

Appendix K – Background Air Quality Data

Adopted background levels for Bathurst and Bargo monitoring stations

Month	Pollutant ($\mu\text{g}/\text{m}^3$)													
	Bathurst					Bargo								
	PM ₁₀ (TEOM)		O ₃			SO ₂			NO ₂		O ₃			
Year	Hourly Average	Maximum 24-hour	Hourly Average	Maximum 1-hour	Maximum 4-hour	Hourly Average	Maximum 1-hour	Maximum 24-hour	Hourly Average	Maximum 1-hour	Hourly Average	Maximum 1-hour	Maximum 4-hour	
	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05
Jan	20 / 18	36 / 36	53.3 / 49.2	198.9 / 117.7	143.4 / 113.4	0.0 / 0.0	19.9 / 17.1	5.7 / 5.7	12.3 / 10.3	59.5 / 94.3	55.6 / 49.2	207.6 / 282.5	177.6 / 196.9	
Feb	22 / 16	38 / 27	51.3 / 43.1	162.6 / 119.8	139.1 / 115.6	2.8 / 0.0	34.5 / 14.2	5.7 / 5.7	12.3 / 12.3	120.6 / 85.7	51.4 / 49.2	209.7 / 218.3	192.6 / 194.7	
Mar	25 / 16	70 / 29	39.0 / 36.9	124.1 / 115.6	117.7 / 113.4	0.0 / 0.0	8.5 / 14.2	2.8 / 2.8	14.4 / 10.3	104.0 / 59.5	42.8 / 40.7	164.8 / 151.9	130.5 / 141.2	
April	32 / 21	73 / 37	36.9 / 28.7	104.9 / 98.4	100.6 / 94.2	0.0 / 0.0	11.4 / 19.9	2.8 / 2.8	16.4 / 18.5	83.6 / 69.4	42.8 / 36.4	130.5 / 126.3	109.1 / 107.0	
May	27 / 18	53 / 31	28.7 / 26.7	104.9 / 77.0	102.7 / 74.9	0.0 / 0.0	14.2 / 5.7	8.5 / 2.8	16.4 / 16.4	79.6 / 65.3	40.7 / 38.5	94.2 / 79.2	92.0 / 74.9	
June	8 / 17	13 / 45	32.8 / 30.8	74.9 / 83.5	70.6 / 81.3	0.0 / 0.0	22.7 / 17.1	5.7 / 2.8	14.4 / 18.5	71.4 / 85.7	42.8 / 38.5	70.6 / 83.9	70.6 / 79.2	
July	10 / 10	19 / 16	30.8 / 30.8	72.8 / 70.6	68.5 / 70.6	0.0 / 0.0	22.7 / 11.4	5.7 / 2.8	14.4 / 12.3	59.2 / 59.5	42.8 / 44.9	79.2 / 81.3	77.0 / 74.9	
Aug	11 / 11	26 / 20	34.9 / 36.9	81.3 / 87.7	79.2 / 81.3	2.8 / 0.0	28.5 / 25.6	5.7 / 5.7	12.3 / 16.4	81.6 / 77.5	51.4 / 47.1	94.2 / 89.9	89.9 / 83.5	
Sept	13 / 10	31 / 17	34.9 / 36.9	96.3 / 89.5	94.2 / 87.7	0.0 / 2.8	20.2 / 14.2	5.7 / 8.5	14.4 / 16.4	87.7 / 83.6	51.4 / 47.1	104.9 / 109.1	102.7 / 104.9	
Oct	12 / 10	34 / 18	43.1 / 36.9	114.2 / 94.2	109.1 / 94.2	0.0 / 2.8	14.2 / 8.5	5.7 / 5.7	12.3 / 12.3	95.9 / 69.4	53.5 / 51.4	173.3 / 117.7	145.9 / 102.7	
Nov	13 / 11	30 / 18	45.1 / 41.0	115.6 / 98.4	113.4 / 96.3	2.8 / 2.8	14.2 / 11.4	5.7 / 2.8	12.3 / 10.3	91.8 / 57.1	51.4 / 44.9	190.5 / 134.8	162.5 / 119.8	
Dec	16 / 20	33 / 39	51.3 / 45.1	149.8 / 111.3	111.3 / 96.3	0.0 / 2.8	17.1 / 14.2	2.8 / 2.8	8.2 / 12.3	53.0 / 73.4	47.1 / 53.5	134.8 / 214	113.4 / 177.6	
NSW Goal ($\mu\text{g}/\text{m}^3$)	50		214		171		570	228		246		214		171
Peak	32	73	2.6	196.9	143.4	2.8	34.5	8.5	16.4	120.6	55.6	282.5		196.9

Source: NSW DEC Air Quality Monitoring Reports 2004 and 2005 (DEC 2005b)

 PM₁₀ = Particulate matter $\leq 10 \mu\text{m}$ in aerodynamic diameter

 Nitrogen dioxide (NO₂)

 $\mu\text{g}/\text{m}^3$ = micro grams per cubic metre, mg/m^3 = milligrams per cubic metre, TEOM (tapered element oscillating meter) – 1 hour average

Source: DEC in PB, 2008

Adopted background levels for Bringelly monitoring stations

Pollutant ($\mu\text{g}/\text{m}^3$)										
Month	Bringelly									
	PM ₁₀ (TEOM)		O ₃			SO ₂			NO ₂	
	Hourly Average	Maximum 24-hour	Hourly Average	Maximum 1-hour	Maximum 4-hour	Hourly Average	Maximum 1-hour	Maximum 24-hour	Hourly Average	Maximum 1-hour
Year	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05	04/05
Jan	25 / 22	60 / 53	51.4 / 44.9	231.1 / 239.7	199.0 / 218.3	2.8 / 0.0	22.8 / 14.2	2.8 / 5.7	12.3 / 8.2	57.1 / 36.7
Feb	24 / 21	46 / 41	47.1 / 47.1	261.1 / 188.3	235.4 / 164.8	0.0 / 0.0	42.7 / 14.2	5.7 / 2.8	12.3 / 8.2	55.1 / 53.0
Mar	23 / 15	41 / 28	36.4 / 34.2	194.7 / 143.4	162.6 / 124.1	0.0 / 0.0	8.5 / 8.5	2.8 / 2.8	14.4 / 8.2	67.3 / 46.9
April	19 / 20	35 / 33	34.2 / 30.0	132.7 / 139.1	113.4 / 128.4	0.0 / 0.0	37.0 / 14.2	5.7 / 2.8	14.4 / 14.4	83.6 / 71.4
May	21 / 19	41 / 34	30.0 / 27.8	96.3 / 85.6	87.7 / 81.3	0.0 / 0.0	19.9 / 17.1	2.8 / 2.8	14.4 / 12.3	57.1 / 53.0
June	19 / 23	35 / 54	30.0 / 25.7	72.8 / 79.2	70.6 / 74.9	0.0 / 0.0	22.8 / 20.2	2.8 / 5.7	14.4 / 16.4	55.1 / 67.3
July	16 / 17	30 / 29	25.7 / 30.0	74.9 / 74.9	70.6 / 73.4	0.0 / 0.0	19.9 / 22.8	5.7 / 2.8	12.3 / 14.4	51.0 / 42.8
Aug	15 / 22	29 / 44	38.5 / 36.4	100.6 / 92.0	94.2 / 87.7	0.0 / 0.0	19.9 / 22.7	2.8 / 5.7	12.3 / 14.4	75.5 / 61.2
Sept	15 / 15	24 / 28	40.7 / 40.7	113.4 / 128.4	111.3 / 119.8	0.0 / 0.0	11.4 / 25.6	2.8 / 5.7	12.3 / 14.4	64.2 / 69.4
Oct	17 / 19	47 / 44	44.9 / 44.9	128.4 / 122.0	117.7 / 113.4	0.0 / 0.0	11.4 / 11.4	2.8 / 2.8	10.3 / 14.4	59.5 / 91.8
Nov	20 / 16	39 / 29	44.9 / 40.7	237.5 / 126.3	181.9 / 109.1	0.0 / 0.0	11.4 / 11.4	2.8 / 5.7	10.3 / 10.3	49.0 / 44.9
Dec	22 / 24	43 / 39	42.8 / 51.4	149.8 / 179.8	128.4 / 164.8	0.0 / 0.0	11.4 / 11.4	2.8 / 2.8	8.2 / 10.3	34.7 / 46.9
NSW Goal		50		214	171		570	228		246
Peak	25	60	2.4	261.1	235.4	2.8	42.7	5.7	16.4	91.8

Source: NSW DEC Air Quality Monitoring Reports (DEC 2005b)

 PM₁₀ = Particulate matter $\leq 10 \mu\text{m}$ in aerodynamic diameter

 Nitrogen dioxide (NO₂)

 $\mu\text{g}/\text{m}^3$ = micro grams per cubic metre, mg/m^3 = milligrams per cubic metre, TEOM (tapered element oscillating meter) – 1 hour average

Source: DEC in PB, 2008

Appendix L – Human Receptors

Easting	Northing	KP	OFFSET (m,-LEFT,+RIGHT) to the Pipeline	FEATURE
622087.817	6210673.459	0.04	473.435	Sheds
621886.911	6210594.682	0.36	121.446	Dwelling
622145.275	6210841.241	0.57	164.534	Dwelling
622954.197	6212135.081	2.22	-279.172	Dwelling & Sheds
623455.566	6211784.896	2.24	332.009	Dwelling
623283.245	6212691.588	2.79	-392.559	Shed
623872.497	6213710.18	4.08	-581.074	Dwelling & Sheds
624032.506	6213628.666	4.10	-402.627	Sheds
624458.979	6214186.703	4.66	-455.894	Dwelling & Sheds
625666.285	6214318.149	5.75	86.589	Dwelling
626325.457	6214259.93	6.18	528.087	Shed
626842.709	6215249.381	7.23	96.209	Sheds
630348.299	6218385.26	11.93	-251.932	Sheds
630414.734	6218499.528	12.05	-314.322	Dwelling
630486.992	6218434.72	12.07	-221.232	Dwelling
631685.544	6218255.785	13.04	613.472	Dwelling & Sheds
632176.423	6218951.627	13.78	380.179	Shed
632525.954	6219096.782	14.14	494.729	Dwelling & Sheds
633050.704	6219434.314	14.76	575.302	Dwelling
633294.305	6219649.014	15.08	568.379	Dwelling
632457.932	6220795.366	15.75	-560.132	Sheds
632535.442	6220791.771	15.76	-482.646	Dwelling
633985.339	6221445.029	16.98	429.446	Dwelling & Sheds
633914.418	6221874.007	17.26	89.533	Shed
635758.653	6223428.964	19.89	510.552	Dwelling & Sheds
636488.021	6224347.603	20.68	515.961	Shed
636081.588	6225775.96	22.12	-271.727	Dwelling & Sheds
637548.86	6227465.102	24.42	592.408	Dwelling & Sheds
637205.82	6227831.105	24.54	52.512	Shed
639029.033	6230430.029	27.71	379.736	Dwelling
639144.428	6231793.3	28.82	-553.729	Dwelling
640680.411	6232103.231	30.12	531.162	Shed
639834.028	6232275.945	30.15	-332.263	Dwelling
639844.052	6232312.891	30.19	-328.665	Shed
640524.006	6233032.495	31.01	217.618	Shed
640263.791	6234338.082	32.16	-281.902	Dwelling
641473.131	6235350.102	33.76	203.397	Shed
641729.25	6235330.893	33.95	373.677	Sheds
641824.48	6235311.413	34.02	446.813	Dwelling
642615.216	6236048.241	34.75	537.196	Dwelling

Easting	Northing	KP	OFFSET (m,-LEFT,+RIGHT) to the Pipeline	FEATURE
642674.661	6236223.676	34.93	565.482	Sheds
642284.889	6237938.027	36.41	-528.813	Sheds
642317.115	6238137.428	36.85	-588.204	Dwelling
643027.005	6240140.827	39.08	105.183	Shed
643871.222	6242224.583	41.37	330.495	Shed
644267.623	6243131.295	42.31	489.955	Dwelling & Sheds
643877.275	6244447.854	43.51	-141.452	Shed
644426.259	6244526.748	43.68	387.964	Shed
644521.649	6244515.499	43.68	483.929	Dwelling
644678.009	6245640.493	44.82	459.159	Shed
644387.737	6247031.907	46.09	-246.569	Dwelling
644421.113	6247096.451	46.17	-249.047	Sheds
644519.516	6250916.639	50.33	-373.848	Shed
644341.848	6251670.887	51.11	-535.237	Dwelling & Sheds
644599.969	6252118.408	51.59	-354.891	Shed
645367.626	6252259.201	51.86	378.796	Shed
645454.115	6252274.183	51.89	461.604	Dwelling
645025.156	6253347.182	52.88	-133.128	Dwelling
645359.514	6254959.412	54.52	9.416	Shed
645459.909	6255066.203	54.64	96.31	Dwelling
645822.774	6255487.99	55.10	406.096	Dwelling
645564.81	6255900.79	55.48	100.589	Shed
645572.226	6256352.858	55.93	53.856	Shed
645733.735	6256898.323	56.47	190.877	Dwelling
644470.238	6258303.58	58.32	-482.251	Dwelling
644672.231	6259451.66	59.21	270.303	Dwelling
644407.437	6259595.142	59.46	113.759	Shed
644286.725	6260537.676	60.26	-379.11	Dwelling
644774.515	6259889.45	60.32	430.093	Dwelling
644544.434	6260607.443	60.78	-217.518	Dwelling
645847.628	6262848.976	63.29	-274.809	Shed
646502.608	6262544.468	63.56	391.499	New Dwelling & Sheds
646959.832	6263681.376	64.66	-164.918	Dwelling
647041.774	6263631.524	64.70	-77.917	Shed
647146.018	6263523.922	64.72	69.484	Shed
647938.523	6263707.394	65.55	543.315	Dwelling & Sheds
647452.635	6264526.724	65.59	-408.08	Dwelling & Sheds
647279.822	6264796.598	65.60	-728.504	Dwelling
647872.167	6263916.172	65.61	332.61	Dwelling
648242.146	6264166.805	65.99	355.009	Dwelling
648693.79	6265477.957	67.63	326.518	Shed
648816.791	6265313.956	67.65	530.001	Dwelling
648846.577	6265486.011	67.76	395.679	Dwelling

Easting	Northing	KP	OFFSET (m,-LEFT,+RIGHT) to the Pipeline	FEATURE
649397.998	6271837.015	74.34	487.147	Dwelling
648555.684	6271453.201	74.38	-437.618	Shed
648568.538	6271567.075	74.48	-374.492	Dwelling
649235.12	6272439.356	75.29	421.445	Dwelling & Sheds
648283.788	6272622.787	75.32	-547.04	Sheds
649815.902	6276651.599	79.73	-324.672	Sheds
649767.722	6276766.302	79.84	-392.355	Dwelling
650525.44	6276845.165	80.05	339.519	Dwelling
650223.047	6279554.584	82.68	-372.852	Sheds
650184.947	6279765.966	82.89	-436.963	Dwelling
650979.572	6279930.584	83.23	320.189	Dwelling
650306.336	6280348.483	83.48	-535.977	Dwelling
650378.961	6280346.69	83.50	-465.304	Dwelling
650914.931	6281415.241	84.71	-131.358	Sheds
651079.915	6281724.839	84.99	-118.581	Shed
651116.578	6281912.228	85.27	-73.732	Dwellings
651022.529	6281984.44	85.36	-159.763	Dwelling
650991.81	6282060.609	85.44	-182.395	Dwelling
650902.71	6282054.806	85.44	-271.615	Shed
651105.572	6282367.748	85.71	-105.712	Dwelling
651124.725	6282409.215	85.89	-154.445	Shed
651219.82	6283168.668	86.63	-83.81	Shed
651864.369	6283394.463	86.95	521.96	Dwelling
651746.15	6283462.906	87.00	395.419	Sheds
650899.95	6285183.304	88.49	-544.472	Dwelling
651787.18	6284768.221	88.56	432.933	Dwelling
651601.093	6284913.917	88.60	199.646	Dwelling
651848.989	6285304.777	88.98	276.367	Sheds
651973.567	6285328.087	89.03	395.109	Sheds
651341.828	6285915.786	89.50	-327.985	Dwelling
651306.925	6286037.466	89.61	-383.221	Sheds
652119.281	6286400.265	90.11	354.96	Dwelling
652324.125	6286459.48	90.20	546.629	Sheds
653196.723	6287782.063	92.03	340.949	Sheds
653449.455	6287790.909	92.13	573.607	Dwelling & Sheds
652679.833	6288187.245	92.22	-287.268	Dwelling & Sheds
652491.038	6288386.304	92.34	-535.287	Dwelling
653669.887	6288809.333	93.16	410.693	Dwelling & Sheds
653870.379	6288809.726	93.23	597.464	Dwelling
655661.421	6296703.612	101.31	532.88	Dwelling & Sheds
654852.811	6297368.042	101.80	-352.094	Dwelling & Sheds
655386.272	6298913.902	103.51	-324.79	Dwelling & Sheds
656283.234	6300074.873	104.77	413.91	Dwelling & Sheds

Easting	Northing	KP	OFFSET (m,-LEFT,+RIGHT) to the Pipeline	FEATURE
656313.671	6300479.916	105.18	391.52	Shed
656366.601	6300789.044	105.68	366.185	Dwelling
656398.048	6301126.27	105.93	351.587	Shed
656067.984	6302777.271	107.56	-305.133	Dwelling
656738.765	6303269.386	108.05	369.603	Dwelling
656231.44	6304986.948	109.82	-468.302	Dwelling
657211.019	6305890.184	110.82	408.217	Dwelling
657784.079	6307744.936	112.92	242.495	Sheds
656980.043	6308608.793	113.80	-545.283	Dwelling
657025.698	6308816.092	113.93	-518.739	Dwelling
658772.541	6312058.184	117.66	-43.933	Shed
659079.671	6314692.293	120.09	-550.068	Dwelling & Sheets
660162.267	6316515.812	122.75	275.088	Shed
660646.955	6318656.051	125.17	-290.836	Dwelling & Sheds
660959.375	6319424.181	125.71	-502.077	Dwelling & Sheds
661713.411	6319511.094	126.51	202.868	Dwelling
662077.878	6319471.774	126.72	503.395	Dwelling & Sheds
664287.278	6324421.499	132.45	-315.805	Dwelling
664121.061	6324522.375	132.53	-495.587	Dwelling
664147.654	6324774.039	132.78	-508.113	Sheds
664318.369	6326237.877	134.25	-565.131	Dwelling
665093.658	6328297.417	136.47	-438.62	Shed
665183.374	6329084.009	137.29	-460.731	Dwelling
666487.378	6331457.188	139.83	489.407	Dwelling & Sheds
666678.069	6332226.78	140.62	518.845	Shed
666435.173	6333752.244	141.80	551.491	Dwelling
666230.952	6333758.3	141.92	387.642	Sheds
665560.61	6333649.986	142.22	-223.679	Dwelling & Sheds
666918.815	6336285.329	144.94	613.319	Dwelling
666606.364	6336558.042	145.14	247.394	Shed
666034.277	6338367.239	146.72	-426.641	Dwelling & Sheds
666917.216	6338279.016	147.16	305.682	Dwelling & Sheds
667434.948	6339312.976	148.18	383.576	Shed
666639.988	6340174.014	148.89	-542.671	Shed
667694.717	6340061.66	148.96	516.13	Dwelling & Sheds
667013.568	6341263.854	150.02	-487.633	Shed
667752.786	6342345.482	151.21	-355.493	Shed
667975.604	6343339.605	152.39	-545.416	Dwelling & Sheds
668529.092	6343721.115	152.81	-172.538	Dwelling & Sheds
668852.052	6343933.08	153.16	-103.177	Shed
668223.155	6350024.315	159.63	161.55	Shed
668573.129	6350195.196	159.84	490.424	Shed
670844.716	6356878.322	167.15	345.914	Dwelling

Easting	Northing	KP	OFFSET (m,-LEFT,+RIGHT) to the Pipeline	FEATURE
671461.458	6359675.872	170.33	-538.487	Dwelling & Sheds
672562.807	6362276.628	173.29	-491.767	Shed
672524.223	6362437.098	173.44	-555.799	Shed
673704.561	6363982.693	175.22	361.798	Dwelling
680320.697	6370924.287	185.76	362.025	Dwelling & Sheds
679568.007	6371230.271	185.90	-433.148	Shed
680512.379	6373059.924	188.32	-339.04	Dwelling & Sheds
680664.299	6373724.779	188.95	-353.22	Dwelling & Sheds
680628.189	6374033.972	189.24	-482.112	Dwelling & Sheds
680708.009	6374305.791	189.65	-465.64	Dwelling & Sheds
680963.975	6375168.067	190.37	-448.129	Dwelling & Sheds
683357.758	6377689.117	193.93	244.054	Dwelling & Sheds
683449.323	6380391.632	196.40	-503.303	Shed
685222.448	6383752.222	200.60	374.405	Dwelling & Sheds
684818.675	6384656.254	201.65	122.105	Dwelling & Sheds
684357.737	6384631.717	201.70	-337.208	Dwelling & Sheds
685461.255	6388095.064	205.44	187.293	Dwelling & Sheds
685897.657	6390317.39	207.60	-571.271	Dwelling
686940.057	6391182.968	209.38	-234.406	Dwelling & Sheds
686353.795	6393492.707	211.72	-587.146	Dwelling
686386.878	6393622.427	211.72	-587.146	Dwelling
686391.231	6393599.791	211.72	-587.146	Dwelling
686406.902	6393531.013	211.72	-587.146	Dwelling
686396.455	6393657.251	211.76	-576.383	Dwelling
686404.29	6393685.111	211.79	-576.714	Dwelling
686410.384	6393710.358	211.81	-577.979	Dwelling
686416.479	6393736.477	211.84	-579.49	Dwelling
686421.702	6393762.595	211.87	-581.836	Dwelling
686075.2	6396691.9	215.32	-537.313	Dwelling & Sheds
685182.459	6398330.39	217.19	-488.876	Dwelling & Sheds