

**Appendix 3.8 Emission Inventory of Concurrent Projects**

Construction Phase Year 2025 and 2028

Location	Source	Emission Rates	Mitigated	Parameters	Remarks			
Reprovision of Tuen Mun Swimming Pool and Tuen Mun Golf Centre Practice Green  Planned Public Housing Development at Wu Shan Road  Reprovision of Pet Garden	Construction Activities	Heavy Construction Area Source (g/m <sup>2</sup> /s)	TSP	1.72276E-05	Emission Rate = (Emission Factor*10 <sup>6</sup> /10000)/(30*No. of Operation hour*60*60)*(Percentage Active/100)*(1-Dust Suppression%) TSP emission factor (Mg/hectare/month of activity) Percentage area actively operating (%) % of dust suppression no. of operation hour (hr) Emission height (m)	2.69 100 91.7 12 0.5	from AP-42, S13.2.3, 1/95 ed.  Assume watering once every 2 hours. Refer to the Calculation of Dust Suppression Efficiency by Watering. Assume typical working hours of work site (0700 - 1900)	
				8.14867E-06	RSP emission factor (Mg/hectare/month of activity) % fraction of TSP	1.27237 0.47	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4	
				1.24039E-06	FSP emission factor (Mg/hectare/month of activity) % fraction of TSP	0.19368 0.07	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4	
		Wind Erosion Area Source (g/m <sup>2</sup> /s)	TSP	Emission Rate = Emission Factor*10 <sup>6</sup> /(10000*365*24*60*60)*(Percentage Active/100)	0.85	TSP emission factor (Mg/hectare/yr) Percentage area actively operating (%) Emission height (m)	0.85 100 0.5	AP-42, 5th ed., Table 11.9.4
					0.40205	RSP emission factor (Mg/hectare/yr) % fraction of TSP	0.47	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4
					0.0612	FSP emission factor (Mg/hectare/yr) % fraction of TSP	0.07	from USEPA AP-42, 5th ed. 11/06 ed. S13.2.4

**Appendix 3.8 Emission Inventory of Concurrent Projects**

Emission Source Listing in AERMOD

Mitigated Construction Dust Emission Sources

Source ID	Type	X1	Y1	X2	Y2	Angle of Rotation	Height (m)	No. of Vertices	Working Hour	TSP Emission Rate (g/m2-s)		RSP Emission Rate (g/m2-s)		FSP Emission Rate (g/m2-s)	
										Working hours	Non-working hours	Working hours	Non-working hours	Working hours	Non-working hours
CW01	AREAPOLY	814233.65	826687.63	-	-	-	0.5	20	07:00 - 19:00	1.72276E-05	2.69533E-06	8.14867E-06	1.27489E-06	1.24039E-06	1.94064E-07
CW02	AREAPOLY	814314.707	826648.915	-	-	-	0.5	14	07:00 - 19:00	1.72276E-05	2.69533E-06	8.14867E-06	1.27489E-06	1.24039E-06	1.94064E-07
CW03	AREAPOLY	814224.93	826919.09	-	-	-	0.5	20	07:00 - 19:00	1.72276E-05	2.69533E-06	8.14867E-06	1.27489E-06	1.24039E-06	1.94064E-07
CW04	AREAPOLY	814315.161	827253.93	-	-	-	0.5	20	07:00 - 19:00	1.72276E-05	2.69533E-06	8.14867E-06	1.27489E-06	1.24039E-06	1.94064E-07
CW05	AREAPOLY	814537.54	826114.19	-	-	-	0.5	13	07:00 - 19:00	1.72276E-05	2.69533E-06	8.14867E-06	1.27489E-06	1.24039E-06	1.94064E-07

Hourly Profile

Hour	TSP	RSP	FSP
Hour 1	0.15645	0.15645	0.15645
Hour 2	0.15645	0.15645	0.15645
Hour 3	0.15645	0.15645	0.15645
Hour 4	0.15645	0.15645	0.15645
Hour 5	0.15645	0.15645	0.15645
Hour 6	0.15645	0.15645	0.15645
Hour 7	0.15645	0.15645	0.15645
Hour 8	1.00000	1.00000	1.00000
Hour 9	1.00000	1.00000	1.00000
Hour 10	1.00000	1.00000	1.00000
Hour 11	1.00000	1.00000	1.00000
Hour 12	1.00000	1.00000	1.00000
Hour 13	1.00000	1.00000	1.00000
Hour 14	1.00000	1.00000	1.00000
Hour 15	1.00000	1.00000	1.00000
Hour 16	1.00000	1.00000	1.00000
Hour 17	1.00000	1.00000	1.00000
Hour 18	1.00000	1.00000	1.00000
Hour 19	1.00000	1.00000	1.00000
Hour 20	0.15645	0.15645	0.15645
Hour 21	0.15645	0.15645	0.15645
Hour 22	0.15645	0.15645	0.15645
Hour 23	0.15645	0.15645	0.15645
Hour 24	0.15645	0.15645	0.15645

Remark:

The construction period was assumed to be 12-hour between 07:00 and 19:00.

Only wind erosion was assumed for non-working hours, and the hourly ratio was calculated by wind erosion emission rate/heavy construction emission rate.

**Appendix 3.8 Emission Inventory of Concurrent Projects**

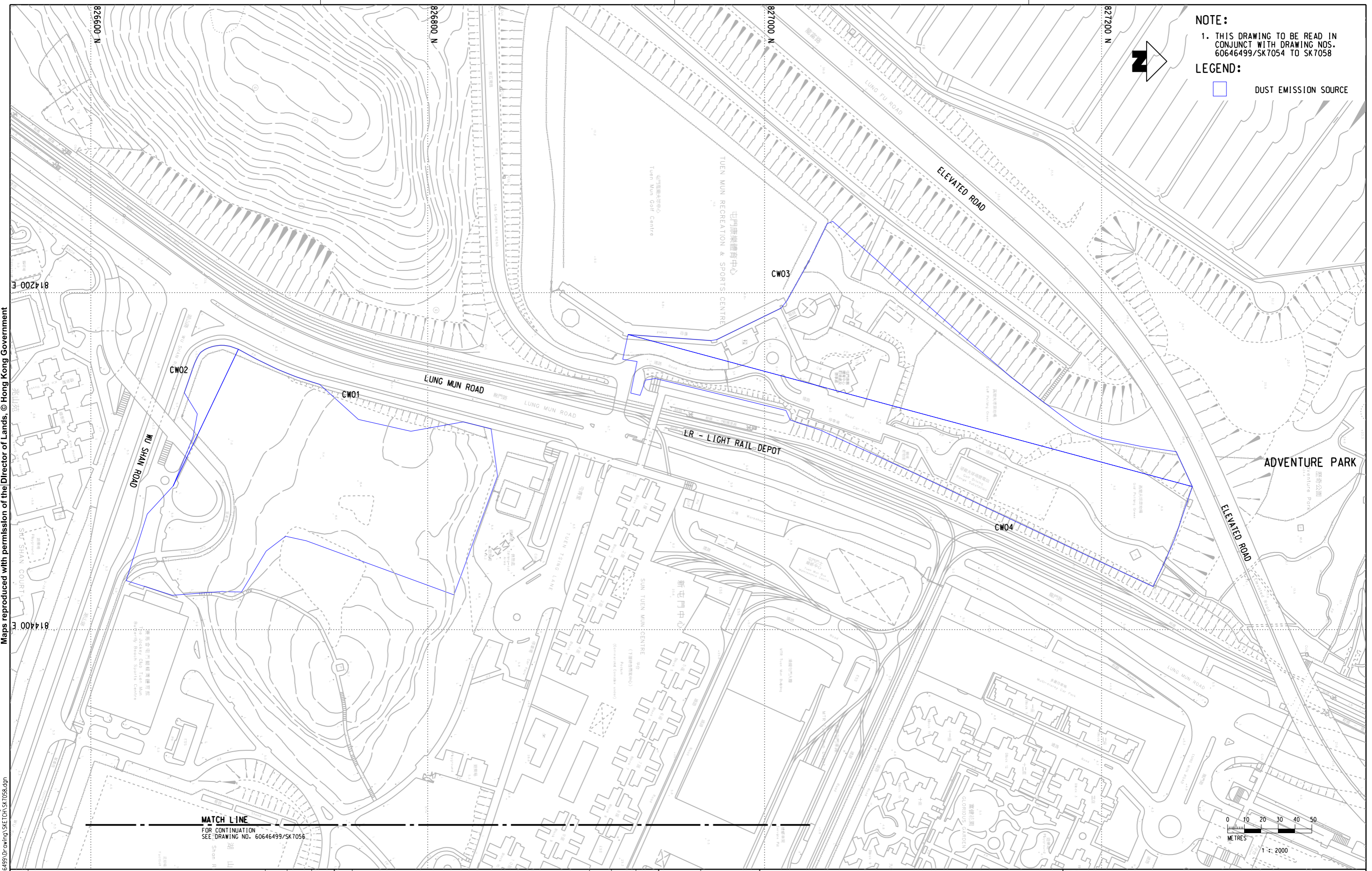
Location of Vertices for AREAPOLY

Source ID	Vertex 1		Vertex 2		Vertex 3		Vertex 4		Vertex 5		Vertex 6		Vertex 7		Vertex 8		Vertex 9		Vertex 10	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
CW01	814233.65	826687.63	814239.38	826698.18	814245.67	826711.10	814250.00	826721.86	814254.43	826735.80	814275.26	826758.81	814282.28	826789.98	814276.67	826821.12	814280.83	826837.67	814308.85	826841.45
CW02	814314.71	826648.91	814285.33	826660.79	814271.94	826663.24	814259.43	826655.50	814242.00	826661.59	814237.08	826663.95	814235.44	826665.28	814233.59	826667.84	814232.67	826670.10	814231.74	826673.28
CW03	814224.93	826919.09	814228.48	826968.14	814227.88	826971.62	814209.25	827009.74	814204.92	827013.13	814181.10	827026.42	814159.04	827037.18	814157.76	827040.40	814210.98	827100.78	814225.61	827117.51
CW04	814315.16	827253.93	814346.70	827243.28	814357.21	827238.59	814361.59	827236.70	814374.42	827230.54	814357.65	827195.02	814344.26	827166.76	814329.15	827134.98	814306.10	827086.62	814281.72	827033.37
CW05	815019.68	827347.08	815024.67	827397.11	815024.03	827408.12	815017.87	827414.00	815008.79	827413.79	815008.54	827420.61	815017.71	827420.83	815018.77	827422.60	815016.11	827426.75	815013.23	827429.27

Source ID	Vertex 11		Vertex 12		Vertex 13		Vertex 14		Vertex 15		Vertex 16		Vertex 17		Vertex 18		Vertex 19		Vertex 20	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
CW01	814379.39	826815.60	814347.26	826727.92	814344.60	826715.57	814353.37	826704.10	814377.63	826689.42	814377.44	826677.30	814379.60	826648.43	814370.91	826620.98	814331.39	826633.49	814314.71	826648.91
CW02	814231.33	826676.56	814231.23	826679.12	814231.88	826682.58	814233.65	826687.63												
CW03	814244.96	827140.39	814250.00	827145.92	814270.50	827172.84	814278.57	827183.56	814281.42	827188.39	814284.49	827194.85	814286.73	827201.67	814291.39	827223.85	814294.43	827244.35	814315.16	827253.93
CW04	814275.62	827015.23	814269.97	827012.67	814251.02	826935.11	814251.92	826929.31	814260.97	826926.10	814259.60	826920.47	814240.91	826924.34	814239.54	826915.74	814226.12	826918.61	814224.93	826919.09
CW05	815006.12	827422.15	815004.77	827423.39	814979.72	827398.61	814980.96	827397.30	814969.29	827386.75	814967.79	827387.89	814950.80	827373.34	814952.34	827371.49	814943.97	827364.77		

**NOTE:**  
 1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NOS. 60646499/SK7054 TO SK7058

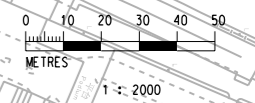
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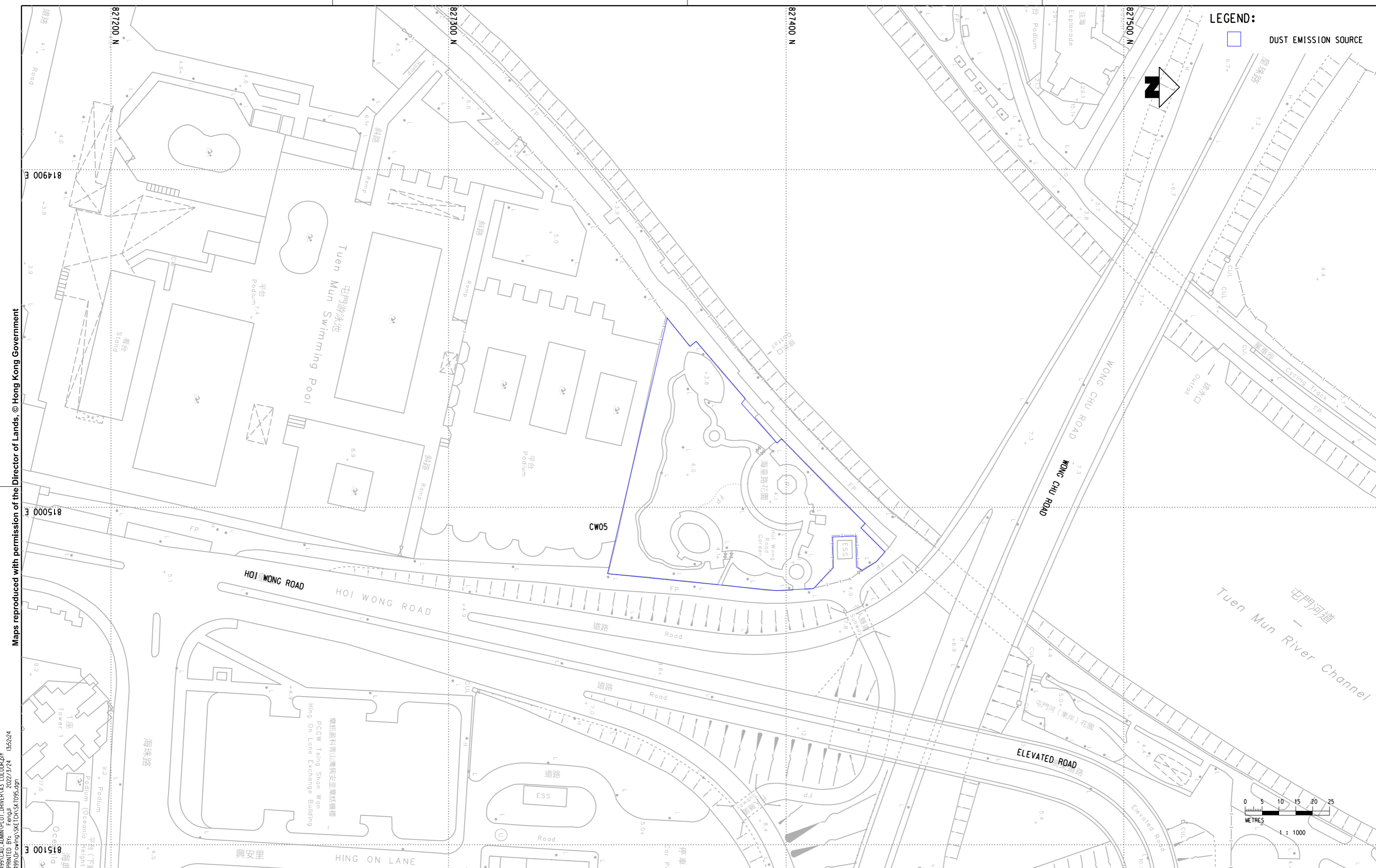
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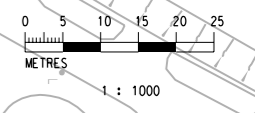
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LEGEND:  
 DUST EMISSION SOURCE



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TUEN MUN SOUTH EXTENSION		LOCATION OF CONSTRUCTION DUST EMISSION SOURCE	
(CONCURRENT PROJECT)			
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