

APPENDIX 5

Design Manual for Roads and Bridges (DMRB)

Traffic Emissions Assessment

Current receptor			
Receptor Name	Queen St 20mph	Receptor number	2
Assessment year	2010		

Results							
Pollutant	Annual mean				For comparison with Air Quality Standards		
	Background concentration	Road traffic component	Total	Units	Metric	Value	Units
CO	0.07	0.25	0.32	mg/m ³	Annual mean*	0.32	mg/m ³
Benzene	0.04	0.25	0.29	µg/m ³	Annual mean	0.29	µg/m ³
1,3-butadiene	0.01	0.30	0.31	µg/m ³	Annual mean	0.31	µg/m ³
NO _x	3.0	61.9	64.9	µg/m ³	Not applicable		
NO ₂	2.4	15.1	17.5	µg/m ³	Annual mean*	17.5	µg/m ³
PM ₁₀	14.5	6.70	21.20	µg/m ³	Annual mean	21.2	µg/m ³
					Days >50µg/m ³	5	Days

Contribution of each link to annual mean					
Link number	CO (mg/m ³)	Benzene (µg/m ³)	1,3-butadiene (µg/m ³)	NO _x (µg/m ³)	PM ₁₀ (µg/m ³)
1	0.08	0.08	0.10	20.65	2.24
2	0.08	0.08	0.10	20.65	2.24
3	0.08	0.08	0.09	19.49	2.11
4	0.00	0.00	0.01	1.07	0.12
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

* See Footnote 4 in DMRB Volume 11 Chapter 3

All receptors			Pollutant concentrations at receptor						
Receptor number	Name	Year	CO *	Benzene	1,3-butadiene	NO _x	NO ₂ *	PM ₁₀	
			Annual mean mg/m ³	Annual mean	Annual mean µg/m ³	Annual mean µg/m ³	Annual mean	Days >50µg/m ³	
1	Queen St 10mph	2010	0.47	0.40	0.48	82.62	20.52	23.78	9.66
2	Queen St 20mph	2010	0.32	0.29	0.31	64.89	17.50	21.20	5.04
3	N College St 10mph	2010	0.33	0.28	0.33	56.18	15.89	20.70	4.31
4	N College St 20mph	2010	0.23	0.21	0.21	44.34	13.54	18.97	2.26
5	Speybay 10mph	2010	0.25	0.19	0.28	50.13	14.72	19.63	2.97
6	Speybay 20mph	2010	0.18	0.14	0.18	38.93	12.40	18.11	1.49
7	N College Street 10mph	2005	0.43	0.37	0.46	78.95	20.29	25.55	13.75
8	N College Street 20mph	2005	0.29	0.26	0.29	61.80	17.29	22.42	7.03
9	Queen Street 10mph	2005	0.60	0.53	0.67	116.39	25.95	30.80	30.57
10	Queen Street 20mph	2005	0.40	0.37	0.43	90.72	22.18	26.12	15.21
11	Speybay 10mph	2005	0.31	0.25	0.38	70.45	18.84	23.98	10.08
12	Speybay 20mph	2005	0.22	0.18	0.24	54.30	15.88	21.17	4.99
13	N College Street 10mph	2004	0.39	0.37	0.48	78.39	18.15	26.02	14.96
14	N College Street 20mph	2004	0.24	0.25	0.30	60.66	15.11	22.67	7.49
15	Speybay 10mph	2004	0.26	0.24	0.40	69.39	16.65	24.34	10.87
16	Speybay 20mph	2004	0.16	0.16	0.25	52.68	13.63	21.36	5.27
17	Queen St 10mph	2004	0.59	0.56	0.73	117.37	23.95	31.55	33.58
18	Queen St 20mph	2004	0.36	0.37	0.46	90.84	20.12	26.55	16.39

* See Footnote 4 in DMRB Volume 11 Chapter 3