Details of Dust Emission Sources
Airport Tung Chung Link Project

TSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	Assume watering once per 2 hours. Refer to the Calculation of Dust Supression Efficiency by Watering.
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	Assume Emission Factor is based on construction activity occurs 30 days per month. AP42, Section 13.2.3.3
	Emission Rate	1.72E-05	g/m²/s	=2.69*1000000/(10000*d*h*60*60)*p/100*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	Emission Rate	2.70E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100

RSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	Assume watering once per 2 hours. Refer to the Calculation of Dust Supression Efficiency by Watering.
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
	% content of RSP	47.3	% of TSP	AP42, Section 13.2.4
	Emission Factor for RSP	1.27	Mg/hectare/month of activity	
	Emission Rate for RSP	8.15E-06	g/m²/s	=1.27*1000000/(10000*d*h*60*60)*(p/100)*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	% content of RSP	47.3	% of TSP	AP42, Section 13.2.4
	Emission Factor for RSP	0.40	Mg/hectare/year	
	Emission Rate for RSP	1.27E-06	g/m²/s	=0.4*1000000/(10000*365*24*60*60)*p/100

FSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
	% content of FSP	7.2	% of TSP	AP42, Section 13.2.4
	Emission Factor for FSP	0.19	Mg/hectare/month of activity	
	Emission Rate for FSP	1.23E-06	g/m²/s	=0.19*1000000/(10000*d*h*60*60)*p/100*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	% content of FSP	7.2	% of TSP	AP42, Section 13.2.4
	Emission Factor for FSP	0.06	Mg/hectare/year	
	Emission Rate for FSP	1.93E-07	g/m²/s	=0.06*1000000/(10000*365*24*60*60)*p/100

Calculation of Dust Suppression Efficiency from Watering

(Calculation based on Equation (5-4) of USEPA's Control of Open Fugitive Dust Sources)

C = 100 - (0.8 x p x d x t) / i

where

C = average control efficiency, in percent
p = potential average hourly daytime evaporation rate in mm/hour
d = average hourly daytime traffic rate in vehicles per hour
i = application intensity in L/m^2
t = time between applications in hour

Assumptions:

1. Potential average hourly daytime evaporation rate p can be estimated by 0.0049 * e, where e is the mean annual average evaporation rate (inches). From the past measurement data in Hong Kong's Observatory, evaporation recorded at King's Park between 1991-2020 is 1206.6 mm.
   p = 0.0049 * (1206.6 mm) = 0.0049 * (47.50 inches)
   = 0.2328 mm/hour

2. Estimated average hourly daytime traffic rate in vehicles per hour provided by the Project Engineer,
   d = 30

3. Assume watering application intensity for assessment purpose,
   i = 1.35 L/m^2

4. Assumes watering frequency as once two hours
   t = 2.0 hour

With the above assumptions, dust suppression efficiency is calculated as below:

C = 100 - 0.8 x 0.2328 x 30 x 2 / 1.35
= 91.7 %

Reference:

The mean annual average evaporation rate is adpoted from HKO (2021).
https://www.hko.gov.hk/en/cis/normal/1991_2020/normals.htm

List of Construction Dust Sources (Project Related)

Source	ID	Type	Base Elevation	Emission Height	TSP Emission Rate (g/s/m^2)		RSP Emission Rate (g/s/m^2)		FSP Emission Rate (g/s/m^2)		Coordiantes of	
			mPD	[mAG]	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	X1 (m)	Y1 (m)
Heavy Construction	CO1	AREA_POLY	7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812014	816822
	CO2	AREA_POLY	7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812010	816835
	CO3	AREA_POLY	6.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811997	816843
	CO4	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811985	816851
	CO5	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811972	816859
	CO6	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811959	816866
	CO7	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811946	816874
	CO8	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811934	816882
	CO9	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811921	816890
	CO10	AREA_POLY	6.4	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811889	816901
	CO11	AREA_POLY	6.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811853	816924
	CO12	AREA_POLY	6.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811833	816969
	CO13	AREA_POLY	5.4	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811800	816996
	CO14	AREA_POLY	5.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811770	817022
	CO15	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811735	817045
	CO16	AREA_POLY	5.7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811705	817056
	CO17	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811699	817070
	CO18	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811601	816971
	CO19	AREA_POLY	6.7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811546	817208
	CO20	AREA_POLY	7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811580	817286
	CO21	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811602	817298
	CO22	AREA_POLY	6.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811645	817331
	CO23	AREA_POLY	6.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811635	817390
	CO24	AREA_POLY	5.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811594	817437
	CO25	AREA_POLY	5.4	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811533	817584
	CO26	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811640	817789
	CO27	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811670	817847
	CO28	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811726	817942
	CO29	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811900	818137
	CO30	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811930	818244
	CO31	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811865	818309
	CO32	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811930	818245
	CO33	AREA_POLY	5.7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811942	818300
	CO34	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811905	818499
	CO35	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811905	818499
	CO36	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811840	818631
	CO37	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811833	818880
	CO38	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811810	818880
	CO39	AREA_POLY	5.7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811842	819008
	CO40	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811969	819201
	CO41	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812026	819254
	CO42	AREA_POLY	6.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812197	819328
	CO43	AREA_POLY	6.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812449	819369
	CO44	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812578	819426
	CO45	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812724	819461
	CO46	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813063	819332
	CO47	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813117	819271
	CO48	AREA_POLY	6.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812491	819393
	CO49	AREA_POLY	6.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812546	819423
	CO50	AREA_POLY	6.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812596	819462
	CO51	AREA_POLY	6.4	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812637	819507
	CO52	AREA_POLY	7.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812668	819555
	CO53	AREA_POLY	7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812692	819607
	CO54	AREA_POLY	6.9	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812703	819645
	CO55	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812234	819710
	CO56	AREA_POLY	5.5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	812234	819710

List of Construction Dust Sources (Project Related)

Source	ID	Type	Base Elevation	Emission Height	TSP Emission Rate (g/s/m^2)		RSP Emission Rate (g/s/m^2)		FSP Emission Rate (g/s/m^2)		Coordiantes of	
			mPD	[mAG]	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	X1 (m)	Y1 (m)
Wind Erosion	W1	AREA_POLY	7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812014	816822
	W2	AREA_POLY	7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812010	816835
	W3	AREA_POLY	6.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811997	816843
	W4	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811985	816851
	W5	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811972	816859
	W6	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811959	816866
	W7	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811946	816874
	W8	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811934	816882
	W9	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811921	816890
	W10	AREA_POLY	6.4	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811889	816901
	W11	AREA_POLY	6.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811853	816924
	W12	AREA_POLY	6.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811833	816969
	W13	AREA_POLY	5.4	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811800	816996
	W14	AREA_POLY	5.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811770	817022
	W15	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811735	817045
	W16	AREA_POLY	5.7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811705	817056
	W17	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811699	817070
	W18	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811601	816971
	W19	AREA_POLY	6.7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811546	817208
	W20	AREA_POLY	7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811580	817286
	W21	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811602	817298
	W22	AREA_POLY	6.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811645	817331
	W23	AREA_POLY	6.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811635	817390
	W24	AREA_POLY	5.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811594	817437
	W25	AREA_POLY	5.4	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811533	817584
	W26	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811640	817789
	W27	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811670	817847
	W28	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811726	817942
	W29	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811900	818137
	W30	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811930	818244
	W31	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811865	818309
	W32	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811930	818245
	W33	AREA_POLY	5.7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811942	818300
	W34	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811905	818499
	W35	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811905	818499
	W36	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811840	818631
	W37	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811833	818880
	W38	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811810	818880
	W39	AREA_POLY	5.7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811842	819008
	W40	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811969	819201
	W41	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812026	819254
	W42	AREA_POLY	6.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812197	819328
	W43	AREA_POLY	6.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812449	819369
	W44	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812578	819426
	W45	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812724	819461
	W46	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813063	819332
	W47	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813117	819271
	W48	AREA_POLY	6.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812491	819393
	W49	AREA_POLY	6.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812546	819423
	W50	AREA_POLY	6.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812596	819462
	W51	AREA_POLY	6.4	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812637	819507
	W52	AREA_POLY	7.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812668	819555
	W53	AREA_POLY	7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812692	819607
	W54	AREA_POLY	6.9	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812703	819645
	W55	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812234	819710
	W56	AREA_POLY	5.5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	812234	819710

Construction Dust Source Emission (Project Related) Listing in AERMOD

	Source ID																																	
No. of Coordinates	CO1		CO2		CO3		CO4		CO5		CO6		CO7		CO8		CO9		CO10		CO11		CO12		CO13		CO14		CO15		CO16		CO17		CO18		CO19		CO20	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	812014	816822	812010	816835	811997	816843	811985	816851	811972	816859	811959	816866	811946	816874	811934	816882	811921	816890	811889	816901	811853	816924	811833	816969	811800	816996	811770	817022	811735	817045	811705	817056	811699	817070	811601	816971	811546	817208	811580	817286
2	812019	816830	812013	816834	812000	816841	811987	816849	811974	816857	811962	816865	811949	816873	811936	816881	811923	816888	811904	816922	811855	816923	811834	816971	811802	816997	811771	817023	811735	817047	811709	817063	811735	817052	811639	816944	811553	817207	811586	817246
3	812021	816828	812008	816826	811995	816834	811983	816842	811970	816849	811957	816857	811944	816865	811931	816873	811916	816877	811902	816923	811872	816944	811839	816970	811807	816996	811776	817022	811741	817047	811716	817060	811760	817039	811691	816996	811586	817246	811615	817267
4	812017	816821	812006	816827	811993	816835	811980	816843	811967	816851	811954	816859	811942	816867	811929	816874	811913	816878	811886	816902	811870	816945	811840	816968	811808	816995	811777	817020	811742	817045	811713	817052	811766	817046	811683	817018	811580	817286	811602	817286
5																							811836	816964	811804	816991	811773	817016	811739	817040			811756	817053	811715	817049	811551	817269		
6																							811835	816964	811802	816991	811772	817017	811737	817040			811722	817091	811690	817061	811544	817213		

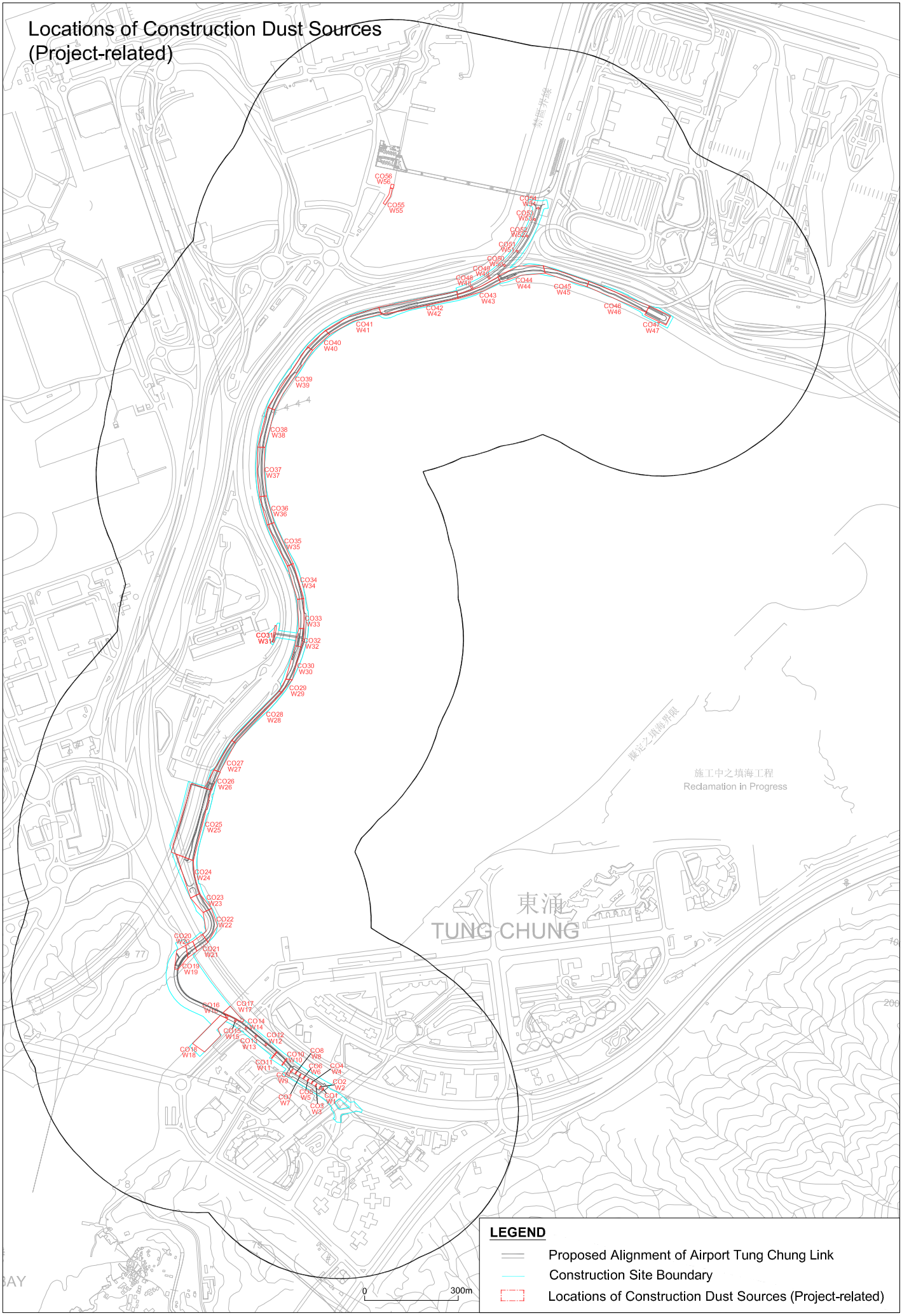
	Source ID																																	
No. of Coordinates	CO21		CO22		CO23		CO24		CO25		CO26		CO27		CO28		CO29		CO30		CO31		CO32		CO33		CO34		CO35		CO36		CO37		CO38		CO39		CO40	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	811602	817298	811645	817331	811635	817390	811594	817437	811533	817584	811640	817789	811670	817847	811726	817942	811900	818137	811930	818244	811865	818309	811930	818245	811942	818300	811905	818499	811905	818499	811840	818631	811833	818880	811810	818880	811842	819008	811969	819201
2	811615	817267	811633	817321	811594	817437	811550	817577	811604	817557	811670	817847	811726	817942	811878	818100	811920	818136	811949	818241	811870	818308	811934	818271	811937	818392	811924	818507	811924	818507	811862	818638	811810	818880	811842	819008	811969	819201	812026	819254
3	811650	817295	811650	817295	811623	817451	811604	817557	811661	817781	811690	817840	811738	817933	811886	818094	811886	818094	811920	818136	811862	818256	811942	818300	811957	818396	811957	818396	811862	818638	811838	818724	811808	818800	811864	819000	811986	819190	812040	819241
4	811633	817321	811681	817347	811662	817403	811606	817511	811599	817804	811661	817781	811688	817840	811738	817933	811878	818100	811900	818137	811857	818257	811958	818299	811958	818299	811936	818392	811840	818631	811816	818721	811816	818721	811833	818880	811891	819051	811986	819190
5			811662	817403			811623	817451															811956	818268									811838	818724			811864	819000		
6			811635	817390																			811949	818241									811830	818802						

	Source ID																																	
No. of Coordinates	CO41		CO42		CO43		CO44		CO45		CO46		CO47		CO48		CO49		CO50		CO51		CO52		CO53		CO54		CO55		CO56		W1		W2		W3		W4	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	812026	819254	812197	819328	812449	819369	812578	819426	812724	819461	813063	819332	813117	819271	812491	819393	812546	819423	812596	819462	812637	819507	812668	819555	812692	819607	812703	819645	812234	819710	812234	819710	812014	816822	812010	816835	811997	816843	811985	816851
2	812109	819302	812446	819379	812522	819394	812644	819460	812869	819411	813053	819312	813132	819300	812493	819388	812549	819419	812600	819458	812641	819504	812673	819552	812697	819606	812704	819643	812240	819709	812237	819722	812019	816830	812013	816834	812000	816841	811987	816849
3	812197	819328	812452	819357	812578	819426	812724	819461	812864	819394	812864	819394	813063	819332	812495	819388	812551	819419	812601	819459	812643	819504	812675	819553	812699	819607	812709	819642	812235	819682	812247	819720	812021	816828	812008	816826	811995	816834	811983	816842
4	812205	819306	812205	819306	812586	819408	812730	819437	812730	819437	812869	819411	813049	819304	812498	819392	812554	819424	812603	819464	812643	819510	812674	819559	812698	819612	812710	819643	812218	819657	812244	819708	812017	816821	812006	816827	811993	816835	811980	816843
5	812116	819283			812533	819380	812654	819430							812498	819394	812553	819425	812602	819465	812642	819511	812673	819560	812696	819613	812709	819648	812211	819661										
6	812040	819241			812452	819357	812586	819408							812492	819394	812547	819425	812596	819464	812637	819509	812668	819557	812692	819609	812707	819649	812230	819689										

	Source ID																																	
No. of Coordinates	W5		W6		W7		W8		W9		W10		W11		W12		W13		W14		W15		W16		W17		W18		W19		W20		W21		W22		W23		W24	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	811972	816859	811959	816866	811946	816874	811934	816882	811921	816890	811889	816901	811853	816924	811833	816969	811800	816996	811770	817022	811735	817045	811705	817056	811699	817070	811601	816971	811546	817208	811580	817286	811602	817298	811645	817331	811635	817390	811594	817437
2	811974	816857	811962	816865	811949	816873	811936	816881	811923	816888	811904	816922	811855	816923	811834	816971	811802	816997	811771	817023	811735	817047	811709	817063	811735	817052	811639	816944	811553	817207	811586	817246	811615	817267	811633	817321	811594	817437	811550	817577
3	811970	816849	811957	816857	811944	816865	811931	816873	811916	816877	811902	816923	811872	816944	811839	816970	811807	816996	811776	817022	811741	817047	811716	817060	811760	817039	811691	816996	811586	817246	811615	817267	811650	817295	811650	817295	811623	817451	811604	817557
4	811967	816851	811954	816859	811942	816867	811929	816874	811913	816878	811886	816902	811870	816945	811840	816968	811808	816995	811777	817020	811742	817045	811713	817052	811766	817046	811683	817018	811580	817286	811602	817286	811633	817321	811681	817347	811662	817403	811606	817511
5															811836	816964	811804	816991	811773	817016	811739	817040			811756	817053	811715	817049	811551	817269					811662	817403			811623	817451
6															811835	816964	811802	816991	811772	817017	811737	817040			811722	817091	811690	817061	811544	817213					811635	817390				

	Source ID																																	
No. of Coordinates	W25		W26		W27		W28		W29		W30		W31		W32		W33		W34		W35		W36		W37		W38		W39		W40		W41		W42		W43		W44	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	811533	817584	811640	817789	811670	817847	811726	817942	811900	818137	811930	818244	811865	818309	811930	818245	811942	818300	811905	818499	811905	818499	811840	818631	811833	818880	811810	818880	811842	819008	811969	819201	812026	819254	812197	819328	812449	819369	812578	819426
2	811604	817557	811670	817847	811726	817942	811878	818100	811920	818136	811949	818241	811870	818308	811934	818271	811937	818392	811924	818507	811924	818507	811862	818638	811810	818880	811842	819008	811969	819201	812026	819254	812109	819302	812446	819379	812522	819394	812644	819460
3	811661	817781	811690	817840	811738	817933	811886	818094	811886	818094	811920	818136	811862	818256	811942	818300	811957	818396	811957	818396	811862	818638	811838	818724	811808	818800	811864	819000	811986	819190	812040	819241	812197	819328	812452	819357	812578	819426	812724	819461
4	811599	817804	811661	817781	811688	817840	811738	817933	811878	818100	811900	818137	811857	818257	811958	818299	811958	818299	811936	818392	811840	818631	811816	818721	811833	818880	811891	819051	811986	819190	812205	819306	812205	819306	812586	819408	812730	819437		
5															811956	818268									811838	818724			811864	819000			812116	819283			812533	819380	812654	819430
6															811949	818241									811830	818802							812040	819241			812452	819357	812586	819408

	Source ID																					
No. of Coordinates	W45		W46		W47		W48		W49		W50		W51		W52		W53		W54		W55		W56	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	812724	819461	813063	819332	813117	819271	812491	819393	812546	819423	812596	819462	812637	819507	812668	819555	812692	819607	812703	819645	812234	819710	812234	819710
2	812869	819411	813053	819312	813132	819300	812493	819388	812549	819419	812600	819458	812641	819504	812673	819552	812697	819606	812704	819643	812240	819709	812237	819722
3	812864	819394	812864	819394	813063	819332	812495	819388	812551	819419	812601	819459	812643	819504	812675	819553	812699	819607	812709	819642	812235	819682	812247	819720
4	812730	819437	812869	819411	813049	819304	812498	819392	812554	819424	812603	819464	812643	819510	812674	819559	812698	819612	812710	819643	812218	819657	812244	819708
5							812498	819394	812553	819425	812602	819465	812642	819511	812673	819560	812696	819613	812709	819648	812211	819661		
6							812492	819394	812547	819425	812596	819464	812637	819509	812668	819557	812692	819609	812707	819649	812230	819689		


Locations of Construction Dust Sources
(Project-related)
CO1 W1
CO2 W2
CO3 W3
CO4 W4
CO5 W5
CO6 W6
CO7 W7
CO8 W8
CO9 W9
CO10 W10
CO11 W11
CO12 W12
CO13 W13
CO14 W14
CO15 W15
CO16 W16
CO17 W17
CO18 W18
CO19 W19
CO20 W20
CO21 W21
CO22 W22
CO23 W23
CO24 W24
CO25 W25
CO26 W26
CO27 W27
CO28 W28
CO29 W29
CO30 W30
CO31 W31
CO32 W32
CO33 W33
CO34 W34
CO35 W35
CO36 W36
CO37 W37
CO38 W38
CO39 W39
CO40 W40
CO41 W41
CO42 W42
CO43 W43
CO44 W44
CO45 W45
CO46 W46
CO47 W47
CO48 W48
CO49 W49
CO50 W50
CO51 W51
CO52 W52
CO53 W53
CO54 W54
CO55 W55
CO56 W56
施工中之填海工程
Reclamation in Progress
東涌
TUNG CHUNG
0
300m
LEGEND
Proposed Alignment of Airport Tung Chung Link
Construction Site Boundary
Locations of Construction Dust Sources (Project-related)

Details of Dust Emission Sources
Concurrent Projects

TSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	Assume watering once per hour. Refer to the Calculation of Dust Supression Efficiency by Watering.
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	Assume Emission Factor is based on construction activity occurs 30 days per month. AP42, Section 13.2.3.3
	Emission Rate	1.72E-05	g/m²/s	=2.69*1000000/(10000*d*h*60*60)*p/100*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	Emission Rate	2.70E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100

RSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	Assume watering once per hour. Refer to the Calculation of Dust Supression Efficiency by Watering.
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
	% content of RSP	47.3	% of TSP	AP42, Section 13.2.4
	Emission Factor for RSP	1.27	Mg/hectare/month of activity	
	Emission Rate for RSP	8.15E-06	g/m²/s	=1.27*1000000/(10000*d*h*60*60)*(p/100)*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	% content of RSP	47.3	% of TSP	AP42, Section 13.2.4
	Emission Factor for RSP	0.40	Mg/hectare/year	
	Emission Rate for RSP	1.27E-06	g/m²/s	=0.4*1000000/(10000*365*24*60*60)*p/100

FSP

Sources	Parameter			Remarks
Heavy Construction (Working Hours)	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Mitigation efficiency	91.7	%	
	No. of working days per month, d	30	days	
	No. of working hours per day, h	12	hour	Mon to Sun, 7:00 to 19:00
	Emission Factor for TSP	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
	% content of FSP	7.2	% of TSP	AP42, Section 13.2.4
	Emission Factor for FSP	0.19	Mg/hectare/month of activity	
	Emission Rate for FSP	1.23E-06	g/m²/s	=0.19*1000000/(10000*d*h*60*60)*p/100*(1-e)
Wind Erosion (Non-Working Hours)	Percentage active area, p	100	%	
	Emission Factor for TSP	0.85	Mg/hectare/year	AP42, Table 11.9-4
	% content of FSP	7.2	% of TSP	AP42, Section 13.2.4
	Emission Factor for FSP	0.06	Mg/hectare/year	
	Emission Rate for FSP	1.93E-07	g/m²/s	=0.06*1000000/(10000*365*24*60*60)*p/100

List of Concurrent Dust Sources

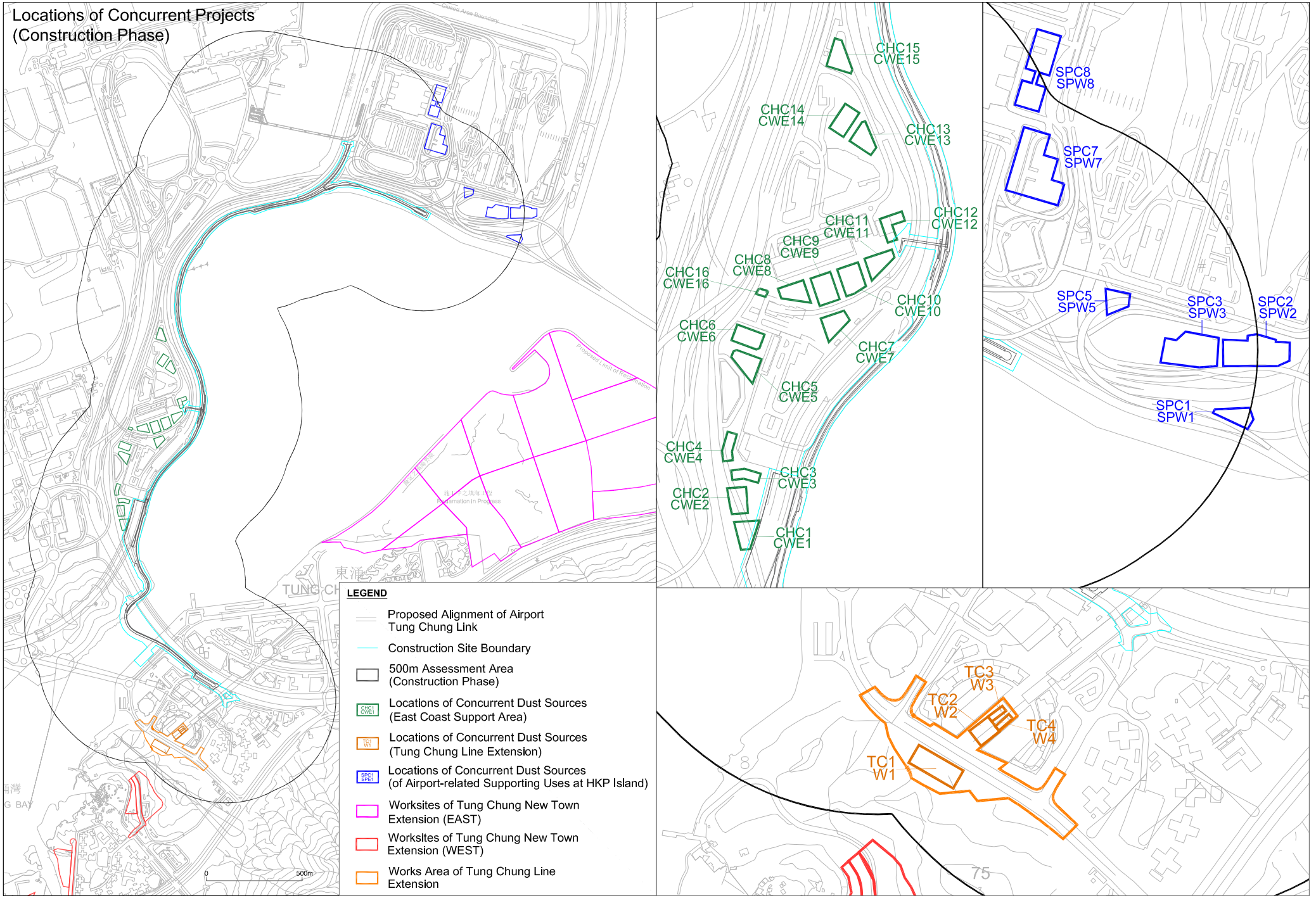
Source	ID	Type	Base Elevation	Emission Height	TSP Emission Rate (g/s/m^2)		RSP Emission Rate (g/s/m^2)		FSP Emission Rate (g/s/m^2)		Coordiantes of		Dimensions		Angle
			mPD	[mAG]	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	Working Hours	Non-Working Hours	X1	Y1	Length of the X Side	Length of the Y Side	
											(m)	(m)	(m)	(m)	
Heavy Construction	CHC1	AREA_POLY	5.9	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811529	817641	-	-	-
	CHC2	AREA_POLY	6.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811500	817769	-	-	-
	CHC3	AREA_POLY	5.9	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811509	817805	-	-	-
	CHC4	AREA_POLY	5.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811510	817844	-	-	-
	CHC5	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811513	818052	-	-	-
	CHC6	AREA_POLY	5.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811521	818107	-	-	-
	CHC7	AREA_POLY	5.2	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811742	818136	-	-	-
	CHC8	AREA_POLY	5.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811657	818199	-	-	-
	CHC9	AREA_POLY	6.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811713	818216	-	-	-
	CHC10	AREA_POLY	5.9	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811770	818236	-	-	-
	CHC11	AREA_POLY	6.1	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811841	818263	-	-	-
	CHC12	AREA_POLY	5.7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811816	818326	-	-	-
	CHC13	AREA_POLY	6.8	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811786	818528	-	-	-
	CHC14	AREA_POLY	7	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811744	818564	-	-	-
	CHC15	AREA_POLY	5	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811723	818699	-	-	-
	CHC16	AREA_POLY	5.4	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811580	818164	-	-	-
	TC1	AREA	22.1	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811821	816602	11	32	53
	TC2	AREA	10.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811833	816584	10	33	48
	TC3	AREA	7.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811788	816576	33	41	52
	TC4	AREA	7.6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	811681	816520	91	36	30
	SPC1	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813538	819182	-	-	-
	SPC2	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813555	819326	-	-	-
	SPC3	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813436	819329	-	-	-
	SPC5	AREA_POLY	6	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813360	819395	-	-	-
	SPC7	AREA_POLY	6.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813106	819636	-	-	-
	SPC8	AREA_POLY	6.3	0	1.72E-05	-	8.15E-06	-	1.23E-06	-	813172	819969	-	-	-
Wind Erosion	CWE1	AREA_POLY	5.9	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811529	817641	-	-	-
	CWE2	AREA_POLY	6.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811500	817769	-	-	-
	CWE3	AREA_POLY	5.9	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811509	817805	-	-	-
	CWE4	AREA_POLY	5.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811510	817844	-	-	-
	CWE5	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811513	818052	-	-	-
	CWE6	AREA_POLY	5.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811521	818107	-	-	-
	CWE7	AREA_POLY	5.2	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811742	818136	-	-	-
	CWE8	AREA_POLY	5.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811657	818199	-	-	-
	CWE9	AREA_POLY	6.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811713	818216	-	-	-
	CWE10	AREA_POLY	5.9	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811770	818236	-	-	-
	CWE11	AREA_POLY	6.1	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811841	818263	-	-	-
	CWE12	AREA_POLY	5.7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811816	818326	-	-	-
	CWE13	AREA_POLY	6.8	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811786	818528	-	-	-
	CWE14	AREA_POLY	7	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811744	818564	-	-	-
	CWE15	AREA_POLY	5	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811723	818699	-	-	-
	CWE16	AREA_POLY	5.4	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811580	818164	-	-	-
	TW1	AREA	22.1	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811821	816602	11	32	53
	TW2	AREA	10.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811833	816584	10	33	48
	TW3	AREA	7.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811788	816576	33	41	52
	TW4	AREA	7.6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	811681	816520	91	36	30
	SPW1	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813538	819182	-	-	-
	SPW2	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813555	819326	-	-	-
	SPW3	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813436	819329	-	-	-
	SPW5	AREA_POLY	6	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813360	819395	-	-	-
	SPW7	AREA_POLY	6.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813106	819636	-	-	-
	SPW8	AREA_POLY	6.3	0	-	2.70E-06	-	1.27E-06	-	1.93E-07	813172	819969	-	-	-

Concurrent Dust Source Emission Listing in AERMOD

	Source ID																													
No. of	CHC1		CHC2		CHC3		CHC4		CHC5		CHC6		CHC7		CHC8		CHC9		CHC10		CHC11		CHC12		CHC13		CHC14		CHC15		CHC16	
Coordinates	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	811529	817641	811500	817769	811509	817805	811510	817844	811513	818052	811521	818107	811742	818136	811657	818199	811713	818216	811770	818236	811841	818263	811816	818326	811786	818528	811744	818564	811723	818699	811580	818164
2	811548	817643	811507	817730	811511	817786	811520	817880	811509	818040	811509	818074	811754	818116	811605	818181	811733	818160	811787	818187	811846	818246	811832	818277	811779	818526	811712	818514	811706	818642	811560	818170
3	811567	817702	811510	817715	811534	817788	811501	817886	811553	817985	811561	818056	811711	818071	811612	818161	811692	818145	811764	818171	811799	818198	811851	818283	811753	818487	811741	818495	811756	818627	811564	818178
4	811514	817698	811543	817717	811564	817780	811490	817846	811571	818036	811567	818059	811694	818120	811674	818152	811672	818202	811747	818165	811784	818243	811841	818313	811797	818458	811774	818545	811759	818635	811565	818179
5			811540	817771	811570	817799	811492	817824	811520	818055	811578	818087							811728	818221			811868	818322	811808	818473			811737	818695	811566	818180
6					811536	817809	811512	817827															811861	818341							811567	818181
7																															811569	818181
8																															811570	818181
9																															811583	818177
10																															811582	818175
11																															811584	818174
12																																

	Source ID																													
No. of	CWE1		CWE2		CWE3		CWE4		CWE5		CWE6		CWE7		CWE8		CWE9		CWE10		CWE11		CWE12		CWE13		CWE14		CWE15		CWE16	
Coordinates	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	811529	817641	811500	817769	811509	817805	811510	817844	811513	818052	811521	818107	811742	818136	811657	818199	811713	818216	811770	818236	811841	818263	811816	818326	811786	818528	811744	818564	811723	818699	811580	818164
2	811548	817643	811507	817730	811511	817786	811520	817880	811509	818040	811509	818074	811754	818116	811605	818181	811733	818160	811787	818187	811846	818246	811832	818277	811779	818526	811712	818514	811706	818642	811560	818170
3	811567	817702	811510	817715	811534	817788	811501	817886	811553	817985	811561	818056	811711	818071	811612	818161	811692	818145	811764	818171	811799	818198	811851	818283	811753	818487	811741	818495	811756	818627	811564	818178
4	811514	817698	811543	817717	811564	817780	811490	817846	811571	818036	811567	818059	811694	818120	811674	818152	811672	818202	811747	818165	811784	818243	811841	818313	811797	818458	811774	818545	811759	818635	811565	818179
5			811540	817771	811570	817799	811492	817824	811520	818055	811578	818087							811728	818221			811868	818322	811808	818473			811737	818695	811566	818180
6					811536	817809	811512	817827															811861	818341							811567	818181
7																															811569	818181
8																															811570	818181
9																															811583	818177
10																															811582	818175
11																															811584	818174
12																																

	Source ID																							
No. of	SPC1		SPC2		SPC3		SPC5		SPC7		SPC8		SPW1		SPW2		SPW3		SPW5		SPW7		SPW8	
Coordinates	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	813538	819182	813555	819326	813436	819329	813360	819395	813106	819636	813172	819969	813538	819182	813555	819326	813436	819329	813360	819395	813106	819636	813172	819969
2	813535	819175	813606	819324	813426	819279	813364	819421	813144	819766	813221	819954	813535	819175	813606	819324	813426	819279	813364	819421	813144	819766	813221	819954
3	813606	819141	813606	819334	813507	819269	813313	819432	813198	819750	813197	819873	813606	819141	813606	819334	813507	819269	813313	819432	813198	819750	813197	819873
4	813618	819162	813624	819338	813543	819272	813316	819377	813185	819708	813177	819879	813618	819162	813624	819338	813543	819272	813316	819377	813185	819708	813177	819879
5	813610	819186	813665	819326	813546	819330			813213	819700	813169	819854	813610	819186	813665	819326	813546	819330			813213	819700	813169	819854
6			813664	819322	813478	819343			813213	819699	813189	819849			813664	819322	813478	819343			813213	819699	813189	819849
7			813693	819320	813459	819325			813214	819699	813174	819798			813693	819320	813459	819325			813214	819699	813174	819798
8			813693	819283					813202	819657	813125	819812			813693	819283					813202	819657	813125	819812
9			813668	819272					813225	819650	813140	819863			813668	819272					813225	819650	813140	819863
10			813556	819271					813225	819648	813161	819857			813556	819271					813225	819648	813161	819857
11									813227	819647	813168	819881									813227	819647	813168	819881
12									813214	819604	813148	819887									813214	819604	813148	819887


Locations of Concurrent Projects
(Construction Phase)
CHC15
CWE15
CHC14
CWE14
CHC13
CWE13
CHC12
CWE12
CHC11
CWE11
CHC9
CWE9
CHC8
CWE8
CHC16
CWE16
CHC10
CWE10
CHC6
CWE6
CHC7
CWE7
CHC5
CWE5
CHC4
CWE4
CHC3
CWE3
CHC2
CWE2
CHC1
CWE1
SPC8
SPW8
SPC7
SPW7
SPC5
SPW5
SPC3
SPW3
SPC2
SPW2
SPC1
SPW1
TC3
W3
TC2
W2
TC4
W4
TC1
W1
LEGEND
Proposed Alignment of Airport Tung Chung Link
Construction Site Boundary
500m Assessment Area (Construction Phase)
Locations of Concurrent Dust Sources (East Coast Support Area)
Locations of Concurrent Dust Sources (Tung Chung Line Extension)
Locations of Concurrent Dust Sources (of Airport-related Supporting Uses at HKP Island)
Worksites of Tung Chung New Town Extension (EAST)
Worksites of Tung Chung New Town Extension (WEST)
Works Area of Tung Chung Line Extension
0
500m
75