

Installation of Submarine Gas Pipelines
and Associated Facilities from
To Kwa Wan to North Point for Former Kai Tak Airport Development
Consultancy Services for Feasibility Study and Detailed Design
Environmental Impact Assessment Report



Appendix I4

Further Mitigated Construction Noise Levels

PME	TM or other reference	No. of PME	SWL, dB(A)	% on time	Noise Mitigation Measure	Screening Corr., dB(A)	Total SWL, dB(A)
Stage 1 - Trench Dredging							
Dredger, grab	CNP 063	1	112	100%		0.0	112
Tug boat	CNP 221	4	110	100%		0.0	116
						Total	117
Stage 2a - Pipe Laying (At sea)							
Derrick barge	CNP 061	6	104	100%		0.0	112
Tug boat	CNP 221	4	110	100%		0.0	116
Mobile crane	BS 5228 Table C.7/114	5	101	100%		0.0	108
						Total	118
Stage 2b - Pipe Laying (On land)							
Winch (pneumatic)	CNP 261	1	110	100%	Movable Noise Barrier	-10.0	100
Generator, super silenced, 70 dB(A) at 7 m	CNP 103	2	95	100%	Movable Noise Barrier	-10.0	88
Mobile crane	BS 5228 Table C.7/114	1	101	100%		0.0	101
Air compressor, air flow > 10m ³ /min and ≤ 30m ³ /min	CNP 002	2	102	100%	Movable Noise Barrier	-10.0	95
						Total	104
Stage 3 - Backfilling							
Derrick barge	CNP 061	1	104	100%		0.0	104
Tug boat	CNP 221	4	110	100%		0.0	116
						Total	116

**Construction Noise Levels -
Marine Dredging Works (Mitigated)**

NSRs	Floor	Slant Distance to the Nearest Marine Construction Activities, (m)	Slant Distance to the Nearest Land Construction Activities, (m)	Distance Correction, dB(A) for Marine Construction Activities	Distance Correction, dB(A) for Land Construction Activities	Façade Correction, dB(A)	Construction Activities and Maximum SWL, dB(A)				Maximum SPL, dB(A)
							Trench Dredging	Pipe Laying (at sea)	Pipe Laying (on land)	Backfilling	
							117	118	104	116	
SCH01	1/F	370.0	176.0	-59	-53	3	61	62	54	60	62
	2/F	370.1	176.1	-59	-53	3	61	62	54	60	62
	4/F	370.2	176.4	-59	-53	3	61	62	54	60	62
SCH02	1/F	346.0	144.1	-59	-51	3	62	62	56	61	62
	3/F	346.1	144.3	-59	-51	3	62	62	56	61	62
	6/F	346.5	145.1	-59	-51	3	62	62	56	60	62
WFM	1/F	449.3	241.5	-61	-56	3	59	60	52	58	60
	8/F	450.4	243.6	-61	-56	3	59	60	51	58	60
	15/F	452.4	247.3	-61	-56	3	59	60	51	58	60
SUV	1/F	427.1	245.2	-61	-56	3	60	60	51	59	60
	18/F	430.8	251.5	-61	-56	3	60	60	51	59	60
	30/F	436.5	261.2	-61	-56	3	60	60	51	58	60
MHE	1/F	334.0	159.0	-58	-52	3	62	62	55	61	62
	5/F	334.3	159.7	-58	-52	3	62	62	55	61	62
	9/F	335.0	161.1	-59	-52	3	62	62	55	61	62
KCM	1/F	325.0	174.1	-58	-53	3	62	63	54	61	63
	4/F	325.3	174.5	-58	-53	3	62	63	54	61	63
	7/F	325.7	175.3	-58	-53	3	62	63	54	61	63
LKB	1/F	400.0	246.0	-60	-56	3	60	61	51	59	61
	4/F	400.1	246.2	-60	-56	3	60	61	51	59	61
	7/F	400.5	246.7	-60	-56	3	60	61	51	59	61
FSQ	1/F	209.0	122.0	-54	-50	3	66	66	57	65	66
	4/F	209.2	122.4	-54	-50	3	66	66	57	65	66
	7/F	209.8	123.4	-54	-50	3	66	66	57	65	66

PME	TM or other reference	No. of PME	SWL, dB(A)	% on time	Total SWL, dB(A)
Stage 1 - Mobilization/Site Preparation					
Breaker, excavator mounted (hydraulic), 52kW	BS 5228 Table C.8/12	1	106	50%	103
Excavator (45kW)	BS 5228 Table C.3/35	1	106	50%	103
Lorry	CNP 141	1	112	50%	109
				Total	111
Stage 2a - Landfall Site Construction (Seawall demolition)					
Breaker, excavator mounted (hydraulic), 52kW	BS 5228 Table C.8/12	2	106	50%	106
Air compressor, air flow > 10m3/min and <= 30m3/min	CNP 002	2	102	100%	105
Mobile crane	BS 5228 Table C.7/114	1	101	100%	101
Dump truck (50t)	BS 5228 Table C.3/39	1	103	50%	100
Generator, super silenced, 70 dB(A) at 7 m	CNP 103	1	95	100%	95
				Total	110
Stage 2b - Seawall reinstatement					
Mobile crane	BS 5228 Table C.7/114	1	101	100%	101
Dump truck (50t)	BS 5228 Table C.3/39	1	103	50%	100
Excavator (45kW)	BS 5228 Table C.3/35	1	106	50%	103
Tracked loader lorry, 310 kW	BS 5228 Table C.3/59	1	105	50%	102
Road roller	BS 5228 Table C.8/30	1	101	100%	101
				Total	109
Stage 3a - Construction of pigging station - Surface reinstatement					
Group 1 - Site Excavation					
Excavator/ loader, wheeled/ tracked	CNP 081	1	112	30%	107
				Total	107
Group 2 - Filling					
Dump truck (50t)	BS 5228 Table C.3/39	1	103	30%	98
				Total	98
Group 3 - Surface Reinstatement					
Road roller	BS 5228 Table C.8/30	1	101	30%	96
Poker, vibratory, hand-held	BS 5228 Table C.6/40	1	98	30%	93
				Total	98
				Max =	107
Stage 3b - Construction of pigging station - Facilities installation					
Group 1 - Transportation of Material					
Tracked loader lorry, 310 kW	BS 5228 Table C.3/59	1	105	25%	99
				Total	99
Group 2 - Facilities Installation					
Generator, super silenced, 70 dB(A) at 7 m	CNP 103	1	95	100%	95
Concrete lorry mixer (6m3)	BS 5228 Table C.6/23	1	100	30%	95
Poker, vibratory, hand-held	BS 5228 Table C.6/40	1	98	30%	93
Excavator (45kW)	BS 5228 Table C.3/35	1	106	30%	101
				Total	103
				Max =	103
Overall Maximum of Stage 3					107

**Construction Noise Levels -
Seawall Demolition and Reinstatement (Mitigated)**

NSRs	Floor	Slant Distance to the Nearest Construction Activities, (m)	Distance Correction, dB(A)	Façade Correction, dB(A)	Construction Activities and Maximum SWL, dB(A)	Construction Activities and Maximum SWL, dB(A)
					Landfall Site Construction (Seawall Demolition)	Seawall Reinstatement
					110	109
SCH01	1/F	176.0	-53	3	60	59
	2/F	176.1	-53	3	60	59
	4/F	176.4	-53	3	60	59
SCH02	1/F	144.1	-51	3	62	60
	3/F	144.3	-51	3	62	60
	6/F	145.1	-51	3	62	60
WFM	1/F	241.5	-56	3	57	56
	8/F	243.6	-56	3	57	56
	15/F	247.3	-56	3	57	56
SUV	1/F	245.2	-56	3	57	56
	18/F	251.5	-56	3	57	55
	30/F	261.2	-56	3	57	55
MHE	1/F	159.0	-52	3	61	59
	5/F	159.7	-52	3	61	59
	9/F	161.1	-52	3	61	59
KCM	1/F	174.1	-53	3	60	59
	4/F	174.5	-53	3	60	59
	7/F	175.3	-53	3	60	59
LKB	1/F	246.0	-56	3	57	56
	4/F	246.2	-56	3	57	56
	7/F	246.7	-56	3	57	56
FSQ	1/F	122.0	-50	3	63	62
	4/F	122.4	-50	3	63	62
	7/F	123.4	-50	3	63	62

**Construction Noise Levels -
Mobilizations/ Site Preparation and Construction of Pigging Station (Mitigated)**

NSRs	Floor	Slant Distance to the Nearest Construction Activities, (m)	Distance Correction, dB(A)	Façade Correction, dB(A)	Construction Activities and Maximum SWL, dB(A)	
					Mobilization/Site Preparation	Construction of Pigging Station
					111	107
SCH01	1/F	122.1	-50	3	64	60
	2/F	122.2	-50	3	64	60
	4/F	122.6	-50	3	64	60
SCH02	1/F	121.1	-50	3	64	60
	3/F	121.4	-50	3	64	60
	6/F	122.3	-50	3	64	60
WFM	1/F	194.7	-54	3	60	56
	8/F	197.3	-54	3	60	56
	15/F	201.7	-54	3	60	56
SUV	1/F	230.2	-55	3	59	55
	18/F	236.9	-55	3	58	54
	30/F	247.2	-56	3	58	54
MHE	1/F	144.0	-51	3	63	59
	5/F	144.7	-51	3	63	59
	9/F	146.3	-51	3	62	58
KCM	1/F	190.1	-54	3	60	56
	4/F	190.5	-54	3	60	56
	7/F	191.2	-54	3	60	56
LKB	1/F	197.0	-54	3	60	56
	4/F	197.3	-54	3	60	56
	7/F	197.9	-54	3	60	56
FSQ	1/F	168.0	-53	3	61	57
	4/F	168.3	-53	3	61	57
	7/F	169.0	-53	3	61	57