

APPENDIX E

PEAK FLOWS IN THE TRUNK DRAINAGE SYSTEM

TABLE E1
PEAK FLOWS IN TRUNK DRAINAGE SYSTEM
(m³/s)

FIGURE NUMBER		-	-	3.6	3.7	3.10	3.11	3.14	3.15	3.18	3.19
ARI		20yr	100yr	20yr	100yr	20yr	100yr	20yr	100yr	20yr	100yr
Location (Refer Figures 3.6 to 3.19)	Location	Present Day	Basins B1, B2, B3 and B5		Basins B1, B2, B3 and B5. Elements U3 and D3		Basins B1, B2, B3 and B5. Elements U3, D2 and D3		Basins B1, B2, B3 and B5. Elements U1, U3, D2, D3 and D4		
OVERLAND FLOW											
Q14	Flow down Bendick Street	0.28	1.54	0.00	0.30	0.00	0.29	0.00	0.29	0.00	0.29
Q15	Along Prospect Street	0.01	1.09	0.00	0.71	0.00	0.71	0.00	0.71	0.00	0.71
Q16	Across Brock Street	3.95	8.44	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00
Q16-1	Across Naysmith Street	6.61	13.42	3.43	7.08	0.00	0.00	0.00	0.00	0.00	0.00
Q17	Surcharge from Railway Drain along Lynch Street	2.84	7.69	1.44	3.58	0.00	0.00	0.00	0.00	0.00	0.00
Q18	Surcharge from Railway Drain along Main Street	0.05	2.04	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00
Q19	Surcharge from Railway Drain along Clarke Street	3.16	8.32	0.00	2.25	0.00	0.14	0.00	0.00	0.00	0.00
Q19-1	Surcharge of Railway Drain at Burrangong Creek	1.02	3.79	0.56	1.85	0.63	1.30	0.64	1.30	0.64	1.31
Q20	Across William Street	6.43	14.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Q21	Across Edwards Street	6.48	15.04	0.00	0.60	0.00	0.60	0.00	0.60	0.00	0.60
Q22	Along Nasmyth Street	2.75	7.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Q23	Across Edwards Street	1.65	3.47	1.65	3.47	1.65	3.47	1.65	3.47	0.00	0.00
Q24	Surcharge Golf Course drain under Railway	2.93	8.93	1.22	3.27	1.22	3.27	1.22	3.27	0.00	0.00
Q25	Along Boorowa Street	3.77	12.28	0.94	3.86	1.13	3.73	1.13	3.72	0.00	0.29

Cont'd Over

TABLE E1 (Cont'd)
PEAK FLOWS IN TRUNK DRAINAGE SYSTEM
(m³/s)

FIGURE NUMBER		-	-	3.6	3.7	3.10	3.11	3.14	3.15	3.18	3.19
ARI		20yr	100yr	20yr	100yr	20yr	100yr	20yr	100yr	20yr	100yr
Location (Refer Figures 3.6 to 3.19)	Location	Present Day		Basins B1, B2, B3 and B5		Basins B1, B2, B3 and B5. Elements U3 and D3		Basins B1, B2, B3 and B5. Elements U3, D2 and D3		Basins B1, B2, B3 and B5. Elements U1, U3, D2, D3 and D4	
PIPED FLOW											
Q14A	1200 mm x 600 mm RCBC in Bendrick Street	1.23	1.37	1.04	1.26	1.04	1.26	1.04	1.26	1.04	1.26
Q15A	1200 mm x 500 mm RCBC in Taylor Road	0.90	1.15	0.74	0.96	0.74	0.96	0.74	0.96	0.74	0.96
Q16A	900 mm RCP Outlet from Brock Street Basin	2.12	2.17	1.25	1.55	1.26	1.55	1.26	1.55	1.26	1.55
Q16B	900 mm RCP under Young Caravan Park	2.25	2.31	2.17	2.28	1.52	2.03	1.52	2.03	1.52	2.03
Q16C	1500 mm ARMCO Pipe parallel to railway	2.05	2.17	1.91	2.06	0.72	1.38	0.72	1.38	0.72	1.38
Q17A	1500 mm RCP Pipe parallel to railway	5.62	6.78	4.87	6.36	1.97	3.82	1.97	3.82	1.97	3.82
Q19A	2100 mm x 2200 mm RCBC under CBD	7.99	8.47	7.11	7.88	4.24	7.26	2.98	5.39	2.98	5.39
Q20A	1050 mm RCP Under Edward Street	2.66	2.67	0.79	2.16	0.79	2.16	0.79	2.16	0.79	2.16
Q21A	2500 mm x 1200 mm RCBC Upstream of Naysmith Street	3.28	3.88	1.95	3.02	1.95	3.02	1.95	3.02	1.95	3.02
Q23A	525 mm RCP Along Stoneridge Street	0.44	0.49	0.44	0.49	0.44	0.49	0.44	0.49	0.00	0.00
Q23B	675 mm RCP Upstream of Naysmith Street	0.73	0.77	0.73	0.77	0.73	0.77	0.73	0.77	0.00	0.09
Q24A	900 mm x 600 mm RCBC Under Industrial Area	1.31	1.50	1.19	1.35	1.19	1.35	1.19	1.35	0.55	1.15
D2	[D2] - Diversion Along Clarke Street	-	-	-	-	-	-	1.24	2.00	1.24	2.00
D3	D3 - Diversion Along Zouch Street	-	-	-	-	5.22	9.60	5.22	9.60	5.22	9.60
D4		-	-	-	-	-	-	-	-	3.24	4.09
U3	U3 - Under Edward St	-	-	-	-	3.66	7.13	3.66	7.13	3.66	7.13

TABLE E2
PEAK FLOWS DERIVED BY TUFLOW MODEL
(m³/s)

LACE ID	Tributary	Location	Present Day				Future Urbanisation			
			20 year ARI		100 year ARI		20 year ARI		100 year ARI	
			Discharge	Critical Duration	Discharge	Critical Duration	Discharge	Critical Duration	Discharge	Critical Duration
Q01	Garibaldi Gully Tributary	In line with Batinichs Road	5.4	120	9.8	120	5.5	120	9.9	60
Q02	Garibaldi Gully	Upstream Extent of Model	9.7	180	16.9	120	9.7	180	16.9	120
Q03	Garibaldi Gully	Young Showgrounds	15.0	180	25.3	120	15.0	120	25.3	120
Q04	Victoria Gully	Upstream Extent of Model	12.3	180	21.7	120	12.3	180	21.7	120
Q05	Victoria Gully Tributary	Upstream Extent of Model	2.1	120	3.8	120	2.1	120	3.8	120
Q06	Victoria Gully	Downstream of Garibaldi Gully Confluence	32.0	180	58.1	120	32.5	180	58.5	120
Q07	Victoria Gully	Downstream of Lachlan Street	37.4	180	59.6	120	37.4	180	59.6	120
Q08	Sawpit Gully	Downstream of Chinamen's Dam	18.1	180	26.9	180	18.1	180	26.9	180
Q09	Sawpit Gully	In line with Western Avenue	33.1	180	57.2	120	31.8	180	55.1	120
Q10	Sawpit Gully	Upstream of Victoria Gully Confluence	51.2	180	82.9	120	50.8	180	82.1	60
Q10-1	Burrangong Creek	Wombat Street	71.4	180	118.7	120	71.3	180	118.2	120
Q11	Petticoat Gully	Downstream of Thornell Road	6.7	180	11.9	120	6.7	180	11.9	120
Q12	Petticoat Gully	1.4 km Upstream of Berthong Street	10.3	180	19.0	120	10.2	180	18.7	120
Q13	Petticoat Gully	In line with Allanan Street	11.4	180	20.5	120	12.7	60	22.0	60
Q14	Railway Drain	Along Bendick Street	0.4	120	1.6	60	3.1	60	5.3	60
Q15	Railway Drain	Along Prospect Street	0.0	-	1.5	60	1.5	60	4.3	60
Q16	Railway Drain	Across Brock Street	3.9	60	8.5	60	9.2	60	15.9	60
Q17	Overland Flow	Surcharge from Railway Drain along Lynch Street	3.1	60	8.0	60	6.6	60	13.3	60
Q17-1	Channel Flow	Railway Drain at Main Street	5.6	60	8.5	60	7.5	60	9.3	60
Q18	Overland Flow	Surcharge from Railway Drain along Main Street	0.1	60	2.1	60	0.9	60	2.9	60
Q19	Overland Flow	Surcharge from Railway Drain along Clarke Street	3.2	60	8.2	60	4.3	60	9.1	60
Q19-1	Overland Flow	Surcharge of Railway Drain at Burrangong Creek	1.0	60	3.8	60	2.4	60	5.1	60
Q20	Chance Gully	Upstream of William Street	8.7	60	15.4	60	8.9	60	16.4	25
Q21	Chance Gully	Across Edwards Street	6.5	60	14.7	60	7.2	60	15.9	60
Q22	Overland Flow	Along Nasmyth Street	2.7	60	7.4	60	3.3	60	8.0	60
Q23	Golf Course Drain	Across Edwards Street	1.7	60	3.5	60	1.7	60	3.5	60
Q24	Overland Flow	Surcharge Golf Course drain under Railway	2.9	60	8.9	60	3.8	60	9.6	60
Q25	Overland Flow	Along Boorowa Street	3.8	60	12.2	60	5.1	60	13.6	60

Cont'd Over

TABLE E2 (Cont'd)
PEAK FLOWS DERIVED BY TUFLOW MODEL
(m³/s)

LACE ID	Tributary	Location	Present Day				Future Urbanisation			
			20 year ARI		100 year ARI		20 year ARI		100 year ARI	
			Discharge	Critical Duration	Discharge	Critical Duration	Discharge	Critical Duration	Discharge	Critical Duration
Q26	Burrangong Creek	Downstream of Clarke Street Pedestrian Bridge	79.0	180	137.1	120	79.0	180	137.1	120
Q27	Burrangong Creek	Upstream of Big Spring Creek Confluence	84.1	180	151.9	120	84.1	180	151.9	120
Q28	Big Spring Creek	Upstream Extent of Model	19.9	180	34.2	120	19.9	180	34.2	120
Q29	Big Spring Creek Tributary	Downstream of Olympic Highway	13.9	180	23.9	120	13.9	180	23.9	120
Q30	Big Spring Creek	Downstream of Pestells Lane	33.9	180	60.5	120	34.5	180	61.3	120
Q31	Big Spring Creek	Downstream of Malvicinos Road	33.8	180	60.3	120	33.8	180	60.3	120
Q32	Big Spring Creek	Downstream of Hardys Road	40.9	180	73.7	120	40.9	180	73.7	120
Q33	Big Spring Creek	Downstream of Spring Creek Road	44.7	180	77.0	120	44.7	180	77.0	120
Q34	Big Spring Creek	Downstream of Little Spring Creek Confluence	56.1	180	96.9	120	56.1	180	96.9	120
Q35	Burrangong Creek	Downstream of Milvale Road	144.8	180	253.4	120	145.5	180	254.8	120
Q36	Burrangong Creek	Upstream of Chillingworks Road	138.7	180	243.7	120	138.8	180	244.8	120
Q37	Burrangong Creek	Sewage Treatment Plant	153.4	180	272.0	120	154.4	180	274.2	120