Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2013

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: B1-B17, BB3-BB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	$g/m^2/s$ (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	$g/m^2/s$ (mitigated)	
	Wind Erosion Source ID: B1-B17, BB3-BB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	$g/m^2/s$	=0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2013

Description	Sources	Parameter	Emission Rate		Remarks
XRL - West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A1, HR7B-C		1.93E-04	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		3.86E-04	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		3.09E-04	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		2.32E-04	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		1.54E-04	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		7.72E-05	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
XRL - West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from SP License of Express Rail Link (Appendix C)**, assume 12 hours of operation
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2013

Description	Sources	Parameter	Emission Rate		Remarks
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2014

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: C1-C10, C14-C18, C26-C29, C32-C33, C37, C39, C41-C42, C45-C54, CB1-CB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: C1-C10, C14-C18, C26-C29, C32-C33, C37, C39, C41-C42, C45-C54, CB1-CB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
XRL - West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A2, HR7B-C		1.93E-04	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		3.86E-04	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		3.09E-04	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		2.32E-04	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		1.54E-04	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		7.72E-05	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
XRL - West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from EIA report of Express Rail Link (Appendix 12.1 p.3)**, assume 12 hours of operation
Concrete Batching Plant - Phase 1					
West Kowloon Terminus Concrete Batching Plant - Phase1	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For Laden Vehicle	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 1	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For Laden Vehicle	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
West Kowloon Terminus Concrete Batching Plant - Phase 1	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For Unladen Vehicle	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 1	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	For Unladen Vehicle	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 1 (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant - Phase 1 (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant - Phase 1 (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	
Concrete Batching Plant - Phase 2					
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	Toward CBP	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	91.0	%	
	Source ID: AEP 1	Sum of Emission Rate	1.41E-04	g/m2/s (mitigated)	Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer. No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
	AEP 2		5.99E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 10 veh/hr respectively.
	AEP 3		1.65E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 2, and 10 veh/hr respectively.
	AEP 6		3.53E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 10 veh/hr respectively.
	AEP 8		1.06E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 0 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant - Toward CBP				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	100.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	AEP 4		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 4, and 10 veh/hr respectively.
	AEP 5		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 7		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 0 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant - Leave CBP				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	18	tons	Aggregate Tipper Truck (Unladen)
			14	tons	Cement Tanker (Unladen)
			30	tons	Concrete Mixer Truck (Laden)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			591	g/VKT	Aggregate Tpper Truck
			457	g/VKT	Cement Tanker
			995	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	91.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	AEP 9		7.62E-06	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 11		8.29E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 10 veh/hr respectively.
	AEP 12		9.06E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 10 veh/hr respectively.
	AEP 13		9.06E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 10 veh/hr respectively.
	AEP 14		4.92E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 0 veh/hr respectively.
	AEP 16		1.32E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
	AEP 17		1.32E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant - Toward CBP				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	100.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	AEP 10		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 15		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Unloading of raw materials)	Unloading aggregate Source ID: PEP9-PEP10	Consumption Rate	210000	kg/h	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
			210	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.454684312	kg/hr	
		Mitigation efficiency	50	%	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Emission height	5.5	m	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
		Emission Rate	6.32E-02	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Cement / PFA Silos)	Cement Silos Source ID: PEP 1 to PEP 7	 Emission height Emission Rate	 5.5 1.48E-02	 m g/s (mitigated)	All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link
	Mixer & Weight Hopper Source ID: PEP8	 Emission height Emission Rate	 5.5 1.98E-02	 m g/s (mitigated)	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
West Kowloon Highway Scheme HIJ					
West Kowloon Highway Scheme HIJ	Heavy construction Source ID: AA9-12	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.1), assume 100% active area
	Wind Erosion Source ID: AA9-12	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.1), assume 100% active area
West Kowloon Highway Scheme Q (Interim)	Heavy construction Source ID: FF1-FF9	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area
	Wind Erosion Source ID: FF1-FF9	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: E1-E61, EB1-EB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: E1-E61, EB1-EB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
					Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A3, HR7B, HR7C1		4.75E-14	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-14	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-14	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-14	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-14	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-14	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
West Kowloon Cultural District Barging Point	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from EIA report of Express Rail Link (Appendix 12.1 p.3)**, assume 12 hours of operation
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1)

Concurrent Projects - at Year 2015

Description	Sources	Parameter	Emission Rate		Remarks
West Kowloon Highway Scheme HIJ	Heavy construction Source ID: AA9-12	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.1), assume 100% active area
	Wind Erosion Source ID: AA9-12	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.1), assume 100% active area
West Kowloon Highway Scheme Q (Interim)	Heavy construction Source ID: FF1-FF9	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area
	Wind Erosion Source ID: FF1-FF9	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: F1-F36,	Mitigation efficiency	91.7	%	Water suppression 12 times a day
	FB1-FB5	No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: F1-F36,	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
	FB1-FB5	Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A-C		4.75E-14	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-14	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-14	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-14	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-14	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-14	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
West Kowloon Cultural District Barging Point	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from SP License of Express Rail Link (Appendix C)**, assume 12 hours of operation
West Kowloon Cultural District Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: H1-H45, HB1-HB5	Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: H1-H45, HB1-HB5	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: I1-I29, IB3-IB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: I1-I29, IB3-IB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Unladen Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Unladen Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2019

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: J1-J24, JB3-JB5	Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: J1-J24, JB3-JB5	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2019

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2020

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: K1-K12, KB3-KB5	Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: K1-K12, KB3-KB5	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.1 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 1) at Year 2020

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: TE1-TE9,	Mitigation efficiency	91.7	%	Water suppression 12 times a day
	Te1- Te7, EB1-EB5	No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: TE1-TE9,	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
	Te1- Te7, EB1-EB5	Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
					Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A3, HR7B, HR7C1		4.75E-14	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-14	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-14	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-14	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-14	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-14	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
West Kowloon Cultural District Barging Point	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from EIA report of Express Rail Link (Appendix 12.1 p.3)**, assume 12 hours of operation
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2)

Concurrent Projects - at Year 2015

Description	Sources	Parameter	Emission Rate		Remarks
West Kowloon Highway Scheme HIJ	Heavy construction Source ID: AA9-12	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.2), assume 100% active area
	Wind Erosion Source ID: AA9-12	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.2), assume 100% active area
West Kowloon Highway Scheme Q (Interim)	Heavy construction Source ID: FF1-FF9	--	2.99368E-05	g/m²/s (mitigated)	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area
	Wind Erosion Source ID: FF1-FF9	--	2.69533E-06	g/m²/s	Extract from PER report of Scheme Q (Appendix 3.2), assume 100% active area

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: TF1-TF16, Tf1-Tf6, FB1-FB5	Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: TF1-TF16, Tf1-Tf6, FB1-FB5	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A-C		4.75E-14	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-14	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-14	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-14	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-14	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-14	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
West Kowloon Cultural District Barging Point	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from SP License of Express Rail Link (Appendix C)**, assume 12 hours of operation
West Kowloon Cultural District Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: TH1-TH7, Th1 - Th9, HB1-HB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: TH1-TH7, Th1 - Th9, HB1-HB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID: CBH1-CBH4	Sum of Emission Rate	1.63E-04	g/m/s (mitigated)	Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer. No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant - For Laden Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID: EP14	Sum of Emission Rate	8.36E-06	g/m/s (mitigated)	Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer. No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction	Percentage active area, p	100	%	Assume 100% works area for heavy construction
	Source ID: Ti1-Ti7	Mitigation efficiency	91.7	%	Water suppression 12 times a day
	IB3-IB5	No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion	Percentage active area, p	100	%	
	Source ID: Ti1-Ti7	Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
	IB3-IB5	Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.

Appendix 3.2 - Details of Dust Emission Sources for 1-hour and Daily TSP Assessment (Tier 2) at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2013

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 1: B16	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	18 91.7 26 12 2.69 4.3109E-05 3.57804E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 18% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 1: B16	Percentage active area, p Emission Factor Emission Rate	18 0.85 4.8516E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: B12-B15	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	6 91.7 26 12 2.69 1.43697E-05 1.19268E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 6% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: B12-B15	Percentage active area, p Emission Factor Emission Rate	6 0.85 1.6172E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 3: B8, B9, B11	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	4 91.7 26 12 2.69 9.57977E-06 7.95121E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 4% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 3: B8, B9, B11	Percentage active area, p Emission Factor Emission Rate	4 0.85 1.07813E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: B1 - B7	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: B1 - B7	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: B10, B17, BB3 - BB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: B10, B17, BB3 - BB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2013

Concurrent Projects - at Year 2013

Description	Sources	Parameter	Emission Rate		Remarks
XRL - West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A1, HR7B-C		1.93E-04	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		3.86E-04	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		3.09E-04	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		2.32E-04	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		1.54E-04	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		7.72E-05	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
XRL - West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from SP License of Express Rail Link (Appendix C)**, assume 12 hours of operation
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Unladen Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2013

Concurrent Projects - at Year 2013

Description	Sources	Parameter	Emission Rate		Remarks
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2014

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 1: C45-C52	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 1: C45-C52	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2a: C37,C39, C41, C42	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	45 91.7 26 12 2.69 0.000107772 8.94511E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 45% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2a: C37,C39, C41, C42	Percentage active area, p Emission Factor Emission Rate	45 0.85 1.2129E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: C26-C29, C32, C33	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	9 91.7 26 12 2.69 2.15545E-05 1.78902E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 9% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: C26-C29, C32, C33	Percentage active area, p Emission Factor Emission Rate	9 0.85 2.4258E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 3: C16-C18	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	10 91.7 26 12 2.69 2.39494E-05 1.9878E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 10% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 3: C16-C18	Percentage active area, p Emission Factor Emission Rate	10 0.85 2.69533E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: C1-C10, C14	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	10 91.7 26 12 2.69 2.39494E-05 1.9878E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 10% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: C1-C10, C14	Percentage active area, p Emission Factor Emission Rate	10 0.85 2.69533E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: C15, C53-C54, CB1-CB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: C15, C53-C54, CB1-CB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2014

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
XRL - West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A2, HR7B-C		1.93E-04	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		3.86E-04	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		3.09E-04	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		2.32E-04	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		1.54E-04	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		7.72E-05	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
XRL - West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from EIA report of Express Rail Link (Appendix 12.1 p.3)**, assume 12 hours of operation
Concrete Batching Plant - Phase 1					
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2014

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	
Concrete Batching Plant - Phase 2					
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of truck trips per day	10	veh/hr	Aggregate Tpper Truck
			0	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	91.0	%	
		Emission Rate	3.17E-04	g/m/s (mitigated)	Aggregate Tipper Truck
			0.00E+00	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
		Distance	30	m	
		Area	90	m2	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2014

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
			1.06E-04	g/m2/s (mitigated)	
	AEP 1		1.41E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and
	AEP 2		5.99E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and
	AEP 3		1.65E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and
	AEP 6		3.53E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and
	AEP 8		1.06E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of truck trips per day	10	veh/hr	Aggregate Tpper Truck
			4	veh/hr	Cement Tanker
			10	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	100.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			0.00E+00	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
		Distance	30	m	
		Area	90	m2	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
			0.00E+00	g/m2/s (mitigated)	
	AEP 4		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 4, and 10 veh/hr respectively.
	AEP 5		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 7		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 0 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	Leave CBP	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	18	tons	Aggregate Tipper Truck (Unladen)
			14	tons	Cement Tanker (Unladen)
			30	tons	Concrete Mixer Truck (Laden)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			591	g/VKT	Aggregate Tpper Truck
			457	g/VKT	Cement Tanker
			995	g/VKT	Concrete Mixer
		No. of truck trips per day	10	veh/hr	Aggregate Tpper Truck
			0	veh/hr	Cement Tanker
			10	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	91.0	%	
		Emission Rate	1.48E-04	g/m/s (mitigated)	Aggregate Tipper Truck
			0.00E+00	g/m/s (mitigated)	Cement Tanker
			2.49E-04	g/m/s (mitigated)	Concrete Mixer
		Distance	30	m	
		Area	90	m2	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
			1.32E-04	g/m2/s (mitigated)	
	AEP 9		7.62E-06	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 11		8.29E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 10 veh/hr respectively.
	AEP 12		9.06E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 10 veh/hr respectively.
	AEP 13		9.06E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 10 veh/hr respectively.
	AEP 14		4.92E-05	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 0 veh/hr respectively.
	AEP 16		1.32E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
	AEP 17		1.32E-04	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
	Toward CBP	Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	38	tons	Aggregate Tipper Truck (Laden)
			44	tons	Cement Tanker (Laden)
			13	tons	Concrete Mixer Truck (Unladen)
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1267	g/VKT	Aggregate Tpper Truck
			1471	g/VKT	Cement Tanker
			424	g/VKT	Concrete Mixer
		No. of truck trips per day	10	veh/hr	Aggregate Tpper Truck
			4	veh/hr	Cement Tanker
			10	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	100.0	%	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2014

Concurrent Projects - at Year 2014

Description	Sources	Parameter	Emission Rate		Remarks
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			0.00E+00	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
		Distance	30	m	
		Area	90	m2	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
			0.00E+00	g/m2/s (mitigated)	
	AEP 10		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	AEP 15		0.00E+00	g/m2/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 10, 0, and 10 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Unloading of raw materials)	Unloading aggregate Source ID: PEP9-PEP10	Consumption Rate	210000	kg/h	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link**
			210	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.454684312	kg/hr	
		Mitigation efficiency	50	%	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Emission height	5.5	m	
		Emission Rate	6.32E-02	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant - Phase 2 (Cement / PFA Silos)	Cement Silos Source ID: PEP 1 to PEP 7	Emission height	5.5	m	All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link
		Emission Rate	1.48E-02	g/s (mitigated)	
	Mixer & Weight Hopper Source ID: PEP8	Emission height	5.5	m	**All calculations and assumptions are extracted from Environmental Review report (v. 2012Oct) of Express Rail Link VEP (Appendix C1).**
		Emission Rate	1.98E-02	g/s (mitigated)	
West Kowloon Highway Scheme HIJ					
West Kowloon Highway Scheme HIJ	Heavy construction Source ID: AA9-12	--	8.98104E-06	g/m²/s (mitigated)	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.3), assume 30% active area
	Wind Erosion Source ID: AA9-12	--	8.086E-07	g/m²/s	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.3), assume 30% active area
West Kowloon Highway Scheme Q (Interim)	Heavy construction Source ID: FF1-FF9	--	8.98104E-06	g/m²/s (mitigated)	Extract from PER report of Scheme Q (Appendix 3.2), assume 30% active area
	Wind Erosion Source ID: FF1-FF9	--	8.086E-07	g/m²/s	Extract from PER report of Scheme Q (Appendix 3.2), assume 30% active area

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 1: E60	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 1: E60	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2a: E51-E55, E57-E59	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	6 91.7 26 12 2.69 1.43697E-05 1.19268E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 6% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2a: E51-E55, E57-E59	Percentage active area, p Emission Factor Emission Rate	6 0.85 1.6172E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: E26, E28, E30-E35, E39, E41-E43, E45-E47, E49, E50	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	4 91.7 26 12 2.69 9.57977E-06 7.95121E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 4% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: E26, E28, E30-E35, E39, E41-E43, E45-E47, E49, E50	Percentage active area, p Emission Factor Emission Rate	4 0.85 1.07813E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 3: E12-E17, E21-E25, E27, E29	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 3: E12-E17, E21-E25, E27, E29	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: E1-E10, E18-E20, E36-E38, E40, E44, E48, E56, E61	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	0.3 91.7 26 12 2.69 7.18483E-07 5.96341E-08	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 0.3% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: E1-E10, E18-E20, E36-E38, E40, E44, E48, E56, E61	Percentage active area, p Emission Factor Emission Rate	0.3 0.85 8.086E-09	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: E11, EB1-EB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: E11, EB1-EB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k Road surface silt loading, sL Average truck weight, W TSP emission factor, E No. of truck trips per day 	3.23 8.2 16 370.7 900 1800 1440 1080 720	g/VKT g/m2 tons g/VKT veh/day veh/day veh/day veh/day veh/day	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads. Average weigh of the vehicles traveling the road, extracted from SP License E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Extracted from SP License of Express Rail Link (Appendix C) For road HR7A-C For road HR8A-B For road HR9 For road HR10A-C For road HR11

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			
	HR7A3, HR7B, HR7C1		4.75E-16	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-16	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-16	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-16	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-16	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-16	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus Works	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from EIA report of Express Rail Link (Appendix 12.1 p.3)**, assume 12 hours of operation
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2015

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Mean wind speed, U	3.5	m/s	PATH year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		Extracted from Specified Processes License (checked on 13 Jan 2012)
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2015

Concurrent Projects - at Year 2015

Description	Sources	Parameter	Emission Rate		Remarks
West Kowloon Highway Scheme HIJ	Heavy construction Source ID: AA9-12	--	8.98104E-06	g/m²/s (mitigated)	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.3), assume 30% active area
	Wind Erosion Source ID: AA9-12	--	8.086E-07	g/m²/s	Extract from PER report of Scheme HIJ and Junction JRD/FST/CRD (Appendix 3.3), assume 30% active area
West Kowloon Highway Scheme Q (Interim)	Heavy construction Source ID: FF1-FF9	--	8.98104E-06	g/m²/s (mitigated)	Extract from PER report of Scheme Q (Appendix 3.2), assume 30% active area
	Wind Erosion Source ID: FF1-FF9	--	8.086E-07	g/m²/s	Extract from PER report of Scheme Q (Appendix 3.2), assume 30% active area

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 2a: F27-F29, F31-F35	Percentage active area, p	1	%	Assume 1% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	2.39494E-06	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-07	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 2a: F27-F29, F31-F35	Percentage active area, p	1	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-08	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: F19, F20, F23-F25	Percentage active area, p	0.3	%	Assume 0.3% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	7.18483E-07	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			5.96341E-08	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 2b: F19, F20, F23-F25	Percentage active area, p	0.3	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	8.086E-09	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 3: F8-F12	Percentage active area, p	0.2	%	Assume 0.2% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	4.78989E-07	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			3.97561E-08	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 3: F8-F12	Percentage active area, p	0.2	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	5.39066E-09	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone4: F7	Percentage active area, p	17	%	Assume 17% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	4.0714E-05	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			3.37926E-06	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone4: F7	Percentage active area, p	17	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	4.58206E-07	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: F1-F6, F13-F18, F21-F22, F26, F30	Percentage active area, p	0.5	%	Assume 0.5% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	1.19747E-06	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			9.93901E-08	g/m²/s (mitigated)	
	Wind Erosion Source ID: Great Park: F1-F6, F13-F18, F21-F22, F26, F30	Percentage active area, p	0.5	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	1.34767E-08	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: FB1-FB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: FB1-FB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
XRL - West Kowloon Barging Point (Construction Site)	Haul road to barging points	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	8.2	g/m2	Mean Silt Loading of Quarry, AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Uncontrolled total loading range from 4.2+1.9g/m2, for a mixture of sand and native soil, to 11.0+3.8g/m2 for native soil alone, Page 10 of Improved Activity Levels for National Emission Inventories of Fugitive Dust from Paved and Unpaved Roads.
		Average truck weight, W	16	tons	Average weigh of the vehicles traveling the road, extracted from SP License
		TSP emission factor, E	370.7	g/VKT	E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
		No. of truck trips per day			Extracted from SP License of Express Rail Link (Appendix C)
			900	veh/day	For road HR7A-C
			1800	veh/day	For road HR8A-B
			1440	veh/day	For road HR9
			1080	veh/day	For road HR10A-C
			720	veh/day	For road HR11
			360	veh/day	For road HR12A
		No. of operation hour	12	hr	From 7:00 to 19:00, extracted from SP License of Express Rail Link (Appendix C)
		% of dust suppression	97.5	%	Extracted from SP License of Express Rail Link (Appendix C)
	Source ID:	Emission Rate			

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
	HR7A-C		4.75E-16	g/m/s (mitigated)	No. of truck per day: 900, extracted from SP License of Express Rail Link (Appendix C)
	HR8A-B		9.49E-16	g/m/s (mitigated)	No. of truck per day: 1800, extracted from SP License of Express Rail Link (Appendix C)
	HR9		7.59E-16	g/m/s (mitigated)	No. of truck per day: 1440, extracted from SP License of Express Rail Link (Appendix C)
	HR10A-C		5.70E-16	g/m/s (mitigated)	No. of truck per day: 1080, extracted from SP License of Express Rail Link (Appendix C)
	HR11		3.80E-16	g/m/s (mitigated)	No. of truck per day: 720, extracted from SP License of Express Rail Link (Appendix C)
	HR12A		1.90E-16	g/m/s (mitigated)	No. of truck per day: 360, extracted from SP License of Express Rail Link (Appendix C)
XRL - West Kowloon Barging Point (5 Barging Points for West Kowloon Terminus Works Area)	Unloading of spoils to barge Source ID: BP4-7	--	4.27E-03	g/s (mitigated)	**Extract from SP License of Express Rail Link (Appendix C)**, assume 12 hours of operation
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP11		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP12		1.42E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP13		6.35E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Unladen Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP18		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
	EP19		5.44E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 6 veh/hr respectively.
	EP20		2.31E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Unladen Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2016

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9-EP10	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	
West Kowloon Cultural District	Heavy construction Source ID: zone 1: F36	Percentage active area, p	1	%	Assume 1% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	2.39494E-06	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-07	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 1: F36	Percentage active area, p	1	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-08	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: Zone 2a: H27-H30	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	3 91.7 26 12 2.69 7.18483E-06 5.96341E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 3% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Zone 2a: H27-H30	Percentage active area, p Emission Factor Emission Rate	3 0.85 8.086E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: H21-H26	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: H21-H26	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 3: H31-H34	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	0.2 91.7 26 12 2.69 4.78989E-07 3.97561E-08	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 0.2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 3: H31-H34	Percentage active area, p Emission Factor Emission Rate	0.2 0.85 5.39066E-09	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 4: H9-H12, H35	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	4 91.7 26 12 2.69 9.57977E-06 7.95121E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 4% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 4: H9-H12, H35	Percentage active area, p Emission Factor Emission Rate	4 0.85 1.07813E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 5: H3, H17, H20	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 5: H3, H17, H20	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: H1-H2, H4-H8, H13-H16, H18-H19, H36-H45	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: H1-H2, H4-H8, H13-H16, H18-H19, H36-H45	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: HB1-HB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: HB1-HB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle	 Particle size multiplier, k Road surface silt loading, sL Average truck weight, W No. of truck trips per day	 3.23 12 36 45 30.8 12 2	 g/VKT g/m2 tons tons tons veh/hr veh/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).** AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Aggregate Tipper Truck Full loading of Cement Tanker Full loading of Concrete Mixer Aggregate Tpper Truck Cement Tanker

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Laden Vehicle	Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2017

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 2a: I25	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	6 91.7 26 12 2.69 1.43697E-05 1.19268E-06	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 6% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2a: I25	Percentage active area, p Emission Factor Emission Rate	6 0.85 1.6172E-07	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: I22-I24	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: I22-I24	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 4: I10-I12	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 4: I10-I12	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 5: I3, I18, I21	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 5: I3, I18, I21	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: I1-I2, I4-I9, I13-I17, I19-I20	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: I1-I2, I4-I9, I13-I17, I19-I20	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: IB3-IB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: IB3-IB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle Source ID: CBH1-CBH4	Particle size multiplier, k Road surface silt loading, sL Average truck weight, W No. of truck trips per day No. of operation hour % of dust suppression Sum of Emission Rate	3.23 12 36 45 30.8 12 2 6 12 97.5 1.63E-04	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).** g/VKT g/m2 tons tons tons veh/hr veh/hr veh/hr hr % g/m/s (mitigated)	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Aggregate Tipper Truck Full loading of Cement Tanker Full loading of Concrete Mixer Aggregate Tpper Truck Cement Tanker Concrete Mixer From 7:00-19:00 Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer. No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant - For Laden Vehicle	Particle size multiplier, k Road surface silt loading, sL Average truck weight, W TSP emission factor, E No. of truck trips per day	3.23 12 36 45 30.8 1199 1505 1022 0	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).** g/VKT g/m2 tons tons tons g/VKT g/VKT g/VKT veh/hr	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Aggregate Tipper Truck Full loading of Cement Tanker Full loading of Concrete Mixer E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Aggregate Tpper Truck Cement Tanker Concrete Mixer Aggregate Tpper Truck

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2018

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
		Emission Rate	1.67E-02	g/s (mitigated)	
West Kowloon Cultural District	Heavy construction Source ID: zone 3: I26-I29	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	0 91.7 26 12 2.69 0 0	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 0% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 1: I26-I29	Percentage active area, p Emission Factor Emission Rate	0 0.85 0	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2019

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: J22-J24	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 5% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 2b: J22-J24	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 4: J10-J12 JB3-JB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	2 91.7 26 12 2.69 4.78989E-06 3.97561E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 2% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 4: J10-J12 JB3-JB5	Percentage active area, p Emission Factor Emission Rate	2 0.85 5.39066E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 5: J3, J18, J21	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	0.4 91.7 26 12 2.69 9.57977E-07 7.95121E-08	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 0.4% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: zone 5: J3, J18, J21	Percentage active area, p Emission Factor Emission Rate	0.4 0.85 1.07813E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: Great Park: J1-J2, J4-J9, J13-J17, J19, J20	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	1 91.7 26 12 2.69 2.39494E-06 1.9878E-07	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 1% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: Great Park: J1-J2, J4-J9, J13-J17, J19,	Percentage active area, p Emission Factor Emission Rate	1 0.85 2.69533E-08	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: JB1-JB5	Percentage active area, p Mitigation efficiency No. of working days per month, d No. of working hours per day, h Emission Factor Emission Rate	100 91.7 26 12 2.69 0.000239494 1.9878E-05	% % days hour Mg/hectare/month of activity g/m²/s (unmitigated) g/m²/s (mitigated)	Assume 100% works area for heavy construction Water suppression 12 times a day AP42, Section 13.2.3.3 =2.69*1000000/(10000*d*h*60*60)*p/100
	Wind Erosion Source ID: JB1-JB5	Percentage active area, p Emission Factor Emission Rate	100 0.85 2.69533E-06	% Mg/hectare/year g/m²/s	 AP42, Table 11.9-4 =0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Laden Vehicle Source ID: CBH1-CBH4	 Particle size multiplier, k Road surface silt loading, sL Average truck weight, W No. of truck trips per day No. of operation hour % of dust suppression Sum of Emission Rate	 3.23 12 36 45 30.8 12 2 6 12 97.5 1.63E-04	 g/VKT g/m2 tons tons tons veh/hr veh/hr veh/hr hr % g/m/s (mitigated)	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).** AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Aggregate Tipper Truck Full loading of Cement Tanker Full loading of Concrete Mixer Aggregate Tpper Truck Cement Tanker Concrete Mixer From 7:00-19:00 Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer. No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant - For Laden Vehicle	 Particle size multiplier, k Road surface silt loading, sL Average truck weight, W TSP emission factor, E No. of truck trips per day No. of operation hour % of dust suppression Emission Rate	 3.23 12 36 45 30.8 1199 1505 1022 0 2 0 12 99.0 0.00E+00 8.36E-06 0.00E+00	 g/VKT g/m2 tons tons tons g/VKT g/VKT g/VKT veh/hr veh/hr veh/hr hr % g/m/s (mitigated) g/m/s (mitigated) g/m/s (mitigated)	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).** AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed. AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed. Full loading of Aggregate Tipper Truck Full loading of Cement Tanker Full loading of Concrete Mixer E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.) Aggregate Tpper Truck Cement Tanker Concrete Mixer Aggregate Tpper Truck Cement Tanker Concrete Mixer From 7:00-19:00 Aggregate Tipper Truck Cement Tanker Concrete Mixer

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2019

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
	For Unladen Vehicle	Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Terminus Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2020

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
West Kowloon Cultural District	Heavy construction Source ID: zone 2b: K4-K6, K11-K12	Percentage active area, p	1	%	Assume 1% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	2.39494E-06	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-07	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 2b: K4-K6, K11-K12	Percentage active area, p	1	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-08	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 4: K7-K10	Percentage active area, p	0.3	%	Assume 0.3% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	7.18483E-07	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			5.96341E-08	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 4: K7-K10	Percentage active area, p	0.3	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	8.086E-09	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: zone 5: K1-K3	Percentage active area, p	0.2	%	Assume 0.2% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	4.78989E-07	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			3.97561E-08	g/m²/s (mitigated)	
	Wind Erosion Source ID: zone 5: K1-K3	Percentage active area, p	0.2	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	5.39066E-09	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District	Heavy construction Source ID: KB3-KB5	Percentage active area, p	100	%	Assume 100% works area for heavy construction
		Mitigation efficiency	91.7	%	Water suppression 12 times a day
		No. of working days per month, d	26	days	
		No. of working hours per day, h	12	hour	
		Emission Factor	2.69	Mg/hectare/month of activity	AP42, Section 13.2.3.3
		Emission Rate	0.000239494	g/m²/s (unmitigated)	=2.69*1000000/(10000*d*h*60*60)*p/100
			1.9878E-05	g/m²/s (mitigated)	
	Wind Erosion Source ID: KB3-KB5	Percentage active area, p	100	%	
		Emission Factor	0.85	Mg/hectare/year	AP42, Table 11.9-4
		Emission Rate	2.69533E-06	g/m²/s	=0.85*1000000/(10000*365*24*60*60)*p/100
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		No. of truck trips per day	12	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			6	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBH1-CBH4		1.63E-04	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant	Paved haul road outside concrete batching plant -				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
	For Laden Vehicle	Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	36	tons	Full loading of Aggregate Tipper Truck
			45	tons	Full loading of Cement Tanker
			30.8	tons	Full loading of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			1199	g/VKT	Aggregate Tpper Truck
			1505	g/VKT	Cement Tanker
			1022	g/VKT	Concrete Mixer
		No. of truck trips per day	0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			8.36E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP14		8.36E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP15		4.00E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP16		1.70E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 6 veh/hr respectively.

Appendix 3.3 - Details of Dust Emission Sources for Annual TSP Assessment at Year 2020

West Kowloon Cultural District

Works Area	Sources	Parameter			Remarks
	EP17		8.52E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Construction Site)	Paved haul road outside concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	97.5	%	
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	CBX1-CBX4		6.12E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 2, and 6 veh/hr respectively.
West Kowloon Terminus Concrete Batching Plant (Construction Site)	Paved haul road within concrete batching plant - For Unladen Vehicle				**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Particle size multiplier, k	3.23	g/VKT	AP-42, Section 13.2.1, Table 13.2.1-1, 01/11 ed.
		Road surface silt loading, sL	12	g/m2	AP-42, Section 13.2.1, Table 13.2.1-3, 01/11 ed.
		Average truck weight, W	14	tons	Unladen weight of Aggregate Tipper Truck
			15	tons	Unladen weight of Cement Tanker
			12	tons	Unladen weight of Concrete Mixer
		TSP emission factor, E			E=k x (sL)^0.91x (W)^1.02 (AP-42, section 13.2.1, 01/11 ed.)
			457	g/VKT	Aggregate Tpper Truck
			491	g/VKT	Cement Tanker
			391	g/VKT	Concrete Mixer
		No. of truck trips per day			Extracted from Specified Processes License (checked on 13 Jan 2012)
			0	veh/hr	Aggregate Tpper Truck
			2	veh/hr	Cement Tanker
			0	veh/hr	Concrete Mixer
		No. of operation hour	12	hr	From 7:00-19:00
		% of dust suppression	99.0	%	
		Emission Rate	0.00E+00	g/m/s (mitigated)	Aggregate Tipper Truck
			2.73E-06	g/m/s (mitigated)	Cement Tanker
			0.00E+00	g/m/s (mitigated)	Concrete Mixer
	Source ID:	Sum of Emission Rate			Sum of emission rate of aggregate tipper truck, cement tanker and concrete mixer.
	EP21		2.73E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 2, and 0 veh/hr respectively.
	EP22		1.52E-05	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 12, 0, and 0 veh/hr respectively.
	EP23		3.26E-06	g/m/s (mitigated)	No. of vehicle of aggregate tipper truck, cement tanker and concrete mixer are 0, 0, and 3 veh/hr respectively.
West Kowloon Cultural District Concrete Batching Plant (Unloading of raw materials)	Unloading aggregate Source ID: EP9	Consumption Rate	272000	kg/h	Extracted from SP License of Express Rail Link (Appendix C).
			272	Mg/h	
		Particle size multiplier, k	0.74		For TSP, AP-42, section 13.2.4, 11/06 ed.
		Moisture content, M	2	%	Extracted from SP License of Express Rail Link (Appendix C).
		Mean wind speed, U	3.5	m/s	PATH Year 2010 mean wind speed
		Emission Factor, E	0.002165163	kg/Mg	E=k x (0.0016) x ((U/2.2)^1.3/(M/2)^1.4) (AP-42, section 13.2.4, 11/06 ed.)
			0.588924442	kg/hr	
		Mitigation efficiency	99	%	Extracted from SP License of Express Rail Link (Appendix C).
		Emission Rate	1.64E-03	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Cement / PFA Silos)	Small Cementitious Material Silos Source ID: EP5-EP8	TSP emission factor	30	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each mixer	1300	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	4		
		Emission height	21 or 22		EP5: 21m, EP6-EP8: 22m
		Emission Rate	1.08E-02	g/s (mitigated)	
	PFA weight Hopper Source ID: EP3-EP4	Production rate	160	m3/hr	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Density	0.001989	mg/m3	
		Emission Factor	2.60E-03	kg/Mg	Weight hopper loading, AP-42, section 11.12-4, Table 11.12-1, 6/06 ed.
		Emission Rate	2.30E-04	g/s (mitigated)	
West Kowloon Cultural District Concrete Batching Plant (Mixing Tower)	Mixer Source ID: EP1-EP2	TSP emission factor	40	mg/m3	**All calculations and assumptions are extracted from SP License of Express Rail Link (Appendix C).**
		Dust extraction flow rate for each	1500	m3/hr	
		No. of operation hour	12	hr	From 7:00 to 19:00
		No. of small cement silos	2		
		Emission height	13		
		Emission Rate	1.67E-02	g/s (mitigated)	