

Appendix E

Table E1 Plant Inventory for Different Construction Tasks in Sai Ying Pun

A. Trench Dredging

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Grab dredgers	CNP 063	2	112	115
Hopper barges #	-	2	-	-
Tug boats	CNP 221	2	110	113
Crane, barge mounted	CNP 048	2	112	115
Total SWL				119

B. Setting up of Temporary Platform

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Marine piling vessel	CNP 165*	-	-	-
Hopper barges #	-	-	-	-
Tug boats	CNP 221	-	-	-
Crane, barge mounted	CNP 048	-	-	-
Total SWL				-

C. Pipe preparation

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Truck/ lorry	CNP 141	-	-	-
Crane, mobile/barge mounted (diesel)	CNP 048	-	-	-
Total SWL				-

D. Pipe Laying - Bottom Pull

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, mobile	CNP 048	-	-	-
Generator	CNP 102	1	100	100
Winch (pneumatic)	CNP 261	1	110	110
Water pump (electric)	CNP 281	2	88	91
Total SWL				110

E. Backfilling

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, barge mounted	CNP 048	2	112	115
Hopper barges #	-	2	-	-
Tug boats	CNP 221	2	110	113
Total SWL				117

F. Seawall Reinstatement

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, mobile/barge mounted	CNP 048	1	112	112
Truck / lorry	CNP 141	2	112	115
Piling machine	CNP 163	1	90	90
Total SWL				117

Note:

No noise is emitted from hopper barges.

* The Marine piling vessel is assumed to be an oscillator piling plant.

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Table E2 Calculation of Construction Noise Levels in Sai Ying Pun (RWM) during Normal Daytime Working Hour (0700 to 1900 on weekday) (Unmitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities															
					Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	
					Trench Dredging					Set up Temporary Platform			Pipe Preparation			Pipe laying			Backfilling	
Trench Dredging	119	215	-55	3	68	68	68	68	68	68	68	68	68	-	-	-	-	-	-	-
Set up Temporary Platform	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pipe Preparation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pipe laying	110	215	-55	3	-	-	-	-	-	-	-	-	-	59	59	59	-	-	-	-
Backfilling	117	215	-55	3	-	-	-	-	-	-	-	-	-	-	-	-	65	65	65	-
Seawall Reinstatement	117	215	-55	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	65
Total dB(A)					68	68	68	68	68	68	68	68	68	59	59	59	65	65	68	65
Criteria dB(A)					75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75

Table E3 Calculation of Construction Noise Levels during evening (1900 to 2300 hours) and night-time (2300 to 0700 hours) in Sai Ying Pun (RWM) (Mitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities				
					Jan-09	Feb-09	Mar-09	Apr-09	May-09
					Trench Dredging				
Trench Dredging	119	215	-55	3	68	68	68	68	68
Total dB(A)					68	68	68	68	68
Criteria (evening) dB(A)					70	70	70	70	70
Criteria (night-time) dB(A)					55	55	55	55	55

Note: Bold Characters indicate that the predicted noise level exceeds the Noise Criteria

Table E4 Calculation of Construction Noise Levels during evening (1900 to 2300 hours) and night-time (2300 to 0700 hours) in Sai Ying Pun (RWM) (Mitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities				
					Jan-09	Feb-09	Mar-09	Apr-09	May-09
					Trench Dredging				
Trench Dredging	119	900	-67	3	55	55	55	55	55
Total dB(A)					55	55	55	55	55
Criteria (evening) dB(A)					70	70	70	70	70
Criteria (night-time) dB(A)					55	55	55	55	55

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Table E5 Plant Inventory for Different Construction Tasks in West Kowloon

A. Trench Dredging

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Grab dredgers	CNP 063	2	112	115
Hopper barges #	-	2	-	-
Tug boats	CNP 221	2	110	113
Crane, barge mounted	CNP 048	2	112	115
Total SWL				119

B. Setting up of Temporary Platform

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Marine piling vessel	CNP 165*	2	115	118
Hopper barges #	-	4	-	-
Tug boats	CNP 221	2	110	113
Crane, barge mounted	CNP 048	2	112	115
Total SWL				121

C. Pipe preparation

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Truck/ lorry	CNP 141	2	112	115
Crane, mobile/barge mounted (diesel)	CNP 048	2	112	115
Total SWL				118

D. Pipe Laying - Bottom Pull

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, mobile	CNP 048	1	112	112
Generator	CNP 102	1	100	100
Winch (pneumatic)	CNP 261	-	-	-
Water pump (electric)	CNP 281	-	-	-
Total SWL				112

E. Backfilling

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, barge mounted	CNP 048	2	112	115
Hopper barges #	-	2	-	-
Tug boats	CNP 221	2	110	113
Total SWL				117

F. Seawall Reinstatement

Powered Mechanical Equipment (PME)	CNP	No. of Plants	SWL/Unit, dB(A)	SWL, dB(A)
Crane, mobile/barge mounted	CNP 048	1	112	112
Truck / lorry	CNP 141	2	112	115
Piling machine	CNP 163	1	90	90
Total SWL				117

Note:

No noise is emitted from hopper barges.

* The Marine piling vessel is assumed to be an oscillator piling plant.

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Table E6 Calculation of Construction Noise Levels in West Kowloon (KS6) during Normal Daytime Working Hour (0700 to 1900 on weekday) (Unmitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities																
					Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10		
					Trench Dredging					Set up Temporary Platform			Pipe Preparation		Pipe laying			Backfilling			Seawall Reinstatement
Trench Dredging	119	580	-63	3	59	59	59	59	59	59	59	59	59	-	-	-	-	-	-	-	
Set up Temporary Platform	121	580	-63	3	-	-	-	-	60	60	60	60	-	-	-	-	-	-	-	-	
Pipe Preparation	118	580	-63	3	-	-	-	-	-	-	58	58	58	58	-	-	-	-	-	-	
Pipe laying	112	580	-63	3	-	-	-	-	-	-	-	-	52	52	52	-	-	-	-	-	
Backfilling	117	580	-63	3	-	-	-	-	-	-	-	-	-	-	-	57	57	57	57	-	
Seawall Reinstatement	117	580	-63	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	57	
Total dB(A)					59	59	59	59	63	63	64	64	59	59	52	57	57	60	57	57	
Criteria dB(A)					75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75

Table E7 Calculation of Construction Noise Levels during evening (1900 to 2300 hours) and night-time (2300 to 0700 hours) in West Kowloon (KS6) (Mitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities				
					Jan-09	Feb-09	Mar-09	Apr-09	May-09
					Trench Dredging				
Trench Dredging	119	580	-63	3	59	59	59	59	59
Total dB(A)					59	59	59	59	59
Criteria (evening) dB(A)					70	70	70	70	70
Criteria (night-time) dB(A)					55	55	55	55	55

Note: Bold Characters indicate that the predicted noise level exceeds the Noise Criteria

Table E8 Calculation of Construction Noise Levels during evening (1900 to 2300 hours) and night-time (2300 to 0700 hours) in West Kowloon (KS6) (Mitigated)

	Sub-SWL, dB(A)	Distance (m)	Distance Attenuation, dB(A)	Facade correction dB(A)	Month / Activities				
					Jan-09	Feb-09	Mar-09	Apr-09	May-09
					Trench Dredging				
Trench Dredging	119	900	-67	3	55	55	55	55	55
Total dB(A)					55	55	55	55	55
Criteria (evening) dB(A)					70	70	70	70	70
Criteria (night-time) dB(A)					55	55	55	55	55