

Shatin to Central Link - Protection Works at CBTS (ME4 option)

Yearly Estimate - 1 Jul 2012 to 30 Jun 2013

Total works area = 17437 m²**Protection Works at CBTS****Activity 1 - Filling behind Temporary Seawall**

From:	1-Jul-12	To:	31-Aug-12	Duration:	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)	
Derrick Barge*	100	-	-	2	-	-
Barge*	100	-	-	2	-	-
Bulldozer	100	5.4	10.9	2	117.7	117.7
Tug Boat*	100	-	-	2	-	-
Total:						117.72
Activity 1	Percentage of Usage Area to Works Area:					0.7%
	Percentage of Yearly Usage:					0.11%

* Marine plant which would not contribute to active area.

Activity 2 - Diaphragm Wall Construction

From:	1-Jul-12	To:	31-Dec-12	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)	
Crane #	100	-	-	4	-	-
Excavator	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	8	192	192
Concrete Pump Truck	100	2.4	10	4	96	96
Concrete Lorry Mixer	100	2.4	10	4	96	96
Bentonite Plants #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Diaphragm Wall Rigs	100	4.5	8	4	144	144
Total:						630.4
Activity 2	Percentage of Usage Area to Works Area:					3.6%
	Percentage of Yearly Usage:					1.81%

Activity 3 - Excavation

From:	1-Dec-12	To:	30-Apr-13	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)	
Excavator	100	3.2	8	8	204.8	204.8
Dump Truck	100	2.4	10	24	576	576
Total:						780.8
Activity 3	Percentage of Usage Area to Works Area:					4.5%
	Percentage of Yearly Usage:					1.87%

Activity 4 - Construction of tunnel box structure

From:	1-Feb-13	To:	30-Jun-13	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)	
Crane #	100	-	-	2	-	-
Concrete Pump Truck	100	2.4	10	4	96	96
Concrete Lorry Mixer	100	2.4	10	8	192	192
Poker Vibrator #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	4	-	-
Total:						288
Activity 4	Percentage of Usage Area to Works Area:					1.7%
	Percentage of Yearly Usage:					0.69%
Combined Yearly Percentage						4.5%

Remark:

* Marine plant which would not contribute to active area.

WDII and CWB at CBTS

Yearly Estimate - Mid 2011 to Early 2012
(Scenario 1)

TCBR1E - CWB Tunnel

Total works area = 6832 m²

Activity 1 - Excavation

From:	1-Jun-11	To:	8-Sep-11	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)	
Excavator	70	3.2	8	4	102.4	71.68
Dump Truck	100	2.4	10	12	288	288
Total:						359.68
Activity 1						Percentage of Usage Area to Works Area: 5.3%
						Percentage of Yearly Usage: 1.32%

Activity 2 - Construction of slabs

From:	1-Sep-11	To:	30-Oct-11	Duration:	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)	
Crane #	70	-	-	2	-	-
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	8	192	192
Poker Vibrator #	70	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	4	-	-
Total:						192
Activity 2						Percentage of Usage Area to Works Area: 2.8%
						Percentage of Yearly Usage: 0.47%

Activity 3 - Backfill

From:	1-Nov-11	To:	20-Nov-11	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	70	3.2	8	4	102.4	71.68
Roller	100	5.8	2.5	2	29	29
Bulldozer	100	5.4	10.9	2	117.7	117.7
Dump Truck	100	2.4	10	4	96	96
Total:						314.4
Activity 3						Percentage of Usage Area to Works Area: 4.6%
						Percentage of Yearly Usage: 0.38%
Combined Yearly Percentage						2.2%

Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTSYearly Estimate - Mid 2011 to Early 2012
(Scenario 1)**TCBR1W - CWB Tunnel**Total works area = 11314 m²**Activity 1 - Diaphragm Wall Construction**

From:	1-Jun-11	To:	12-Oct-11	Duration:	4	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)		
Crane #	100	-	-	4	-	-	
Excavator	100	3.2	8	4	102.4	102.4	
Dump Truck	100	2.4	10	8	192	192	
Concrete Pump #	100	-	-	4	-	-	
Concrete Lorry Mixer	100	2.4	10	4	96	96	
Bentonite Plants #	100	-	-	4	-	-	
Bar Bender #	100	-	-	2	-	-	
Diaphragm Wall Rigs	100	4.5	8	4	144	144	
Total:						534.4	
Activity 1						Percentage of Usage Area to Works Area:	4.7%
						Percentage of Yearly Usage:	1.57%

Activity 2 - Excavation

From:	4-Aug-11	To:	8-Feb-12	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	100	3.2	8	8	204.8	204.8	
Dump Truck	100	2.4	10	24	576	576	
Total:						780.8	
Activity 2						Percentage of Usage Area to Works Area:	6.9%
						Percentage of Yearly Usage:	3.45%

Activity 3 - Construction of slabs

From:	24-Jan-12	To:	30-Mar-12	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)		
Crane #	100	-	-	2	-	-	
Concrete Pump #	100	-	-	4	-	-	
Concrete Lorry Mixer	100	2.4	10	8	192	192	
Poker Vibrator #	100	-	-	4	-	-	
Bar Bender #	100	-	-	2	-	-	
Air Compressor #	100	-	-	4	-	-	
Total:						192	
Activity 3						Percentage of Usage Area to Works Area:	1.7%
						Percentage of Yearly Usage:	0.28%
Combined Yearly Percentage						5.3%	

Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTS

Yearly Estimate - Mid 2011 to Early 2012
(Scenario 1)

TCBR2 - CWB Tunnel

Total works area = 9159 m²

Activity 1 - Diaphragm Wall Construction

From:	9-Jun-11	To:	29-Oct-11	Duration:	5	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)	
Crane #	100	-	-	4	-	-
Excavator	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	8	192	192
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	4	96	96
Bentonite Plants #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Diaphragm Wall Rigs	100	4.5	8	4	144	144
Total:						534.4
Activity 1	Percentage of Usage Area to Works Area:					5.8%
	Percentage of Yearly Usage:					2.43%
Combined Yearly Percentage						2.4%

Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

Appendix 5.3 Justification for the percentage of Annual Average Active Area

WDII and CWB at CBTS

Yearly Estimate - Mid 2011 to Early 2012
(Scenario 1)

TPCWAE - CWB Tunnel

Total works area = 7681 m²

Activity 1 - Excavation

From:	1-Jun-11	To:	15-Jun-11	Duration:	0.5	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	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	12	288	288
		Total:				390.4
Activity 1		Percentage of Usage Area to Works Area:				5.1%
		Percentage of Yearly Usage:				0.21%

Activity 2 - Construction of slabs

From:	16-Jun-11	To:	27-Aug-11	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)	
Crane #	100	-	-	2	-	-
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	8	192	192
Poker Vibrator #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	4	-	-
		Total:				192
Activity 2		Percentage of Usage Area to Works Area:				2.5%
		Percentage of Yearly Usage:				0.42%

Combined Yearly Percentage						0.6%
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Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTS

Yearly Estimate - Mid 2011 to Early 2012
(Scenario 1)

WCR1 - CWB Tunnel, Drainage & Cooling Water

Total works area = 8223 m²

CWB Tunnel

Activity 1 - Diaphragm Wall Construction

From:	1-Jun-11	To:	1-Jul-11	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)	
Crane #	100	-	-	4	-	-
Excavator	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	8	192	192
Concrete Pump #	100	-	-	4	-	-
Concrete Truck	100	2.4	10	4	96	96
Bentonite Plants #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Diaphragm Wall Rigs	100	4.5	8	4	144	144
Total:						534.4
Activity 1	Percentage of Usage Area to Works Area:					6.5%
	Percentage of Yearly Usage:					0.54%

Activity 2 - Excavation

From:	1-Jun-11	To:	30-Sep-11	Duration:	4	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	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	12	288	288
Total:						390.4
Activity 2	Percentage of Usage Area to Works Area:					4.7%
	Percentage of Yearly Usage:					1.58%

Activity 3 - Construction of slabs

From:	14-Aug-11	To:	28-Oct-11	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)	
Crane #	100	-	-	2	-	-
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	8	192	192
Poker Vibrator #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	4	-	-
Total:						192
Activity 3	Percentage of Usage Area to Works Area:					2.3%
	Percentage of Yearly Usage:					0.39%

Activity 4 - Backfill

From:	29-Oct-11	To:	28-Jan-12	Duration:	3	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	100	3.2	8	4	102.4	102.4
Roller	100	5.8	2.5	2	29	29
Bulldozer	100	5.4	10.9	2	117.7	117.7
Dump Truck	100	2.4	10	4	96	96
Total:						345.12
Activity 4	Percentage of Usage Area to Works Area:					4.2%
	Percentage of Yearly Usage:					1.05%

Appendix 5.3 Justification for the percentage of Annual Average Active Area

Drainage Culverts

Activity 1 - Drainage Culverts (2 cell)

From:	29-Oct-11	To:	26-Feb-12	Duration:	4	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)	
Dump Truck	100	2.4	10	4	96	96
Concrete Lorry Mixer	100	2.4	10	2	48	48
Excavator	100	3.2	8	2	51.2	51.2
Poker Vibrator #	100	-	-	4	-	-
Bulldozer	100	5.4	10.9	2	117.7	117.7
Roller	100	5.8	2.5	2	29	29
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	2	-	-
Total:						341.92
Activity 1	Percentage of Usage Area to Works Area:					4.2%
	Percentage of Yearly Usage:					1.39%

Cooling Water System

Activity 1 - Pipeline Works

From:	29-Oct-11	To:	27-Nov-11	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)	
Crane #	100	-	-	2	-	-
Excavator	100	3.2	8	2	51.2	51.2
Dump Truck	100	2.4	10	2	48	48
Concrete Lorry Mixer	100	2.4	10	2	48	48
Poker Vibrator #	100	-	-	4	-	-
Air Compressor #	100	-	-	2	-	-
Compactor	100	1.4	4.2	1	5.88	5.88
Total:						147.2
Activity 1	Percentage of Usage Area to Works Area:					1.8%
	Percentage of Yearly Usage:					0.15%
Combined Yearly Percentage						5.1%

Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTS

Yearly Estimate - Mid 2012 to Early 2013
(Scenario 2)

TCBR1W - CWB Tunnel

Total works area = 11314 m²

Activity 1 - Backfill

From:	28-Nov-12	To:	29-Mar-13	Duration:	4	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	100	3.2	8	4	102.4	102.4
Roller	100	5.8	2.5	2	29	29
Bulldozer	100	5.4	10.9	2	117.7	117.7
Dump Truck	100	2.4	10	4	96	96
Total:						345.12
Activity 1	Percentage of Usage Area to Works Area:					3.1%
	Percentage of Yearly Usage:					1.02%
Combined Yearly Percentage						1.0%

Appendix 5.3 Justification for the percentage of Annual Average Active Area

WDII and CWB at CBTS

Yearly Estimate - Mid 2012 to Early 2013
(Scenario 2)

TCBR2 - CWB Tunnel

Total works area = 9159 m²

Activity 1 - Excavation

From:	25-May-12	To:	19-Dec-12	Duration:	7	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	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	12	288	288
Total:						390.4
Activity 1	Percentage of Usage Area to Works Area:					4.3%
	Percentage of Yearly Usage:					2.49%

Activity 2 - Construction of slabs

From:	20-Dec-12	To:	9-Mar-13	Duration:	3	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)	
Crane #	100	-	-	2	-	-
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	8	192	192
Poker Vibrator #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Air Compressor #	100	-	-	4	-	-
Total:						192
Activity 2	Percentage of Usage Area to Works Area:					2.1%
	Percentage of Yearly Usage:					0.52%

Activity 3 - Backfill

From:	10-Mar-13	To:	25-Apr-13	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	100	3.2	8	4	102.4	102.4
Roller	100	5.8	2.5	2	29	29
Bulldozer	100	5.4	10.9	2	117.7	117.7
Dump Truck	100	2.4	10	4	96	96
Total:						345.12
Activity 3	Percentage of Usage Area to Works Area:					3.8%
	Percentage of Yearly Usage:					0.63%

Combined Yearly Percentage						3.6%
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Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTS

Yearly Estimate - Mid 2012 to Early 2013
(Scenario 2)

TCBR3 - CWB Tunnel

Total works area = 10467 m²

Activity 1 - Diaphragm Wall Construction

From:	25-Aug-12	To:	27-Jan-13	Duration:	5	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)	
Crane #	100	-	-	4	-	-
Excavator	100	3.2	8	4	102.4	102.4
Dump Truck	100	2.4	10	8	192	192
Concrete Pump #	100	-	-	4	-	-
Concrete Lorry Mixer	100	2.4	10	4	96	96
Bentonite Plants #	100	-	-	4	-	-
Bar Bender #	100	-	-	2	-	-
Diaphragm Wall Rigs	100	4.5	8	4	144	144
Total:						534.4
Activity 1	Percentage of Usage Area to Works Area:					5.1%
	Percentage of Yearly Usage:					2.13%
Combined Yearly Percentage						2.1%

Notes:

* Marine plant which would not contribute to active area.

No dust generated machine

WDII and CWB at CBTS

Yearly Estimate - Mid 2012 to Early 2013
(Scenario 2)

TPCWAE - CWB Tunnel

Total works area = 7681 m²

Activity 1 - Backfill

From:	28-Nov-12	To:	24-Feb-13	Duration:	3	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	100	3.2	8	4	102.4	102.4
Roller	100	5.8	2.5	2	29	29
Bulldozer	100	5.4	10.9	2	117.7	117.7
Dump Truck	100	2.4	10	4	96	96
Total:						345.12
Activity 1	Percentage of Usage Area to Works Area:					4.5%
	Percentage of Yearly Usage:					1.12%
Combined Yearly Percentage						1.1%