

Appendix 4.13 Details of Portal Emissions (Operational Phase)
 Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report on Road Improvement Works

Portal Emissions for NCWBR RIW (Operational Phase)

24 hour NOx Emission Factor (g/mile-veh) and Traffic Profile (Year 2020)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf		
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	386	0.635	263	0.634	188	0.625	138	0.612	181	0.460	210	0.656	489	0.714	1089	0.726	1399	0.580	1118	0.689	871	0.683	791	0.651	782	0.680	737	0.996	743	0.921	801	1.092	950	1.138	1023	0.969	1061	0.746	851	0.671	680	0.666	636	0.619	637	0.639	550	0.640

24 hour NOx Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	1.68E-01	4.65E-03	1.14E-01	3.17E-03	8.02E-02	2.23E-03	5.75E-02	1.60E-03	5.68E-02	1.58E-03	9.44E-02	2.62E-03	2.39E-01	6.63E-03	5.41E-01	1.50E-02	5.54E-01	1.54E-02	5.26E-01	1.46E-02	4.06E-01	1.13E-02	3.52E-01	9.78E-03	3.63E-01	1.01E-02	5.02E-01	1.39E-02	4.68E-01	1.30E-02	5.98E-01	1.66E-02	7.39E-01	2.05E-02	6.77E-01	1.88E-02	5.41E-01	1.50E-02	3.91E-01	1.08E-02	3.10E-01	8.60E-03	2.69E-01	7.48E-03	2.78E-01	7.73E-03	2.40E-01	6.68E-03

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Portal Emissions for NCWBR RIW (Operational Phase)

24 hour RSP Emission Factor (g/mile-veh) and Traffic Profile (Year 2026)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf		
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	438	0.027	299	0.027	213	0.027	156	0.027	211	0.018	246	0.027	571	0.029	1272	0.029	1633	0.023	1304	0.027	1015	0.027	923	0.025	912	0.027	826	0.045	830	0.041	899	0.053	1068	0.056	1151	0.045	1199	0.032	966	0.029	770	0.029	721	0.026	723	0.027	624	0.027

24 hour RSP Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s	g/hr	g/s			
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	8.06E-01	2.24E-04	5.53E-01	1.53E-04	3.94E-01	1.10E-04	2.89E-01	8.02E-05	2.55E-01	7.08E-05	4.61E-01	1.28E-04	1.12E+00	3.12E-04	2.52E+00	7.00E-04	2.60E+00	7.23E-04	2.41E+00	6.68E-04	1.86E+00	5.15E-04	1.61E+00	4.46E-04	1.71E+00	4.76E-04	2.55E+00	7.08E-04	2.31E+00	6.41E-04	3.25E+00	9.03E-04	4.07E+00	1.13E-03	3.51E+00	9.74E-04	2.61E+00	7.26E-04	1.92E+00	5.34E-04	1.51E+00	4.19E-04	1.29E+00	3.60E-04	1.34E+00	3.72E-04	1.15E+00	3.20E-04

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Portal Emissions for NCWBR RIW (Operational Phase)

24 hour FSP Emission Factor (g/mile-veh) and Traffic Profile (Year 2026)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf	Flow	Emf		
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	438	0.025	299	0.025	213	0.025	156	0.025	211	0.016	246	0.025	571	0.027	1272	0.027	1633	0.021	1304	0.025	1015	0.025	923	0.023	912	0.025	826	0.042	830	0.037	899	0.049	1068	0.051	1151	0.041	1199	0.029	966	0.027	770	0.026	721	0.024	723	0.025	624	0.025

24 hour FSP Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)
New Clear Water Bay Road	Proposed Full Enclosure	WB	110	0.0684	7.42E-01	2.06E-04	5.09E-01	1.41E-04	3.63E-01	1.01E-04	2.66E-01	7.39E-05	2.35E-01	6.52E-05	4.24E-01	1.18E-04	1.03E+00	2.87E-04	2.32E+00	6.44E-04	2.39E+00	6.65E-04	2.21E+00	6.15E-04	1.71E+00	4.74E-04	1.48E+00	4.11E-04	1.58E+00	4.38E-04	2.35E+00	6.52E-04	2.12E+00	5.89E-04	2.99E+00	8.31E-04	3.75E+00	1.04E-03	3.23E+00	8.96E-04	2.40E+00	6.68E-04	1.77E+00	4.91E-04	1.39E+00	3.86E-04	1.19E+00	3.31E-04	1.23E+00	3.42E-04	1.06E+00	2.95E-04

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Portal Emissions for NCWBR RW (Operational Phase)

NOx Emission Inventory for Portal Emissions at Year 2020

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Portal Source Group	Ref. Link ID1	Ref. Link ID2	Portal Source ID	1st Half/2nd Half	AvgFactor	Tunnel Length (mils)	Emission Rate (g/s)																							
																Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
NCWB01	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841018.3	821501.2	104.8	5	4.65	2.33		24		NCWB01	1	5	0.0559234	6.21E-04	4.23E-04	2.97E-04	2.13E-04	2.10E-04	3.49E-04	8.84E-04	2.00E-03	2.05E-03	1.95E-03	1.51E-03	1.30E-03	1.35E-03	1.86E-03	1.73E-03	2.21E-03	2.74E-03	2.51E-03	2.00E-03	1.45E-03	1.15E-03	9.97E-04	1.03E-03	8.91E-04
NCWB02	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841010.9	821504.8	104.8	5	4.65	2.33		24		NCWB02	1	5	0.0559234	6.21E-04	4.23E-04	2.97E-04	2.13E-04	2.10E-04	3.49E-04	8.84E-04	2.00E-03	2.05E-03	1.95E-03	1.51E-03	1.30E-03	1.35E-03	1.86E-03	1.73E-03	2.21E-03	2.74E-03	2.51E-03	2.00E-03	1.45E-03	1.15E-03	9.97E-04	1.03E-03	8.91E-04
NCWB03	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841003.4	821508.4	104.8	5	4.65	2.33		24		NCWB03	1	5	0.0559234	6.21E-04	4.23E-04	2.97E-04	2.13E-04	2.10E-04	3.49E-04	8.84E-04	2.00E-03	2.05E-03	1.95E-03	1.51E-03	1.30E-03	1.35E-03	1.86E-03	1.73E-03	2.21E-03	2.74E-03	2.51E-03	2.00E-03	1.45E-03	1.15E-03	9.97E-04	1.03E-03	8.91E-04
NCWB04	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840995.9	821512.0	104.8	5	4.65	2.33		24		NCWB04	1	5	0.0559234	6.21E-04	4.23E-04	2.97E-04	2.13E-04	2.10E-04	3.49E-04	8.84E-04	2.00E-03	2.05E-03	1.95E-03	1.51E-03	1.30E-03	1.35E-03	1.86E-03	1.73E-03	2.21E-03	2.74E-03	2.51E-03	2.00E-03	1.45E-03	1.15E-03	9.97E-04	1.03E-03	8.91E-04
NCWB05	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840988.5	821515.7	104.8	5	4.65	2.33		24		NCWB05	1	5	0.0559234	6.21E-04	4.23E-04	2.97E-04	2.13E-04	2.10E-04	3.49E-04	8.84E-04	2.00E-03	2.05E-03	1.95E-03	1.51E-03	1.30E-03	1.35E-03	1.86E-03	1.73E-03	2.21E-03	2.74E-03	2.51E-03	2.00E-03	1.45E-03	1.15E-03	9.97E-04	1.03E-03	8.91E-04
NCWB06	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840981.0	821519.3	104.8	5	4.65	2.33		24		NCWB06	2	5	0.0559234	3.10E-04	2.11E-04	1.48E-04	1.07E-04	1.05E-04	1.75E-04	4.42E-04	1.00E-03	1.03E-03	9.75E-04	7.53E-04	6.52E-04	6.73E-04	9.29E-04	8.66E-04	1.11E-03	1.37E-03	1.25E-03	1.00E-03	7.23E-04	5.74E-04	4.99E-04	5.16E-04	4.45E-04
NCWB07	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840973.5	821522.9	104.8	5	4.65	2.33		24		NCWB07	2	5	0.0559234	3.10E-04	2.11E-04	1.48E-04	1.07E-04	1.05E-04	1.75E-04	4.42E-04	1.00E-03	1.03E-03	9.75E-04	7.53E-04	6.52E-04	6.73E-04	9.29E-04	8.66E-04	1.11E-03	1.37E-03	1.25E-03	1.00E-03	7.23E-04	5.74E-04	4.99E-04	5.16E-04	4.45E-04
NCWB08	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840966.0	821526.5	104.8	5	4.65	2.33		24		NCWB08	2	5	0.0559234	3.10E-04	2.11E-04	1.48E-04	1.07E-04	1.05E-04	1.75E-04	4.42E-04	1.00E-03	1.03E-03	9.75E-04	7.53E-04	6.52E-04	6.73E-04	9.29E-04	8.66E-04	1.11E-03	1.37E-03	1.25E-03	1.00E-03	7.23E-04	5.74E-04	4.99E-04	5.16E-04	4.45E-04
NCWB09	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840958.6	821530.1	104.8	5	4.65	2.33		24		NCWB09	2	5	0.0559234	3.10E-04	2.11E-04	1.48E-04	1.07E-04	1.05E-04	1.75E-04	4.42E-04	1.00E-03	1.03E-03	9.75E-04	7.53E-04	6.52E-04	6.73E-04	9.29E-04	8.66E-04	1.11E-03	1.37E-03	1.25E-03	1.00E-03	7.23E-04	5.74E-04	4.99E-04	5.16E-04	4.45E-04
NCWB10	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840951.1	821533.7	104.8	5	4.65	2.33		24		NCWB10	2	5	0.0559234	3.10E-04	2.11E-04	1.48E-04	1.07E-04	1.05E-04	1.75E-04	4.42E-04	1.00E-03	1.03E-03	9.75E-04	7.53E-04	6.52E-04	6.73E-04	9.29E-04	8.66E-04	1.11E-03	1.37E-03	1.25E-03	1.00E-03	7.23E-04	5.74E-04	4.99E-04	5.16E-04	4.45E-04

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RSP Emission Inventory for Portal Emissions at Year 2026

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Emission Rate (g/s)																							
									Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
NCWB01	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841018.3	821501.2	104.8	5	4.65	2.33	2.99E-05	2.05E-05	1.46E-05	1.07E-05	9.44E-06	1.71E-05	4.16E-05	9.33E-05	9.63E-05	8.91E-05	6.87E-05	5.95E-05	6.35E-05	9.44E-05	8.54E-05	1.20E-04	1.51E-04	1.30E-04	9.67E-05	7.12E-05	5.59E-05	4.80E-05	4.96E-05	4.27E-05
NCWB02	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841010.9	821504.8	104.8	5	4.65	2.33	2.99E-05	2.05E-05	1.46E-05	1.07E-05	9.44E-06	1.71E-05	4.16E-05	9.33E-05	9.63E-05	8.91E-05	6.87E-05	5.95E-05	6.35E-05	9.44E-05	8.54E-05	1.20E-04	1.51E-04	1.30E-04	9.67E-05	7.12E-05	5.59E-05	4.80E-05	4.96E-05	4.27E-05
NCWB03	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841003.4	821508.4	104.8	5	4.65	2.33	2.99E-05	2.05E-05	1.46E-05	1.07E-05	9.44E-06	1.71E-05	4.16E-05	9.33E-05	9.63E-05	8.91E-05	6.87E-05	5.95E-05	6.35E-05	9.44E-05	8.54E-05	1.20E-04	1.51E-04	1.30E-04	9.67E-05	7.12E-05	5.59E-05	4.80E-05	4.96E-05	4.27E-05
NCWB04	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840995.9	821512.0	104.8	5	4.65	2.33	2.99E-05	2.05E-05	1.46E-05	1.07E-05	9.44E-06	1.71E-05	4.16E-05	9.33E-05	9.63E-05	8.91E-05	6.87E-05	5.95E-05	6.35E-05	9.44E-05	8.54E-05	1.20E-04	1.51E-04	1.30E-04	9.67E-05	7.12E-05	5.59E-05	4.80E-05	4.96E-05	4.27E-05
NCWB05	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840988.5	821515.7	104.8	5	4.65	2.33	2.99E-05	2.05E-05	1.46E-05	1.07E-05	9.44E-06	1.71E-05	4.16E-05	9.33E-05	9.63E-05	8.91E-05	6.87E-05	5.95E-05	6.35E-05	9.44E-05	8.54E-05	1.20E-04	1.51E-04	1.30E-04	9.67E-05	7.12E-05	5.59E-05	4.80E-05	4.96E-05	4.27E-05
NCWB06	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840981.0	821519.3	104.8	5	4.65	2.33	1.49E-05	1.02E-05	7.30E-06	5.35E-06	4.72E-06	8.54E-06	2.08E-05	4.67E-05	4.82E-05	4.46E-05	3.44E-05	2.98E-05	3.17E-05	4.72E-05	4.27E-05	6.02E-05	7.54E-05	6.49E-05	4.84E-05	3.56E-05	2.79E-05	2.40E-05	2.48E-05	2.14E-05
NCWB07	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840973.5	821522.9	104.8	5	4.65	2.33	1.49E-05	1.02E-05	7.30E-06	5.35E-06	4.72E-06	8.54E-06	2.08E-05	4.67E-05	4.82E-05	4.46E-05	3.44E-05	2.98E-05	3.17E-05	4.72E-05	4.27E-05	6.02E-05	7.54E-05	6.49E-05	4.84E-05	3.56E-05	2.79E-05	2.40E-05	2.48E-05	2.14E-05
NCWB08	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840966.0	821526.5	104.8	5	4.65	2.33	1.49E-05	1.02E-05	7.30E-06	5.35E-06	4.72E-06	8.54E-06	2.08E-05	4.67E-05	4.82E-05	4.46E-05	3.44E-05	2.98E-05	3.17E-05	4.72E-05	4.27E-05	6.02E-05	7.54E-05	6.49E-05	4.84E-05	3.56E-05	2.79E-05	2.40E-05	2.48E-05	2.14E-05
NCWB09	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840958.6	821530.1	104.8	5	4.65	2.33	1.49E-05	1.02E-05	7.30E-06	5.35E-06	4.72E-06	8.54E-06	2.08E-05	4.67E-05	4.82E-05	4.46E-05	3.44E-05	2.98E-05	3.17E-05	4.72E-05	4.27E-05	6.02E-05	7.54E-05	6.49E-05	4.84E-05	3.56E-05	2.79E-05	2.40E-05	2.48E-05	2.14E-05
NCWB10	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840951.1	821533.7	104.8	5	4.65	2.33	1.49E-05	1.02E-05	7.30E-06	5.35E-06	4.72E-06	8.54E-06	2.08E-05	4.67E-05	4.82E-05	4.46E-05	3.44E-05	2.98E-05	3.17E-05	4.72E-05	4.27E-05	6.02E-05	7.54E-05	6.49E-05	4.84E-05	3.56E-05	2.79E-05	2.40E-05	2.48E-05	2.14E-05

Appendix 4.13 Details of Portal Emissions (Operational Phase)
 Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report on Road Improvement Works

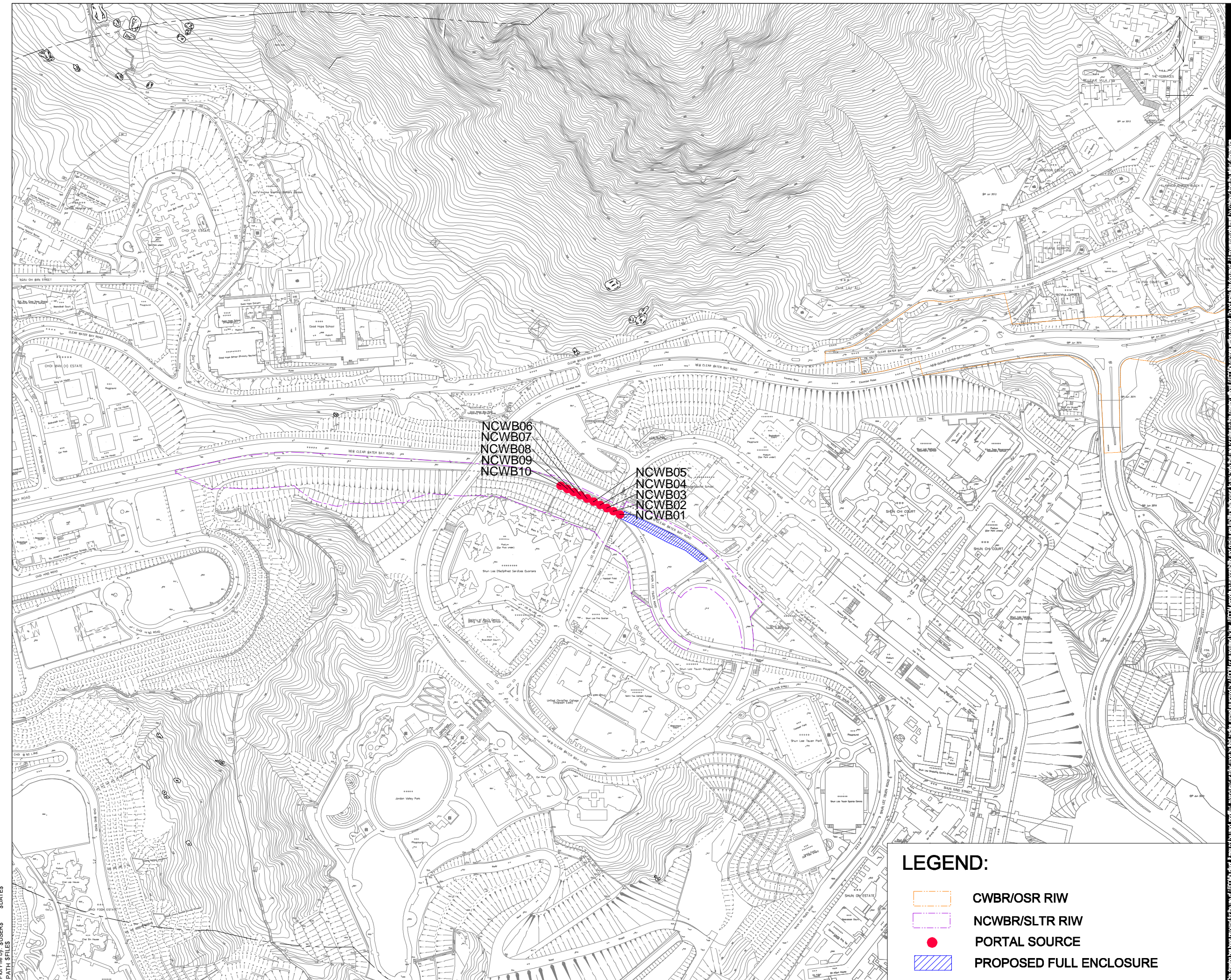
Portal Emissions for NCWBR RIW (Operational Phase)

FSP Emission Inventory for Portal Emissions at Year 2026

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Emission Rate (g/s)																							
									Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
NCWB01	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841018.3	821501.2	104.8	5	4.65	2.33	2.75E-05	1.88E-05	1.34E-05	9.85E-06	8.69E-06	1.57E-05	3.83E-05	8.59E-05	8.86E-05	8.20E-05	6.32E-05	5.48E-05	5.84E-05	8.69E-05	7.86E-05	1.11E-04	1.39E-04	1.20E-04	8.90E-05	6.55E-05	5.14E-05	4.41E-05	4.56E-05	3.93E-05
NCWB02	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841010.9	821504.8	104.8	5	4.65	2.33	2.75E-05	1.88E-05	1.34E-05	9.85E-06	8.69E-06	1.57E-05	3.83E-05	8.59E-05	8.86E-05	8.20E-05	6.32E-05	5.48E-05	5.84E-05	8.69E-05	7.86E-05	1.11E-04	1.39E-04	1.20E-04	8.90E-05	6.55E-05	5.14E-05	4.41E-05	4.56E-05	3.93E-05
NCWB03	Full Enclosure Portal (New Clear Water Bay Road)	Volume	841003.4	821508.4	104.8	5	4.65	2.33	2.75E-05	1.88E-05	1.34E-05	9.85E-06	8.69E-06	1.57E-05	3.83E-05	8.59E-05	8.86E-05	8.20E-05	6.32E-05	5.48E-05	5.84E-05	8.69E-05	7.86E-05	1.11E-04	1.39E-04	1.20E-04	8.90E-05	6.55E-05	5.14E-05	4.41E-05	4.56E-05	3.93E-05
NCWB04	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840995.9	821512.0	104.8	5	4.65	2.33	2.75E-05	1.88E-05	1.34E-05	9.85E-06	8.69E-06	1.57E-05	3.83E-05	8.59E-05	8.86E-05	8.20E-05	6.32E-05	5.48E-05	5.84E-05	8.69E-05	7.86E-05	1.11E-04	1.39E-04	1.20E-04	8.90E-05	6.55E-05	5.14E-05	4.41E-05	4.56E-05	3.93E-05
NCWB05	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840988.5	821515.7	104.8	5	4.65	2.33	2.75E-05	1.88E-05	1.34E-05	9.85E-06	8.69E-06	1.57E-05	3.83E-05	8.59E-05	8.86E-05	8.20E-05	6.32E-05	5.48E-05	5.84E-05	8.69E-05	7.86E-05	1.11E-04	1.39E-04	1.20E-04	8.90E-05	6.55E-05	5.14E-05	4.41E-05	4.56E-05	3.93E-05
NCWB06	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840981.0	821519.3	104.8	5	4.65	2.33	1.37E-05	9.42E-06	6.72E-06	4.93E-06	4.35E-06	7.85E-06	1.91E-05	4.29E-05	4.43E-05	4.10E-05	3.16E-05	2.74E-05	2.92E-05	4.34E-05	3.93E-05	5.54E-05	6.94E-05	5.98E-05	4.45E-05	3.27E-05	2.57E-05	2.20E-05	2.28E-05	1.97E-05
NCWB07	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840973.5	821522.9	104.8	5	4.65	2.33	1.37E-05	9.42E-06	6.72E-06	4.93E-06	4.35E-06	7.85E-06	1.91E-05	4.29E-05	4.43E-05	4.10E-05	3.16E-05	2.74E-05	2.92E-05	4.34E-05	3.93E-05	5.54E-05	6.94E-05	5.98E-05	4.45E-05	3.27E-05	2.57E-05	2.20E-05	2.28E-05	1.97E-05
NCWB08	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840966.0	821526.5	104.8	5	4.65	2.33	1.37E-05	9.42E-06	6.72E-06	4.93E-06	4.35E-06	7.85E-06	1.91E-05	4.29E-05	4.43E-05	4.10E-05	3.16E-05	2.74E-05	2.92E-05	4.34E-05	3.93E-05	5.54E-05	6.94E-05	5.98E-05	4.45E-05	3.27E-05	2.57E-05	2.20E-05	2.28E-05	1.97E-05
NCWB09	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840958.6	821530.1	104.8	5	4.65	2.33	1.37E-05	9.42E-06	6.72E-06	4.93E-06	4.35E-06	7.85E-06	1.91E-05	4.29E-05	4.43E-05	4.10E-05	3.16E-05	2.74E-05	2.92E-05	4.34E-05	3.93E-05	5.54E-05	6.94E-05	5.98E-05	4.45E-05	3.27E-05	2.57E-05	2.20E-05	2.28E-05	1.97E-05
NCWB10	Full Enclosure Portal (New Clear Water Bay Road)	Volume	840951.1	821533.7	104.8	5	4.65	2.33	1.37E-05	9.42E-06	6.72E-06	4.93E-06	4.35E-06	7.85E-06	1.91E-05	4.29E-05	4.43E-05	4.10E-05	3.16E-05	2.74E-05	2.92E-05	4.34E-05	3.93E-05	5.54E-05	6.94E-05	5.98E-05	4.45E-05	3.27E-05	2.57E-05	2.20E-05	2.28E-05	1.97E-05

NO.	DATE	DESCRIPTION	CHK.

NO.	DATE	DESCRIPTION	CHK.



NCWB06
NCWB07
NCWB08
NCWB09
NCWB10

NCWB05
NCWB04
NCWB03
NCWB02
NCWB01

LEGEND:

- CWBR/OSR RIW
- NCWBR/SLTR RIW
- PORTAL SOURCE
- PROPOSED FULL ENCLOSURE

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report for Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

24 hour NOx Emission Factor (g/mile-veh) and Traffic Profile (Year 2022)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)	Flow (veh/hr)	Emf (g/mile-veh)		
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwan Tong Side	To Kwun Tong	857	0.5325	750	0.439	524	0.442	389	0.446	276	0.453	317	0.424	364	0.642	802	0.644	2070	0.676	2340	0.611	2168	0.641	1843	0.675	1667	0.763	1599	0.831	1336	0.797	1354	0.764	1443	0.756	1523	0.744	1740	0.722	1942	0.583	1717	0.536	1337	0.507	1307	0.523	1346	0.452	1121	0.450
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	60	1.093	41	1.049	29	1.060	21	1.058	23	1.000	27	1.236	62	1.371	139	1.366	174	1.036	140	1.059	107	1.045	99	1.022	98	1.074	100	1.181	97	1.077	113	1.250	137	1.266	147	1.201	158	1.056	133	1.055	104	1.034	98	1.009	99	1.061	86	1.058
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	47	1.317	32	1.258	23	1.269	17	1.269	23	0.986	27	1.218	64	1.351	141	1.346	177	1.021	142	1.045	109	1.031	101	1.009	100	1.059	79	1.334	75	1.213	88	1.390	108	1.403	115	1.368	123	1.243	103	1.256	80	1.228	76	1.207	77	1.272	67	1.269

24 hour NOx Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwan Tong Side	To Kwun Tong	857	0.5325	1.76E+02	4.88E-02	1.23E+02	3.43E-02	9.25E+01	2.57E-02	6.67E+01	1.85E-02	7.16E+01	1.99E-02	1.24E+02	3.46E-02	2.75E+02	7.63E-02	7.45E+02	2.07E-01	7.62E+02	2.12E-01	7.40E+02	2.06E-01	6.62E+02	1.84E-01	6.77E+02	1.88E-01	7.07E+02	1.96E-01	5.67E+02	1.57E-01	5.51E+02	1.53E-01	5.81E+02	1.61E-01	6.03E+02	1.68E-01	6.69E+02	1.86E-01	6.02E+02	1.67E-01	4.90E+02	1.36E-01	3.61E+02	1.00E-01	3.64E+02	1.01E-01	3.24E+02	8.99E-02	2.68E+02	7.45E-02
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	5.90E+00	1.64E-03	3.84E+00	1.07E-03	2.77E+00	7.71E-04	2.03E+00	5.63E-04	2.14E+00	5.94E-04	3.07E+00	8.52E-04	7.93E+00	2.20E-03	1.76E+01	4.88E-03	1.67E+01	4.65E-03	1.37E+01	3.81E-03	1.04E+01	2.90E-03	9.38E+00	2.61E-03	9.79E+00	2.72E-03	1.03E+01	2.87E-03	9.07E+00	2.52E-03	1.22E+01	3.39E-03	1.50E+01	4.18E-03	1.55E+01	4.29E-03	1.48E+01	4.12E-03	1.25E+01	3.47E-03	9.54E+00	2.65E-03	8.86E+00	2.46E-03	9.42E+00	2.62E-03	8.11E+00	2.25E-03
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	5.90E+00	1.64E-03	3.84E+00	1.07E-03	2.77E+00	7.71E-04	2.03E+00	5.63E-04	2.14E+00	5.94E-04	3.07E+00	8.52E-04	7.93E+00	2.20E-03	1.76E+01	4.88E-03	1.67E+01	4.65E-03	1.37E+01	3.81E-03	1.04E+01	2.90E-03	9.38E+00	2.61E-03	9.79E+00	2.72E-03	1.03E+01	2.87E-03	9.07E+00	2.52E-03	1.22E+01	3.39E-03	1.50E+01	4.18E-03	1.55E+01	4.29E-03	1.48E+01	4.12E-03	1.25E+01	3.47E-03	9.54E+00	2.65E-03	8.86E+00	2.46E-03	9.42E+00	2.62E-03	8.11E+00	2.25E-03

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report for Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

24 hour RSP Emission Factor (g/mile-veh) and Traffic Profile (Year 2026)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF		
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	To Kwun Tong	857	0.5325	754	0.022	527	0.022	391	0.023	278	0.023	319	0.018	366	0.038	806	0.038	2082	0.035	2353	0.028	2180	0.029	1853	0.032	1676	0.038	1607	0.044	1343	0.044	1361	0.042	1451	0.043	1531	0.042	1749	0.040	1952	0.030	1726	0.027	1344	0.025	1314	0.028	1353	0.021	1127	0.022
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	139	0.019	94	0.019	67	0.020	49	0.020	51	0.024	59	0.033	136	0.033	303	0.032	394	0.026	309	0.027	239	0.027	219	0.025	217	0.027	229	0.039	226	0.035	259	0.050	318	0.054	339	0.039	366	0.023	306	0.021	241	0.021	229	0.019	229	0.019	197	0.019
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	102	0.022	69	0.022	49	0.024	36	0.023	62	0.022	71	0.031	163	0.031	364	0.030	476	0.024	372	0.025	288	0.025	264	0.023	261	0.025	170	0.043	167	0.038	193	0.055	237	0.058	251	0.043	269	0.027	224	0.024	176	0.024	167	0.022	168	0.023	145	0.023

24 hour RSP Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)		
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	To Kwun Tong	857	0.5325	8.99E+00	2.50E-03	6.30E+00	1.75E-03	4.73E+00	1.31E-03	3.43E+00	9.52E-04	3.04E+00	8.44E-04	7.41E+00	2.06E-03	1.63E+01	4.54E-03	3.85E+01	1.07E-02	3.55E+01	9.86E-03	3.41E+01	9.46E-03	3.16E+01	8.79E-03	3.41E+01	9.48E-03	3.72E+01	1.03E-02	3.18E+01	8.83E-03	3.04E+01	8.44E-03	3.30E+01	9.18E-03	3.44E+01	9.55E-03	3.74E+01	1.04E-02	3.08E+01	8.56E-03	2.52E+01	7.01E-03	1.81E+01	5.03E-03	1.93E+01	5.35E-03	1.55E+01	4.30E-03	1.34E+01	3.72E-03
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	2.23E-01	6.21E-05	1.56E-01	4.32E-05	1.17E-01	3.26E-05	8.31E-02	2.31E-05	1.19E-01	3.30E-05	1.90E-01	5.29E-05	4.43E-01	1.23E-04	9.65E-01	2.68E-04	9.96E-01	2.77E-04	8.20E-01	2.28E-04	6.26E-01	1.74E-04	5.39E-01	1.50E-04	5.76E-01	1.60E-04	7.58E-01	2.11E-04	6.62E-01	1.84E-04	1.09E+00	3.03E-04	1.43E+00	3.98E-04	1.11E+00	3.10E-04	7.29E-01	2.03E-04	5.53E-01	1.54E-04	4.38E-01	1.22E-04	3.64E-01	1.01E-04	3.81E-01	1.06E-04	3.30E-01	9.16E-05
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	2.23E-01	6.21E-05	1.56E-01	4.32E-05	1.17E-01	3.26E-05	8.31E-02	2.31E-05	1.19E-01	3.30E-05	1.90E-01	5.29E-05	4.43E-01	1.23E-04	9.65E-01	2.68E-04	9.96E-01	2.77E-04	8.20E-01	2.28E-04	6.26E-01	1.74E-04	5.39E-01	1.50E-04	5.76E-01	1.60E-04	7.58E-01	2.11E-04	6.62E-01	1.84E-04	1.09E+00	3.03E-04	1.43E+00	3.98E-04	1.11E+00	3.10E-04	7.29E-01	2.03E-04	5.53E-01	1.54E-04	4.38E-01	1.22E-04	3.64E-01	1.01E-04	3.81E-01	1.06E-04	3.30E-01	9.16E-05

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report for Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

24 hour FSP Emission Factor (g/mile-veh) and Traffic Profile (Year 2026)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Traffic Flow and Emission Factor (g/mile-veh)																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF	Flow	EmF
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	To Kwun Tong	857	0.5325	754	0.021	527	0.021	391	0.021	278	0.021	319	0.016	366	0.035	806	0.035	2082	0.032	2353	0.026	2180	0.027	1853	0.029	1676	0.035	1607	0.040	1343	0.041	1361	0.039	1451	0.039	1531	0.039	1749	0.037	1952	0.027	1726	0.025	1344	0.023	1314	0.025	1353	0.020	1127	0.021
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	139	0.017	94	0.018	67	0.019	49	0.018	51	0.022	59	0.030	136	0.030	303	0.030	394	0.024	309	0.025	239	0.025	219	0.023	217	0.025	229	0.036	226	0.032	259	0.046	318	0.050	339	0.036	366	0.022	306	0.019	241	0.020	229	0.017	229	0.018	197	0.018
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	102	0.020	69	0.021	49	0.022	36	0.021	62	0.020	71	0.028	163	0.028	364	0.028	476	0.022	372	0.023	288	0.023	264	0.021	261	0.023	170	0.040	167	0.035	193	0.050	237	0.053	251	0.040	269	0.025	224	0.023	176	0.022	167	0.020	168	0.021	145	0.021

24 hour FSP Emission Rate - Tunnel Portals (100% of Total Emission)

Location	Source Description	Direction	Tunnel Length (m)	Tunnel Length (mile)	Emission Rate																																															
					Hour 01		Hour 02		Hour 03		Hour 04		Hour 05		Hour 06		Hour 07		Hour 08		Hour 09		Hour 10		Hour 11		Hour 12		Hour 13		Hour 14		Hour 15		Hour 16		Hour 17		Hour 18		Hour 19		Hour 20		Hour 21		Hour 22		Hour 23		Hour 24	
					(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)	(g/hr)	(g/s)
Tseung Kwan O Tunnel	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	To Kwun Tong	857	0.5325	8.26E+00	2.30E-03	5.80E+00	1.61E-03	4.36E+00	1.21E-03	3.15E+00	8.76E-04	2.80E+00	7.78E-04	6.82E+00	1.89E-03	1.50E+01	4.18E-03	3.54E+01	9.84E-03	3.27E+01	9.07E-03	3.13E+01	8.70E-03	2.91E+01	8.08E-03	3.14E+01	8.72E-03	3.43E+01	9.52E-03	2.92E+01	8.12E-03	2.79E+01	7.76E-03	3.04E+01	8.44E-03	3.16E+01	8.79E-03	3.44E+01	9.56E-03	2.84E+01	7.88E-03	2.32E+01	6.45E-03	1.67E+01	4.63E-03	1.77E+01	4.92E-03	1.43E+01	3.96E-03	1.23E+01	3.42E-03
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Eastern Side	-	149	0.0926	2.06E-01	5.72E-05	1.43E-01	3.97E-05	1.08E-01	2.99E-05	7.57E-02	2.10E-05	1.11E-01	3.07E-05	1.75E-01	4.86E-05	4.06E-01	1.13E-04	8.88E-01	2.47E-04	9.16E-01	2.54E-04	7.52E-01	2.09E-04	5.75E-01	1.60E-04	4.95E-01	1.38E-04	5.29E-01	1.47E-04	6.98E-01	1.94E-04	6.09E-01	1.69E-04	1.00E+00	2.79E-04	1.32E+00	3.66E-04	1.03E+00	2.85E-04	6.71E-01	1.86E-04	5.10E-01	1.42E-04	4.02E-01	1.12E-04	3.35E-01	9.31E-05	3.49E-01	9.70E-05	3.05E-01	8.47E-05
Underpass to Po Lam Road	Portal of Underpass to Po Lam Road at Western Side	-	149	0.0926	2.06E-01	5.72E-05	1.43E-01	3.97E-05	1.08E-01	2.99E-05	7.57E-02	2.10E-05	1.11E-01	3.07E-05	1.75E-01	4.86E-05	4.06E-01	1.13E-04	8.88E-01	2.47E-04	9.16E-01	2.54E-04	7.52E-01	2.09E-04	5.75E-01	1.60E-04	4.95E-01	1.38E-04	5.29E-01	1.47E-04	6.98E-01	1.94E-04	6.09E-01	1.69E-04	1.00E+00	2.79E-04	1.32E+00	3.66E-04	1.03E+00	2.85E-04	6.71E-01	1.86E-04	5.10E-01	1.42E-04	4.02E-01	1.12E-04	3.35E-01	9.31E-05	3.49E-01	9.70E-05	3.05E-01	8.47E-05

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report on Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

NOx Emission Inventory for Portal Emissions at Year 2022

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Emission Rate (g/s)																							
									Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
TTW01	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843056.2	819795.5	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW02	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843050.6	819791.4	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW03	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843044.9	819787.2	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW04	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843039.2	819783.1	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW05	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843033.6	819779.0	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW06	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843027.9	819774.9	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW07	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843022.2	819770.8	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW08	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843016.6	819766.7	81.1	3.8	3.26	3.53	4.06E-03	2.86E-03	2.14E-03	1.54E-03	1.66E-03	2.88E-03	6.36E-03	1.72E-02	1.76E-02	1.71E-02	1.53E-02	1.57E-02	1.64E-02	1.31E-02	1.27E-02	1.34E-02	1.40E-02	1.55E-02	1.39E-02	1.13E-02	8.36E-03	8.42E-03	7.49E-03	6.21E-03
TTW09	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843010.9	819762.6	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW10	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843005.2	819758.4	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW11	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842999.6	819754.3	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW12	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842993.9	819750.2	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW13	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842988.3	819746.1	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW14	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842982.6	819742.0	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW15	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842976.9	819737.9	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
TTW16	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842971.3	819733.8	81.1	3.8	3.26	3.53	2.03E-03	1.43E-03	1.07E-03	7.72E-04	8.29E-04	1.44E-03	3.18E-03	8.62E-03	8.82E-03	8.57E-03	7.67E-03	7.84E-03	8.18E-03	6.56E-03	6.37E-03	6.72E-03	6.98E-03	7.75E-03	6.97E-03	5.67E-03	4.18E-03	4.21E-03	3.75E-03	3.11E-03
PLE001	Portal of Underpass to Po Lam Road at Eastern Side	Volume	842985.8	820190.4	165.6	2.75	9.53	2.56	3.64E-04	2.37E-04	1.71E-04	1.25E-04	1.32E-04	1.89E-04	4.90E-04	1.09E-03	1.03E-03	8.47E-04	6.43E-04	5.79E-04	6.04E-04	6.38E-04	5.60E-04	7.52E-04	9.28E-04	9.54E-04	9.17E-04	7.70E-04	5.89E-04	5.47E-04	5.82E-04	5.01E-04
PLE002	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843002.4	820178.4	165.6	2.75	9.53	2.56	3.64E-04	2.37E-04	1.71E-04	1.25E-04	1.32E-04	1.89E-04	4.90E-04	1.09E-03	1.03E-03	8.47E-04	6.43E-04	5.79E-04	6.04E-04	6.38E-04	5.60E-04	7.52E-04	9.28E-04	9.54E-04	9.17E-04	7.70E-04	5.89E-04	5.47E-04	5.82E-04	5.01E-04
PLE003	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843019.0	820166.3	165.6	2.75	9.53	2.56	3.64E-04	2.37E-04	1.71E-04	1.25E-04	1.32E-04	1.89E-04	4.90E-04	1.09E-03	1.03E-03	8.47E-04	6.43E-04	5.79E-04	6.04E-04	6.38E-04	5.60E-04	7.52E-04	9.28E-04	9.54E-04	9.17E-04	7.70E-04	5.89E-04	5.47E-04	5.82E-04	5.01E-04
PLE004	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843035.6	820154.3	165.6	2.75	9.53	2.56	1.82E-04	1.19E-04	8.56E-05	6.26E-05	6.60E-05	9.47E-05	2.45E-04	5.43E-04	5.16E-04	4.24E-04	3.22E-04	2.90E-04	3.02E-04	3.19E-04	2.80E-04	3.76E-04	4.64E-04	4.77E-04	4.58E-04	3.85E-04	2.94E-04	2.73E-04	2.91E-04	2.50E-04
PLE005	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843052.1	820142.2	165.6	2.75	9.53	2.56	1.82E-04	1.19E-04	8.56E-05	6.26E-05	6.60E-05	9.47E-05	2.45E-04	5.43E-04	5.16E-04	4.24E-04	3.22E-04	2.90E-04	3.02E-04	3.19E-04	2.80E-04	3.76E-04	4.64E-04	4.77E-04	4.58E-04	3.85E-04	2.94E-04	2.73E-04	2.91E-04	2.50E-04
PLE006	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843068.7	820130.2	165.6	2.75	9.53	2.56	1.82E-04	1.19E-04	8.56E-05	6.26E-05	6.60E-05	9.47E-05	2.45E-04	5.43E-04	5.16E-04	4.24E-04	3.22E-04	2.90E-04	3.02E-04	3.19E-04	2.80E-04	3.76E-04	4.64E-04	4.77E-04	4.58E-04	3.85E-04	2.94E-04	2.73E-04	2.91E-04	2.50E-04
PLW01	Portal of Underpass to Po Lam Road at Western Side	Volume	842846.9	820147.5	174.4	2.75	7.44	2.56	2.73E-04	1.78E-04	1.28E-04	9.39E-05	9.90E-05	1.42E-04	3.67E-04	8.14E-04	7.75E-04	6.35E-04	4.83E-04	4.34E-04	4.53E-04	4.79E-04	4.20E-04	5.64E-04	6.96E-04	7.16E-04	6.87E-04	5.78E-04	4.41E-04	4.10E-04	4.36E-04	3.76E-04
PLW02	Portal of Underpass to Po Lam Road at Western Side	Volume	842839.9	820133.2	174.4	2.75	7.44	2.56	2.73E-04	1.78E-04	1.28E-04	9.39E-05	9.90E-05	1.42E-04	3.67E-04	8.14E-04	7.75E-04	6.35E-04	4.83E-04	4.34E-04	4.53E-04	4.79E-04	4.20E-04	5.64E-04	6.96E-04	7.16E-04	6.87E-04	5.78E-04	4.41E-04	4.10E-04	4.36E-04	3.76E-04
PLW03	Portal of Underpass to Po Lam Road at Western Side	Volume	842832.9	820118.8	174.4	2.75	7.44	2.56	2.73E-04	1.78E-04	1.28E-04	9.39E-05	9.90E-05	1.42E-04	3.67E-04	8.14E-04	7.75E-04	6.35E-04	4.83E-04	4.34E-04	4.53E-04	4.79E-04	4.20E-04	5.64E-04	6.96E-04	7.16E-04	6.87E-04	5.78E-04	4.41E-04	4.10E-04	4.36E-04	3.76E-04
PLW04	Portal of Underpass to Po Lam Road at Western Side	Volume	842825.9	820104.4	174.4	2.75	7.44	2.56	2.73E-04	1.78E-04	1.28E-04	9.39E-05	9.90E-05	1.42E-04	3.67E-04	8.14E-04	7.75E-04	6.35E-04	4.83E-04	4.34E-04	4.53E-04	4.79E-04	4.20E-04	5.64E-04	6.96E-04	7.16E-04	6.87E-04	5.78E-04	4.41E-04	4.10E-04	4.36E-04	3.76E-04
PLW05	Portal of Underpass to Po Lam Road at Western Side	Volume	842818.9	820090.0	174.4	2.75	7.44	2.56	1.37E-04	8.90E-05	6.42E-05	4.70E-05	4.95E-05	7.10E-05	1.84E-04	4.07E-04	3.87E-04	3.18E-04	2.41E-04	2.17E-04	2.27E-04	2.39E-04	2.10E-04	2.82E-04	3.48E-04	3.58E-04	3.44E-04	2.89E-04	2.21E-04	2.05E-04	2.18E-04	1.88E-04
PLW06	Portal of Underpass to Po Lam Road at Western Side	Volume	842811.8	820075.6	174.4	2.75	7.44	2.56	1.37E-04	8.90E-05	6.42E-05	4.70E-05	4.95E-05	7.10E-05	1.84E-04	4.07E-04	3.87E-04	3.18E-04	2.41E-04	2.17E-04	2.27E-04	2.39E-04	2.10E-04	2.82E-04	3.48E-04	3.58E-04	3.44E-04	2.89E-04	2.21E-04	2.05E-04	2.18E-04	1.88E-04
PLW07	Portal of Underpass to Po Lam Road at Western Side	Volume	842804.8	820061.2	174.4	2.75	7.44	2.56	1.37E-04	8.90E-05	6.42E-05	4.70E-05	4.95E-05	7.10E-05	1.84E-04	4.07																

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report on Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

RSP Emission Inventory for Portal Emissions at Year 2026

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Emission Rate (g/s)																							
									Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
TTW01	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843056.2	819795.5	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW02	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843050.6	819791.4	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW03	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843044.9	819787.2	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW04	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843039.2	819783.1	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW05	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843033.6	819779.0	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW06	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843027.9	819774.9	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW07	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843022.2	819770.8	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW08	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843016.6	819766.7	81.1	3.8	3.26	3.53	2.08E-04	1.46E-04	1.09E-04	7.93E-05	7.03E-05	1.72E-04	3.78E-04	8.91E-04	8.22E-04	7.88E-04	7.32E-04	7.90E-04	8.62E-04	7.36E-04	7.03E-04	7.65E-04	7.96E-04	8.66E-04	7.14E-04	5.84E-04	4.19E-04	4.46E-04	3.59E-04	3.10E-04
TTW09	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843010.9	819762.6	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW10	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843005.2	819758.4	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW11	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842999.6	819754.3	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW12	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842993.9	819750.2	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW13	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842988.3	819746.1	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW14	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842982.6	819742.0	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW15	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842976.9	819737.9	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
TTW16	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842971.3	819733.8	81.1	3.8	3.26	3.53	1.04E-04	7.29E-05	5.47E-05	3.97E-05	3.52E-05	8.58E-05	1.89E-04	4.46E-04	4.11E-04	3.94E-04	3.66E-04	3.95E-04	4.31E-04	3.68E-04	3.52E-04	3.82E-04	3.98E-04	4.33E-04	3.57E-04	2.92E-04	2.10E-04	2.23E-04	1.79E-04	1.55E-04
PLE001	Portal of Underpass to Po Lam Road at Eastern Side	Volume	842985.8	820190.4	165.6	2.75	9.53	2.56	1.38E-05	9.61E-06	7.25E-06	5.13E-06	7.34E-06	1.17E-05	2.73E-05	5.96E-05	6.15E-05	5.06E-05	3.86E-05	3.33E-05	3.56E-05	4.68E-05	4.09E-05	6.74E-05	8.85E-05	6.88E-05	4.50E-05	3.41E-05	2.70E-05	2.24E-05	2.35E-05	2.04E-05
PLE002	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843002.4	820178.4	165.6	2.75	9.53	2.56	1.38E-05	9.61E-06	7.25E-06	5.13E-06	7.34E-06	1.17E-05	2.73E-05	5.96E-05	6.15E-05	5.06E-05	3.86E-05	3.33E-05	3.56E-05	4.68E-05	4.09E-05	6.74E-05	8.85E-05	6.88E-05	4.50E-05	3.41E-05	2.70E-05	2.24E-05	2.35E-05	2.04E-05
PLE003	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843019.0	820166.3	165.6	2.75	9.53	2.56	1.38E-05	9.61E-06	7.25E-06	5.13E-06	7.34E-06	1.17E-05	2.73E-05	5.96E-05	6.15E-05	5.06E-05	3.86E-05	3.33E-05	3.56E-05	4.68E-05	4.09E-05	6.74E-05	8.85E-05	6.88E-05	4.50E-05	3.41E-05	2.70E-05	2.24E-05	2.35E-05	2.04E-05
PLE004	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843035.6	820154.3	165.6	2.75	9.53	2.56	6.90E-06	4.81E-06	3.62E-06	2.57E-06	3.67E-06	5.87E-06	1.37E-05	2.98E-05	3.07E-05	2.53E-05	1.93E-05	1.66E-05	1.78E-05	2.34E-05	2.04E-05	3.37E-05	4.42E-05	3.44E-05	2.25E-05	1.71E-05	1.35E-05	1.12E-05	1.18E-05	1.02E-05
PLE005	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843052.1	820142.2	165.6	2.75	9.53	2.56	6.90E-06	4.81E-06	3.62E-06	2.57E-06	3.67E-06	5.87E-06	1.37E-05	2.98E-05	3.07E-05	2.53E-05	1.93E-05	1.66E-05	1.78E-05	2.34E-05	2.04E-05	3.37E-05	4.42E-05	3.44E-05	2.25E-05	1.71E-05	1.35E-05	1.12E-05	1.18E-05	1.02E-05
PLE006	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843068.7	820130.2	165.6	2.75	9.53	2.56	6.90E-06	4.81E-06	3.62E-06	2.57E-06	3.67E-06	5.87E-06	1.37E-05	2.98E-05	3.07E-05	2.53E-05	1.93E-05	1.66E-05	1.78E-05	2.34E-05	2.04E-05	3.37E-05	4.42E-05	3.44E-05	2.25E-05	1.71E-05	1.35E-05	1.12E-05	1.18E-05	1.02E-05
PLW01	Portal of Underpass to Po Lam Road at Western Side	Volume	842846.9	820147.5	174.4	2.75	7.44	2.56	1.03E-05	7.21E-06	5.44E-06	3.85E-06	5.51E-06	8.81E-06	2.05E-05	4.47E-05	4.61E-05	3.79E-05	2.90E-05	2.50E-05	2.67E-05	3.51E-05	3.07E-05	5.06E-05	6.63E-05	5.16E-05	3.38E-05	2.56E-05	2.03E-05	1.68E-05	1.76E-05	1.53E-05
PLW02	Portal of Underpass to Po Lam Road at Western Side	Volume	842839.9	820133.2	174.4	2.75	7.44	2.56	1.03E-05	7.21E-06	5.44E-06	3.85E-06	5.51E-06	8.81E-06	2.05E-05	4.47E-05	4.61E-05	3.79E-05	2.90E-05	2.50E-05	2.67E-05	3.51E-05	3.07E-05	5.06E-05	6.63E-05	5.16E-05	3.38E-05	2.56E-05	2.03E-05	1.68E-05	1.76E-05	1.53E-05
PLW03	Portal of Underpass to Po Lam Road at Western Side	Volume	842832.9	820118.8	174.4	2.75	7.44	2.56	1.03E-05	7.21E-06	5.44E-06	3.85E-06	5.51E-06	8.81E-06	2.05E-05	4.47E-05	4.61E-05	3.79E-05	2.90E-05	2.50E-05	2.67E-05	3.51E-05	3.07E-05	5.06E-05	6.63E-05	5.16E-05	3.38E-05	2.56E-05	2.03E-05	1.68E-05	1.76E-05	1.53E-05
PLW04	Portal of Underpass to Po Lam Road at Western Side	Volume	842825.9	820104.4	174.4	2.75	7.44	2.56	1.03E-05	7.21E-06	5.44E-06	3.85E-06	5.51E-06	8.81E-06	2.05E-05	4.47E-05	4.61E-05	3.79E-05	2.90E-05	2.50E-05	2.67E-05	3.51E-05	3.07E-05	5.06E-05	6.63E-05	5.16E-05	3.38E-05	2.56E-05	2.03E-05	1.68E-05	1.76E-05	1.53E-05
PLW05	Portal of Underpass to Po Lam Road at Western Side	Volume	842818.9	820090.0	174.4	2.75	7.44	2.56	5.17E-06	3.60E-06	2.72E-06	1.92E-06	2.75E-06	4.40E-06	1.03E-05	2.23E-05	2.31E-05	1.90E-05	1.45E-05	1.25E-05	1.33E-05	1.75E-05	1.53E-05	2.53E-05	3.32E-05	2.58E-05	1.69E-05	1.28E-05	1.01E-05	8.42E-06	8.82E-06	7.64E-06
PLW06	Portal of Underpass to Po Lam Road at Western Side	Volume	842811.8	820075.6	174.4	2.75	7.44	2.56	5.17E-06	3.60E-06	2.72E-06	1.92E-06	2.75E-06	4.40E-06	1.03E-05	2.23E-05	2.31E-05	1.90E-05	1.45E-05	1.25E-05	1.33E-05	1.75E-05	1.53E-05	2.53E-05	3.32E-05	2.58E-05	1.69E-05	1.28E-05	1.01E-05	8.42E-06	8.82E-06	7.64E-06
PLW07	Portal of Underpass to Po Lam Road at Western Side	Volume	842804.8	820061.2	174.4	2.75	7.44	2.56	5.17E-06	3.60E-06	2.72E-06	1.92E-06	2.75E-06	4.40E-06	1.03E-05	2.23E-0																

Appendix 4.13 Details of Portal Emissions (Operational Phase)

Agreement No. CE 10/2014 (CE)
 Development of Anderson Road Quarry Site- Investigation, Design and Construction
 EIA Report on Road Improvement Works

Portal Emissions for LTR RIW (Operational Phase)

FSP Emission Inventory for Portal Emissions at Year 2026

Source ID	Source Description	Type	X (m)	Y (m)	Base Elevation (m)	Release Height (m)	Lateral Dim. (Sy) (m)	Vertical Dim. (Sz) (m)	Emission Rate (g/s)																							
									Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
TTW01	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843056.2	819795.5	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW02	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843050.6	819791.4	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW03	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843044.9	819787.2	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW04	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843039.2	819783.1	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW05	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843033.6	819779.0	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW06	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843027.9	819774.9	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW07	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843022.2	819770.8	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW08	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843016.6	819766.7	81.1	3.8	3.26	3.53	1.91E-04	1.34E-04	1.01E-04	7.30E-05	6.48E-05	1.58E-04	3.48E-04	8.20E-04	7.56E-04	7.25E-04	6.74E-04	7.27E-04	7.93E-04	6.77E-04	6.47E-04	7.04E-04	7.33E-04	7.96E-04	6.56E-04	5.38E-04	3.86E-04	4.10E-04	3.30E-04	2.85E-04
TTW09	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843010.9	819762.6	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW10	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	843005.2	819758.4	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW11	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842999.6	819754.3	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW12	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842993.9	819750.2	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW13	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842988.3	819746.1	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW14	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842982.6	819742.0	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW15	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842976.9	819737.9	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
TTW16	Tseung Kwan O Tunnel (WB) Tunnel Portal at Kwun Tong Side	Volume	842971.3	819733.8	81.1	3.8	3.26	3.53	9.57E-05	6.71E-05	5.04E-05	3.65E-05	3.24E-05	7.89E-05	1.74E-04	4.10E-04	3.78E-04	3.63E-04	3.37E-04	3.64E-04	3.97E-04	3.39E-04	3.23E-04	3.52E-04	3.66E-04	3.98E-04	3.28E-04	2.69E-04	1.93E-04	2.05E-04	1.65E-04	1.43E-04
PLE001	Portal of Underpass to Po Lam Road at Eastern Side	Volume	842985.8	820190.4	165.6	2.75	9.53	2.56	1.27E-05	8.81E-06	6.64E-06	4.67E-06	6.83E-06	1.08E-05	2.51E-05	5.48E-05	5.65E-05	4.64E-05	3.55E-05	3.06E-05	3.27E-05	4.31E-05	3.76E-05	6.20E-05	8.14E-05	6.33E-05	4.14E-05	3.15E-05	2.48E-05	2.07E-05	2.16E-05	1.88E-05
PLE002	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843002.4	820178.4	165.6	2.75	9.53	2.56	1.27E-05	8.81E-06	6.64E-06	4.67E-06	6.83E-06	1.08E-05	2.51E-05	5.48E-05	5.65E-05	4.64E-05	3.55E-05	3.06E-05	3.27E-05	4.31E-05	3.76E-05	6.20E-05	8.14E-05	6.33E-05	4.14E-05	3.15E-05	2.48E-05	2.07E-05	2.16E-05	1.88E-05
PLE003	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843019.0	820166.3	165.6	2.75	9.53	2.56	1.27E-05	8.81E-06	6.64E-06	4.67E-06	6.83E-06	1.08E-05	2.51E-05	5.48E-05	5.65E-05	4.64E-05	3.55E-05	3.06E-05	3.27E-05	4.31E-05	3.76E-05	6.20E-05	8.14E-05	6.33E-05	4.14E-05	3.15E-05	2.48E-05	2.07E-05	2.16E-05	1.88E-05
PLE004	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843035.6	820154.3	165.6	2.75	9.53	2.56	6.36E-06	4.41E-06	3.32E-06	2.34E-06	3.42E-06	5.40E-06	1.25E-05	2.74E-05	2.83E-05	2.32E-05	1.78E-05	1.53E-05	1.63E-05	2.15E-05	1.88E-05	3.10E-05	4.07E-05	3.16E-05	2.07E-05	1.57E-05	1.24E-05	1.03E-05	1.08E-05	9.41E-06
PLE005	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843052.1	820142.2	165.6	2.75	9.53	2.56	6.36E-06	4.41E-06	3.32E-06	2.34E-06	3.42E-06	5.40E-06	1.25E-05	2.74E-05	2.83E-05	2.32E-05	1.78E-05	1.53E-05	1.63E-05	2.15E-05	1.88E-05	3.10E-05	4.07E-05	3.16E-05	2.07E-05	1.57E-05	1.24E-05	1.03E-05	1.08E-05	9.41E-06
PLE006	Portal of Underpass to Po Lam Road at Eastern Side	Volume	843068.7	820130.2	165.6	2.75	9.53	2.56	6.36E-06	4.41E-06	3.32E-06	2.34E-06	3.42E-06	5.40E-06	1.25E-05	2.74E-05	2.83E-05	2.32E-05	1.78E-05	1.53E-05	1.63E-05	2.15E-05	1.88E-05	3.10E-05	4.07E-05	3.16E-05	2.07E-05	1.57E-05	1.24E-05	1.03E-05	1.08E-05	9.41E-06
PLW01	Portal of Underpass to Po Lam Road at Western Side	Volume	842846.9	820147.5	174.4	2.75	7.44	2.56	9.53E-06	6.61E-06	4.98E-06	3.50E-06	5.12E-06	8.11E-06	1.88E-05	4.11E-05	4.24E-05	3.48E-05	2.66E-05	2.29E-05	2.45E-05	3.23E-05	2.82E-05	4.65E-05	6.11E-05	4.75E-05	3.11E-05	2.36E-05	1.86E-05	1.55E-05	1.62E-05	1.41E-05
PLW02	Portal of Underpass to Po Lam Road at Western Side	Volume	842839.9	820133.2	174.4	2.75	7.44	2.56	9.53E-06	6.61E-06	4.98E-06	3.50E-06	5.12E-06	8.11E-06	1.88E-05	4.11E-05	4.24E-05	3.48E-05	2.66E-05	2.29E-05	2.45E-05	3.23E-05	2.82E-05	4.65E-05	6.11E-05	4.75E-05	3.11E-05	2.36E-05	1.86E-05	1.55E-05	1.62E-05	1.41E-05
PLW03	Portal of Underpass to Po Lam Road at Western Side	Volume	842832.9	820118.8	174.4	2.75	7.44	2.56	9.53E-06	6.61E-06	4.98E-06	3.50E-06	5.12E-06	8.11E-06	1.88E-05	4.11E-05	4.24E-05	3.48E-05	2.66E-05	2.29E-05	2.45E-05	3.23E-05	2.82E-05	4.65E-05	6.11E-05	4.75E-05	3.11E-05	2.36E-05	1.86E-05	1.55E-05	1.62E-05	1.41E-05
PLW04	Portal of Underpass to Po Lam Road at Western Side	Volume	842825.9	820104.4	174.4	2.75	7.44	2.56	9.53E-06	6.61E-06	4.98E-06	3.50E-06	5.12E-06	8.11E-06	1.88E-05	4.11E-05	4.24E-05	3.48E-05	2.66E-05	2.29E-05	2.45E-05	3.23E-05	2.82E-05	4.65E-05	6.11E-05	4.75E-05	3.11E-05	2.36E-05	1.86E-05	1.55E-05	1.62E-05	1.41E-05
PLW05	Portal of Underpass to Po Lam Road at Western Side	Volume	842818.9	820090.0	174.4	2.75	7.44	2.56	4.77E-06	3.30E-06	2.49E-06	1.75E-06	2.56E-06	4.05E-06	9.40E-06	2.05E-05	2.12E-05	1.74E-05	1.33E-05	1.15E-05	1.23E-05	1.62E-05	1.41E-05	2.32E-05	3.05E-05	2.37E-05	1.55E-05	1.18E-05	9.31E-06	7.76E-06	8.08E-06	7.05E-06
PLW06	Portal of Underpass to Po Lam Road at Western Side	Volume	842811.8	820075.6	174.4	2.75	7.44	2.56	4.77E-06	3.30E-06	2.49E-06	1.75E-06	2.56E-06	4.05E-06	9.40E-06	2.05E-05	2.12E-05	1.74E-05	1.33E-05	1.15E-05	1.23E-05	1.62E-05	1.41E-05	2.32E-05	3.05E-05	2.37E-05	1.55E-05	1.18E-05	9.31E-06	7.76E-06	8.08E-06	7.05E-06
PLW07	Portal of Underpass to Po Lam Road at Western Side	Volume	842804.8	820061.2	174.4	2.75	7.44	2.56	4.77E-06	3.30E-06	2.49E-06	1.75E-06	2.56E-06	4.05E-06	9.40E-06	2.05E																

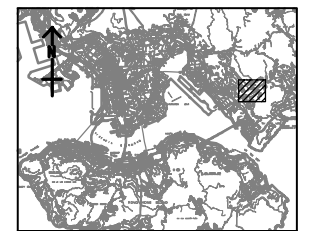
ISSUE/REVISION
 發行

IR	DATE	DESCRIPTION	CHK
發行	日期	內容描述	校核

STATUS
 階段

SCALE **DIMENSION UNIT**
 比例 尺寸單位
 A3 1:7000 METRES

KEY PLAN
 索引圖

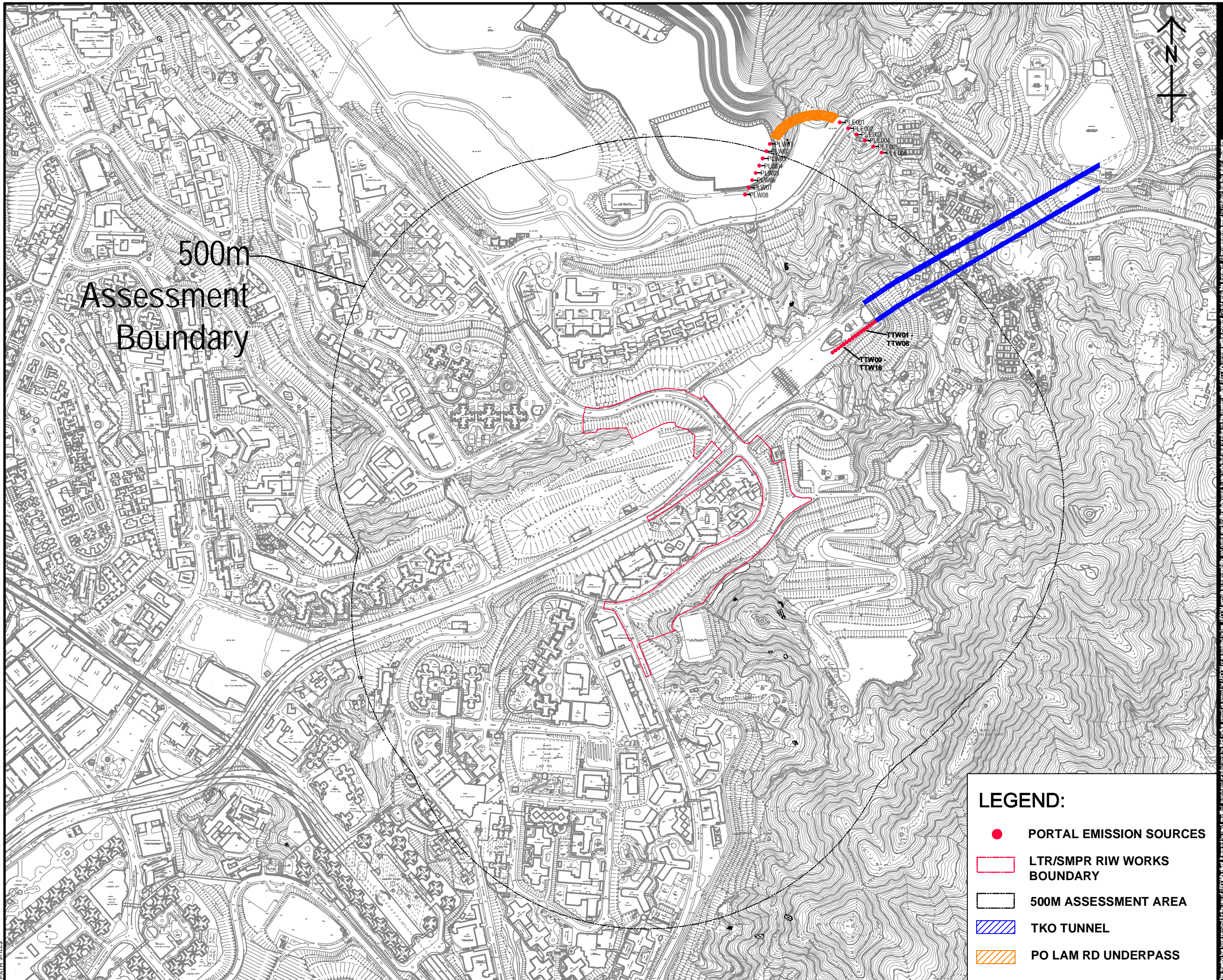


PROJECT NO. **CONTRACT NO.**
 項目編號 合約編號
 60328348 CE 10/2014 (CE)

SHEET TITLE
 圖紙名稱
 Location of Portal Emission Sources (LTR/SMPR RIW) (OPERATIONAL PHASE)

SHEET NUMBER
 圖紙編號

Project Management Initials: Designer: Checked: Approved: Pot File by: \$USER\$ \$DATES\$ PATH \$FILES\$



500m
 Assessment
 Boundary

LEGEND:

- PORTAL EMISSION SOURCES
- LTR/SMPR RIW WORKS BOUNDARY
- 500M ASSESSMENT AREA
- TKO TUNNEL
- PO LAM RD UNDERPASS

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