

## **APPENDIX 4.13 Derivation of Portal Emission Rates (Operation)**

Calculation of Portal Emission for Year 2029 (i.e. All Project Roads Commenced)

Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	NO <sub>x</sub>					NO					RSP					FSP								
						Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate
						(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)
1a	Tsing Lun Road Emitted to the North of Enclosure	1aN	0.0260	1	460	0.1544	0.0953	1.50E-04	25%	5.31E-05	2.65E-05	1.0223	0.63520	1.06E-03	26%	3.52E-04	1.75E-04	0.0518	0.0322	5.34E-05	26%	1.73E-05	8.91E-06	0.0476	0.0296	4.91E-05	26%	1.64E-05	8.19E-06
				2	325	0.1303	0.08097	9.50E-05	15%	3.17E-05	1.58E-05	0.8890	0.55239	6.48E-04	16%	2.16E-04	1.08E-04	0.0450	0.0280	3.28E-05	16%	1.09E-05	5.47E-06	0.0414	0.0257	3.02E-05	16%	1.01E-05	5.03E-06
				3	240	0.1613	0.10024	8.69E-05	13%	2.90E-05	1.45E-05	1.0378	0.64487	9.31E-05	14%	1.86E-04	9.31E-05	0.0572	0.0355	3.08E-05	15%	1.03E-05	5.13E-06	0.0525	0.0326	2.83E-05	15%	9.43E-06	4.71E-06
				4	175	0.1560	0.09696	8.13E-05	9%	2.04E-05	1.02E-05	1.0928	0.67904	4.29E-04	11%	1.43E-04	7.15E-05	0.0579	0.0360	2.07E-05	11%	7.58E-06	3.79E-06	0.0532	0.0331	2.09E-05	11%	6.96E-06	3.48E-06
				5	185	0.1508	0.09265	7.62E-05	10%	2.09E-05	1.04E-05	1.0706	0.66524	4.44E-04	11%	1.48E-04	7.41E-05	0.0556	0.0345	2.31E-05	11%	7.69E-06	3.85E-06	0.0511	0.0317	2.12E-05	11%	7.07E-06	3.53E-06
				6	285	0.1454	0.09034	9.30E-05	14%	3.10E-05	1.55E-05	0.9519	0.59151	6.09E-04	15%	2.03E-04	1.01E-04	0.0504	0.0313	3.22E-05	16%	1.07E-05	5.37E-06	0.0463	0.0288	2.96E-05	16%	9.86E-06	4.93E-06
				7	730	0.1598	0.09931	2.62E-04	40%	8.73E-05	4.36E-05	1.0569	0.65675	1.73E-03	43%	5.77E-04	2.89E-04	0.0533	0.0331	8.73E-05	43%	2.91E-05	1.46E-05	0.0490	0.0305	3.02E-05	43%	1.24E-05	6.25E-06
				8	1625	0.1769	0.10994	6.45E-04	99%	2.15E-04	1.08E-04	1.0908	0.67776	3.98E-03	98%	1.33E-03	6.63E-04	0.0560	0.0348	2.04E-04	99%	6.81E-05	3.40E-05	0.0515	0.0320	1.88E-04	99%	6.26E-05	3.13E-05
				9	1675	0.1727	0.10730	6.49E-04	100%	2.16E-04	1.08E-04	1.0748	0.66784	4.04E-03	100%	1.35E-03	6.73E-04	0.0547	0.0340	2.05E-04	100%	6.85E-05	3.42E-05	0.0503	0.0312	1.89E-04	100%	6.39E-05	3.15E-05
				10	1540	0.1764	0.10961	6.10E-04	94%	2.03E-04	1.02E-04	1.0854	0.67445	3.75E-03	93%	1.25E-03	6.25E-04	0.0550	0.0342	1.90E-04	92%	6.33E-05	3.17E-05	0.0506	0.0314	1.75E-04	92%	5.82E-05	2.91E-05
				11	1450	0.1688	0.10489	5.49E-04	85%	1.83E-04	9.15E-05	1.0514	0.65329	3.42E-03	85%	1.14E-03	5.70E-04	0.0529	0.0329	1.72E-04	84%	5.74E-05	2.87E-05	0.0487	0.0303	1.58E-04	84%	5.28E-05	2.64E-05
				12	1390	0.1738	0.10787	5.42E-04	84%	1.81E-04	9.03E-05	1.0743	0.66753	3.35E-03	83%	1.12E-03	5.58E-04	0.0546	0.0339	1.70E-04	83%	5.68E-05	2.84E-05	0.0502	0.0312	1.57E-04	83%	5.22E-05	2.61E-05
				13	1280	0.1813	0.11265	5.21E-04	80%	1.74E-04	8.69E-05	1.1106	0.69008	3.19E-03	79%	1.06E-03	5.32E-04	0.0568	0.0353	1.63E-04	79%	5.44E-05	2.72E-05	0.052	0.032	1.50E-04	79%	5.00E-05	2.50E-05
				14	1320	0.1765	0.10966	5.23E-04	81%	1.74E-04	8.71E-05	1.0881	0.67613	3.22E-03	80%	1.07E-03	5.37E-04	0.0554	0.0344	1.64E-04	80%	5.47E-05	2.73E-05	0.0510	0.0317	1.51E-04	80%	5.03E-05	2.52E-05
				15	1410	0.1733	0.10770	5.48E-04	84%	1.83E-04	9.14E-05	1.0724	0.66634	3.39E-03	84%	1.13E-03	5.65E-04	0.0543	0.0337	1.72E-04	84%	5.72E-05	2.86E-05	0.0499	0.0310	1.58E-04	84%	5.26E-05	2.63E-05
				16	1450	0.1688	0.10489	5.49E-04	85%	1.83E-04	9.15E-05	1.0514	0.65329	3.42E-03	85%	1.14E-03	5.70E-04	0.0529	0.0329	1.72E-04	84%	5.74E-05	2.87E-05	0.0487	0.0303	1.58E-04	84%	5.28E-05	2.64E-05
				17	1545	0.1758	0.10926	6.10E-04	94%	2.03E-04	1.02E-04	1.0820	0.67232	3.75E-03	93%	1.25E-03	6.25E-04	0.0548	0.0341	1.90E-04	93%	6.33E-05	3.17E-05	0.0504	0.0313	1.75E-04	93%	5.83E-05	2.91E-05
				18	1665	0.1737	0.10793	6.49E-04	100%	2.16E-04	1.08E-04	1.0810	0.67171	4.04E-03	100%	1.35E-03	6.73E-04	0.0549	0.0341	2.05E-04	100%	6.84E-05	3.42E-05	0.0505	0.0314	1.89E-04	100%	6.29E-05	3.15E-05
				19	1675	0.1727	0.10730	6.49E-04	100%	2.16E-04	1.08E-04	1.0748	0.66784	4.04E-03	100%	1.35E-03	6.73E-04	0.0547	0.0340	2.05E-04	100%	6.85E-05	3.42E-05	0.0503	0.0312	1.89E-04	100%	6.30E-05	3.15E-05
				20	1420	0.1721	0.10695	5.48E-04	85%	1.83E-04	9.14E-05	1.0651	0.66181	3.39E-03	84%	1.13E-03	5.66E-04	0.0539	0.0335	1.72E-04	84%	5.73E-05	2.86E-05	0.0498	0.0308	1.59E-04	84%	5.27E-05	2.63E-05
				21	1135	0.1731	0.10754	4.41E-04	68%	1.47E-04	7.35E-05	1.0598	0.65855	2.70E-03	67%	9.00E-04	4.50E-04	0.0537	0.0334	1.37E-04	67%	4.56E-05	2.28E-05	0.0494	0.0307	1.26E-04	67%	4.19E-05	2.10E-05
				22	1035	0.1763	0.10958	4.10E-04	63%	1.37E-04	6.83E-05	1.0812	0.67184	2.51E-03	62%	8.37E-04	4.18E-04	0.0549	0.0341	1.29E-04	62%	4.25E-05	2.13E-05	0.0505	0.0314	1.17E-04	62%	3.91E-05	1.96E-05
				23	1000	0.1816	0.11286	4.08E-04	63%	1.36E-04	6.79E-05	1.1050	0.68662	2.48E-03	61%	8.26E-04	4.13E-04	0.0565	0.0351	1.27E-04	62%	4.23E-05	2.11E-05	0.0520	0.0323	1.17E-04	62%	3.89E-05	1.94E-05
				24	715	0.1630	0.10125	2.61E-04	40%	8.71E-05	4.36E-05	1.0711	0.66553	1.72E-03	43%	5.73E-04	2.86E-04	0.0544	0.0338	8.72E-05	42%	2.91E-05	1.45E-05	0.0500	0.0311	8.02E-05	42%	2.67E-05	1.34E-05
1b	Tsing Lun Road Emitted to the South of Enclosure	1bS	0.026	1	460	0.1544	0.0959	1.59E-04	25%	5.31E-05	2.66E-05	1.0223	0.6352	1.06E-03	26%	3.52E-04	1.76E-04	0.0518	0.0322	5.34E-05	26%	1.76E-05	8.91E-06	0.048	0.030	4.91E-05	26%	1.64E-05	8.19E-06
				2	325	0.1303	0.08097	9.50E-05	15%	3.17E-05	1.58E-05	0.8890	0.55239	6.48E-04	16%	2.16E-04	1.08E-04	0.0450	0.0280	3.28E-05	16%	1.09E-05	5.47E-06	0.0414	0.0257	3.02E-05	16%	1.01E-05	5.03E-06
				3	240	0.1613	0.10024	8.69E-05	13%	2.90E-05	1.45E-05	1.0378	0.64487	9.31E-05	14%	1.86E-04	9.31E-05	0.0572	0.0355	3.08E-05	15%	1.03E-05	5.13E-06	0.0525	0.0326	2.83E-05	15%	9.43E-06	4.71E-06
				4	175	0.1560	0.09696	8.13E-05	9%	2.04E-05	1.02E-05	1.0928	0.67904	4.29E-04	11%	1.43E-04	7.15E-05	0.0579	0.0360	2.07E-05	11%	7.58E-06	3.79E-06	0.0532	0.0331	2.09E-05	11%	6.96E-06	3.48E-06
				5	185	0.1508	0.09265	7.62E-05	10%	2.09E-05	1.04E-05	1.0706	0.66524	4.44E-04	11%	1.48E-04	7.41E-05	0.0556	0.0345	2.31E-05	11%	7.69E-06	3.85E-06	0.0511	0.0317	2.12E-05	11%	7.07E-06	3.53E-06
				6	285	0.1454	0.09033	9.30E-05	14%	3.10E-05	1.55E-05	0.9519	0.59151	6.09E-04	15%	2.03E-04	1.01E-04	0.0504	0.0313	3.22E-05	16%	1.07E-05	5.37E-06	0.0463	0.0288	2.96E-05	16%	9.86E-06	4.93E-06
				7	730	0.1598	0.09931	2.62E-04	40%	8.73E-05	4.36E-05	1.0569	0.65675	1.73E-03	43%	5.77E-04	2.89E-04	0.0533	0.0331	8.73E-05	43%	2.91E-05	1.46E-05	0.0490	0.0305	3.02E-05	43%	1.24E-05	6.25E-06
				8	1625	0.1769	0.10999	6.45E-04	99%	2.15E-04	1.08E-04	1.0908	0.67776	3.98E-03	98%	1.33E-03	6.63E-04	0.0560	0.0348	2.04E-04	99%	6.81E-05	3.40E-05	0.0515	0.0320	1.88E-04	99%	6.26E-05	3.13E-05
				9	1675	0.1727	0.10730	6.49E-04	100%	2.16E-04	1.08E-04	1.0748	0.66784	4.04E-03	100%	1.35E-03	6.73E-04	0.0547	0.0340	2.05E-04	100%	6.85E-05	3.42E-05	0.0503	0.0312	1.89E-04	100%	6.39E-05	3.15E-05
				10	1540	0.1764	0.10961	6.10E-04	94%	2.03E-04	1.02E-04	1.0854	0.67445	3.75E-03	93%	1.25E-03	6.25E-04	0.0550	0.0342	1.90E-04	92%	6.33E-05	3.17E-05	0.0506	0.0314	1.75E-04	92%	5.82E-05	2.91E-05
				11	1450	0.1688	0.10489	5.49E-04	85%	1.83E-04	9.15E-05	1.0514	0.65329	3.42E-03	85%	1.14E-03	5.70E-04	0.0529	0.0329	1.72E-04	84%	5.74E-05	2.87E-05	0.0487	0.0303	1.58E-04	84%	5.28E-05	2.64E-05
				12	1390	0.1738	0.10787	5.42E-04	84%	1.81E-04	9																		

Calculation of Portal Emission for Year 2033 (i.e. Full Population Intake, without Project)

Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	NO <sub>x</sub>					NO					RSP					FSP								
						Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate
						(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)
1a	Tsing Lun Road Emitted to the North of Enclosure	1aN	0.0260	1	465	0.0995	0.06182	1.04E-04	26%	3.46E-05	1.73E-05	0.5917	0.36786	6.17E-04	26%	2.06E-04	1.03E-04	0.0303	0.0188	3.16E-05	26%	1.05E-05	5.26E-06	0.0278	0.0173	2.93E-05	26%	9.67E-06	4.84E-06
				2	330	0.0813	0.05051	6.02E-05	15%	2.01E-05	1.00E-05	0.5136	0.31912	3.80E-04	16%	1.27E-04	6.34E-05	0.0273	0.0170	2.02E-05	17%	6.74E-06	3.37E-06	0.0250	0.0156	1.85E-05	17%	6.18E-06	3.09E-06
				3	250	0.0950	0.05903	5.33E-05	13%	1.78E-05	8.88E-06	0.5651	0.35116	3.17E-04	14%	1.06E-04	5.28E-05	0.0322	0.0200	1.81E-05	15%	6.02E-06	3.01E-06	0.0296	0.0184	1.66E-05	15%	5.53E-06	2.76E-06
				4	180	0.0806	0.05010	3.26E-05	8%	1.09E-05	5.43E-06	0.5572	0.34488	2.37E-04	10%	7.91E-05	3.95E-05	0.0312	0.0194	1.81E-05	10%	4.20E-06	2.10E-06	0.0288	0.0178	1.15E-05	10%	3.92E-06	1.92E-06
				5	190	0.0765	0.04605	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.34655	2.39E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	11%	4.25E-06	2.12E-06	0.0274	0.0176	1.17E-05	11%	3.97E-06	1.94E-06
				6	295	0.0834	0.05182	5.52E-05	14%	1.84E-05	9.20E-06	0.5271	0.32754	3.49E-04	15%	1.16E-04	5.82E-05	0.0287	0.0178	1.90E-05	16%	6.34E-06	3.17E-06	0.0263	0.0164	1.74E-05	16%	5.81E-06	2.90E-06
				7	750	0.1015	0.06308	1.71E-04	42%	5.69E-05	2.85E-05	0.6153	0.38230	1.04E-03	44%	3.45E-04	1.73E-04	0.0309	0.0192	5.20E-05	43%	1.73E-05	8.67E-06	0.0284	0.0180	1.78E-05	43%	1.69E-06	7.97E-06
				8	1645	0.1075	0.06678	3.97E-04	98%	1.32E-04	6.61E-05	0.6154	0.38237	2.27E-03	97%	7.57E-04	3.79E-04	0.0321	0.0200	1.19E-04	98%	3.96E-05	1.98E-05	0.0295	0.0184	1.09E-04	98%	3.63E-05	1.82E-05
				9	1705	0.1058	0.06576	4.05E-04	100%	1.35E-04	6.75E-05	0.6104	0.37932	2.34E-03	100%	7.78E-04	3.89E-04	0.0316	0.0196	1.21E-04	100%	4.03E-05	2.01E-05	0.0290	0.0180	1.11E-04	100%	3.70E-05	1.85E-05
				10	1570	0.1081	0.06720	3.81E-04	94%	1.27E-04	6.35E-05	0.6173	0.38357	2.17E-03	93%	7.25E-04	3.62E-04	0.0320	0.0199	1.13E-04	93%	3.76E-05	1.88E-05	0.0294	0.0183	1.04E-04	93%	3.45E-05	1.73E-05
				11	1470	0.1033	0.06420	3.41E-04	84%	1.14E-04	5.68E-05	0.6031	0.37478	1.99E-03	85%	6.63E-04	3.32E-04	0.0307	0.0191	1.01E-04	84%	3.37E-05	1.69E-05	0.0282	0.0175	9.30E-05	84%	3.10E-05	1.55E-05
				12	1415	0.1064	0.06614	3.38E-04	83%	1.13E-04	5.63E-05	0.6076	0.37758	1.93E-03	83%	6.43E-04	3.22E-04	0.0315	0.0196	1.00E-04	83%	3.33E-05	1.67E-05	0.0290	0.0180	9.19E-05	83%	3.06E-05	1.53E-05
				13	1305	0.1104	0.06889	3.23E-04	80%	1.08E-04	5.39E-05	0.6241	0.38780	1.83E-03	78%	6.09E-04	3.05E-04	0.0329	0.0204	9.63E-05	80%	3.21E-05	1.61E-05	0.0302	0.0188	8.86E-05	80%	2.98E-05	1.48E-05
				14	1340	0.1081	0.06715	3.25E-04	80%	1.08E-04	5.42E-05	0.6170	0.38341	1.86E-03	79%	6.18E-04	3.09E-04	0.0323	0.0201	9.72E-05	80%	3.24E-05	1.62E-05	0.0297	0.0185	8.93E-05	80%	2.98E-05	1.49E-05
				15	1435	0.1056	0.06563	3.40E-04	84%	1.13E-04	5.67E-05	0.6104	0.37927	1.97E-03	84%	6.55E-04	3.28E-04	0.0313	0.0194	1.01E-04	83%	3.36E-05	1.68E-05	0.0287	0.0179	9.26E-05	83%	3.09E-05	1.54E-05
				16	1475	0.1030	0.06399	3.41E-04	84%	1.14E-04	5.68E-05	0.6012	0.37396	1.99E-03	85%	6.63E-04	3.32E-04	0.0306	0.0190	1.01E-04	84%	3.37E-05	1.69E-05	0.0281	0.0175	9.30E-05	84%	3.10E-05	1.55E-05
				17	1570	0.1081	0.06720	3.81E-04	94%	1.27E-04	6.35E-05	0.6173	0.38357	2.17E-03	93%	7.25E-04	3.62E-04	0.0320	0.0199	1.13E-04	93%	3.76E-05	1.88E-05	0.0294	0.0183	1.04E-04	93%	3.45E-05	1.73E-05
				18	1695	0.1064	0.06614	4.05E-04	100%	1.35E-04	6.75E-05	0.6139	0.38144	2.33E-03	100%	7.78E-04	3.89E-04	0.0317	0.0197	1.21E-04	100%	4.02E-05	2.01E-05	0.0291	0.0181	1.11E-04	100%	3.69E-05	1.85E-05
				19	1705	0.1058	0.06576	4.05E-04	100%	1.35E-04	6.75E-05	0.6104	0.37932	2.34E-03	100%	7.78E-04	3.89E-04	0.0316	0.0196	1.21E-04	100%	4.03E-05	2.01E-05	0.0290	0.0180	1.11E-04	100%	3.70E-05	1.85E-05
				20	1445	0.1049	0.06518	3.40E-04	84%	1.13E-04	5.67E-05	0.6064	0.37677	1.97E-03	84%	6.55E-04	3.28E-04	0.0311	0.0193	1.01E-04	84%	3.36E-05	1.68E-05	0.0288	0.0178	9.27E-05	84%	3.09E-05	1.55E-05
				21	1165	0.1069	0.06640	2.79E-04	69%	9.31E-05	4.66E-05	0.6073	0.37739	1.59E-03	68%	5.29E-04	2.65E-04	0.0314	0.0195	8.20E-05	68%	2.73E-05	1.37E-05	0.0288	0.0179	7.54E-05	68%	2.51E-05	1.26E-05
				22	1045	0.1075	0.06679	2.52E-04	62%	8.40E-05	4.20E-05	0.6162	0.38291	1.44E-03	62%	4.82E-04	2.41E-04	0.0320	0.0199	7.51E-05	62%	2.50E-05	1.25E-05	0.0294	0.0183	6.90E-05	62%	2.30E-05	1.15E-05
				23	1015	0.1104	0.06887	2.51E-04	62%	8.38E-05	4.19E-05	0.6240	0.38775	1.42E-03	61%	4.74E-04	2.37E-04	0.0328	0.0204	7.47E-05	62%	2.49E-05	1.25E-05	0.0302	0.0183	6.90E-05	62%	2.29E-05	1.14E-05
				24	740	0.1025	0.06370	1.70E-04	42%	5.67E-05	2.84E-05	0.6101	0.37910	1.01E-03	43%	3.38E-04	1.69E-04	0.0313	0.0195	5.20E-05	43%	1.73E-05	8.67E-06	0.0288	0.0179	4.78E-05	43%	1.59E-05	7.96E-06
1a	Tsing Lun Road Emitted to the South of Enclosure	1aS	0.026	1	465	0.0995	0.0618	1.04E-04	26%	3.46E-05	1.73E-05	0.5917	0.36777	6.17E-04	26%	2.06E-04	1.03E-04	0.0303	0.0188	3.16E-05	26%	1.05E-05	5.26E-06	0.028	0.017	2.90E-05	26%	9.67E-06	4.84E-06
				2	330	0.0813	0.0505	6.02E-05	15%	2.01E-05	1.00E-05	0.5136	0.31912	3.80E-04	16%	1.27E-04	6.34E-05	0.0273	0.0170	2.02E-05	17%	6.74E-06	3.37E-06	0.0250	0.0156	1.85E-05	17%	6.18E-06	3.09E-06
				3	250	0.0950	0.05903	5.33E-05	13%	1.78E-05	8.88E-06	0.5651	0.35116	3.17E-04	14%	1.06E-04	5.28E-05	0.0322	0.0200	1.81E-05	15%	6.02E-06	3.01E-06	0.0296	0.0184	1.66E-05	15%	5.53E-06	2.76E-06
				4	180	0.0806	0.05010	3.26E-05	8%	1.09E-05	5.43E-06	0.5572	0.34488	2.37E-04	10%	7.91E-05	3.95E-05	0.0312	0.0194	1.81E-05	10%	4.20E-06	2.10E-06	0.0288	0.0178	1.15E-05	10%	3.92E-06	1.92E-06
				5	190	0.0765	0.04605	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.34655	2.39E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	11%	4.25E-06	2.12E-06	0.0274	0.0176	1.17E-05	11%	3.97E-06	1.94E-06
				6	295	0.0834	0.05182	5.52E-05	14%	1.84E-05	9.20E-06	0.5271	0.32754	3.49E-04	15%	1.16E-04	5.82E-05	0.0287	0.0178	1.90E-05	16%	6.34E-06	3.17E-06	0.0263	0.0164	1.74E-05	16%	5.81E-06	2.90E-06
				7	750	0.1015	0.06308	1.71E-04	42%	5.69E-05	2.85E-05	0.6153	0.3823	1.04E-03	44%	3.45E-04	1.73E-04	0.0309	0.0192	5.20E-05	43%	1.73E-05	8.67E-06	0.0284	0.0180	1.78E-05	43%	1.69E-06	7.97E-06
				8	1645	0.1075	0.0668	3.97E-04	98%	1.32E-04	6.61E-05	0.6154	0.3824	2.27E-03	97%	7.57E-04	3.79E-04	0.0321	0.0200	1.19E-04	98%	3.96E-05	1.98E-05	0.0295	0.0184	1.09E-04	98%	3.63E-05	1.82E-05
				9	1705	0.1058	0.06576	4.05E-04	100%	1.35E-04	6.75E-05	0.6104	0.3793	2.34E-03	100%	7.78E-04	3.89E-04	0.0316	0.0196	1.21E-04	100%	4.03E-05	2.01E-05	0.0290	0.0180	1.11E-04	100%	3.70E-05	1.85E-05
				10	1570	0.1081	0.0672	3.81E-04	94%	1.27E-04	6.35E-05	0.6173	0.3836	2.17E-03	93%	7.25E-04	3.62E-04	0.0320	0.0199	1.13E-04	93%	3.76E-05	1.88E-05	0.0294	0.0183	1.04E-04	93%	3.45E-05	1.73E-05
				11	1470	0.1033	0.0642	3.41E-04	84%	1.14E-04	5.68E-05	0.6031	0.3748	1.99E-03	85%	6.63E-04	3.32E-04	0.0307	0.0191	1.01E-04	84%	3.37E-05	1.69E-05	0.0282	0.0175	9.30E-05	84%	3.10E-05	1.55E-05
				12	1415	0.1064	0.0661	3.38E-04	83%	1.13E-04	5																		

Calculation of Portal Emission for Year 2033 (i.e. Full Population Intake, with Project)

Road No.	Portal Description	Portal ID	Tunnel Length (km)	Hour	Total Vehicle (veh/hr)	NO <sub>x</sub>					NO					RSP					FSP								
						Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 emission rate	Forest 50m - 1/3 emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate	Emission Rate		Total Emission	% of the maximum emission rate <sup>[1]</sup>	Nearest 50m 2/3 of the total emission rate	Forest 50m - 1/3 of the total emission rate
						(g/veh/mile)	(g/veh/km)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)	(g/s)
1a	Tsing Lun Road Emitted to the North of Enclosure	1aN	0.0260	1	805	0.1038	0.0647	1.18E-04	28%	3.92E-05	1.98E-05	0.6008	0.3734	6.91E-04	28%	2.27E-04	1.13E-04	0.0305	0.0190	3.46E-05	28%	1.15E-05	5.78E-06	0.0280	0.0174	3.18E-05	28%	1.08E-05	5.29E-06
				2	345	0.0835	0.05186	6.46E-05	15%	2.15E-05	1.08E-05	0.5052	0.3191	3.91E-04	16%	1.30E-04	6.52E-05	0.0275	0.0171	2.13E-05	17%	7.11E-06	3.55E-06	0.0252	0.0157	1.95E-05	17%	6.52E-06	3.26E-06
				3	255	0.0932	0.05792	5.33E-05	13%	1.78E-05	8.89E-06	0.5548	0.3447	3.17E-04	13%	1.06E-04	5.29E-05	0.0317	0.0197	1.81E-05	15%	6.05E-06	3.02E-06	0.0291	0.0181	1.87E-05	15%	5.55E-06	2.78E-06
				4	190	0.0765	0.04752	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.3465	2.38E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	10%	4.25E-06	2.12E-06	0.0274	0.0170	1.17E-05	10%	3.89E-06	1.95E-06
				5	190	0.0765	0.0498	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.3465	2.38E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	10%	4.25E-06	2.12E-06	0.0274	0.0170	1.17E-05	10%	3.89E-06	1.95E-06
				6	310	0.0802	0.04982	5.58E-05	13%	1.86E-05	9.30E-06	0.5309	0.3297	3.69E-04	15%	1.23E-04	6.15E-05	0.0274	0.0170	1.91E-05	15%	6.36E-06	3.18E-06	0.0251	0.0156	1.75E-05	15%	5.83E-06	2.91E-06
				7	790	0.1034	0.06423	1.83E-04	43%	6.11E-05	3.05E-05	0.6004	0.3731	1.06E-03	44%	3.55E-04	1.77E-04	0.0310	0.0193	5.50E-05	44%	1.83E-05	9.17E-06	0.0285	0.0177	5.06E-05	44%	1.69E-05	8.43E-06
				8	1720	0.1055	0.0657	4.07E-04	97%	1.36E-04	6.79E-05	0.6064	0.3768	2.34E-03	97%	7.80E-04	3.90E-04	0.0315	0.0196	1.22E-04	97%	4.05E-05	2.03E-05	0.0289	0.0180	1.12E-04	97%	3.72E-05	1.86E-05
				9	1790	0.1049	0.06517	4.21E-04	100%	1.40E-04	7.02E-05	0.6020	0.37406	2.42E-03	100%	8.06E-04	4.03E-04	0.0311	0.0193	1.25E-04	100%	4.16E-05	2.08E-05	0.0285	0.0177	1.15E-04	100%	3.82E-05	1.91E-05
				10	1650	0.1072	0.06663	3.97E-04	94%	1.32E-04	6.62E-05	0.6066	0.37690	2.25E-03	93%	7.49E-04	3.74E-04	0.0315	0.0196	1.17E-04	94%	3.89E-05	1.95E-05	0.0290	0.0180	1.07E-04	94%	3.58E-05	1.79E-05
				11	1540	0.1032	0.06411	3.57E-04	85%	1.19E-04	5.94E-05	0.5930	0.36848	2.05E-03	85%	6.83E-04	3.42E-04	0.0304	0.0189	1.05E-04	84%	3.50E-05	1.75E-05	0.0279	0.0174	9.65E-05	84%	3.22E-05	1.61E-05
				12	1480	0.1065	0.06617	3.54E-04	84%	1.18E-04	5.89E-05	0.5989	0.37211	1.99E-03	82%	6.63E-04	3.31E-04	0.0313	0.0194	1.04E-04	83%	3.46E-05	1.73E-05	0.0287	0.0179	9.55E-05	83%	3.18E-05	1.59E-05
				13	1360	0.1103	0.06867	3.37E-04	80%	1.12E-04	5.61E-05	0.6164	0.38302	1.89E-03	78%	6.27E-04	3.14E-04	0.0327	0.0203	9.97E-05	80%	3.32E-05	1.66E-05	0.0300	0.0186	9.16E-05	80%	3.05E-05	1.53E-05
				14	1410	0.1072	0.06660	3.39E-04	80%	1.13E-04	5.65E-05	0.6105	0.37934	1.93E-03	80%	6.44E-04	3.22E-04	0.0318	0.0198	1.01E-04	81%	3.35E-05	1.68E-05	0.0292	0.0182	9.25E-05	81%	3.08E-05	1.54E-05
				15	1500	0.1056	0.06559	3.55E-04	84%	1.18E-04	5.92E-05	0.6010	0.37346	2.02E-03	84%	6.74E-04	3.37E-04	0.0310	0.0193	1.04E-04	84%	3.48E-05	1.74E-05	0.0285	0.0177	9.58E-05	84%	3.19E-05	1.60E-05
				16	1540	0.1032	0.06411	3.57E-04	85%	1.19E-04	5.94E-05	0.5930	0.36848	2.05E-03	85%	6.83E-04	3.42E-04	0.0304	0.0189	1.05E-04	84%	3.50E-05	1.75E-05	0.0279	0.0174	9.65E-05	84%	3.22E-05	1.61E-05
				17	1650	0.1072	0.06663	3.97E-04	94%	1.32E-04	6.62E-05	0.6066	0.37690	2.25E-03	93%	7.49E-04	3.74E-04	0.0315	0.0196	1.17E-04	94%	3.89E-05	1.95E-05	0.0290	0.0180	1.07E-04	94%	3.58E-05	1.79E-05
				18	1790	0.1055	0.06553	4.21E-04	100%	1.40E-04	7.02E-05	0.6052	0.37605	2.42E-03	100%	8.06E-04	4.03E-04	0.0312	0.0194	1.05E-04	100%	4.15E-05	2.08E-05	0.0287	0.0178	1.14E-04	100%	3.82E-05	1.91E-05
				19	1790	0.1049	0.06517	4.21E-04	100%	1.40E-04	7.02E-05	0.6020	0.37406	2.42E-03	100%	8.06E-04	4.03E-04	0.0311	0.0193	1.25E-04	100%	4.16E-05	2.08E-05	0.0285	0.0177	1.15E-04	100%	3.82E-05	1.91E-05
				20	1520	0.1045	0.06494	3.56E-04	85%	1.19E-04	5.94E-05	0.6004	0.37308	2.05E-03	85%	6.83E-04	3.41E-04	0.0307	0.0191	1.05E-04	84%	3.49E-05	1.75E-05	0.0282	0.0175	9.62E-05	84%	3.21E-05	1.60E-05
				21	1215	0.1058	0.06575	2.89E-04	68%	9.62E-05	4.81E-05	0.5988	0.37208	1.63E-03	68%	5.44E-04	2.72E-04	0.0309	0.0192	8.42E-05	67%	2.81E-05	1.40E-05	0.0284	0.0176	7.74E-05	67%	2.58E-05	1.29E-05
				22	1090	0.1059	0.06581	2.59E-04	61%	8.63E-05	4.32E-05	0.6068	0.37706	1.48E-03	61%	4.95E-04	2.47E-04	0.0314	0.0195	7.68E-05	62%	2.56E-05	1.28E-05	0.0289	0.0179	7.06E-05	62%	2.35E-05	1.18E-05
				23	1060	0.1084	0.06736	2.58E-04	61%	8.59E-05	4.30E-05	0.6132	0.38105	1.48E-03	60%	4.86E-04	2.43E-04	0.0321	0.0199	7.63E-05	61%	2.54E-05	1.27E-05	0.0295	0.0183	7.01E-05	61%	2.34E-05	1.17E-05
				24	790	0.1047	0.06504	1.83E-04	43%	6.11E-05	3.05E-05	0.6078	0.37764	1.06E-03	44%	3.55E-04	1.77E-04	0.0313	0.0195	5.49E-05	44%	1.83E-05	9.14E-06	0.0288	0.0179	5.04E-05	44%	1.68E-05	8.40E-06
1a	Tsing Lun Road Emitted to the South of Enclosure	1aS	0.026	1	805	0.1038	0.0645	1.18E-04	28%	3.92E-05	1.98E-05	0.6008	0.3733	6.91E-04	28%	2.27E-04	1.13E-04	0.0305	0.0190	3.46E-05	28%	1.15E-05	5.78E-06	0.028	0.017	3.18E-05	28%	1.06E-05	5.29E-06
				2	345	0.0835	0.0519	6.46E-05	15%	2.15E-05	1.08E-05	0.5052	0.3191	3.91E-04	16%	1.30E-04	6.52E-05	0.0275	0.0171	2.13E-05	17%	7.11E-06	3.55E-06	0.0252	0.0157	1.95E-05	17%	6.52E-06	3.26E-06
				3	255	0.0932	0.0579	5.33E-05	13%	1.78E-05	8.89E-06	0.5548	0.3447	3.17E-04	13%	1.06E-04	5.29E-05	0.0317	0.0197	1.81E-05	15%	6.05E-06	3.02E-06	0.0291	0.0181	1.87E-05	15%	5.55E-06	2.78E-06
				4	190	0.0765	0.0475	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.3465	2.38E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	10%	4.25E-06	2.12E-06	0.0274	0.0170	1.17E-05	10%	3.89E-06	1.95E-06
				5	190	0.0765	0.0498	3.26E-05	8%	1.09E-05	5.43E-06	0.5577	0.3465	2.38E-04	10%	7.93E-05	3.96E-05	0.0299	0.0186	1.27E-05	10%	4.25E-06	2.12E-06	0.0274	0.0170	1.17E-05	10%	3.89E-06	1.95E-06
				6	310	0.0802	0.04982	5.58E-05	13%	1.86E-05	9.30E-06	0.5309	0.3297	3.69E-04	15%	1.23E-04	6.15E-05	0.0274	0.0170	1.91E-05	15%	6.36E-06	3.18E-06	0.0251	0.0156	1.75E-05	15%	5.83E-06	2.91E-06
				7	790	0.1034	0.0642	1.83E-04	43%	6.11E-05	3.05E-05	0.6004	0.3731	1.06E-03	44%	3.55E-04	1.77E-04	0.0310	0.0193	5.50E-05	44%	1.83E-05	9.17E-06	0.0285	0.0177	5.06E-05	44%	1.69E-05	8.43E-06
				8	1720	0.1055	0.0656	4.07E-04	97%	1.36E-04	6.79E-05	0.6064	0.3768	2.34E-03	97%	7.80E-04	3.90E-04	0.0315	0.0196	1.22E-04	97%	4.05E-05	2.03E-05	0.0289	0.0180	1.12E-04	97%	3.72E-05	1.86E-05
				9	1790	0.1049	0.0652	4.21E-04	100%	1.40E-04	7.02E-05	0.6020	0.3741	2.42E-03	100%	8.06E-04	4.03E-04	0.0311	0.0193	1.25E-04	100%	4.16E-05	2.08E-05	0.028	0.018	1.15E-04	100%	3.82E-05	1.91E-05
				10	1650	0.1072	0.0666	3.97E-04	94%	1.32E-04	6.62E-05	0.6066	0.3769	2.25E-03	93%	7.49E-04	3.74E-04	0.0315	0.0196	1.17E-04	94%	3.89E-05	1.95E-05	0.029	0.018	1.07E-04	94%	3.58E-05	1.79E-05
				11	1540	0.1032	0.0641	3.57E-04	85%	1.19E-04	5.94E-05	0.5930	0.3685	2.05E-03	85%	6.83E-04	3.42E-04	0.0304	0.0189	1.05E-04	84%	3.50E-05	1.75E-05	0.028	0.018	9.65E-05	84%	3.22E-05	1.61E-05
				12	1480	0.1065	0.0662	3.54E-04	84%	1.18E-04	5.89E-05	0.5989	0.3721	1.99E-03</															