

Lok Ma Chau Loop Environmental Impact Assessment
Active Construction Area Estimate

1) Yearly Estimate - 2016

Works Area = 840,000 m²
(total area for Contract B and C)

Activity 1 - Zone 1 - Remove Surplus Surcharge to Zone 3 (Contract B 9.2.4.3)

From:	30-May-16	To:	09-Aug-16	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	100	4			400	1600
Dump Truck	100	8			400	3200
						0
						0
Total:						4800
Activity 1						Percentage of Usage Area to Works Area: 0.57%
						Percentage of Yearly Usage: 0.11%

Activity 2 - Zone 2 - Import Fill from Fill Bank and Vertical Wick Drain (Contract B 9.2.5.1 & 9.2.5.2)

From:	01-Jan-16	To:	28-Jul-16	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)	
Backhoe	70	2			400	560
Roller	70	2			400	560
Dump Truck	100	8			400	3200
Bulldozer	50	1			400	200
Motor Grader	50	2			400	400
Vertical band drain installation rig	100	8			400	3200
Total:						8120
Activity 2						Percentage of Usage Area to Works Area: 0.97%
						Percentage of Yearly Usage: 0.55%

Activity 3 - Zone 3 - Inert Fill from Zone 1 (Contract B 9.2.6.1)

From:	30-May-16	To:	09-Aug-16	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)	
Backhoe	70	2			400	560
Roller	70	2			400	560
Dump Truck	100	8			400	3200
Bulldozer	50	1			400	200
Motor Grader	50	2			400	400
Vertical band drain installation rig	100	8			400	3200
Total:						8120
Activity 3						Percentage of Usage Area to Works Area: 0.97%
						Percentage of Yearly Usage: 0.19%

Activity 4 - Zone 3 - Import Fill from Fill Bank and Vertical Wick Drain (Contract B 9.2.6.2)

From:	28-Jul-16	To:	22-Sep-16	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)	
Backhoe	70	2			400	560
Roller	70	2			400	560
Dump Truck	100	8			400	3200
Bulldozer	50	1			400	200
Motor Grader	50	2			400	400
Vertical band drain installation rig	100	8			400	3200
						0
Total:						8120
Activity 4						Percentage of Usage Area to Works Area: 0.97%
						Percentage of Yearly Usage: 0.15%

Activity 5 - Zone 4 - Swamp Deposit to Zone 5 (Contract B 9.2.7.1)

From:	09-Aug-16	To:	15-Sep-16	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	100	4			400	1600
Dump Truck	100	8			400	3200
						0
						0
Total:						4800
Activity 5						Percentage of Usage Area to Works Area: 0.57%
						Percentage of Yearly Usage: 0.06%

Activity 6 - Zone 5 - Swamp Deposit from Zone 4 (Contract B 9.2.8.1)

From:	09-Aug-16	To:	15-Sep-16	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)	
Backhoe	70	2			400	560
Roller	70	2			400	560
Dump Truck	100	8			400	3200
Bulldozer	50	1			400	200
Motor Grader	50	2			400	400

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Works Area = 840,000 m²

(total area for Contract B and C)

* Remarks : Vertical drain is installed in year 2017						
					Total:	4920
Activity 6	Percentage of Usage Area to Works Area:					0.59%
	Percentage of Yearly Usage:					0.06%

Activity 7 - Construction at Western Connection Road (Lok Ma Chau Road) (Contract C 10.2.2)

From:	29-Jun-16	To:	31-Dec-16	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)	
Vertical band drain / stone column installat	100	2			30	60
Hand held breaker	30	2			30	18
Compactor, vibratory	30	2			30	18
Backactor	30	2			30	18
Concrete mixer truck	60	2			30	36
Asphalt paver	60	2			30	36
Roller	60	2			30	36
Vibratory poker	60	2			30	36
					Total:	258
Activity 7	Percentage of Usage Area to Works Area:					0.03%
	Percentage of Yearly Usage:					0.02%

Activity 8 - Construction at Junction Improvement Works (Lok Ma Chau Road - Castle Peak Road) (Contract C 10.2.4)

From:	29-Jun-16	To:	31-Dec-16	Duration:	6	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	30	2			30	18
Compactor, vibratory	30	4			30	36
Backactor	30	2			30	18
Concrete mixer truck	60	4			30	72
Asphalt paver	60	2			30	36
Roller	60	2			30	36
Vibratory poker	60	4			30	72
Bar bender, cutter	50	2			30	30
Air compressor	30	2			30	18
						0
						0
					Total:	336
Activity 8	Percentage of Usage Area to Works Area:					0.04%
	Percentage of Yearly Usage:					0.02%

Activity 9 - Construction at Lok Ma Chau Station Connection (Contract C 10.2.7)

From:	29-Jun-16	To:	31-Dec-16	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)	
Hand held breaker	30	2			30	18
Compactor, vibratory	30	4			30	36
Backactor	30	2			30	18
Concrete mixer truck	60	4			30	72
Asphalt paver	60	2			30	36
Roller	60	2			30	36
Vibratory poker	60	4			30	72
Bar bender, cutter	50	2			30	30
Air compressor	30	2			30	18
						0
					Total:	336
Activity 9	Percentage of Usage Area to Works Area:					0.04%
	Percentage of Yearly Usage:					0.02%

Combined Percentage for Activities		1.184% <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.

Lok Ma Chau Loop Environmental Impact Assessment
Active Construction Area Estimate

1) Yearly Estimate - 2025

Works Area = 60,000 m²

(total area for Contract F)

Activity 1 - Construction at Eastern Connect Road (except pond and meander area) (Contract F 24.2.1, 24.2.2 & 24.2.3)

From:	01-Jan-25	To:	31-Dec-25	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)	
Vertical band drain / stone column installat	100	3			30	90
Hand held breaker	30	3			30	27
Compactor, vibratory	30	6			30	54
Backactor	30	4			30	36
Concrete mixer truck	60	6			30	108
Asphalt paver	60	3			30	54
Roller	60	3			30	54
Vibratory poker	60	6			30	108
Bar bender, cutter	50	2			30	30
Air compressor	30	2			30	18
						0
					Total:	579
Activity 1	Percentage of Usage Area to Works Area:					0.97%
	Percentage of Yearly Usage:					0.96%

Activity 2 - Internal Roads, Drainage & Utilities (Zone 4 to Zone 5) (Contract F 24.2.4)

From:	01-Jan-25	To:	31-Dec-25	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)	
Hand held breaker	30	2			30	18
Compactor, vibratory	30	2			30	18
Backactor	30	2			30	18
Concrete mixer truck	60	2			30	36
Asphalt paver	60	2			30	36
Roller	60	2			30	36
Vibratory poker	60	2			30	36
					Total:	198
Activity 2	Percentage of Usage Area to Works Area:					0.33%
	Percentage of Yearly Usage:					0.33%

Combined Percentage for Activities		1.291%
		<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.