

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

Blast Monitoring Locations

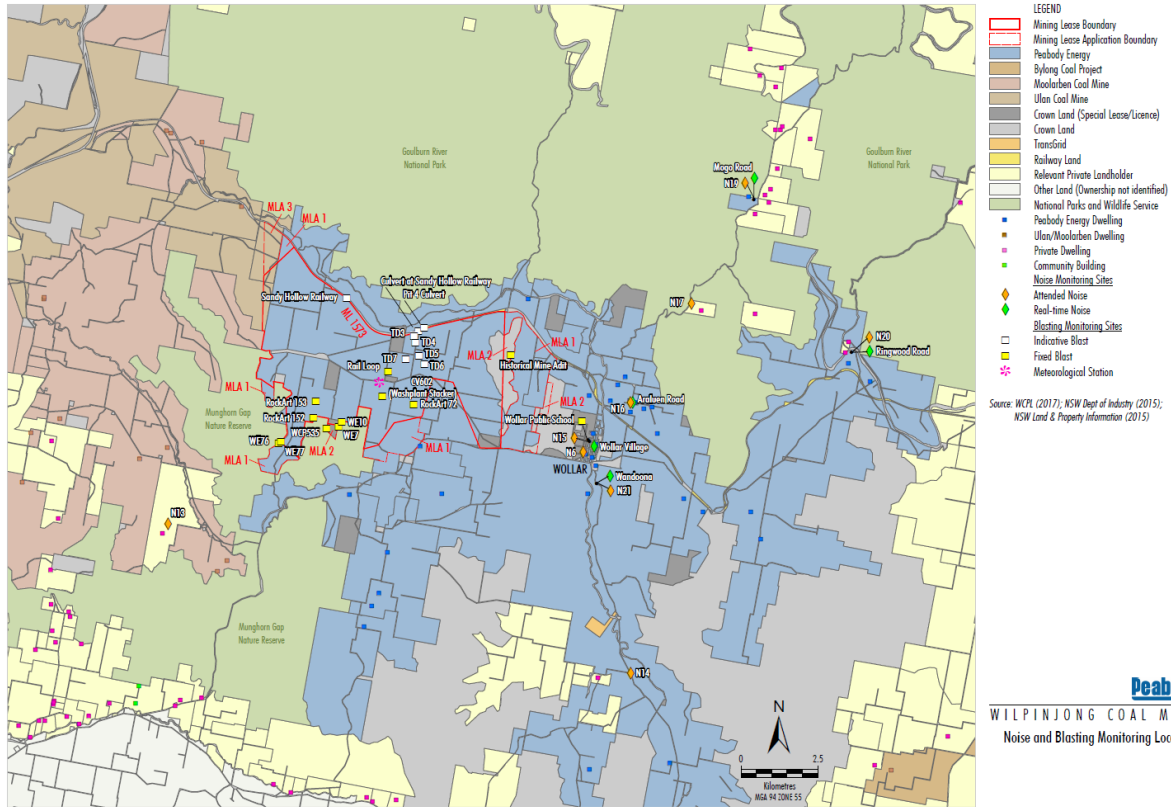


Figure 1 – Blast Monitoring Locations (Wollar)



<b>LEGEND</b>		<b>Noise Monitoring Sites</b>	
<span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Peabody Energy	<span style="display:inline-block; width:15px; height:15px; background-color:grey; border:1px solid black;"></span> Crown Land (Special Lease/Licence)	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Attended Noise	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Real-time Noise
<span style="display:inline-block; width:15px; height:15px; background-color:lightgrey; border:1px solid black;"></span> Crown Land	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Railway Land	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Blasting Monitoring Sites	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Fixed Blast
<span style="display:inline-block; width:15px; height:15px; background-color:lightyellow; border:1px solid black;"></span> Relevant Private Landholder	<span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Landholder Reference Number	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Air Quality Monitoring Sites	<span style="display:inline-block; width:15px; height:15px; background-color:lightgrey; border:1px solid black;"></span> Static Dust Gauge
<span style="display:inline-block; width:15px; height:15px; background-color:lightblue; border:1px solid black;"></span> Peabody Energy Dwelling	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Community Building	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> High Volume Air Sampler	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> Real-time PM <sub>2.5</sub>
<span style="display:inline-block; width:15px; height:15px; background-color:lightgrey; border:1px solid black;"></span> Private Dwelling	<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid black;"></span> # Special Lease/Licence Holder	<span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> Real-time PM <sub>10</sub>	

Source: WCPL (2017); NSW Dept of Industry (2015); NSW Land & Property Information (2016)

**Peabody**  
 WILPINJONG COAL MINE  
 Wollar Environmental Monitoring Sites

Blast	Date	Time	Location			Type	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	Rock Art (Site 152) Pit 5 South (Southern Site)	Rock Art (Site 153) Pit 5 South (Northern Site)	Castle Rock (Site 72)
			Pit	Strip	Block	IB/OB					Wollar Public School EPA Compliance Point Overpressure (dBL)	Vibration (mm/s)	Vibration (mm/s)	Vibration (mm/s)
1604	03-Jan-17	11:31	1	28	12-14	BP	120	115	5	10	79.5	0.63	2.3	0.14
1590	03-Jan-17	15:12	5	48	08-14	PS	120	115	5	10	99.4	14.62	27.5	0.38
1605	05-Jan-17	14:02	1	28	4-8	DP	120	115	5	10	68.8	1.4	2.03	0.66
1591	07-Jan-17	11:35	5	46	21-25	OB	120	115	5	10	79.7	1.23	1.99	0.28
1600	09-Jan-17	15:08	7	11	08-13	BP	120	115	5	10	97.7	0.18	0.27	0.49
1606	10-Jan-17	11:30	1	28	10-13	DP	120	115	5	10	79.5	0.44	1.24	0.11
1603	12-Jan-17	11:35	5	48	08-14	OB	120	115	5	10	70.2	14.81	34.36	0.6
1608	13-Jan-17	11:29	2	25	21-25	EG	120	115	5	10	92.2	0.17	0.39	1.17
1609	16-Jan-17	11:32	4	13	04-08	EG	120	115	5	10	86.9	0.07	0.17	0.09
1610	18-Jan-17	13:10	4	13	09-13	BP	120	115	5	10	94.1	0.11	0.24	0.41
1593	19-Jan-17	14:59	7	13	01-07	PS	120	115	5	10	98.5	0.24	0.39	1.06
1612	20-Jan-17	11:23	4	14	8	PS	120	115	5	10	100	0.15	0.21	0.62
1611	21-Jan-17	14:29	1	28	04-08	EG	120	115	5	10	84.4	0.81	1.26	0.38
1613	23-Jan-17	11:31	3	13	5-9	BP	120	115	5	10	98.7	0.18	0.26	0.25
1614	24-Jan-17	11:28	1	28	10-13	EG	120	115	5	10	91.8	0.47	1.8	0.17
1583	27-Jan-17	15:02	3	8	10-15	OB	120	115	5	10	92.5	0.57	0.67	1.55
1615	28-Jan-17	15:01	4	14	06-08	OB	120	115	5	10	94.8	0.35	0.56	0.71
1616	30-Jan-17	15:00	7	11	08-13	DP	120	115	5	10	102.6	0.21	0.31	0.32
1620	31-Jan-17	9:54	2	26	20-24	PS	120	115	5	10	93.1	0.25	0.39	4.42
1615A	01-Feb-17	11:55	4	14	06-08	OB	120	115	5	10	86.4	0.05	0.08	0.23
1618	03-Feb-17	11:44	4	13	09-13	DP	120	115	5	10	86.7	0.13	0.25	0.26
1623	04-Feb-17	14:51	5	48	08-14	DP	120	115	5	10	89.9	3.73	16.49	0.23
1621	06-Feb-17	11:31	2	26	20-24	OB	120	115	5	10	105.5	0.83	1.17	13.52
1630	08-Feb-17	15:02	1	29	12	OB	120	115	5	10	86.3	0.55	1.39	0.13
1626	08-Feb-17	15:03	3	13	06-09	DP	120	115	5	10	91.6	0.2	0.26	0.29
1607	13-Feb-17	15:11	7	13	01-07	OB	120	115	5	10	108.6	0.56	1.13	2.88
1631	14-Feb-17	11:32	4	14	06-08	BP	120	115	5	10	88.1	0.16	0.32	0.21
1619	16-Feb-17	14:11	4	14	09-13	PS	120	115	5	10	100.4	0.21	0.34	1.14
1617	16-Feb-17	14:11	3	5	19-21	PS	120	115	5	10	100.4	0.2	0.22	0.39

1622	16-Feb-17	14:11	3	5	16-19	BP	120	115	5	10				
1627	17-Feb-17	14:48	1	29	10-13	BP	120	115	5	10	91.1	0.3	1.11	0.08
1638	20-Feb-17	15:20	4	13	09-13	EG	120	115	5	10	89.2	0.14	0.27	0.12
1633	21-Feb-17	9:50	5	46	21-23	BP	120	115	5	10	72.5	0.57	1.49	0.14
1634	22-Feb-17	14:35	1	29	4-8	DP	120	115	5	10	88.6	1.09	2.04	0.82
1639	24-Feb-17	15:01	5	48	8-14	EG	120	115	5	10	94.6	7.8	22.18	0.37
1628	24-Feb-17	15:01	5	49	8-14	PS	120	115	5	10				
1643	25-Feb-17	15:00	1	29	10-13	DP	120	115	5	10	90.2	0.71	2.45	0.16
1640	27-Feb-17	11:27	3	13	06-09	EG	120	115	5	10	83.3	0.09	0.13	0.15
1642	01-Mar-17	11:29	2	26	21-24	BP	120	115	5	10	87.4	0.47	0.78	3.03
1641	02-Mar-17	15:00	4	14	06-08	DP	120	115	5	10	106.3	0.1	0.25	0.19
1646	06-Mar-17	15:03	7	11	08-13	EG	120	115	5	10	94.3	0.1	0.14	0.18
1625	07-Mar-17	12:22	4	14	09-13	OB	120	115	5	10	102.1	0.45	0.96	2.25
1647	09-Mar-17	11:35	5	46	21-25	DP	120	115	5	10	78	0.51	1.12	0.14
1645	11-Mar-17	10:21	1	29	4-8	EG	120	115	5	10	79.1	0.99	1.53	0.35
1632	13-Mar-17	11:31	5	49	08-14	OB	120	115	5	10	76.2	23.02	34.36	1.17
1649	13-Mar-17	15:02	1	29	10-13	EG	120	115	5	10	105.7	0.52	2.41	0.11
1653	14-Mar-17	11:31	4	14	06-08	EG	120	115	5	10	100.9	0.07	0.2	0.11
1636	15-Mar-17	15:02	3	9	10-12	PS	120	115	5	10	87.1	0.2	0.25	0.44
1644	17-Mar-17	12:21	3	5	16-18	DP	120	115	5	10	103.9	0.42	0.47	1.14
1624	17-Mar-17	12:21	3	5	19-21	OB	120	115	5	10				
1625.5	17-Mar-17	12:21	4	14	8	OB	120	115	5	10				
1651	20-Mar-17	14:59	2	26	21-24	DP	120	115	5	10	87.9	0.8	1.43	18.2
1652	20-Mar-17	14:59	2	55	06-08	OB/PS	120	115	5	10				
1654	20-Mar-17	14:59	2	27	20-23	PS	120	115	5	10				
1655	25-Mar-17	15:00	7	13	01-07	BP	120	115	5	10	98.7	0.19	0.25	0.44
1655.5	28-Mar-17	11:35	7	13	01-07	BP	120	115	5	10	89.9	0.16	0.28	0.32
1657	29-Mar-17	11:28	5	46	21-25	EG	120	115	5	10	86.8	0.19	0.34	0.05
1659	30-Mar-17	15:31	2	55	04-06	BP	120	115	5	10	73.9	0.23	0.41	0.58
1660	03-Apr-17	14:51	4	14	09-13	BP	120	115	5	10	88.4	0.19	0.33	0.31
1629	05-Apr-17	11:09	3	8	10-12	PLUG	120	115	5	10	80.8	0.3	0.34	0.37
1664	06-Apr-17	11:30	1	30	11-12	BP	120	115	5	10	75.9	0.61	2.12	0.09
1659.5	06-Apr-17	15:19	2	55	04-06	BP	120	115	5	10	85.2	0.12	0.19	0.45
1661	07-Apr-17	11:30	2	26	20-24	EG	120	115	5	10	88.5	0.16	0.27	1.28
1665	08-Apr-17	15:14	5	49	07-14	DP	120	115	5	10	76.9	4.18	11.36	0.16
1648	11-Apr-17	11:42	3	14	06-09	PS	120	115	5	10	97.3	0.31	0.38	0.83
1667	13-Apr-17	12:35	7	13	01-07	DP	120	115	5	10	94.7	0.28	0.57	0.57
1668	13-Apr-17	15:26	1	30	10-13	DP	120	115	5	10	64.8	0.88	2.64	0.28
1658	18-Apr-17	11:32	2	27	20-24	OB	120	115	5	10	101.7	0.72	0.98	18.17
1672	19-Apr-17	11:31	2	55	04-06	DP	120	115	5	10	98.2	0.41	0.89	2.04
1666	19-Apr-17	15:35	3	08	10-15	BP	120	115	5	10	93.9	0.15	0.17	0.36
1670	21-Apr-17	11:41	1	30	04-07	DP	120	115	5	10	89.9	1.38	3.62	1.1

1671	24-Apr-17	11:49	4	14	08-13	DP	120	115	5	10	84.3	0.18	0.47	0.5
1673	24-Apr-17	11:49	4	15	08-13	PS	120	115	5	10				
1675	26-Apr-17	16:06	5	49	08-14	EG	120	115	5	10	67	22.82	24.98	0.52
1656	26-Apr-17	16:06	5	50	07-13	PS	120	115	5	10				
1670.5	27-Apr-17	15:28	1	30	04	DP	120	115	5	10	64.8	1.01	1.73	0.29
1666.5	29-Apr-17	11:29	3	08	4-5	BP	120	115	5	10	99.7	0.17	0.3	0.2
1650	01-May-17	12:05	3	14	06-09	OB	120	115	5	10	99.5	0.66	0.84	2.46
1679	02-May-17	15:32	2	55	02-06	EG	120	115	5	10	92	0.21	0.38	0.48
1680	04-May-17	15:29	7	13	01-07	EG	120	115	5	10	87.4	0.16	0.19	0.26
1678	05-May-17	11:26	3	05	19-21	BP	120	115	5	10	91.3	0.08	0.14	0.09
1676	06-May-17	11:30	1	30	10-13	EG	120	115	5	10	69.5	0.58	2.57	0.2
1656.5	06-May-17	15:27	5	50	07-13	PS	120	115	5	10	76.5	1.64	3.8	0.24
1684	08-May-17	11:36	1	30	04-08	EG	120	115	5	10	70.8	0.71	1.45	0.44
1685	10-May-17	11:31	2	27	20-24	BP	120	115	5	10	89.1	0.44	0.93	6.99
1674	10-May-17	15:40	5	50	07-13	OB	120	115	5	10	68.8	13.16	18.42	0.43
1683	12-May-17	11:57	4	14	09-13	EG	120	115	5	10	83.3	0.09	0.25	0.13
1686	15-May-17	11:30	3	8	10-15	DP	120	115	5	10	105	0.24	0.43	0.81
1556	17-May-17	13:03	5	5	16-20	OB	120	115	5	10	74.8	0.56	2.25	0.46
1691	19-May-17	12:36	3	5	19-21	DP	120	115	5	10	80.6	0.04	0.09	0.05
1681	19-May-17	15:02	2	56	3-6	OB	120	115	5	10	67.9	1.15	1.75	3.56
1682	19-May-17	15:02	2	56	3-6	PS	120	115	5	10				
1692	27-May-17	11:34	2	27	20	DP	120	115	5	10	85.3	0.37	0.92	4.95
1693	29-May-17	11:35	1	31	04-05	OB	120	115	5	10	88.8	1.32	3.03	0.37
1677	29-May-17	14:40	4	15	08-13	OB	120	115	5	10	114.8	0.72	1.48	1.48
1688	30-May-17	15:30	6	6	12-17	PS	120	115	5	10	85.1	0.35	0.97	0.25
1696	02-Jun-17	11:24	3	8	10-15	EG	120	115	5	10	90.7	0.05	0.11	0.06
1650.5	03-Jun-17	14:57	3	14	06-09	OB	120	115	5	10	112.1	0.78	1.16	1.62
1698	06-Jun-17	11:30	5	50	07-14	DP	120	115	5	10	87.4	8.56	23.35	0.25
1663	08-Jun-17	15:35	3	9	10-15	PS	120	115	5	10	101.9	0.2	0.25	1.13
1696.5	08-Jun-17	15:35	3	8	10-15	EG	120	115	5	10				
1694	09-Jun-17	12:21	6	6	12-17	OB	120	115	5	10	87.3	1.19	4.25	0.43
1688.5	09-Jun-17	12:21	6	6	12-17	PS	120	115	5	10				
1701	10-Jun-17	15:25	2	27	20	EG	120	115	5	10	82.2	0.26	0.48	2.35
1702	13-Jun-17	11:27	2	56	04-06	DP	120	115	5	10	76.9	0.54	2.82	0.21
1705	13-Jun-17	15:21	1	31	12	BP	120	115	5	10	98.9	0.49	0.78	0.98
1703	14-Jun-17	13:13	5	5	16-18	DP	120	115	5	10	84.6	0.14	0.44	0.2
1695	15-Jun-17	14:59	2	28	20-24	PS	120	115	5	10	93.7	0.27	0.33	5.36
1687	16-Jun-17	11:42	3	9	11-15	OB	120	115	5	10	95.2	0.78	0.78	1.42
1697	19-Jun-17	12:05	3	6	16-21	PS	120	115	5	10	96.7	1	1.31	0.75
1704	19-Jun-17	12:05	3	5	16-21	EG	120	115	5	10				
1699	19-Jun-17	15:00	2	28	20-24	OB	120	115	5	10	96.7	0.83	1.01	9.68
1708	21-Jun-17	13:02	4	15	8-13	BP	120	115	5	10	84	0.12	0.42	0.26

1709	23-Jun-17	12:24	5	50	07-13	EG	120	115	5	10	94.5	15.24	15.18	0.49
1706	23-Jun-17	12:24	5	51	06-13	PS	120	115	5	10				
1711	24-Jun-17	15:29	1	31	04-13	DP	120	115	5	10	90.2	1.25	6.68	0.69
1711.5	26-Jun-17	11:43	1	31	04-13	DP	120	115	5	10	92.4	1.3	3.33	0.4
1712	27-Jun-17	11:27	3	14	07-09	BP	120	115	5	10	95.4	0.23	0.26	0.34
1716	28-Jun-17	15:35	2	56	03-06	EG	120	115	5	10	97.4	0.27	0.5	0.75
1700	30-Jun-17	12:03	3	6	16-20	OB	120	115	5	10	93.1	0.34	1.16	0.86
1717	01-Jul-17	13:44	7	14	01-07	BP	120	115	5	10	91	0.39	0.75	0.71
1707	05-Jul-17	11:50	5	51	07-13	OB	120	115	5	10	105.7	33.8	22.49	0.85
1690	05-Jul-17	15:30	7	12	8-9	PS	120	115	5	10	99.8	0.19	0.28	0.71
1710	06-Jul-17	12:05	4	16	08-13	PS	120	115	5	10	100.3	0.24	0.71	0.57
1719	06-Jul-17	12:05	4	15	8-13	DP	120	115	5	10				
1713	06-Jul-17	15:20	2	57	5-6	PS	120	115	5	10	97	1.06	2.28	2.24
1722	08-Jul-17	11:24	1	31	04-13	EG	120	115	5	10	83.8	1.34	4.18	0.42
1715	10-Jul-17	11:31	7	12	08-09	OB	120	115	5	10	109.8	0.44	0.62	0.91
1720	11-Jul-17	11:38	3	14	07-09	DP	120	115	5	10	100	0.19	0.28	0.36
1699.5	11-Jul-17	15:26	2	28	20-24	OB	120	115	5	10	87.3	0.29	0.5	3.25
1714	13-Jul-17	11:44	2	57	4-6	OB	120	115	5	10	98.1	2.85	4.05	6.29
1689	14-Jul-17	12:31	6	7	12-17	OB	120	115	5	10	76.5	0.27	0.48	0.26
1725	15-Jul-17	15:06	7	14	1-7	DP	120	115	5	10	102.1	0.36	0.94	0.64
1728	18-Jul-17	11:59	5	4	21	OB	120	115	5	10	97.8	0.13	0.36	0.2
1731	19-Jul-17	11:35	4	15	08-13	EG	120	115	5	10	96.9	0.15	0.35	0.21
1727	21-Jul-17	11:42	7	15	01-07	PS	120	115	5	10	96.8	0.3	0.36	0.79
1729	24-Jul-17	11:32	3	09	10-15	BP	120	115	5	10	94.5	0.19	0.36	0.41
1723	24-Jul-17	14:59	2	29	20-24	PS	120	115	5	10	111.5	0.34	0.33	4.17
1721	27-Jul-17	11:31	1	32	10-11	OB	120	115	5	10	83.9	1.43	8.62	0.22
1733	27-Jul-17	15:05	2	28	20-24	BP	120	115	5	10	89.4	0.53	0.98	6.65
1718	28-Jul-17	11:38	4	16	08-13	OB	120	115	5	10	108.5	0.52	1.04	1.4
1734	29-Jul-17	11:27	3	14	07-07	EG	120	115	5	10	90.1	0.16	0.16	0.27
1736	31-Jul-17	15:00	5	51	7-13	DP	120	115	5	10	92.3	10.02	16.88	0.17
1738	01-Aug-17	11:30	7	14	1-7	EG	120	115	5	10	91.1	0.16	0.39	0.39
1732	02-Aug-17	15:28	5	52	06-12	PS	120	115	5	10	86.8	13.9	6.17	0.31
1739	03-Aug-17	11:29	3	6	16-20	BP	120	115	5	10	96.4	0.15	0.3	
1737	04-Aug-17	12:18	2	28	20-24	DP	120	115	5	10	101.1	0.44	0.48	
1730	11-Aug-17	11:30	7	15	01-07	OB	120	115	5	10	117.9	0.82	2.16	0.3
1740	12-Aug-17	11:31	3	09	10-15	DP	120	115	5	10	100.3	0.32	0.39	0.08
1742	14-Aug-17	11:29	5	51	07-13	EG	120	115	5	10	91.6	3.61	15.22	0.02
1747	14-Aug-17	15:21	6	6	13-17	OB	120	115	5	10	83.5	0.23	0.52	0.01
1744	16-Aug-17	15:26	1	32	04-05	OB	120	115	5	10	96.9	1.35	2.28	0.09
1748	17-Aug-17	15:25	2	28	20-24	EG	120	115	5	10	93.9	0.25	0.32	0.46
1749	23-Aug-17	11:29	3	06	16-20	DP	120	115	5	10	88.8	0.13	0.25	0.04
1751	23-Aug-17	15:21	6	06	12-17	BP	120	115	5	10	70.8	0.27	0.7	0.03

1752	25-Aug-17	11:46	4	16	08-13	BP	120	115	5	10	79.7	0.19	0.9	0.23
1735	26-Aug-17	11:27	5	52	06-12	OB	120	115	5	10	95.7	38.15	26.02	0.21
1755	26-Aug-17	15:25	2	57	06-08	BP	120	115	5	10	88.8	0.24	0.22	0.03
1726	28-Aug-17	11:29	2	29	20-24	OB	120	115	5	10	93	0.46	0.92	1.22
1754	29-Aug-17	11:39	1	32	10-11	DP	120	115	5	10	87.1	1.56	4.82	0.21
1756	30-Aug-17	11:02	5	5	16-18	EG	120	115	5	10	82.4	0.2	0.56	0.03
1758	01-Sep-17	14:55	3	09	10-15	EG	120	115	5	10	92.8	0.15	0.32	0.03
1741	02-Sep-17	12:25	2	30-32	20-24	OB	120	115	5	10	91.3	0.42	1.02	0.78
1757	04-Sep-17	15:22	2	58	06-07	PS	120	115	5	10	96	1.65	3.89	0.33
1760	04-Sep-17	15:22	2	57	04-07	DP	120	115	5	10				
1761	07-Sep-17	11:45	3	06	16-20	EG	120	115	5	10	104.4	0.13	0.16	0.02
1762	08-Sep-17	12:15	4	16	09-13	DP	120	115	5	10	106.4	0.2	0.51	0.09
1750	08-Sep-17	12:15	4	17	09-13	PS	120	115	5	10				
1765	09-Sep-17	11:32	3	15	07-09	BP	120	115	5	10	89.8	0.14	0.16	0.02
1764	12-Sep-17	11:31	1	32	04-08	EG	120	115	5	10	86.7	1.1	3.93	0.06
1768	15-Sep-17	11:34	2	29	20-24	BP	120	115	5	10	94.8	0.38	0.77	1.03
1769	18-Sep-17	11:31	6	6	12-17	EG	120	115	5	10	97.7	0.25	0.89	0.02
1771	19-Sep-17	14:57	5	52	07-13	DP	120	115	5	10	105.3	7.18	29.35	0.03
1743	21-Sep-17	11:32	3	10	15-15	PS	120	115	5	10	110.9	0.37	0.47	0.22
1770	22-Sep-17	12:31	7	15	01-07	BP	120	115	5	10	99.3	0.33	0.76	0.09
1759	27-Sep-17	11:43	3	10	10-15	OB	120	115	5	10	93.9	0.82	1.75	0.29
1745	28-Sep-17	11:35	7	12	10-13	PS	120	115	5	10	109.7	0.32	0.42	0.14
1766	29-Sep-17	11:34	1	33	04-05	OB	120	115	5	10	97.6	1.57	3.69	0.09
1775	30-Sep-17	15:21	5	52	06-12	EG	120	115	5	10	103.8	3.84	13.36	0.03
1776	30-Sep-17	15:21	6	07	14	OB	120	115	5	10				
1773	03-Oct-17	12:06	4	16	09-13	EG	120	115	5	10	87.1	0.17	0.38	0.03
1746	04-Oct-17	15:00	7	12	10-13	OB	120	115	5	10	102.5	0.59	1.57	0.16
1777	05-Oct-17	15:00	2	57	03-07	EG	120	115	5	10	95.8	0.28	0.6	0.11
1772	06-Oct-17	11:34	5	47	15-19	PS	120	115	5	10	96.5	1.31	1.74	0.27
1778	07-Oct-17	11:39	2	29	20-24	DP	120	115	5	10	85.3	0.33	0.58	6.11
1779	10-Oct-17	11:34	7	15	01-07	DP	120	115	5	10	92.5	0.26	0.52	0.33
1784	11-Oct-17	11:27	1	33	04-06	DP	120	115	5	10	92.9	1.89	2.72	1.17
1753	13-Oct-17	12:34	4	17	09-13	OB	120	115	5	10	109.6	0.5	1.12	1.67
1763	13-Oct-17	15:15	2	58	03-07	OB	120	115	5	10	101.9	3.03	6.79	4.72
1767	17-Oct-17	11:34	3	07	16-21	PS	120	115	5	10	95.6	0.19	0.3	0.52
1783	18-Oct-17	15:03	6	8	12-17	OB	120	115	5	10	94.1	0.27	0.7	0.15
1774	18-Oct-17	15:03	6	07	12-17	PS	120	115	5	10				
1788	21-Oct-17	11:37	3	10	10-15	BP	120	115	5	10	93	0.26	0.26	0.33
1790	21-Oct-17	15:03	1	33	10-11	BP	120	115	5	10	93.4	0.5	2.93	0.11
1786	23-Oct-17	11:41	5	5	16-18	EG	120	115	5	10	84.2	0.17	0.34	0.07
1789	24-Oct-17	11:35	2	29	20-24	EG	120	115	5	10	94.5	0.25	0.46	5.36
1782	26-Oct-17	11:37	6	7	12-17	OB	120	115	5	10	100.7	1.11	3.1	0.4



1791	26-Oct-17	15:29	5	47	21-26	PS	120	115	5	10	102.5	0.88	1.61	0.25
1794	28-Oct-17	15:01	7	15	01-04	EG	120	115	5	10	92.2	0.2	0.35	0.2
1781	30-Oct-17	11:31	5	47	15-19	OB	120	115	5	10	108.9	2.63	5.49	0.88
1797	30-Oct-17	14:59	7	12	8	OB	120	115	5	10	98.2	0.16	0.25	0.39
1793	31-Oct-17	11:24	1	33	4-8	EG	120	115	5	10	109	1.26	4.61	0.33
1795	31-Oct-17	11:24	1	33	10-11	DP	120	115	5	10				
1792	02-Nov-17	11:33	2	30-34	20-24	BP	120	115	5	10	92.9	0.38	0.89	5.06
1798	03-Nov-17	15:33	3	10	10-15	DP	120	115	5	10	102.7	0.31	0.35	0.28
1780	04-Nov-17	12:47	5	53	06-13	PS	120	115	5	10	68.8	1.17	2.66	0.15
1796	07-Nov-17	13:33	7	12	08-13	BP	120	115	5	10	96.3	0.34	0.38	0.42
1800	08-Nov-17	15:00	5	47	21-23	OB	120	115	5	10	73.5	1.51	3.54	0.33
1801	08-Nov-17	15:00	5	47	25-26	OB	120	115	5	10				
1799	09-Nov-17	12:24	4	17	09-13	BP	120	115	5	10	85.1	0.14	0.27	0.15
1803	10-Nov-17	11:29	1	33	09-13	EG	120	115	5	10	89.1	0.62	4.92	0.13
1802	11-Nov-17	11:31	5	53	11-13	OB	120	115	5	10	86.8	2.44	10.4	0.4
1787	17-Nov-17	12:16	3	7	16-21	OB	120	115	5	10	99.7	0.6	0.8	1.15
1806	17-Nov-17	14:58	2	58	05-07	BP	120	115	5	10	89.5	1.96	3.04	1.8
1807	18-Nov-17	11:27	7	15	05-07	PS	120	115	5	10	86.7	0.41	0.51	1.42
1805	21-Nov-17	11:36	5	47	25-26	BP	120	115	5	10	86.2	0.47	0.71	0.09
1811	22-Nov-17	15:05	3	10	10-15	EG	120	115	5	10	101.4	0.17	0.15	0.19
1813	24-Nov-17	12:38	4	17	09-13	DP	120	115	5	10	88.8	0.16	0.31	0.22
1808	25-Nov-17	15:01	3	11	10-15	PS	120	115	5	10	101.8	0.45	0.52	1.62
1816	27-Nov-17	11:26	5	47	15-19	DP	120	115	5	10	66	0.5	1.36	0.14
1811.5	27-Nov-17	14:58	3	10	14-15	EG	120	115	5	10	84.2	0.12	0.1	0.06
1804	28-Nov-17	11:27	1	34	04-05	OB	120	115	5	10	81.2	1.23	1.29	0.28
1812	30-Nov-17	11:31	7	12	8-13	DP	120	115	5	10	97.2	0.27	0.33	0.45
1818	01-Dec-17	15:07	2	30	20-24	DP	120	115	5	10	93.5	0.38	0.35	6.09
1819	04-Dec-17	11:31	5	47	22-26	DP	120	115	5	10	68.8	0.71	1.2	0.12
1817	04-Dec-17	15:01	2	58	4-6	BP	120	115	5	10	96	0.45	0.51	0.46
1820	08-Dec-17	12:13	4	17	09-13	EG	120	115	5	10	77.2	0.35	0.4	0.73
1809	11-Dec-17	11:44	3	11	10-15	OB	120	115	5	10	98.6	0.82	0.69	2
1821	11-Dec-17	15:17	5	47	15-19	EG	120	115	5	10	81.9	0.42	0.87	0.1
1823	13-Dec-17	15:04	2	58	05-07	DP	120	115	5	10	99.9	0.99	0.89	0.81
1824	15-Dec-17	11:22	5	53	10-13	DP	120	115	5	10	72.5	1.05	1.37	0.12
1825	18-Dec-17	12:31	2	30	20-24	EG	120	115	5	10	88.5	0.35	0.31	4.58
1829	22-Dec-17	10:32	5	53	06-07	DP	120	115	5	10	79.7	12.3	6.24	0.1
1810	22-Dec-17	12:27	7	15	05-08	OB	120	115	5	10	98.7	0.73	0.75	2.39
1826	23-Dec-17	15:48	7	12	08-13	EG	120	115	5	10	86.8	0.16	0.17	0.55
1828	27-Dec-17	11:41	5	47	24-26	EG	120	115	5	10	77.8	0.38	0.49	0.09
1827	29-Dec-17	11:20	6	7	12-17	OB	120	115	5	10	79.1	0.37	0.99	0.12
1831	30-Dec-17	14:28	5	53	06-09	EG	120	115	5	10	97.3	3.36	3.85	0.14

## Blasts in Vicinity of Rail Culvert 2017

Shot Id	Date fired	Time fired	BCM (m <sup>3</sup> )	TYPE	MIC (kg)	Distance from Rail (m)	Culvert Pit3 (mm/s)	Culvert Pit5 (mm/s)
1618	3-Feb-17	11:44	81,024	DP	179	45	2.54	0.12
1619	16-Feb-17	14:11	19,986	PS	588	40	10.26	0.26
1617	16-Feb-17	14:11	11,845	PS	686	330	10.26	0.22
1622	16-Feb-17	14:11	69,085	BP	234	45	10.26	0.22
1644	17-Mar-17	12:21	59,860	DP	176	325	21.43	0.65
1624	17-Mar-17	12:21	421,590	OB	5,851	325	21.43	0.65
1660	3-Apr-17	14:51	86,670	BP	210	50	4.34	0.15
1671	24-Apr-17	11:49	83,501	DP	163	50	7.09	0.27
1673	24-Apr-17	11:49	28,776	PS	307	50	7.09	0.27
1678	5-May-17	11:26	40,818	BP	192	325	2.42	0.13
1683	12-May-17	11:57	98,322	EG	127	50	1.81	0.17
1556	17-May-17	13:03	546,447	OB	-	235	0.87	28.17
1691	19-May-17	12:36	30,186	DP	166	325	1.56	0.06
1677	29-May-17	14:40	775,016	OB	5,070	45	26.23	1.27
1703	14-Jun-17	13:13	22,615	DP	58	242	0.14	1.97
1697	19-Jun-17	12:05	21,207	PS	424	330	2.23	0.15
1704	19-Jun-17	12:05	108,017	EG	146	330	2.23	0.15
1708	21-Jun-17	13:02	91,452	BP	182	45	7.96	0.22
1700	30-Jun-17	12:03	514,596	OB	4,832	445	8.42	0.51
1710	6-Jul-17	12:05	19,825	PS	686	40	9.08	0.34
1719	6-Jul-17	12:05	96,199	DP	167	40	9.08	0.34
1728	18-Jul-17	11:59	7,152	OB	312	278	0.1	16.95
1731	19-Jul-17	11:35	116,848	EG	170	57	2.27	0.25
1718	28-Jul-17	11:38	530,195	OB	3,524	55	25.16	0.97
1739	3-Aug-17	11:29	86,434	BP	211	435	5.51	0.08
1749	23-Aug-17	11:29	88,457	DP	177	448	2.15	0.09
1752	25-Aug-17	11:46	75,062	BP	174	43	7.24	0.32
1761	7-Sep-17	11:45	89,648	EG	140	448	1.33	0.06
1762	8-Sep-17	12:15	58,629	DP	157	40	11.88	0.24
1750	8-Sep-17	12:15	20,926	PS	397	40	11.88	0.24
1787	17-Nov-17	12:16	1,317,663	OB	5,914	362	17.42	0.54
1813	24-Nov-17	12:38	62,954	DP	174	46	8.65	0.28
1820	8-Dec-17	12:13	78,642	EG	124	40	0.78	0.39