

North Approaching Tunnel (Source ID: NAT1 - 28)

Yearly Estimate - Feb 2014 to Jan 2015

Total works area = 26576.49 m²

**Area C1
North Approach Tunnel**

Activity 1 - Demolish Existing way & Works Workshop(ID: 11110NF08000)

From:	1-Feb-14	To:	1-Mar-14	Duration:	1	months
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Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe with Hydraulic Breaker	70	3.2	8	1	25.6	17.92
Dump Truck	30	2.4	10	1	24	7.2
		Total:				25.12
Activity 1		Percentage of Usage Area to Works Area:				0.1%
		Percentage of Yearly Usage:				0.008%

Cheung Wan Road Viaduct

Activity 1- Construction of substructure and superstructure for diversion bridge(ID: 11110VD04400 to 11110VD04420)

From:	1-Feb-14	To:	31-Jul-14	Duration:	6	months
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Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Excavator	50	3.2	8	1	25.6	12.8
Concrete Lorry Mixer	30	2.4	10	2	48	14.4
Poker, Vibrator, hand-held#	-	-	-	-	-	-
Air Compressor#	-	-	-	-	-	-
Crane, mobile	30	2.6	10	1	26	7.8
		Total:				35
Activity 1		Percentage of Usage Area to Works Area:				0.1%
		Percentage of Yearly Usage:				0.07%

Activity 2 - Demolish of existing viaduct(ID: 11110VD04600)

From:	1-Aug-14	To:	30-Sep-14	Duration:	2	months
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Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Excavator	70	3.2	8	1	25.6	17.92
Hydraulic breaker	70	3.2	8	1	25.6	17.92
Concrete saw	40	1	2	1	2	0.8
Air compressor#	-	-	-	-	-	-
Lorry with crane/grab	100	2.4	10	1	24	24
Crane, mobile	70	2.6	10	1	26	18.2
Welder/generator#	-	-	-	-	-	-
		Total:				78.84
Activity 2		Percentage of Usage Area to Works Area:				0.3%
		Percentage of Yearly Usage:				0.05%

Storm Water Culvert

Activity 1- Construct New Box Culvert(ID: 11110CW03500)

From:	1-Feb-14	To:	30-Nov-14	Duration:	10	months
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Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe with Hydraulic Breaker	70	3.2	8	1	25.6	17.92
Dump Truck	30	2.4	10	1	24	7.2
Bar bender and cutter#	-	-	-	-	-	-
Concrete pump truck	30	2.4	10	1	24	7.2
Concrete mixer truck	30	2.4	10	1	24	7.2
		Total:				39.52
Activity 1		Percentage of Usage Area to Works Area:				0.1%
		Percentage of Yearly Usage:				0.12%

Podium to Existing Culvert

Activity 1- Temporary cofferdam NSL & EWL(ID: 11110NF10110)

From:	1-Aug-14	To:	31-Oct-14	Duration:	3	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Pipe Piling Rig	70	2.3	6	2	27.6	19.32
Crawler crane	30	4.5	8	1	36	10.8
Grout mixer#	-	-	-	-	-	-
Grout pump#	-	-	-	-	-	-
Air compressor#	-	-	-	-	-	-
Drill rig, rotary type(diesel)	50	2.3	6	1	13.8	6.9
Backhoe with hydraulic breaker	30	3.2	8	1	25.6	7.68
					Total:	44.7
Activity 1	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.04%

Activity 2- Excavation(ID: 11110NF11110)

From:	1-Nov-14	To:	31-Jan-15	Duration:	3	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	70	3.2	8	1	25.6	17.92
Dump Truck	30	2.4	10	1	24	7.2
					Total:	25.12
Activity 2	Percentage of Usage Area to Works Area:					0.1%
	Percentage of Yearly Usage:					0.02%

Area C2

Existing Culvert to STA building

Activity 1 - Temporary Cofferdam(ID: 11110NF10210)

From:	1-Feb-14	To:	30-Jun-14	Duration:	5	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Pipe Piling Rig	70	2.3	6	2	27.6	19.32
Crawler crane	30	4.5	8	1	36	10.8
Grout mixer#	-	-	-	-	-	-
Grout pump#	-	-	-	-	-	-
Air compressor#	-	-	-	-	-	-
Drill rig, rotary type(diesel)	50	2.3	6	1	13.8	6.9
Backhoe with hydraulic breaker	30	3.2	8	1	25.6	7.68
					Total:	44.7
Activity 1	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.07%

Activity 2 - Excavation(ID: 11110NF11210)

From:	1-Jul-14	To:	31-Dec-14	Duration:	6	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	70	3.2	8	2	51.2	35.84
Dump Truck	30	2.4	10	2	48	14.4
					Total:	50.24
Activity 2	Percentage of Usage Area to Works Area:					0.2%
	Percentage of Yearly Usage:					0.09%

Activity 3 - Concrete structures NSL(ID:11110NF12220)

From:	1-Jan-15	To:	31-Jan-15	Duration:	1	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	30	3.2	8	1	25.6	7.68
Crawler crane	30	4.5	8	1	36	10.8
Bar bender and cutter#	-	-	-	-	-	-
Concrete Mixer Truck	50	2.4	10	2	48	24
Concrete Pump Truck	50	2.4	10	2	48	24
Poker, vibrator,hand-held#	-	-	-	-	-	-
					Total:	66.48
Activity 3	Percentage of Usage Area to Works Area:					0.3%
	Percentage of Yearly Usage:					0.02%

Area C3A
STA building to Chatham Road North(OB2)

Activity 1 - Temporary Cofferdam NSL(ID: 11110NF10320)

From:	1-Feb-14	To:	30-Apr-14	Duration:	3	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Pipe Piling Rig	70	2.3	6	1	13.8	9.66
Crawler crane	30	4.5	8	1	36	10.8
Grout mixer#	-	-	-	-	-	-
Grout pump#	-	-	-	-	-	-
Air compressor#	-	-	-	-	-	-
Drill rig, rotary type(diesel)	50	2.3	6	1	13.8	6.9
Backhoe with hydraulic breaker	30	3.2	8	1	25.6	7.68
Total:						35.04
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.03%

Activity 2 - Excavation(ID: 11110NF11320)

From:	1-May-14	To:	31-Aug-14	Duration:	4	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	70	3.2	8	1	25.6	17.92
Dump Truck	30	2.4	10	1	24	7.2
Total:						25.12
Activity 2						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.03%

Activity 3 - Concrete structures NSL(ID: 11110NF12320)

From:	1-Sep-14	To:	31-Jan-15	Duration:	5	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	30	3.2	8	1	25.6	7.68
Crawler crane	30	4.5	8	1	36	10.8
Bar bender and cutter#	-	-	-	-	-	-
Concrete Mixer Truck	50	2.4	10	2	48	24
Concrete Pump Truck	50	2.4	10	2	48	24
Poker, vibrator,hand-held#	-	-	-	-	-	-
Total:						66.48
Activity 3						Percentage of Usage Area to Works Area: 0.3%
						Percentage of Yearly Usage: 0.10%

Area C4A
Chatham Road North(OB2) to Slip Road (OB2A)

Activity 1 - Temporary Cofferdam NSL(ID: 11110NF10410)

From:	1-Feb-14	To:	30-Apr-14	Duration:	3	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Pipe Piling Rig	70	2.3	6	1	13.8	9.66
Crawler crane	30	4.5	8	1	36	10.8
Grout mixer#	-	-	-	-	-	-
Grout pump#	-	-	-	-	-	-
Air compressor#	-	-	-	-	-	-
Drill rig, rotary type(diesel)	50	2.3	6	1	13.8	6.9
Backhoe with hydraulic breaker	30	3.2	8	1	25.6	7.68
Total:						35.04
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.03%

Activity 2 - Excavation(ID: 11110NF11410)

From:	1-Jul-14	To:	31-Oct-14	Duration:	4	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	70	3.2	8	1	25.6	17.92
Dump Truck	30	2.4	10	1	24	7.2
Total:						25.12
Activity 2						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.03%

Appendix 5.5 Justification for the percentage of Annual Average Active Area

Activity 3 - Concrete structures NSL (ID: 11110NF12410)

From:	1-Nov-14	To:	31-Jan-15	Duration:	3	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	30	3.2	8	1	25.6	7.68
Crawler crane	30	4.5	8	1	36	10.8
Bar bender and cutter#	-	-	-	-	-	-
Concrete Mixer Truck	50	2.4	10	1	24	12
Concrete Pump Truck	50	2.4	10	1	24	12
Poker, vibrator, hand-held#	-	-	-	-	-	-
Total:						42.48
Activity 3						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.04%

**Area C6
Chatham Road North Overbridge(OB2A)**

Activity 1 - Site clearance and hoarding and utility diversion (ID: 11110VD05010)

From:	1-Feb-14	To:	28-Feb-14	Duration:	1	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Excavator	60	3.2	8	1	25.6	15.36
Air compressor#	-	-	-	-	-	-
Hand held breaker#	-	-	-	-	-	-
Lorry with crane/grab	60	2.4	10	1	24	14.4
Welder/generator#	-	-	-	-	-	-
Total:						29.76
Activity 1						Percentage of Usage Area to Works Area: 0.1%
						Percentage of Yearly Usage: 0.01%

Activity 2 - Foundations for TB2 (Piling & Pier) (ID: 11110VD05010 to 11110VD05020)

From:	1-Mar-14	To:	31-Aug-14	Duration:	6	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Excavator	60	3.2	8	1	25.6	15.36
Piling, large diameter bored, grab and chisel	30	4.5	8	1	36	10.8
Pipe piling rig	30	2.3	6	1	13.8	4.14
Air compressor#	-	-	-	-	-	-
Lorry with crane/grab	60	2.4	10	1	24	14.4
Poker, vibrator, hand-held#	-	-	-	-	-	-
Concrete lorry mixer	30	2.4	10	2	48	14.4
Total:						59.1
Activity 2						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.11%

Oi Sen Path Works

Activity 1 - Pedestrian Diversion works (ID: 11110NF20100)

From:	1-Oct-14	To:	31-Jan-15	Duration:	4	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Mini Piling Rig	70	2.3	6	1	13.8	9.66
Grout mixer#	-	-	-	-	-	-
Grout pump#	-	-	-	-	-	-
Air compressor#	-	-	-	-	-	-
Drill rig, rotary type(diesel)	50	2.3	6	1	13.8	6.9
Backhoe with hydraulic breaker	30	3.2	8	1	25.6	7.68
Mobile Crane	50	2.6	10	1	26	13
Bar Bender and Cutter#	-	-	-	-	-	-
Concrete Mixer Truck	30	2.4	10	1	24	7.2
Concrete Pump Truck	30	2.4	10	1	24	7.2
Poker, vibrator, hand-held#	-	-	-	-	-	-
Total:						51.64
Activity 1						Percentage of Usage Area to Works Area: 0.2%
						Percentage of Yearly Usage: 0.06%

Combined Yearly Percentage	1.0%
Yearly Percentage adopted in Dust model as the worst case	6.0%

Hung Hom Station, South Approach Tunnels (Source ID: H1)

Yearly Estimate - Oct 15 to Sep 16

Area H1

Total works area = 1126 m²

Temporary Cofferdam

Activity 1 - Dwall construction(NSL) remaining (ID :11120NS41300)

From	1-Oct-15	To	18-Oct-15	Duration:	0.6	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	30	3.2	8	2	51.2	15.36
Bar Bender and Cutter #	-	-	-	4	-	-
Concrete mixer truck	30	2.4	10	6	144	43.2
concrete pump truck	30	2.4	10	3	72	21.6
Modified Rig	100	2.3	6	2	27.6	27.6
Modified Crane #	-	-	-	1	-	-
Bentonite Plant #	-	-	-	1	-	-
Dump truck	50	2.4	10	2	48	24
Grouting Machine	30	2	3	2	12	3.6
Pumping test #	-	-	-	1	-	-
Total:						135.36
Activity 1						Percentage of Usage Area to Works Area: 12.0%
						Percentage of Yearly Usage: 0.57%

Excavation - Podium to NOV

Activity 1 - Excavation & Strutting to NSL roof (ID :11120NS42100)

From	15-Oct-15	To	21-Dec-15	Duration:	2.2	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	100	3.2	8	4	102.4	102.4
Dump truck	100	2.4	10	4	96	96
Crane #	-	-	-	1	-	-
Total:						198.4
Activity 1						Percentage of Usage Area to Works Area: 17.6%
						Percentage of Yearly Usage: 3.26%

Activity 2 - Excavation & Strutting to NSL base (ID :11120NS42200)

From	1-Jun-16	To	24-Aug-16	Duration:	2.8	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Backhoe	100	3.2	8	4	102.4	102.4
Dump truck	100	2.4	10	4	96	96
Crane #	-	-	-	1	-	-
Piling rig	50	2.3	2.6	1	5.98	2.99
Grouting mixer #	-	-	-	1	-	-
Grouting pump #	-	-	-	1	-	-
Total:						201.39
Activity 2						Percentage of Usage Area to Works Area: 17.9%
						Percentage of Yearly Usage: 4.10%

Structural works - Podium to NOV

Activity 1 - Concrete Structure NSL roof (ID :11120NS43100)

From	22-Dec-15	To	2-Feb-16	Duration:	1.4	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Modified Crane #	-	-	-	2	-	-
Bar bender and cutter #	-	-	-	4	-	-
concrete mixer truck	30	2.4	10	4	96	28.8
concrete poker vibrator #	-	-	-	4	-	-
concrete pump truck	30	2.4	10	2	48	14.4
backhoe	30	3.2	8	1	25.6	7.68
dump truck	30	2.4	10	1	24	7.2
Total:						58.08
Activity 1						Percentage of Usage Area to Works Area: 5.2%
						Percentage of Yearly Usage: 0.59%

Appendix 5.5 Justification for the percentage of Annual Average Active Area

Activity 2 - Concrete support to CLP Tunnel (ID : 11120NS43200)

From	3-Feb-16	To	25-May-16	Duration:	3.7	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Modified Crane #	-	-	-	1	-	-
Bar bender and cutter #	-	-	-	2	-	-
concrete mixer truck	30	2.4	10	4	96	28.8
concrete poker vibrator #	-	-	-	2	-	-
concrete pump truck	30	2.4	10	1	24	7.2
backhoe	30	3.2	8	1	25.6	7.68
dump truck	30	2.4	10	1	24	7.2
					Total:	50.88
Activity 2					Percentage of Usage Area to Works Area:	4.5%
					Percentage of Yearly Usage:	1.38%

Activity 3 - Concrete Structure NSL base & wall (ID :11120NS43300)

From	25-Aug-16	To	30-Sep-16	Duration:	1.2	months
Plant	Percentage of Usage (%)	Plan Size				Area in term of Time of Usage (m ²)
		B (m)	L (m)	No. of Item	Area(m ²)	
Modified Crane #	-	-	-	4	-	-
Bar bender and cutter #	-	-	-	8	-	-
concrete mixer truck	30	2.4	10	8	192	57.6
concrete poker vibrator #	-	-	-	8	-	-
concrete pump truck	30	2.4	10	4	96	28.8
backhoe	30	3.2	8	4	102.4	30.72
dump truck	30	2.4	10	8	192	57.6
					Total:	174.72
Activity 3					Percentage of Usage Area to Works Area:	15.5%
					Percentage of Yearly Usage:	1.53%

Combined Yearly Percentage	11.4%
Yearly Percentage adopted in Dust model as the worst case	15.0%

Notes:

No dust generated machine