

APPENDIX 5I

**Tunnel Emission
Calculations**

Project: HKBCF / HKLR EIA
 Title: Calculations of Portal Emission and Emission from Ventilation Buildings
 Year: 2031
 Date: 22-Jul-09
 Parameter: Nox emission during peak hour

Tunnel	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow (veh/hr)	Emission Factor (g/mile-veh)	Total Emission (g/hr)	Total Emission (g/s)	to Vent Bld (g/s)	to each Portal (g/s)	first 50m (each)	2nd 50m (each)	Remark
HKLR (EB)	EB	1110	0.690	1121	1.926	1489.460	0.414	-	0.124	0.01655	0.00827	
HKLR (WB)	WB	1110	0.690	982	1.961	1328.483	0.369	-	0.111	0.01476	0.00738	
Ventilation Bld_HKLR	-	-	-	-	-	-	-	0.548	-	-	-	70% to vent buildings
BCF HK Tunnel	SB	882	0.548	344	0.502	94.662	0.026	-	0.026	0.00351	0.00175	Jet fan 100%
HZMB-Main Bridge (Eastern)	EB	7000	4.351	1121	1.926	9392.991	2.609	-	0.783	0.10437	0.05218	
HZMB-Main Bridge (Western)	WB	7000	4.351	982	1.961	8377.821	2.327	-	0.698	0.09309	0.04654	
HZMB-Main Bridge Vent Bld (Eastern)	-	-	-	-	-	-	-	1.728	-	-	-	70% to vent buildings
HZMB-Main Bridge Vent Bld (Western)	-	-	-	-	-	-	-	1.728	-	-	-	50%/50% split into 2 vent buildings
TMCLKL (SB)	SB	-	-	-	-	-	-	-	-	0.05170	0.02580	Provided by TMCLKL's Consultant
Ventilation Bld_TMCLKL	-	-	-	-	-	-	-	2.790	-	-	-	

Project: HKBCF / HKLR EIA
Title: Calculations of Portal Emission and Emission from Ventilation Buildings
Year: 2031
Date: 22-Jul-09
Parameter: RSP emission during peak hour

Tunnel	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow (veh/hr)	Emission Factor (g/mile-veh)	Total Emission (g/hr)	Total Emission (g/s)	to Vent Bld (g/s)	to each Portal (g/s)	first 50m (each)	2nd 50m (each)	Remark
HKLR (EB)	EB	1110	0.690	1121	0.034	26.294	0.007	-	0.002	0.00029	0.00015	70% to vent buildings
HKLR (WB)	WB	1110	0.690	982	0.035	23.711	0.007	-	0.002	0.00026	0.00013	
Ventilation Bld_HKLR	-	-	-	-	-	-	-	0.010	-	-	-	
BCF HK Tunnel	SB	882	0.548	344	0.027	5.091	0.001	-	0.001	0.00019	0.00009	Jet fan 100%
HZMB-Main Bridge (Eastern)	EB	7000	4.351	1121	0.034	165.816	0.046	-	0.014	0.00184	0.00092	70% to vent buildings
HZMB-Main Bridge (Western)	WB	7000	4.351	982	0.035	149.528	0.042	-	0.012	0.00166	0.00083	
HZMB-Main Bridge Vent Bld (Eastern)	-	-	-	-	-	-	-	0.031	-	-	-	
HZMB-Main Bridge Vent Bld (Western)	-	-	-	-	-	-	-	0.031	-	-	-	50%/50% split into 2 vent buildings
TMCLKL (SB)	SB	-	-	-	-	-	-	-	-	0.00170	0.00080	Provided by TMCLKL's Consultant
Ventilation Bld_TMCLKL	-	-	-	-	-	-	-	0.090	-	-	-	