

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 1 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S1)

From:	1-Mar-14	To:	30-Jun-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	2	3.2	8	51.2	25.6
Crane Mobile	70	1	2.6	10	26	18.2
Lorry, Crane/Grab	70	1	2.4	10	24	16.8
Cutter, Circular, Steel	10	1	1.5	1.5	2.25	0.225
Generator	70	1	2.2	5	11	7.7
Air Compressor	70	1	2.2	5	11	7.7
Breaker (Pneumatic)	70	1	0.5	1	0.5	0.35
Hand Held Breaker	30	2	0.5	1	1	0.3
Dump Truck	30	2	2.4	10	48	14.4
Total:						91.275
Activity 1						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 2 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S1)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	1	3.2	8	25.6	12.8
Lorry	30	1	2.4	10	24	7.2
Air Compressor	50	1	2.2	5	11	5.5
Generator	70	1	2.2	5	11	7.7
Hand Held Breaker	50	2	0.5	1	1	0.5
Total:						33.7
Activity 2						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 3 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S2)

From:	1-Mar-14	To:	30-Jun-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	2	3.2	8	51.2	25.6
Crane Mobile	70	1	2.6	10	26	18.2
Lorry, Crane/Grab	70	1	2.4	10	24	16.8
Cutter, Circular, Steel	10	1	1.5	1.5	2.25	0.225
Generator	70	1	2.2	5	11	7.7
Air Compressor	70	1	2.2	5	11	7.7
Breaker (Pneumatic)	70	1	0.5	1	0.5	0.35
Hand Held Breaker	30	2	0.5	1	1	0.3
Dump Truck	30	2	2.4	10	48	14.4
Total:						91.275
Activity 3						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 4 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S2)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	1	3.2	8	25.6	12.8
Lorry	30	1	2.4	10	24	7.2
Air Compressor	50	1	2.2	5	11	5.5
Generator	70	1	2.2	5	11	7.7
Hand Held Breaker	50	2	0.5	1	1	0.5
Total:						33.7
Activity 4						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

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Activity 5 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S3)

From:	1-Mar-14	To:	30-Jun-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	2	3.2	8	51.2	25.6
Crane Mobile	70	1	2.6	10	26	18.2
Lorry, Crane/Grab	70	1	2.4	10	24	16.8
Cutter, Circular, Steel	10	1	1.5	1.5	2.25	0.225
Generator	70	1	2.2	5	11	7.7
Air Compressor	70	1	2.2	5	11	7.7
Breaker (Pneumatic)	70	1	0.5	1	0.5	0.35
Hand Held Breaker	30	2	0.5	1	1	0.3
Dump Truck	30	2	2.4	10	48	14.4
Total:						91.275
Activity 5						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 6 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S3)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	50	1	3.2	8	25.6	12.8
Lorry	30	1	2.4	10	24	7.2
Air Compressor	50	1	2.2	5	11	5.5
Generator	70	1	2.2	5	11	7.7
Hand Held Breaker	50	2	0.5	1	1	0.5
Total:						33.7
Activity 6						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 7 - Bulk Excavation of Soft Soil HIK 3 (Workfront S4)

From:	1-May-14	To:	31-May-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	30	2	2.4	10	48	14.4
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Total:						65.85
Activity 7						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Activity 8 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S4)

From:	1-May-14	To:	31-Dec-14	Duration:	8	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	80	4	3	3	36	28.8
Piling, Bored, Oscillator	30	4	3	3	36	10.8
Piling, Bored, RCD	50	4	3	3	36	18
Concrete Lorry Mixer	40	2	2.4	10	48	19.2
Concrete Pump	40	1	2	3	6	2.4
Poker, Vibratory, Hand Held	40	2	0.5	1.2	1.2	0.48
Generator	40	4	2.2	5	44	17.6
Air Compressor	100	4	2.2	5	44	44
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Roller, Vibratory	20	1	1.4	4.5	6.3	1.26
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Crane Mobile	50	1	2.6	10	26	13
Mini Concrete Cruncher	30	4	3.2	8	102.4	30.72
Total:						239.160
Activity 8						Percentage of Usage Area to Works Area: 0.7%
						Percentage of Yearly Usage: 0.5%

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Activity 9 - Bulk Excavation of Soft Soil HIK 3 (Workfront S5)

From:	1-May-14	To:	31-May-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Dump Truck	30	2	2.4	10	48	14.4	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
					Total:	65.85	
Activity 9						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.0%

Activity 10 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S5)

From:	1-May-14	To:	31-Dec-14	Duration:	8	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Piling, Bored, Grab & Chisel	80	4	3	3	36	28.8	
Piling, Bored, Oscillator	30	4	3	3	36	10.8	
Piling, Bored, RCD	50	4	3	3	36	18	
Concrete Lorry Mixer	40	2	2.4	10	48	19.2	
Concrete Pump	40	1	2	3	6	2.4	
Poker, Vibratory, Hand Held	40	2	0.5	1.2	1.2	0.48	
Generator	40	4	2.2	5	44	17.6	
Air Compressor	100	4	2.2	5	44	44	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
Roller, Vibratory	20	1	1.4	4.5	6.3	1.26	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Crane Mobile	50	1	2.6	10	26	13	
Mini Concrete Cruncher	30	4	3.2	8	102.4	30.72	
					Total:	239.160	
Activity 10						Percentage of Usage Area to Works Area:	0.7%
						Percentage of Yearly Usage:	0.5%

Activity 11 - Bulk Excavation of Soft Soil HIK 3 (Workfront S6)

From:	1-May-14	To:	31-May-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Dump Truck	30	2	2.4	10	48	14.4	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
					Total:	65.85	
Activity 11						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.0%

Activity 12 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S6)

From:	1-May-14	To:	31-Dec-14	Duration:	8	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Piling, Bored, Grab & Chisel	80	4	3	3	36	28.8	
Piling, Bored, Oscillator	30	4	3	3	36	10.8	
Piling, Bored, RCD	50	4	3	3	36	18	
Concrete Lorry Mixer	40	2	2.4	10	48	19.2	
Concrete Pump	40	1	2	3	6	2.4	
Poker, Vibratory, Hand Held	40	2	0.5	1.2	1.2	0.48	
Generator	40	4	2.2	5	44	17.6	
Air Compressor	100	4	2.2	5	44	44	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
Roller, Vibratory	20	1	1.4	4.5	6.3	1.26	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Crane Mobile	50	1	2.6	10	26	13	
Mini Concrete Cruncher	30	4	3.2	8	102.4	30.72	
					Total:	239.160	
Activity 12						Percentage of Usage Area to Works Area:	0.7%
						Percentage of Yearly Usage:	0.5%

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Activity 13 - Bulk Excavation of Soft Soil HIK 3 (Workfront S7)

From:	1-May-14	To:	31-May-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Dump Truck	30	2	2.4	10	48	14.4	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
					Total:	65.85	
Activity 13						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.0%

Activity 14 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S7)

From:	1-May-14	To:	31-Dec-14	Duration:	8	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Piling, Bored, Grab & Chisel	80	4	3	3	36	28.8	
Piling, Bored, Oscillator	30	4	3	3	36	10.8	
Piling, Bored, RCD	50	4	3	3	36	18	
Concrete Lorry Mixer	40	2	2.4	10	48	19.2	
Concrete Pump	40	1	2	3	6	2.4	
Poker, Vibratory, Hand Held	40	2	0.5	1.2	1.2	0.48	
Generator	40	4	2.2	5	44	17.6	
Air Compressor	100	4	2.2	5	44	44	
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25	
Roller, Vibratory	20	1	1.4	4.5	6.3	1.26	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Crane Mobile	50	1	2.6	10	26	13	
Mini Concrete Cruncher	30	4	3.2	8	102.4	30.72	
					Total:	239.160	
Activity 14						Percentage of Usage Area to Works Area:	0.7%
						Percentage of Yearly Usage:	0.5%

Activity 15 - Installing Earth Mat HIK 5 (Workfront S8)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Drilling Rig	70	1	2.3	6	13.8	9.66	
					Total:	9.660	
Activity 15						Percentage of Usage Area to Works Area:	0.0%
						Percentage of Yearly Usage:	0.0%

Activity 16 - Cast Station Structural Elements HIK 6 (Workfront S8)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Poker, Vibratory, Hand Held	30	3	0.5	1.2	1.8	0.54	
Air Compressor	100	1	2.2	5	11	11	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Concrete Pump	30	1	2	3	6	1.8	
Tower Crane	20	3	4.5	14	189	37.8	
Crane Mobile	20	1	2.6	10	26	5.2	
Saw, Circular Wood	40	2	0.3	0.3	0.18	0.072	
Hoist, Passenger / Material	20	1	2.5	2.5	6.25	1.25	
					Total:	64.862	
Activity 16						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.0%

Activity 17 - Installing Earth Mat HIK 5 (Workfront S10)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Drilling Rig	70	1	2.3	6	13.8	9.66	
					Total:	9.660	
Activity 17						Percentage of Usage Area to Works Area:	0.0%
						Percentage of Yearly Usage:	0.0%

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Activity 18 - Cast Station Structural Elements HIK 6 (Workfront S10)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	30	3	0.5	1.2	1.8	0.54
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Concrete Pump	30	1	2	3	6	1.8
Tower Crane	20	3	4.5	14	189	37.8
Crane Mobile	20	1	2.6	10	26	5.2
Saw, Circular Wood	40	2	0.3	0.3	0.18	0.072
Hoist, Passenger / Material	20	1	2.5	2.5	6.25	1.25
Total:						64.862
Activity 18						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Activity 19 - Bar Bender and Cutter at Stockpiling Area HIK 6 (Workfront S11a)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Total:						1.125
Activity 19						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 20 - Piling Works of Viaduct HIK 4 (Workfront S34)

From:	1-May-14	To:	31-Dec-14	Duration:	8	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Vibrating Hammer	40	1	4.5	8	36	14.4
Piling, Bored, Grab & Chisel	80	1	3	3	9	7.2
Piling, Bored, Oscillator	30	1	3	3	9	2.7
Piling, Bored, RCD	50	1	3	3	9	4.5
Concrete Lorry Mixer	40	2	2.4	10	48	19.2
Concrete Pump	40	1	2	3	6	2.4
Generator	80	1	2.2	5	11	8.8
Air Compressor	80	1	2.2	5	11	8.8
Water Pump, Submersible	80	1	0.5	0.5	0.25	0.2
Hydraulic Crawler Crane	60	1	4.5	14	63	37.8
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Crane Mobile	50	1	2.6	10	26	13
Mini Concrete Cruncher	30	1	3.2	8	25.6	7.68
Total:						128.930
Activity 20						Percentage of Usage Area to Works Area: 0.4%
						Percentage of Yearly Usage: 0.3%

Activity 21 - Install Shoring and Cast Pile Cap HIK E5 (Workfront S34)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Vibrating Hammer	80	1	4.5	8	36	28.8
Lorry	30	1	2.4	10	24	7.2
Air Compressor	30	1	2.2	5	11	3.3
Generator	30	1	2.2	5	11	3.3
Concrete Lorry Mixer	40	1	2.4	10	24	9.6
Concrete Pump	40	1	2	3	6	2.4
Poker, Vibratory, Hand Held	40	1	0.5	1.2	0.6	0.24
Generator	70	1	2.2	5	11	7.7
Air Compressor	40	1	2.2	5	11	4.4
Bar Bender and Cutter	70	2	1.5	1.5	4.5	3.15
Saw, Circular Wood	40	1	0.3	0.3	0.09	0.036
Total:						70.126
Activity 21						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

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Activity 22a - Cast Abutment and Column HIK E6 (Workfront S34)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Poker, Vibratory, Hand Held	30	1	0.5	1.2	0.6	0.18
Air Compressor	80	1	2.2	5	11	8.8
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Concrete Pump	30	1	2	3	6	1.8
Crane Mobile	20	1	2.6	10	26	5.2
Saw, Circular Wood	40	1	0.3	0.3	0.09	0.036
Generator	30	1	2.2	5	11	3.3
Total:						28.766
Activity 22a						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 22b - Cast Abutment and Column HIK E6 (Workfront S34)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Poker, Vibratory, Hand Held	30	1	0.5	1.2	0.6	0.18
Air Compressor	80	1	2.2	5	11	8.8
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Concrete Pump	30	1	2	3	6	1.8
Crane Mobile	20	1	2.6	10	26	5.2
Saw, Circular Wood	40	1	0.3	0.3	0.09	0.036
Generator	30	1	2.2	5	11	3.3
Total:						28.766
Activity 22b						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 23 - Construction of Bridge Deck HIK E7 (Workfront S38)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Poker, Vibratory, Hand Held	30	1	0.5	1.2	0.6	0.18
Air Compressor	80	1	2.2	5	11	8.8
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Concrete Pump	30	1	2	3	6	1.8
Crane Mobile	20	1	2.6	10	26	5.2
Saw, Circular Wood	40	1	0.3	0.3	0.09	0.036
Total:						25.466
Activity 23						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 24 - Installation of Parapet and Viaduct Enclosure HIK E8 (Workfront S38)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	70	1	2.6	10	26	18.2
Lorry	30	1	2.4	10	24	7.2
Total:						25.400
Activity 24						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

**Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 25 - Cast Retaining Wall and Demolish Existing Wall HIK E9 (Workfront S40)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Poker, Vibratory, Hand Held	30	1	0.5	1.2	0.6	0.18
Air Compressor	80	1	2.2	5	11	8.8
Generator	70	1	2.2	5	11	7.7
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Concrete Pump	30	1	2	3	6	1.8
Excavator/Loader, Wheel/Tracked	30	1	3.2	8	25.6	7.68
Grinder	40	2	0.3	0.5	0.3	0.12
Saw, Circular Wood	40	1	0.3	0.3	0.09	0.036
Breaker (Pneumatic)	30	1	0.5	1	0.5	0.15
Total:						35.916
Activity 25						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 26 - Track Works of SCL & Installation of OHL and Modify MOS Overrun Track HIK E10 (Workfront S41)

From:	1-Jan-14	To:	31-May-14	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	70	1	2.6	10	26	18.2
Lorry	30	1	2.4	10	24	7.2
Generator	50	1	2.2	5	11	5.5
Total:						30.900
Activity 26						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 27 - Track Works of SCL & Installation of OHL and Modify MOS Overrun Track HIK E10 (Workfront S42)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	70	1	2.6	10	26	18.2
Lorry	30	1	2.4	10	24	7.2
Generator	50	1	2.2	5	11	5.5
Total:						30.900
Activity 27						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Combined Percentage for Activities	2.919% <6%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 1 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Crane Mobile	100	1	2.6	10	26	26
Lorry, Crane/Grab	100	1	2.4	10	24	24
Cutter, Circular, Steel	100	1	1.5	1.5	2.25	2.25
Generator	100	1	2.2	5	11	11
Air Compressor	100	1	2.2	5	11	11
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.5
Hand Held Breaker	100	2	0.5	1	1	1
Dump Truck	100	2	2.4	10	48	48
Total:					174.950	
Activity 1						Percentage of Usage Area to Works Area: 0.5%

Activity 2 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Lorry	100	1	2.4	10	24	24
Air Compressor	100	1	2.2	5	11	11
Generator	100	1	2.2	5	11	11
Hand Held Breaker	100	2	0.5	1	1	1
Total:					72.6	
Activity 2						Percentage of Usage Area to Works Area: 0.2%

Activity 3 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S2)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Crane Mobile	100	1	2.6	10	26	26
Lorry, Crane/Grab	100	1	2.4	10	24	24
Cutter, Circular, Steel	100	1	1.5	1.5	2.25	2.25
Generator	100	1	2.2	5	11	11
Air Compressor	100	1	2.2	5	11	11
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.5
Hand Held Breaker	100	2	0.5	1	1	1
Dump Truck	100	2	2.4	10	48	48
Total:					174.950	
Activity 3						Percentage of Usage Area to Works Area: 0.5%

Activity 4 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S2)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Lorry	100	1	2.4	10	24	24
Air Compressor	100	1	2.2	5	11	11
Generator	100	1	2.2	5	11	11
Hand Held Breaker	100	2	0.5	1	1	1
Total:					72.6	
Activity 4						Percentage of Usage Area to Works Area: 0.2%

Activity 5 - Site Clearance (Demolition of Existing Structures) and Erection of Hoarding HIK 1 (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Crane Mobile	100	1	2.6	10	26	26
Lorry, Crane/Grab	100	1	2.4	10	24	24
Cutter, Circular, Steel	100	1	1.5	1.5	2.25	2.25
Generator	100	1	2.2	5	11	11
Air Compressor	100	1	2.2	5	11	11
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.5
Hand Held Breaker	100	2	0.5	1	1	1
Dump Truck	100	2	2.4	10	48	48
Total:					174.950	
Activity 5						Percentage of Usage Area to Works Area: 0.5%

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 6 - Initial Possession of Land Exposing Utilities HIK 2 (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Lorry	100	1	2.4	10	24	24
Air Compressor	100	1	2.2	5	11	11
Generator	100	1	2.2	5	11	11
Hand Held Breaker	100	2	0.5	1	1	1
Total:						72.6
Activity 6						Percentage of Usage Area to Works Area: 0.2%

Activity 7 - Bulk Excavation of Soft Soil HIK 3 (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Total:						99.45
Activity 7						Percentage of Usage Area to Works Area: 0.3%

Activity 8 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	4	3	3	36	36
Piling, Bored, Oscillator	100	4	3	3	36	36
Piling, Bored, RCD	100	4	3	3	36	36
Concrete Lorry Mixer	100	2	2.4	10	48	48
Concrete Pump	100	1	2	3	6	6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Generator	100	4	2.2	5	44	44
Air Compressor	100	4	2.2	5	44	44
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Crane Mobile	100	1	2.6	10	26	26
Mini Concrete Cruncher	100	4	3.2	8	102.4	102.4
Total:						453.650
Activity 8						Percentage of Usage Area to Works Area: 1.4%

Activity 9 - Bulk Excavation of Soft Soil HIK 3 (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Total:						99.45
Activity 9						Percentage of Usage Area to Works Area: 0.3%

Activity 10 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	4	3	3	36	36
Piling, Bored, Oscillator	100	4	3	3	36	36
Piling, Bored, RCD	100	4	3	3	36	36
Concrete Lorry Mixer	100	2	2.4	10	48	48
Concrete Pump	100	1	2	3	6	6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Generator	100	4	2.2	5	44	44
Air Compressor	100	4	2.2	5	44	44
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Crane Mobile	100	1	2.6	10	26	26
Mini Concrete Cruncher	100	4	3.2	8	102.4	102.4
Total:						453.650
Activity 10						Percentage of Usage Area to Works Area: 1.4%

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 11 - Bulk Excavation of Soft Soil HIK 3 (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Total:					99.45	
Activity 11						Percentage of Usage Area to Works Area: 0.3%

Activity 12 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	4	3	3	36	36
Piling, Bored, Oscillator	100	4	3	3	36	36
Piling, Bored, RCD	100	4	3	3	36	36
Concrete Lorry Mixer	100	2	2.4	10	48	48
Concrete Pump	100	1	2	3	6	6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Generator	100	4	2.2	5	44	44
Air Compressor	100	4	2.2	5	44	44
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Crane Mobile	100	1	2.6	10	26	26
Mini Concrete Cruncher	100	4	3.2	8	102.4	102.4
Total:					453.650	
Activity 12						Percentage of Usage Area to Works Area: 1.4%

Activity 13 - Bulk Excavation of Soft Soil HIK 3 (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Total:					99.45	
Activity 13						Percentage of Usage Area to Works Area: 0.3%

Activity 14 - Construction of Piles and Pile Caps/Ground Beams HIK 4 (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	4	3	3	36	36
Piling, Bored, Oscillator	100	4	3	3	36	36
Piling, Bored, RCD	100	4	3	3	36	36
Concrete Lorry Mixer	100	2	2.4	10	48	48
Concrete Pump	100	1	2	3	6	6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Generator	100	4	2.2	5	44	44
Air Compressor	100	4	2.2	5	44	44
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Crane Mobile	100	1	2.6	10	26	26
Mini Concrete Cruncher	100	4	3.2	8	102.4	102.4
Total:					453.650	
Activity 14						Percentage of Usage Area to Works Area: 1.4%

Activity 15 - Installing Earth Mat HIK 5 (Workfront S8)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Drilling Rig	100	1	2.3	6	13.8	13.8
Total:					13.800	
Activity 15						Percentage of Usage Area to Works Area: 0.0%

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 16 - Cast Station Structural Elements HIK 6 (Workfront S8)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Tower Crane	100	3	4.5	14	189	189
Crane Mobile	100	1	2.6	10	26	26
Saw, Circular Wood	100	2	0.3	0.3	0.18	0.18
Hoist, Passenger / Material	100	1	2.5	2.5	6.25	6.25
					Total:	264.23
Activity 16						Percentage of Usage Area to Works Area: 0.8%

Activity 17 - Installing Earth Mat HIK 5 (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	13.800
Activity 17						Percentage of Usage Area to Works Area: 0.0%

Activity 18 - Cast Station Structural Elements HIK 6 (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Tower Crane	100	3	4.5	14	189	189
Crane Mobile	100	1	2.6	10	26	26
Saw, Circular Wood	100	2	0.3	0.3	0.18	0.18
Hoist, Passenger / Material	100	1	2.5	2.5	6.25	6.25
					Total:	264.23
Activity 18						Percentage of Usage Area to Works Area: 0.8%

Activity 19 - Bar Bender and Cutter at Stockpiling Area HIK 6 (Workfront S11a)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
					Total:	2.250
Activity 19						Percentage of Usage Area to Works Area: 0.0%

Activity 20 - Piling Works of Viaduct HIK 4 (Workfront S34)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Piling, Vibrating Hammer	100	1	4.5	8	36	36
Piling, Bored, Grab & Chisel	100	1	3	3	9	9
Piling, Bored, Oscillator	100	1	3	3	9	9
Piling, Bored, RCD	100	1	3	3	9	9
Concrete Lorry Mixer	100	2	2.4	10	48	48
Concrete Pump	100	1	2	3	6	6
Generator	100	1	2.2	5	11	11
Air Compressor	100	1	2.2	5	11	11
Water Pump, Submersible	100	1	0.5	0.5	0.25	0.25
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Crane Mobile	100	1	2.6	10	26	26
Mini Concrete Cruncher	100	1	3.2	8	25.6	25.6
					Total:	258.350
Activity 20						Percentage of Usage Area to Works Area: 0.8%

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 21 - Install Shoring and Cast Pile Cap HIK E5 (Workfront S34)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Piling, Vibrating Hammer	100	1	4.5	8	36	36
Lorry	100	1	2.4	10	24	24
Air Compressor	100	1	2.2	5	11	11
Generator	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Generator	100	1	2.2	5	11	11
Air Compressor	100	1	2.2	5	11	11
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
					Total:	139.190
Activity 21						Percentage of Usage Area to Works Area: 0.4%

Activity 22a - Cast Abutment and Column HIK E6 (Workfront S34)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Crane Mobile	100	1	2.6	10	26	26
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Generator	100	1	2.2	5	11	11
					Total:	83.190
Activity 22a						Percentage of Usage Area to Works Area: 0.3%

Activity 22b - Cast Abutment and Column HIK E6 (Workfront S34)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Crane Mobile	100	1	2.6	10	26	26
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Generator	100	1	2.2	5	11	11
					Total:	83.190
Activity 22b						Percentage of Usage Area to Works Area: 0.3%

Activity 23 - Construction of Bridge Deck HIK E7 (Workfront S38)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Air Compressor	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Crane Mobile	100	1	2.6	10	26	26
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
					Total:	72.190
Activity 23						Percentage of Usage Area to Works Area: 0.2%

Activity 24 - Installation of Parapet and Viaduct Enclosure HIK E8 (Workfront S38)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
					Total:	50.000
Activity 24						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Hin Keng Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 31937 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S11a, S12, S13, S14, S15, S16, S31, S34, S38, S40, S41, S42, S43 & S45 in noise assessment or 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 324, 325, 326 & 327 in air quality assessment)

Activity 25 - Cast Retaining Wall and Demolish Existing Wall HIK E9 (Workfront S40)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Air Compressor	100	1	2.2	5	11	11
Generator	100	1	2.2	5	11	11
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump	100	1	2	3	6	6
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Grinder	100	2	0.3	0.5	0.3	0.3
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.5
Total:						83.590
Activity 25						Percentage of Usage Area to Works Area: 0.3%

Activity 26 - Track Works of SCL & Installation of OHL and Modify MOS Overrun Track HIK E10 (Workfront S41)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Generator	100	1	2.2	5	11	11
Total:						61.000
Activity 26						Percentage of Usage Area to Works Area: 0.2%

Activity 27 - Track Works of SCL & Installation of OHL and Modify MOS Overrun Track HIK E10 (Workfront S42)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Generator	100	1	2.2	5	11	11
Total:						61.000
Activity 27						Percentage of Usage Area to Works Area: 0.2%

Combined Percentage for Activities	13.793% <30%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Hin Keng Portal - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 25519 m²
(total area of workfronts S17, S18, S19, S20, S21, S22, S24, S25, S26, S28, S32, S33, S35, S36, S37, S39, S46 & S47 in noise assessment or 313, 314, 315, 316, 317, 318, 319, 320, 321, 322 & 323 in air quality assessment)

Activity 1 - Pipe Pile Wall Construction HIK Portal 8c (Workfront S18)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	2	2.3	6	27.6	27.6
Lorry	20	1	2.4	10	24	4.8
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
					Total:	82.800
Activity 1						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.0%

Activity 2 - Tunnel Construction HIK Portal 8f (Workfront S22)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Concrete Lorry Mixer	20	2	2.4	10	48	9.6
Water Pump, Submersible	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Grout Mixer	20	1	1.2	0.8	0.96	0.192
Grout Pump	20	1	1.7	0.9	1.53	0.306
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Air Compressor	80	2	2.2	5	22	17.6
Concrete Pumping Lorry	20	1	2.4	10	24	4.8
Conveyor	40	1	4.5	14	63	25.2
					Total:	135.268
Activity 2						Percentage of Usage Area to Works Area: 0.5%
						Percentage of Yearly Usage: 0.5%

Activity 3 - Site Clearance for Permanent RCP (Workfront S46)

From:	1-Nov-14	To:	30-Nov-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	50	1	2.4	10	24	12
					Total:	37.600
Activity 3						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 4 - Construction of Existing RCP (Workfront S46)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	80	1	2.4	10	24	19.2
Generator	100	1	2.2	5	11	11
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Concrete Pumping Lorry	10	1	2.4	10	24	2.4
Concrete Lorry Mixer	10	1	2.4	10	24	2.4
Bar Bender and Cutter	80	2	1.5	1.5	4.5	3.6
					Total:	38.78
Activity 4						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Combined Percentage for Activities		0.594% <6%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Hin Keng Portal - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 25519 m²
(total area of workfronts S17, S18, S19, S20, S21, S22, S24, S25, S26, S28, S32, S33, S35, S36, S37, S39, S46 & S47 in noise assessment or 313, 314, 315, 316, 317, 318, 319, 320, 321, 322 & 323 in air quality assessment)

Activity 1 - Pipe Pile Wall Construction HIK Portal 8c (Workfront S18)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	2	2.3	6	27.6	27.6
Lorry	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Total:					114.600	
Activity 1						Percentage of Usage Area to Works Area: 0.4%

Activity 2 - Tunnel Construction HIK Portal 8f (Workfront S22)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Concrete Lorry Mixer	100	2	2.4	10	48	48
Water Pump, Submersible	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Grout Mixer	100	1	1.2	0.8	0.96	0.96
Grout Pump	100	1	1.7	0.9	1.53	1.53
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Air Compressor	100	2	2.2	5	22	22
Concrete Pumping Lorry	100	1	2.4	10	24	24
Conveyor	100	1	4.5	14	63	63
Total:					237.06	
Activity 2						Percentage of Usage Area to Works Area: 0.9%

Activity 3 - Site Clearance for Permanent RCP (Workfront S46)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Total:					49.600	
Activity 3						Percentage of Usage Area to Works Area: 0.2%

Activity 4 - Construction of Existing RCP (Workfront S46)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Generator	100	1	2.2	5	11	11
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Concrete Pumping Lorry	100	1	2.4	10	24	24
Concrete Lorry Mixer	100	1	2.4	10	24	24
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Total:					87.68	
Activity 4						Percentage of Usage Area to Works Area: 0.3%

Combined Percentage for Activities	1.916%
	<30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

**Shatin to Central Link - East West Line
Ma Chai Hang Ventilation Building - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 13100 m²
(total area of workfronts S1, S2, S3 S4, S5 & S9 in noise assessment or 424 & 424* in air quality assessment)

Activity 1 - Tunnelling/Mining Operations (Workfront S5)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Conveyor	40	1	4.5	14	63	25.2	
Crane Mobile	5	1	2.6	10	26	1.3	
TBM Tunnelling, Bentonite Filtering Plant	75	1	2.9	3.6	10.44	7.83	
Concrete Lorry Mixer	20	1	2.4	10	24	4.8	
Hydraulic Crawler Crane	5	1	4.5	14	63	3.15	
Concrete Pumping Lorry	20	1	2.4	10	24	4.8	
Dump Truck	50	2	2.4	10	48	24	
Water Pump, Submersible	75	2	0.5	0.5	0.5	0.375	
Ventilation Fan	100	3	1	1	3	3	
Welder/Generator, portable	75	2	0.3	0.3	0.18	0.135	
Hoist, Passenger / Material	40	1	2.5	2.5	6.25	2.5	
Grout Mixer	20	1	1.2	0.8	0.96	0.192	
Grout Pump	20	1	1.7	0.9	1.53	0.306	
Air Compressor	75	1	2.2	5	11	8.25	
Total:						85.838	
Activity 1					Percentage of Usage Area to Works Area:		0.7%
					Percentage of Yearly Usage:		0.7%
Combined Percentage for Activities						0.653%	
						<6%, OK	

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

**Shatin to Central Link - East West Line
Ma Chai Hang Ventilation Building - Active Construction Area Estimate**

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 13100 m²
(total area of workfronts S1, S2, S3 S4, S5 & S9 in noise assessment or 424 & 424* in air quality assessment)

Activity 1 - Tunnelling/Mining Operations (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Conveyor	100	1	4.5	14	63	63
Crane Mobile	100	1	2.6	10	26	26
TBM Tunnelling, Bentonite Filtering Plant	100	1	2.9	3.6	10.44	10.44
Concrete Lorry Mixer	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Concrete Pumping Lorry	100	1	2.4	10	24	24
Dump Truck	100	2	2.4	10	48	48
Water Pump, Submersible	100	2	0.5	0.5	0.5	0.5
Ventilation Fan	100	3	1	1	3	3
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Hoist, Passenger / Material	100	1	2.5	2.5	6.25	6.25
Grout Mixer	100	1	1.2	0.8	0.96	0.96
Grout Pump	100	1	1.7	0.9	1.53	1.53
Air Compressor	100	1	2.2	5	11	11
					Total:	281.86
Activity 1	Percentage of Usage Area to Works Area:					2.2%
Combined Percentage for Activities						2.152% <30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 1 - Crosswall (36m) 5th Stage (Workfront S1)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Diaphragm Wall, Hydraulic Extract	80	1	4.5	8	36	28.800
Diaphragm Wall Bentonite Filtering Plant	80	1	2.9	3.6	10.44	8.352
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Excavator/Loader, Wheel/Tracked	70	2	3.2	8	51.2	35.84
Crane Mobile	60	1	2.6	10	26	15.6
Bar Bender and Cutter	20	1	1.5	1.5	2.25	0.45
Water Pump	90	1	0.5	0.5	0.25	0.225
Total:						94.067
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 2 - Install ELS & Struts (West End) (Workfront S1)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						46.6
Activity 2						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 3 - Install Pipe Pile Walls (West End) (Workfront S1)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry	20	1	2.4	10	24	4.8
Crane Mobile	80	1	2.6	10	26	20.8
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Water Pump	90	1	0.5	0.5	0.25	0.225
Total:						44.425
Activity 3						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 4 - Install ELS near Adit D1 (Workfront S1)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						46.6
Activity 4						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 5 - Excavation (West End to +6m) (Workfront S1)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.82
Activity 5						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 6 - Entrance (A2) - Construct Bulk Head Wall (Workfront S1)

From:	1-Mar-14	To:	30-Apr-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73
Activity 6						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 7 - Entrance (A2) - Construct Partial Floor Slab & Staircase (Workfront S1)

From:	1-Mar-14	To:	30-Jun-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73
Activity 7						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 8 - Excavate to -20.8 (Workfront S1)

From:	1-Jun-14	To:	31-Oct-14	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.82
Activity 8						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 9 - Entrance (A2) - Install ELS (Workfront S1)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						46.600
Activity 9						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 10 - Entrance (A2) - Demolish Subway & Install Struts (Workfront S1)

From:	1-Jul-14	To:	31-Aug-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Hand Held Breaker	30	1	0.5	1	0.5	0.15
Dump Truck	50	2	2.4	10	48	24
Saw, Chain, Hand-held	30	1	0.3	1	0.3	0.09
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						71.340
Activity 10						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 11 - Entrance (A2) - Excavation (Workfront S1)

From:	1-Aug-14	To:	30-Sep-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.820
Activity 11						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 12 - Entrance (A2) - Structure (Workfront S1)

From:	1-Oct-14	To:	30-Nov-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 12						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 13 - Remaining TBM W Grout Block (Workfront S9)

From:	1-Oct-14	To:	30-Nov-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Grout Mixer	20	1	1.2	0.8	0.96	0.192
Grout Pump	20	1	1.7	0.9	1.53	0.306
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Piling Rig & Drilling Rig	80	1	2.3	6	13.8	11.04
Crane Mobile	30	1	2.6	10	26	7.8
Dump Truck	30	1	2.4	10	24	7.2
Total:						26.628
Activity 13						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 14 - DIH - Base Slab (Workfront S1)

From:	1-Oct-14	To:	31-Dec-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 14						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 15 - Excavate to -20.8 (Workfront S2)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	2	3.2	8	51.2	40.96
Dump Truck	50	2	2.4	10	48	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:						65.64
Activity 15						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 16 - DIH - Base Slab (Workfront S2)

From:	1-Oct-14	To:	31-Dec-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 16						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 17 - Excavate to -11.4 (Workfront S3)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	2	3.2	8	51.2	40.96
Dump Truck	50	2	2.4	10	48	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:						65.64
Activity 17						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 18 - Excavate to -20.8 (Workfront S3)

From:	1-Mar-14	To:	30-Apr-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	2	3.2	8	51.2	40.96
Dump Truck	50	2	2.4	10	48	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:						65.64
Activity 18						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 19 - DIH - Base Slab (Workfront S3)

From:	1-Apr-14	To:	31-Jul-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 19						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 20 - DIH - Mezz. Slab (Workfront S3)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 20						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 21 - DIH - Columns (Workfront S3)

From:	1-Jul-14	To:	30-Nov-14	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 21						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 22 - DIH - Conc. Slab (Workfront S3)

From:	1-Sep-14	To:	30-Nov-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 22						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 23 - Internal Structures - Platform Level (Workfront S3)

From:	1-Sep-14	To:	31-Dec-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 23						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 24 - Roof Slab (Workfront S3)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 24						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 25 - Internal Structures - Mezz. Level (Workfront S3)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	60	1	4.5	14	63	37.8	
Total:						73.000	
Activity 25						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 26 - Excavate to -20.8 (Workfront S4)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48	
Dump Truck	50	1	2.4	10	24	12	
Water Pump	100	1	0.5	0.5	0.25	0.25	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Total:						32.82	
Activity 26						Percentage of Usage Area to Works Area:	0.0%
						Percentage of Yearly Usage:	0.0%

Activity 27 - Base Slab (Workfront S4)

From:	1-Feb-14	To:	30-Apr-14	Duration:	3	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	60	1	4.5	14	63	37.8	
Total:						73.000	
Activity 27						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 28 - Mezz. Slab (Workfront S4)

From:	1-Apr-14	To:	31-Jul-14	Duration:	4	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	60	1	4.5	14	63	37.8	
Total:						73.000	
Activity 28						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 29 - Columns (Workfront S4)

From:	1-Apr-14	To:	30-Sep-14	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 29						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

Activity 30 - Conc. Slab (Workfront S4)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 30						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 31 - Internal Structures - Platform Level (Workfront S4)

From:	1-Jul-14	To:	30-Nov-14	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 31						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 32 - DIA - Roof Slab (Workfront S4)

From:	1-Sep-14	To:	30-Nov-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 32						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 33 - Internal Structures - Mezz. Level (Workfront S4)

From:	1-Sep-14	To:	31-Dec-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 33						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 34 - Internal Structures - Conc. Level (Workfront S4)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 33						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 34 - DIH - Base Slab (Workfront S5)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 34						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 35 - DIH - Conc. Slab (with hole) (Workfront S5)

From:	1-Mar-14	To:	31-May-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 35						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 36 - DIH - Columns (Workfront S5)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 36						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 37 - DIH - Roof Slab (with hole) (Workfront S5)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 37						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 38 - DHS Base Slab (Workfront S6)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 38						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 39 - DHS Columns (to Mezz.) (Workfront S6)

From:	1-Feb-14	To:	30-Apr-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 39						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 40 - DHS Walls (Workfront S6)

From:	1-Feb-14	To:	31-May-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 40						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 41 - DHS Mezz Slab (Workfront S6)

From:	1-May-14	To:	31-Jul-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 41						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 42 - DHS Internal Structures - Track Level (Workfront S6)

From:	1-Jul-14	To:	30-Oct-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 42						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 43 - DHS Columns (to Roof) (Workfront S6)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 43						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 44 - DHS Roof Slab (Workfront S6)

From:	1-Sep-14	To:	30-Nov-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 44						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 45 - DHS Vent Shafts etc (Workfront S6)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 45						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 46 - DHS - Excavate to -1 (Workfront S7)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	40	3	3.2	8	76.8	30.72
Dump Truck	30	3	2.4	10	72	21.6
Water Pump	100	3	0.5	0.5	0.75	0.75
Welder/Generator, portable	100	3	0.3	0.3	0.27	0.27
Total:						53.34
Activity 46						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 47 - DHS Base Slab (Workfront S7)

From:	1-Apr-14	To:	31-Jul-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 47						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 48 - DHS Walls (1) (Workfront S7)

From:	1-Jul-14	To:	31-Oct-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 48						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 49 - DHS Columns (1) (Workfront S7)

From:	1-Jul-14	To:	31-Oct-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 49						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 50 - DHS Roof Slab (Workfront S7)

From:	1-Oct-14	To:	31-Dec-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 50						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 51 - Piles LDBP 26 nos (Workfront S8)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	60	8	3	3	72	43.2
Piling, Bored, Oscillator	50	8	3	3	72	36
Crane Crawler	30	16	4.5	14	1008	302.4
Excavator/Loader, Wheel/Tracked	30	8	3.2	8	204.8	61.44
Lorry	50	8	2.4	10	192	96
Concrete Lorry Mixer	20	16	2.4	10	384	76.8
Bar Bender and Cutter	50	8	1.5	1.5	18	9
Air Compressor	50	8	2.2	5	88	44
Dump Truck	30	8	2.4	10	192	57.6
Total:						726.440
Activity 51						Percentage of Usage Area to Works Area: 1.1%
						Percentage of Yearly Usage: 0.1%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 52 - Piles LDBP 27 nos (Workfront S9)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	60	8	3	3	72	43.2
Piling, Bored, Oscillator	50	8	3	3	72	36
Crane Crawler	30	16	4.5	14	1008	302.4
Excavator/Loader, Wheel/Tracked	30	8	3.2	8	204.8	61.44
Lorry	50	8	2.4	10	192	96
Concrete Lorry Mixer	20	16	2.4	10	384	76.8
Bar Bender and Cutter	50	8	1.5	1.5	18	9
Air Compressor	50	8	2.2	5	88	44
Dump Truck	30	8	2.4	10	192	57.6
Total:						726.440
Activity 52						Percentage of Usage Area to Works Area: 1.1%
						Percentage of Yearly Usage: 0.1%

Activity 53 - Formation of Construction Access (1) (Workfront S9)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker (Pneumatic)	20	1	0.5	1	0.5	0.100
Dump Truck	50	2	2.4	10	48	24
Poker, Vibratory, Hand Held	30	2	0.5	1.2	1.2	0.36
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Lorry	50	1	2.4	10	24	12
Total:						61.740
Activity 53						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 54 - DHS - Excavate to -2 (Workfront S9)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	40	4	3.2	8	102.4	40.96
Dump Truck	30	4	2.4	10	96	28.8
Water Pump	100	4	0.5	0.5	1	1
Welder/Generator, portable	100	4	0.3	0.3	0.36	0.36
Total:						71.12
Activity 54						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 55 - DHS Base Slab (Workfront S9)

From:	1-Mar-14	To:	30-Jun-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 55						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 56 - DHS Walls (1) (Workfront S9)

From:	1-Jun-14	To:	31-Aug-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 56						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 57 - DHS Columns (1) (Workfront S9)

From:	1-Jun-14	To:	31-Aug-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 57						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 58 - DHS Roof Slab (Workfront S9)

From:	1-Aug-14	To:	31-Oct-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 58						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 59 - DHS - Excavate to -2 (Workfront S10)

From:	1-Jan-14	To:	30-Apr-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	40	3	3.2	8	76.8	30.72
Dump Truck	30	3	2.4	10	72	21.6
Water Pump	100	3	0.5	0.5	0.75	0.75
Welder/Generator, portable	100	3	0.3	0.3	0.27	0.27
Total:						53.34
Activity 59						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 60 - DHS Base Slab (Workfront S10)

From:	1-Apr-14	To:	30-Jun-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 60						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 61 - DHS Walls (Workfront S10)

From:	1-Jun-14	To:	31-Aug-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 61						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 62 - DHS Columns (to Mezz) (Workfront S10)

From:	1-Jun-14	To:	31-Jul-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 62						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 63 - DHS Mezz. Slab (Workfront S10)

From:	1-Aug-14	To:	30-Nov-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	50	1	4.5	14	63	31.5
Total:						66.700
Activity 63						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 64 - DHS Internal Structures - Track Level (Workfront S10)

From:	1-Nov-14	To:	30-Dec-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	50	1	4.5	14	63	31.5	
Total:						66.700	
Activity 64						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 65 - DHS Columns (to Roof) (Workfront S10)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	50	1	4.5	14	63	31.5	
Total:						66.700	
Activity 65						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 66 - DHS Roof Slab (Workfront S10)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	50	1	4.5	14	63	31.5	
Total:						66.700	
Activity 66						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 67 - LCR E/B Reinstatement (Workfront S11)

From:	1-Sep-14	To:	31-Oct-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry	50	1	2.4	10	24	12	
Breaker (Pneumatic)	50	1	0.5	1	0.5	0.250	
Roller	20	1	1.4	4.5	6.3	1.26	
Dump Truck	20	1	2.4	10	24	4.8	
Crane Mobile	100	1	2.6	10	26	26	
Bulldozer	100	1	4.5	8.3	37.35	37.35	
Asphalt Paver	80	1	5	6.4	32	25.6	
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3	
Total:						113.560	
Activity 67						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 68 - LCR E/B to Original Traffic (Workfront S11)

From:	1-Oct-14	To:	31-Oct-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	50	1	2.4	10	24	12
Breaker (Pneumatic)	50	1	0.5	1	0.5	0.250
Roller	20	1	1.4	4.5	6.3	1.26
Dump Truck	20	1	2.4	10	24	4.8
Crane Mobile	100	1	2.6	10	26	26
Bulldozer	100	1	4.5	8.3	37.35	37.35
Asphalt Paver	80	1	5	6.4	32	25.6
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						113.560
Activity 68						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Activity 69 - LCR W/B Reinstatement (Workfront S11)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	50	1	2.4	10	24	12
Breaker (Pneumatic)	50	1	0.5	1	0.5	0.250
Roller	20	1	1.4	4.5	6.3	1.26
Dump Truck	20	1	2.4	10	24	4.8
Crane Mobile	100	1	2.6	10	26	26
Bulldozer	100	1	4.5	8.3	37.35	37.35
Asphalt Paver	80	1	5	6.4	32	25.6
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						113.560
Activity 69						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Activity 70 - Interchange Adit - Excavation (Part 2) (Workfront S12)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.82
Activity 70						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 71 - Adit D1 - ELS (Part 2) (Workfront S12)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						46.6
Activity 71						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 72 - Adit D1 - Excavation (Part 2) (Workfront S12)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.82
Activity 72						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 73 - Interchange Adit - Structure (Part 2) (Workfront S12)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 73						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 74 - Interchange Adit - Backfill (Part 2) (Workfront S11)

From:	1-Mar-14	To:	31-Mar-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bulldozer	100	1	4.5	8.3	37.35	37.35
Roller, Vibratory	60	1	1.4	4.5	6.3	3.78
Lorry	80	1	2.4	10	24	19.2
Crane Mobile	100	1	2.6	10	26	26
Total:						86.330
Activity 74						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 75 - Adit D1 - Structures (Part 2) (Workfront S12)

From:	1-Mar-14	To:	31-May-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	30	1	2.4	10	24	7.2
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	60	1	4.5	14	63	37.8
Total:						73.000
Activity 75						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 76 - Interchange Adit - ELS (Part 3) (Workfront S12)

From:	1-Mar-14	To:	31-May-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	80	1	2.6	10	26	20.8
Lorry	50	1	2.4	10	24	12
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						46.6
Activity 76						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 77 - Interchange Adit - Excavation (Part 3) (Workfront S12)

From:	1-May-14	To:	31-Jul-14	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48
Dump Truck	50	1	2.4	10	24	12
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						32.82
Activity 77						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 78 - Interchange Adit - Structure (Part 3) (Workfront S12)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	2	0.5	1.2	1.2	0.24	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	30	1	2.4	10	24	7.2	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	60	1	4.5	14	63	37.8	
					Total:	73.000	
Activity 78						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 79 - Construction of Retrieval Shaft at DIH Interchange/Adit (Workfront S12)

From:	1-Jun-14	To:	30-Jun-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Crane Mobile	10	1	2.6	10	26	2.6	
					Total:	2.600	
Activity 79						Percentage of Usage Area to Works Area:	0.0%
						Percentage of Yearly Usage:	0.0%

Activity 80 - Construction of Retrieval Shaft at DIH Interchange/Adit (Workfront S12)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Crane Mobile	10	1	2.6	10	26	2.6	
					Total:	2.600	
Activity 80						Percentage of Usage Area to Works Area:	0.0%
						Percentage of Yearly Usage:	0.0%

Activity 81 - Permanent Underground Structures (Workfront S14)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry, with Crane/Grab	50	1	2.4	10	24	12	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36	
Concrete Lorry Mixer	20	1	2.4	10	24	4.8	
Concrete Pump Lorry	20	1	2.4	10	24	4.8	
					Total:	74.745	
Activity 81						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.1%

Activity 82 - Stage 1 Structure Roof (Bay 1) (Workfront S15)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry, with Crane/Grab	50	1	2.4	10	24	12	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36	
Concrete Lorry Mixer	20	1	2.4	10	24	4.8	
Concrete Pump Lorry	20	1	2.4	10	24	4.8	
					Total:	74.745	
Activity 82						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 83 - Stage 1 Structure Base (Bay 3) (Workfront S15)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 83						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 84 - Stage 1 Structure Wall (Bay 2) (Workfront S15)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 84						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 85 - Stage 1 Structure Roof (Bay 2) (Workfront S15)

From:	1-Feb-14	To:	28-Feb-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 85						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 86 - Stage 1 Structure Walls (Bay 3) (Workfront S15)

From:	1-Feb-14	To:	28-Feb-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 86						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 87 - Stage 1 Structure Roof (Bay 3) (Workfront S15)

From:	1-Mar-14	To:	31-Mar-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry, with Crane/Grab	50	1	2.4	10	24	12	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36	
Concrete Lorry Mixer	20	1	2.4	10	24	4.8	
Concrete Pump Lorry	20	1	2.4	10	24	4.8	
Total:						74.745	
Activity 87						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 88 - Stage 1 Waterproof & Backfill (Workfront S15)

From:	1-Mar-14	To:	31-May-14	Duration:	3	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bulldozer	100	1	4.5	8.3	37.35	37.35	
Roller	20	1	1.4	4.5	6.3	1.26	
Dump Truck with Grab	20	1	2.4	10	24	4.8	
Dump Truck	20	1	2.4	10	24	4.8	
Lorry, with Crane/Grab	100	1	2.6	10	26	26	
Total:						74.210	
Activity 88						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 89 - Stage 1 Reinstatement (Workfront S15)

From:	1-Apr-14	To:	31-May-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bulldozer	100	1	4.5	8.3	37.35	37.35	
Roller	20	1	1.4	4.5	6.3	1.26	
Dump Truck with Grab	20	1	2.4	10	24	4.8	
Dump Truck	20	1	2.4	10	24	4.8	
Lorry, with Crane/Grab	100	1	2.6	10	26	26	
Total:						74.210	
Activity 89						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

Activity 90 - Stage 2 Traffic Diversions (Workfront S18)

From:	1-Jun-14	To:	30-Jun-14	Duration:	1	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bulldozer	100	1	4.5	8.3	37.35	37.35	
Roller	20	1	1.4	4.5	6.3	1.26	
Excavator/Loader, Wheel/Tracked	80	1	3.2	8	25.6	20.48	
Lorry, with Crane/Grab	20	1	2.6	10	26	5.2	
Dump Truck with Grab	20	1	2.4	10	24	4.8	
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3	
Total:						75.390	
Activity 90						Percentage of Usage Area to Works Area:	0.1%
						Percentage of Yearly Usage:	0.0%

**Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 91 - Stage 2 Pipe Piles King Posts & Grout (Workfront S18)

From:	1-Jul-14	To:	30-Sep-14	Duration:	3	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry	70	1	2.6	10	26	18.2	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Breaker, Hand Held	20	1	0.5	1	0.5	0.1	
Concrete Lorry Mixer	80	1	2.4	10	24	19.2	
Dump Truck with Grab	20	1	2.4	10	24	4.8	
Poker, Vibratory, Hand Held	30	2	0.5	1.2	1.2	0.36	
Piling Rig & Drilling Rig	50	1	2.3	6	13.8	6.9	
Lorry, Crane/Grab	50	1	2.6	10	26	13	
Grout Mixer	20	1	1.2	0.8	0.96	0.192	
Grout Pump	20	1	1.7	0.9	1.53	0.306	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Air Compressor	100	1	2.2	5	11	11	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8	
Lorry	20	1	2.6	10	26	5.2	
Crane Mobile	80	1	2.6	10	26	20.8	
Total:						115.073	
Activity 91	Percentage of Usage Area to Works Area:					0.2%	
	Percentage of Yearly Usage:					0.0%	

Activity 92 - Jet & Permeation Grout (Workfront S18)

From:	1-Aug-14	To:	30-Sep-14	Duration:	2	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry	70	1	2.6	10	26	18.2	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Breaker, Hand Held	20	1	0.5	1	0.5	0.1	
Concrete Lorry Mixer	80	1	2.4	10	24	19.2	
Poker, Vibratory, Hand Held	30	2	0.5	1.2	1.2	0.36	
Piling Rig & Drilling Rig	50	1	2.3	6	13.8	6.9	
Lorry, Crane/Grab	50	1	2.6	10	26	13	
Grout Mixer	20	1	1.2	0.8	0.96	0.192	
Grout Pump	20	1	1.7	0.9	1.53	0.306	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Air Compressor	100	1	2.2	5	11	11	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8	
Lorry	20	1	2.6	10	26	5.2	
Crane Mobile	80	1	2.6	10	26	20.8	
Total:						110.273	
Activity 92	Percentage of Usage Area to Works Area:					0.2%	
	Percentage of Yearly Usage:					0.0%	

Combined Percentage for Activities	2.224% <6%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²

(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459 & 460 in air quality assessment)

Activity 1 - Crosswall (36m) 5th Stage (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Diaphragm Wall, Hydraulic Extractor	100	1	4.5	8	36	36.000
Diaphragm Wall Bentonite Filtering Plant	100	1	2.9	3.6	10.44	10.44
Concrete Lorry Mixer	100	1	2.4	10	24	24
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Crane Mobile	100	1	2.6	10	26	26
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Water Pump	100	1	0.5	0.5	0.25	0.25
					Total:	150.140
Activity 1						Percentage of Usage Area to Works Area: 0.2%

Activity 2 - Install ELS & Struts (West End) (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	63.8
Activity 2						Percentage of Usage Area to Works Area: 0.1%

Activity 3 - Install Pipe Pile Walls (West End) (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry	100	1	2.4	10	24	24
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
					Total:	88.05
Activity 3						Percentage of Usage Area to Works Area: 0.1%

Activity 4 - Install ELS near Adit D1 (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	63.8
Activity 4						Percentage of Usage Area to Works Area: 0.1%

Activity 5 - Excavation (West End to +6m) (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
					Total:	49.94
Activity 5						Percentage of Usage Area to Works Area: 0.1%

Activity 6 - Entrance (A2) - Construct Bulk Head Wall (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.13
Activity 6						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 7 - Entrance (A2) - Construct Partial Floor Slab & Staircase (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.13
Activity 7						Percentage of Usage Area to Works Area: 0.2%

Activity 8 - Excavate to -20.8 (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
					Total:	49.94
Activity 8						Percentage of Usage Area to Works Area: 0.1%

Activity 9 - Entrance (A2) - Install ELS (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	63.800
Activity 9						Percentage of Usage Area to Works Area: 0.1%

Activity 10 - Entrance (A2) - Demolish Subway & Install Struts (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Hand Held Breaker	100	1	0.5	1	0.5	0.5
Dump Truck	100	2	2.4	10	48	48
Saw, Chain, Hand-held	100	1	0.3	1	0.3	0.3
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	113.100
Activity 10						Percentage of Usage Area to Works Area: 0.2%

Activity 11 - Entrance (A2) - Excavation (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
					Total:	49.940
Activity 11						Percentage of Usage Area to Works Area: 0.1%

Activity 12 - Entrance (A2) - Structure (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 12						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 13 - Remaining TBM W Grout Block (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Grout Mixer	100	1	1.2	0.8	0.96	0.96
Grout Pump	100	1	1.7	0.9	1.53	1.53
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Crane Mobile	100	1	2.6	10	26	26
Dump Truck	100	1	2.4	10	24	24
Total:					66.380	
Activity 13						Percentage of Usage Area to Works Area: 0.1%

Activity 14 - DIH - Base Slab (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:					117.130	
Activity 14						Percentage of Usage Area to Works Area: 0.2%

Activity 15 - Excavate to -20.8 (Workfront S2)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:					99.88	
Activity 15						Percentage of Usage Area to Works Area: 0.2%

Activity 16 - DIH - Base Slab (Workfront S2)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:					117.130	
Activity 16						Percentage of Usage Area to Works Area: 0.2%

Activity 17 - Excavate to -11.4 (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:					99.88	
Activity 17						Percentage of Usage Area to Works Area: 0.2%

Activity 18 - Excavate to -20.8 (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Dump Truck	100	2	2.4	10	48	48
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18
Total:					99.88	
Activity 18						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 19 - DIH - Base Slab (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 19						Percentage of Usage Area to Works Area: 0.2%

Activity 20 - DIH - Mezz. Slab (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 20						Percentage of Usage Area to Works Area: 0.2%

Activity 21 - DIH - Columns (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 21						Percentage of Usage Area to Works Area: 0.2%

Activity 22 - DIH - Conc. Slab (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 22						Percentage of Usage Area to Works Area: 0.2%

Activity 23 - Internal Structures - Platform Level (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 23						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 24 - Roof Slab (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 24					Percentage of Usage Area to Works Area:		0.2%

Activity 25 - Internal Structures - Mezz. Level (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 25					Percentage of Usage Area to Works Area:		0.2%

Activity 26 - Excavate to -20.8 (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6	
Dump Truck	100	1	2.4	10	24	24	
Water Pump	100	1	0.5	0.5	0.25	0.25	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Total:						49.94	
Activity 26					Percentage of Usage Area to Works Area:		0.1%

Activity 27 - Base Slab (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 27					Percentage of Usage Area to Works Area:		0.2%

Activity 28 - Mezz. Slab (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 28					Percentage of Usage Area to Works Area:		0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 29 - Columns (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 29						Percentage of Usage Area to Works Area: 0.2%

Activity 30 - Conc. Slab (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 30						Percentage of Usage Area to Works Area: 0.2%

Activity 31 - Internal Structures - Platform Level (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 31						Percentage of Usage Area to Works Area: 0.2%

Activity 32 - DIA - Roof Slab (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 32						Percentage of Usage Area to Works Area: 0.2%

Activity 33 - Internal Structures - Mezz. Level (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 33						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 34 - Internal Structures - Conc. Level (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 33						Percentage of Usage Area to Works Area: 0.2%

Activity 34 - DIH - Base Slab (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 34						Percentage of Usage Area to Works Area: 0.2%

Activity 35 - DIH - Conc. Slab (with hole) (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 35						Percentage of Usage Area to Works Area: 0.2%

Activity 36 - DIH - Columns (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 36						Percentage of Usage Area to Works Area: 0.2%

Activity 37 - DIH - Roof Slab (with hole) (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 37						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 38 - DHS Base Slab (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 38						Percentage of Usage Area to Works Area: 0.2%

Activity 39 - DHS Columns (to Mezz.) (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 39						Percentage of Usage Area to Works Area: 0.2%

Activity 40 - DHS Walls (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 40						Percentage of Usage Area to Works Area: 0.2%

Activity 41 - DHS Mezz Slab (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 41						Percentage of Usage Area to Works Area: 0.2%

Activity 42 - DHS Internal Structures - Track Level (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 42						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 43 - DHS Columns (to Roof) (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 43						Percentage of Usage Area to Works Area: 0.2%

Activity 44 - DHS Roof Slab (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 44						Percentage of Usage Area to Works Area: 0.2%

Activity 45 - DHS Vent Shafts etc (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 45						Percentage of Usage Area to Works Area: 0.2%

Activity 46 - DHS - Excavate to -1 (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	3	3.2	8	76.8	76.8
Dump Truck	100	3	2.4	10	72	72
Water Pump	100	3	0.5	0.5	0.75	0.75
Welder/Generator, portable	100	3	0.3	0.3	0.27	0.27
Total:						149.82
Activity 46						Percentage of Usage Area to Works Area: 0.2%

Activity 47 - DHS Base Slab (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 47						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 48 - DHS Walls (1) (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 48						Percentage of Usage Area to Works Area: 0.2%

Activity 49 - DHS Columns (1) (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 49						Percentage of Usage Area to Works Area: 0.2%

Activity 50 - DHS Roof Slab (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 50						Percentage of Usage Area to Works Area: 0.2%

Activity 51 - Piles LDBP 26 nos (Workfront S8)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	8	3	3	72	72
Piling, Bored, Oscillator	100	8	3	3	72	72
Crane Crawler	100	16	4.5	14	1008	1008
Excavator/Loader, Wheel/Tracked	100	8	3.2	8	204.8	204.8
Lorry	100	8	2.4	10	192	192
Concrete Lorry Mixer	100	16	2.4	10	384	384
Bar Bender and Cutter	100	8	1.5	1.5	18	18
Air Compressor	100	8	2.2	5	88	88
Dump Truck	100	8	2.4	10	192	192
					Total:	2230.800
Activity 51						Percentage of Usage Area to Works Area: 3.4%

Activity 52 - Piles LDBP 27 nos (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling, Bored, Grab & Chisel	100	8	3	3	72	72
Piling, Bored, Oscillator	100	8	3	3	72	72
Crane Crawler	100	16	4.5	14	1008	1008
Excavator/Loader, Wheel/Tracked	100	8	3.2	8	204.8	204.8
Lorry	100	8	2.4	10	192	192
Concrete Lorry Mixer	100	16	2.4	10	384	384
Bar Bender and Cutter	100	8	1.5	1.5	18	18
Air Compressor	100	8	2.2	5	88	88
Dump Truck	100	8	2.4	10	192	192
					Total:	2230.800
Activity 52						Percentage of Usage Area to Works Area: 3.4%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 53 - Formation of Construction Access (1) (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Dump Truck	100	2	2.4	10	48	48
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Concrete Lorry Mixer	100	1	2.4	10	24	24
Lorry	100	1	2.4	10	24	24
Total:						123.300
Activity 53						Percentage of Usage Area to Works Area: 0.2%

Activity 54 - DHS - Excavate to -2 (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	4	3.2	8	102.4	102.4
Dump Truck	100	4	2.4	10	96	96
Water Pump	100	4	0.5	0.5	1	1
Welder/Generator, portable	100	4	0.3	0.3	0.36	0.36
Total:						199.76
Activity 54						Percentage of Usage Area to Works Area: 0.3%

Activity 55 - DHS Base Slab (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 55						Percentage of Usage Area to Works Area: 0.2%

Activity 56 - DHS Walls (1) (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 56						Percentage of Usage Area to Works Area: 0.2%

Activity 57 - DHS Columns (1) (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 57						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 58 - DHS Roof Slab (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 58					Percentage of Usage Area to Works Area:		0.2%

Activity 59 - DHS - Excavate to -2 (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Excavator/Loader, Wheel/Tracked	100	3	3.2	8	76.8	76.8	
Dump Truck	100	3	2.4	10	72	72	
Water Pump	100	3	0.5	0.5	0.75	0.75	
Welder/Generator, portable	100	3	0.3	0.3	0.27	0.27	
Total:						149.82	
Activity 59					Percentage of Usage Area to Works Area:		0.2%

Activity 60 - DHS Base Slab (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 60					Percentage of Usage Area to Works Area:		0.2%

Activity 61 - DHS Walls (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 61					Percentage of Usage Area to Works Area:		0.2%

Activity 62 - DHS Columns (to Mezz) (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Water Pump	100	2	0.5	0.5	0.5	0.5	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Tower Crane	100	1	4.5	14	63	63	
Total:						117.130	
Activity 62					Percentage of Usage Area to Works Area:		0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 63 - DHS Mezz. Slab (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 63					Percentage of Usage Area to Works Area: 0.2%	

Activity 64 - DHS Internal Structures - Track Level (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 64					Percentage of Usage Area to Works Area: 0.2%	

Activity 65 - DHS Columns (to Roof) (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 65					Percentage of Usage Area to Works Area: 0.2%	

Activity 66 - DHS Roof Slab (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 66					Percentage of Usage Area to Works Area: 0.2%	

Activity 67 - LCR E/B Reinstatement (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	100	1	2.4	10	24	24
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Roller	100	1	1.4	4.5	6.3	6.3
Dump Truck	100	1	2.4	10	24	24
Crane Mobile	100	1	2.6	10	26	26
Bulldozer	100	1	4.5	8.3	37.35	37.35
Asphalt Paver	100	1	5	6.4	32	32
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						156.450
Activity 67					Percentage of Usage Area to Works Area: 0.2%	

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 68 - LCR E/B to Original Traffic (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	100	1	2.4	10	24	24
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Roller	100	1	1.4	4.5	6.3	6.3
Dump Truck	100	1	2.4	10	24	24
Crane Mobile	100	1	2.6	10	26	26
Bulldozer	100	1	4.5	8.3	37.35	37.35
Asphalt Paver	100	1	5	6.4	32	32
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						156.450
Activity 68						Percentage of Usage Area to Works Area: 0.2%

Activity 69 - LCR W/B Reinstatement (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	100	1	2.4	10	24	24
Breaker (Pneumatic)	100	1	0.5	1	0.5	0.500
Roller	100	1	1.4	4.5	6.3	6.3
Dump Truck	100	1	2.4	10	24	24
Crane Mobile	100	1	2.6	10	26	26
Bulldozer	100	1	4.5	8.3	37.35	37.35
Asphalt Paver	100	1	5	6.4	32	32
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						156.450
Activity 69						Percentage of Usage Area to Works Area: 0.2%

Activity 70 - Interchange Adit - Excavation (Part 2) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						49.94
Activity 70						Percentage of Usage Area to Works Area: 0.1%

Activity 71 - Adit D1 - ELS (Part 2) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Total:						63.8
Activity 71						Percentage of Usage Area to Works Area: 0.1%

Activity 72 - Adit D1 - Excavation (Part 2) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Total:						49.94
Activity 72						Percentage of Usage Area to Works Area: 0.1%

Activity 73 - Interchange Adit - Structure (Part 2) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
Total:						117.130
Activity 73						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 74 - Interchange Adit - Backfill (Part 2) (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bulldozer	100	1	4.5	8.3	37.35	37.35
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Lorry	100	1	2.4	10	24	24
Crane Mobile	100	1	2.6	10	26	26
					Total:	93.650
Activity 74						Percentage of Usage Area to Works Area: 0.1%

Activity 75 - Adit D1 - Structures (Part 2) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 75						Percentage of Usage Area to Works Area: 0.2%

Activity 76 - Interchange Adit - ELS (Part 3) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
Lorry	100	1	2.4	10	24	24
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
					Total:	63.8
Activity 76						Percentage of Usage Area to Works Area: 0.1%

Activity 77 - Interchange Adit - Excavation (Part 3) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Dump Truck	100	1	2.4	10	24	24
Water Pump	100	1	0.5	0.5	0.25	0.25
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
					Total:	49.94
Activity 77						Percentage of Usage Area to Works Area: 0.1%

Activity 78 - Interchange Adit - Structure (Part 3) (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Concrete Lorry Mixer	100	1	2.4	10	24	24
Water Pump	100	2	0.5	0.5	0.5	0.5
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Tower Crane	100	1	4.5	14	63	63
					Total:	117.130
Activity 78						Percentage of Usage Area to Works Area: 0.2%

Activity 79 - Construction of Retrieval Shaft at DIH Interchange/Adit (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
					Total:	26.000
Activity 79						Percentage of Usage Area to Works Area: 0.0%

Activity 80 - Construction of Retrieval Shaft at DIH Interchange/Adit (Workfront S12)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Crane Mobile	100	1	2.6	10	26	26
					Total:	26.000
Activity 80						Percentage of Usage Area to Works Area: 0.0%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 81 - Permanent Underground Structures (Workfront S14)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 81						Percentage of Usage Area to Works Area: 0.2%

Activity 82 - Stage 1 Structure Roof (Bay 1) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 82						Percentage of Usage Area to Works Area: 0.2%

Activity 83 - Stage 1 Structure Base (Bay 3) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 83						Percentage of Usage Area to Works Area: 0.2%

Activity 84 - Stage 1 Structure Wall (Bay 2) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 84						Percentage of Usage Area to Works Area: 0.2%

Activity 85 - Stage 1 Structure Roof (Bay 2) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 85						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 86 - Stage 1 Structure Walls (Bay 3) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 86					Percentage of Usage Area to Works Area: 0.2%	

Activity 87 - Stage 1 Structure Roof (Bay 3) (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 87					Percentage of Usage Area to Works Area: 0.2%	

Activity 88 - Waterproof & Backfill (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bulldozer	100	1	4.5	8.3	37.35	37.35
Roller	100	1	1.4	4.5	6.3	6.3
Dump Truck with Grab	100	1	2.4	10	24	24
Dump Truck	100	1	2.4	10	24	24
Lorry, with Crane/Grab	100	1	2.6	10	26	26
Total:						117.650
Activity 88					Percentage of Usage Area to Works Area: 0.2%	

Activity 89 - Stage 1 Reinstatement (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bulldozer	100	1	4.5	8.3	37.35	37.35
Roller	100	1	1.4	4.5	6.3	6.3
Dump Truck with Grab	100	1	2.4	10	24	24
Dump Truck	100	1	2.4	10	24	24
Lorry, with Crane/Grab	100	1	2.6	10	26	26
Total:						117.650
Activity 89					Percentage of Usage Area to Works Area: 0.2%	

Activity 90 - Stage 2 Traffic Diversions (Workfront S18)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bulldozer	100	1	4.5	8.3	37.35	37.35
Roller	100	1	1.4	4.5	6.3	6.3
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Lorry, with Crane/Grab	100	1	2.6	10	26	26
Dump Truck with Grab	100	1	2.4	10	24	24
Roller, Vibratory	100	1	1.4	4.5	6.3	6.3
Total:						125.550
Activity 90					Percentage of Usage Area to Works Area: 0.2%	

**Shatin to Central Link - East West Line
Diamond Hill Station & Stabling Sidings - Active Construction Area Estimate**

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 66165 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, S15, S16, S18, S19, S20, S21 & S22 in noise assessment or 436, 450,

Activity 91 - Stage 2 Pipe Piles King Posts & Grout (Workfront S18)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	100	1	2.6	10	26	26
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Breaker, Hand Held	100	1	0.5	1	0.5	0.5
Concrete Lorry Mixer	100	1	2.4	10	24	24
Dump Truck with Grab	100	1	2.4	10	24	24
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry, Crane/Grab	100	1	2.6	10	26	26
Grout Mixer	100	1	1.2	0.8	0.96	0.96
Grout Pump	100	1	1.7	0.9	1.53	1.53
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Air Compressor	100	1	2.2	5	11	11
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry	100	1	2.6	10	26	26
Crane Mobile	100	1	2.6	10	26	26
Total:						197.130
Activity 91						Percentage of Usage Area to Works Area: 0.3%

Activity 92 - Jet & Permeation Grout (Workfront S18)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry	100	1	2.6	10	26	26
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Breaker, Hand Held	100	1	0.5	1	0.5	0.5
Concrete Lorry Mixer	100	1	2.4	10	24	24
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry, Crane/Grab	100	1	2.6	10	26	26
Grout Mixer	100	1	1.2	0.8	0.96	0.96
Grout Pump	100	1	1.7	0.9	1.53	1.53
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Air Compressor	100	1	2.2	5	11	11
Piling Rig & Drilling Rig	100	1	2.3	6	13.8	13.8
Lorry	100	1	2.6	10	26	26
Crane Mobile	100	1	2.6	10	26	26
Total:						173.130
Activity 92						Percentage of Usage Area to Works Area: 0.3%

Combined Percentage for Activities	22.162% <30%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Kai Tak Station and Prince Edward Road East to Kai Tak Station Tunnel - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 76337 m²
(total area of workfronts S1, S3 & S4 in noise assessment or 503, 504, 505, 506, 507, 508, 509 & 510 in air quality assessment)

Activity 1 - Station Structure Construction (Workfront S1)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	6	0.5	1.2	3.6	0.72
Air Compressor	100	6	2.2	5	66	66
Concrete Lorry Mixer	20	6	2.4	10	144	28.8
Concrete Pump	20	6	2	3	36	7.2
Crane Mobile	20	2	2.6	10	52	10.4
Total:						113.12
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

Activity 2 - Backfilling & Compaction (Workfront S1)

From:	1-Apr-14	To:	31-Dec-14	Duration:	9	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	50	6	3.2	8	153.6	76.8
Dump Truck	50	6	2.4	10	144	72
Roller	70	6	1.4	4.5	37.8	26.46
Bulldozer	70	6	4.5	8.3	224.1	156.87
Total:						332.13
Activity 2						Percentage of Usage Area to Works Area: 0.4%
						Percentage of Yearly Usage: 0.3%

Activity 3 - Sheeting & Lateral Support System (Workfront S1)

From:	1-Jul-14	To:	31-Dec-14	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Welder/Generator, portable	50	2	0.3	0.3	0.18	0.09
Crane Mobile	20	2	2.6	10	52	10.4
Dump Truck	10	2	2.4	10	48	4.8
Piling, Vibrating Hammer	80	2	4.5	8	72	57.6
Air Compressor	50	2	2.2	5	22	11
Total:						83.89
Activity 3						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

Activity 4 - Installation of Struts and Waling (Workfront S3)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Lorry, with Crane/Grab	20	1	2.4	10	24	4.8
Total:						55.2
Activity 4						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 5 - Tunnel Construction (Workfront S3)

From:	1-Feb-14	To:	31-Dec-14	Duration:	11	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 5						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

Activity 6 - Installation of Struts and Waling (Workfront S4)

From:	1-Jan-14	To:	31-Jan-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Lorry, with Crane/Grab	20	1	2.4	10	24	4.8
Total:						55.2
Activity 6						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line

Kai Tak Station and Prince Edward Road East to Kai Tak Station Tunnel - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 76337 m²
 (total area of workfronts S1, S3 & S4 in noise assessment or 503, 504, 505, 506, 507, 508, 509 & 510 in air quality assessment)

Activity 7 - Tunnel Construction (Workfront S4)

From:	1-Feb-14	To:	31-Dec-14	Duration:	11	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	50	1	2.4	10	24	12
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	50	2	1.5	1.5	4.5	2.25
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Concrete Lorry Mixer	20	1	2.4	10	24	4.8
Concrete Pump Lorry	20	1	2.4	10	24	4.8
Total:						74.745
Activity 7	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.1%
Combined Percentage for Activities						0.721% <6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line

Kai Tak Station and Prince Edward Road East to Kai Tak Station Tunnel - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 76337 m²
 (total area of workfronts S1, S3 & S4 in noise assessment or 503, 504, 505, 506, 507, 508, 509 & 510 in air quality assessment)

Activity 1 - Station Structure Construction (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Poker, Vibratory, Hand Held	100	6	0.5	1.2	3.6	3.6	
Air Compressor	100	6	2.2	5	66	66	
Concrete Lorry Mixer	100	6	2.4	10	144	144	
Concrete Pump	100	6	2	3	36	36	
Crane Mobile	100	2	2.6	10	52	52	
Total:						301.6	
Activity 1					Percentage of Usage Area to Works Area:		0.4%

Activity 2 - Backfilling & Compaction (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Mini Backhoe	100	6	3.2	8	153.6	153.6	
Dump Truck	100	6	2.4	10	144	144	
Roller	100	6	1.4	4.5	37.8	37.8	
Bulldozer	100	6	4.5	8.3	224.1	224.1	
Total:						559.5	
Activity 2					Percentage of Usage Area to Works Area:		0.7%

Activity 3 - Sheeting & Lateral Support System (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Welder/Generator, portable	100	2	0.3	0.3	0.18	0.18	
Crane Mobile	100	2	2.6	10	52	52	
Dump Truck	100	2	2.4	10	48	48	
Piling, Vibrating Hammer	100	2	4.5	8	72	72	
Air Compressor	100	2	2.2	5	22	22	
Total:						194.18	
Activity 3					Percentage of Usage Area to Works Area:		0.3%

Activity 4 - Installation of Struts and Waling (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hydraulic Crawler Crane	100	1	4.5	14	63	63	
Lorry, with Crane/Grab	100	1	2.4	10	24	24	
Total:						87	
Activity 4					Percentage of Usage Area to Works Area:		0.1%

Activity 5 - Tunnel Construction (Workfront S3)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Lorry, with Crane/Grab	100	1	2.4	10	24	24	
Hydraulic Crawler Crane	100	1	4.5	14	63	63	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5	
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8	
Concrete Lorry Mixer	100	1	2.4	10	24	24	
Concrete Pump Lorry	100	1	2.4	10	24	24	
Total:						141.48	
Activity 5					Percentage of Usage Area to Works Area:		0.2%

Activity 6 - Installation of Struts and Waling (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hydraulic Crawler Crane	100	1	4.5	14	63	63	
Lorry, with Crane/Grab	100	1	2.4	10	24	24	
Total:						87	
Activity 6					Percentage of Usage Area to Works Area:		0.1%

Activity 7 - Tunnel Construction (Workfront S4)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Lorry, with Crane/Grab	100	1	2.4	10	24	24
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	2	1.5	1.5	4.5	4.5
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Concrete Lorry Mixer	100	1	2.4	10	24	24

Shatin to Central Link - East West Line

Kai Tak Station and Prince Edward Road East to Kai Tak Station Tunnel - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 76337 m²
 (total area of workfronts S1, S3 & S4 in noise assessment or 503, 504, 505, 506, 507, 508, 509 & 510 in air quality assessment)

Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						141.48
Activity 7	Percentage of Usage Area to Works Area:					0.2%
Combined Percentage for Activities						1.981%

<30%, OK

Note:

1. All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
2. Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
3. The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
4. The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
5. "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
6. Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Kai Tak Station to To Kwa Wan Station Tunnel - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 70634 m²
(total area of workfronts S5, S6, S7, S14, S15 & S16 in noise assessment or 512, 513, 514, 515, 516, 517, 518 & 520)

Activity 1 - Construct Tunnel (Workfront S5)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4
Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.56
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 2 - Backfilling & Compaction (Workfront S5)

From:	1-Jan-14	To:	30-Jun-14	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	50	4	3.2	8	102.4	51.2
Dump Truck	50	4	2.4	10	96	48
Roller	70	4	1.4	4.5	25.2	17.64
Bulldozer	70	4	4.5	8.3	149.4	104.58
Total:						221.42
Activity 2						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.2%

Activity 3 - Canopy Pipe Pile Construction (Workfront S6)

From:	1-Jan-14	To:	31-Aug-14	Duration:	8	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	50	4	2.3	6	55.2	27.600
Mini Backhoe	50	4	3.2	8	102.4	51.200
Breaker (Pneumatic)	50	2	0.5	1	1	0.5
Dump Truck	20	4	2.4	10	96	19.2
Piling, Vibrating Hammer	50	2	4.5	8	72	36
Air Compressor	50	2	2.2	5	22	11
Concrete Lorry Mixer	50	2	2.4	10	48	24
Welder/Generator, portable	50	4	0.3	0.3	0.36	0.18
Total:						169.680
Activity 3						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.2%

Activity 4 - Construct Tunnel (Workfront S6)

From:	1-Sep-14	To:	31-Dec-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4
Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.560
Activity 4						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 5 - Bulk Excavation & Dewatering (Workfront S7)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	6	3.2	8	153.6	153.600
Dump Truck	50	4	2.4	10	96	48
Water Pump	100	100	0.5	0.5	25	25
Crane Mobile	30	2	2.6	10	52	15.6
Total:						242.200
Activity 5						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.3%

Activity 6 - Construct Tunnel (Workfront S7)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4

Shatin to Central Link - East West Line
Kai Tak Station to To Kwa Wan Station Tunnel - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 70634 m²
(total area of workfronts S5, S6, S7, S14, S15 & S16 in noise assessment or 512, 513, 514, 515, 516, 517, 518 & 520)

Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.560
Activity 6	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.1%

Activity 7 - Construct Tunnel (Workfront S14)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4
Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.56
Activity 7	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.0%

Activity 8 - Backfilling & Compaction (Workfront S14)

From:	1-Jan-14	To:	30-Jun-14	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	50	4	3.2	8	102.4	51.2
Dump Truck	50	4	2.4	10	96	48
Roller	70	4	1.4	4.5	25.2	17.64
Bulldozer	70	4	4.5	8.3	149.4	104.58
Total:						221.42
Activity 8	Percentage of Usage Area to Works Area:					0.3%
	Percentage of Yearly Usage:					0.2%

Activity 9 - Canopy Pipe Pile Construction (Workfront S15)

From:	1-Jan-14	To:	31-Aug-14	Duration:	8	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	50	4	2.3	6	55.2	27.600
Mini Backhoe	50	4	3.2	8	102.4	51.200
Breaker (Pneumatic)	50	2	0.5	1	1	0.5
Dump Truck	20	4	2.4	10	96	19.2
Piling, Vibrating Hammer	50	2	4.5	8	72	36
Air Compressor	50	2	2.2	5	22	11
Concrete Lorry Mixer	50	2	2.4	10	48	24
Welder/Generator, portable	50	4	0.3	0.3	0.36	0.18
Total:						169.680
Activity 9	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.2%

Activity 10 - Construct Tunnel (Workfront S15)

From:	1-Sep-14	To:	31-Dec-14	Duration:	4	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4
Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.56
Activity 10	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.0%

Activity 11 - Bulk Excavation & Dewatering (Workfront S16)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	6	3.2	8	153.6	153.600
Dump Truck	50	4	2.4	10	96	48
Water Pump	100	100	0.5	0.5	25	25
Crane Mobile	30	2	2.6	10	52	15.6
Total:						242.200
Activity 11	Percentage of Usage Area to Works Area:					0.3%
	Percentage of Yearly Usage:					0.3%

Activity 12 - Construct Tunnel (Workfront S16)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	month
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**Shatin to Central Link - East West Line
Kai Tak Station to To Kwa Wan Station Tunnel - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 70634 m²
(total area of workfronts S5, S6, S7, S14, S15 & S16 in noise assessment or 512, 513, 514, 515, 516, 517, 518 & 520)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Poker, Vibratory, Hand Held	20	3	0.5	1.2	1.8	0.36
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	20	3	2.4	10	72	14.4
Concrete Pump	20	3	2	3	18	3.6
Crane Mobile	20	1	2.6	10	26	5.2
Total:						56.56
Activity 12	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.1%
Combined Percentage for Activities						1.565%
						<6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Kai Tak Station to To Kwa Wan Station Tunnel - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 70634 m²
(total area of workfronts S5, S6, S7, S14, S15 & S16 in noise assessment or 512, 513, 514, 515, 516, 517, 518 & 520)

Activity 1 - Construct Tunnel (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
Total:					150.8	
Activity 1						Percentage of Usage Area to Works Area: 0.2%

Activity 2 - Backfilling & Compaction (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	4	3.2	8	102.4	102.4
Dump Truck	100	4	2.4	10	96	96
Roller	100	4	1.4	4.5	25.2	25.2
Bulldozer	100	4	4.5	8.3	149.4	149.4
Total:					373	
Activity 2						Percentage of Usage Area to Works Area: 0.5%

Activity 3 - Canopy Pipe Pile Construction (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	4	2.3	6	55.2	55.200
Mini Backhoe	100	4	3.2	8	102.4	102.400
Breaker (Pneumatic)	100	2	0.5	1	1	1
Dump Truck	100	4	2.4	10	96	96
Piling, Vibrating Hammer	100	2	4.5	8	72	72
Air Compressor	100	2	2.2	5	22	22
Concrete Lorry Mixer	100	2	2.4	10	48	48
Welder/Generator, portable	100	4	0.3	0.3	0.36	0.36
Total:					396.960	
Activity 3						Percentage of Usage Area to Works Area: 0.6%

Activity 4 - Construct Tunnel (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
Total:					150.800	
Activity 4						Percentage of Usage Area to Works Area: 0.2%

Activity 5 - Bulk Excavation & Dewatering (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	6	3.2	8	153.6	153.600
Dump Truck	100	4	2.4	10	96	96
Water Pump	100	100	0.5	0.5	25	25
Crane Mobile	100	2	2.6	10	52	52
Total:					326.600	
Activity 5						Percentage of Usage Area to Works Area: 0.5%

Activity 6 - Construct Tunnel (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
Total:					150.800	
Activity 6						Percentage of Usage Area to Works Area: 0.2%

Activity 7 - Construct Tunnel (Workfront S14)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
Total:					150.8	
Activity 7						Percentage of Usage Area to Works Area: 0.2%

Shatin to Central Link - East West Line
Kai Tak Station to To Kwa Wan Station Tunnel - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 70634 m²
(total area of workfronts S5, S6, S7, S14, S15 & S16 in noise assessment or 512, 513, 514, 515, 516, 517, 518 & 520)

Activity 8 - Backfilling & Compaction (Workfront S14)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	4	3.2	8	102.4	102.4
Dump Truck	100	4	2.4	10	96	96
Roller	100	4	1.4	4.5	25.2	25.2
Bulldozer	100	4	4.5	8.3	149.4	149.4
					Total:	373
Activity 8						Percentage of Usage Area to Works Area: 0.5%

Activity 9 - Canopy Pipe Pile Construction (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Piling Rig & Drilling Rig	100	4	2.3	6	55.2	55.200
Mini Backhoe	100	4	3.2	8	102.4	102.400
Breaker (Pneumatic)	100	2	0.5	1	1	1
Dump Truck	100	4	2.4	10	96	96
Piling, Vibrating Hammer	100	2	4.5	8	72	72
Air Compressor	100	2	2.2	5	22	22
Concrete Lorry Mixer	100	2	2.4	10	48	48
Welder/Generator, portable	100	4	0.3	0.3	0.36	0.36
					Total:	396.960
Activity 9						Percentage of Usage Area to Works Area: 0.6%

Activity 10 - Construct Tunnel (Workfront S15)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
					Total:	150.8
Activity 10						Percentage of Usage Area to Works Area: 0.2%

Activity 11 - Bulk Excavation & Dewatering (Workfront S16)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mini Backhoe	100	6	3.2	8	153.6	153.600
Dump Truck	100	4	2.4	10	96	96
Water Pump	100	100	0.5	0.5	25	25
Crane Mobile	100	2	2.6	10	52	52
					Total:	326.600
Activity 11						Percentage of Usage Area to Works Area: 0.5%

Activity 12 - Construct Tunnel (Workfront S16)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Air Compressor	100	3	2.2	5	33	33
Concrete Lorry Mixer	100	3	2.4	10	72	72
Concrete Pump	100	3	2	3	18	18
Crane Mobile	100	1	2.6	10	26	26
					Total:	150.8
Activity 12						Percentage of Usage Area to Works Area: 0.2%

Combined Percentage for Activities	4.386%
	<30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air quality assessment)

Activity 1 - Culvert Diversion (Workfront S1)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	70	2	2.3	6	27.6	19.320
Hand Held Breaker	20	1	0.5	1	0.5	0.1
Breaker, Excavator Mounted (Hydraulic)	20	1	3.2	8	25.6	5.12
Excavator/Loader, Wheel/Tracked	70	2	3.2	8	51.2	35.84
Compactor, Vibratory	20	1	1.4	4.5	6.3	1.26
Poker, Vibratory, Hand Held	10	3	0.5	1.2	1.8	0.18
Crane Mobile	10	1	2.6	10	26	2.6
Generator (silenced)	70	1	2.2	5	11	7.7
Bar Bender and Cutter	20	1	1.5	1.5	2.25	0.45
Dump Truck	70	2	2.4	10	48	33.6
Total:						106.170
Activity 1						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.0%

Activity 2a - Grouting/Dewatering (Workfront S1)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Grout Mixer	50	4	1.2	0.8	3.84	1.92
Grout Pump	50	4	1.7	0.9	6.12	3.06
Dump Truck	50	2	2.4	10	48	24
Drill Rig, Rotary Type (Diesel)	50	4	2.3	6	55.2	27.6
Total:						56.58
Activity 2a						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.0%

Activity 2b - Grouting/Dewatering (Workfront S1)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Water Pump (Electric)	100	10	0.5	0.5	2.5	2.5
Generator (silenced)	80	4	2.2	5	44	35.2
Total:						37.7
Activity 2b						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.1%

Activity 3a - Open Excavation North East End (Workfront S1)

From:	1-Mar-14	To:	31-Oct-14	Duration:	8	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Hand Held Breaker	20	2	0.5	1	1	0.2
Excavator/Loader, Wheel/Tracked	90	6	3.2	8	153.6	138.24
Air Compressor	50	2	2.2	5	22	11
Dump Truck	90	10	2.4	10	240	216
Total:						365.44
Activity 3a						Percentage of Usage Area to Works Area: 0.7%
						Percentage of Yearly Usage: 0.4%

Activity 3b - Open Excavation North East End (Workfront S1)

From:	1-Nov-14	To:	30-Nov-14	Duration:	1	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Hand Held Breaker	20	2	0.5	1	1	0.2
Excavator/Loader, Wheel/Tracked	90	4	3.2	8	102.4	92.16
Air Compressor	50	2	2.2	5	22	11
Dump Truck	90	10	2.4	10	240	216
Total:						319.36
Activity 3b						Percentage of Usage Area to Works Area: 0.6%
						Percentage of Yearly Usage: 0.0%

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air quality assessment)

Activity 4a - Structure - South West End (Workfront S1)

From:	1-Jan-14	To:	28-Feb-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	20	2	2	3	12	2.4
Air Compressor	20	4	2.2	5	44	8.8
Generator (silenced)	60	4	2.2	5	44	26.4
Poker, Vibratory, Hand Held	10	6	0.5	1.2	3.6	0.36
Bar Bender and Cutter	30	3	1.5	1.5	6.75	2.025
Tower Crane	80	2	4.5	14	126	100.8
Dump Truck	90	2	2.4	10	48	43.2
Total:						183.985
Activity 4a						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 4b - Structure - South West End (Workfront S1)

From:	1-Mar-14	To:	30-Apr-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	20	2	2	3	12	2.4
Air Compressor	20	4	2.2	5	44	8.8
Generator (silenced)	60	4	2.2	5	44	26.4
Poker, Vibratory, Hand Held	10	6	0.5	1.2	3.6	0.36
Bar Bender and Cutter	30	3	1.5	1.5	6.75	2.025
Tower Crane	80	2	4.5	14	126	100.8
Ventilation Fan	100	3	1	1	3	3
Dump Truck	90	2	2.4	10	48	43.2
Total:						186.985
Activity 4b						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 4c - Structure - South West End (Workfront S1)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	20	2	2	3	12	2.4
Air Compressor	20	4	2.2	5	44	8.8
Generator (silenced)	60	4	2.2	5	44	26.4
Poker, Vibratory, Hand Held	10	6	0.5	1.2	3.6	0.36
Bar Bender and Cutter	30	3	1.5	1.5	6.75	2.025
Tower Crane	80	2	4.5	14	126	100.8
Ventilation Fan	100	3	1	1	3	3
Dump Truck	90	2	2.4	10	48	43.2
Total:						186.985
Activity 4c						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.0%

Activity 5 - Adit B Phase 4 (Workfront S5)

From:	1-Jan-14	To:	31-Aug-14	Duration:	8	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	90	3	2.3	6	41.4	37.260
Hand Held Breaker	20	3	0.5	1	1.5	0.3
Breaker, Excavator Mounted (Hydraulic)	40	2	3.2	8	51.2	20.48
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	10	2	0.5	1.2	1.2	0.12
Crane Mobile	30	1	2.6	10	26	7.8
Generator (silenced)	60	2	2.2	5	22	13.2
Bar Bender and Cutter	60	1	1.5	1.5	2.25	1.35
Dump Truck	100	1	2.4	10	24	24
Total:						130.110
Activity 5						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.2%

Activity 6 - Adit B Phase 5 (Workfront S6)

From:	1-Aug-14	To:	30-Nov-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	90	3	2.3	6	41.4	37.260
Hand Held Breaker	20	3	0.5	1	1.5	0.3
Breaker, Excavator Mounted (Hydraulic)	40	2	3.2	8	51.2	20.48
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	10	2	0.5	1.2	1.2	0.12
Crane Mobile	30	1	2.6	10	26	7.8

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air quality assessment)

Generator (silenced)	60	2	2.2	5	22	13.2
Bar Bender and Cutter	60	1	1.5	1.5	2.25	1.35
Dump Truck	100	1	2.4	10	24	24
Total:						130.110
Activity 6	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.1%

Activity 7 - Adit B Phase 6 (Workfront S7)

From:	1-Dec-14	To:	31-Dec-14	Duration:	1	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m²)
			B (m)	L (m)	Area(m²)	
Giken Pile Rig	90	3	2.3	6	41.4	37.260
Hand Held Breaker	20	3	0.5	1	1.5	0.3
Breaker, Excavator Mounted (Hydraulic)	40	2	3.2	8	51.2	20.48
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	10	2	0.5	1.2	1.2	0.12
Crane Mobile	30	1	2.6	10	26	7.8
Generator (silenced)	60	2	2.2	5	22	13.2
Bar Bender and Cutter	60	1	1.5	1.5	2.25	1.35
Dump Truck	100	1	2.4	10	24	24
Total:						130.110
Activity 7	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.0%

Activity 8 - Adit C - Reinstatement of Roads & Landscaping (Workfront S8)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m²)
			B (m)	L (m)	Area(m²)	
Hand Held Breaker	60	3	0.5	1	1.5	0.9
Excavator/Loader, Wheel/Tracked	90	2	3.2	8	51.2	46.08
Crane Mobile	20	1	2.6	10	26	5.2
Generator (silenced)	60	2	2.2	5	22	13.2
Dump Truck	90	2	2.4	10	48	43.2
Total:						108.580
Activity 8	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.0%

Activity 9 - Adit C - Reinstatement of Roads & Landscaping (Workfront S9)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m²)
			B (m)	L (m)	Area(m²)	
Hand Held Breaker	60	3	0.5	1	1.5	0.9
Excavator/Loader, Wheel/Tracked	90	2	3.2	8	51.2	46.08
Crane Mobile	20	1	2.6	10	26	5.2
Generator (silenced)	60	2	2.2	5	22	13.2
Dump Truck	90	2	2.4	10	48	43.2
Total:						108.580
Activity 8	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.0%

Activity 10 - Adit C - Reinstatement of Roads & Landscaping (Workfront S10)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m²)
			B (m)	L (m)	Area(m²)	
Hand Held Breaker	60	3	0.5	1	1.5	0.9
Excavator/Loader, Wheel/Tracked	90	2	3.2	8	51.2	46.08
Crane Mobile	20	1	2.6	10	26	5.2
Generator (silenced)	60	2	2.2	5	22	13.2
Dump Truck	90	2	2.4	10	48	43.2
Total:						108.580
Activity 10	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.0%

Activity 11 - Adit C Phase 4 (Workfront S11)

From:	1-May-14	To:	31-Oct-14	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m²)
			B (m)	L (m)	Area(m²)	
Giken Pile Rig	90	3	2.3	6	41.4	37.260
Hand Held Breaker	20	2	0.5	1	1	0.2
Breaker, Excavator Mounted (Hydraulic)	40	1	3.2	8	25.6	10.24
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	10	2	0.5	1.2	1.2	0.12
Crane Mobile	30	1	2.6	10	26	7.8
Generator (silenced)	60	2	2.2	5	22	13.2
Bar Bender and Cutter	60	1	1.5	1.5	2.25	1.35

**Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air quality assessment)

Dump Truck	100	1	2.4	10	24	24
Total:						119.770
Activity 11	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.1%

Activity 12 - Adit C - Reinstatement of Roads & Landscaping (Workfront S11)

From:	1-Nov-14	To:	31-Dec-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Hand Held Breaker	60	3	0.5	1	1.5	0.9
Excavator/Loader, Wheel/Tracked	90	2	3.2	8	51.2	46.08
Crane Mobile	20	1	2.6	10	26	5.2
Generator (silenced)	60	2	2.2	5	22	13.2
Dump Truck	90	2	2.4	10	48	43.2
Total:						108.580
Activity 12	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.0%

Combined Percentage for Activities	1.218%
	<6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air quality assessment)

Activity 1 - Culvert Diversion (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Giken Pile Rig	100	2	2.3	6	27.6	27.600
Hand Held Breaker	100	1	0.5	1	0.5	0.5
Breaker, Excavator Mounted (Hydraulic)	100	1	3.2	8	25.6	25.6
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2
Compactor, Vibratory	100	1	1.4	4.5	6.3	6.3
Poker, Vibratory, Hand Held	100	3	0.5	1.2	1.8	1.8
Crane Mobile	100	1	2.6	10	26	26
Generator (silenced)	100	1	2.2	5	11	11
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Dump Truck	100	2	2.4	10	48	48
Total:						200.250
Activity 1						Percentage of Usage Area to Works Area: 0.4%

Activity 2a - Grouting/Dewatering (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Grout Mixer	100	4	1.2	0.8	3.84	3.84
Grout Pump	100	4	1.7	0.9	6.12	6.12
Dump Truck	100	2	2.4	10	48	48
Drill Rig, Rotary Type (Diesel)	100	4	2.3	6	55.2	55.2
Total:						113.16
Activity 2a						Percentage of Usage Area to Works Area: 0.2%

Activity 2b - Grouting/Dewatering (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Water Pump (Electric)	100	10	0.5	0.5	2.5	2.5
Generator (silenced)	100	4	2.2	5	44	44
Total:						46.5
Activity 2b						Percentage of Usage Area to Works Area: 0.1%

Activity 3a - Open Excavation North East End (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Hand Held Breaker	100	2	0.5	1	1	1
Excavator/Loader, Wheel/Tracked	100	6	3.2	8	153.6	153.6
Air Compressor	100	2	2.2	5	22	22
Dump Truck	100	10	2.4	10	240	240
Total:						416.6
Activity 3a						Percentage of Usage Area to Works Area: 0.7%

Activity 3b - Open Excavation North East End (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of
			B (m)	L (m)	Area(m ²)	Time of Usage (m ²)
Hand Held Breaker	100	2	0.5	1	1	1
Excavator/Loader, Wheel/Tracked	100	4	3.2	8	102.4	102.4
Air Compressor	100	2	2.2	5	22	22
Dump Truck	100	10	2.4	10	240	240
Total:						365.4
Activity 3b						Percentage of Usage Area to Works Area: 0.7%

Activity 4a - Structure - South West End (Workfront S1)

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	100	2	2	3	12	12
Air Compressor	100	4	2.2	5	44	44
Generator (silenced)	100	4	2.2	5	44	44
Poker, Vibratory, Hand Held	100	6	0.5	1.2	3.6	3.6
Bar Bender and Cutter	100	3	1.5	1.5	6.75	6.75
Tower Crane	100	2	4.5	14	126	126
Dump Truck	100	2	2.4	10	48	48
Total:					284.35	
Activity 4a						Percentage of Usage Area to Works Area: 0.5%

Activity 4b - Structure - South West End (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	100	2	2	3	12	12
Air Compressor	100	4	2.2	5	44	44
Generator (silenced)	100	4	2.2	5	44	44
Poker, Vibratory, Hand Held	100	6	0.5	1.2	3.6	3.6
Bar Bender and Cutter	100	3	1.5	1.5	6.75	6.75
Tower Crane	100	2	4.5	14	126	126
Ventilation Fan	100	3	1	1	3	3
Dump Truck	100	2	2.4	10	48	48
Total:					287.35	
Activity 4b						Percentage of Usage Area to Works Area: 0.5%

Activity 4c - Structure - South West End (Workfront S1)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Concrete Pump	100	2	2	3	12	12
Air Compressor	100	4	2.2	5	44	44
Generator (silenced)	100	4	2.2	5	44	44
Poker, Vibratory, Hand Held	100	6	0.5	1.2	3.6	3.6
Bar Bender and Cutter	100	3	1.5	1.5	6.75	6.75
Tower Crane	100	2	4.5	14	126	126
Ventilation Fan	100	3	1	1	3	3
Dump Truck	100	2	2.4	10	48	48
Total:					287.35	
Activity 4c						Percentage of Usage Area to Works Area: 0.5%

Activity 5 - Adit B Phase 4 (Workfront S5)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	3	2.3	6	41.4	41.400
Hand Held Breaker	100	3	0.5	1	1.5	1.5
Breaker, Excavator Mounted (Hydraulic)	100	2	3.2	8	51.2	51.2
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Generator (silenced)	100	2	2.2	5	22	22
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Dump Truck	100	1	2.4	10	24	24
Total:					195.150	
Activity 5						Percentage of Usage Area to Works Area: 0.3%

Activity 6 - Adit B Phase 5 (Workfront S6)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	3	2.3	6	41.4	41.400
Hand Held Breaker	100	3	0.5	1	1.5	1.5
Breaker, Excavator Mounted (Hydraulic)	100	2	3.2	8	51.2	51.2
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2
Crane Mobile	100	1	2.6	10	26	26
Generator (silenced)	100	2	2.2	5	22	22
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Dump Truck	100	1	2.4	10	24	24
Total:					195.150	
Activity 6						Percentage of Usage Area to Works Area: 0.3%

Activity 7 - Adit B Phase 6 (Workfront S7)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	3	2.3	6	41.4	41.400
Hand Held Breaker	100	3	0.5	1	1.5	1.5
Breaker, Excavator Mounted (Hydraulic)	100	2	3.2	8	51.2	51.2

Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²
(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air

Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Dump Truck	100	1	2.4	10	24	24	
Total:						195.150	
Activity 7						Percentage of Usage Area to Works Area: 0.3%	

Activity 8 - Adit C - Reinstatement of Roads & Landscaping (Workfront S8)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hand Held Breaker	100	3	0.5	1	1.5	1.5	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Dump Truck	100	2	2.4	10	48	48	
Total:						148.700	
Activity 8						Percentage of Usage Area to Works Area: 0.3%	

Activity 9 - Adit C - Reinstatement of Roads & Landscaping (Workfront S9)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hand Held Breaker	100	3	0.5	1	1.5	1.5	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Dump Truck	100	2	2.4	10	48	48	
Total:						148.700	
Activity 8						Percentage of Usage Area to Works Area: 0.3%	

Activity 10 - Adit C - Reinstatement of Roads & Landscaping (Workfront S10)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hand Held Breaker	100	3	0.5	1	1.5	1.5	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Dump Truck	100	2	2.4	10	48	48	
Total:						148.700	
Activity 10						Percentage of Usage Area to Works Area: 0.3%	

Activity 11 - Adit C Phase 4 (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Giken Pile Rig	100	3	2.3	6	41.4	41.400	
Hand Held Breaker	100	2	0.5	1	1	1	
Breaker, Excavator Mounted (Hydraulic)	100	1	3.2	8	25.6	25.6	
Excavator/Loader, Wheel/Tracked	100	1	3.2	8	25.6	25.6	
Poker, Vibratory, Hand Held	100	2	0.5	1.2	1.2	1.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25	
Dump Truck	100	1	2.4	10	24	24	
Total:						169.050	
Activity 11						Percentage of Usage Area to Works Area: 0.3%	

Activity 12 - Adit C - Reinstatement of Roads & Landscaping (Workfront S11)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Hand Held Breaker	100	3	0.5	1	1.5	1.5	
Excavator/Loader, Wheel/Tracked	100	2	3.2	8	51.2	51.2	
Crane Mobile	100	1	2.6	10	26	26	
Generator (silenced)	100	2	2.2	5	22	22	
Dump Truck	100	2	2.4	10	48	48	
Total:						148.700	
Activity 12						Percentage of Usage Area to Works Area: 0.3%	

Combined Percentage for Activities	5.961%
	<30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.

**Shatin to Central Link - East West Line
To Kwa Wan Station - Active Construction Area Estimate**

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 56201 m²

(total area of workfronts S1, S2, S3, S4, S5, S6, S7, S8, S9 & S10 in noise assessment or 519, 524, 525, 526, 527, 528, 529, 532, 535 & 540 in air

3. The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.

4. The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))

5. "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))

6. Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

1a) Yearly Estimate - TTMS Stage 1 (Sept 2012 to Aug 2013)

Works Area = 5900 m²
(total area of workfronts S26, S28, S30, S32, S34, S36 & S38)

Activity 1 - Diaphragm Wall Support (Workfront S26)

From:	1-Sep-12	To:	31-Aug-13	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bentonite Mixer / pump	100	1	1.2	2.4	2.88	2,880
Desander	100	1	2.9	3.6	10.44	10.44
Centrifuge	100	1	2.4	6.1	14.64	14.64
Silo	100	1	3.2	3.2	10.24	10.24
Excavator	100	1	3.2	8	25.6	25.6
Generator (silenced)	100	1	2.2	5	11	11
Total:						74.800
Activity 1						Percentage of Usage Area to Works Area: 1.3%
						Percentage of Yearly Usage: 1.3%

Activity 2 - Diaphragm Wall Construction (Workfront S30, S32, S34, S36 & S38)

From:	1-Sep-12	To:	31-Mar-13	Duration:	7	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	90	2	5.6	5.9	66.08	59.472
Piling, Diaphragm Wall, Hydraulic Extracto	90	4	4.5	8	144	129.6
Grab	90	2	3.2	1.2	7.68	6.912
Total:						195.984
Activity 2						Percentage of Usage Area to Works Area: 3.3%
						Percentage of Yearly Usage: 1.9%

Activity 3 - Excavation, Roof Slab Construction and Backfilling (Workfront S30, S32, S34, S36 & S38)

From:	1-Oct-12	To:	31-Aug-13	Duration:	11	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	10	2	2.3	6	27.6	2.76
Breaker, Hand Held	10	3	0.5	1	1.5	0.15
Excavator	50	3	3.2	8	76.8	38.4
Breaker, Hydraulic	20	3	3.2	8	76.8	15.36
Poker, Vibratory, Hand Held	10	4	0.5	1.2	2.4	0.24
Generator (silenced)	60	4	2.2	5	44	26.4
Spoil Trucks	50	2	2.4	10	48	24
Concrete Trucks	20	2	2.4	10	48	9.6
Delivery Trucks	10	2	2.4	10	48	4.8
Total:						121.71
Activity 3						Percentage of Usage Area to Works Area: 2.1%
						Percentage of Yearly Usage: 1.9%

Activity 4 - Pipe Piling (Workfront S26)

From:	1-Jan-13	To:	30-Jun-13	Duration:	6	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Pipe Piling Rigs	90	2	2.3	6	13.8	12.42
Total:						12.42
Activity 4						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.1%

Activity 5a - Breaking Out (Workfront S26)

From:	1-Feb-13	To:	31-Aug-13	Duration:	7	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hand Held	50	1	0.5	1	0.5	0.25
Total:						0.25
Activity 5a						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 5b - Breaking Out (Workfront S26)

From:	1-Feb-13	To:	30-Apr-13	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hydraulic	60	1	3.2	8	25.6	15.36
Total:						15.36
Activity 5b						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.1%

Activity 6 - Excavation and Station Construction (Workfront S26)

From:	1-Apr-13	To:	31-Aug-13	Duration:	5	month
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Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

1a) Yearly Estimate - TTMS Stage 1 (Sept 2012 to Aug 2013)

Works Area = 5900 m²
(total area of workfronts S26, S28, S30, S32, S34, S36 & S38)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator	90	1	3.2	8	25.6	23.04
Poker, Vibratory, Hand Held	10	1	0.5	1.2	0.6	0.06
Generator (silenced)	50	1	2.2	5	11	5.5
Trucks	90	1	2.4	10	24	21.6
Bar Bender and Cutter	70	1	1.5	1.5	2.25	1.575
Lorry	10	1	2.4	10	24	2.4
Total:					54.175	
Activity 6						Percentage of Usage Area to Works Area: 0.9%
						Percentage of Yearly Usage: 0.4%

Activity 7 - Pipe Piling (Workfront S28)

From:	1-Apr-13	To:	31-Aug-13	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Pipe Piling Rigs	90	2	2.3	6	13.8	12.42
Total:					12.42	
Activity 7						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.1%

Activity 8a - Breaking Out (Workfront S28)

From:	1-May-13	To:	31-Aug-13	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hand Held	50	1	0.5	1	0.5	0.25
Total:					0.25	
Activity 8a						Percentage of Usage Area to Works Area: 0.0%
						Percentage of Yearly Usage: 0.0%

Activity 8b - Breaking Out (Workfront S28)

From:	1-May-13	To:	31-Jul-13	Duration:	3	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hydraulic	50	1	3.2	8	25.6	12.8
Total:					12.8	
Activity 8b						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.1%

Activity 9 - Excavation and Station Construction (Workfront S28)

From:	1-Jul-13	To:	31-Aug-13	Duration:	2	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator	90	1	3.2	8	25.6	23.04
Poker, Vibratory, Hand Held	10	1	0.5	1.2	0.6	0.06
Generator (silenced)	50	1	2.2	5	11	5.5
Trucks	90	1	2.4	10	24	21.6
Bar Bender and Cutter	70	1	1.5	1.5	2.25	1.575
Lorry	10	1	2.4	10	24	2.4
Total:					54.175	
Activity 9						Percentage of Usage Area to Works Area: 0.9%
						Percentage of Yearly Usage: 0.2%

Combined Yearly Percentage for Activities	5.930%
	<6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

1b) Yearly Estimate - TTMS Stage 2 (Nov 2013 to Oct 2014)

Works Area = 4925 m²
(total area of workfronts S1, S2, S4, S6, S8, S10, S12, S14, S16, S18, S20, S21 & S26)

Activity 1 - Diaphragm Wall Construction (Workfront S2, S8, S14 & S20)

From:	1-Nov-13	To:	31-Mar-14	Duration:	5	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	90	2	5.6	5.9	66.08	59.472
Piling, Diaphragm Wall, Hydraulic Extractor	90	3	4.5	8	108	97.2
Grab	90	3	3.2	1.2	11.52	10.368
					Total:	167.04
Activity 1						Percentage of Usage Area to Works Area: 3.4%
						Percentage of Yearly Usage: 1.4%

Activity 2 - Excavation, Roof Slab Construction and Backfilling (Workfront S2, S8, S14 & S20)

From:	1-Jan-14	To:	31-Mar-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	10	4	2.3	6	55.2	5.52
Breaker, Hand Held	10	4	0.5	1	2	0.2
Excavator	50	4	3.2	8	102.4	51.2
Breaker, Hydraulic	20	4	3.2	8	102.4	20.48
Poker, Vibratory, Hand Held	10	4	0.5	1.2	2.4	0.24
Generator (silenced)	60	4	2.2	5	44	26.4
Spoil Trucks	50	2	2.4	10	48	24
Concrete Trucks	20	2	2.4	10	48	9.6
Delivery Trucks	10	2	2.4	10	48	4.8
					Total:	142.44
Activity 2						Percentage of Usage Area to Works Area: 2.9%
						Percentage of Yearly Usage: 0.7%

Activity 3 - Diaphragm Wall Construction (Workfront S4, S10 & S16)

From:	1-Apr-14	To:	31-Jul-14	Duration:	4	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	90	2	5.6	5.9	66.08	59.472
Piling, Diaphragm Wall, Hydraulic Extractor	90	3	4.5	8	108	97.2
Grab	90	3	3.2	1.2	11.52	10.368
					Total:	167.04
Activity 3						Percentage of Usage Area to Works Area: 3.4%
						Percentage of Yearly Usage: 1.1%

Activity 4 - Excavation, Roof Slab Construction and Backfilling (Workfront S4, S10 & S16)

From:	1-Jun-14	To:	31-Aug-14	Duration:	3	month
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	10	3	2.3	6	41.4	4.14
Breaker, Hand Held	10	3	0.5	1	1.5	0.15
Excavator	50	3	3.2	8	76.8	38.4
Breaker, Hydraulic	20	3	3.2	8	76.8	15.36
Poker, Vibratory, Hand Held	10	3	0.5	1.2	1.8	0.18
Generator (silenced)	60	3	2.2	5	33	19.8
Spoil Trucks	50	2	2.4	10	48	24
Concrete Trucks	20	2	2.4	10	48	9.6
Delivery Trucks	10	2	2.4	10	48	4.8
					Total:	116.43
Activity 4						Percentage of Usage Area to Works Area: 2.4%
						Percentage of Yearly Usage: 0.6%

Activity 5 - Diaphragm Wall Construction (Workfront S6, S12 & S18)

From:	1-Sep-14	To:	31-Oct-14	Duration:	2	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	90	2	5.6	5.9	66.08	59.472
Piling, Diaphragm Wall, Hydraulic Extractor	90	3	4.5	8	108	97.2
Grab	90	3	3.2	1.2	11.52	10.368
					Total:	167.04
Activity 5						Percentage of Usage Area to Works Area: 3.4%
						Percentage of Yearly Usage: 0.6%

**Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate**

1b) Yearly Estimate - TTMS Stage 2 (Nov 2013 to Oct 2014)

Works Area = 4925 m²
(total area of workfronts S1, S2, S4, S6, S8, S10, S12, S14, S16, S18, S20, S21 & S26)

Activity 6 - Diaphragm Wall Support (Workfront S26)

From:	1-Nov-13	To:	31-Oct-14	Duration:	12	months
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bentonite Mixer / pump	100	1	1.2	2.4	2.88	2.880
Desander	100	1	2.9	3.6	10.44	10.44
Centrifuge	100	1	2.4	6.1	14.64	14.64
Silo	100	1	3.2	3.2	10.24	10.24
Excavator	100	1	3.2	8	25.6	25.6
Generator (silenced)	100	1	2.2	5	11	11
Total:						74.800
Activity 6						Percentage of Usage Area to Works Area: 1.5%
						Percentage of Yearly Usage: 1.5%
Combined Yearly Percentage for Activities						5.915%
						<6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

1c) Yearly Estimate - TTMS Stage 3 (Mar 2015 to Feb 2016)

Works Area = 6260 m²
(total area of workfronts S26, S28, S40, S50, S52, S54, S56, S58 & S60)

Activity 1 - Station Top Down Construction (Workfront S50, S52, S54, S56, S58 & S60)

From:	1-Mar-15	To:	28-Feb-16	Duration:	12	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Mobile Crane	80	6	2.6	10	26	20.800	
Excavator	80	6	3.2	8	153.6	122.88	
Spoil Trucks	80	6	2.4	10	144	115.2	
Concrete / Delivery Trucks	10	6	2.4	10	144	14.4	
Total:						273.280	
Activity 1						Percentage of Usage Area to Works Area:	4.4%
						Percentage of Yearly Usage:	4.4%

Activity 2 - Excavation, Roof Slab Construction and Backfilling (Workfront S40)

From:	1-Mar-15	To:	31-Mar-15	Duration:	1	month	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Giken Pile Rig	10	1	2.3	6	13.8	1.38	
Breaker, Hand Held	10	1	0.5	1	0.5	0.05	
Excavator	50	1	3.2	8	25.6	12.8	
Breaker, Hydraulic	20	1	3.2	8	25.6	5.12	
Poker, Vibratory, Hand Held	10	1	0.5	1.2	0.6	0.06	
Generator (silenced)	60	1	2.2	5	11	6.6	
Spoil Trucks	50	1	2.4	10	24	12	
Concrete Trucks	20	1	2.4	10	24	4.8	
Delivery Trucks	10	1	2.4	10	24	2.4	
Total:						45.21	
Activity 2						Percentage of Usage Area to Works Area:	0.7%
						Percentage of Yearly Usage:	0.1%

Activity 3 - Reinforcement Fabrication (Workfront S26 & S28)

From:	1-Mar-15	To:	28-Feb-16	Duration:	12	month	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Generator (silenced)	60	1	2.2	5	11	6.6	
Bar Bender and Cutter	70	1	1.5	1.5	2.25	1.575	
Lorry	10	1	2.4	10	24	2.4	
Total:						10.575	
Activity 3						Percentage of Usage Area to Works Area:	0.2%
						Percentage of Yearly Usage:	0.2%

Combined Yearly Percentage for Activities

4.583%
<6%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

2a) Hourly or Daily Estimate - TTMS Stage 1 (Sep 2012 to Aug 2013)

Works Area = 5900 m²
(total area of workfronts S26, S28, S30, S32, S34, S36 & S38)

Activity 1 - Diaphragm Wall Support (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bentonite Mixer / pump	100	1	1.2	2.4	2.88	2.880
Desander	100	1	2.9	3.6	10.44	10.44
Centrifuge	100	1	2.4	6.1	14.64	14.64
Silo	100	1	3.2	3.2	10.24	10.24
Excavator	100	1	3.2	8	25.6	25.6
Generator (silenced)	100	1	2.2	5	11	11
Total:						74.800
Activity 1						Percentage of Usage Area to Works Area: 1.3%

Activity 2 - Diaphragm Wall Construction (Workfront S30, S32, S34, S36 & S38)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	100	2	5.6	5.9	66.08	66.08
Piling, Diaphragm Wall, Hydraulic Extractor	100	4	4.5	8	144	144
Grab	100	2	3.2	1.2	7.68	7.68
Total:						217.76
Activity 2						Percentage of Usage Area to Works Area: 3.7%

Activity 3 - Excavation, Roof Slab Construction and Backfilling (Workfront S30, S32, S34, S36 & S38)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	2	2.3	6	27.6	27.6
Breaker, Hand Held	100	3	0.5	1	1.5	1.5
Excavator	100	3	3.2	8	76.8	76.8
Breaker, Hydraulic	100	3	3.2	8	76.8	76.8
Poker, Vibratory, Hand Held	100	4	0.5	1.2	2.4	2.4
Generator (silenced)	100	4	2.2	5	44	44
Spoil Trucks	100	2	2.4	10	48	48
Concrete Trucks	100	2	2.4	10	48	48
Delivery Trucks	100	2	2.4	10	48	48
Total:						373.1
Activity 3						Percentage of Usage Area to Works Area: 6.3%

Activity 4 - Pipe Piling (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Pipe Piling Rigs	100	2	2.3	6	13.8	13.8
Total:						13.8
Activity 4						Percentage of Usage Area to Works Area: 0.2%

Activity 5a - Breaking Out (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hand Held	100	1	0.5	1	0.5	0.5
Total:						0.5
Activity 5a						Percentage of Usage Area to Works Area: 0.0%

Activity 5b - Breaking Out (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hydraulic	100	1	3.2	8	25.6	25.6
Total:						25.6
Activity 5b						Percentage of Usage Area to Works Area: 0.4%

Activity 6 - Excavation and Station Construction (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Excavator	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Generator (silenced)	100	1	2.2	5	11	11
Trucks	100	1	2.4	10	24	24
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Lorry	100	1	2.4	10	24	24
Total:						87.45
Activity 6						Percentage of Usage Area to Works Area: 1.5%

Shatin to Central Link - East West Line
 Ma Tau Wai Station - Active Construction Area Estimate

2a) Hourly or Daily Estimate - TTMS Stage 1 (Sep 2012 to Aug 2013)

Works Area = 5900 m²
 (total area of workfronts S26, S28, S30, S32, S34, S36 & S38)

Activity 7 - Pipe Piling (Workfront S28)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Pipe Piling Rigs	100	2	2.3	6	13.8	13.8
Total:					13.8	13.8
Activity 7						Percentage of Usage Area to Works Area: 0.2%

Activity 8a - Breaking Out (Workfront S28)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hand Held	100	1	0.5	1	0.5	0.5
Total:					0.5	0.5
Activity 8a						Percentage of Usage Area to Works Area: 0.0%

Activity 8b - Breaking Out (Workfront S28)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Breaker, Hydraulic	100	1	3.2	8	25.6	25.6
Total:					25.6	25.6
Activity 8b						Percentage of Usage Area to Works Area: 0.4%

Combined Hourly or Daily Percentage for Activities						14.1% <30%, OK
---	--	--	--	--	--	------------------------------------

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

2b) Hourly or Daily Estimate - TTMS Stage 2 (Nov 2013 to Oct 2014)

Works Area = 4925 m²
(total area of workfronts S1, S2, S4, S6, S8, S10, S12, S14, S16, S18, S20, S21 & S26)

Activity 1 - Diaphragm Wall Construction (Workfront S2, S8, S14 & S20)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
D-wall Mini Cutter	100	2	5.6	5.9	66.08	66.08
Piling, Diaphragm Wall, Hydraulic Extractor	100	3	4.5	8	108	108
Grab	100	3	3.2	1.2	11.52	11.52
Total:					185.6	
Activity 1					Percentage of Usage Area to Works Area: 3.8%	

Activity 2 - Excavation, Roof Slab Construction and Backfilling (Workfront S2, S8, S14 & S20)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	4	2.3	6	55.2	55.2
Breaker, Hand Held	100	4	0.5	1	2	2
Excavator	100	4	3.2	8	102.4	102.4
Breaker, Hydraulic	100	4	3.2	8	102.4	102.4
Poker, Vibratory, Hand Held	100	4	0.5	1.2	2.4	2.4
Generator (silenced)	100	4	2.2	5	44	44
Spoil Trucks	100	2	2.4	10	48	48
Concrete Trucks	100	2	2.4	10	48	48
Delivery Trucks	100	2	2.4	10	48	48
Total:					452.4	
Activity 2					Percentage of Usage Area to Works Area: 9.2%	

Activity 3 - Diaphragm Wall Support (Workfront S26)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Bentonite Mixer / pump	100	1	1.2	2.4	2.88	2.880
Desander	100	1	2.9	3.6	10.44	10.44
Centrifuge	100	1	2.4	6.1	14.64	14.64
Silo	100	1	3.2	3.2	10.24	10.24
Excavator	100	1	3.2	8	25.6	25.6
Generator (silenced)	100	1	2.2	5	11	11
Total:					74.800	
Activity 3					Percentage of Usage Area to Works Area: 1.5%	

Combined Hourly or Daily Percentage for Activities

14.5%
<30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Shatin to Central Link - East West Line
Ma Tau Wai Station - Active Construction Area Estimate

2c) Hourly and Daily Estimate - TTMS Stage 3 (Mar 2015 to Feb 2016)

Works Area = 6260 m²
(total area of workfronts S26, S28, S40, S50, S52, S54, S56, S58 & S60)

Activity 1 - Station Top Down Construction (Workfront S50, S52, S54, S56, S58 & S60)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Mobile Crane	100	6	2.6	10	26	26.000
Excavator	100	6	3.2	8	153.6	153.6
Spoil Trucks	100	6	2.4	10	144	144
Concrete / Delivery Trucks	100	6	2.4	10	144	144
					Total:	467.600
Activity 1						Percentage of Usage Area to Works Area: 7.5%

Activity 2 - Excavation, Roof Slab Construction and Backfilling (Workfront S40)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Giken Pile Rig	100	1	2.3	6	13.8	13.8
Breaker, Hand Held	100	1	0.5	1	0.5	0.5
Excavator	100	1	3.2	8	25.6	25.6
Breaker, Hydraulic	100	1	3.2	8	25.6	25.6
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Generator (silenced)	100	1	2.2	5	11	11
Spoil Trucks	100	1	2.4	10	24	24
Concrete Trucks	100	1	2.4	10	24	24
Delivery Trucks	100	1	2.4	10	24	24
					Total:	149.1
Activity 2						Percentage of Usage Area to Works Area: 2.4%

Activity 3 - Reinforcement Fabrication (Workfront S26 & S28)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Generator (silenced)	100	1	2.2	5	11	11
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Lorry	100	1	2.4	10	24	24
					Total:	37.25
Activity 3						Percentage of Usage Area to Works Area: 0.6%

Combined Hourly or Daily Percentage for Activities	10.4% <30%, OK
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Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

**Shatin to Central Link - East West Line
Fung Tak EEP - Active Construction Area Estimate**

1) Yearly Estimate - Jan 2013 to Dec 2014

Works Area = 2847 m²
(total area of workfronts S13 in noise assessment or 426 in air quality assessment)

Activity 1 - Permanent Underground Structures (Workfront S13)

From:	1-Jan-14	To:	31-Dec-14	Duration:	12	months	
Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)	
			B (m)	L (m)	Area(m ²)		
Ventilation Fan	100	1	1	1	1	1	
Hydraulic Crawler Crane	80	1	4.5	14	63	50.4	
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09	
Bar Bender and Cutter	50	1	1.5	1.5	2.25	1.125	
Saw, Circular Wood	50	1	0.3	0.3	0.09	0.045	
Poker, Vibratory, Hand Held	20	1	0.5	1.2	0.6	0.12	
Concrete Lorry Mixer	20	1	2.4	10	24	4.8	
Concrete Pump Lorry	20	1	2.4	10	24	4.8	
Total:						62.380	
Activity 1						Percentage of Usage Area to Works Area:	2.2%
						Percentage of Yearly Usage:	2.2%
Combined Percentage for Activities						2.185%	
						<6%, OK	

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- "Percentage of Yearly Usage" means the percentage of duration of each plant/activity over the year (12 months) (i.e. Percentage of Yearly Usage (%) = Percentage of Usage Area to Works Area for each plant/activity (%) x Duration (months) / 12 (months))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

**Shatin to Central Link - East West Line
Fung Tak EEP - Active Construction Area Estimate**

2) Hourly or Daily Estimate - Jan 2013 to Dec 2014

Works Area = 2847 m²
(total area of workfronts S13 in noise assessment or 426 in air quality assessment)

Activity 1 - Permanent Underground Structures (Workfront S13)

Plant	Percentage of Usage (%)	No.	Plan Size			Area in term of Time of Usage (m ²)
			B (m)	L (m)	Area(m ²)	
Ventilation Fan	100	1	1	1	1	1
Hydraulic Crawler Crane	100	1	4.5	14	63	63
Welder/Generator, portable	100	1	0.3	0.3	0.09	0.09
Bar Bender and Cutter	100	1	1.5	1.5	2.25	2.25
Saw, Circular Wood	100	1	0.3	0.3	0.09	0.09
Poker, Vibratory, Hand Held	100	1	0.5	1.2	0.6	0.6
Concrete Lorry Mixer	100	1	2.4	10	24	24
Concrete Pump Lorry	100	1	2.4	10	24	24
Total:						115.030
Activity 1	Percentage of Usage Area to Works Area:					4.0%
Combined Percentage for Activities						4.040% <30%, OK

Note:

- All plant that would generate dust emissions during their operation (e.g. excavator) have been included in estimating the active work areas.
- Since the plants do not normally operate continuously throughout the 12-hour working period, an adjustment by "Percentage of Usage (%)" was adopted for each plant/activity to reflect its estimated hours of operation on a typical working day.
- The actual dust emission area for each plant/activity was estimated and given as "Area", by taking account the maximum area of dust emissions which could be created by the plant/activity at any time instant.
- The actual dust emission area for each hour, which is given as "Area in term of Time of Usage" was estimated by taking account the "Percentage of Usage (%)" of each plant/activity. (i.e. Area in term of Time of Usage (m²) = Area (m²) x Percentage of Usage (%))
- "Percentage of Usage Area to Works Area" means the percentage of total actual active area for each plant/activity over the total Works area (i.e. Percentage of Usage Area to Works Area (%) = Total Area in term of Time of Usage for each plant/activity (m²) / Total Works Area (m²))
- Justification provided above are for the purpose of assessment predictions only. Actual figures would be defined during detailed design stage.

Calculation of Watering Efficiency

With reference to Cowherd et al., "Control of Open Fugitive Dust Sources, EPA-450/3-88-008, U.S. Environmental Protection Agency, Research Triangle Park, NC, percentage of dust mitigation efficiency is calculated from Equation (3-2) :

$$C = 100 - \frac{0.8 p d t}{i}$$

Where

- p = Potential average hourly daytime evaporation rate, mm/hr = 0.25916 ^[1]
d = Average hourly daytime traffic rate per hour = 71/hr ^[2]
I = Application intensity = 0.39 gal per yard = 1.8 L/m² ^[3]

Note:

- [1] p = 0.0049 x 52.8898 inch where 52.8898 inch is equivalent to the total evaporation of 1343.4mm obtained from Hong Kong Observatory (http://www.weather.gov.hk/cis/normal/1971_2000/normals_e.htm)
[2] Estimated by Engineer
[3] The assumptions provided are for the purpose of assessment predictions only. Actual figures would be defined in the detailed design stage.

By applying the Equation (3-2) with the above assumptions,

$$\text{Dust suppression efficiency} = 100 - 0.8 \times (0.25916 \times 71 \times t) / 1.8 \quad [t = \text{time between application, hr}]$$

Therefore,

For watering once per hour (i.e. t=1 hour), the estimated dust suppression efficiency is 91.7%

For watering once per 1.5 hour (i.e. t=1.5 hour), the estimated dust suppression efficiency is 87.5%

EPA-450/3-88-008

CONTROL OF OPEN FUGITIVE DUST SOURCES

FINAL REPORT

by

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September 1988

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3.3.3 Surface Treatments

3.3.3.1 Watering. The control efficiency of unpaved road watering depends upon (a) the amount of water applied per unit area of road surface, (b) the time between reapplications, (c) traffic volume during that period, and (d) prevailing meteorological conditions during the period. While several investigations have estimated or studied watering efficiencies, few have specified all the factors listed above.

An empirical model for the performance of watering as a control technique has been developed.⁸ The supporting data base consists of 14 tests performed in four states during five different summer and fall months. The model is:

$$C = 100 - \frac{0.8 p d t}{i} \quad (3-2)$$

where: C = average control efficiency, percent

P = potential average hourly daytime evaporation rate, mm/h

d = average hourly daytime traffic rate, (h⁻¹)

i = application intensity, L/m²

t = time between applications, h

Estimates of the potential average hourly daytime evaporation rate may be obtained from

$$P = \begin{array}{l} 0.0049 \times (\text{value in Figure 3-2}) \text{ for annual conditions} \\ 0.0065 \times (\text{value in Figure 3-2}) \text{ for summer conditions} \end{array}$$

An alternative approach (which is potentially suitable for a regulatory format) is shown as Figure 3-3. This figure is adapted from 11 field tests conducted at a coal-fired power plant. Measured control efficiencies did not correlate well with either time or vehicle passes after application. However, this is believed due to reduced evening evaporation (logistics delayed the start of testing until 3 p.m. and testing continued through the early evening). Surface moisture grab samples were taken throughout the testing period, and not surprisingly, these show a strong correlation with control efficiency.

Figure 3-3 shows that between the average uncontrolled moisture content and a value of twice that, a small increase in moisture content results in a large increase in control efficiency. Beyond this point, control efficiency grows slowly with increased moisture content. Although