.1	30.0	50.3	0.0
11/11/15	14.9	25.6	15.1	25.5	59.2	0.0
12/11/15	12.9	25.4	13.4	24.7	82.3	17.8
13/11/15	15.0	28.9	15.1	27.8	73.4	1.4
14/11/15	9.9	21.6	11.2	21.2	80.2	2.2
15/11/15	7.4	19.0	8.6	18.6	76.1	0.0
16/11/15	7.5	22.9	8.5	22.8	67.6	0.0
17/11/15	9.7	27.5	10.8	26.4	65.4	0.0
18/11/15	12.6	32.9	14.1	32.6	46.5	0.0
19/11/15	14.2	36.3	16.1	36.0	48.7	0.0
20/11/15	18.0	37.2	19.4	36.8	30.3	0.0
21/11/15	15.5	30.2	15.6	29.6	59.4	0.0
22/11/15	10.2	25.9	10.8	25.8	73.5	0.0
23/11/15	10.5 9.7	27.3	12.3	26.7 28.7	52.0	0.0
24/11/15 25/11/15	14.1	29.6 33.5	11.2 15.6	32.4	60.1 42.9	0.0
26/11/15	13.0	33.5	13.9	32.4	37.4	0.0
27/11/15	11.8	28.5	12.8	27.2	63.3	0.0
28/11/15	15.6	27.6	15.2	26.7	67.0	0.0
29/11/15	9.2	29.7	10.4	28.9	49.8	0.0
30/11/15	14.4	32.4	16.8	31.6	28.9	0.0
01/12/15	16.9	36.0	17.7	35.5	37.9	0.0
02/12/15	13.2	26.7	13.4	25.7	47.5	0.0
03/12/15	11.7	23.1	12.0	22.3	59.6	0.0
04/12/15	7.8	27.0	8.7	26.2	59.4	0.0
05/12/15	10.3	31.9	12.2	30.9	50.3	0.0
06/12/15	15.5	34.6	16.0	32.6	38.1	0.0
07/12/15	16.1	33.9	16.7	32.3	52.7	0.0
08/12/15	18.1	30.9	17.8	29.9	62.8	2.6
09/12/15	16.6	32.4	16.9	31.5	67.1	3.6
10/12/15	12.2	33.3	13.9	32.8	56.4	0.2
11/12/15	10.8	32.0	12.1	31.2	34.0	0.0
12/12/15	15.4	28.5	15.1	27.1	44.9	0.0
13/12/15	10.7	31.8	12.0	30.6	51.4	0.0

Dete	Temperatu	re (2m) (°C)	Temperature (10m) (°C)		Humidity	RAIN
Date	Min	Max	Minimum	Maximum	Average	(mm)
14/12/15	11.5	33.7	13.2	32.6	41.8	0.0
15/12/15	17.5	35.4	18.1	34.1	39.8	0.0
16/12/15	12.6	30.7	13.4	29.2	75.6	7.6
17/12/15	13.3	27.8	14.3	27.1	67.0	0.0
18/12/15	15.0	33.4	16.5	32.2	54.5	0.0
19/12/15	14.2	36.0	15.6	35.0	41.0	0.0
20/12/15	21.8	36.2	22.3	34.5	31.9	0.0
21/12/15	15.7	35.1	15.8	33.7	59.7	32.4
22/12/15	14.9	15.9	14.8	15.9	96.0	44.6
23/12/15	15.1	21.3	15.4	20.7	73.4	0.0
24/12/15	15.5	22.4	15.6	21.9	66.3	0.0
25/12/15	15.5	25.8	15.9	25.4	66.3	0.0
26/12/15	15.5	25.8	15.5	25.8	81.2	10.0
27/12/15	9.9	22.8	10.6	22.4	71.7	0.0
28/12/15	8.7	22.0	9.9	21.5	67.1	0.0
29/12/15	9.4	26.0	10.2	24.8	60.9	0.0
30/12/15	11.0	30.0	12.0	28.7	53.7	0.0
31/12/15	16.8	29.7	15.8	28.8	52.2	0.0

APPENDIX 3B. NOISE COMPLIANCE REPORT

Moolarben Coal Operations

Environmental Noise Monitoring Annual Report 1 January to 31 December 2015

Prepared for

Moolarben Coal Operations Pty Ltd



Noise and Vibration Analysis and Solutions

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Moolarben Coal Operations

Environmental Noise Monitoring Annual Report – 1 January to 31 December 2015

Reference: 15456_R02 Report date: 7 April 2016

Prepared for

Moolarben Coal Operations 4250 Ulan Road Ulan NSW 2850

Prepared by

Global Acoustics Pty Ltd PO Box 3115 Thornton NSW 2322

Khleekes

Prepared: Katie Weekes QA Review: Tony Welbourne

Environmental Scientist (Acoustics) Director

Global Acoustics Pty Ltd ~ Environmental noise modelling and impact assessment ~ Sound power testing ~ Noise control advice ~ Noise and vibration monitoring ~ OHS noise monitoring and advice ~ Expert evidence in Land and Environment and Compensation Courts ~ Architectural acoustics ~ Blasting assessments and monitoring ~ Noise management plans (NMP) ~ Sound level meter and noise logger sales and hire

T. Weller.

EXECUTIVE SUMMARY

Global Acoustics was engaged by Moolarben Coal Operations Pty Ltd (MCO) to provide a summary of operational environmental noise surveys conducted around Moolarben Coal Complex (MCC) during the period 1 January to 31 December 2015.

The MCC is located on Ulan Road, approximately 40 kilometres north east of Mudgee. Stage 1 of the mine consists of the construction and operation of three separate open cut mines (OC1, OC2 and OC3), an underground mine (UG4), the coal handling and preparation plant (CHPP), and mining infrastructure area (MIA). Stage 2 includes the construction and operation of Open Cut 4 (OC4), underground mines (UG1 and UG2), and a ROM coal facility in OC4.

During this reporting period, major activities included:

- The operation of OC1, OC2 and OC4;
- The operation of the CHPP and rail load-out facilities;
- Vegetation clearing, topsoil stripping, drilling, overburden removal and coaling in OC1, OC2 and OC4; and
- Construction activities in OC4, Underground 1, CHPP, south west haul road, conveyor trace and Open Cut Admin/Workshop mine infrastructure areas.

During the 2015 reporting period, attended environmental noise monitoring described in this report was conducted monthly. The noise management plan (NMP) was most recently revised and approved in July 2015 to address the operation of the MCC. While continuing to undertake monthly attended noise monitoring, additional locations were included in the program requiring quarterly monitoring. More detail regarding monitoring locations and timing of monitoring during 2015 is provided in Section 1.2 of this report.

The purpose of the attended monitoring was to quantify and describe the acoustic environment around the site and compare results with relevant limits.

January to December 2015 Compliance

MCO complied with the project specific criteria at all monitoring sites during attended noise monitoring undertaken between January and December 2015.

EIS Comparison

Predicted noise levels from Year 2016 of the South West Haul Road Modification (Stage 1 MOD 11 and Stage 2 Modification 1) were compared against actual noise levels during 2015. Results indicated that MCO was generally well under the predicted levels where meteorological conditions were relevant.

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Appendices

1 INTRODUCTION

1.1 Background

Global Acoustics was engaged by Moolarben Coal Operations Pty Ltd (MCO) to provide a summary of operational environmental noise surveys conducted around Moolarben Coal Mine (MCM) from 1 January to 31 December 2015.

The MCM is located on Ulan Road, approximately 40 kilometres north east of Mudgee. Stage 1 of the mine consists of the construction and operation of three separate open cut mines (OC1, OC2 and OC3), an underground mine (UG4), the coal handling and preparation plant (CHPP) and mining infrastructure area (MIA). Stage 2 includes the construction and operation of Open Cut 4 (OC4), Underground Mine (UG1 and UG2) and a ROM coal facility in OC4.

During this reporting period, major activities included:

- The operation of OC1, OC2 and OC4;
- The operation of the CHPP and rail load-out facilities;
- Vegetation clearing, topsoil stripping, drilling, overburden removal and coaling in OC1, OC2 and OC4; and
- Construction activities in OC4, Underground 1, CHPP, south west haul road, conveyor trace and Open Cut Admin/Workshop mine infrastructure areas.

During the 2015 reporting period, attended environmental noise monitoring described in this report was conducted monthly. The noise management plan (NMP) was most recently revised and approved in July 2015 to address noise impacts associated with the operation of the entire MCC, including Stage 1 and Stage 2 of the operation. While continuing to undertake monthly attended noise monitoring, additional locations were included in the program requiring quarterly monitoring. More detail regarding monitoring locations and timing of monitoring during 2015 is provided in Section 1.2 of this report.

The purpose of the attended noise monitoring is to quantify and describe the existing acoustic environment around the site and compare results with relevant limits.

1.2 Monitoring Locations and Timing

1.2.1 January to June 2015, Monthly

There were four attended monitoring locations between January and June 2015 as detailed in Table 1.1 and shown on Figure 1. Monitoring during this period was undertaken monthly. It should be noted that this figure shows the actual monitoring position, not the location of residences.

Table 1.1: MCO ATTENDED MONITORING LOCATIONS – JANUARY TO JUNE 2015, MONTHLY

Report Descriptor	Monitoring Location	Location Purpose	Monitoring Period
NA1	Ulan Public School, Ulan Village	Compliance	Day
NA6	Lower Ridge Road, Cooks Gap	Compliance	Night
NA8	Southern Ridge Road, Cooks Gap	Compliance	Night
NA9	Winchester Crescent/Ulan Road Residential Area	Compliance	Night

1.2.2 July to December 2015, Monthly

There were six monthly attended monitoring locations between July and December 2015 as detailed in Table 1.2 and shown on Figure 2. Monitoring during this period was undertaken monthly. It should be noted that this figure shows the actual monitoring position, not the location of residences.

Table 1.2: ATTENDED NOISE MONITORING LOCATIONS – JULY TO DECEMBER 2015, MONTHLY

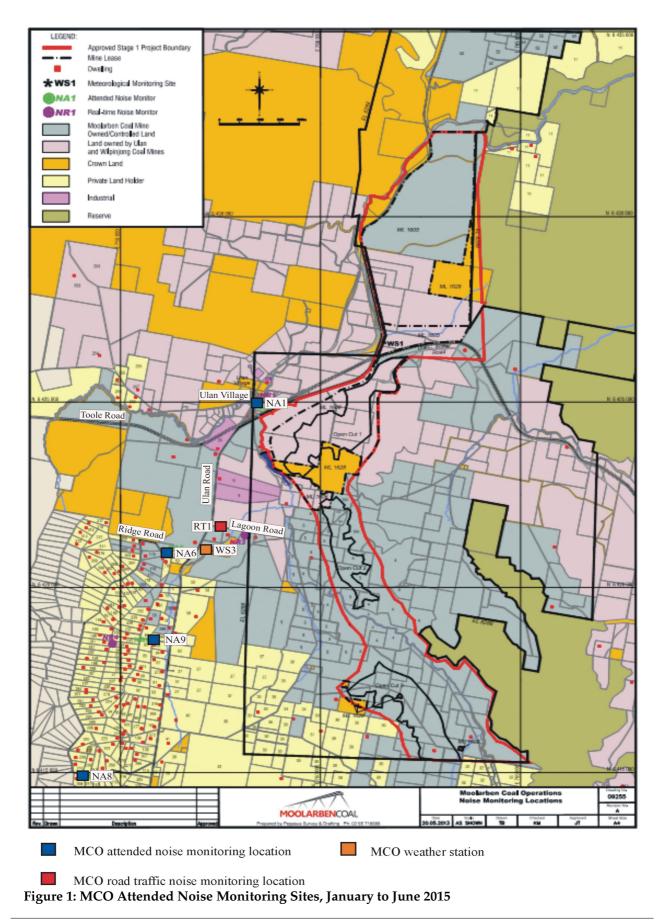
Report Descriptor	Monitoring Location	Location Purpose	Monitoring Period
NA1	Ulan Public School, Ulan Village	Compliance	Day
NA2	Lagoons Road, Ulan	Validation	Night
NA3	Upper Ridge Road, Cooks Gap	Validation	Night
NA6	Lower Ridge Road, Cooks Gap	Compliance	Night
NA10	Moolarben Road, Moolarben	Validation	Night
NA12	Winchester Crescent, Cooks Gap	Compliance/Validation	Night

1.2.3 July to December 2015, Quarterly

In addition to the monthly monitoring locations detailed in Table 1.2, quarterly surveys were completed at these additional attended monitoring locations (conducted in September and November 2015). These are detailed in Table 1.3 and shown in Figure 2 and Figure 3. It should be noted that the figures show the actual monitoring position, not the location of residences.

Table 1.3: ATTENDED NOISE MONITORING LOCATIONS – JULY TO DECEMBER 2015, QUARTERLY

Report Descriptor	Monitoring Location	Location Purpose	Monitoring Period
NA11	Cope Road (Receiver 258), Ulan	Management	Night
GRNP	Goulburn River National Park	Compliance	Night
MGNR	Munghorn Gap Nature Reserve	Compliance	Night



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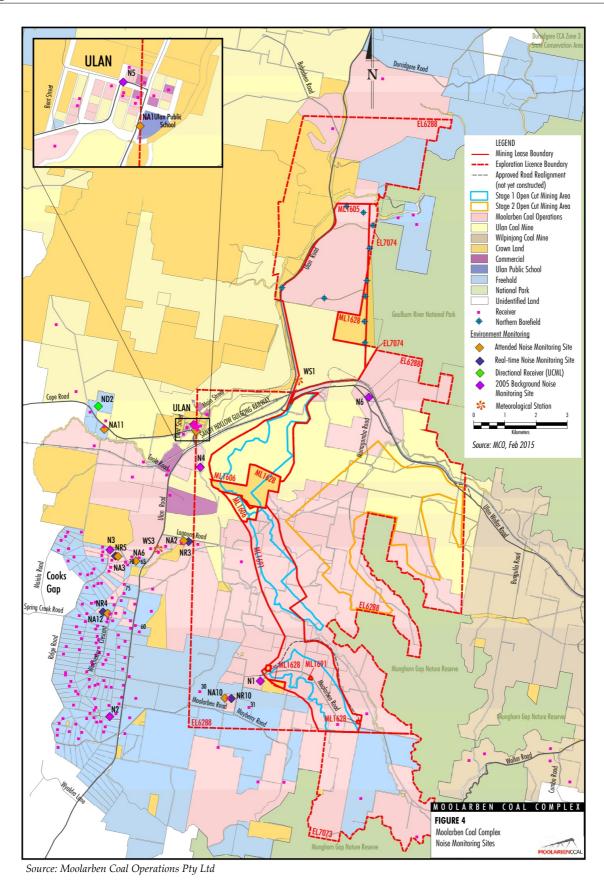


Figure 2: MCO Attended Noise Monitoring Sites, July to December 2015



Figure 3: MCO Quarterly Attended Monitoring Locations, July to December 2015

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1.3 Terminology & Abbreviations

Some definitions of terms and abbreviations, which may be used in this report, are provided in Table 1.4.

Table 1.4: TERMINOLOGY & ABBREVIATIONS

Descriptor	Definition
L_{A}	The A-weighted root mean squared (RMS) noise level at any instant
L_{Amax}	The maximum A-weighted noise level over a time period or for an event
L_{A1}	The noise level which is exceeded for 1 per cent of the time
L_{A10}	The noise level which is exceeded for 10 percent of the time, which is approximately the average of the maximum noise levels
L_{A50}	The noise level which is exceeded for 50 per cent of the time
L_{A90}	The level exceeded for 90 percent of the time, which is approximately the average of the minimum noise levels. The $L_{\rm A90}$ level is often referred to as the "background" noise level and is commonly used to determine noise criteria for assessment purposes
L_{Amin}	The minimum A-weighted noise level over a time period or for an event
$L_{ ext{Aeq}}$	The average noise energy during a measurement period
dB(A)	Noise level measurement units are decibels (dB). The "A" weighting scale is used to describe human response to noise
SPL	Sound pressure level (SPL), fluctuations in pressure measured as 10 times a logarithmic scale, the reference pressure being 20 micropascals
Hertz (Hz)	Cycles per second, the frequency of fluctuations in pressure, sound is usually a combination of many frequencies together
VTG	Vertical temperature gradient in degrees Celsius per 100 metres altitude. Estimated from wind speed and sigma theta data
IA	Inaudible. When site only noise is noted as IA, there was no noise from the source of interest audible at the monitoring location
NM	Not Measurable. If site only noise is noted as NM, this means some noise from the source of interest was audible at low-levels, but could not be quantified
Day	This is the period 7:00am to 6:00pm
Evening	This is the period 6:00pm to 10:00pm
Night	This is the period 10:00pm to 7:00am

2 PROJECT APPROVAL AND CRITERIA

2.1 Project Approval

Current mining operations at the Moolarben Coal Complex are undertaken in accordance with the requirements of NSW Project Approval 05_0117 (as modified) and the requirements of NSW Project Approval 08_0135 (as modified).

The relevant noise conditions from the most recent consolidated approvals can be viewed on the MCO website.

2.2 Environmental Protection Licence

MCO holds Environmental Protection Licence (EPL) No. 12932 for Moolarben mine. The Office of Environment and Heritage approved this licence in August 2008. Section L5 and M9 of the EPL Variation dated 28 July 2015 outlines noise limits and can be viewed on the MCO website.

2.3 Noise Management Plan

The Moolarben Coal Complex Noise Management Plan (NMP) was approved in July 2015. Section 5 details the noise monitoring program, including monitoring locations and methodology. The NMP can be viewed on the MCO website.

2.4 Noise Criteria – January to June 2015

2.4.1 Impact Assessment

Impact assessment criteria for MCO between January and June 2015 are detailed in Table 2.1.

Table 2.1: MCO NOISE IMPACT ASSESSMENT CRITERIA, dB - - JANUARY TO JUNE 2015

NMP Descriptor	Monitoring Location	Day ^L Aeq,15minute	Evening ¹ LAeq,15minute	Night ¹ L _{Aeq,} 15minute/ LA1,1minute
NA1 ²	Ulan Public School – internal	35	NA	NA/NA
	Ulan Public School – external	43	NA	NA/NA
NA6	Lower Ridge Road	38	38	37/45
NA8	Southern Ridge Road	38	38	37/45
NA9	Winchester Crescent	35	35	35/45

- 1. NA indicates criteria are not applicable at this location during this time period; and
- 2. Criteria for Ulan Public School apply `when is use`.

Appendix 6 of the project approval states:

- The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions except the following:
 - during periods of rain or hail;
 - average wind speeds at microphone height exceeds 5 m/s;
 - wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - temperature inversion conditions greater than 3°C/100m.

2.4.2 Land Acquisition Criteria

As detailed in Condition 2 of Schedule 3 of the project approval, acquisition criteria for MCO are to consider noise in respect to criteria detailed in Table 2.2 at any residence on privately-owned land or on more than 25% of any privately-owned land.

Table 2.2: MCO LAND ACQUISITION CRITERIA, dB¹

NMP Descriptor	Monitoring Location	Day/Evening/Night ^L Aeq,15minute
NA6	Lower Ridge Road	35/35/35
NA8	Southern Ridge Road	35/35/35
NA9	Winchester Crescent	35/35/35

Notes:

1. From modified project approval.

2.5 Noise Criteria – July to December 2015

2.5.1 Impact Assessment

Impact assessment criteria for MCO between July and December 2015 are detailed in Table 2.3. The criteria are based on the NMP, which is consistent with the consolidated approval and the EPL.

Table 2.3: MCO NOISE IMPACT ASSESSMENT CRITERIA, dB

NMP Descriptor	Monitoring Location	Day ^L Aeq,15minute	Evening ¹ LAeq,15minute	Night ¹ L _{Aeq,15} minute/ LA1,1minute
NA1 ²	Ulan Public School – internal	35	NA	NA/NA
	Ulan Public School – external ³	43	NA	NA/NA
NA6	Lower Ridge Road	37	37	37/45
NA12	Winchester Crescent	35	35	35/45
$GRNP^4$	Goulburn River National Park	50	50	50/NA
MGNR ⁴	Munghorn Gap Nature Reserve	50	50	50/NA

Notes:

- 1. NA indicates criteria are not applicable at this location during this time period;
- 2. Criteria for Ulan Public School apply `when is use`;
- 3. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP; and
- 4. Monitoring at these locations undertaken quarterly in accordance with the NMP.

Appendix 6 of the project approval states that noise levels apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- Stability category G temperature inversion conditions.

2.5.2 Noise Mitigation Criteria

As detailed in Condition 4 of Schedule 3 of the project approval, mitigation criteria for MCO are to consider noise in respect to criteria detailed in Table 2.4 at any residence on privately-owned land.

Table 2.4: MCO MITIGATION CRITERIA, dB1

NMP Descriptor	Monitoring Location	Day/Evening/Night ^L Aeq,15minute
NA6	Lower Ridge Road	37/37/37
NA12	Winchester Crescent	37/37/37

Notes:

2.5.3 Land Acquisition Criteria

As detailed in Condition 2 of Schedule 3 of the project approval, acquisition criteria for MCO are to consider noise in respect to criteria detailed in Table 2.5 at any residence on privately-owned land.

Table 2.5: MCO LAND ACQUISITION CRITERIA, dB1

NMP Descriptor	Monitoring Location	Day/Evening/Night ^L Aeq,15minute
NA6	Lower Ridge Road	40/40/40
NA12	Winchester Crescent	40/40/40

Notes:

2.6 INP Modifying Factors

Noise monitoring and reporting is carried out generally in accordance with Environment Protection Authority (EPA) *Industrial Noise Policy* (INP). Chapter 4 of the INP deals specifically with modifying factors that may apply to industrial noise. The most common modifying factors are addressed in detail below.

As detailed in the notes below condition 18 of the development consent:

The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied where applicable.

2.6.1 Tonality, Intermittent and Impulsive Noise

As defined in the Industrial Noise Policy:

Tonal noise contains a prominent frequency and is characterised by a definite pitch.

Impulsive noise has high peaks of short duration or a sequence of such peaks.

Intermittent noise is characterised by the level suddenly dropping to the background noise levels several times

^{1.} From consolidated project approval.

^{1.} From consolidated project approval.

during a measurement, with a noticeable change in noise level of at least 5 dB. Intermittent noise applies to night-time only.

Years of monitoring have indicated that noise levels from mining operations, particularly those levels measured at significant distances from the source are relatively continuous. Given this, noise levels from MCO at the monitoring locations are unlikely to be intermittent. In addition, there is no equipment on site that is likely to generate tonal or impulsive noise as defined in the INP.

2.6.2 Low Frequency

As defined in the Industrial Noise Policy:

Low frequency noise contains major components within the low frequency range (20 Hz to 250 Hz) of the frequency spectrum.

As detailed in Chapter 4 of the INP, low frequency noise should be assessed by measuring the C-weighted and A-weighted level over the same time period. A correction/penalty of 5 dB is triggered *if the difference between the two levels is 15 dB or more.*

Low frequency noise can also be assessed against levels specified in the paper "A Simple Method for Low Frequency Noise Emission Assessment" (Broner JLFNV Vol29-1 pp1-14 2010). If the total predicted C – weighted noise level at a receptor exceeds the relevant criterion, a 5 dB penalty (modifying factor) is triggered and added to measured levels.

Low frequency assessment methods are detailed in Table 2.6.

Table 2.6: LOW FREQUENCY ASSESSMENT METHODS AND MODIFICATION FACTOR TRIGGERS

Assessment Method	Calculation Method	Night Period Modifying Factor Trigger	Day Period Modifying Factor Trigger
Broner, 2010	Site only L _{Ceq}	>60	>65
INP, total	Site only $L_{\ensuremath{\text{Ceq}}}$ minus site only $L_{\ensuremath{\text{Aeq}}}$	>=15	>=15

The EPA is currently undertaking a review of the assessment of low frequency noise. While a practice note is not yet available, low frequency noise results from MCO have been compared to the range of assessment methods and criteria presented above.

3 METHODOLOGY

3.1 Overview

All noise monitoring was conducted at the nearest residences in accordance with the Environment Protection Authority (EPA) 'Industrial Noise Policy' (INP) guidelines and Australian Standard AS 1055 'Acoustics, Description and Measurement of Environmental Noise' and the MCO NMP. Atmospheric condition measurement was also undertaken during attended monitoring.

3.2 Attended Noise Monitoring

Attended noise monitoring was conducted monthly during 2015, during the night period. At NA1 (Ulan Public School) monitoring was only undertaken during the day period, within the hours of use. The duration of all measurements was 15 minutes.

A measurement of $L_{A1,1minute}$ corresponds to the highest noise level generated for 0.6 of a second during one minute in the night period. In practical terms this is the highest noise level emitted from a MCO noise source during the entire measurement period (i.e. the highest level of the worst minute during the 15-minute measurement).

In most cases, monitoring near the residence facade is impractical due to barking dogs or issues with obtaining access. In all cases, measurements for this survey were undertaken at a suitable and representative location.

As indicated in Appendix 6 of Project Approvals 05_0117 and 08_0135, modifying factors should be considered where applicable. Low frequency noise from MCO was assessed by analysis of the measured spectrum.

The terms "Inaudible" (IA), "Not measurable" (NM) or "Less than 25 dB" (<25 dB) have been used in this report. When site noise is noted as IA then there was no site noise audible at the monitoring location. However, if site noise is noted as NM or <25 dB, this means some noise was audible but could not be quantified. In the case of very low site levels, we do not consider it necessary to attempt to accurately quantify site noise as it would be significantly less than any criterion and most unlikely to cause annoyance (and in many cases, to be even noticed).

If site noise were not measurable due to masking, methods as per the INP (e.g. measure closer and back calculate) are employed to determine a value for reporting if deemed necessary. All site values NM or <25 dB in this report are due to low absolute values.

3.3 Log of Operation

MCO personnel have provided a log of operations that confirms operations were in progress during each monthly survey period in 2015.

3.4 Modification Factors

Years of attended noise monitoring have indicated that noise levels from mining operations, particularly those levels measured at significant distances from the source are relatively continuous. Given this, noise levels from MCO at the monitoring locations are unlikely to be intermittent. In addition, there is no equipment on site at MCO that would generate impulsive noise as defined in the INP. However, low frequency noise from MCO has been addressed.

3.5 Meteorological Conditions

Meteorological data was obtained from the MCO weather station (WS03) located off Ulan Road and shown on Figure 1 and Figure 2. This data allowed correlation of atmospheric parameters and measured noise levels as per EPL 12932 condition L5.4.

4 RESULTS

4.1 January 2015

Table 4.1 compares MCO levels during January 2015 against impact assessment criteria detailed in the project approval.

Table 4.1: LAea.15minute GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – JANUARY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	VTG °C/100m ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15} min dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1min} Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	23/01/2015 10:08	57	1.5	-2.0	43	<35	Yes	Nil	NA	NA	NA	NA
NA6	22/01/2015 22:00	33	2.0	0.5	37	24	Yes	Nil	45	31	Yes	Nil
NA8	22/01/2015 23:13	42	1.3	0.5	37	<20	Yes	Nil	45	23	Yes	Nil
NA9	22/01/2015 22:34	33	1.3	3.0	35	<20	Yes	Nil	45	26	Yes	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured LAeq,15minute or LA1,1minute attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Noise levels generated by activity at MCO are shown in Table 4.2. The $L_{Aeq,15minute}$ for MCO is compared to the land acquisition criterion detailed in the project approval.

Table 4.2: L_{Aea,15minute} GENERATED BY MCO AGAINST PROJECT APPROVAL LAND ACQUISITION CRITERIA – JANUARY 2015

Location	Start Date and Time	Wind Speed m/s ⁵	VTG °C/100m ⁵	Criterion dB	Criterion Applies? ¹	MCO L _{Aeq,15min} dB ^{2,3}	Exceedance ³
NA6	22/01/2015 22:00	2.0	0.5	35	Yes	24	Nil
NA8	22/01/2015 23:13	1.3	0.5	35	Yes	<20	Nil
NA9	22/01/2015 22:34	1.3	3.0	35	Yes	<20	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.2 February 2015

Table 4.3 compares MCO levels during February 2015 against impact assessment criteria detailed in the project approval.

Table 4.3: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – FEBRUARY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	VTG °C/100m ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	18/02/2015 11:30	43	2.8	-2.0	43	IA	Yes	Nil	NA	NA	NA	NA
NA6	17/02/2015 22:53	35	2.7	0.5	37	<30	Yes	Nil	45	33	Yes	Nil
NA8	17/02/2015 22:01	41	3.0	-1.0	37	IA	Yes	Nil	45	IA	Yes	Nil
NA9	17/02/2015 22:27	33	2.2	3.0	35	23	Yes	Nil	45	25	Yes	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Noise levels generated by activity at MCO are shown in Table 4.4. The $L_{Aeq,15minute}$ for MCO is compared to the land acquisition criterion detailed in the project approval.

Table 4.4: L_{Aea,15minute} GENERATED BY MCO AGAINST PROJECT APPROVAL LAND ACQUISITION CRITERIA – FEBRUARY 2015

Location	Start Date and Time	Wind Speed m/s ⁵	VTG °C/100m ⁵	Criterion dB	Criterion Applies? ¹	$MCO \\ L_{Aeq,15min} dB^{2,3}$	Exceedance ³
NA6	17/02/2015 22:53	2.7	0.5	35	Yes	<30	Nil
NA8	17/02/2015 22:01	3.0	-1.0	35	Yes	IA	Nil
NA9	17/02/2015 22:27	2.2	3.0	35	Yes	23	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.3 March 2015

Table 4.5 compares MCO levels during March 2015 against impact assessment criteria detailed in the project approval.

Table 4.5: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – MARCH 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	VTG °C/100m ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	18/02/2015 11:30	43	2.8	-2.0	43	IA	Yes	Nil	NA	NA	NA	NA
NA6	17/02/2015 22:53	35	2.7	0.5	37	<30	Yes	Nil	45	33	Yes	Nil
NA8	17/02/2015 22:01	41	3.0	-1.0	37	IA	Yes	Nil	45	IA	Yes	Nil
NA9	17/02/2015 22:27	33	2.2	3.0	35	23	Yes	Nil	45	25	Yes	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Noise levels generated by activity at MCO are shown in Table 4.6. The $L_{Aeq,15minute}$ for MCO is compared to the land acquisition criterion detailed in the project approval.

Table 4.6: L_{Aea,15minute} GENERATED BY MCO AGAINST PROJECT APPROVAL LAND ACQUISITION CRITERIA – MARCH 2015

Location	Start Date and Time	Wind Speed m/s ⁵	VTG °C/100m ⁵	Criterion dB	Criterion Applies? ¹	MCO L _{Aeq,15min} dB ^{2,3}	Exceedance ³
NA6	24/03/2015 22:27	1.1	3.0	35	Yes	IA	Nil
NA8	24/03/2015 22:53	1.0	3.0	35	Yes	IA	Nil
NA9	24/03/2015 22:04	1.0	3.0	35	Yes	IA	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.4 April 2015

Table 4.7 compares MCO levels during April 2015 against impact assessment criteria detailed in the project approval.

Table 4.7: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – APRIL 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	VTG °C/100m ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of LA1,1min Criterion ³
NA1 ^{6,7}	15/04/2015 11:04	46	1.2	-2.0	43	IA	Yes	Nil	NA	NA	NA	NA
NA6	14/04/2015 23:34	29	0.8	3.0	37	23	Yes	Nil	45	23	Yes	Nil
NA8	14/04/2015 22:27	38	0.1	3.0	37	IA	Yes	Nil	45	IA	Yes	Nil
NA9	14/04/2015 22:58	28	0.8	3.0	35	24	Yes	Nil	45	24	Yes	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - During periods of rain or hail;
 - Average wind speeds at microphone height exceeds 5 m/s; or
 - Wind speeds greater than 3 m/s measured at 10 metres above ground level; or
 - Temperature inversion conditions greater than 3°C/100m;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Noise levels generated by activity at MCO are shown in Table 4.8. The $L_{Aeq,15minute}$ for MCO is compared to the land acquisition criterion detailed in the project approval.

Table 4.8: L_{Aeq,15minute} GENERATED BY MCO AGAINST PROJECT APPROVAL LAND ACQUISITION CRITERIA – APRIL 2015

Location	Start Date and Time	Wind Speed m/s ⁵	VTG °C/100m ⁵	Criterion dB	Criterion Applies? ¹	MCO L _{Aeq,15min} dB ^{2,3}	Exceedance ³
NA6	14/04/2015 23:34	0.8	3.0	42	Yes	23	Nil
NA8	14/04/2015 22:27	0.1	3.0	40	Yes	IA	Nil
NA9	14/04/2015 22:58	0.8	3.0	40	Yes	24	Nil

- 1. In accordance with project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.5 May 2015

Table 4.9 compares MCO levels during May 2015 against impact assessment criteria detailed in the project approval.

Table 4.9: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – MAY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	25/05/2015 11:18	43	1.3	A	43	<30	Yes	Nil	NA	NA	NA	NA
NA6	24/05/2015 23:43	38	1.0	F	37	25	Yes	Nil	45	25	Yes	Nil
NA8	24/05/2015 23:16	29	2.3	D	37	<20	Yes	Nil	45	<20	Yes	Nil
NA9	24/05/2015 22:14	29	1.3	F	35	26	Yes	Nil	45	26	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Table 4.10 compares MCO levels during May 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.10: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – MAY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Mitigation L _{Aeq} Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO LAeq,15min dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	24/05/2015 23:43	38	1.0	F	40	42	25	Yes	Nil	Nil
NA8	24/05/2015 23:16	29	2.3	D	37	40	<20	Yes	Nil	Nil
NA9	24/05/2015 22:14	29	1.3	F	37	40	26	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.6 June 2015

Table 4.11 compares MCO levels during June 2015 against impact assessment criteria detailed in the project approval.

Table 4.11: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – JUNE 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	23/06/2015 10:01	43	0.9	A	43	IA	Yes	Nil	NA	NA	NA	NA
NA6	21/06/2015 22:01	43	0.9	D	37	34	Yes	Nil	45	40	Yes	Nil
NA8	21/06/2015 23:00	25	0.8	E	37	<20	Yes	Nil	45	<20	Yes	Nil
NA9	21/06/2015 22:30	38	1.0	E	35	21	Yes	Nil	45	24	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable.

Table 4.12 compares MCO levels during June 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.12: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – JUNE 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Mitigation L _{Aeq} Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO LAeq,15min dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	21/06/2015 22:01	43	0.9	D	40	42	34	Yes	Nil	Nil
NA8	21/06/2015 23:00	25	0.8	E	37	40	<20	Yes	Nil	Nil
NA9	21/06/2015 22:30	38	1.0	E	37	40	21	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition criteria only applicable at privately owned residences. NA1 has not been assessed.

4.7 July 2015

Table 4.13 compares MCO levels during July 2015 against impact assessment criteria detailed in the project approval.

Table 4.13: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – JULY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Impact Assess. L _{Aeq} Criterion dB	$\begin{array}{c} MCO \\ L_{Aeq,15min} \\ dB^{_{2,4}} \end{array}$	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	24/07/2015 11:29	40	1.1	A	43 8	<25	Yes	Nil	NA	NA	NA	NA
NA6	23/07/2015 22:00	36	0.2	E	37	30	Yes	Nil	45	34	Yes	Nil
NA12	23/07/2015 23:00	42	0.1	F	35	<25	Yes	Nil	45	<25	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.14 compares MCO levels during July 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.14: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – JULY 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s⁵	SC⁵	Mitigation ${ m L_{Aeq}}$ Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	23/07/2015 22:00	36	0.2	Е	40	42	30	Yes	Nil	Nil
NA12	23/07/2015 23:00	42	0.1	F	37	40	<25	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured LAea.15minute attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.8 August 2015

Table 4.15 compares MCO levels during August 2015 against impact assessment criteria detailed in the project approval.

Table 4.15: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – AUGUST 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15} min dB ^{2,4}		Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	14/08/2015 09:30	47	2.8	A	43 8	<35	Yes	Nil	NA	NA	NA	NA
NA6	13/08/2015 22:00	34	2.7	E	37	IA	Yes	Nil	45	IA	Yes	Nil
NA12	13/08/2015 23:00	32	2.7	D	35	IA	Yes	Nil	45	IA	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.16 compares MCO levels during August 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.16: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – AUGUST 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s⁵	SC⁵	Mitigation ${ m L_{Aeq}}$ Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO ^L Aeq,15min dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	13/08/2015 22:00	34	2.7	Е	40	42	IA	Yes	Nil	Nil
NA12	13/08/2015 23:00	32	2.7	D	37	40	IA	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- Estimated or measured L_{Aea,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.9 September/Quarter 3 2015

Table 4.17 compares MCO levels during September 2015 against impact assessment criteria detailed in the project approval. In accordance with the NMP (approved July 2015) additional sites are required to be monitored on a quarterly basis and include GRNP and MGNP.

Table 4.17: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – SEPTEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	18/09/2015 12:26	46	3.1	A	43 8	<30	Yes	Nil	NA	NA	NA	NA
NA6	18/09/2015 00:35	27	0.7	D	37	<25	Yes	Nil	45	29	Yes	Nil
NA12	17/09/2015 23:45	45	1.3	D	35	26	Yes	Nil	45	30	Yes	Nil
GRNP ⁷	17/09/2015 22:00	34	0.5	E	50	IA	Yes	Nil	NA	NA	NA	NA
MGNR ⁷	18/09/2015 01:38	27	1.4	D	50	IA	Yes	Nil	NA	NA	NA	NA

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured $L_{Aeq,15minute}$ or $L_{A1,1minute}$ attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use);
- 7. Night measurements not undertaken at NA1, GRNP and MGNR as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.18 compares MCO levels during September 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.18: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – SEPTEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Mitigation ${ m L_{Aeq}}$ Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO ^L Aeq,15min dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	18/09/2015 00:35	27	0.7	D	40	42	<25	Yes	Nil	Nil
NA12	17/09/2015 23:45	45	1.3	D	37	40	26	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.10 October 2015

Table 4.19 compares MCO levels during October 2015 against impact assessment criteria detailed in the project approval.

Table 4.19: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – OCTOBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15} min dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1min} Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	26/10/2015 09:45	46	2.7	A	43 8	IA	Yes	Nil	NA	NA	NA	NA
NA6	25/10/2015 22:00	39	1.3	D	37	28	Yes	Nil	45	34	Yes	Nil
NA12	25/10/2015 22:30	37	1.3	D	35	<25	Yes	Nil	45	<25	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured $L_{Aeq,15minute}$ or $L_{A1,1minute}$ attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.20 compares MCO levels during October 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.20: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – OCTOBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s⁵	SC⁵	Mitigation L _{Aeq} Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO $^{ m L}{ m Aeq,15min}$ $^{ m dB}^{ m 2.4}$	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	25/10/2015 22:00	39	1.3	D	40	42	28	Yes	Nil	Nil
NA12	25/10/2015 22:30	37	1.3	D	37	40	<25	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.11 November/Quarter 4 2015

Table 4.21 compares MCO levels during November 2015 against impact assessment criteria detailed in the project approval. In accordance with the NMP (approved July 2015) additional sites are required to be monitored on a quarterly basis and include GRNP and MGNP.

Table 4.21: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – NOVEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC ⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15} min dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1} min Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	20/11/2015 12:02	50	3.7	A	43 8	IA	Yes	Nil	NA	NA	NA	NA
NA6	19/11/2015 22:00	37	1.2	D	37	<20	Yes	Nil	45	<20	Yes	Nil
NA12	19/11/2015 22:30	36	1.3	E	35	IA	Yes	Nil	45	IA	Yes	Nil
GRNP ⁷	20/11/2015 00:31	35	0.5	E	50	<25	Yes	Nil	NA	NA	Yes	Nil
$MGNR^7$	20/11/2015 01:45	33	0.5	E	50	IA	Yes	Nil	NA	NA	NA	NA

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use);
- 7. Night measurements not undertaken at NA1, GRNP and MGNR as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.22 compares MCO levels during November 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.22: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – NOVEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s⁵	SC⁵	Mitigation ${ m L}_{{ m Aeq}}$ Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO LAeq,15min dB ^{2,4}	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	19/11/2015 22:00	37	0.7	D	40	42	<20	Yes	Nil	Nil
NA12	19/11/2015 22:30	36	1.3	D	37	40	IA	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.12 December 2015

Table 4.23 compares MCO levels during December 2015 against impact assessment criteria detailed in the project approval.

Table 4.23: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL IMPACT ASSESSMENT CRITERIA – DECEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s ⁵	SC⁵	Impact Assess. L _{Aeq} Criterion dB	MCO L _{Aeq,15} min dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{Aeq} Criterion ³	L _{A1,1min} Criterion dB	MCO L _{A1,1min} dB ^{2,4}	Criterion Applies? ¹	Exceedance of L _{A1,1} min Criterion ³
NA1 ^{6,7}	18/12/2015 11:04	54	1.5	A	43 8	IA	Yes	Nil	NA	NA	NA	NA
NA6	17/12/2015 22:03	44	2.4	D	37	<25	Yes	Nil	45	<25	Yes	Nil
NA12	17/12/2015 22:30	37	1.7	F	35	<20	Yes	Nil	45	<20	Yes	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} or L_{A1,1minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station;
- 6. Criterion applies under all weather conditions at this location (when in use); and
- 7. Night measurements not undertaken at NA1 as outside hours of use and criterion not applicable; and
- 8. External criterion. A difference of 8 dB between internal and external criteria has been adopted at NA1 for consistency with previous versions of the NMP.

Table 4.24 compares MCO levels during December 2015 against land acquisition and mitigation criteria detailed in the project approval.

Table 4.24: NOISE LEVELS GENERATED BY MCO AGAINST PROJECT APPROVAL MITIGATION AND LAND ACQUISITION CRITERIA – DECEMBER 2015

Location	Start Date and Time	Total L _{Aeq} dB	Wind Speed m/s⁵	SC⁵	Mitigation L _{Aeq} Criterion dB	Land Acquisition L _{Aeq} Criterion dB	MCO $^{ m L}{ m Aeq,15min}$ $^{ m dB}^{ m 2.4}$	Criterion Applies? ¹	Exceedance of Mitigation Criterion ³	Exceedance of Land Acquisition Criterion ³
NA6	17/12/2015 22:03	44	2.4	D	40	42	<25	Yes	Nil	Nil
NA12	17/12/2015 22:30	37	1.7	F	37	40	<20	Yes	Nil	Nil

- 1. In accordance with the project approval, the noise criteria are to apply under all meteorological conditions except the following:
 - Wind speeds greater than 3 m/s at 10 metres above ground level; or
 - Stability class F temperature inversion conditions, and wind speeds greater than 2 m/s at 10 metres above ground level; or
 - -Stability class G temperature inversions;
- 2. Estimated or measured L_{Aeq,15minute} attributed to MCO;
- 3. NA in exceedance column means atmospheric conditions outside conditions specified in approval and so criterion is not applicable;
- 4. Bolded results in red indicate exceedance of criteria;
- 5. Atmospheric data is sourced from the MCO meteorological station; and
- 6. Land acquisition and mitigation criteria only applicable at privately owned residences. NA1 has not been assessed.

4.13 Summary of Operational Results

4.13.1 Day

A summary of MCO daytime operational L_{Aeq,15minute} results from 2015 is presented in Table 4.25.

Table 4.25: 2015 MCO OPERATIONAL LAeq, 15minute SUMMARY - DAY

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA1 Ulan School	<35	IA	<35	IA	<30	IA	<25	<35	<30	IA	IA	IA

4.13.2 Night

A summary of MCO night operational L_{Aeq,15minute} results from 2015 is presented in Table 4.26.

Table 4.26: 2015 MCO OPERATIONAL LAeq,15minute SUMMARY – NIGHT

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 151	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA6 Lower Ridge Road	24	<30	IA	23	25	34	30	IA	<25	28	<20	<25
NA8 Southern Ridge Road	<20	IA	IA	IA	<20	<20	-	-	-	-	-	-
NA9 Winchester Crescent	<20	23	IA	24	26	21	-	-	-	-	-	-
NA12 Winchester Crescent	-	-	-	-	-	-	<25	IA	26	<25	IA	<20
GRNP	-	-	-	-	-	-	-	-	IA	-	<25	-
MGNR	-	-	-	-	-	-	-	-	IA	-	IA	-

^{1.} New NMP resulted in change to monitoring locations.

A summary of MCO night operational L_{A1.1}minute results from 2015 is presented in Table 4.27.

Table 4.27: 2015 MCO OPERATIONAL LA1.1minute SUMMARY – NIGHT

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15 ¹	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA6 Lower Ridge Road	31	33	IA	24	31	40	34	IA	29	34	<20	<25
NA8 Southern Ridge Road	23	IA	IA	IA	24	<20	-	-	-	-	-	-
NA9 Winchester Crescent	26	25	IA	38	32	24	-	-	-	-	-	-
NA12 Winchester Crescent	-	-	-	-	-	-	<25	IA	30	<25	IA	<20

^{1.} New NMP resulted in change to monitoring locations.

4.14 Comparison with Environmental Assessment Predictions

Predicted Year 2016 and 2018 operational noise levels are provided in OC4 South-West Modification Noise Assessment by SLR (April 2015). The noise assessment was prepared for Stage 1 Modification 11/Stage 2 Modification 1.

Table 9 of the South-West Modification report details different modelling parameters for different periods. Of particular relevance in this comparison exercise is the meteorological parameters (wind speed and direction and temperature gradient) for day (NA1 only) and night. Table 9 has been reproduced below. Monitoring was not undertaken during the evening period during 2015 and therefore no comparison has been made with these predictions.

Table 9 Calm (Neutral) and Noise Enhancing Meteorological Modelling Parameters

Period	Meteorological Parameter	Air Temperature	Relative Humidity	Wind Velocity	Temperature Gradient
Daytime	Calm	18°C	55%	0 m/s	0°C/100 m
	Wind only	19°C	55%	WSW and W 3 m/s	0°C/100 m
Evening	Calm	16°C	66%	0 m/s	0°C/100 m
	Wind only	16°C	65%	ENE, SSW, SW, WSW and W 3 m/s	0°C/100 m
Night-time	Calm	12ºC	75%	0 m/s	0°C/100 m
	Wind only	12°C	75%	ENE, E, SSW, SW and WSW 3 m/s	0°C/100 m
	Strong Inversion	6°C	70%	0 m/s	5.2°C/100 m
	Strong Inversion plus Drainage	6°C	70%	ENE 1.0 m/s	5.2°C/100 m

Predicted Year 2016 operational noise levels from Table 22 of the modification report are summarised in Table 4.28 for comparison with attended monitoring results, with the exception of NA1 as predicted $L_{Aeq,15minute}$ levels were not provided. However, Table 23 of the modification report details $L_{Aeq,period}$ amenity levels for NA1 (Ulan School). While it's not strictly correct to compare $L_{Aeq,15minute}$ with $L_{Aeq,period}$, results for these parameters (when predicted) are usually similar (within 2 to 3 dB), and, in the case of NA1, the predicted $L_{Aeq,period}$ is very low. Notwithstanding that it is also not possible to directly compare atmospheric condition results for NA1, it is assumed that if measured $L_{Aeq,15minute}$ values are less than 30 dB then this approximately correlates with the predicted $L_{Aeq,period}$.

Table 4.28: MCO OPERATIONAL PREDICTIONS. YEAR 2016 - dB

Location	^L Aeq,period	^L Aeq,15minute Calm	^L Aeq,15minute Wind or Inversion
NA1 Ulan School ^{1,2}	27	NA	NA
NA6 Lower Ridge Road ³	NA	21	37
NA8 South Ridge Road ⁴	NA	13	21
NA9 Winchester Cres ⁵	NA	16	32
NA12 Winchester Cres ⁶	NA	17	34

Source: MCO OC4 South-West Modification Noise Assessment (SLR, April 2015).

Notes:

- 1. L_{Aeq,period} result for worst case atmospheric condition;
- 2. Day result only for this location corresponding to period of use;
- 3. Predicted levels for 70 DJ & A Coventry;
- 4. Predicted levels for 171 AD & SA McGregor;
- 5. Predicted levels for 83 CF & CR Wall; and
- 6. Predicted levels for 292 B Powell; and
- 7. NA is not applicable at this location.

4.14.1 2016 Comparison

Table 4.29 to Table 4.31 in this report compared the measured operational levels to the predicted levels for Year 2016 in the modification report for the relevant meteorological conditions. The differences against predicted levels for all relevant meteorological parameters as detailed in Table 9 of the modification report (shown above).

In the tables below, a positive difference is where the measured level is greater than the predicted level and a negative difference is where the measured levels are less than the predicted level. Notation used in the tables to denote differences is irrespective of the integer value sign. For example, the notation >-17 means the values are more than 17 dB less than the predicted level.

Where the meteorological conditions (primarily wind direction and temperature gradient) during the attended monitoring do not correspond with those that are modelled, no further analysis is undertaken.

4.14.2 Day Comparison

Detailed analysis of meteorological conditions which were present during 2015 attended day monitoring show that the following conditions did not occur:

• Calm.

Table 4.29 provides the difference between measured and predicted levels during the day period.

Table 4.29: 2015 MCO OPERATIONAL L_{Aeq,period} dB DIFFERENCE AGAINST PREDICTED LEVELS - DAY, YEAR 2016 12.3

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA1 Ulan School	NR	IA										

Notes:

- 1. NR denotes met conditions not relevant, IA denotes conditions relevant but MCO inaudible during monitoring;
- 2. Wind conditions assumes winds at speeds between 0.1 and 3 m/s during monitoring; and
- 3. Assumes the following possible predicted wind directions: WSW from 236.25 to 258.75 degrees; W from 258.75 to 281.25 degrees.

4.14.3 Night Comparison

Detailed analysis of meteorological conditions which were present during 2015 attended night monitoring show that the following conditions did not occur:

- Calm;
- strong inversion; and
- strong inversion plus ENE drainage.

Table 4.30 provides the difference between measured and predicted levels for ENE, E, SSW, SW or WSW winds during the night for $L_{Aeq,15minute}$ levels. As the reported model results are the highest predicted noise level (without specifying the actual meteorological condition responsible) it is not possible to determine which conditions match specifically.

Table 4.30: 2015 MCO OPERATIONAL LAea.15minute dB DIFFERENCE AGAINST PREDICTED WIND CONDITIONS - NIGHT, YEAR 2016^{2,4}

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA6 Lower Ridge Road	-13	>-7	IA^4	NR	NR	-3	-7	IA	>-12	-9	>-17	>-12
NA8 South Ridge Road	>-1	IA	IA^4	IA^4	NR	>-1	NA	NA	NA	NA	NA	NA
NA9 Winchester Cres	>-124	-9 ⁴	IA^4	NR	NR	-11	NA	NA	NA	NA	NA	NA
NA12 Winchester Cres	NA	NA	NA	NA	NA	NA	NR	NR	-8	>-9	IA	NR

Notes:

- 1. NR denotes met conditions not relevant, NA denotes not applicable, IA denotes conditions relevant but MCO inaudible during monitoring, NM denotes conditions relevant but MCO not measurable during monitoring;
- 2. Wind conditions assumes winds at speeds between 0.1 and 3 m/s during monitoring;
- 3. Assumes the following possible predicted wind directions: ENE from 56.25 to 78.75 degrees, E from 78.75 to 101.25 degrees, SSW from 191.25 to 213.75 degrees, SW from 213.75 to 236.25 degrees and WSW from 236.25 to 258.75 degrees; and
- 4. Conditions relevant, however, temperature gradient greater than 0 degrees C per 100 metres during monitoring.

Table 4.31 provides the difference between measured and predicted levels for ENE, E, SSW, SW or WSW winds during the night for LA1.1minute levels.

Table 4.31: 2015 MCO OPERATIONAL LA1.1minute dB DIFFERENCE AGAINST PREDICTED WIND CONDITIONS - NIGHT, YEAR 2016²

Location	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15
NA6 Lower Ridge Road	-9	-7	IA^4	NR	NR	0	-6	IA	-11	-6	>-20	>-15
NA8 South Ridge Road	-1	IA	IA^4	IA^4	NR	>-4	NA	NA	NA	NA	NA	NA
NA9 Winchester Cres	-9^4	-10^4	IA^4	NR	NR	-11	NA	NA	NA	NA	NA	NA
NA12 Winchester Cres	NA	NA	NA	NA	NA	NA	NR	NR	-7	>-12	IA	NR

Notes:

- 1. NR denotes met conditions not relevant, NA denotes not applicable, IA denotes conditions relevant but MCO inaudible during monitoring, NM denotes conditions relevant but MCO not measurable during monitoring;
- 2. Wind conditions assumes winds at speeds between 0.1 and 3 m/s during monitoring;
- 3. Assumes the following wind directions: ENE from 56.25 to 78.75 degrees, E from 78.75 to 101.25 degrees, SSW from 191.25 to 213.75 degrees, SW from 213.75 to 236.25 degrees and WSW from 236.25 to 258.75 degrees; and
- 4. Conditions relevant, however, temperature gradient greater than 0 degrees C per 100 metres during monitoring.

As shown above, a comparison of predicted and measured levels from MCO Year 2016 OC4 South-West operation varies greatly. This comparison does not take into account operational activities at the time of monitoring compared to predicted scenarios.

5 SUMMARY OF COMPLIANCE

Global Acoustics was engaged by Moolarben Coal Operations Pty Ltd (MCO) to provide a summary of operational environmental noise surveys conducted around Moolarben Coal Complex (MCC) during the period 1 January to 31 December 2015.

During the 2015 reporting period, attended environmental noise monitoring described in this report was conducted monthly. The noise management plan (NMP) was most recently revised and approved in July 2015 to address the operation of the MCC. While continuing to undertake monthly attended noise monitoring, additional locations were included in the program requiring quarterly monitoring. More detail regarding monitoring locations and timing of monitoring during 2015 is provided in Section 1.2 of this report.

The purpose of the attended noise monitoring is to quantify and describe the existing acoustic environment around the site and compare results with relevant approvals.

5.1 January to December 2015 Compliance

MCO complied with the project specific criteria at all monitoring sites during attended noise monitoring undertaken between January and December 2015.

5.2 EIS Comparison

Predicted noise levels from Year 2016 of the South West Haul Road Modification (Stage 1 MOD 11 and Stage 2 Modification 1) were compared against actual noise levels during 2015. Results indicated that MCO was generally well under the predicted levels where meteorological conditions were relevant.

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APPENDIX 3C. BLAST MONITORING DATA

		BM1 Ula	n School	BM5 Ri	dge Road
Date	Time	Ground Vibration (mm/s)	Blast Overpressure (dBL)	Ground Vibration (mm/s)	Blast Overpressure (dBL)
07/01/15	12:37	0.15	100.0	0.1	91.5
09/01/15	12:01	0.17	91.5	0.11	88
14/01/15	12:04	0.23	88.0	0.24	106
16/01/15	15:00	0.41	88.0	0.39	98.8
22/01/15	14:30	0.48	100.0	0.1	95.9
30/01/15	15:40	0.45	98.8	0.15	98.8
06/02/15	12:03	0.27	94.0	0.08	100
06/02/13	12:07	0.36	95.9	0.35	101
13/02/15	11:38	0.55	101.9	0.26	94
18/02/15	12:01	0.63	102.8	0.21	98.8
20/02/15	11:56	0.49	102.8	0.19	95.9
25/02/15	13:06	0.41	94.0	0.14	95.9
27/02/15	11:58	0.43	103.5	0.26	95.9
04/03/15	12:04	0.52	95.9	0.3	95.5
06/03/15	12:08	0.32	91.5	0.23	91.5
09/03/15	15:09	0.34	95.9	0.26	102.8
11/03/15	13:01	0.32	94.0	0.26	98.8
14/03/15	11:03	0.81	106.5	0.27	100
20/03/15	12:08	0.42	91.5	0.31	91.5
27/03/15	12:33	0.40	94.0	0.31	100
27/03/15	12:35	0.40	97.5	0.14	101
02/04/15	12:09	0.21	111.8	0.14	103.5
10/04/15	16:05	0.45	108.4	0.45	106.5
10/04/15	16:06	0.43	108.4	0.43	100.3
15/04/15		0.17			88
	13:08		94.0	0.03	94
17/04/15 24/04/15	13:58	1.10	106.0	0.57	
	13:58	1.01	102.8	0.46	100 104.9
29/04/15	11:04	0.38	108.8	0.08	
30/04/15	12:04	0.93	115.9	0.41	101.9
08/05/15	12:04	0.86 0.65	101.0	0.66	100
12/05/15	12:06		98.8	0.33	110.9
15/05/15	14:00	0.69	109.2	0.18	98.8
18/05/15	12:55	0.36	105.5	0.24	100
22/05/15	12:11	1.31	111.5	0.73	98.8
26/05/15	12:01	3.20	104.9	0.86	100
28/05/15	12:09	0.36	97.5	0.18	101
01/06/15	12:08	0.35	98.8	0.43	114.6
04/06/15	11:57	0.36	101.0	0.23	97.5
15/06/15	11:57	1.08	102.8	0.48	102.8
17/06/15	12:03	1.92	94.0	1.28	101
17/06/15	12:06	0.18	91.5	0.21	98.8
22/06/15	12:00	3.06	100.0	0.71	97.5
26/06/15	12:04	1.53	101.0	1.32	103.5

		BM1 Ula	n School	BM5 Ri	dge Road
Date	Time	Ground Vibration (mm/s)	Blast Overpressure (dBL)	Ground Vibration (mm/s)	Blast Overpressure (dBL)
26/06/15	12:07	0.17	98.8	0.27	106.5
29/06/15	12:04	0.38	100.0	0.52	112
03/07/15	12:13	0.50	104.2	0.34	101
03/07/15	12:16	0.21	94.0	0.35	100
07/07/15	12:04	Power Failure	Power Failure	0.5	107
09/07/15	12:04	0.10	97.5	0.04	97.5
17/07/15	14:51	0.34	94.0	0.27	111.5
22/07/15	11:56	0.09	91.5	0.04	81.9
27/07/15	12:01	1.80	108.8	0.47	107.5
28/07/15	14:46	0.23	88.0	0.14	94
31/07/15	12:09	0.61	104.9	0.28	97.5
31/07/15	14:14	0.27	98.8	0.3	102.8
03/08/15	12:04	0.15	95.9	0.18	104.2
07/08/15	12:17	0.31	91.5	0.32	97.5
10/08/15	12:09	0.08	88.0	0.01	94
12/08/15	12:04	0.11	95.9	0.04	107
17/08/15	12:14	1.14	98.8	0.41	107.5
21/08/15	12:05	0.31	88.0	0.64	97.5
24/08/15	12:28	0.17	95.9	0.22	106
25/08/15	12:14	0.51	97.5	0.16	97.5
03/09/15	16:24	0.14	91.5	0.19	97.5
03/09/15	16:25	0.80	95.9	0.68	108.4
10/09/15	12:00	0.35	102.8	0.08	95.9
10/09/15	12:10	1.02	97.5	0.14	93.9
14/09/15	12:07	0.48	105.5	0.43	101.9
14/09/15	12:11	0.43	88.0	0.13	98.8
22/09/15					115.4*
	12:02	0.27 0.44	100.0 91.5	0.56	97.5
29/09/15 02/10/15	12:02 12:05	1.20	100.0	0.38 0.78	101
07/10/15	13:14	2.22	106.0	0.78	107.5
09/10/15		2.22	95.9		98.8
13/10/15	12:01			1.03 0.17	
	12:01	0.16	100.0		95.9
16/10/15 20/10/15	12:00	0.15 3.11	91.5 95.9	0.29 1.12	97.5
-	12:00				
22/10/15	12:03	2.00	95.9	1.76	100.0
26/10/15	12:07	0.24	102.8	0.23	103.5
28/10/15	12:06	0.16	97.5	0.25	106.5
30/10/15	11:59	0.62	94.0	0.17	94.0
02/11/15	12:08	0.83	88.0	0.26	104.2
11/11/15	12:10	0.14	98.8	0.09	104.2
12/11/15	16:06	0.35	103.5	0.73	97.5
16/11/15	12:09	0.26	98.8	0.41	106
16/11/15	12:11	0.55	105.5	0.22	109.5
20/11/15	12:00	0.27	91.5	0.47	100
23/11/15	12:01	0.09	91.5	0.29	101.0

		BM1 Ula	n School	BM5 Ridge Road			
Date	Time	Ground Vibration (mm/s)	Blast Overpressure (dBL)	Ground Vibration (mm/s)	Blast Overpressure (dBL)		
27/11/15	12:01	0.26	97.5	0.29	102.8		
03/12/15	12:06	3.19	114.6	0.8	Mic. Fault		
04/12/15	12:11	0.18	94.0	0.14	Mic. Fault		
04/12/15	12:12	0.19	100.0	0.12	Mic. Fault		
09/12/15	12:06	0.42	108.0	0.42	108.0		
11/12/15	12:10	1.36	108.4	0.07	115.0*		
14/12/15	16:05	0.24	101.0	0.02	102.8		
18/12/15	12:23	0.15	109.5	0.01	94.0		
18/12/15	12:30	0.27	94.0	0.02	91.5		
23/12/15	12:04	0.18	115.4*	0.02	110.6		
31/12/15	12:04	0.36	103.5	0.03	94.0		
Min		0.08	88.00	0.01	81.90		
Max		3.20	115.90	1.76	115.40		

^{*} Environmental influenced

APPENDIX 3D. AIR QUALITY DATA

Table A: Summary of the MCO Air Quality-Monitoring Program

Monitoring	Monitoring	Frequency	Justification
Parameter	Location	rrequency	Justineation
Dust	DG01 -	Every 30 days ± 2	Background monitoring north of the Moolarben Coal
Deposition	Bobadeen	days	Complex.
	DG04 - Ulan	Every 30 days ± 2	Representative of nearest non-mine owned residences to
	Village	days	the north-west of the Moolarben Coal Complex.
	DG05 -	Every 30 days ± 2	Representative of nearest non-mine owned residences to
	Glenmoor	days	the south-west and west of the Moolarben Coal Complex.
	DG06 – Barcoo	Every 30 days ± 2	Representative of non-mine owned residences to the south,
		days	south-west and west of the Moolarben Coal Complex.
	DG07 – Hillside	Every 30 days ± 2	Representative of non-mine owned residences to the south of the Moolarben Coal Complex. Due to its close proximity
		days	to OC3, DG07 will be discontinued prior to mining OC3 and
			an alternative location will be investigated.
	DG08 -	Every 30 days ± 2	Representative of non-mine owned residences to the south
	Croydon	days	of the Moolarben Coal Complex. Due to its close proximity
			to OC3, DG08 will be discontinued prior to mining OC3 and an alternative location will be investigated.
	DG09 – Wilga	Every 30 days ± 2	Representative of non-mine owned residences to the south-
	2 200 1184	days	west and west of the Moolarben Coal Complex.
	DG11 – Ridge	Every 30 days ± 2	Representative of non-mine owned residences to the south-
	Road	days	west and west of the Moolarben Coal Complex.
	DG12 – Ulan-	Every 30 days ± 2	Representative of mine owned land east of the Moolarben
	Wollar Rd	days	Coal Complex.
	DG 13 -	Every 30 days ± 2	Representative of mine owned land south of the southwest
	Winchester	days	and south of the Moolarben Coal Complex
	Cres		
HVAS -	PM01 (Ulan	Every 6 days	Indicative of potential impacts to nearest non-mine owned residences to the north-west of the
PM10	Village)		Moolarben Coal Complex.
	PM02 (Ridge	Every 6 days	Background monitoring south-west west of the Moolarben
	Road)		Coal Complex.
Real Time	TEOM 01 (Ulan	Real Time PM ₁₀	Real time monitoring at Ulan Public School.
PM ₁₀	School)		
	TEOM 04	Real Time PM ₁₀	Real-time monitoring representative of nearest non-mine
	(Mobile)		owned residences to the south-west and west the Moolarben Coal Complex. Unit available for additional
			PM10 monitoring and complaint investigation as required
	TEOM 05	Real Time PM ₁₀	Real time monitoring representative of non-mine owned
	(Southern Ridge		residences to the south-west of and west of the Moolarben
	Road)		Coal Complex. Alternative locations will be investigated for
	TECNACE (UII-	Dool Time - DNA	future relocation.
	TEOM06 (Ulan- Wollar Rd)	Real Time PM ₁₀	Real time monitoring representative of mine owned land to the east of Moolarben Coal Complex and indicator of
	vvoliai Nu)		background air quality. (Note there are no residences on
			private or mine owned land in the vicinity of the monitor).

Table B: Summary of the MCO Air Quality-Monitoring Program - Dust Deposition

Dust Gauge	Jan- 15	Feb- 15	Mar- 15	Apr- 15	May- 15	Jun- 15	Jul- 15	Aug- 15	Sep- 15	Oct- 15	Nov- 15	Dec- 15
DG1	0.4	0.4	0.8	0.4	0.2	0.4	0.4	0.2	0.3	0.5	2.5	0.9
DG2	С	2.8	С	1.5	2.0	0.9	0.7	0.9	R			
DG3	С	2.4	1.7	С	1.0	0.4	0.5	Α	R			
DG4	1.2	1.3	0.8	0.5	0.8	1.2	0.7	1.2	0.7	1.1	1.4	1.0
DG5	1.3	1.0	1.1	0.7	0.5	0.6	0.8	0.8	0.4	0.9	1.0	1.0
DG6	0.9	0.8	0.8	0.6	0.4	0.3	0.2	0.5	0.4	1.8	0.7	1.1
DG7	2.7	0.7	0.9	0.7	0.3	0.2	0.2	0.4	0.3	1.4	1.3	2.1
DG8	0.8	С	0.7	0.7	0.3	0.2	0.3	0.5	0.3	0.5	0.7	1.5
DG9	1.0	0.7	0.7	0.7	0.5	0.3	0.2	0.5	0.5	0.7	0.5	0.7
DG11	0.8	0.8	0.5	0.3	0.4	0.3	0.3	0.4	1.1	0.9	0.8	1.1
DG12	NI	2.4	0.8	1.4								
DG13	NI	0.9	0.5	0.8								
DG14	NI	1.6	1.2	0.6								

^{*}C – Dust gauge deemed contaminated after analysis of influencing factors. These factors include an ash residue result of <50%, the presence of bird droppings or other contaminants such as insects in the dust gauge and analysis of historical results from the dust gauge.

Table 3: TEOM Monitoring Data

Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
1/01/15	15.7	15.4	16.1	-	17.0	
2/01/15	7.7	12.7	10.0	-	8.6	
3/01/15	14.1	14.8	17.4	-	9.9	
4/01/15	11.7	11.2	14.2	-	9.3	
5/01/15	6.2	6.2	7.9	-	5.9	
6/01/15	9.0	3.2	10.6	=	9.3	
7/01/15	7.2	6.2	12.8	=	7.5	
8/01/15	9.6	9.8	13.8	-	10.5	
9/01/15	8.6	10.9	11.5	-	8.7	
10/01/15	18.7	12.1	15.5	=	9.6	
11/01/15	5.0	4.5	5.9	-	4.2	
12/01/15	7.8	1.0	3.5	-	0.9	
13/01/15	14.4	5.8	9.9	-	5.0	
14/01/15	4.6	8.8	6.2	-	4.1	
15/01/15	3.8	5.0	4.3	-	3.2	
16/01/15	6.5	10.6	7.5	-	6.1	
17/01/15	6.8	13.2	8.7	-	7.4	
18/01/15	8.6	Power Failure	7.4	-	7.7	
19/01/15	14.0	0.7	16.4	-	12.9	
20/01/15	4.4	3.0	7.3	-	4.8	
21/01/15	8.1	0.9	10.7	-	7.0	
22/01/15	11.6	8.6	14.9	-	9.1	

NI - Not installed

A - No Access R - Gauge removed

Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
23/01/15	8.2	2.4	0.8	-	8.6	
24/01/15	10.1	17.4	9.0	-	10.2	
25/01/15	5.0	6.5	5.6	-	4.4	
26/01/15	9.5	8.9	9.8	-	6.5	
27/01/15	6.3	4.2	6.7	-	3.4	
28/01/15	1.4	3.8	5.0	-	1.3	
29/01/15	4.3	5.5	7.4	-	2.6	
30/01/15	7.2	10.4	10.1	-	7.2	
31/01/15	8.4	14.7	12.1	-	14.0	
1/02/15	13.6	13.2	14.2	-	15.6	
2/02/15	8.1	8.0	12.5	-	7.4	
3/02/15	9.8	10.2	14.8	-	9.3	
4/02/15	12.5	10.7	19.1	-	12.7	
5/02/15	9.0	8.6	12.2	-	7.4	
6/02/15	11.5	10.4	15.7	-	9.7	
7/02/15	8.2	8.8	18.8	-	8.7	
8/02/15	14.5	15.3	20.0	-	13.1	
9/02/15	21.5	20.8	34.1	-	21.7	
10/02/15	14.6	13.6	18.4	-	14.3	
11/02/15	8.5	7.0	11.0	-	7.5	
12/02/15	11.1	9.7	15.7	-	10.0	
13/02/15	10.4	9.3	13.8	-	8.4	
14/02/15	7.9	6.8	12.2	-	7.1	
15/02/15	6.9	9.4	10.3	-	7.5	
16/02/15	10.3	10.6	13.4	-	9.3	
17/02/15	11.4	9.5	15.4	-	12.1	
18/02/15	11.2	8.6	17.1	-	9.3	
19/02/15	10.8	9.2	17.5	-	9.3	
20/02/15	9.7	8.6	15.4	-	0.7	
21/02/15	0.9	3.5	6.9	-	2.6	
22/02/15	2.8	1.4	4.4	-	2.4	
23/02/15	4.9	3.6	8.8	-	4.7	
24/02/15	7.7	6.3	13.4	-	6.2	
25/02/15	6.0	0.9	10.6	-	3.7	
26/02/15	7.8	7.4	9.1	-	8.3	
27/02/15	8.4	7.8	11.8	-	8.2	
28/02/15	15.2	9.6	14.9	-	8.6	
1/03/15	11.4	12.3	1.5	-	10.5	
2/03/15	13.7	13.9	14.1	-	10.9	
3/03/15	14.7	14.5	16.5	-	15.4	
4/03/15	14.7	24.1	16.1	-	23.5	
5/03/15	23.3	62.3	26.6	-	30.6	
6/03/15	17.6	28.8	19.3	-	24.1	
7/03/15	20.6	22.6	21.9	-	24.8	
8/03/15	17.7	21.3	18.9	-	30.5	
9/03/15	20.9	33.1	19.0	-	27.9	
10/03/15	27.0	41.5	27.0	-	31.0	
11/03/15	19.4	24.6	21.7	-	22.4	
12/03/15	14.5	33.4	16.6	-	14.5	
13/03/15	9.8	23.7	10.7	-	8.0	

Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
14/03/15	14.9	9.2	10.6	-	10.2	
15/03/15	15.1	19.6	20.2	-	28.3	
16/03/15	22.0	29.8	16.2	-	14.9	
17/03/15	19.2	17.0	20.1	-	17.5	
18/03/15	22.9	31.4	19.2	-	24.8	
19/03/15	18.2	31.9	16.4	-	16.3	
20/03/15	20.1	39.7	25.5	-	30.0	
21/03/15	8.9	8.5	9.3	-	8.8	
22/03/15	9.9	8.7	10.3	-	9.1	
23/03/15	18.8	16.4	11.1	-	11.2	
24/03/15	11.1	15.1	16.7	-	9.9	
25/03/15	21.0	15.8	12.3	-	12.8	
26/03/15	46.0	36.8	21.4	-	22.0	
27/03/15	15.5	36.9	20.9	-	16.6	
28/03/15	4.6	13.7	13.0	-	13.7	
29/03/15	8.0	10.8	12.9	-	9.4	
30/03/15	10.7	73.0	23.5	-	14.9	Road Works
31/03/15	6.4	12.9	8.9	-	4.3	
1/04/15	8.5	12.6	9.6	-	7.3	
2/04/15	18.6	28.4	19.5	-	13.6	
3/04/15	6.9	7.9	10.3	-	5.6	
4/04/15	0.4	1.6	5.1	-	NA*	
5/04/15	7.9	2.8	4.7	-	4.9	
6/04/15	2.7	4.5	3.8	-	1.3	
7/04/15	0.1	0.3	0.2	-	1.5	
8/04/15	3.1	6.0	3.6	-	1.8	
9/04/15	4.2	14.3	6.8	-	4.5	
10/04/15	6.2	17.4	11.1	-	4.7	
11/04/15	11.8	9.5	11.7	-	5.0	
12/04/15	7.8	9.2	10.0	-	7.1	
13/04/15	11.5	13.9	16.9	-	10.9	
14/04/15	19.6	21.2	17.0	-	14.3	
15/04/15	23.0	30.2	21.8	-	16.8	
16/04/15	16.3	46.8	13.9	-	13.4	
17/04/15	18.2	33.9	21.0	-	18.2	
18/04/15	9.5	10.5	10.1	-	10.2	
19/04/15	1.9	3.4	2.0	-	1.6	
20/04/15	0.0	0.2	0.6	-	0.1	
21/04/15	0.5	0.4	0.8	-	0.0	
22/04/15	1.4	2.0	2.0	-	0.7	
23/04/15	3.7	5.1	6.0	-	2.0	
24/04/15	4.5	13.1	7.6	-	4.1	
25/04/15	5.6	7.6	6.7	-	6.3	
26/04/15	3.7	5.8	3.8	-	4.4	
27/04/15	3.4	18.0	4.7	-	4.1	
28/04/15	4.6	11.4	8.1	-	4.5	
29/04/15	5.3	8.2	8.9	-	5.2	
30/04/15	3.0	7.4	6.5	-	2.1	
1/05/15	2.8	5.7	6.7	-	2.5	
2/05/15	3.9	6.0	7.9	-	3.3	

7/05/15 11.7 19.2 13.1 - 14.6 8/05/15 8.6 13.1 10.6 - 9.6 9/05/15 6.1 11.6 9.2 - 7.2 10/05/15 8.6 15.8 8.6 - 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12/05/15 5.2 10.4 5.5 - 5.9 13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9	Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
4/05/15 5.4 2.4 5.5 - 2.7			Daily Result (24hr Average Lii	mit = 50μg/m³))		
5/05/15 8.2 15.4 10.9 - 7.4 7.4 6/05/15 63.1 106.6 64.1 - 85.7 Regional ev 7/05/15 11.7 19.2 13.1 - 14.6 8.5 7 Regional ev 8/05/15 8.6 13.1 10.6 - 9.6 9.6 9.6 99.1 117.05/15 8.0 19.2 8.3 - 9.1 117.05/15 8.0 19.2 8.3 - 9.1 117.05/15 8.0 19.2 8.3 - 9.1 117.05/15 8.0 19.2 8.3 - 9.4 Road Wor 14/05/15 5.0 6.7 10.5 10.5 10	3/05/15	1.9	4.0	5.1	-	1.4	
6/05/15 63.1 106.6 64.1 - 85.7 Regional ev 7/05/15 11.7 19.2 13.1 - 14.6 8/05/15 8.6 13.1 10.6 - 9.6 99.5 9/05/15 6.1 11.6 9.2 - 7.2 10/05/15 8.6 15.8 8.6 - 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12.7 10.5 1.1 12/05/15 5.2 10.4 5.5 - 5.9 14.3 10.4 - 6.3 11.4 7.7 - 10.8 115/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 10.8 117/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 <	4/05/15	5.4	2.4	5.5	-	2.7	
7/05/15 11.7 19.2 13.1 - 14.6 8/05/15 8.6 13.1 10.6 - 9.6 9/05/15 6.1 11.6 9.2 - 7.2 10/05/15 8.6 15.8 8.6 - 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12/05/15 5.2 10.4 5.5 - 5.9 13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.9 14.3 10.4 - 6.3 11/05/15 5.0 6.7 10.5 - 4.1 11/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 18/05/15 1.2	5/05/15	8.2	15.4	10.9	-	7.4	
8/05/15 8.6 13.1 10.6 - 9.6 9/05/15 6.1 11.6 9.2 - 7.2 10/05/15 8.6 15.8 8.6 - 12.5 11/05/15 8.0 19.2 8.3 - 9.1 12/05/15 5.2 10.4 5.5 - 5.9 13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 3.1 4.3 4.9 - 2.3 22/05/15 3.1 4.3	6/05/15	63.1	106.6	64.1	-	85.7	Regional event
9/05/15	7/05/15	11.7	19.2	13.1	-	14.6	
10/05/15	8/05/15	8.6	13.1	10.6	-	9.6	
11/05/15 8.0 19.2 8.3 - 9.1 12/05/15 5.2 10.4 5.5 - 5.9 13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 1.4 2.0 3.4 - 1.4 1.4 23/05/15 3.5 3.2 5.1 - 3.5 <td< td=""><td>9/05/15</td><td>6.1</td><td>11.6</td><td>9.2</td><td>-</td><td>7.2</td><td></td></td<>	9/05/15	6.1	11.6	9.2	-	7.2	
12/05/15 5.2 10.4 5.5 - 5.9 13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 3.5	10/05/15	8.6	15.8	8.6	-	12.5	
13/05/15 7.6 51.3 8.5 - 9.4 Road Wor 14/05/15 6.3 17.4 7.7 - 10.8 10.8 15/05/15 5.9 14.3 10.4 - 6.3 1 16/05/15 5.0 6.7 10.5 - 4.1 1 17/05/15 4.6 6.0 9.3 - 4.5 1 18/05/15 5.6 13.3 9.6 - 6.0 1 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.2 2 21/05/15 3.1 4.3 4.9 - 2.3 2 2 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 2	11/05/15	8.0	19.2	8.3	-	9.1	
14/05/15 6.3 17.4 7.7 - 10.8 15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7	12/05/15	5.2	10.4	5.5	-	5.9	
15/05/15 5.9 14.3 10.4 - 6.3 16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7	13/05/15	7.6	51.3	8.5	-	9.4	Road Works
16/05/15 5.0 6.7 10.5 - 4.1 17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - </td <td>14/05/15</td> <td>6.3</td> <td>17.4</td> <td>7.7</td> <td>-</td> <td>10.8</td> <td></td>	14/05/15	6.3	17.4	7.7	-	10.8	
17/05/15 4.6 6.0 9.3 - 4.5 18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 <td>15/05/15</td> <td>5.9</td> <td>14.3</td> <td>10.4</td> <td>-</td> <td>6.3</td> <td></td>	15/05/15	5.9	14.3	10.4	-	6.3	
18/05/15 5.6 13.3 9.6 - 6.0 19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2	16/05/15	5.0	6.7	10.5	-	4.1	
19/05/15 5.2 7.0 7.5 - 4.7 20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 -	17/05/15	4.6	6.0	9.3	-	4.5	
20/05/15 3.9 4.2 4.1 - 3.2 21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 -	18/05/15	5.6	13.3	9.6	-	6.0	
21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 -	19/05/15	5.2	7.0	7.5	-	4.7	
21/05/15 3.1 4.3 4.9 - 2.3 22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 -	20/05/15	3.9	4.2	4.1	-	3.2	
22/05/15 1.4 2.0 3.4 - 1.4 23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 -		3.1	4.3	4.9	-	2.3	
23/05/15 3.5 3.2 5.1 - 3.5 24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 3.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 - 3.9 5/06/15 3.2 8.1 4.7 -	1	1.4	2.0	3.4	-	1.4	
24/05/15 7.0 6.7 8.7 - 7.2 25/05/15 7.5 11.1 11.8 - 8.3 26/05/15 5.6 15.5 7.4 - 6.0 27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 - 3.9 5/06/15 3.2 8.1 4.7 - 6.4 6/06/15 4.9 7.1 6.2 - 5.4 7/06/15 5.5 8.5 6.3 - 2.7					-		
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27/05/15 6.1 16.8 8.7 - 5.2 28/05/15 6.9 15.8 9.1 - 6.1 29/05/15 3.7 4.4 5.2 - 3.0 30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 - 3.9 5/06/15 3.2 8.1 4.7 - 6.4 6/06/15 4.9 7.1 6.2 - 5.4 7/06/15 5.5 8.5 6.3 - 4.7 8/06/15 3.2 10.7 6.2 - 2.7 9/06/15 4.3 14.4 7.5 -					-		
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30/05/15 4.7 9.5 5.4 - 4.1 31/05/15 2.9 5.2 3.6 - 2.9 1/06/15 1.2 9.7 2.6 - 1.2 2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 - 3.9 5/06/15 3.2 8.1 4.7 - 6.4 6/06/15 4.9 7.1 6.2 - 5.4 7/06/15 5.5 8.5 6.3 - 4.7 8/06/15 3.2 10.7 6.2 - 2.7 9/06/15 4.3 14.4 7.5 - 5.2					-		
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2/06/15 2.9 10.2 5.6 - 2.3 3/06/15 5.5 14.3 7.8 - 3.3 4/06/15 4.6 12.4 8.2 - 3.9 5/06/15 3.2 8.1 4.7 - 6.4 6/06/15 4.9 7.1 6.2 - 5.4 7/06/15 5.5 8.5 6.3 - 4.7 8/06/15 3.2 10.7 6.2 - 2.7 9/06/15 4.3 14.4 7.5 - 5.2					-		
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5/06/15 3.2 8.1 4.7 - 6.4 6/06/15 4.9 7.1 6.2 - 5.4 7/06/15 5.5 8.5 6.3 - 4.7 8/06/15 3.2 10.7 6.2 - 2.7 9/06/15 4.3 14.4 7.5 - 5.2							
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8/06/15 3.2 10.7 6.2 - 2.7 9/06/15 4.3 14.4 7.5 - 5.2			1		-		
9/06/15 4.3 14.4 7.5 - 5.2					-		
			1		-		
1U/UD/15 D.1 14.8 9.3 - 5.4	10/06/15	6.1	14.8	9.3	-	5.4	
11/06/15 6.6 10.3 9.9 - 5.7			1				
12/06/15 5.5 5.9 10.2 - 3.5	1						
13/06/15 7.7 3.3 7.3 - 3.9			1				
14/06/15 7.9 5.9 11.1 - 5.0							
15/06/15 9.5 12.5 13.9 - 8.1	1						
16/06/15 3.2 3.5 4.3 - 2.0							
17/06/15							
18/06/15 1.5 3.5 4.6 - 0.6	1		1				
19/06/15 1.8 4.7 5.5 - 1.0							
13/00/15	-						
21/06/15 4.3 3.7 6.6 - 3.3							

Date	Date Road TEOM01 TEOM02 TEOM04 EPL 17		Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Li	mit = 50μg/m ³))		
22/06/15	4.8	3.3	8.0	-	2.6	
23/06/15	5.6	6.3	14.3	-	4.2	
24/06/15	5.4	5.1	8.0	-	4.1	
25/06/15	2.8	5.3	10.5	-	2.3	
26/06/15	4.3	3.7	9.3	-	4.6	
27/06/15	4.8	8.9	8.4	-	5.5	
28/06/15	5.0	11.6	6.4	-	3.7	
29/06/15	8.5	8.3	15.0	_	7.6	
30/06/15	8.8	10.5	8.3	_	7.2	
1/07/15	2.5	5.5	7	_	7	
2/07/15	2.3	5.5	9.9	_	4	
3/07/15	5.6	9.6	8.7	-	4.7	
4/07/15	4.2	6.2	15.3	-	3	
5/07/15	2.7	7	11.5	_	2.1	
-	2.7	5.6	11.5	-		
6/07/15 7/07/15	5.9	13.5		-	5.1 4.9	
			18.9			
8/07/15	5.1	13.1	5.7	-	2.8	
9/07/15	3	9.8	10	-	3.7	
10/07/15	3.6	6.2	7.6	-	1.4	
11/07/15	2.9	1.9	2	-	1.5	
12/07/15	0.2	0.1	0.5	-	NA*	
13/07/15	0.2	0.4	1.4	-	0.3	
14/07/15	1.5	3.7	2.6	-	1.2	
15/07/15	3.4	9	4.9	-	1.3	
16/07/15	0.1	6.8	0.1	-	0.8	
17/07/15	1.6	5.1	3.2	-	1.1	
18/07/15	3.4	11.4	4.1	-	2.6	
19/07/15	2.7	9.8	2.9	-	2.1	
20/07/15	4.3	13	6.4	-	4.7	
21/07/15	4.1	12	6	-	2.2	
22/07/15	6.7	10.6	Relocation		3.7	
23/07/15	3.6	8.7	-		1.7	
24/07/15	3.2	6.7	-		1.8	
25/07/15	3	5.7	-		2	
26/07/15	2.3	4.2	-		2.8	
27/07/15	5.2	9	-		4.6	
28/07/15	6	11.7	-		3.4	
29/07/15	9.1	17	-		4.9	
30/07/15	6.9	15.5	-	New Site -	5.5	
31/07/15	6.1	11.6	-	Relocatino	5	
1/08/15	5.0	7.2	-	and	5.0	
2/08/15	5.3	11.7	-	calibration	6.4	
3/08/15	3.7	7.1	-	1	4.6	
4/08/15	0.0	6.9	-	1	4.0	
5/08/15	4.0	4.9	-	1	2.9	
6/08/15	1.9	4.6	-		2.3	
7/08/15	2.2	6.8	-	1	1.4	
8/08/15	4.8	9.4	-	1	3.3	
9/08/15	8.7	14.2	_	1	8.2	
10/08/15	5.8	10.5	_	1	2.9	
10/00/13	5.0	10.5	<u> </u>	l .	2.9	İ

	Lagoons Road	Ulan School TEOM01	Murragamba TEOM02	Ulan-Wollar Road	Ridge Road TEOM05	
Date	TEOM04	EPL 17	TEOWIOZ	TEOM06 EPL15	EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
11/08/15	7.7	11.4	-		5.4	
12/08/15	7.7	12.9	-	5.9	5.8	
13/08/15	3.2	5.1	-	0.2	3.0	
14/08/15	2.5	5.7	-	2.0	3.3	
15/08/15	9.2	11.9	-	5.2	7.5	
16/08/15	11.3	14.1	-	15.6	12.0	
17/08/15	5.1	8.9	-	7.9	4.1	
18/08/15	6.1	7.1	-	6.6	9.3	
19/08/15	13.2	14.3	-	8.2	18.3	
20/08/15	15.7	19.7	-	11.5	11.7	
21/08/15	17.3	24.2	-	10.4	19.3	
22/08/15	10.2	16.7	-	14.0	12.1	
23/08/15	6.4	5.2	-	5.8	4.1	
24/08/15	1.4	3.5	-	2.3	0.9	
25/08/15	2.1	1.8	-	1.3	0.2	
26/08/15	1.3	4.5	-	2.3	0.7	
27/08/15	1.0	4.9	-	3.8	0.7	
28/08/15	2.2	6.6	-	4.5	1.1	
29/08/15	3.2	3.3	-	5.6	1.6	
30/08/15	1.6	0.4	-	5.5	2.4	
31/08/15	3.0	6.5	-	6.9	4.6	
1/09/15	5.9	11.4	-	10.8	4.6	
2/09/15	8.5	16.0	-	7.0	5.0	
3/09/15	7.2	6.0	-	4.2	2.3	
4/09/15	3.6	7.7	-	3.7	3.1	
5/09/15	5.7	6.2	-	5.6	7.7	
6/09/15	8.3	12.3	-	9.7	8.2	
7/09/15	4.8	6.3	-	7.2	4.1	
8/09/15	3.7	7.5	-	8.8	4.6	
9/09/15	3.6	7.3	-	7.0	4.1	
10/09/15	10.2	14.3	-	8.1	7.3	
11/09/15	10.4	16.5	-	8.9	7.9	
12/09/15	12.6	13.8	-	14.1	7.3	
13/09/15	11.8	14.4	-	13.9	8.2	
14/09/15	14.5	21.1	-	12.3	9.7	
15/09/15	9.6	20.7	-	15.8	8.9	
16/09/15	7.0	13.2	-	12.9	4.2	
17/09/15	5.3	11.0	-	12.6	5.9	
18/09/15	7.6	15.9	-	12.3	6.8	
19/09/15	5.6	10.7	-	4.9	3.6	
20/09/15	3.9	6.9	-	3.3	4.1	
21/09/15	5.8	10.3	-	9.7	4.6	
22/09/15	4.2	7.0	-	6.8	4.9	
23/09/15	3.0	7.4	-	6.8	3.3	
24/09/15	3.7	7.5	-	6.8	2.7	
25/09/15	3.2	10.9	-	5.7	3.8	
26/09/15	4.4	9.1	-	4.9	2.2	
27/09/15	7.1	10.0	-	6.6	5.9	
28/09/15	12.9	12.3	-	13.2	13.8	
29/09/15	14.6	18.4	-	18.1	10.2	

Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
30/09/15	11.7	18.5	-	15.8	9.8	
1/10/15	12.0	18.3	-	18.1	12.3	
2/10/15	19.6	18.9	-	11.8	16.2	
3/10/15	14.8	14.7	-	18.0	13.5	
4/10/15	13.5	10.1	-	24.2	11.6	
5/10/15	28.4	11.3	-	22.3	10.1	
6/10/15	52.2	17.8	-	25.6	21.0	
7/10/15	26.9	35.0	-	27.5	23.6	
8/10/15	14.1	19.1	-	13.5	12.6	
9/10/15	13.0	18.7	-	6.8	16.0	
10/10/15	14.6	22.3	-	17.8	17.8	
11/10/15	4.8	7.6	-	7.8	5.6	
12/10/15	8.4	12.0	-	13.6	10.4	
13/10/15	10.5	18.4	-	11.6	11.6	
14/10/15	13.5	19.2	-	13.1	14.0	
15/10/15	17.6	18.1	-	11.5	10.6	
16/10/15	20.9	19.9	-	20.8	12.4	
17/10/15	20.5	16.5	-	34.6	13.3	
18/10/15	16.8	24.3	-	17.6	15.9	
19/10/15	12.8	16.0	-	13.5	14.3	
20/10/15	10.1	18.1	-	12.7	14.3	
21/10/15	9.1	15.7	-	15.9	11.4	
22/10/15	2.1	2.7	-	2.7	1.6	
23/10/15	5.0	9.6	-	4.0	3.9	
24/10/15	10.5	13.6	-	7.3	7.5	
25/10/15	13.5	17.5	-	14.2	11.7	
26/10/15	8.2	13.4	-	10.6	8.5	
27/10/15	5.7	9.1	-	4.4	5.2	
28/10/15	10.2	15.8	-	9.0	9.5	
29/10/15	12.8	20.1	-	12.0	11.1	
30/10/15	13.1	18.7	-	8.9	11.7	
31/10/15	8.3	7.2	-	6.5	6.1	
1/11/15	7.5	9.3	-	9.5	7.0	
2/11/15	6.2	10.6	-	8.1	6.5	
3/11/15	0.1	13.4	-	11.7	8.9	
4/11/15	3.7	3.9	-	1.9	1.7	
5/11/15	4.5	7.6	-	3.8	2.8	
6/11/15	4.7	10.7	-	7.2	4.7	
7/11/15	5.6	13.7	-	5.5	5.8	
8/11/15	6.5	9.1	-	2.9	3.1	
9/11/15	9.8	14.0	-	5.9	6.8	
10/11/15	18.9	28.4	-	29.5	12.7	
11/11/15	12.4	16.1	-	8.5	9.2	
12/11/15	9.7	5.9	-	6.6	7.3	
13/11/15	3.8	8.5	-	5.3	3.9	
14/11/15	3.3	4.1	-	2.6	2.1	
15/11/15	3.2	7.4	-	3.2	3.0	
16/11/15	4.9	10.0	-	4.2	4.2	
17/11/15	8.7	15.0	-	7.8	6.8	
18/11/15	10.1	15.6	-	19.5	10.1	

Date	Lagoons Road TEOM04	Ulan School TEOM01 EPL 17	Murragamba TEOM02	Ulan-Wollar Road TEOM06 EPL15	Ridge Road TEOM05 EPL27	Comment
		Daily Result (24hr Average Lii	mit = 50μg/m³))		
19/11/15	18.9	28.2	-	26.4	16.2	
20/11/15	13.5	26.6	-	21.0	15.7	
21/11/15	18.9	23.4	-	2.4	20.9	
22/11/15	12.9	16.9	-	7.1	12.9	
23/11/15	5.3	7.1	-	6.9	10.5	
24/11/15	22.4	29.7	-	21.0	22.0	
25/11/15	17.2	22.7	-	21.5	15.5	
26/11/15	23.7	33.3	-	38.5	28.2	
27/11/15	21.0	30.1	-	22.6	24.4	
28/11/15	15.8	22.5	-	14.7	17.9	
29/11/15	9.9	17.4	-	13.2	11.8	
30/11/15	15.0	31.3	-	19.8	16.3	
1/12/15	25.4	52.2	-	20.0	30.7	Road Works
2/12/15	11.7	23.6	-	15.5	14.2	
3/12/15	15.1	25.2	-	14.6	14.4	
4/12/15	11.5	20.4	-	9.3	10.9	
5/12/15	14.6	20.2	-	9.1	10.6	
6/12/15	16.4	25.1	-	12.8	12.6	
7/12/15	19.2	24.8	-	11.3	18.4	
8/12/15	12.5	25.4	-	11.2	14.2	
9/12/15	7.7	15.0	-	16.0	7.2	
10/12/15	7.0	19.9	-	11.4	6.7	
11/12/15	10.9	23.7	-	17.9	13.3	
12/12/15	17.6	26.4	-	19.7	22.4	
13/12/15	17.4	28.6	-	18.2	15.7	
14/12/15	18.3	41.0	-	18.3	13.2	
15/12/15	27.3	47.6	-	28.6	31.2	
16/12/15	0.7	21.1	-	14.5	10.7	
17/12/15	9.6	14.7	=	9.8	9.7	
18/12/15	9.4	19.7	-	11.3	7.8	
19/12/15	18.3	20.7	-	19.2	13.7	
20/12/15	13.7	19.3	-	14.2	27.4	
21/12/15	12.1	18.3	-	12.6	12.0	
22/12/15	NA*	0.5	-	Power Failure	NA*	
23/12/15	1.5	2.9	-	Power Failure	0.9	
24/12/15	7.7	10.8	-	8.1	7.7	
25/12/15	6.3	7.8	-	6.7	6.6	
26/12/15	6.5	7.1	-	Power Failure	6.8	
27/12/15	3.6	5.5	-	Power Failure	3.2	
28/12/15	6.2	10.3	-	Power Failure	5.7	
29/12/15	5.9	12.8	-	0.7	5.4	
30/12/15	6.2	15.6	-	3.7	6.8	
31/12/15	11.1	18.3	-	3.3	11.2	

NA* = negative value - Likely humidity related

Table 4: HVAS monitoring results

Sample Sampling Matter < 10 Sample Sampling Matter < 2			Particulate			Particulate
PM01	Sample	Sampling		Sample	Sampling	Matter <10
PM02	Location	Date	μm μg/m³	Location	Date	μm μg/m³
PM01 11-Jan-15 12 PM02 10-Jul-15 6 PM02 11-Jan-15 11 PM01 16-Jul-15 <1	PM01	05-Jan-15	12	PM02	4-Jul-15	6
PM02 11-Jan-15 11 PM01 16-Jul-15 <1 PM01 17-Jan-15 14 PM02 16-Jul-15 <1	PM02	05-Jan-15	10	PM01	10-Jul-15	7
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PM02 05-May-15 5 PM01 07-Nov-15 14 PM01 11-May-15 8 PM02 07-Nov-15 8 PM02 11-May-15 7 PM01 13-Nov-15 8						
PM01 11-May-15 8 PM02 07-Nov-15 8 PM02 11-May-15 7 PM01 13-Nov-15 8		•				
PM02 11-May-15 7 PM01 13-Nov-15 8						
		•				
PM02 17-May-15 4 PM01 19-Nov-15 20		i -				
PM01 23-May-15 5 PM02 19-Nov-15 15 PM02 23-May-15 4 PM01 25-Nov-15 19						

Sample Location	Sampling Date	Particulate Matter <10 μm μg/m³	Sample Location	Sampling Date	Particulate Matter <10 μm μg/m³
PM01	29-May-15	3	PM02	25-Nov-15	19
PM02	29-May-15	2	PM01	01-Dec-15	45
PM01	4-Jun-15	5	PM02	01-Dec-15	29
PM02	4-Jun-15	5	PM01	07-Dec-15	30
PM01	10-Jun-15	7	PM02	07-Dec-15	24
PM02	10-Jun-15	4	PM01	13-Dec-15	26
PM01	16-Jun-15	4	PM02	13-Dec-15	23
PM02	16-Jun-15	1	PM01	19-Dec-15	24
PM01	22-Jun-15	5	PM02	19-Dec-15	27
PM02	22-Jun-15	4	PM01	25-Dec-15	8
PM01	28-Jun-15	4	PM02	25-Dec-15	7
PM02	28-Jun-15	5	PM01	31-Dec-15	17
PM01	4-Jul-15	6	PM02	31-Dec-15	13

APPENDIX 3E. BIODIVERSITY MONITORING DATA

Table 5: Threatened fauna recorded during spring 2015

Scientific Name	Common Name	TSC Act	EPBC Act	Location
	Offset Area	as 1, 2 ar	nd 3	
Birds				
Calyptorhynchus lathami	Glossy Black-Cockatoo	V	-	Fa5a and Fa5b
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	V	-	Fa1a and Fa2b
Merops ornatus	Rainbow Bee-eater	-	М	Fa2a, Fa9b, Fa14a and Fa24a
Daphoenositta chrysoptera	Varied Sittella	V	-	Fa1a, Fa5a, Fa5c, Fa8a, Fa9a and Fa13b
Glossopsitta pusilla	Little Lorikeet	V	-	Fa4a
Grantiella picta	Painted Honeyeater	V	-	Fa4a, Fa7a, Fa9a and Fa24a
Hieraaetus morphnoides	Little Eagle	V	-	Fa4a
Melanodryas cucullata cucullata	Hooded Robin (south- eastern form)	V	-	Fa24a
Ninox strenua	Powerful Owl	V	-	Fa13b
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	V	-	Fa7a
Pyrrholaemus saggitatus	Speckled Warbler	V	-	Fa1a, Fa5a, Fa5d and Fa9a
Stagonopleura guttata	Diamond Firetail	V	-	BOA 1, Fa2b and Fa13a
Mammals				
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	Fa1a, Fa4a, Fa5d, Fa2b, Fa14a, Fa24a, Fa25a and Fa13b
Miniopterus orianae oceanensis	Eastern Bentwing-bat	V	-	Fa1a, Fa2a, Fa2b, Fa13b and Fa14a
Nyctophilus spp.	Long-eared Bats	V	-	Fa1a, Fa14a, Fa9a, Fa5a, Fa5d, Fa5b, Fa4a, Fa4b, Fa2b and Fa13b
Saccolaimus flaviventris	Yellow-bellied Sheath- tailed Bat	V	-	Fa13b, Fa14a and Fa25a
Vespadelus troughtoni	Eastern Cave Bat	V	-	Possibly recorded at Fa1a
	EPBC (2013/69	929) offs	et areas	
Birds				
Calyptorhynchus lathami Glossy Black-Cockatoo		V	-	Opportunistically BOA Bobadeen
Climacteris picumnus victoriae	limacteris picumnus victoriae Brown Treecreeper (eastern subspecies)		-	Fa7d and Opportunistically
Merops ornatus	Rainbow Bee-eater	-	М	Fa11, Fa14
Daphoenositta chrysoptera	Varied Sittella	V	-	Fa7, Fa8
Glossopsitta pusilla	Little Lorikeet	V	-	Opportunistically BOA Bobadeen
Grantiella picta	Painted Honeyeater	V	-	Fa3

Scientific Name	Common Name	TSC Act	EPBC Act	Location
Hieraaetus morphnoides	Little Eagle	V	-	Fa10
Haliaeetus leucogaster	White-bellied Sea-Eagle	-	М	Fa3
Melanodryas cucullata cucullata	Hooded Robin (south- eastern form)	V	-	Fa3
Ninox strenua	Powerful Owl		-	Fa15
Pomatostomus temporalis temporalis			-	Fa3
Pyrrholaemus saggitatus	laemus saggitatus Speckled Warbler		-	Fa1 and Fa8
Stagonopleura guttata	Diamond Firetail	V	-	Fa3
Mammals				
Pseudomys novaehollandiae	New Holland Mouse	-	V	Fa6
Chalinolobus dwyeri	Large-eared Pied Bat	V	V	Fa1, Fa2, Fa4, Fa5, Fa9 and Fa15
Miniopterus australis	Little Bentwing-bat	V	-	Possibly recorded at Fa5
Miniopterus orianae oceanensis	Eastern Bentwing-bat	V	-	Fa1, Fa5, Fa12, Fa13, Fa17 and Fa18
Nyctophilus spp.	ilus spp. Long-eared Bats		-	Fa1, Fa2, Fa5, Fa6, Fa7, Fa12, Fa13, Fa14, Fa15, Fa17 and Fa18
Saccolaimus flaviventris	Yellow-bellied Sheath- tailed Bat	٧	-	Fa1

Table 6: BioMetric baseline monitoring results, spring 2015

Assigned BioMetric Vegetation Type (BVT)	Site no.	MZ	NSD	NTC (%)	NMC (%)	NGC (out of 300%)	Exotic cover (%)	# HBTs	Logs (m)	Regen Y/N
	Mod9_Fl3	MZ2	21	0	0	46	38	0	0	N
	Mod9_Fl12	MZ1	31	12	0	76	4	2	85	Υ
HU515 Blakely's Red	Mod9_Fl15	MZ2	32	0	0	86	22	0	0	N
Gum – Yellow Box	Mod9_Fl16	MZ2	27	6	50	46	30	0	0	Υ
Grassy Open Forest	Mod9_Fl23	MZ2	29	28	0	30	0	0	8	N
	Mod9_Fl24	MZ1	23	12	1	44	0	0	8	N
	Mod9_Fl27	MZ2	13	0	0	10	84	0	0	N
HU537 Dwyer's Red	Mod9_Fl10	MZ1	35	14	16	10	0	2	56	Υ
Gum Low Woodland	Mod9_Fl19	MZ1	34	20	0	22	0	0	27	N
HU551 Grey Box –	Mod9_Fl5	MZ2	24	0	0	44	66	0	0	N
Narrow-leaved Ironbark	Mod9_Fl14	MZ2	21	0	0	58	4	0	0	N
Shrubby Woodland	Mod9_Fl18	MZ1	20	10	5	16	0	0	35	N
HU552 Grey Gum – Narrow-leaved	Mod9_Fl13	MZ1	29	28	0	6	0	2	121	N

Assigned BioMetric Vegetation Type (BVT)	Site no.	MZ	NSD	NTC (%)	NMC (%)	NGC (out of 300%)	Exotic cover (%)	# HBTs	Logs (m)	Regen Y/N
Stringybark – Ironbark Woodland										
HU574 Narrow-leaved Ironbark – Grey Gum Shrubby Woodland	Mod9_Fl25	MZ1	31	13	11	24	0	2	0	N
	Mod9_Fl9	MZ2	15	0	1	52	46	0	0	N
HU575 Narrow-leaved	Mod9_Fl17	MZ1	43	24	1	44	0	0	27.5	Υ
Ironbark Shrubby Open	Mod9_Fl21	MZ1	28	9	4	90	0	0	1	Υ
Forest	Mod9_Fl22	MZ1	33	15	1	30	0	0	11	Υ
	Mod9_Fl26	MZ2	22	0	0	26	64	0	8	N
HU603 Rough-barked Apple – Silvertop	Mod9_Fl1	MZ1	46	13	0	62	0	0	70	Υ
Stringybark – Red Stringybark Grassy Open Forest	Mod9_Fl28	MZ1	54	24	1	92	4	0	173	Υ
HU608 Scribbly Gum – Brown Bloodwood Woodland	Mod9_Fl20	MZ1	22	18	2	32	0	1	45	N
HU647 Tea-tree Shrubland of Drainage Areas	Mod9_Fl11	MZ1	50	5	12	54	4	0	11	Υ
	Mod9_Fl2	MZ2	10	0	0	68	32	0	0	N
	Mod9_Fl4	MZ2	17	0	0	68	38	0	0	N
HU654 White Box – Yellow Box Grassy	Mod9_Fl6	MZ2	27	0	0	76	62	1	26	N
Woodland	Mod9_Fl7	MZ2	23	2	0	36	72	0	24	Υ
	Mod9_Fl8	MZ2	19	0	0	34	64	0	0	N

Appendix 3F. SURFACE WATER MONITORING DATA

Table 7: Surface Water Quality – Sampling Summary

	Results Data I	Range (pH)		D	ata Range (μS/cn	n)	Data Range (1	rss)		Comments
Site	Background	Previous Period	2015	Background	Previous Period	2015	Background	Previous Period	2015	
SW01	5.4 – 8.1	6.9 – 8.3	5.7 – 8.6	300 – 1,500	401 – 941	563 – 888	<2 – 310	<5 – 16	<5 – 12	Generally Consistent with previous monitoring. Slight increase in pH observed
SW02	4.4 – 7.9	7.6 - 8.4	6.2 – 8.6	200 – 1,560	678 – 1020	590 – 857	<2 – 844	<5 – 9	<5 – 12	Generally Consistent with previous monitoring. Slight increase in pH observed
SW04	5.1 – 7.8	7.2 – 8.8	6.4 – 8.8	60 – 2,260	162 – 3,570	127 – 1986	4 – 440	<5 – 87	<5 – 284	Generally Consistent with previous monitoring. Slight increase in pH observed
SW05	5.3 – 7.7	7.2 – 7.9	6.6-8.7	290 – 1,590	546 – 1,150	168 – 1018	<2 – 2,600	<5 – 42	<5 – 70	Generally Consistent with previous monitoring. Slight increase in pH observed
SW07	5.3 – 8.0	7.6 – 8.4	5.8 – 7.8	750 – 6,540	2,610 – 7,300	795 – 5680	<2 – 64	<5 – 72	<5 – 46	Generally Consistent with previous monitoring.
SW08	4.5 – 7.6	6.6 – 7.8	6.1 – 7.5	2,060 – 6,990	2,850 – 4,230	2360 – 4800	<2 – 510	<5 – 35	<5 – 36	Generally Consistent with previous monitoring.
SW09	5.2 – 7.9	6.8 – 8.0	6.6 – 8.0	490 – 5,750	2,550 – 3,900	3480 – 6040	2 – 140	<5 – 72	<5 – 404	Generally Consistent with previous monitoring. Slight increase in pH observed, Increased TSS during low flow periods at the beginning of 2015. Sample point located upstream of operations
SW10	Dry - no samples collected	Dry - no samples collected	7.5	Dry - no samples collected	Dry - no samples collected	93	Dry - no samples collected	Dry - no samples collected	24	Generally Consistent with previous monitoring.
SW11	5.5 – 7.2	6.6 – 7.4	6.1 – 8.7	40 – 150	150 – 329	122-844	13 – 66	10 – 59	<5 – 63	Generally Consistent with previous monitoring with rain event influences.
SW12	6.0 – 7.0	7.2 – 7.8	6.7 – 8.7	50 – 670	484 – 860	193 – 837	<2 – 564	<5 – 33	<5 – 40	Generally Consistent with previous monitoring.
SW15#	6.0 – 7.8	NA*	6.0 – 7.8	143 – 609	NA*	143 - 549	5 – 920	NA*	<5 - 920	Site include in program in 2015
SW16#	6.1 – 7.7	NA*	6.1 – 7.7	231 – 1431	NA*	286 – 1431	5 – 572	NA*	<5 – 572	Site include in program in 2015

	Results Data I	Range (pH)		D	ata Range (μS/cn	n)	Data Range (1	rss)		Comments
Site	Background	Previous Period	2015	Background	Previous Period	2015	Background	Previous Period	2015	
SW17#	4.4 – 7.6	NA*	4.4 – 7.6	60.5 – 725	NA*	72 – 687	5 – 59	NA*	<5 - 59	Site include in program in 2015
SW18#	3.4 – 7.4	NA*	3.4 – 6.3	18.5 - 1654	NA*	20 – 1654	8 – 52	NA*	8 – 46	Site include in program in 2015
SW19#	NA**	NA*	6.1	NA**	NA*	36	NA**	NA*	13	Site include in program in 2015 Site was dry for 11 of 12 monthly sampling events.
SW20#	Dry - no samples collected**	NA*	Dry - no samples collecte d	Dry - no samples collected**	NA*	Dry - no samples collected	Dry - no samples collected**	NA*	Dry - no samples collecte d	Site include in program in 2015 Site was dry for all monthly sampling events.

^{*} Monitoring program commenced in 2015 period. ** Background to be revised when sufficient data is available. * Current monitoring contributing to background.

Second 1986		Sample Date	Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Copper mg/L	Dissolved Oxygen mg/L	Electrical Conductivity (Non Compensated) µS/cm	Iron mg/L	Lead mg/L	Lithium mg/L	Manganese mg/L	Nickel mg/L	Oil & Grease m <i>g</i> /L	pH - Field pH Unit	Selenium mg/L	Strontium mg/L	Temperature °C	Тіте	Total Dissolved Solids @ 180°C mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Total Suspended Solids mg/L	Turbidity NTU	Zinc mg/L
Second S	-																							7		-
Service Serv			<0.001	0.020	<0.0001	<0.001	<0.001	7 38		0.43		0.003	0.026	0.006			<0.01	0.157				0.2	0.0	<5 <5	9.5	0.006
SWEET SWEE			V0.001	0.020	V0.0001	Q0.001	V0.001	7.50		0.40		0.000	0.020	0.000			V0.01	0.107				0.2	0.0	<5	3.3	0.000
Second 1986 1994 1445 390 1997 1998		08-Apr-15							871							5.7			17.2	10:45	527			<5		<0.005
SWIND 1706/15			<0.001	0.017	<0.0001	<0.001	<0.001	6.5			<0.001	0.111	0.006	0.004		-	<0.01	0.209			_	<0.1	<0.01	<5	0.3	0.014
SWOIN 15/07/15										0.55														<5 <5		0.008
SWON 1500715																								<5		
Section Sect									613										15.8					<5		
SWOT 127015									-															<5		
SWOID 120-015			<0.001	0.021	<0.0001	<0.001	<0.001	10.0			<0.001	0.110	0.022	0.004			<0.01	0.188				0.2	<0.01	<5 <5	1.6	0.007
SWOI 101116			NO.001	0.021	\0.0001	\0.001	\0.001	10.5		0.10	\U.UU1	0.115	0.022	0.004			\J.U.U I	0.100				U.Z	₹0.01	<5 <5	1.0	0.000
SWOID 22-08-15	Ī	20-Oct-15							597	1.05						8.1			21.4	16:20	393			12		0.006
SWOIZ 1909-15 SWOIZ 19		10/11/15																						<5	4.02	$oxed{oxed}$
SW02 1701/15										0.05														<5	0.5	0.005
SW02 29/215										0.35														<5 9	8.5	<0.005
SW02 93/315																								<5		
SW02 1309415 0.001 0.007 0.0001 0.001 0.001 5.9 857 0.6 0.001 0.006 0.004 0.006 0.004 0.212 19.6 11.20 364 358 0.007 0.001	2		<0.001	0.016	<0.0001	<0.001	0.002	7.42		0.19		0.108	0.028	0.006			<0.01	0.175				0.2	<0.01	<5	2.5	0.006
SW02 1304/15 SW02 1304/15 SW02 2346/15 SW02 1105/15 SW02 1105/15 SW02 1105/15 SW02 1105/15 SW02 1105/15 SW02 1105/15 SW02 1105/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW02 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 SW04 1208/15 	-																							<5		
SW02 1005/15			0.004	0.047	0.0004	0.004	0.004	5.0			0.004	0.444	0.000	0.004			0.04	0.040				0.4	0.04	<5	0.4	<0.005
SW02 1109/15			<0.001	0.017	<0.0001	<0.001	<0.001	5.9			<0.001	0.114	0.006	0.004			<0.01	0.212				<0.1	<0.01	<5 <5	0.4	0.006
SW02 1706/15										0.0														<5		0.000
SW02 1208/15	2	17/06/15																		10:00	388			<5		
SW02 24-Aug-15																								<5		
SW02 709/15 < 0.001 0.02 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 < 0.001 <										0.64														<5 6		0.007
SW02 12/10/15			<0.001	0.02	<0.0001	<0.001	<0.001	11.0			<0.001	0.114	0.022	0.003			<0.01	0.178				<0.1	<0.01	<5	1.7	<0.007
SW02 10/11/15												*****												<5		
SW02 9/12/15										1.07														12		0.007
SW02 22-Dec-15																								<5	1.37	
SW04 701/15										0.26														<5 <5	15.4	0.008
SW04 9/02/15										0.30														11	13.4	0.000
SW04 903/15																								8		
SW04 08-Apr-15			<0.001	0.024	<0.0001	0.001	0.001	6.98		0.61		0.002	0.096	0.002			<0.01	0.125				0.6	0.0	9	21.4	0.007
SW04 13/04/15 < 0.001 0.017 < 0.0001 0.001 0.001 0.001 5.8 301 0.76 < 0.001 0.001 0.036 0.002 7.8 < 0.01 0.068 19.6 13:12 161 0.4					-					0.04							1	-						<5 6		0.007
SW04 23-Apr-15 127 1.12 7.7 17.8 13.25 150			<0.001	0.017	<0.0001	0.001	0.001	5.8			<0.001	0.001	0.036	0.002			<0.01	0.066				0.4	<0.01	8	25.1	0.007
SW04 11/05/15																	1							12		0.015
SW04 1607/15 1,866 6.4 8.3 9:55 1120 SW04 12/08/15 1,986 7.1 7.6 17:17 1080 SW04 24-Aug-15 502 10.2 6.3 19 10:35 902 SW04 8/09/15 < 0.001	1	11/05/15							202										16.3	12:35	184			<5		
SW04 12/08/15 1,986 7.1 7.6 17:17 1080 SW04 24-Aug-15 502 10.2 6.3 19 10.35 902 SW04 8/09/15 < 0.001																								44		1
SW04 24-Aug-15 6.3 19 10:35 902 SW04 8/09/15 <0.001																								6 <5		
SW04 8/09/15 <0.001 0.036 <0.0001 0.002 8.2 826 3.8 0.001 0.014 0.796 0.011 7.1 <0.01 0.138 14.9 12:55 466 1.5 SW04 12/10/15 8.8 24.8 17:10 540 SW04 20-Oct-15 1080 0.45 7.9 24.5 15:45 537										10.2								-						284		0.044
SW04 <u>20-Oct-15</u> 1080 0.45 7.9 24.5 15:45 537			<0.001	0.036	<0.0001	0.003	0.002	8.2			0.001	0.004	0.796	0.011			<0.01	0.138				1.5	0.07	10	63.7	0.012
																								29		
										0.45														7	54	<0.005
SW04 10/11/15 1,484 7.9 25.6 15:15 888 SW04 9/12/15 8.4 27.2 12:10 556				1	-												+	1						<5 <5	51	+-+
5W04 2 2 Dec 15 153 1.74 5.6.9 20 16:40 162										1.74														50	125	0.02
SW05 7/01/15 7.6 27.8 12:35 386	5	7/01/15							688							7.6			27.8	12:35	386			16		
SW05 9/02/15 7.7 25.7 13:40 302																								12		
			<0.001	0.032	<0.0001	0.002	0.002	6.32		1.6		0.003	0.353	0.002			<0.01	0.144				0.9	0.1	12	25.8	0.009
SW05 9/03/15 611 7.3 25.10 13:50 336 SW05 08-Apr-15 601 0.66 6.7 15.2 11:55 347				 	-					0.66							1							6 18		<0.005

							c	r						ب							Z	s as			
ation	9.	4	یے	mg/L	mg/L	بے	Oxyge	rity (No ated)			٦/	mg/L		e mg/L	pH Unit	mg/L	ng/L	ی e °C		blved 80°C	len as	ohoru	ended-	UTN	
le Loc	le Dat	ic mg/L	gm r	E E	m ie	er mg	lved (ectrical onductivi ompensal S/cm	mg/L	mg/L	юш ш	anese	l/gm	Greas	Field p	u mn	ium r	eratui		Disse (@ 1	Nitrog	Phos	otal Suspe	lity N	mg/L
Sample	Samp	Arsen	Sariun	Sadim	Shron	Coppe	Disso ng/L	Electr Condu Comp Somp	ron m	ead I	ithiu	Manga	lickel	Oil & (H- H	Seleni	Stront	Gmp	īme	Fotal Solids ng/L	rotal I ng/L	rotal mg/	otal 3	Turbidity	Zinc n
SW05	13/04/15	<0.001	0.026	<0.0001	0.001	<0.001	5.9	551	0.9	<0.001	0.003	0.132	0.001		7.7	<0.01	0.125	20.1	13:20	268	0.6	<0.01	34	23	<0.005
SW05	23-Apr-15							590	1.28						7.4			15.9	12:00	306			8		0.006
SW05	11/05/15 17/06/15							547 381							7.9 8.3			13.4 14.2	14:00 9:27	378 290			65 14		-
SW05	15/07/15							478							8.5			9.8	14:42	400			<5		
SW05	12/08/15							679							7.7			12.4	14:50	431			7		
SW05	24-Aug-15							553	1.93						6.6			19.5	14:10	389			12		0.01
SW05	8/09/15 12/10/15	0.001	0.043	<0.0001	<0.001	<0.001	7.5	832 784	1.09	<0.001	0.004	0.229	0.002		7.1 7.2	<0.01	0.26	13.3 21.3	12:40 17:25	514 517	8.0	0.02	9 46	14.3	<0.005
SW05	20-Oct-15							897	0.46						7.1			21.3	13:45	509			<5		<0.005
SW05	10/11/15							982	0.10						8.7			28.2	18:15	594			<5	1.95	
SW05	9/12/15							1,018							7.3			22.5	8:35	568			<5		
SW05	22-Dec-15							168	3.82						7.0			20.3	12:25	303			70	453	0.023
SW07	7/01/15				L			4,480							7.2			29.2	13:40	3050			24		\vdash
SW07	9/02/15 26-Feb-15	No Sample was collect 0.004	0.116	<0.0001	<0.001	0.003	3.53	5100	0.84		0.002	3.9	0.004		7.4	<0.01	2.19	26.7	13:05 11:10	3060	4.1	0.2	14	8	0.014
SW07	9/03/15	No Sample was collect				0.003	3.33	3100	0.04		0.002	3.5	0.004		7.4	V0.01	2.15	20.1	12:58	3000	4.1	0.2	14	0	0.014
SW07	08-Apr-15							4270	0.19						7.5			16.1	13:30	2780			7		<0.005
SW07	13/04/15	0.002	0.067	<0.0001	<0.001	<0.001	5.6	4,070	0.08	<0.001	0.001	0.074	0.003		7.7	<0.01	1.71	19.9	14:09	2300	1.9	0.04	<5	1.6	<0.005
SW07	23-Apr-15							4860	0.19						7.7			16.5	10:05	2760			<5		<0.005
SW07	11/05/15							4,120 795							7.8 6.3			12.9 14.3	14:20 8:50	2390 484			10 <5		
SW07	17/06/15 15/07/15							5,680							5.8			11.7	16:50	484			<5 <5		
SW07	12/08/15							2,810							7.1			12.7	17:20	2190			46		
SW07	24-Aug-15							1240	0.61						7.1			18.1	7:30	782			14		0.015
SW07	8/09/15	0.002	0.041	<0.0001	<0.001	<0.001	6.9	2,030	3.91	<0.001	0.002	0.623	0.006		7.0	<0.01	0.84	8.4	8:45	1560	1.3	0.07	38	27	0.032
SW07	12/10/15							1,846							7.3			17.5	19:05	1290			40		
SW07	20-Oct-15 10/11/15	No Sample was collect																	13:10 18:49						
SW07	9/12/15	No Sample was collect No Sample was collect																	8:00						
SW07	22-Dec-15	The Campie was conce	100 00 010 0	To was too is	The Gampio			1040	2.12						5.8			19.7	13:30	711			22	6.05	0.049
SW08	7/01/15							3,520							7.1			27.1	13:20	2170			22		
SW08	9/02/15							2,360							7.1			24.1	12:50	1160			<5		
SW08	26-Feb-15	0.001	0.110	<0.0001	<0.001	<0.001	6.33	3040	1.96		0.006	1.04	0.002		7.3	<0.01	0.788	26.5	10:50	1460	1.1	0.1	7	12	0.013
SW08	9/03/15 08-Apr-15							3,590 4040	1.04						7.3 6.9			25 14.3	12:42 12:33	1780 2300			<5 <5		<0.005
SW08	13/04/15	<0.001	0.186	<0.0001	<0.001	<0.001	5.3	4,130	1.61	<0.001	0.016	0.563	0.004		7.5	<0.01	1.3	19.6	14:15	2170	0.5	0.04	18	5.2	0.021
SW08	23-Apr-15	No Sample was collect						1,100		101001									10:30						
SW08	11/05/15							3,980							7.3			13.3	14:35	2560			10		
SW08	17/06/15							3,950							6.2			14	7:57	1940			8		
SW08	15/07/15 12/08/15							4,060 3,450							7.5			9.5 12.3	15:55 16:45	2490 2570			<5 25		
SW08	24-Aug-15							3,450	0.99						6.1 7.1			17.6	8:00	2170			12		0.007
SW08	8/09/15	<0.001	0.092	<0.0001	<0.001	<0.001	8.2	3,180	1.15	<0.001	0.007	0.6	0.006		6.9	<0.01	1.01	13.1	8:06	2000	0.5	0.02	6	6.6	<0.007
SW08	12/10/15							3,440							6.4			20.8	6:25	2540			<5		
SW08	20-Oct-15							4160	1.01						6.3			21	12:50	2530			5		<0.005
SW08	10/11/15							4,240							6.9			22.1	18:50	2710			<5	18.39	
SW08	9/12/15							4,800							7.0			20.3	7:30	2880			<5		
SW08 SW09	22-Dec-15 7/01/15	-		-	-			4130 3,610	1.45						6.9 7.0			19 28.1	13:10 13:05	2960 2200			36 224	50.6	0.008
SW09	9/02/15							3,900							6.6			26.2	12:30	1780			404		
SW09	26-Feb-15	No Sample was collect	ted as the si	ite was too lo	w to sample			2,300							0				10:30						
SW09	9/03/15	No Sample was collect																	12:28						
SW09	08-Apr-15							4130	12.2						7.0			16.9	12:45	2330			49		0.011
SW09	13/04/15	0.004	0.33	<0.0001	0.001	0.008	4.5	4,180	72.1	<0.001	0.001	7.81	0.004		6.9	<0.01	1.41	19.4	14:30	2300	0.4	<0.01	216	229	0.011
SW09 SW09	23-Apr-15 11/05/15							5510 4,070	2.04						7.1 7.2			17.3 13.9	10:40 14:45	2950 2520			<5 25		0.035
SW09	17/06/15							3,970							7.2			13.9	7:22	1770			8		\vdash
2.700		1				ı	1	-,5.0															,		

nple Location	nple Date	enic mg/L	ium mg/L	dmium mg/L	omium mg/L	pper mg/L	issolved Oxygen ng/L	Electrical Conductivity (Non (Compensated) µS/cm	ı mg/L	d mg/L	ium mg/L	ıganese mg∕L	kel mg/L	& Grease mg/L	- Field pH Unit	enium mg/L	ontium mg/L	nperature °C	9	otal Dissolved Solids @ 180°C ng/L	otal Nitrogen as N ng/L	Fotal Phosphorus as Pmg/L	fotal Suspended Solids mg/L	urbidity NTU	c mg/L
Sar	San	Ars	Bar	Cac	-Ë-	S	Dis	Cor Cor LS/	<u>r</u> o	Lea	Ė	Mar	N.	ō	五	Sel	Stro	Ten	Ė	- 0, -	Tot	Tot P m	Tot Sol	à	Zin
SW09	15/07/15							3,680							8.0			10.7	15:27	2220			<5		
SW09 SW09	12/08/15 24-Aug-15							3,510 3480	0.29						7.6 7.2	-		12.4 17.6	15:45 8:30	2520 1880			20 7		<0.005
SW09	8/09/15	<0.001	0.075	<0.0001	<0.001	<0.001	8.6	3,590	1.72	<0.001	<0.001	0.822	<0.001		7.0	<0.01	1.15	12	7:25	2310	0.4	<0.01	29	13.9	<0.005
SW09	12/10/15							3,480							6.6			20.5	6:05	2450			24		
SW09	20-Oct-15							4170	11.7						6.6			21.1	12:35	2360			27		0.014
SW09	10/11/15							4,250							6.8			20.3	18:35	2520			10	4.22	
SW09 SW09	9/12/15 22-Dec-15							4,560 6040	1.4						6.6			19.4 18.9	7:10	2670 4290			- - - 5	21.7	0.024
SW10		No Sample was collect	ted as the si	te was too lo	w to sample			6040	1.4						6.8			18.9	12:55 12:25	4290			<5	21.7	0.024
SW10		No Sample was collect																	13:50						
SW10	26-Feb-15	No Sample was collect	ted as the si	te was too lo	w to sample														13:30						
SW10		No Sample was collect																	14:05						
SW10 SW10		No Sample was collect																							
SW10		No Sample was collect No Sample was collect																	14:10						\vdash
SW10		No Sample was collect																	11:50						
SW10	17/06/15	·						93						7	7.5			13.5	17:57	174			24		
SW10		No Sample was collect																	9:30						
SW10 SW10		No Sample was collect																	16:30 13:40						\vdash
SW10		No Sample was collect No Sample was collect																	10:37						
SW10		No Sample was collect																	6:05						
SW10		No Sample was collect	ted as the si	te was too lo	w to sample														16:10						
SW10		No Sample was collect																	11:05						
SW10 SW10		No Sample was collect No Sample was collect																	12:58 14:45						
SW11	7/01/15	No Sample was collec	teu as trie si	le was 100 10	w to sample			366						<5	7.3			31	12:15	260			50		
SW11	9/02/15							204						<5	7.2			24.9	13:52	354			26		
SW11	26-Feb-15	0.002	0.034	<0.0001	0.011	0.006	2.8	122	7.38		0.004	0.283	0.017	<5	6.3	<0.01	0.029	28.5	13:20	316	1.6	0.2	63	277	0.044
SW11	9/03/15							176						6	6.5			25	14:20	298			23		
SW11	08-Apr-15 13/04/15	0.002	0.029	<0.0001	0.008	0.004	6.1	162 333	8.19 11.1	0.002	0.003	0.242	0.013	<5 21	6.2 7.4	<0.01	0.044	16.4 19.4	11:10 11:50	282 254	0.8	0.08	11 31	129	0.043
SW11	23-Apr-15	0.002	0.025	Q0.0001	0.000	0.004	0.1	131	21.2	0.002	0.003	0.242	0.013	<5	6.5	Q0.01	0.044	19.5	13:50	520	0.0	0.00	28	123	0.108
SW11	11/05/15							216						<5	8.2			13.4	13:15	309			28		
SW11	17/06/15							271						5	7.5			14.6	9:42	296			30		
SW11	15/07/15							254						<5	8.7			11.6	14:30	217			<5		
SW11	12/08/15 24-Aug-15							282 844	2.48					13 10	6.2 6.5			10.1 20.2	14:41 15:45	194 572			<5 34		0.041
SW11	8/09/15	<0.001	0.067	<0.0001	<0.001	<0.001	5.8	476	1.26	<0.001	0.001	0.203	0.024	<5	6.8	<0.01	0.102	11.1	9:50	220	2.8	0.01	<5	9.3	0.041
SW11	12/10/15							344						8	7.4			24.2	16:05	268			60		
SW11	20-Oct-15							486	3.28						6.1			24.1	15:55	468			17		0.035
SW11	10/11/15							368						<5	6.6			31.4	10:55	284			<5	25	——
SW11	9/12/15 22-Dec-15							337 144	1.31					<5	7.3 7.2	1		29 19.5	15:30 14:15	265 166			30 20	72.4	0.018
SW11	7/01/15			<u> </u>		1		526	1.31						6.9	<u> </u>		29.7	14:15	350			22	12.4	0.010
SW12	9/02/15							565							7.1			26.5	13:32	254			<5		
SW12	26-Feb-15	<0.001	0.024	<0.0001	0.004	0.002	6.35	436	2.12		0.004	0.082	0.002		7.0	<0.01	0.097	26.8	11:50	291	0.8	0.1	15	55.6	0.008
SW12	9/03/15							508							6.8			25	13:23	296			<5		
SW12 SW12	08-Apr-15 13/04/15	<0.001	0.022	<0.0001	<0.001	<0.001	5.9	401 522	5.25 0.79	<0.001	0.003	0.11	<0.001		7.0 7.3	<0.01	0.121	15.3 19.2	12:30 12:00	290 290	0.4	<0.01	40 5	10.5	0.024
SW12	23-Apr-15	<0.001	0.022	<0.0001	<0.001	<0.001	5.9	380	2.56	<0.001	0.003	0.11	<0.001		7.5	<0.01	0.121	15.8	11:33	276	0.4	<0.01	8	10.5	0.006
SW12	11/05/15							502	2.00						7.9	1		13.6	15:00	346			22		
SW12	17/06/15							193							7.5			14.2	9:17	399			26		
SW12	15/07/15							387							8.4			9.4	14:50	321			<5		igsquare
SW12	12/08/15			-				376 219	4.00						6.8	-		13.1 18.7	15:05	286			<5 24		0.013
SW12 SW12	24-Aug-15 8/09/15	<0.001	0.027	<0.0001	0.002	<0.001	8.7	219 452	4.36 2.05	0.001	0.004	0.047	0.001		6.7 7.2	<0.01	0.118	18.7 13.5	14:20 12:25	290 227	0.7	0.02	24 <5	38.3	0.013
SW12	12/10/15	Q0.001	0.021	40.0001	0.002	NO.001	0.7	442	2.00	0.001	0.004	0.047	0.001		7.4	\0.01	0.110	20.5	17:35	330	0.7	0.02	<5	50.5	0.000
J 12	12/10/10	i .		<u> </u>		<u> </u>	1	. 14	1	i		ı				1		20.0		550		1	-,0		

Sample Location	Sample Date	Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Copper mg/L	Dissolved Oxygen mg/L	Electrical Conductivity (Non Compensated) µS/cm	Iron mg/L	Lead mg/L	Lithium mg/L	Manganese mg/L	Nickel mg/L	Oil & Grease mg/L	pH - Field pH Unit	Selenium mg/L	Strontium mg/L	Temperature °C	Time	Total Dissolved Solids @ 180°C mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Total Suspended Solids mg/L	Turbidity NTU	Zinc mg/L
SW12	20-Oct-15							516 581	1.02						7.1 8.7			20.8 24.2	13:35 18:21	274 370			-8 -<5	4.04	<0.005
SW12	10/11/15 9/12/15							837							7.3			21.2	8:25	499			<5 <5	4.04	
SW12	22-Dec-15							537	2.59						7.1			19.3	13:55	418			20	182	0.01
SW15	7/01/15							472							6.8			29.7	15:10	350			46		
SW15	9/02/15	0.000	0.045	0.0004	0.004	0.004	4.00	274	00.0		0.000	4.0	0.005		7.1	0.04	0.00	21.8	14:20	191	0.4	0.0	72	540	<0.005
SW15	26-Feb-15 9/03/15	0.002	0.045	<0.0001	<0.001	<0.001	4.86	299 306	20.9		0.003	1.3	0.005		7.1 7.0	<0.01	0.06	29.8 25.2	14:10 15:10	220 254	2.1	0.2	22 51	54.9	<0.005
SW15	08-Apr-15							301	93.2						6.5			16	11:20	216			920		0.041
SW15	13/04/2015	0.001	0.03	<0.0001	<0.001	0.001	4.8	383	9.19	<0.001	0.002	0.306	0.003		7.6	<0.01	0.108	19	12:30	213	1	0.06	12	25.4	<0.005
SW15 SW15	11/05/15 17/06/15							279 143							7.8 7.4			14.8 13.1	12:40 17:05	252 258			<5 19		
SW15	16/07/15							296							6.4			8.4	9:40	210			<5		
SW15	12/08/15							439							6.0			8.9	16:46	268			6		0.007
SW15 SW15	24-Aug-15 8/09/15	0.002	0.068	<0.0001	0.001	<0.001	5.2	166 392	5.09 8.79	<0.001	0.002	0.283	0.009		6.3 6.0	<0.01	0.084	19.3 14	13:00 14:27	250 263	0.8	0.04	17 5	31.1	0.007 <0.005
SW15	12/10/15	0.002	0.000	C0.0001	0.001	V0.001	3.2	441	0.75	C0.001	0.002	0.203	0.009		7.0	V0.01	0.004	22.9	16:30	312	0.0	0.04	37	31.1	V0.000
SW15	20-Oct-15							549	12.7						6.5			23.1	14:05	301			40		<0.005
SW15	10/11/15 9/12/15							236 340							6.5 6.8			25.5 23.1	16:05 12:40	199 252			20 13	67.2	
SW15	22-Dec-15							340	14.7						6.6			19.3	15:05	245			12	86.7	<0.005
SW16	7/01/15							355							6.9			33.2	15:00	292			39		
SW16	9/02/15	0.002	0.070	0.0004	0.004		E 40	315			0.000	1.10	0.000		7.1	0.04	0.400	22	14:25	192			<5	44.0	0.008
SW16 SW16	26-Feb-15 9/03/15	0.002	0.073	<0.0001	<0.001	0.009	5.12	389 473	14.4		0.002	1.18	0.003		7.0 7.0	<0.01	0.108	31.5 25	14:35 15:30	224 260	8.0	0.3	26 16	41.9	0.008
SW16	08-Apr-15							354	9.98						6.1			16.9	11:35	185			24		0.017
SW16	13/04/2015	0.004	0.089	<0.0001	<0.001	<0.001	5.1	305	32.8	<0.001	0.003	0.717	0.006		7.4	<0.01	0.068	20	13:00	196	1.6	0.09	51	149	0.008
SW16	11/05/15 17/06/15							286 405							7.7 6.5			15.1 12.8	12:45 17:35	214 310			18 17		
SW16	16/07/15							1,431							6.7			8.8	16:05	914			<5		
SW16	12/08/15							1,009							6.1			7.2	17:00	552			<5		
SW16	24-Aug-15 8/09/15	0.002	0.053	<0.0001	0.006	0.006	6.5	418 512	12.7 4.56	0.002	0.004	0.555	0.021		6.3 6.3	<0.01	0.086	19.7 12.5	13:15 15:20	903 412	1.6	0.06	572 17	54.1	0.056 0.018
SW16	12/10/15	0.002	0.055	<0.0001	0.006	0.006	6.5	535	4.30	0.002	0.004	0.555	0.021		6.8	<0.01	0.000	20.7	16:45	398	1.0	0.06	9	34.1	0.010
SW16	20-Oct-15							630	3.91						7.5			20.9	14:15	384			20		0.005
SW16	10/11/15 9/12/15							714 516							7.0 7.4			24.9 23.5	17:00 12:24	481 424			<5	14.78	
SW16	22-Dec-15							360	3.5						7.4			19.1	15:30	315			12 76	85.6	0.022
SW17	7/01/15	No Sample was collect	ted as the si	te was too lo	w to sample				0.0										15:20	0.0					
SW17		No Sample was collect																	14:40						
SW17	26-Feb-15 9/03/15	No Sample was collect No Sample was collect																	14:50 15:58						
SW17	08-Apr-15	No Sample was collect	cted as the si	te was too lo	w to sample														13:10						
SW17	13/04/15 11/05/15	No Sample was collect																	13:15	\perp					
SW17	17/06/15	No Sample was collect	led as the si	te was too lo	w to sample			122							6.6			12.8	12:50 11:46	244			59		
SW17	16/07/15							475							7.6			8.4	10:05	366			<5		
SW17	12/08/15							687	0.70						4.4			8.2	17:27	410			30		0.024
SW17	24-Aug-15 8/09/15	0.007	0.031	<0.0001	0.01	0.007	4.6	138 512	2.76 15.1	0.004	0.013	1.55	0.11		6.1 6.1	0.01	0.097	19.8 15.9	10:50 13:05	202 430	2.4	0.08	45 10	52.6	0.034
SW17	12/10/15	2.301				2.007		525		2.301					7.0			24.5	17:05	490		2.30	53		
SW17	20-Oct-15							656	20						7.4			23.9	15:35	504			45		0.032
SW17	10/11/15 9/12/15		-					402 465					\vdash		7.0			28.9 24.2	15:35 12:07	382 364			14 20	90.6	
SW17	22-Dec-15							72	2.16						6.4			20.1	16:30	133			35	101	0.018
SW18		No Sample was collect																	15:35						
SW18 SW18		No Sample was collect No Sample was collect																	14:55 15:05						$\overline{}$
SW18	9/03/15	No Sample was collect																	16:21						
SW18		No Sample was collect	cted as the si	te was too lo	w to sample														13:20						
SW18 SW18	13/04/15 11/05/15	No Sample was collect																	15:20	\vdash					
SW18	17/06/15	No Sample was collect	icu as irie si	te was 100 l0	w to sample			523							6.3			12.7	12:55 17:17	464			46		-
SW18	16/07/15							874							5.8			9.6	10:35	585			8		
SW18	12/08/15							1,654							3.4			5.7	17:44	984			26		0.05
SW18	24-Aug-15					l	l	621	5.44						6.1			19.2	11:05	512			46		0.05

Sample Location	Sample Date	Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Copper mg/L	Dissolved Oxygen mg/L	Electrical Conductivity (Non Compensated) µS/cm	Iron mg/L	Lead mg/L	Lithium mg/L	Manganese mg/L	Nickel mg/L	Oil & Grease mg/L	pH - Field pH Unit	Selenium mg/L	Strontium mg/L	Temperature °C	Time	Total Dissolved Solids @ 180°C mg/L	Total Nitrogen as N mg/L	Total Phosphorus as P mg/L	Total Suspended Solids mg/L	Turbidity NTU	Zinc mg/L
SW18	8/09/15	< 0.001	0.072	0.0001	< 0.001	0.002	7.0	1,351	19.5	< 0.001	0.019	6.23	0.182		4.3	< 0.01	0.378	18.3	13:15	842	1.3	0.02	35	33.9	0.191
SW18	12/10/15	No Sample was collect	ted as the si	te was too lo	ow to sample														17:00						
SW18	20-Oct-15	No Sample was collect	ted as the si	te was too lo	ow to sample														14:35						
SW18	10/11/15							1,049							3.7			33.1	15:50	588			13	26.8	
SW18	9/12/15	No Sample was collect	ted as the si	te was too lo	ow to sample														12:00						
SW18	22-Dec-15							20	0.68						7.4			19.7	15:45	21			11	21.1	< 0.005
SW19	7/01/15	No Sample was collect	ted as the si	te was too lo	ow to sample			-											16:00						
SW19	9/02/15	No Sample was collect																	15:20						
SW19	26-Feb-15	No Sample was collect																	15:25						
SW19	9/03/15	No Sample was collect																	16:40						
SW19	08-Apr-15	No Sample was collect																	13:35						
SW19	13/04/15	No Sample was collect																	15:50						
SW19	11/05/15	No Sample was collect																	13:30						
SW19	17/06/15			I	1			36							6.1			12.7	14:04	119			13		
SW19	16/07/15	No Sample was collect	ted as the si	te was too lo	ow to sample														13:37						
SW19	12/08/15	No Sample was collect																	11:30						
SW19		No Sample was collect																	12:25						
SW19	7/09/15	No Sample was collect																	14:42						
SW19	13/10/15	No Sample was collect																	15:35						
SW19		No Sample was collect																	15:15						
SW19	10/11/15	No Sample was collect																	14:00						
SW19	9/12/15	No Sample was collect																	10:30						
SW19	22-Dec-15	Access to SW19 site v																	17:10						
SW20	7/01/15	No Sample was collect																	16:15						
SW20	9/02/15	No Sample was collect																	15:31						
SW20		No Sample was collect																	15:35						
SW20	9/03/15	No Sample was collect																	16:52						
SW20	08-Apr-15	No Sample was collect																	13:45						
SW20	13/04/15	No Sample was collect																	15:10						
SW20	11/05/15	No Sample was collect																	13:45						
SW20	17/06/15	No Sample was collect																	12:13						
SW20	16/07/15	No Sample was collect																	11:28						
SW20	12/08/15	No Sample was collect																	9:48						
SW20		No Sample was collect							t										11:45						
SW20	7/09/15	No Sample was collect							1										12:58	1					
SW20		No Sample was collect							t										13:20	1					-
SW20		No Sample was collect							t										15:00	1					-
SW20	10/11/15	No Sample was collect							t										12:40	1					-
SW20		No Sample was collect					 		 			 							11:35	 	-				
SW20		No Sample was collect					-		 										16:05	+					
		ate rein event compline		10 1143 100 10	JW to sample	l	l												10.00						

Underlined dates indicate rain event sampling

Table 8: Effluent Discharge Quantities

Release Point	Average dai (kL/day)	ly release	Criteria (kL/day)
5 (EFF01) Open Cut	5.99		25
22 (EFF02) Administration	0.53		25
23 (EFF03) CHPP	0.9		25

Table 9: Effluent Discharge Quality

Sample Location	Sample Date	Biological Oxygen Demand (mg/L)	Total Nitrogen (mg/L)	Oil & Grease (mg/L)	Total Phosphorus (mg/L)	рН	Total Suspended Solids (mg/L)
Administration	09-Feb-15	10	44.7	<5	22.9	7.1	13
СНРР	09-Feb-15	25	36.9	<5	15	7.8	78
Open Cut	09-Feb-15	7	10.1	<5	1.5	7.6	50
Administration	11-May-15	10	63	<5	27	4.8	78
СНРР	11-May-15	15	2.4	<5	0.11	7.6	57
Open Cut	11-May-15	21	12.3	5	3.4	7.5	34
Administration	13-Aug-15	14	175	14	34.9	7	84
СНРР	13-Aug-15	11	3	22	0.32	7.2	37
Open Cut	13-Aug-15	20	9	17	0.7	7	46
Administration	11-Nov-15	23	68.8	<5	21	5.8	44
СНРР	11-Nov-15	7	1.5	<5	0.09	7.4	17
Open Cut	11-Nov-15	20	8.3	<5	0.6	7.4	46

APPENDIX 3G. GROUNDWATER MONITORING DATA

uogeog egdueg P2003	Sample Date	Alkalinity - Bicarbonate mg CaCo3/L	Alkali nity - Carbonate mg CaCO3/L	Alkalinity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	Aluminium - Dissolved mg/L	Arsenic - Dissolved mg/L	Boron - Dissolved mg/L	Cadmium - Dissolved mg/L	Calcium mg/L	Cation Sum me/L	Chloride mg/L	Chromium - Dissolved mg/L	Cobalt - Dissolved mg/L	Copper - Dissolved mg/L	Cyanide mg/L	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	Iron - Dissolved mg/L	Lead - Dissolve d mg/L	Magne sium mg/L.	Manganese - Dissolved mg/L	Mercury - Dissolved mg/L	Nickel - Dis solved mg/L	Nifrate as N mg/L	Nitrogen Ammonia mg/L.N	pH - Fleid pH Unit	Phosphorus - reactive mg/L	Phosphorus - total mg/l.	Potassium mg/L	Se lenium - Diss ol ved mg/L	Si Ner - Dissolved mg/L	Sodium mg/L	Sulfate mg/L.	Temperature °C	Time	Total Dissolved Solids @180°C mg/L.	Total Suspended Solids mg/L	Total Nitrogen as N mg/L	Zinc - Dissolved mg/L
PZ003 PZ003 PZ003 PZ003	Feb-15 Mar-15 Apr-15 May-15	282	<1	<1	282		<0.001	<0.05	<0.0001	46	14.70	252	<0.001	<0.001	<0.001	<0.004	1,343	0.5	<0.05	<0.001	58	<0.001		<0.001	0.27		7.0		<0.01	12.0	<0.01	<0.001	168	110		15:15	711		0.30	<0.005
PZ003 PZ003 PZ003 PZ003	Jun-15 Jul-15																																							
PZ003 PZ003 PZ003	Aug-15 Sep-15 Oct-15 Nov-15	171	<1	<1	171	0.03	<0.001	<0.05	<0.0001	29	9.82	186	<0.001	<0.001	<0.001	<0.004	915	0.4	<0.05	<0.001	36	0.003	<0.0001	<0.001	0.52	0.05	6.6	<0.01	<0.01	9	<0.01	<0.001	119	101	19	18:32	524	13	0.5	0.008
PZ003	Dec-15 Minimum Average																915 1129 1343										6.6 6.8 7.0										524 618 711	13 13		
PZ039 PZ039 PZ039	Maximum Jan-15 Feb-15																1343										7.0										711	13		
PZ039 PZ039 PZ039 PZ039	Mar-15 Apr-15 May-15 Jun-15	30	<1	<1	30		<0.001	<0.05	<0.0001	24	5.12	140	<0.001	0.0110	0.0280	<0.004	732	<0.1	5.51	<0.001	16	0.76		0.003	0.09		5.8		0.05	10.0	<0.01	<0.001	54	13	20	0.572916667	354		0.80	0.036
PZ039 PZ039 PZ039	Jul-15 Aug-15 Sep-15																																							
PZ039 PZ039 PZ039	Oct-15 Nov-15 Dec-15	29	<1	<1	29	0.04	<0.001	<0.05	<0.0001	22	4.56	140	<0.001	0.008	<0.001	<0.004		<0.1	3.85	<0.001	13	0.602	<0.0001	0.002	1.02	0.67		<0.01	0.15	12	<0.01	<0.001	48	14	22	16:40	279		2.1	0.016
PZ040B	Minimum Average Maximum Jan-15																479 606 732										5.8 5.8 5.8										354 354 354	37 37 37		
PZ040B PZ040B PZ040B	Feb-15 Mar-15 Apr-15	<1	<1	<1	<1		<0.001	<0.05	<0.0001	14	10.40	370	<0.001	0.0180	0.0010	<0.004	1,165	0.1	<0.05	<0.001	25	0.19		0.015	0.84		5.3		<0.01	7.0	<0.01	<0.001	171	14		8:20	678		1.20	0.083
PZ040B PZ040B PZ040B	May-15 Jun-15 Jul-15																																							
PZ040B PZ040B PZ040B PZ040B	Aug-15 Sep-15 Oct-15 Nov-15	3	<1	<1	3	0.06	<0.001	<0.05	<0.0001	15	9.95	371	<0.001	0.018	0.001	<0.004	1,013	0.2	<0.05	<0.001	24	0.229	<0.0001	0.016	0.94	0.02	4.7	<0.01	0.02	7	<0.01	<0.001	162	17	22	14:05	576	31	1.1	0.074
PZ040B PZ040B	Dec-15 Minimum Average																1013										4.7										678	31		
PZ044 PZ044	Maximum Jan-15 Feb-15																1089 1165										5.0 5.3										678 678	31		
PZ044 PZ044 PZ044	Mar-15 Apr-15 May-15	443	<1	<1	443		<0.001	<0.05	<0.0001	452	35.60	269	0.006	<0.001	<0.001	<0.004	2,820	0.3	<0.05	<0.001	85	0.00		0.008	0.18		7.2		<0.01	41.0	<0.01	<0.001	115	1,020		16:30	2,200		0.20	0.018
PZ044 PZ044 PZ044 PZ044	Jun-15 Jul-15 Aug-15 Sep-15																																							
PZ044 PZ044 PZ044	Oct-15 Nov-15 Dec-15	340	<1	<1	340	0.04	<0.001	<0.05	<0.0001	373	29.1	251	<0.001	<0.001	0.002	<0.004	1,957	0.3	<0.05	<0.001	66	0.062	<0.0001	0.002	0.16	0.03	6.7	<0.01	0.02	37	<0.01	<0.001	94	914	20	18:51	2090	10	0.4	0.028
	Minimum Average Maximum																1957 2389 2820										6.7 6.9 7.2										2200 2200 2200	10 10 10		
PZ055 PZ055 PZ055	Jan-15 Feb-15 Mar-15 Apr-15																																							
PZ055 PZ055 PZ055 PZ055	May-15 Jun-15 Jul-15	30	<1	<1	30		<0.001	<0.05	<0.0001	26	20.80	475	<0.001	0.0310	<0.001	<0.004	2,109	0.1	<0.05	<0.001	88	1.66		0.012	0.06		6.9		<0.01	16.0	<0.01	<0.001	273	336		13:10	1,240		0.50	<0.005
PZ055 PZ055 PZ055	Aug-15 Sep-15 Oct-15	34	<1	<1	34	0.03	0.001	<0.05	<0.0001	26	22.6	509	<0.001	0.219	<0.001	<0.004	1,992	<0.1	1.24	<0.001	105	4.92	<0.0001	0.058	0.01	0.30	5.2	<0.01	0.05	16	<0.01	<0.001	282	420	21	14:03	1370	12	0.5	0.054
PZ055 PZ055	Nov-15 Dec-15 Minimum																1992										5.2										1240	12		
PZ058 PZ058	Average Maximum Jan-15 Feb-15																2051 2109										6.1 6.9										1240 1240	12 12		
PZ058 PZ058 PZ058	Mar-15	No Sample	was collected	d as the site w	ras too low to	sample																														14:40				
PZ058 PZ058 PZ058	Jun-15 Jul-15 Aug-15																																							
PZ058 PZ058 PZ058 PZ058	Sep-15 Oct-15 Nov-15 Dec-15	No Sample	was collected	d as the site v	as too low to	sample																														18:15				
P2058	Minimum Average Maximum																																							
PZ101B PZ101B PZ101B	Jan-15 Feb-15 Mar-15																																							
PZ101B PZ101B PZ101B	Apr-15 May-15 Jun-15	349	<1	<1	349		0.006	<0.05	<0.0001	54	8.28	51	<0.001	<0.001	<0.001	<0.004	799	1.0	<0.05	<0.001	20	0.00		<0.001	0.02		7.6		0.09	18.0	<0.01	<0.001	80	1		9:00	396		0.40	<0.005
PZ101B PZ101B PZ101B	Jul-15 Aug-15 Sep-15																																							

PZ101B	Oct-15 Nov-15	A Railnity - Cacos/L Cacos/L	Alkalinity - Carbonate mg CaCO3/L	A likali nity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	0 Dissolved mg/L	0.00 Arsenic - Dissolved	S Boron - Dissolved	Cadmium - Dissolved	? Caldium mg/L	Cation Sum me/L	25 Chloride mg/L	A Chromium -	O Cobalt - Dissolved mg/L	Copper - Dissolved	Cyanide mg/L	Electrical S9 Conductivity (Non Compensated) µS/cm	1.3	Iron - Dissolved mg/L	Complete Com	Tybu unis auße W 20	- Nanganese - Dissolved mg/L	Mercury - Dissolved	0.00 Nickel - Dissolved	0.28 Nitrate as N mg/L	0. Nitrogen Ammonia 6. mg/L N	HUD Hd Die H - Hd 7.4	D Phosphorus - reactive IQ mg/L	© Phosphorus -total	12 Potassium mg/L	Selenium - Dissolved	Silver - Dissolved	© Sodium mg/L	ω Sulfate mg/L.	∑ Temperature °C	9 <u>E</u> 13:35	Dissolved Solids @180°C mg/L	Total Suspended Solids mg/L	Total Nitrogen as N mg/L	O Zinc - Dissolved mg/L
PZ101B	Dec-15 Minimum Average																663 731										7.4 7.5 7.6										396 396	30 30		
PZ101C PZ101C	Jan-15 Feb-15																799										7.6										396	30		
PZ101C PZ101C PZ101C	Mar-15	No Sample	was collected	d as the bore	was blocked																															9:02				
PZ101C PZ101C PZ101C	Jun-15 Jul-15																																							
PZ101C PZ101C PZ101C	Aug-15 Sep-15 Oct-15	No Sample	was collected	d as the bore	was blocked																															13:40				_
PZ101C PZ101C	Nov-15 Dec-15 Minimum																																							
	Average Maximum																																							
PZ102A PZ102A PZ102A	Jan-15 Feb-15 Mar-15																																							
PZ102A PZ102A PZ102A	Apr-15 May-15	362	<1	<1	362		<0.001	0.07	<0.0001	135	24.40	214	<0.001	<0.001	<0.001	<0.004	2,340	2.1	<0.05	<0.001	52	0.00		0.009	<0.01		7.2		<0.01	34.0	<0.01	<0.001	287	566		11:30	1,360		0.80	<0.005
PZ102A PZ102A	Jul-15 Aug-15																																							
PZ102A PZ102A PZ102A	Sep-15 Oct-15 Nov-15	301	<1	<1	301	0.05	<0.001	0.07	<0.0001	124	21.6	198	<0.001	0.005	<0.001	<0.004	1,770	2.4	2.10	<0.001	42	0.117	<0.0001	0.018	0.17	0.84	6.8	<0.01	0.02	32	<0.01	<0.001	256	460	21	15:30	1,280	32	1.0	0.016
PZ102A	Dec-15 Minimum Average																1770 2055										6.8 7.0										1280 1320	32 32		
PZ102B PZ102B	Maximum Jan-15 Feb-15																2340										7.2										1360	32		
PZ102B PZ102B	Mar-15 Apr-15 May-15	237	<1	<1	237		<0.001	<0.05	<0.0001	199	29.00	122	<0.001	<0.001	<0.001	<0.004	2,156	1.4	<0.05	<0.001	89	0.22		<0.001	0.07		7.3		0.04	33.0	<0.01	<0.001	250	986		11:45	1,680		0.70	<0.005
PZ102B PZ102B PZ102B	May-15 Jun-15 Jul-15																																							
PZ102B PZ102B PZ102B	Aug-15 Sep-15 Oct-15	103			402	0.02	-0.001	-0.06	<0.0001	100	20.0	447	<0.001	-0.001	-0.001	-0.004	2.073		400	-0.004	92	1.51	-0.0004	0.000	0.33	0.66		<0.01	0.00	30	-0.01	<0.001	220	1030	21	16:26	1.730	74	1.2	0.012
PZ102B PZ102B PZ102B	Nov-15 Dec-15	193	ζ1		193	0.03	KU.001	40.05	40.0001	100	20.0	117	40.001	40.001	40.001	10.004		1.0	4.05	40.001	62	1.01	40.0001	0.002	0.33	0.66		40.01	0.00	30	40.01	40.001	230	1030	21	10.30			1.2	0.013
	Minimum Average Maximum																2073 2115 2156										6.6 7.0 7.3										1680 1705 1730	74 74 74		
PZ103A PZ103A PZ103A	Jan-15 Feb-15 Mar-15																																							
PZ103A PZ103A	Apr-15 May-15	210	<1	<1	210		<0.001	<0.05	<0.0001	51	6.51	89	<0.001	<0.001	<0.001	<0.004	657	0.6	<0.05	<0.001	22	<0.001		<0.001	0.02		6.9		0.03	13.0	<0.01	<0.001	42	6		10:37	364		0.40	<0.005
PZ103A PZ103A PZ103A	Jun-15 Jul-15 Aug-15 Sep-15																																							
PZ103A PZ103A PZ103A	Sep-15 Oct-15 Nov-15	166	<1	<1	166	0.03	<0.001	<0.05	<0.0001	51	6.28	84	<0.001	0.001	<0.001	<0.004	571	0.7	1.28	<0.001	21	0.117	<0.0001	0.003	<0.01	0.18	6.5	<0.01	<0.01	12	<0.01	<0.001	39	5	22	15:10	316	70	0.2	0.011
PZ103A	Dec-15 Minimum																571 614										6.5 6.7										316	70		
PZ103B	Average Maximum Jan-15																657										6.9										340 364	70 70		
PZ103B PZ103B PZ103B	Feb-15 Mar-15 Apr-15	97	<1	<1	97		<0.001	<0.05	<0.0001	23	3.94	73	<0.001	<0.001	<0.001	<0.004	461	0.2	0.08	<0.001	13	0.02		<0.001	0.02		6.3		<0.01	8.0	<0.01	<0.001	35	4		10:35	270		0.40	<0.005
PZ103B PZ103B PZ103B	May-15 Jun-15 Jul-15																																							
PZ103B PZ103B PZ103B	Aug-15 Sep-15 Oct-15												<0.001				449									0.45		<0.01						7	20	15:05	245		0.6	
PZ103B PZ103B PZ103B	Nov-15 Dec-15		<1	<1	96	0.04	<0.001	×0.05	<0.0001	29	4.29	76	<0.001	0.002	<0.001	<0.004		0.1	9.13	<0.001	13	0.259	<0.0001	0.006	0.04	0.45		<0.01	0.02	8	₹0.01	<0.001	36		20	15:05		42	0.6	0.030
	Minimum Average Maximum																449 455 461										6.0 6.2 6.3										245 258 270	42 42 42		
PZ103C PZ103C PZ103C	Jan-15 Feb-15																																							
PZ103C PZ103C	Mar-15 Apr-15 May-15	17	<1	<1	17		0.010	<0.05	<0.0001	4	2.60	76	<0.001	<0.001	<0.001	<0.004	324	<0.1	0.05	<0.001	8	0.68		0.233	0.06		5.6		0.08	7.0	<0.01	<0.001	36	16		10:30	208		0.60	<0.005
PZ103C PZ103C PZ103C	Jun-15 Jul-15 Aug-15																																							=
PZ103C PZ103C PZ103C	Sep-15 Oct-15 Nov-15	16	<1	<1	16	0.05	<0.001	<0.05	<0.0001	6	2.57	65	<0.001	0.028	<0.001	<0.004	278	<0.1	2.29	<0.001	8	0.581	<0.0001	0.147	0.02	0.04	5.2	<0.01	0.18	7	<0.01	<0.001	33	18	20	15:01	158	83	0.5	0.098
PZ103C PZ103C	Dec-15 Minimum																278										5.2										158	83		
PZ104	Average Maximum																301 324										5.4 5.6										183 208	83 83		
PZ104	Feb-15																																							

000 000 000 000 000 000 000 000 000 00	Mar-15 Apr-15 May-15	Alkali nity - A Blearbonate mg CaCO3/L	Alkalinity - Carbonate mg CaCO3/L	Alkalinity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	Aluminium - Dissolved mg/L	O.00.0 mg/L	Boron - Dissolved mg/L	Cadmium - Dissolved mg/L	Calcium mg/L	Cation Sum mol.	CN odde mg/L	Chromium - Dissolved mg/L	Cobalt - Dissolved	Copper - Dissolved	Cyanide mg/L	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	lron - Dissolved mg/L	mg/L Lead - Dissolved	△ Magne sium mg/L	Manganese - S Dissolved mg/L	Mercury - Dissolved mg/L	Nickel - Dissolved mg/L	Nitrate as N mg/L	Nitrogen Ammonia mg/L.N	Nun Hd pie H - Hd	Phosphorus - reactive mg/L	Phosphorus - total mg/L	9. Potassium mg/L	Se lenium - Diss ol ved 0 mg/L	Si Ner - Dissolved mg/L	Sodium mg/L	∆ Sulfate mg/L	Temperature °C	9 <u>4</u> 14:10	Total Dissolved Solids @180°C mg/L	Total Suspended Solids mg/L	Total Mirogen as N 0.20	Zinc - Dissolved mg/L
PZ104 PZ104 PZ104 PZ104 PZ104 PZ104 PZ104 PZ104	Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	<1	42	1510	1550	0.04	<0.001	<0.05	<0.0001	703	36.6	17	0.030	<0.001	0.001	<0.004		0.2	<0.05	0.002	ব	<0.001	<0.0001	<0.001	0.06	0.09		<0.01	0.05	5	<0.01	<0.001	31	4	22	11:15			0.7	<0.005
P7106A	Minimum Average Maximum																6680 7210 7740										12.4 12.6 12.8										1610 1665 1720	210 210 210		
PZ105A PZ105A PZ105A PZ105A PZ105A PZ106A	Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15	27	<1	<1	27		0.008	<0.05	<0.0001	7	2.58	71	<0.001	0.0010	<0.001	<0.004	212	0.2	0.09	<0.001	5	0.03		0.012	0.07		5.3		0.02	3.0	<0.01	<0.001	40	4		9:22	188		0.30	0.01
PZ105A PZ105A PZ105A PZ105A PZ105A PZ105A	Jul-15 Aug-15 Sep-15 Oct-15 Nov-15	30	<1	<1	30	0.03	0.016	<0.05	<0.0001	10	2.72	74	<0.001	0.011	<0.001	<0.004	290	<0.1	1.66	<0.001	6	0.254	<0.0001	0.061	0.13	0.05	5.8	<0.01	0.16	3	<0.01	<0.001	38	13	21	13:51	198	362	1.3	0.089
PZ105A	Dec-15 Minimum Average																212 251 290										5.3 5.5 5.8										188 193 198	362 362 362		
PZ105B PZ105B PZ105B	Jan-15 Feb-15 Mar-15																290										5.8										198	362		
PZ105B PZ105B PZ105B PZ105B	Apr-15 May-15 Jun-15	7	<1	<1	7		0.004	<0.05	<0.0001	2	1.72	52	0.066	0.0040	0.0050	<0.004	292	<0.1	0.39	<0.001	4	0.07		0.122	0.02		6.3		0.02	1.0	<0.01	<0.001	29	<1		9:20	130		<0.1	0.006
PZ105B PZ105B PZ105B PZ105B PZ105B PZ105B	Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	6	<1	<1	6	0.01	<0.001	<0.05	<0.0001	2	1.56	50	<0.001	0.013	0.002	<0.004	167	<0.1	<0.05	<0.001	4	0.094	<0.0001	0.066	0.10	0.01	4.9	<0.01	0.03	<1	<0.01	<0.001	26	1	20	13:52	109	9	0.2	0.033
	Minimum Average Maximum																167 230 292										4.9 5.6 6.3										109 120 130	9 9 9		
PZ105C PZ105C PZ105C PZ105C PZ105C PZ105C	Jan-15 Feb-15 Mar-15 Apr-15 May-15	22	<1	<1	22		<0.001	<0.05	<0.0001	6	1.77	42	<0.001	<0.001	<0.001	<0.004	266	0.2	<0.05	<0.001	4	0.00		0.003	0.31		7.7		0.04	2.0	<0.01	<0.001	25	6		9:15	134		0.50	0.007
PZ105C PZ105C PZ105C PZ105C	Jun-15 Jul-15 Aug-15 Sep-15																																							
PZ105C PZ105C PZ105C	Oct-15 Nov-15 Dec-15 Minimum	16	<1	<1	16	<0.01	<0.001	<0.05	<0.0001	6	1.68	45	<0.001	<0.001	<0.001	<0.004	183	<0.1	<0.05	<0.001	4	0.009	<0.0001	0.010	0.32	0.02	5.8	<0.01	0.04	2	<0.01	<0.001	23	6	20	13:50	120	13	0.3	0.026
PZ106A PZ106A	Average Maximum Jan-15 Feb-15																225 266										6.8 7.7										127 134	13 13		
PZ106A PZ106A PZ106A PZ106A PZ106A	Mar-15 Apr-15 May-15 Jun-15 Jul-15	26	10	<1	36		<0.001	<0.05	<0.0001	16	6.20	188	<0.001	<0.001	<0.001	<0.004	688	0.2	<0.05	<0.001	2	<0.001		0.002	0.84		10.4		0.02	21.0	<0.01	<0.001	108	15		9:55	362		0.90	<0.005
PZ106A PZ106A PZ106A PZ106A PZ106A	Aug-15 Sep-15 Oct-15 Nov-15	28	3	<1	31	0.60	<0.001	<0.05	<0.0001	16	6.04	188	<0.001	<0.001	0.001	<0.004	627	0.1	<0.05	<0.001	2	0.003	<0.0001	0.001	0.85	0.02	9.7	<0.01	0.04	20	<0.01	<0.001	105	16	23	15:05	364	130	1.6	<0.005
PZ106A	Dec-15 Minimum Average Maximum																627 658 688										9.7 10.1 10.4										362 363 364	130 130 130		
PZ106B PZ106B	Jan-15 Feb-15																688										10.4										364	130		
PZ106B PZ106B PZ106B PZ106B PZ106B	Mar-15 Apr-15 May-15 Jun-15 Jul-15	12	<1	<1	12		<0.001	<0.05	0.00190	37	20.80	692	<0.001	0.0480	<0.001	<0.004	2,180	<0.1	<0.05	<0.001	62	1.50		0.063	0.01		5.9		0.01	11.0	<0.01	<0.001	311	41		9:58	1,400		<0.1	0.118
PZ106B PZ106B PZ106B PZ106B PZ106B	Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	11	<1	<1	11	0.03	<0.001	<0.05	0.0016	33	19.3	688	<0.001	0.040	0.001	<0.004	1,899	<0.1	<0.05	<0.001	56	1.19	<0.0001	0.082	0.03	0.02	5.1	<0.01	0.02	10	<0.01	<0.001	294	44	22	15:15	1,230	48	<0.1	0.190
	Minimum Average Maximum																1899 2040 2180										5.1 5.5 5.9										1230 1315 1400	48 48 48		
PZ107 PZ107 PZ107	Jan-15 Feb-15 Mar-15																																							
PZ107 PZ107 PZ107 PZ107 PZ107 PZ107 PZ107	Apr-15 May-15 Jun-15 Jul-15	163	<1	<1	163		<0.001	<0.05	<0.0001	30	6.97	97	<0.001	<0.001	<0.001	<0.004	690	0.2	<0.05	<0.001	19	<0.001		0.001	0.26		7.3		0.04	10.0	<0.01	<0.001	84	47		10:37	394		0.40	<0.005
PZ107 PZ107 PZ107 PZ107	Aug-15 Sep-15 Oct-15 Nov-15	133	<1	<1	133	0.03	<0.001	<0.05	0.0001	28	6.70	88	<0.001	<0.001	<0.001	<0.004	600	0.2	<0.05	<0.001	18	0.011	<0.0001	0.004	0.31	0.01	6.1	<0.01	<0.01	10	<0.01	<0.001	82	47	24	15:45	320	85	0.3	0.086

uog eoo pod seduces P2107	Sample Date	Alkalinity - Bicarbonate mg CaCO3/L	Alkalinity - Carbonate mg CaCO3/L	Alkalinity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	Aluminium - Dissolved mg/L	Arsenic - Dissolved mg/L	Boron - Dissolved mg/L	Cadmium - Dissolved mg/L	Calcium mg/L	Cation Sum me/L	Chloride mg/L	Chromium - Dissolved mg/L	Cobalt - Dissolve d mg/L	Copper - Dissolved mg/L	Cyanide mg/L	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	iron - Dissolved mg/L Lead - Dissolved	mg/L M agne sium mg/L	Manga ne se - Dissolve d mg/L	Mercury - Dissolved mg/L	Nickel - Dis solved mg/L	Nitrate as N mg/L	Nitrogen Ammonia mg/L N	pH - Fleid pH Unit	Phosphorus - reactive mg/L	Phosphorus - total mg/L	Potassium mg/L	Se lenium - Diss ol ved mg/L	Silver - Dissolved mg/L	Sodium mg/L	Sulfate mg/L	Temperature "C	Time	Total Dissolved Solids @180°C mg/L	Total Suspended Solids mg/L	Total Nitrogen as N mg/L	Zinc - Dissolved mg/L
	Minimum Average Maximum	1															600 645 690									6.1 6.7 7.3										320 357 394	85 85 85		
PZ109 PZ109 PZ109	Jan-15 Feb-15 Mar-15 Apr-15																																						
PZ109 PZ109 PZ109 PZ109	May-15 Jun-15 Jul-15		<1	<1	578		0.002	0.10	<0.0001	22	12.20	61	<0.001	<0.001	0.0020		1,078	2.2	.25 0.00	300 11	<0.001		0.003	0.01		7.6		0.04	26.0	<0.01	<0.001	218	6		8:15	638		1.50	0.011
PZ109 PZ109 PZ109	Aug-15 Sep-15 Oct-15	427	<1	<1	427	0.03	<0.001	0.07	<0.0001	38	10.4	48	<0.001	<0.001	<0.001	<0.004	884	1.9	.50 <0.	001 15	0.025	<0.0001	<0.001	0.03	1.01	7.2	<0.01	0.02	20	<0.01	<0.001	155	3	23	12:35	524	<5	1.0	<0.005
PZ109 PZ109	Nov-15 Dec-15 Minimum	1															884									7.2										524	<5		
PZ111	Average Maximum Jan-15	1															981 1078									7.4 7.6										581 638	<5 <5		
PZ111 PZ111 PZ111 PZ111	Feb-15 Mar-15 Apr-15		<1	<1	72		<0.001	<0.05	<0.0001	36	6.78	192	<0.001	<0.001	<0.001	<0.004	752	0.3	.13 <0.	001 24	<0.001		<0.001	0.20		6.4		0.04	12.0	<0.01	<0.001	62	11		12:35	494		0.50	<0.005
PZ111 PZ111 PZ111 PZ111	May-15 Jun-15 Jul-15																																						
PZ111 PZ111	Aug-15 Sep-15 Oct-15 Nov-15	70	<1	<1	70	<0.01	<0.001	<0.05	<0.0001	38	6.25	200	<0.001	0.019	<0.001	<0.004	698	0.2	.99 <0.	001 22	0.904	<0.0001	0.048	<0.10	0.27	6.3	<0.01	0.14	11	<0.01	<0.001	52	11	23	11:40	474	3,300	0.8	0.011
PZ111 PZ111	Dec-15 Minimum																698 725									6.3										474 484			
PZ112B PZ112B	Average Maximum Jan-15 Feb-15																725 752									6.3 6.4										484 494	3300 3300		
PZ112B PZ112B PZ112B	Mar-15 Apr-15 May-15	4	<1	<1	4		<0.001	<0.05	<0.0001	2	16.90	418	0.001	0.0050	<0.001	<0.004	1,804	0.1	.19 <0.	001 20	0.04		0.010	1.54		5.9		0.06	8.0	<0.01	<0.001	344	249		13:40	1,160		2.10	0.007
PZ112B PZ112B PZ112B PZ112B	Jun-15 Jul-15 Aug-15																																						
PZ112B PZ112B PZ112B PZ112B	Sep-15 Oct-15 Nov-15 Dec-15	4	<1	<1	4	0.11	<0.001	<0.05	0.0002	3	19.8	473	<0.001	0.021	0.002	<0.004	1,806	0.1	.10 <0.	001 24	0.074	<0.0001	0.056	2.01	0.02	5.2	<0.01	2.22	9	<0.01	<0.001	400	324	20	13:15	2,700	14,700	6.0	0.084
	Minimum																1804									5.2										1160	14700		
	Average Maximum																1805 1806									5.5 5.9										1930 2700	14700 14700		
PZ137 PZ137 PZ137	Average Maximum Jan-15 Feb-15 Mar-15																1805 1806									5.5 5.9											14700 14700		
PZ137 PZ137 PZ137 PZ137	Average Maximum Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15	63	<1	<1	63		<0.001	<0.05	<0.0001	52	12.60	386	<0.001	<0.001	<0.001	<0.004	1805 1806	0.2	.07 <0.	001 45	0.27		<0.001	0.03		5.5 5.9 6.4		<0.01	31.0	<0.01	<0.001	126	68		9:31	1930 2700	14700	0.30	<0.005
PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137	Average Maximum Jan-15 Feb-15 Mar-15 Apr-15 May-15	63															1805 1806 1,359									5.5 5.9 6.4	<0.01							21		872			
PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137	Average Maximum Jan-15 Feb-15 Mar-15 Apr-15 Jun-15 Jul-15 Aug-15 Sep-15	63															1,359 1,100	0.2								5.5 5.9 6.4	<0.01							21		706			
PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137 PZ137	Average Maximum Jan-15 Feb-15 Mar-15 Apr-15 Apr-15 Jun-15 Jun-15 Jun-15 Ceb-15 Oct-15 Nov-15 Minimum Average Maximum Jan-15	63															1805 1806 1,359									5.5 5.9 6.4	<0.01							21		872			
P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2149 P2149 P2149	Average Maximum Jan-15 Feb-15 Max-15 Ap-15 May-15 Jun-15 Jun-15 Oc-15 Nov-15 Nov-15 Nov-15 Maximum Average Maximum Average Maximum Average Maximum Average	25	<1		25	<0.01											1,359 1,100 1,100									5.5 5.9 6.4 5.5	<0.01							21		706 706 789	59		
P2137 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149	Average Maximum Jan-15 Feb-15 Feb-15 Feb-15 May-15 Ay-15 Ay-15 Jun-15 Jun-15 Ce-15 Oc-15 De-15 Maximum Jan-15 Feb-15 Maximum Jan-15 Feb-15 May-15 Jun-16 Jun	25 No Sample	<1	ব	25	<0.01											1,359 1,100 1,100									5.5 5.9 6.4 5.5	<0.01							21		706 706 789	59		
P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2149	Average Maximum Jan-15 Feb-15 Feb-15 Ap-16 Ap-16 Ap-16 Jun-15 Sep-15 Oc-15 Nov-15 De-15 Nov-15 De-15 Ap-11 Jun-15 Ap-15	63 25 No Sample	<1 vas collecte	ব	25	<0.01											1,359 1,100 1,100									5.5 5.9 6.4 5.5	<0.01							21		706 706 789	59		
P2137 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149 P2149	Average Jan-15 Feb-15 Feb-15 Ap-15 Ap-15 Jun-15 Jun-15 Jun-15 Sep-15 Oc-15 Nov-15 Nov-15 Nov-15 Mainman Jan-16 Average Maximum Jan-16 Ap-15 May-15 Jun-15 May-15 Jun-15 Nov-15 N	63 25 No Sample	<1 vas collecte	<1 das the site w	25	<0.01											1,359 1,100 1,100									5.5 5.9 6.4 5.5	<0.01							21	14:50	706 706 789	59		
P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2140	Average Maximum Maximum Max10 Feb:15 Apr:15 Apr:15 Apr:15 Jun:15 Jun:15 Jun:15 Dec:15 Dec:15 Dec:15 Average Maximum Jun:15 Apr:1	No Sample No Sample	<1 vas collecte	<1 das the site w	25	<0.01											1,359 1,100 1,100									5.5 5.9 6.4 5.5	<0.01							21	14:50	706 706 789	59		
P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2140	Average Maximum Jan-15 Mas-15 Mas-15 Mas-15 May-15 May-15 Jun-15 Sep-15 Oc-15 Non-15 Non-15 Non-15 Non-15 Non-15 Maximum Jan-15 Ap-1	63 25 No Sample No Sample	was collecte	<1 das the site w	as too low to a	<0.01	<0.001	<0.05	<0.0001	46	11.1	363	<0.001	0.003	0.001	<0.004	1905 1906 1,359 1,100 1100 1230 1359		.09 <0.	38	0.762	<0.0001	0.008		0.06	5.5 5.9 6.4 5.5	40.01	<0.01		<0.01	<0.001	114	65	21	14:50	706 706 789 872	59 59 59 59		0.035
P2137 P2140 P2140	Anstage Ans	63 25 No Sample No Sample	was collecte	d as the site w	as too low to a	<0.01	<0.001	<0.05	<0.0001	46	11.1	363	<0.001	0.003	0.001	<0.004	1905 1906 1,359 1,100 1100 1230 1359	<0.1	.09 <0.	38	0.762	<0.0001	0.008	0.12	0.06	5.5 5.9 6.4 6.4 5.5 5.5 6.4	10.0>	<0.01	28	<0.01	<0.001	114	65	21	14:50	706 706 789 872	59 59 59 59	0.1	0.035
P2137 P2140 P2140	Anniage Ann	63 25 No Sample No Sample 237	was collecte	<1 as the site w	as too low to as	<0.01	<0.001	<0.05	<0.0001	46	11.1	353	<0.001	0.003	0.001	<0.004	1,369 1,369 1,369 1,369 1,100 1100 1220 1339	<0.1		201 38	0.762	<0.0001	0.008 -<0.001	0.12	0.06	5.5 5.9 6.4 6.4 5.5 5.5 5.9 6.4		<0.01	28	<0.01	<0.001	114	65		14:50 14:45	872 706 706 709 872	59 59 59 59	1.10	0.035
P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2137 P2140	American Jan 15 - Peb	63 25 No Sample No Sample 237	was collecte	<1 as the site w	as too low to as	<0.01	<0.001	<0.05	<0.0001	46	11.1	353	<0.001	0.003	0.001	<0.004	1,369 1,369 1,369 1,100 1,100 1,100 1,340 1,340	0.1		201 38	0.762	<0.0001	0.008 -<0.001	0.12	0.06	5.5 5.9 6.4 6.5 5.5 6.4		<0.01	28	<0.01	<0.001	114	65		14:50 14:45	872 706 706 707 872 872 772	59 59 59 59 59 59	1.10	0.035
P2137 P2140 P2140	Aming Maninum Am	63	was collecte	<1 as the site w	as too low to as	<0.01	<0.001	<0.05	<0.0001	46	11.1	353	<0.001	0.003	0.001	<0.004	1,369 1,369 1,369 1,100 1,100 1,100 1,340 1,340	0.1		201 38	0.762	<0.0001	0.008 -<0.001	0.12	0.06	5.5 5.9 6.4 6.4 5.5 5.5 5.9 6.4		<0.01	28	<0.01	<0.001	114	65		14:50 14:45	872 706 706 709 872 682	59 59 59 59 59 59	1.10	0.035

uogeoori ejdures P2152 P2152	Section of the sectio	A likali nity - Bicarbonate mg CaCO3/L	Alkalinity - Carbonate mg Ca CO3/L	Alkalinity - Hydroxide mg CaCO3/L	Alkali nity - Total as CaCO3 mg CaCO3/L	Alumi ni um - Dissolved mg/L	Arsenic - Dissolved mg/L	Boron - Dissolved mg/L	Cadmium - Dissolved mg/L	Calcium mg/L	Cation Sum me/L	Chloride mg/L	Chromium - Dissolved mg/L	Cobalt - Dissolved mg/L	Copper - Dissolved mg/L	Cyanide mg/L	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	Iron - Dissolved mg/L	Lead - Dissolved mg/L	Magne sium mg/L	Manganese - Dissolved mg/L	Mercury - Dis solved mg/L	Nickel - Dissolved mg/L	Nitrate as N mg/L	Nitrogen Ammonia mg/L N	pH - Fleid pH Unit	Phosphorus - reactive mg/L	Phosphorus - total mg/L	Potassium mg/L	Selenium - Diss ol ved mg/L	Silver - Dissolved mg/L	Sodium mg/L	Sulfate mg/L	Temperature °C	Time	Total Dissolved Solids @180°C mg/L.	Total Suspended Solids mg/L	Total Nitrogen as N mg/L	Zinc - Dissolved mg/L
PZ152 PZ152 PZ152 PZ152 PZ152 PZ152 PZ152	Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Minimum Average Maximum	No Sample	was collecte	d as the site v	vas too low to	sample																														13:00				
PZ156 PZ156 PZ156 PZ156 PZ156 PZ156 PZ156 PZ156 PZ156 PZ156	Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15	99	<1	<1	99		<0.001	<0.05	<0.0001	30	7.35	168	<0.001	<0.001	<0.001	<0.004	811	0.2	<0.05	<0.001	24	0.05		0.005	0.01		6.8		0.03	12.0	<0.01	<0.001	82	39		13:05	468		0.20	<0.005
PZ156 PZ156 PZ156 PZ156 PZ156 PZ156 PZ156	Sep-15 Oct-15 Nov-15 Dec-15 Minimum Average Maximum Jan-15	75	<1	<1	75	0.04	<0.001	<0.05	<0.0001	26	6.49	146	<0.001	0.010	<0.001	<0.004	617 617 714 811	0.2	1.22	<0.001	20	0.326	<0.0001	0.052	0.02	0.03	5.9 5.9 6.4 6.8	<0.01	0.02	11	<0.01	<0.001	75	34	22	18:15	346 346 407 468	60 60 60	0.1	0.016
P2157 P2157 P2157 P2157 P2157 P2157 P2157 P2157 P2157 P2157 P2157	Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15		<1	<1	363		<0.001	<0.05	<0.0001	68			<0.001	<0.001	<0.001	<0.004	891		<0.05		36	<0.001		<0.001	0.56		6.9					<0.001	59	20		12:48	561		0.60	
PZ157 PZ157 PZ157 PZ157 PZ157 PZ170	Oct-15 Nov-15 Dec-15 Minimum Average Maximum Jan-15 Feb-15	294 <1 1 204 0.03															412 412 487 561	40 40 40 40	0.3	0.042																				
PZ170 PZ170 PZ170 PZ170 PZ170 PZ170 PZ170 PZ170 PZ170 PZ170	Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15	262		41		0.03			0.00020 <0.0001			1,480		0.0140			5,290						<0.0001	0.095	0.03	0.20	6.3		0.01			<0.001		18	20		2,930	42	0.20	
PZ170 PZ170 PZ170 PZ174 PZ174 PZ174	Nov-15 Dec-15 Minimum Average Maximum Jan-15 Feb-15																4390 4840 5290										6.3 6.3 6.3										2930 3155 3380	43 43 43		
PZ174 PZ174 PZ174 PZ174 PZ174 PZ174 PZ174 PZ174 PZ174 PZ174	Mar-15 Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15			<1		0.03	<0.001		<0.0001	166	95.90	2,940		0.1360		<0.004	10,950	0.4					<0.0001		0.14	0.28	6.3	<0.01		6.0	<0.01		1,000	298	20	8:30 0.579861111 16:50		<5	0.40	
PZ174 PZ174 PZ175 PZ175 PZ175 PZ175	Nov-15 Dec-15 Minimum Average Maximum Jan-15 Feb-15 Mar-15																8270 9610 10950										5.9 6.1 6.3										6420 6515 6610	<5 <5 <5		
PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175 PZ175	Apr-15 May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15			<1		0.04							<0.001			<0.004	17,570 6,050	1.2					<0.0001		0.05	0.02	7.1	<0.01	0.03			<0.001		717	20	8:35 0.600694444 16:55	11,200 4,170	15	0.20	
PZ176 PZ176 PZ176 PZ176 PZ176 PZ176	Dec-15 Minimum Average Maximum Jan-15 Feb-15 Mar-15 Apr-15																6050 11810 17570										6.6 6.8 7.1									0.40	4170 7685 11200	15 15 15		
PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176 PZ176	May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15			<1		0.03				17	5.20 4.55				<0.001		289		8.96 <0.05				<0.0001		0.02	0.02	6.4	<0.01		4.0		<0.001				8:40 0.600694444 17:10		16	0.10	
⊬Z176	Dec-15 Minimum		_	1				_									289										6.4										322	16		_

Sample Location	ega ega Average Maximum Jan-15	Alkali nity - Bicarbonale mg CaCo3/L	Alkali nity - Carbona te mg Ca CO3/L	Alkali nity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	Aluminium- Dissolved mg/L	Arsenic - Dissolved mg/L	Boron - Dissolved mg/L	Cadmium - Dissolved mg/l.	Calcium mg/L	Cation Sum me/L	Chloride mg/L	Chromium - Dissolve d mg/L	Cobalt - Dissolved mg/L	Copper - Dissolved mg/L	Cyanide mg/L.	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	Iron - Dissolved mg/L	Lead - Dissolved mg/L	Magne sium mg/L	M anganese - Dissolved mg/L Mercury - Dissolved	Nickel - Dis solved mg/L	Nifrate as N mg/L	Nifrogen Ammonia mg/L N	Mun Hd ploH - Hd 6.4 6.4	Phosphorus - reactive mg/L	Phosphorus -total mg/L	Potassium mg/L	Se lenium - Diss ol ved mg/L	Si Iver - Dissolved mg/L	Sodium mg/L	Sulfate mg/L	Temperature °C	Time	Total Dissolved 353 384	Total Suspended Solids mg/L	Total Mitrogen as N mg/L	Zinc - Dissolved mg/L
PZ177 PZ177 PZ177 PZ177 PZ177 PZ177 PZ177	Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15	268	<1	<1	268		<0.001	<0.05	<0.001	25	57.50	1,570	<0.001	0.0090	0.0020	<0.004	7,800	0.9	<0.05	<0.001	144	0.02	0.017	0.01		7.3		0.19	<1	<0.01	<0.001	1,020	230	21	8:25 0.59375	4,550		0.20	0.024
PZ177 PZ177 PZ177 PZ177 PZ177	Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	125	<1	<1	125	0.04	0.003	<0.05	<0.0001	9	27.8	766	<0.001	0.004	<0.001	<0.004	2,710	1.0	1.72	<0.001	49	0.022 <0.00	0.005	<0.01	0.01	6.6	<0.01	0.39	<1	<0.01	<0.001	535	87	19	17:00	2,840		0.6	0.011
PZ184	Average Maximum Jan-15		1							1		1	1				2710 5255 7800							1		6.6 7.0 7.3								1	I	2840 3695 4550	957 957 957		
PZ184 PZ184 PZ184 PZ184 PZ184 PZ184 PZ184	Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15	<1	<1	ব	<1		0.010	<0.05	0.00120	40	77.20	2,370	0.017	0.2860	0.0240	<0.004	7,600	0.1	34.00	0.02300	193	1.02	0.394	0.11		3.1		0.16	6.0	0.020	<0.001	1,360	801		12:52	4,750		1.70	0.572
PZ184 PZ184 PZ184 PZ184 PZ184	Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	<1	<1	<1	<1	21.60	<0.001	<0.05	0.0008	28	51.6	1260	0.003	0.173	0.011	<0.004		0.2	3.15	0.013	114	0.921 <0.00	0.254	0.06	0.81		<0.01	0.18	6	<0.01	<0.001	934	442	21	13:45			1.0	0.379
PZ186	Minimum Average Maximum																4770 6185 7600									3.1 3.1 3.1										3430 4090 4750	1080 1080 1080		
PZ186 PZ186 PZ186 PZ186 PZ186 PZ186 PZ186	Jan-15 Feb-15 Mar-15 Apr-15 May-15 Jun-15 Jul-15	89	<1	<1	89		0.016	<0.05	<0.0001	23	3.61	63	0.001	<0.001	0.0040	<0.004	483	0.2	11.60	0.00400	12	0.19	0.003	0.02		6.6		0.07	10.0	<0.01	<0.001	28	1		14:21	192		0.10	0.018
PZ186 PZ186 PZ186 PZ186 PZ186 PZ186	Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	69	<1	<1	69	0.05	<0.001	<0.05	<0.0001	20	3.12	49	<0.001	<0.001	<0.001	<0.004	293	0.2	1.44	<0.001	11	0.047 <0.00	0.001	0.10	0.03		<0.01	0.15	10	<0.01	<0.001	22	3	19	10:50		29	0.3	0.008
PZ187	Minimum Average Maximum Jan-15									1		1					293 388 483									6.3 6.5 6.6										160 176 192	29 29 29		
PZ187 PZ187 PZ187	Feb-15 Mar-15 Apr-15																																						
PZ187 PZ187	May-15 Jun-15	27	<1	<1	27		0.004	<0.05	<0.0001	1	1.48	37	0.001	<0.001	0.0020	<0.004	189	<0.1	0.79	<0.001	1	0.02	0.002	0.09		5.9		0.01	ব	<0.01	<0.001	31	1		14:30	100		0.20	0.009
PZ187 PZ187 PZ187 PZ187 PZ187 PZ187 PZ187 PZ187 PZ187	May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15					0.11				1	1.48			<0.001		<0.004	1,678					0.02			0.12	5.5	<0.01							19		112	36	0.20	
P2187 P2187 P2187 P2187 P2187 P2187 P2187	May-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Minimum Average Maximum																										<0.01							19					
P2187 P2187 P2187 P2187 P2187 P2187 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188	May-15 Jun-15 Jun-15 Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15 Minimum Average Maximum Jan-15 Feb-15 Mar-15 Apr-15 Jun-15 Jun-15 Jun-15 Jun-15	22		ব	22	0.11	0.006	<0.05	<0.0001	1	1.65	38	<0.001	<0.001	<0.001	<0.004	1,678 189 934 1678	<0.1	1.12		2	0.019 <0.00	0.003		0.12	5.5 5.5 5.7	<0.01	0.05	ব	<0.01		33	3		10:45	112	36 36 36 36		0.007
P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2188 P2188 P2188 P2188 P2188 P2188	May-15 Jun-15 Aug-15 Sep-15 Oct-15 Dec-15 Dec-15 Minimum Jun-15 Feb-15 May-15 Jun-15 Sep-15 Aug-15 Feb-15 Move-15 Feb-15 Move-15 Feb-15 Move-15 Feb-15 Move-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-15 Mov-15 Feb-16 Mov-15 Feb-16 Mov-15 Feb-16 Mov-15 Feb-16 Mov-16 Mov-16 Feb-16 Mov-16 Feb-17 Mov-16 Feb-18 Mov-16 Mov-16 Feb-18 Mov-16 Feb-18 Mov-16 Feb-18 Mov-16 Mov-16 Feb-18 Mov-16 Mov-16 Mov-16 Mov-16 Feb-18 Mov-16 Mov-	30	c1	ব	30	0.11	0.006	<0.05	<0.0001	1	1.65	38	<0.001	<0.001	<0.001	<0.004	1,678 189 934 1678 265	<0.1	1.12	<0.001	5	0.019 <0.00	0.003	<0.01	0.12	5.5 5.5 5.7 5.9 6.2 6.1		0.05	1.0	<0.01	<0.001	33	3		10:45	112 100 106 112 124	36 36 36 36 36	0.2	0.007
P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188 P2188	May-15 Jun-15 Jul-15 Jul-15 Jul-15 Jul-15 Sep-15 Op-15 Nov-15 De-15 Maintum Jun-15 May-15 May-15 Jun-15 Sep-16 Op-16 May-15 May-15 Jun-15 Sep-16 Op-16 Sep-16 Nov-15 Nov-1	30	c1	ব	30	0.11	0.006	<0.05	<0.0001	1	1.65	38	<0.001	<0.001	<0.001	<0.004	1,678 189 934 1678 266	-0.1	1.12	<0.001	5	0.019 <0.00	0.003	<0.01	0.12	5.5 5.7 5.9 6.2		0.05	1.0	<0.01	<0.001	33	3		10:45	112 100 106 112 124	36 36 36 36	<0.1	0.007
P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2188	May-15 Jun-15 Jul-15 Jul-15 Jul-15 Jul-15 Jul-15 Sep-15 Co-15 Sep-15 Co-15 Nov-	30	c1	ব	30 27	0.11	0.006	<0.05	<0.0001 <0.0001	2	2.15	53	<0.001 0.003 <0.001	0.0050	0.001	<0.004	1,678 189 934 1678 265 182 224 265	0.1	1.12	<0.001	5	0.019 <0.00	0.003	<0.01	0.12	5.5 5.7 5.9 6.2 6.1 6.1		0.05	1.0	<0.01	<0.001	37 28	3		10:45	112 100 106 112 124 113 113	36 36 36 36 36 36 36 36	<0.1	0.007
P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2187 P2188	May-15 Jun-15 Jun-15 Jun-15 Jun-15 Sep-15 Oc-15 Sep-15 Nov	30 27	ব	ব	30 27 57	0.11	0.006	<0.05 <0.05 <0.05	<0.0001 <0.0001	2	2.15	53	<0.001 0.003 <0.001	-0.001 -0.0050 -0.001	0.001	<0.004	1,678 189 934 1678 265 182 224 224 235 340	0.1	1.12	<0.001 0.00400 <0.001	5 5 11	0.019 <0.00	0.003	0.01	0.12	5.5 5.5 5.7 5.9 6.2 6.1 6.1 6.1 6.2	<0.01	0.05	1.0	<0.01	<0.001	37 28	3		10:45	112 100 106 112 124 113 119 124 200	36 36 36 36 36 36 36 36 26	<0.1	0.007
P2107 P2107 P2107 P2107 P2107 P2107 P2107 P2107 P2100	May-15 Jun-15 Jul-15 Jul-15 Jul-15 Sep-15 Ge-15 Sep-15 Ge-15 Dec-15 Dec-15 Marrian Jan-15 Feb-15 Mar-15 Ap-15 Co-15 May-15 Ap-15 Dec-15 Jul-15 Dec-15	30 27	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	ব	30 27 57	0.11	0.006	<0.05 <0.05 <0.05	<0.0001 <0.0001	3	1.65	53	<0.001 0.003 <0.001	-0.001 -0.0050 -0.001	0.001	<0.004 <0.004 <0.004	1,678 189 934 1678 265 182 224 265 340	0.1	1.12	<0.001 0.00400 <0.001	5 5 11	0.019 <0.000	0.003	0.01	0.12	6.1 6.1 6.1 6.2 6.5	<0.01	0.05	1.0	<0.01	<0.001 <0.001 <0.001	33 37 28 33	3	19	13:45	112 100 106 112 112 124 113 113 119 124	36 36 36 36 36 36 36 36 36	-0.1 -0.1	0.007

PZ191 PZ191 PZ191 PZ191 PZ191 PZ191 PZ191	Jul-15 Aug-15 Sep-15 Oct-15 Nov-15 Dec-15	Alball nity - Bicarbonate mg CacO3/L	A Mailinity - Carbona to mg Ca CO3/L	A likalinity - Hydroxide mg CaCO3/L	Alkalinity - Total as CaCO3 mg CaCO3/L	O. Aluminium- Dissolved mg/L	Arsenic - Dissolved mg/L	Boron - Dissolved	Cadmium - Dissolved mg/L	Calcium mg/L	Cation Sum mel.	Chloride mg/L	Chromium - Dissolved mg/L	Cobalt - Dissolved	Copper - Dissolved	Cyanide mg/L	Electrical Conductivity (Non Compensated) µS/cm	Fluoride mg/L	Juliu payoss IQ - uou	Co. Lead - Dissolved mg/L	Magnesium mg/L	Manganese - Dissolved mg/L	Mercury - Dis solved mg/L	Nickel - Dissolved mg/L	Nitrato as N mg/L	Nitrogen Ammonia mg/L N	PH - Held ph Unit	Phosphorus -reactive mg/L	Phosphorus - total	9 Potassium mg/L	Selenium - Dissolved mg/L	Silver - Dissolved	7,6m milyos 49	Sulfate mg/L	Temperature °C	13:20	Total Dissolved Solids @180°C mg/L	Total Suspended 1.670	Total Mitrogen as N mg/L	Zinc - Dissolved mg/L
	Minimum																442										5.9										242	1670		
	Average																489										6.1										256	1670		
	Maximum																535										6.2										270	1670		
TB105	Jan-15																																							
TB105	Feb-15																																							
TB105	Mar-15																																							
TB105 TB105	Apr-15	344	<1	<1	344		<0.001	0.06	<0.0001	42	7.60	46	<0.001	<0.001	<0.001	<0.004	719	1.4	<0.05	<0.001	17	<0.001		<0.001	0.02		7.7		0.02	21.0	<0.01	<0.001	82	<1		9:30	372		0.50	<0.005
TB105	May-15 Jun-15	_	_				_		_		_			_																										
TB105	Jun-15 Jul-15	+	-	-	-	-	-	-	-	-	-	-		-	-			-	-	-	-							-	-											
TB105	Aug-15	_	_		_		_		_		_			_				_		_								_	_											
TB105	Sep-15	_												_																										
TB105	Oct-15	276	<1	<1	276	0.02	<0.001	0.06	<0.0001	45	7.20	44	<0.001	<0.001	<0.001	<0.004	620	2.0	0.23	<0.001	16	0.012	<0.0001	0.001	< 0.01	0.63	7.2	<0.01	0.01	18	<0.01	<0.001	73	<1	20	13:55	340	6	0.5	0.005
										-											-									_										
TB105																		_		_								_												
TB105 TB105	Nov-15 Dec-15																																							
																	620										7.2		l .								340	6		
	Dec-15																620 670 719										7.2 7.4										340 356 372	6		

BORE	PZ003	PZ039	PZ040B	PZ044	PZ055	PZ058	PZ101B	PZ101C	PZ102A	PZ102B	PZ103A	PZ103B	PZ103C	PZ104	TB105	PZ105A	PZ105B	PZ105C	PZ106B	PZ107
Jan-15	470.94	418.05	419.77	479.32	422.94	467.61	372.68	381.59	369.07	369.07	368.62	381.04	398.60	381.85	370.18	370.19	376.48	376.93	499.79	433.98
Feb-15	470.88	417.99	419.69	479.40	422.94	467.53	372.50	381.56	368.82	368.78	368.41	380.57	398.53	381.88	370.04	370.08	376.43	376.88	499.67	433.91
Mar-15	470.94		419.63	479.52	423.04	468.09	372.40	381.55	368.68	368.65	368.33	380.22	398.59	381.82	370.00	370.02	376.40	376.85	499.60	433.98
Apr-15	471.09		419.55	480.02	423.05	467.61	372.17	381.54	368.44	368.44	368.18	379.75	398.46	381.59	369.87	369.89	376.31	376.75	499.36	433.87
May-15	471.07	417.86	419.75	479.48	423.14	467.65	372.02	381.57	368.26	368.27	368.01	378.57	398.52	381.61	369.85	369.86	376.36	376.82	499.34	433.93
Jun-15	470.90	417.84	419.59	479.50	423.17	467.62	371.78	381.62	367.90	367.92	367.58	378.18	398.54	381.57	369.73	369.75	376.42	376.89	499.19	434.00
Jul-15	470.88	417.81	419.66	479.54	423.19	467.77	371.69	381.56	367.49	367.60	367.12	377.90	398.47	381.54	369.59	369.61	376.46	376.93	499.02	433.97
Aug-15	470.88	417.75	419.64	479.76	423.16	467.65	371.52	381.63	367.34	367.31	366.88	377.60	398.54	381.45	369.46	369.47	376.52	377.00	498.79	433.94
Sep-15	470.85	417.74	419.75	479.95	423.15	467.47	371.27	381.56	367.33	367.27	366.90	377.23	398.33	381.44	369.30	369.35	376.50	376.98	498.69	433.95
Oct-15	470.71	417.69	419.66	480.24	423.11	467.65	371.15	381.62	367.31	367.27	367.14	376.84	398.50	381.28	369.23	369.25	376.52	377.00	498.58	433.96
Nov-15	470.78	417.71	419.66	480.18	423.13		371.12		367.77	367.72	367.49	375.52	398.24	381.37	369.25	369.27	376.46	376.94	498.53	433.96
Dec-15	470.65	417.72	419.68	480.14	423.14		371.09		367.99	367.98	367.77	375.31	398.28	381.30	369.33	369.34	376.45	376.95	498.34	433.92
min	470.65	417.69	419.55	479.32	422.94	467.47	371.09	381.54	367.31	367.27	366.88	375.31	398.24	381.28	369.23	369.25	376.31	376.75	498.34	433.87
max	471.09	418.05	419.77	480.24	423.19	468.09	372.68	381.63	369.07	369.07	368.62	381.04	398.60	381.88	370.18	370.19	376.52	377.00	499.79	434.00
BORE	PZ109	PZ111	PZ112B	PZ137	PZ149	PZ151	PZ152	PZ156	PZ157	PZ170	PZ174	PZ175	PZ176	PZ177	PZ184	PZ186	PZ187	PZ188	PZ189	PZ191
Jan-15	382.67	376.70	480.04	460.60		380.32	441.06	376.10	377.50	421.30	417.91	418.30	416.34	415.68	411.91	408.47	416.47	416.05	412.86	375.12
Feb-15	382.67	376.68	479.94	460.57		380.06	441.01	376.50	377.68	421.22	417.86	418.18	416.32	415.67	411.90	408.41	416.42	415.80	412.62	375.24
Mar-15	382.65	376.56	479.99	462.56		380.00	441.15	376.54	377.72	421.17					411.87	408.36	416.43	415.98	412.57	375.30
Apr-15	382.57	376.26	479.92	460.56	107.01	379.83	441.02	376.65	377.73	421.09		440.00	440.04	445.00	411.78	408.15	416.35	415.94	412.30	375.58
May-15	382.55	376.16 376.18	479.91	460.65	467.34	379.78	441.04	376.37	377.59	421.11	417.72 417.69	418.08	416.31	415.66	411.82	408.12	416.32	416.00	412.00	374.22
Jun-15 Jul-15	382.63 382.62	376.18	479.82 479.81	460.69 460.62	467.10 467.11	379.65 379.54	441.06 441.04	374.70	376.43	420.99	417.69	418.18 418.23	416.40 416.35	415.70 415.64	411.82 411.83	407.76 407.59	416.39 416.51	416.04 416.02	411.63 411.45	374.03 373.19
Aug-15	382.62	376.21	479.74	460.59	467.11	379.34	440.99	374.70	376.43	420.99	417.59	418.26	416.35	415.70	411.77	407.59	416.51	415.98	411.45	373.19
Sep-15	382.64	375.86	479.74	460.64	467.07	379.35	441.03	375.09	376.18	1	417.58	418.40	416.43	415.70	411.78	407.49	416.57	415.99	411.34	373.43
Oct-15	382.55	375.49	479.70	460.65	467.04	379.25	441.03	375.36	376.59	420.89	417.53	418.45	416.41	415.88	411.77	407.57	416.58	416.00	411.30	373.43
Nov-15	382.54	375.39	479.70	460.67	407.04	378.99	441.06	375.81	376.86	420.93	417.57	418.47	416.39	415.94	411.79	407.36	416.67	416.03	411.38	374.22
Dec-15	382.50	375.28	479.66	460.66		378.89	441.04	375.86	376.91	420.89	417.57	418.48	416.36	415.87	411.75	407.19	416.41	416.00	411.36	374.53
min	382.50	375.28	479.66	460.56	467.04	378.89	440.99	374.51	376.18	420.89	417.53	418.08	416.31	415.64	411.75	407.19	416.32	415.80	411.30	372.90
max	382.67	376.70	480.04	462.56	467.34	380.32	441.15	376.65	377.73	421.30	417.91	418.48	416.43	415.98	411.91	408.47	416.67	416.05	412.86	375.58
mux	302.07	370.70	400.04	402.00	407.04	300.02	471.10	570.00	377.73	42 1.00	417.51	410.40	+10.40	410.00	411.01	400.47	+10.01	410.00	412.00	070.00
											PZ130 -			PZ133 -						
BORE	PZ127 - 43m	PZ127 - 68m	PZ127 - 112m	PZ127 - 141m		PZ128 - 36m	PZ128 - 55m	PZ129 - 35m	PZ129 - 53m	PZ129 - 74m	38.5m		PZ130 - 97m	31.5m	PZ133 - 43m	PZ133 - 59m	PZ179 - 28m			PZ179 - 145m
Jan-15	449.59	442.28	406.63	391.03	388.93	379.75	376.11	391.56	389.37	379.67	497.32	476.15	446.88	428.68	427.64	386.24	419.26	417.66	440.36	375.19
Feb-15	449.47	442.77	407.38	391.68	388.97	379.75	376.11	391.56	388.77	379.66	497.31	476.13	446.66	428.71	427.68	386.26	419.19	417.66	440.36	375.19
Mar-15	449.47	442.73	407.32	391.62	388.83	379.69	376.02	391.51	388.56	379.54	497.31	476.02	446.74	428.73	427.69	386.29	419.12	417.59	440.31	375.13
Apr-15	449.47	442.73	407.15	392.07	388.97	379.73	375.90	391.47	388.85	379.54	497.32	476.13	446.71	428.73	427.68	386.31	419.10	417.61	440.19	375.19
May-15	449.41	442.50	406.81	392.01	388.91	379.71	375.76	391.45	388.51	379.55	497.44	475.99	446.76	428.68	427.64	386.43	419.10	417.56	439.96	375.02
Jun-15	449.47	442.38	406.81	391.79	389.02	379.75	375.67	391.42	388.84	379.66	497.63	475.97	447.00	428.73	427.59	386.29	419.05	417.45	439.73	374.38
Jul-15	449.47	442.62	406.12	391.57	388.90	379.69	375.60	391.40	388.94	379.73	497.80	475.94	447.27	428.78	427.63	386.31	418.93	417.25	439.68	373.92
Aug-15	440.47	440 FC	405.66	200.05	388.91	379.69	375.48	391.38	389.16	379.69	497.94	475.93	447.03	428.76	427.60	386.31	418.83	417.18	439.51	373.63
Sep-15	449.47	442.50	405.66	390.95	388.95	379.68	375.60	391.36	388.58	379.79	498.04	475.99	447.70	428.76	427.44	386.31	418.77	417.19	439.91	373.73
Oct-15	449.47 449.47	442.73	405.54	390.78 390.73	388.99 388.91	379.71 379.61	375.58	391.35 391.31	388.32 388.98	379.69 379.59	498.15 498.22	476.02 475.91	448.14 448.63	428.73 428.73	427.39 427.36	386.33 386.31	418.77	417.25 417.20	439.91 439.91	373.86 374.09
Nov-15		442.62	405.43				375.60										418.77			
Dec-15	449.47 449.41	442.44 442.28	405.48	389.95	388.91	379.61 379.61	375.60	391.27	388.65	379.47 379.47	498.25 497.31	475.88	449.04	428.71	427.39	386.33	418.77	417.20 417.18	439.96	374.27 373.63
min			405.43	389.95	388.83		375.48	391.27	388.32			475.88	446.66	428.68	427.36	386.24	418.77		439.51	
max	449.59	442.77	407.38	392.07	389.02	379.75	376.11	391.56	389.37	379.79	498.25	476.15	449.04	428.78	427.69	386.43	419.26	417.66	440.36	375.19

Gaps in data indicate that no result is available



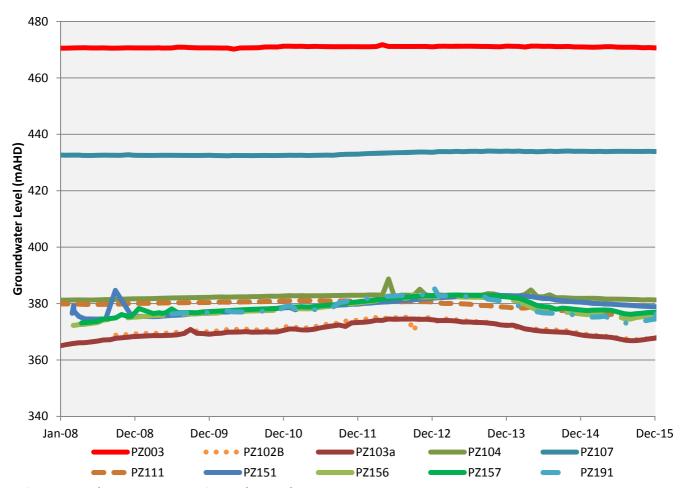


Figure 3-a: Ulan Seam Composite Hydrograph

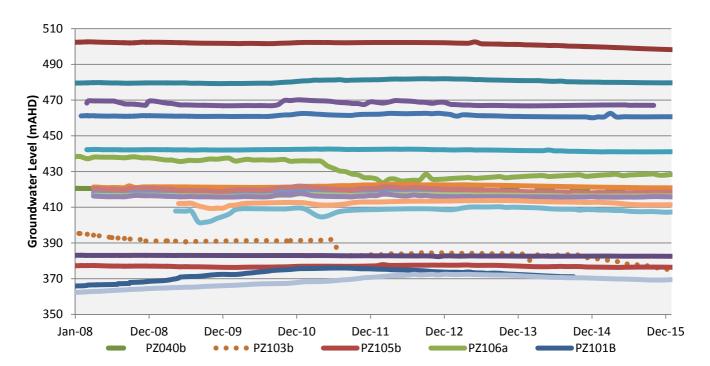


Figure 3-b: Permian Overburden Composite Hydrograph

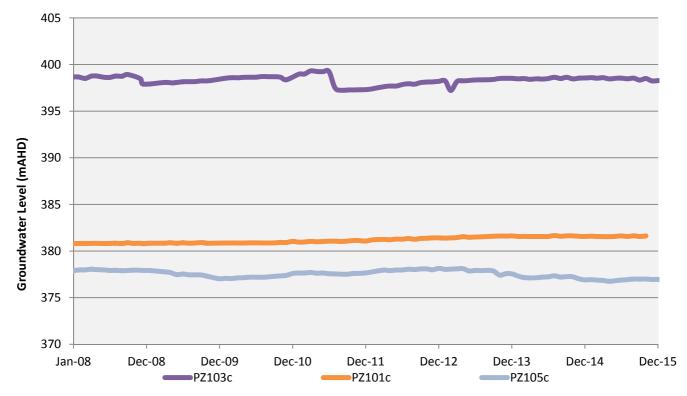


Figure 3-c: Triassic Composite Hydrograph

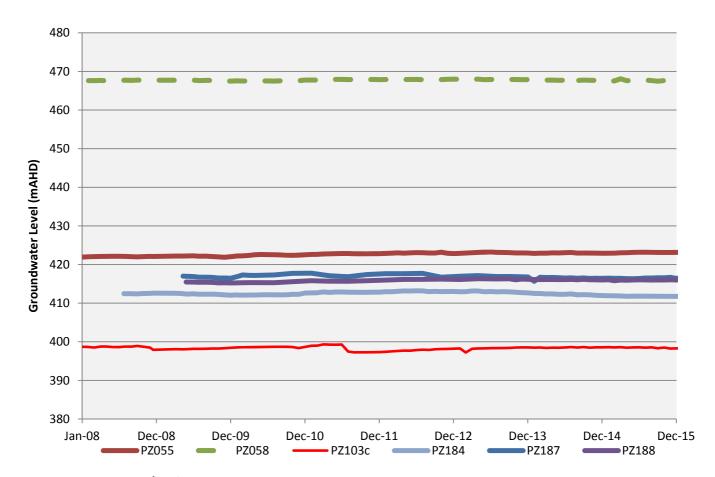


Figure 3-d: Tertiary/Surficial Composite Hydrograph

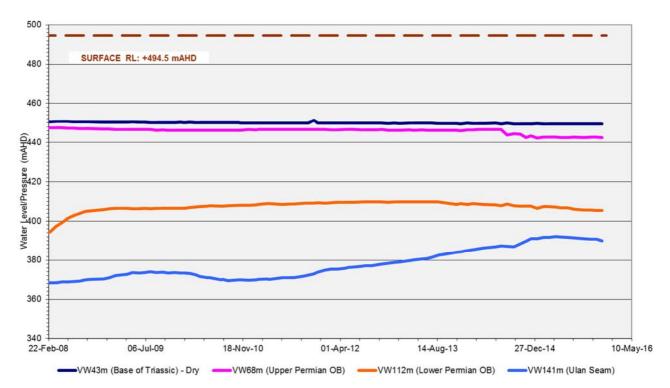


Figure 3-e PZ127 Composite Hydrograph

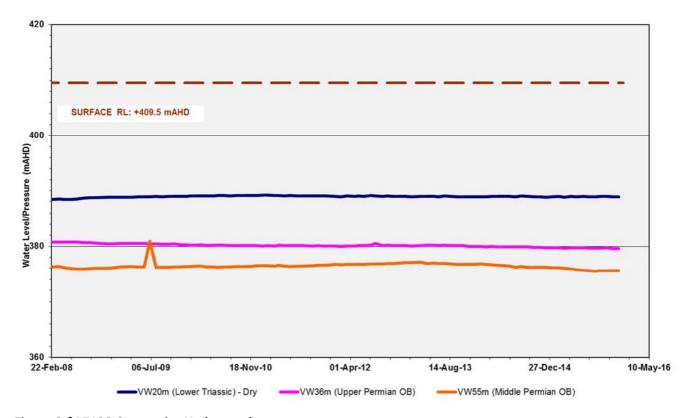


Figure 3-f PZ128 Composite Hydrograph

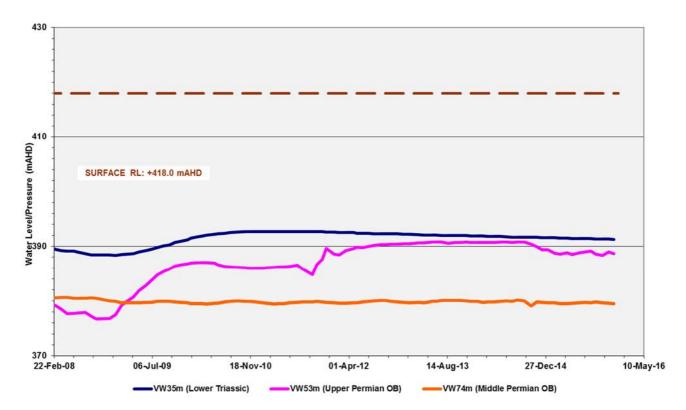


Figure 3-g PZ129 Composite Hydrograph

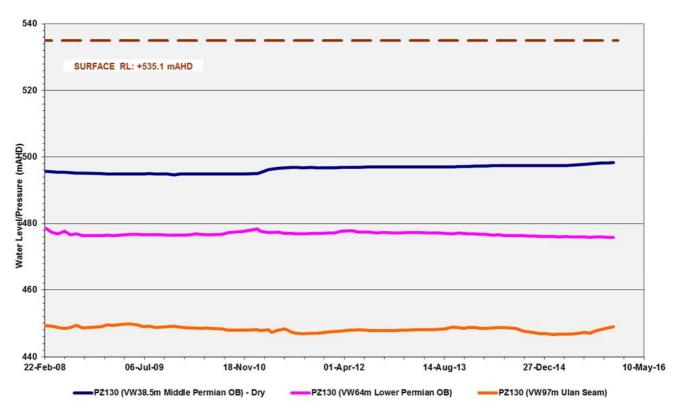


Figure 3-h PZ130 Composite Hydrograph

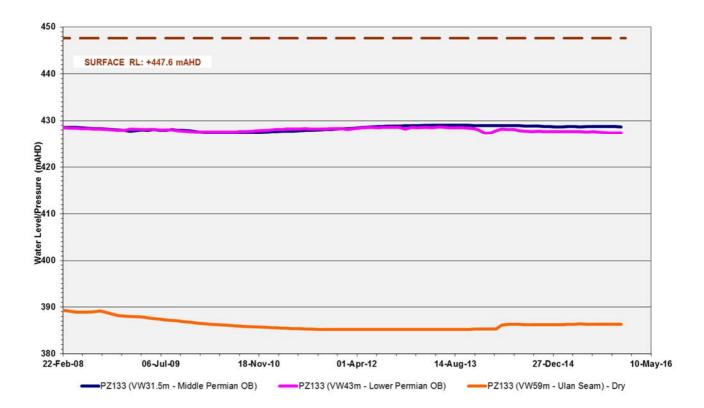


Figure 3-i PZ133 Composite Hydrograph

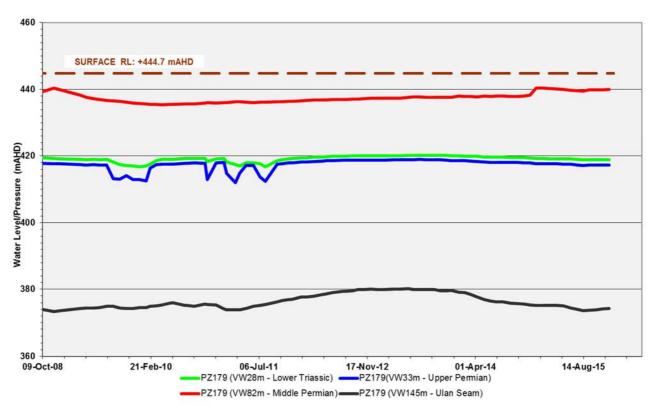


Figure 3-j PZ1179 Composite Hydrograph

APPENDIX 4. EPBC COMPLIANCE TABLES (2007/3297) (2008/444)

Condition	Compliance ¹	Evidence/Comments
3297		
In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall make suitable arrangements within 12 months of this approval to:	Noted	Completed prior to period.
(a) Transfer at least 130 hectares of the White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland listed ecological community to the NSW Minister for Climate Change Environment and Water offset, on a "like for like" basis, the 65 hectares that would be cleared by the project at an offset ratio of 2:1; and		
(b) Provide the NSW Department of Environment and Climate Change (DECC) with funds (which at the discretion of DECC may include an in-kind contribution) to cover any reasonable costs associated with the transfer and ongoing management of this land.		
In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall in accordance with the Rehabilitation and Offset Management Plan (See Condition 3 below):	Compliant	Proposed instrument of security approved on 17 December 2014 . The Department of Planning and Environment have endorsed
(a) Revegetate at least 38 hectares of disturbed land on the "Red Hills" property with Yellow Box- White Box-Blakely's Red Gum vegetation;		the method of security and are reviewing the terms.
(b) Revegetate at least 143 hectares of cleared land on the "Red Hills" property with suitable native vegetation to improve wildlife corridor linkages;		
(c) Conserve and enhance at least 1262 hectares of existing native vegetation onsite; and		
(d) Make suitable arrangements to protect these offset areas from development in the long term, to the satisfaction of the Minister for the Environment and Water Resources (the Minister).		
In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking action shall prepare and implement a detailed Rehabilitation and Offsets Management Plan for the project to the satisfaction of the Minister for the Environment and Water Resources. The proponent shall progressively rehabilitate the site to the satisfaction of Minister for the Environment and Water Resources and the NSW Department of Primary Industries, in general accordance with the proposed Rehabilitation and Offset Management Plan. The rehabilitation and Offset Management Plan must include:	Compliant	The Landscape Management Plan was approved 6 September 2011. This report refer Sections 6.5 and 8.
	In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall make suitable arrangements within 12 months of this approval to: (a) Transfer at least 130 hectares of the White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland listed ecological community to the NSW Minister for Climate Change Environment and Water offset, on a "like for like" basis, the 65 hectares that would be cleared by the project at an offset ratio of 2:1; and (b) Provide the NSW Department of Environment and Climate Change (DECC) with funds (which at the discretion of DECC may include an in-kind contribution) to cover any reasonable costs associated with the transfer and ongoing management of this land. In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall in accordance with the Rehabilitation and Offset Management Plan (See Condition 3 below): (a) Revegetate at least 38 hectares of disturbed land on the "Red Hills" property with Yellow Box-White Box-Blakely's Red Gum vegetation; (b) Revegetate at least 143 hectares of cleared land on the "Red Hills" property with suitable native vegetation to improve wildlife corridor linkages; (c) Conserve and enhance at least 1262 hectares of existing native vegetation onsite; and (d) Make suitable arrangements to protect these offset areas from development in the long term, to the satisfaction of the Minister for the Environment and Water Resources (the Minister). In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking action shall prepare and implement a detailed Rehabilitation and Offsets Management Plan for the project to the satisfaction of the Minister for the Environment shall progressively rehabilitate the site to the satisfaction of Minister for	In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall make suitable arrangements within 12 months of this approval to: (a) Transfer at least 130 hectares of the White Box-Yellow Box-Blakely's Red Gum Woodland and Derived Native Grassland listed ecological community to the NSW Minister for Climate Change Environment and Water offset, on a "like for like" basis, the 65 hectares that would be cleared by the project at an offset ratio of 2:1; and (b) Provide the NSW Department of Environment and Climate Change (DECC) with funds (which at the discretion of DECC may include an in-kind contribution) to cover any reasonable costs associated with the transfer and ongoing management of this land. In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking the action shall in accordance with the Rehabilitation and Offset Management Plan (See Condition 3 below): (a) Revegetate at least 38 hectares of disturbed land on the "Red Hills" property with Yellow Box-White Box-Blakely's Red Gum vegetation; (b) Revegetate at least 143 hectares of cleared land on the "Red Hills" property with suitable native vegetation to improve wildlife corridor linkages; (c) Conserve and enhance at least 1262 hectares of existing native vegetation onsite; and (d) Make suitable arrangements to protect these offset areas from development in the long term, to the satisfaction of the Minister for the Environment and Water Resources (the Minister). In order to protect the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland listed ecological community, the person taking action shall prepare and implement a detailed Rehabilitation and Offset Management Plan for the project to the satisfaction of the Minister for the Environment and Water Resources and the NSW Department of Primary Industries, in general ac

Condition Number	Condition	Compliance ¹	Evidence/Comments
	(b) A description of the short, medium and long term measures that would be implemented to:		
	Rehabilitate the site		
	Implement the vegetation offsets; and		
	Landscape the environmental bunds;		
	(c) Performance and completion criteria for the rehabilitation of the site, implementation of the vegetation offsets, and landscaping of the environmental bunds;		
	(d) A detailed description of the measures that would be implemented over the next 3 years including the progressive rehabilitation of mining areas and progressive implementation of the vegetation offset areas referred to in Condition 2.		
	(e) A program to monitor the effectiveness of these measures, and progress against the performance and completion criteria (see (c) above);		
	(f) A description of the potential risks to successful rehabilitation and/or revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and		
	(g) Details of who would be responsible for monitoring, reviewing, and implementing the plan.		
	Coal mining operations must not commence until the plan has been approved. The approved plan must be implemented.		
4	The person taking the action must provide a report to the Department by 1 November each year following commencement of the action, addressing compliance with the conditions of this approval. Annual reports must be provided until the Minister is satisfied that the person taking the action has complied with all conditions of the approval.	Compliant	This report.
5	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister'. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister	Compliant	Noted.
6	If the Minster believes that it is necessary or desirable for the better protection of the listed threatened species and ecological communities to do so, the Minister may request that the person taking the action make specified revisions to the plans, reports or management strategies approved pursuant to paragraphs 1, 2 and 3, and submit the revised plan, report or strategy for the Minster's approval. The person taking the action must comply with any such request. The revised approve plan, report or strategy must be implemented.	Compliant	Noted

Condition Number	Condition	Compliance ¹	Evidence/Comments
7	If at any time after 5 years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of coal mining operations, the action must not thereafter be commenced without the written agreement of the Minister.	Compliant	Noted
EPBC 2008/4	1444		
1	The approval holder must not clear more than 1,534 hectares of native vegetation within the defined footprint at Schedule 1.	Compliant	This Report Section 4
2	To mitigate the impacts of the proposal on the Large-eared Pied Bat, Southern Long-eared Bat, Regent Honeyeater, Swift Parrot and the Spotted-tail Quoll, the approval holder must prepare and submit, prior to the proposed date of commencement of the action, a mine site Vegetation Clearance Protocol and Landscape Management plan (VCPLMP) for the Minister's written approval. The VCPLMP must; a. Delineate areas to be cleared, describe pre-clearance survey methods, specify actions to minimise fauna impacts and detail vegetation clearance procedures. b. Require collection and stockpiling of habitat features important to threatened fauna species for reinstatement in rehabilitation areas. c. Require use of native, locally sourced seed for propagation for rehabilitation activates. d. Specify a two stage clearing protocol where non-habitat trees are cleared 24 hours prior to any habitat trees are cleared, to encourage fauna to move out of an area. The approval holder must not commence until the VCPLMP is approved by the Minister. The approved VCPLMP must be implemented.	Compliant	VCPLMP prepared and submitted to the Department of Environment with VCPLMP approval granted on 29 May 2015.
3	To compensate for the loss of 123.3 hectares of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 902 hectares of habitat for EPBC listed threatened species, the approval holder must prepare and submit (within 3 months after the approval), a Biodiversity Offset Management Plan (BOMP) for the proposed EPBC Offset Areas, for the Minister's written approval. The BOMP must; a. Identify those lands described as the Offset Areas at Schedule 2 (Figures 1-7) of this notice that are necessary to achieve the outcomes required by the Environmental Offsets Policy 2012. This must include offset attributes, shapefiles, textile descriptions and maps to clearly define the location and boundaries of the offset area (s). b. Provide a survey and description of the current condition (prior to any management activities) of the offset areas identified in Condition 3a. c. Detail management actions and regeneration and revegetation strategies to be undertaken on the offset areas to improve the ecological quality of these areas, including: l. a description and timeframe of measures that would be implemented to improve the condition of the ecological communities on the site;	Compliant	A Biodiversity Offset Management Plan (BOMP) was submitted to the Department of Environment for approval on 18 August 2015 . Following receipt of the Department of Environments comments, a revised plan was submitted in the 2016.

Condition Number	Condition	Compliance ¹	Evidence/Comments
	II. Performance and completion criteria for evaluating the management of the offset area, and criteria for triggering remedial action; III. a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria; IV. a description of potential risks to the successful implementation of the plan, a description of the measures that will be implemented to mitigate against these risks and a description of the contingency measures that will be implemented if defines triggers arise; and V. details of who would be responsible for monitoring, reviewing, and implementing the plan. The approved BOMP must be published on the approval holder's internet website, within 1 month of being approved and for a period of 5 years thereafter. The approved BOMP must be implemented.		
4	To compensate for the loss of 123.3 hectares of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (WBGW) ecological community and 902 hectares of habitat for EPBC listed threatened species, within 24 months of the date of this approval, the approval holder must secure the lands identified as the Offset Areas at Schedule 2 (Figures 1-7) of this notice as a biodiversity offset by a legal instrument under relevant nature conservation legislation on the title of the land. This instrument must: a. Provide for the protection of the land in perpetuity; b. Prevent any future development activities, including mining and mineral extraction; c. Ensure the active management of the land; and d. Be provided to the Department within 3 months of it being issued, as evidence of compliance with this condition.	Compliant	Security of offsets in progress. Offset mechanisms have been endorsed. All offsets pending response from the NSW Department of Planning and environment or NSW Office of Environment and Heritage.
5	The approval holder must undertake management and monitoring of water resources in accordance with this project approval for Application Number 08-0135 issued by the NSW Planning Assessment Commission under the Environmental Planning and Assessment Act 1979 (NSW) on 30 January 2015.	Compliant	Moolarben Complex Water Management Plan. This report Section 7
6	Upon request, the approval holder shall supply the groundwater monitoring data for the Moolarben Coal Project to the Department, NSW Government agencies, Operators of the Ulan and/or Wilpinjong mines or other adjacent mine operators. A protocol for the supply of the data will be included in the project's Water Management Plan.	Compliant	Moolarben Complex Water Management Plan.
7	The approval holder must make available for the Minister on request, all plans or programs and any review of plans or programs produced pursuant to Condition 5.	Not Applicable	Noted
8	Within 30 days after the commencement of the action, the approval holder must advise the Department in writing of the actual date of commencement.	Compliant	Department of Environment advised 13 August 2015.
9	The approval holder must maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement the BOMP and	Compliant	Noted.

Condition Number	Condition	Compliance ¹	Evidence/Comments
	VCPLMP, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.		
10	Within three months of every 12 month anniversary of the commencement of the action, the approval holder must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the BOMP and VCPLMP as specified in the conditions. Documentary evidence providing proof of the date of publication must be provided to the Department at the same time as the compliance report is published.	Compliant	This report. Future reports will be prepared in conjunction with Annual Reviews as per email correspondence 8 March 2016 (subject to approval).
11	Non-compliance with any of the conditions of this approval must be reported to the Department within 2 business days of becoming aware of the non-compliance.	Not Applicable	Noted
12	Upon the direction of the Minister, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minster. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Not Applicable	Noted
13	If the approval holder wishes to carry out any activity otherwise than in accordance with the Plans as specified in the conditions, the approval holder must submit to the Department for the Minister's written approval a revised version of that Plan. The approval holder must not commence the varied activity until the Minster has approved the varied Plan in writing. The Minister will not approve a varied plan unless the revised Plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised Plan, that Plan must be implemented in place of the Plan originally approved.	Not Applicable	Noted
14	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and ecological communities to do so, the Minister may request that the approval holder make specified revisions to the Plan specified in the conditions and submit the revised Plan for the Minister's written approval. The approval holder must comply with any such request. The revise approved Plan must be implemented. Unless the Minster has approved the revised Plan then the approval holder must continue to implement the plan originally approved.	Not Applicable	Noted
15	If, at any time after 5 years from the date of this approval, the approval holder has not substantially commenced the action, then the approval holder must not substantially commence the action without the written agreement of the Minister.	Complaint	Action commenced 2 August 2014.

APPENDIX 5. COMMUITY CONTRIBUTIONS

Beneficiary	Amount	Project/Event
Bungara Progress Association	2000	Inverter. Power supply to brigade shed
Cudgegong Cruisers		Can Assist Mudgee Branch- car rally
	4500	fundraiser
Cudgegong Mathematics	1500	mathematics competition
Gulgong Aviculture	1000	annual canary show Gulgong
Gulgong Eisteddfod	2500	annual performing arts eisteddfod
Gulgong Polocrosse	3684	water tank and pump
Gulgong Tennis	1000	upgrade lighting
Mudgee Hockey	950	PA system
Mid-Western Dancing	2500	local dance festival
Mudgee Indoor Swimming	1500	time keepers clock
Mudgee Mens Shed	1500	photography equipment
Mudgee Muddragons	2000	new dragon boat
Mudgee Poultry & Pigeons	1500	computer
Munmarra Fire Brigade	1000	catering equipment dishwasher
Rylstone Show	5000	annual show sponsorship
Black Sheep Breeders	1000	annual show sponsorship in Mudgee
Central West Alpacas	1500	local event
Cooyal Tennis	576	tennis net
Gulgong RFS	3000	portable light to use at incidents
Gulgong High	1500	expand school vegie garden
Lue Hall	1500	tables and chairs for hall functions
Midwestern Horses	940	wireless micro phone system
Mudgee Cycle Club	2500	annual road cycling event
Lions Club	2500	twilight festival and market
MPAV- Mudgee People Against Violence	2000	awareness campaign in schools
Mudgee Police Rugby	3000	police rugby tournament
Mudgee Rescue Squad	2200	equipment for additional rescue vehicle
Mudgee Equitation	950	trailer for equipment
pioneer House	2000	upgrade of internal courtyard
Rotary Mudgee	5000	Christmas carols festival
Coolah Rugby League	1000	Goal post pads
Cudgegong School	2300	Irrigation- kids garden club
Watershed Landcare 1	3000	environmental education day years 5 & 6
Gulgong Aviculture	850	canary breeders show
Gulgong Eisteddfod	2000	dance, drama, poetry reading etc. festival
Gulgong Fishing Club		purchase fingerlings - restock Cudgegong
	600	river
Rylstone Show society	2500	upgrade poultry shed
Kanandah retirement		furniture & ornaments for new residents
	3000	outdoor area
Mudgee Catholic Playgroup	2500	outdoor play equipment

Beneficiary	Amount	Project/Event
Mud Fest	3000	short film festival
Mudgee Ladies Golf	1500	rehab a ladies tee
Cudgegong Learning Committee	2500	The try a trade bus will attend MHS for all district schools to take part
Mudgee High School	5000	equipment to build an aquaponics system
Mudgee Softball	1000	marquee
Windeyer RFS	2000	Purchase BBQ & marquee
Sculptures in the Garden	5000	sculptures in the gardens event
Total	\$100050	

Additional Donations

Beneficiary	Amount	Project/Event
Westpac Rescue Helicopter	5000	Local fundraising function
Pioneer House	8000	50 year celebration
Mudgee Little Athletics	6000	New uniform
Celebrity Golf Day	16000	Annual local charity fundraiser
Pink Tractor Event	3000	Fundraiser for local breast cancer care nurse
Moolarben Spirit Award	5000	High School awards program
Mudgee Touch Football	1500	Team sponsorship

\$44500.00 Total \$144550.00

APPENDIX 6. COMMUNITY COMPLAINTS SUMMARY 2015

Date	Туре	Location	Complaint Description
3/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
7/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
8/01/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
10/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
10/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
12/01/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
13/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
13/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
19/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes.
21/01/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
21/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
22/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required.
22/01/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
23/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
31/01/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
7/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
7/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
7/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
9/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
11/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
12/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
12/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
12/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
12/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
14/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
15/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
15/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
17/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
18/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
18/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
19/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
20/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
20/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
20/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
22/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
23/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
26/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
27/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
27/02/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
28/02/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
28/02/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
1/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
3/03/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
3/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
9/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
10/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/03/2015	Blasting	Winchester Crescent	No actions required. Monitoring results indicated acceptable vibration and overpressure levels. Caller advised of investigation, results and actions.
13/03/2015	Odour	Winchester Crescent	No actions required. Investigations did not identify source or odour. Caller not able to be contacted.
17/03/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
18/03/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
18/03/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
18/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
22/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
23/03/2015	Lighting	Moolarben Road	Operational adjustments were made. Caller advised of investigation, results and actions.
24/03/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
25/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
28/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
29/03/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
29/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
29/03/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
30/03/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
30/03/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
1/04/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
1/04/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
2/04/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
5/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
6/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
7/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
9/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
10/04/2015	Blasting	Ridge Road	No actions required. SMS blast notification sent. Caller advised of investigation, results and actions.
10/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/04/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
12/04/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
12/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
22/04/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
28/04/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
29/04/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
29/04/2015	Noise	Other	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
30/04/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
30/04/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
1/05/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
3/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
6/05/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
16/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
18/05/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
18/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
19/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
19/05/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Operational adjustments were made. Caller advised of investigation, results and actions.
19/05/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller advised of investigation, results and actions.
21/05/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller not able to be contacted.
24/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
24/05/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
24/05/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
25/05/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
1/06/2015	Blasting	Winchester Crescent	No actions required. Monitoring results indicated acceptable vibration and overpressure levels. Caller advised of investigation, results and actions.
2/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
2/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
3/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
4/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
6/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
6/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
9/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to
11/06/2015	Noise	Winchester Crescent	be contacted. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
12/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
12/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
13/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
13/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
14/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
14/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
15/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
15/06/2015	Blasting	Winchester Crescent	No actions required. Monitoring results indicated acceptable vibration and overpressure levels. EC met with the complainant Caller advised of investigation, results and actions.
15/06/2015	Odour	Winchester Crescent	No actions required. MPEA and EC attended the complainants residence. No Odour observed. Caller advised of investigation, results and actions.
15/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
16/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
16/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
16/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
17/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
20/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
21/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
21/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
21/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
21/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
22/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
22/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
23/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
23/06/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
23/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
23/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
24/06/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
24/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
25/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
27/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
27/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
28/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
28/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
29/06/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
29/06/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
29/06/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
29/06/2015	Blasting	Winchester Crescent	No actions required. Monitoring results indicated acceptable vibration and overpressure levels. Caller advised of investigation, results and actions.
2/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller advised of investigation, results and actions.
3/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
4/07/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
5/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
8/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
8/07/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
10/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Operational adjustments were made. Caller not able to be contacted.
15/07/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller not able to be contacted.
16/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller not able to be contacted.
18/07/2015	Noise	Cope Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
19/07/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
19/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
19/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
19/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
19/07/2015	Noise	Cope Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
19/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
19/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
19/07/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
19/07/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
20/07/2015	Noise	Other	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
20/07/2015	Noise	Cope Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
20/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.

Date	Туре	Location	Complaint Description
20/07/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to
21/07/2015	Noise	Cope Road	be contacted. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made.
21/07/2015	Noise	Ridge Road	Caller not able to be contacted. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made.
21/07/2015	Noise	Ulan Road	Caller not able to be contacted. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
22/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
27/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
28/07/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
29/07/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
30/07/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
1/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
1/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
1/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
1/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
1/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Operational adjustments were made. Caller not able to be contacted.
2/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
2/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
4/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
8/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
8/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
8/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.

Date	Туре	Location	Complaint Description
8/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
9/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
9/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
9/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
9/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
10/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
10/08/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
12/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller not able to be contacted.
14/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
15/08/2015	Noise	Cope Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
15/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
15/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
16/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
16/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
17/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
20/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
21/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
21/08/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
21/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.

Date	Туре	Location	Complaint Description
Date	Type	Location	Investigation revealed no unusual mining operations were occurring at the time.
21/08/2015	Noise	Ridge Road	Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
22/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
23/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Thunder, lightning and rain were present in area. Caller not able to be contacted.
23/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
24/08/2015	Blasting	Other	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Blast monitoring results within criteria levels. Caller advised of investigation, results and actions.
27/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
30/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
30/08/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
30/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
30/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
30/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
31/08/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
31/08/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
2/09/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
4/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
5/09/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
5/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
6/09/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted. Complainant not contacted upon their request.
7/09/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
8/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.

Date	Туре	Location	Complaint Description
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Investigation revealed no unusual mining operations were occurring at the time.
10/09/2015	Noise	Ridge Road	Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/09/2015	Noise	Ulan Road	No actions required. Caller not able to be contacted. Complainant not contacted upon their request.
11/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational
13/09/2015	Noise	Winchester Crescent	changes made to improve outcomes. Caller advised of investigation, results and actions. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
13/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
15/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
21/09/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
28/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
29/09/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
1/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
1/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
3/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
7/10/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
7/10/2015	Dust	Ulan Road	Investigation undertaken. No actions required. Caller not contacted upon their request.
13/10/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
15/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not contacted upon their request.
20/10/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
22/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
24/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
24/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
25/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.

Date	Туре	Location	Complaint Description
27/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
29/10/2015	Noise	Ulan Road	Investigation, results and actions. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not contacted upon their request.
29/10/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
29/10/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
30/10/2015	Noise	Cope Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.
30/10/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Caller not able to be contacted.
30/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not contacted upon their request.
30/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
30/10/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
30/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
30/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
30/10/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not able to be contacted.
31/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
31/10/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
31/10/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
1/11/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
1/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
2/11/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
3/11/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not contacted upon their request.
3/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made.

Date	Туре	Location	Complaint Description
3/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational
10/11/2015	Noise	Moolarben Road	changes made to improve outcomes. Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller advised of investigation, results and actions.
10/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
11/11/2015	Odour	Winchester Crescent	No actions required. No odour observed during shift. Caller not able to be contacted.
13/11/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
16/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
23/11/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
30/11/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required.
3/12/2015	Dust and Blasting	Cope Road	No actions required. Blast and dust results within criteria. Caller advised of investigation, results and actions.
4/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
5/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
5/12/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
6/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller not able to be contacted.
8/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
8/12/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller not contacted upon their request.
8/12/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. Operational adjustments were made. Caller advised of investigation, results and actions.
10/12/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not contacted upon their request.
10/12/2015	Noise	Moolarben Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
11/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
19/12/2015	Noise	Ulan Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.

Date	Туре	Location	Complaint Description
19/12/2015	Noise	Winchester Crescent	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Caller not able to be contacted.
24/12/2015	Noise	Ridge Road	Investigation revealed no unusual mining operations were occurring at the time. Monitoring results indicated acceptable noise levels. No actions required. Operational changes made to improve outcomes. Caller advised of investigation, results and actions.