



Legend

- Group 1 (EX/TR/PD/DD without cold start)
- Group 2 (LD/RR with cold start)

0 125 250 500 750 1,000 Meters

Calculation of % of Daily vehicle-km for local and rural roads in Hong Kong

Region	Average Daily Vehicle-km in Year 2019 [1]		
	Major road network	Minor road network	All road
HK Island	4,856,454 (3,018,306)	1,082,420 (672,728)	5,938,874 (3,691,034)
Kowloon	8,010,289 (4,978,427)	1,039,537 (646,076)	9,049,826 (5,624,503)
New Territories	20,732,342 (12,885,234)	2,714,257 (1,686,922)	23,446,599 (14,572,156)
Total	33,599,085 (20,881,967)	4,836,214 (3,005,727)	38,435,299 (23,887,694)
%	87.4%	13%	100.0%

Assumed % of daily vehicle-km for local and rural roads in Hong Kong = 13%

Note:

[1] Vehicle-mile is shown in ().

Remark:

- 1) Average Daily Vehicle-km in 2019 are extracted from The Annual Traffic Census (ATC) 2019 published by Transport Department
- 2) According to ATC 2019, almost all (>99%) of the trafficable lengths of minor road networks in Hong Kong belong to local distributors or rural roads with possible cold start trips, whereas the remaining minority <1% of the minor road networks belong to district distributors with stopping/parking restrictions and hence no cold start trips. For major road networks in Hong Kong, a small portion (about 10%) of the trafficable length belong to local distributors or rural roads with possible cold start trips, whereas the remaining large portion (about 90%) belong to expressways, trunk roads, primary or district distributors, all of which have stopping/parking restrictions and hence no cold start trips. Therefore, the % of daily vehicle-km for local and rural roads in Hong Kong can be approximated by the % of daily vehicle-km for minor road networks in Hong Kong, which would be conservative estimates for the number of trips.

Project: Environmental Consultancy No. C1202 Environmental Impact Assessment Study for Tung Chung Line Extension
 Scenario: Group 2 - Year 2029 (for Construction Dust Assessment)
 Title: Trip for Composite Emission Factors Calculation

	Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24
All Vehicle PC	748.8	504.4	305.9	215.2	323.3	771.6	1265.5	1921.8	2158.6	1577.8	1340.3	1319.3	1189.3	1145.4	1321.6	1251.5	1322.2	1810.2	2146.8	1512.6	1203.8	1208.7	1208.0	1000.4
TAXI	119.1	79.2	47.3	33.0	48.8	114.7	185.5	277.6	226.7	183.6	192.7	196.0	151.2	172.6	144.6	189.0	160.1	174.2	166.4	162.9	175.2	196.3	196.7	160.8
LGV3	0.2	0.0	0.0	0.0	0.0	0.2	1.7	3.9	6.0	6.2	6.2	6.1	9.6	9.6	9.8	9.4	10.4	10.4	6.8	5.1	4.6	2.5	1.8	1.8
LGV4	113.9	82.9	53.3	40.4	64.2	164.7	286.9	459.5	495.7	580.6	564.4	519.3	842.6	823.7	950.0	786.6	989.8	981.4	565.9	459.3	436.7	357.3	315.9	281.2
LGV6	29.8	21.4	13.9	11.1	16.6	43.5	76.4	122.3	132.6	155.0	150.4	139.3	225.8	221.0	253.7	210.5	265.2	262.1	152.1	122.4	115.9	95.7	83.6	75.4
HGV7	19.1	12.8	7.2	4.7	7.0	14.9	24.0	33.3	33.3	33.5	42.2	26.0	16.5	31.3	41.4	39.0	22.6	13.7	19.0	27.7	38.7	35.8	42.2	31.6
HGV8	40.2	25.9	14.7	10.3	14.0	31.9	49.4	69.0	69.0	70.4	89.3	54.5	36.7	65.8	85.4	82.6	47.9	28.1	39.8	57.7	81.3	75.3	86.8	67.8
PLB	1.6	1.5	0.8	0.7	0.8	1.6	3.1	4.6	3.9	3.9	3.1	3.1	3.1	3.9	3.1	3.1	3.8	3.9	3.9	3.1	3.1	3.9	3.1	3.0
PV4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.0	0.0	0.1	0.1	0.1	0.0	0.4	1.5	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
PV5	0.1	0.1	0.0	0.0	0.1	3.8	6.2	11.0	0.7	3.8	7.1	6.6	6.7	2.7	7.8	15.0	9.4	9.1	2.7	0.0	0.0	0.7	0.0	0.0
NFB6	11.3	9.5	5.5	4.6	7.8	20.7	35.9	58.9	52.6	35.4	35.4	34.7	30.6	25.4	24.5	26.3	51.7	52.9	60.6	32.6	30.6	14.1	14.4	14.1
NFB7	8.8	5.9	4.5	3.5	5.4	15.0	26.2	42.5	37.4	25.9	25.9	24.7	21.2	18.4	17.7	19.3	36.2	37.3	42.5	22.5	21.2	9.0	10.4	9.0
NFB8	15.4	11.0	6.9	5.6	9.9	26.3	46.5	75.9	68.1	45.1	45.0	43.9	38.8	33.2	31.4	33.7	66.1	68.2	76.9	41.6	38.8	18.2	19.2	18.2
FBSD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FBDD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MC	173.2	122.8	74.6	62.7	109.4	278.3	490.0	791.1	419.4	224.9	224.9	157.9	142.4	206.4	281.8	154.1	234.3	469.2	387.2	287.5	202.1	85.4	221.5	209.8
HGV9	10.5	6.8	3.8	2.7	3.7	8.4	13.0	18.1	18.1	18.5	23.4	14.3	9.6	17.3	22.4	21.7	12.6	7.4	10.4	15.1	21.3	19.7	22.8	17.8
NFB9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note:
 Start emissions from franchised buses (FBSD/FBDD) are calculated separately from other vehicle types. Detailed calculations are presented in Appendix 3.8.

Project: Environmental Consultancy No. C1202 Environmental Impact Assessment Study for Tung Chung Line Extension
 Scenario: Group 2 - Year 2029 (for Construction Dust Assessment)
 Title: Trip to VKT Ratio

		Hour01	Hour02	Hour03	Hour04	Hour05	Hour06	Hour07	Hour08	Hour09	Hour10	Hour11	Hour12	Hour13	Hour14	Hour15	Hour16	Hour17	Hour18	Hour19	Hour20	Hour21	Hour22	Hour23	Hour24	
All Vehicle Type	PC	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103	
	TAXI	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	0.0716	
	LGV3	0.4734	0.4734	0.4637	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4740	0.4728	0.4734	0.4741	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4734	0.4700
	LGV4	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523	0.4523
	LGV6	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069	0.3069
	HGV7	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580	0.3580
	HGV8	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570	0.3570
	PLB	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1275	0.1276	0.1276	0.1275	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276	0.1276
	PV4	0.2383	0.2383	0.2383	0.2383	0.2383	0.2383	0.2383	0.2385	0.2383	0.2383	0.2383	0.2383	0.2383	0.2383	0.2387	0.2383	0.2383	0.2383	0.2383	0.2383	0.2405	0.2354	0.2383	0.2349	0.2383
	PV5	0.2852	0.2849	0.2851	0.2851	0.2851	0.2850	0.2850	0.2850	0.2851	0.2850	0.2850	0.2850	0.2850	0.2851	0.2850	0.2850	0.2850	0.2850	0.2850	0.2850	0.2853	0.2851	0.2852	0.2852	0.2851
	NFB6	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
	NFB7	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561	0.2561
	NFB8	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573	0.2573
	FBSD	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586	0.4586
	FBDD	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680	0.3680
	MC	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753	2.8753
	HGV9	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585	0.3585
	NFB9	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569	0.2569

Note:
 [1] VKT multiplied by 0.13 to represent VKT for minor roads (referenced from "Annual Traffic Census 2019")