

## **APPENDIX 3E – BLAST MONITORING DATA**

Blast Monitoring Locations

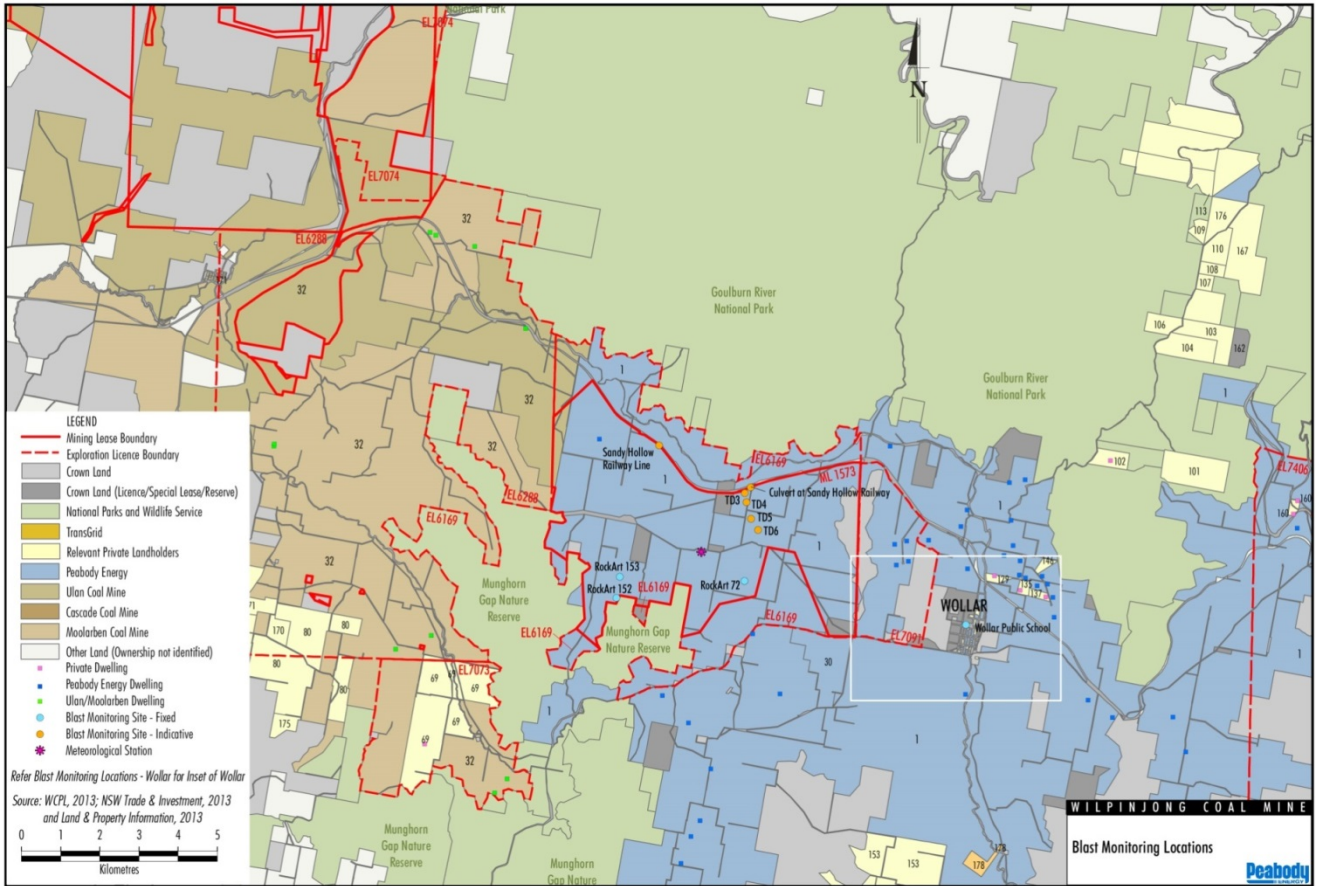


Figure 1 – Blast Monitoring Locations (Wollar)



Blast Monitoring Data 2016

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1422	02-Jan-16	5	43	10-20	DP	120	115	5	10	83.75	0.08	460	3.05	1.18	3.05
1418.5	02-Jan-16	5	42	18-23	BP	120	115	5	10			460			
1426	07-Jan-16	7	10	1-7	BP	120	115	5	10	91.03	0.31	460	0.42	0.55	0.42
1421	11-Jan-16	5	5	21-25	OB	120	115	5	10	91.14	0.24	460	0.91	0.74	0.91
1423	15-Jan-16	5	5	26-30	OB	120	115	5	10	86.57	0.21	460	1.09	0.62	1.09
1406.5	15-Jan-16	5	5	26-30	PS	120	115	5	10			460			
1428	18-Jan-16	5	42	18-24	DP	120	115	5	10	79.34	0.05	460	1.05	0.66	1.05
1427	20-Jan-16	3	03	16-21	EG	120	115	5	10	94	0.04	460	0.04	0.04	0.04
1400	21-Jan-16	7	10	8-13	OB	120	115	5	10	107.88	1.95	460	0.61	0.76	0.61
1430	23-Jan-16	3	09	10-13	BP	120	115	5	10	96.19	0.23	460	0.16	0.23	0.16
1427.5	25-Jan-16	3	03	16-21	EG	120	115	5	10	82.83	0.05	460	0.08	0.04	0.08
1429	27-Jan-16	3	05	10-15	BP	120	115	5	10	91.87	0.1	460	0.1	0.11	0.1
1434	29-Jan-16	7	10	01-07	DP	120	115	5	10	99.33	0.23	460	0.24	0.19	0.24
1433	01-Feb-16	5	43	10-20	EG	120	115	5	10	93.18	0.03	460	2.29	0.76	2.29
1431	02-Feb-16	5	44	10-20	PS	120	115	5	10	78.3	0.06	460	9.3	2.14	9.3
1439	05-Feb-16	5	5	21-26	BP	120	115	5	10	74.44	0.04	460	0.25	0.09	0.25
1437	06-Feb-16	3	09	03-09	DP	120	115	5	10	95.77	0.14	460	0.13	0.21	0.13
1440	11-Feb-16	5	42	18-24	EG	120	115	5	10	76.9	0.03	460	0.21	0.16	0.21

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1436	12-Feb-16	4	11	03-06	BP	120	115	5	10	84.88	0.05	460	0.12	0.07	0.12
1424	15-Feb-16	4	11	07	OB	120	115	5	10	107.96	0.53	460	0.79	0.64	0.79
1432	16-Feb-16	5	44	10-20	OB	120	115	5	10	94.78	0.14	460	30.42	6.71	30.42
1445	18-Feb-16	5	5	26-30	DP	120	115	5	10	83.94	0.03	460	0.17	0.11	0.17
1443	18-Feb-16	7	10	01-07	EG	120	115	5	10	87.36	0.06	460	0.14	0.15	0.14
1446	20-Feb-16	3	5	10-15	DP	120	115	5	10	91	0.23	460	0.3	0.22	0.3
1443.5	22-Feb-16	7	10	1-7	EG	120	115	5	10	84	0.05	460	0.05	0.04	0.05
1449	23-Feb-16	1	25	11-14	DP	120	115	5	10	77.43	0.11	460	3.38	2.62	3.38
1435	23-Feb-16	5	43	21-26	PS	120	115	5	10	78.48	0.06	460	1.65	0.56	1.65
1442	26-Feb-16	3	9	3-9	EG	120	115	5	10	95.54	0.1	460	0.09	0.11	0.09
1438	29-Feb-16	5	43	21	OB	120	115	5	10	86.94	0.1	460	1.9	1.68	1.9
1450	29-Feb-16	4	11	02-06	DP	120	115	5	10	91.83	0.2	460	0.24	0.15	0.24
1423.5	02-Mar-16	3	6	10-15	PS	120	115	5	10	104.8	0.29	460	0.32	0.43	0.32
1423.75	04-Mar-16	5	5	26-30	PS	120	115	5	10	83.24	0.22	460	0.97	0.63	0.97
1447	07-Mar-16	7	11	01-07	OB	120	115	5	10	101.63	0.7	460	0.4	0.33	0.4
1447.5	07-Mar-16	7	11	01-07	PS	120	115	5	10			460			
1451	07-Mar-16	1	25	11-14	EG	120	115	5	10	83.86	0.05	460	1.25	0.42	1.25
1454	10-Mar-16	5	5	21-25	EG	120	115	5	10	75.84	0.03	460	0.28	0.09	0.28
1453	10-Mar-16	3	3	16	TRENCH	120	115	5	10	83.75	0.04	460	0.07	0.06	0.07

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance PointVibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1459	12-Mar-16	3	5	10-15	EG	120	115	5	10	89.22	0.06	460	0.06	0.1	0.06
1456	12-Mar-16	5	43	21-26	TRIM	120	115	5	10	78.66	0.04	460	11.5	1.7	11.5
1458	12-Mar-16	5	44	10-15	BP	120	115	5	10			460			
1462	14-Mar-16	5	44	15-20	BP	120	115	5	10	88.69	0.05	460	1.8	1	1.8
1444	16-Mar-16	3	10	03-09	OB	120	115	5	10	85.5	0.47	460	0.27	0.37	0.27
1444.5	16-Mar-16	3	10	03-09	PS	120	115	5	10			460			
1464	17-Mar-16	5	43	21-23	BP	120	115	5	10	86.52	0.04	460	0.67	0.49	0.67
1463	19-Mar-16	4	11	03-06	EG	120	115	5	10	90.8	0.06	460	0.16	0.13	0.16
1465	22-Mar-16	7	11	01-07	BP	120	115	5	10	89.68	0.3	460	0.2	0.21	0.2
1468	23-Mar-16	5	43	21-26	OB	120	115	5	10	75.98	0.03	460	0.32	0.2	0.32
1467	24-Mar-16	5	5	26-30	BP	120	115	5	10	79.27	0.03	460	0.19	0.08	0.19
1464.5	29-Mar-16	5	43	21-26	BP	120	115	5	10	84.75	0.04	460	0.64	0.28	0.64
1461	30-Mar-16	5	4	21-25	OB	120	115	5	10	90.9	0.29	460	1.04	0.63	1.04
1461.5	30-Mar-16	5	4	21-25	PS	120	115	5	10			460			
1452	31-Mar-16	3	6	10-15	OB	120	115	5	10	92.84	0.73	460	0.53	0.67	0.53
1469	02-Apr-16	5	44	10-20	DP	120	115	5	10	98.8	0.08	460	4.1	1.27	4.1
1472	05-Apr-16	5	5	28-30	DP	120	115	5	10	80.88	0.08	460	0.36	0.26	0.36
1466	05-Apr-16	5	4	26-30	PS	120	115	5	10			460			
1473	08-Apr-16	5	43	21-25	DP	120	115	5	10	97.99	0.04	460	0.69	0.34	0.69

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1475	12-Apr-16	4	11	07-13	BP	120	115	5	10	81.63	0.09	460	0.17	0.1	0.17
1425	15-Apr-16	3	4	16-21	OB	120	115	5	10	92.64	0.77	460	0.41	0.45	0.41
1425	15-Apr-16	3	4	16-21	OB	120	115	5	10			460			
1471	16-Apr-16	7	11	01-07	DP	120	115	5	10	87.48	0.28	460	0.2	0.25	0.2
1476	18-Apr-16	5	5	28-30	EG	120	115	5	10	73.68	0.02	460	0.13	0.06	0.13
1479	19-Apr-16	3	10	03-09	BP	120	115	5	10	103.67	0.27	460	0.28	0.26	0.28
1481	21-Apr-16	5	4	21-25	BP	120	115	5	10	84.37	0.08	460	0.25	0.11	0.25
1480	26-Apr-16	3	6	10-15	BP	120	115	5	10	83	0.24	460	0.19	0.21	0.19
1478	28-Apr-16	5	44	10-20	EG	120	115	5	10	78.56	0.04	460	1.84	0.69	1.84
1470	30-Apr-16	5	4	26-30	OB	120	115	5	10	102.29	0.23	460	0.89	0.64	0.89
1484	04-May-16	4	11	07-13	DP	120	115	5	10	88.95	0.15	460	0.27	0.15	0.27
1474	06-May-16	5	45	10-20	PS	120	115	5	10	87.8	0.09	460	21.93	4.05	21.93
1486	06-May-16	5	43	21-26	EG	120	115	5	10			460			
1488	09-May-16	5	4	21-25	DP	120	115	5	10	92.39	0.04	460	0.21	0.11	0.21
1487	11-May-16	3	10	04-09	DP	120	115	5	10	95.27	0.14	460	0.12	0.12	0.12
1457	12-May-16	4	12	04-06	OB	120	115	5	10	96.57	0.16	460	0.3	0.17	0.3
1460	12-May-16	4	12	04-06	PS	120	115	5	10			460			
1477	17-May-16	5	45	09-20	OB	120	115	5	10	96.06	0.24	460	0.25	0.44	0.25
1490	17-May-16	3	6	10-15	DP	120	115	5	10	84	0.07	460	20.1	3.58	20.1

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1489	18-May-16	7	11	01-07	EG	120	115	5	10	87.31	0.14	460	0.14	0.14	0.14
1492	20-May-16	5	4	26-30	BP	120	115	5	10	79.14	0.03	460	0.29	0.12	0.29
1477.5	21-May-16	5	45	12-20	OB	120	115	5	10	85.64	0.15	460	4.22	2.84	4.22
1482	23-May-16	5	44	21-26	PS	120	115	5	10	90.49	0.06	460	1.74	1.1	1.74
1495	26-May-16	3	10	04-09	EG	120	115	5	10	103.09	0.07	460	0.11	0.13	0.11
1493	27-May-16	4	11	07-13	EG	120	115	5	10	91	0.05	460	0.12	0.09	0.12
1497	30-May-16	5	4	21-25	EG	120	115	5	10	75.12	0.04	460	0.23	0.07	0.23
1485	31-May-16	5	44	21-26	OB	120	115	5	10	76.25	0.15	460	3.03	2.07	3.03
1491	02-Jun-16	3	07	10-15	PS	120	115	5	10	100.81	0.39	460	0.52	0.49	0.52
1494	02-Jun-16	3	11	03-09	PS	120	115	5	10			460			
1500	06-Jun-16	5	04	26-30	DP	120	115	5	10	90.55	0.03	460	0.14	0.11	0.14
1499	08-Jun-16	3	06	10-15	EG	120	115	5	10	93.73	0.11	460	0.22	0.18	0.22
1503	11-Jun-16	5	45	10-11	BP	120	115	5	10	91.55	0.07	460	3.83	1.82	3.83
1496	15-Jun-16	3	11	04-09	OB	120	115	5	10	88.44	0.71	460	0.38	0.36	0.38
1504	18-Jun-16	7	10	08-13	BP	120	115	5	10	97.3	0.31	460	0.15	0.15	0.15
1505	24-Jun-16	5	07	16-20	PS	120	115	5	10	91.65	0.11	460	0.56	0.42	0.56
1507	24-Jun-16	5	04	26-30	EG	120	115	5	10			460			
1508	27-Jun-16	5	44	21-25	BP	120	115	5	10	87.45	0.08	460	0.81	0.54	0.81
1502	01-Jul-16	4	12	07-13	PS	120	115	5	10	90	0.73	460	0.78	0.7	0.78

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance PointVibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1510	02-Jul-16	5	45	09-20	DP	120	115	5	10	85.53	0.09	460	3.42	1.64	3.42
1509	07-Jul-16	5	07	13-17	OB	120	115	5	10	81.8	0.13	460	0.6	0.45	0.6
1512	08-Jul-16	3	11	03-09	BP	120	115	5	10	103.57	0.31	460	0.2	0.19	0.2
1509	11-Jul-16	5	07	13-17	OB	120	115	5	10	88.61	0.11	460	0.23	0.11	0.23
1515	13-Jul-16	1	26	04-14	DP	120	115	5	10	99.47	0.06	460	1.65	1.06	1.65
1509.5	15-Jul-16	5	07	13-15	OB	120	115	5	10	80.4	0.15	460	0.28	0.21	0.28
1513	16-Jul-16	7	10	08-11	DP	120	115	5	10	86.02	0.73	460	0.22	0.22	0.22
1517	18-Jul-16	2	23	23-24	OB	120	115	5	10	91.56	0.08	460	0.27	0.26	0.27
1501	19-Jul-16	3	05	16-17	OB	120	115	5	10	96.05	0.38	460	0.27	0.25	0.27
1519	20-Jul-16	5	07	13-17	BP	120	115	5	10	87.59	0.03	460	0.11	0.08	0.11
1516	20-Jul-16	5	44	23-25	BP	120	115	5	10	92.59	0.09	460	0.83	0.59	0.83
1518	25-Jul-16	3	04	16-21	BP	120	115	5	10	92.15	0.09	460	0.1	0.08	0.1
1506	27-Jul-16	4	12	07-13	OB	120	115	5	10	114.6	0.7	460	0.52	0.47	0.52
1523	28-Jul-16	5	45	09-20	EG	120	115	5	10	90.06	0.04	460	4.24	1.99	4.24
1523.5	30-Jul-16	5	45	12-20	EG	120	115	5	10	79.22	0.07	460	8.83	4.64	8.83
1514	30-Jul-16	5	46	09-10	PS	120	115	5	10			460			
1518.5	01-Aug-16	3	04	16	BP	120	115	5	10	92.1	0.07	460	0.04	0.04	0.04
1525	03-Aug-16	1	26	09-14	EG	120	115	5	10	98.1	0.08	460	0.72	0.46	0.72
1520	04-Aug-16	3	11	04-09	DP	120	115	5	10	89.9	0.22	460	0.19	0.18	0.19



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		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1524	06-Aug-16	2	23	23-24	BP	120	115	5	10	81.4	0.08	460	0.26	0.24	0.26
1506.5	08-Aug-16	4	12	07	OB	120	115	5	10	88.4	0.2	460	0.24	0.22	0.24
1526	10-Aug-16	5	44	21-25	DP	120	115	5	10	92.2	0.11	460	1.01	0.7	1.01
1483	11-Aug-16	7	12	01-07	OB	120	115	5	10	103.5	1.32	460	0.87	0.84	0.87
1527	13-Aug-16	7	10	08-13	EG	120	115	5	10	92.6	0.15	460	0.11	0.11	0.11
1529	15-Aug-16	2	23	23-24	DP	120	115	5	10	83.5	0.1	460	0.28	0.26	0.28
1514.5	15-Aug-16	5	46	09-20	PS	120	115	5	10	80.2	0.12	460	11.6	5.76	11.6
1530	17-Aug-16	3	04	16-21	DP	120	115	5	10	92.4	0.11	460	0.1	0.09	0.1
1522	18-Aug-16	5	46	09-20	OB	120	115	5	10	82.3	0.14	460		8.27	
1532	19-Aug-16	5	7	13-17	DP	120	115	5	10	88.4	0.03	460	0.08	0.06	0.08
1533	20-Aug-16	3	11	03-09	EG	120	115	5	10	100.4	0.13	460	0.18	0.17	0.18
1536	26-Aug-16	4	12	07-13	BP	120	115	5	10	85.6	0.22	460	0.27	0.24	0.27
1537	27-Aug-16	2	23	23-24	EG	120	115	5	10	83.5	0.05	460	0.08	0.07	0.08
1522.5	27-Aug-16	5	46	16-21	OB	120	115	5	10	88.7	0.24	460	3.25	1.89	3.25
1521	29-Aug-16	4	12	03-06	DP	120	115	5	10	81.6	0.08	460	0.1	0.1	0.1
1498	31-Aug-16	3	07	10-15	OB	120	115	5	10	106.1	0.76	460	0.6	0.56	0.6
1541	02-Sep-16	5	07	13-17	EG	120	115	5	10	67.0	0.05	460	0.65		0.65
1531	06-Sep-16	5	06	16-20	PS	120	115	5	10	69.5	0.08	460	0.83	0.48	0.83
1538	07-Sep-16	5	44	21-25	EG	120	115	5	10	77.5	0.04	460	0.7	0.39	0.7

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1541.5	08-Sep-16	5	07	13-17	EG	120	115	5	10	89.1	0.03	460	0.51	0.17	0.51
1542	09-Sep-16	3	04	16-21	EG	120	115	5	10	97.3	0.07	460	0.14	0.08	0.14
1540	10-Sep-16	2	24	22-24	OB	120	115	5	10	103.3	0.21	460	1.08	0.75	1.08
1528	12-Sep-16	3	12	03-09	PS	120	115	5	10	105.9	0.53	460	0.72	0.90	0.72
1543	13-Sep-16	5	46	09-20	DP	120	115	5	10	66.0	0.03	460	11.44	3.56	11.44
1535	13-Sep-16	5	6	16-20	OB	120	115	5	10	70.8	0.17	460	1.12		1.12
1535.5	20-Sep-16	5	6	16-20	OB	120	115	5	10	67.0	0.07	460	0.72	0.21	0.72
1547	21-Sep-16	4	12	07-13	DP	120	115	5	10	100.9	0.10	460	0.68	0.19	0.68
1543.5	23-Sep-16	5	46	09-20	DP	120	115	5	10	93.0	0.08	460	1.65	0.93	1.65
1498.5	28-Sep-16	3	7	10-15	OB	120	115	5	10	86.6	0.31	460	0.17	0.19	0.17
1548	29-Sep-16	7	12	01-07	BP	120	115	5	10	119.0	1.61	460	0.77		0.77
1545	29-Sep-16	3	12	03-09	OB	120	115	5	10			460			
1549	01-Oct-16	5	46	09-12	EG	120	115	5	10	83.8	0.04	460	5.26	2.69	5.26
1551	04-Oct-16	4	12	03-09	EG	120	115	5	10	97	0.07	460	0.34	0.13	0.34
1534	07-Oct-16	5	45	21-25	OB	120	115	5	10	75.2	0.24	460	7.97	3.48	7.97
1534.5	07-Oct-16	5	45	21-25	PS	120	115	5	10			460			
1555	08-Oct-16	3	13	06	OB	120	115	5	10	95.4	0.14	460	0.14	0.12	0.14
1555.5	08-Oct-16	3	13	06	PS	120	115	5	10			460			
1553	10-Oct-16	2	24	22-24	BP	120	115	5	10	102.9	0.07	460	0.64	0.44	0.64

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1544	11-Oct-16	7	11	08-13	PS	120	115	5	10	102.3	0.99	460	0.37	0.31	0.37
1548.5	11-Oct-16	7	12	07	BP	120	115	5	10			460			
1549.5	13-Oct-16	5	46	13-20	EG	120	115	5	10	79.1	0.04	460	1.42		1.42
1558	14-Oct-16	3	12	06	OB	120	115	5	10	92.1	0.09	460	0.12	0.08	0.12
1546	17-Oct-16	7	11	08-13	OB	120	115	5	10	117.9	1.85	460	1.12	0.57	1.12
1559	20-Oct-16	7	12	01-07	DP	120	115	5	10	91.9	0.23	460	0.49	0.23	0.49
1561	21-Oct-16	2	24	22-24	DP	120	115	5	10	88.3	0.06	460	0.38	0.24	0.38
1550	22-Oct-16	5	47	09-15	PS	120	115	5	10	88.4	0.05	460	26.9	8.55	26.9
1563	22-Oct-16	1	27	12-14	BP	120	115	5	10	76.5	0.03	460	1.46	0.59	1.46
1560	25-Oct-16	3	5	16-19	PS	120	115	5	10	103.6	0.2	460	0.12	0.09	0.12
1562	26-Oct-16	5	6	16-20	EG	120	115	5	10	97.1	0.07	460	1.01	0.27	1.01
1554	26-Oct-16	5	5	16-20	PS	120	115	5	10			460			
1564	29-Oct-16	3	7	10-15	BP	120	115	5	10	93.8	0.14	460	0.19	0.15	0.19
1557	31-Oct-16	5	47	09-18	OB	120	115	5	10	103.1	0.12	460	34.36	14.68	34.36
1565	01-Nov-16	3	5	16-19	OB	120	115	5	10	102.9	0.42	460	0.38	0.26	0.38
1566	01-Nov-16	3	12	05-09	BP	120	115	5	10			460			
1569	03-Nov-16	2	24	23-24	EG	120	115	5	10	88.5	0.05	460	0.25	0.15	0.25
1570	04-Nov-16	1	27	11-14	DP	120	115	5	10	99.4	0.04	460	2.57	0.51	2.57
1568	08-Nov-16	7	12	01-07	EG	120	115	5	10	96	0.2	460	0.38	0.18	0.38

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance PointVibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1567	09-Nov-16	4	13	03-08	PS	120	115	5	10	101.5	0.09	460	0.19	0.2	0.19
1573	10-Nov-16	1	27	04-08	DP	120	115	5	10	78.8	0.06	460	1.86	1.17	1.86
1571	14-Nov-16	3	7	10-15	DP	120	115	5	10	104.8	0.25	460	0.22	0.29	0.22
1575	17-Nov-16	5	45	23-25	OB	120	115	5	10	86.4	0.04	460	0.8	0.4	0.8
1547.5	18-Nov-16	4	12	07-13	DP	120	115	5	10	90	0.08	460	0.36	0.1	0.36
1574	18-Nov-16	3	12	05-09	DP	120	115	5	10	101.9	0.2	460	0.24	0.19	0.24
1572	21-Nov-16	4	13	05-08	OB	120	115	5	10	93.7	0.41	460	0.53	0.34	0.53
1577	22-Nov-16	1	27	11-14	EG	120	115	5	10	86.5	0.05	460	1.62	0.67	1.62
1576	25-Nov-16	4	13	09-13	PS	120	115	5	10	83.2	0.12	460	0.3	0.25	0.3
1579	26-Nov-16	2	25	23-25	OB	120	115	5	10	103.4	0.21	460	1.66	0.9	1.66
1579.5	26-Nov-16	2	25	21-24	PS	120	115	5	10			460			
1547.7	29-Nov-16	4	12	12	DP	120	115	5	10	77.5	0.03	460	0.19	0.06	0.19
1580	29-Nov-16	1	27	04-08	EG	120	115	5	10	86.6	0.07	460	1.59	0.62	1.59
1582	01-Dec-16	5	45	21-25	DP	120	115	5	10	79.5	0.08	460	1.03	0.67	1.03
1584	03-Dec-16	3	7	10-15	EG	120	115	5	10	91.7	0.1	460	0.1	0.08	0.1
1581	05-Dec-16	3	8	10-15	PS	120	115	5	10	109.6	0.42	460	0.26	0.22	0.26
1585	06-Dec-16	3	12	05-09	EG	120	115	5	10	101	0.12	460	0.19	0.17	0.19
1586	08-Dec-16	5	47	08-14	DP	120	115	5	10	106.1	0.08	460	15.07	5.02	15.07
1587	09-Dec-16	5	46	21-23	PS	120	115	5	10	95.1	0.1	460	1.72	1.29	1.72

Blast	Date	Location			Type					Wollar Public School EPA Compliance Point		Rock Art Vibration Max Limit (mm/s)	Rock Art (Site 72) V1 Castle Rock	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)
		Pit	Strip	Block		IB/OB	Overpressure Max. Limit (dBL)	Overpressure Limit 5% Total Blasts (dBL)	Vibration Limit 5% Total Blasts (mm/s)	Vibration Max. Limit (mm/s)	Wollar Public School EPA Compliance Point Overpressure (dBL)		Wollar Public School EPA Compliance Point Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1588	12-Dec-16	4	12	08-13	EG	120	115	5	10	83.6	0.04	460	0.25	0.08	0.25
1594	13-Dec-16	5	45	21-25	EG	120	115	5	10	101.8	0.03	460	0.42	0.26	0.42
1592	14-Dec-16	3	13	06-09	PS	120	115	5	10	106.1	0.45	460	0.2	0.42	0.2
1595	16-Dec-16	4	13	05-08	BP	120	115	5	10	89.1	0.08	460	0.26	0.12	0.26
1596	19-Dec-16	2	25	21-24	BP	120	115	5	10	85.2	0.08	460	0.6	0.4	0.6
1599	21-Dec-16	5	47	08-14	EG	120	115	5	10	103.5	0.08	460	7.64	3.11	7.64
1578	22-Dec-16	4	13	09-13	OB	120	115	5	10	100.2	0.45	460	0.64	0.42	0.64
1597	23-Dec-16	1	28	12-13	OB	120	115	5	10	79.7	0.03	460	1.81	0.62	1.81
1598	28-Dec-16	3	13	05-09	OB	120	115	5	10	97.8	1.33	460	0.71	0.88	0.71
1601	30-Dec-16	4	13	04-08	DP	120	115	5	10	93.6	0.07	460	0.21	0.09	0.21
1602	31-Dec-16	2	25	21-24	DP	120	115	5	10	87.5	0.04	460	0.47	0.44	0.47



WILPINJONG COAL PROJECT



BLAST CONTROLLER CHECKLIST

Location: Pit 5 Strip 6 Block 13-17 Shot No: 1531 Day/ Date: Tuesday 6.9.16

Scheduled Blast Time: 12:00 Actual Blast Date/Time: 12:00

Is this a road or rail closure? Yes/No Yes If yes has PD been confirmed? Yes/No Yes If yes proceed with tie up Yes

WIND SPEED, DIRECTION and CLOUD COVER **DO NOT BLAST IF 1. Wind speed > 7m/s in pits 3 or 7 OR 2. Wind speed >10m/s**  
Source: <http://novecom.net/sentinex/index.php>

Time	Results and Comments	OK to Proceed with blast?	Action
Pre Start	<u>1.6m/s NW 0%</u>	<u>YES/NO</u>	<u>YES</u> : Proceed tie up, NO: Reschedule blast
1 hour prior to blast	<u>3.3m/s W 0%</u>	<u>YES/NO</u>	<u>YES/NO</u> : Proceed blast, check conditions
5 min prior to blast	<u>3.6m/s W 0%</u>	<u>YES/NO</u>	<u>YES</u> : Proceed blast, NO: 30 minute window to check conditions, if no change proceed with Blast Security Guard process

Blast Security Guard: D/S N/S Guard tied-in shot, delineate area, communicate to OCE

CONFIRM AT LEAST 45 MIN PRIOR TO SCHEDULED BLAST TIME

- 1. Does this blast comply with the 'maximum 2 blasts per day' limit? YES/NO
- 2. Does the blast comply with the 'maximum 5 blasts per week' limit? YES/NO
- 3. Is the rail loop and train load out in the blast exclusion radius? YES/NO If YES: go to 4. Otherwise proceed with checklist
- 4. Has the train schedule been confirmed with the CHPP control room? YES/NO
- 5. Does the confirmed train schedule affect the blast time? YES/NO If YES: reschedule blast time, distribute notification, inform OCE

CONFIRM PRIOR TO TIE UP

	YES	NO	N/A		YES	NO	N/A
Blast Notice Boards Active	<input checked="" type="checkbox"/>			Equipment Park up Confirmed	<input checked="" type="checkbox"/>		
Peabody Office Notified	<input checked="" type="checkbox"/>			Blast Area OCE Advised	<input checked="" type="checkbox"/>		
Neighbours Notified	<input checked="" type="checkbox"/>			Local Council Notified (Road Closure)	<input checked="" type="checkbox"/>		
Subcontractors Notified	<input checked="" type="checkbox"/>			Blast Signs on Road	<input checked="" type="checkbox"/>		
Blast Holes Surveyed	<input checked="" type="checkbox"/>			Rail Possession secured if within 500m	<input checked="" type="checkbox"/>		
500m Exclusion Zone Mapped	<input checked="" type="checkbox"/>			Rail Protection officer secured	<input checked="" type="checkbox"/>		

Is there a westerly wind?  YES  NO  N/A } If yes to both then must use nonel surface connection

Is the shot in overburden?  YES  NO  N/A

BLAST MONITORING

Monitor Location	Unit Number	Person Responsible
Main Rail Culvert	_____	_____
Main Railway Line	_____	_____
Magazine	_____	_____

1 km Radius Castle Rock ,P1 or P5 South (153 &152) BMP  
Is there a risk of Blast Fume ?  YES  NO If Yes please see Blast Fume TARP TARP Level \_\_\_\_\_

Comments: \_\_\_\_\_

Blast Fume Present  YES  NO Video Footage Captured  YES  NO

MISFIRE EVENT

	YES	NO		Time:
Advised by Shotfirer:	<input type="checkbox"/>	<input type="checkbox"/>	If YES: Mine Manager Advised:	<input type="checkbox"/> _____
Delineated:	<input type="checkbox"/>	<input type="checkbox"/>	Mine Supt. Advised:	<input type="checkbox"/> _____
Removed:	<input type="checkbox"/>	<input type="checkbox"/>	OCE Advised:	<input type="checkbox"/> _____
Surveyed:	<input type="checkbox"/>	<input type="checkbox"/>		
Investigation Complete	<input type="checkbox"/>	<input type="checkbox"/>	Learning's Implemented: <input type="checkbox"/> YES <input type="checkbox"/> NO	Date Implemented: _____

Signed: M. Beant Blast Controller M. Paul Drill and Blast Supervisor

Name: M. Beant \_\_\_\_\_