

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

1. General

1.1 Site Clearance

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
Total SWL:									109

3 Lin Tak Road pick up/drop off construction

4 Cut Slope

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Total SWL:									103

5 Slope Drainage

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Total SWL:									101

6 Utility Installation

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Total SWL:									101

7 Formation of Carriageway

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Total SWL:									106

8 Pavement Construction

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Sub SWL:									105
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
Sub SWL:									100
Group 3*									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
Sub SWL:									83
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Sub SWL:									104
Total SWL:									105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

13 Junction Modification

PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	30%	90
Total SWL:									106

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

17 TKOR Slip Road near Hong Wah Court

18 Temp Cut Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Total SWL:									103

19 Retaining Wall

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	2	50%	94
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	40%	94
Sub SWL:									107
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Sub SWL:									103
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	50%	98
Sub SWL:									99
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Sub SWL:									106
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

20 Backfilling of Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Sub SWL:									103
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Sub SWL:									96
Total SWL:									103

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

21 Utility Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	1	40%	91
Total SWL:									101

22 Formation of Carriageway

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Total SWL:									104

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

306 23 Pavement Construction

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u> Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
									Sub SWL: 105
<u>Group 2*</u> Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
									Sub SWL: 100
<u>Group 3*</u> Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
									Sub SWL: 83
<u>Group 4*</u> Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
									Sub SWL: 104
									Total SWL: 105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

401 25 TKOR Slip Rd SMP Bound Re-alignment

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
									Total SWL: 106

402 27 Retaining Walls

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
									Total SWL: 106

403 28 Retaining Wall Structure

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u> Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	40%	94
									Sub SWL: 107
<u>Group 2*</u> Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
									Sub SWL: 103
<u>Group 3*</u> Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	50%	98
									Sub SWL: 99
<u>Group 4*</u> Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
									Sub SWL: 106
									Total SWL: 107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

404 29 Backfilling of Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u> Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
									Sub SWL: 103
<u>Group 2*</u> Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
									Sub SWL: 96
									Total SWL: 103

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

405 30 Utility Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
									Total SWL: 101

406 31 Utility Diversion

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
									Total SWL: 101

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

407 32 Formation of Carriageway

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Total SWL:									106

408 33 Pavement Construction

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Sub SWL:									105
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
Sub SWL:									100
<u>Group 3*</u>									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
Sub SWL:									83
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Sub SWL:									104
Total SWL:									105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

501 35 Flyover Construction

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Oscillator	CNP 165	115	CNP 165	115	Acoustic Mat -10	105	2	50%	105
Reverse Circulation Drill	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	2	100%	91
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	50%	101
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Total SWL:									109

502 37 Pile Cap

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	65%	95
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	65%	96
Sub SWL:									107
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									104
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	65%	86
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	65%	91
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	65%	99
Sub SWL:									100
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	65%	98
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									107
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

503 38 Bridge Pier and Abutment

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	65%	95
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	65%	96
Sub SWL:									107
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									104
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	65%	86
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	65%	91
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	65%	99
Sub SWL:									100
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	65%	98
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									107
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

504	39 In situ Deck PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>Group 1*</u>									
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	2	65%	95
	Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	65%	96
										Sub SWL: 107
	<u>Group 2*</u>									
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
										Sub SWL: 104
	<u>Group 3*</u>									
	Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	65%	86
	Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	65%	91
	Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	65%	99
										Sub SWL: 100
	<u>Group 4*</u>									
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
	Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	65%	98
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
										Sub SWL: 107
										Total SWL: 107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

505	40 Noise Barrier Installation	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>40.1 NB Column Post* PME</u>									
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
	Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
										Sub SWL: 106
	<u>40.2 NB Panel Installation* PME</u>									
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
	Cherry Picker	BS C4/54	107	BS C4/54	107	Barrier	102	2	30%	100
	Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
										Sub SWL: 107
										Total SWL: 107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

506	41 Pavement Construction	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>Group 1*</u>									
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
										Sub SWL: 105
	<u>Group 2*</u>									
	Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
	Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	99	1	80%	98
										Sub SWL: 100
	<u>Group 3*</u>									
	Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	85	1	65%	83
										Sub SWL: 83
	<u>Group 4*</u>									
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
	Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
										Sub SWL: 104
										Total SWL: 105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

601	43 SMPR Re-alignment	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>44 Utility Installation</u>									
	Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
	Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
	Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	1	50%	91
	Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	1	40%	91
										Total SWL: 101

602	45 Formation of Carriageway	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>PME</u>									
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
	Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
	Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
										Total SWL: 106

603	46 Pavement Construction	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	<u>PME</u>									
	<u>Group 1*</u>									
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
										Sub SWL: 105
	<u>Group 2*</u>									
	Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
	Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	99	1	80%	98
										Sub SWL: 100
	<u>Group 3*</u>									
	Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	85	1	65%	83
										Sub SWL: 83
	<u>Group 4*</u>									
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
	Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
										Sub SWL: 104
										Total SWL: 105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

604 47 Junction Modification

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	30%	90
Total SWL:									106

605 49 Semi-NE and NB along SMPR

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Total SWL:									101

606 51 Pile Foundation at Uphill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Total SWL:									106

607 52 Pile Cap at Uphill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	65%	95
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	65%	96
Sub SWL:									107
Group 2*									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									104
Group 3*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	65%	86
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	65%	91
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	65%	99
Sub SWL:									100
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	65%	98
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									107
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

608 53 Semi-NE and NB Column Post at Uphill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
Total SWL:									103

609 54 Pile foundation at Downhill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Total SWL:									106

610 55 Pile Cap at Downhill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	65%	95
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	65%	96
Sub SWL:									107
Group 2*									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102
Sub SWL:									104
Group 3*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	65%	86
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	65%	91
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	65%	99
Sub SWL:									100
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	65%	98
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	65%	102

Appendix 5.9 - Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For Sau Mau Ping Road and Lin Tak Road (Mitigated)

Task No.

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Sub SWL: 107
Total SWL: 107

611 56 Semi-NE Column Post at Downhill

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
Total SWL:									103

612 57 Semi-NE Roof Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Cherry Picker	BS C4/54	107	BS C4/54	107	Barrier	102	1	30%	97
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
Total SWL:									104

613 58 Panel Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Cherry Picker	BS C4/54	107	BS C4/54	107	Barrier	102	1	30%	97
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
Total SWL:									104

Model for quiet plant is for reference only. The Contrator might adpot other models of plant with lower SWL.

Reference for Hilti - TE 1500-AVR (Breaker): <https://www.us.hilti.com/drilling-%26-demolition/demolition-hammers-%26-breakers/r4422>

Reference for Sandhurst - XT-200 (Breaker), Makita - BSS501Z (Saw) and Hitachi Sumitomo SCX700 (Mobile crane) are made from Development of Anderson Road Quarry Schedule III EIA.

Reference is made to the QPME listed on the EPD website. Model for quiet plant is for reference only. The Contrator might adpot other models od plant with lower SWL.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

J/O New Clear Water Bay Road and Shun Lee Tsuen Road (Mitigated)

Task No.

1. General

1101 2 Site Clearance

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	- -	105	2	50%	105
Total SWL:									109

3 SLTR Slip Road

1201 4 Cut Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	3	65%	102
Total SWL:									107

1202 5 Retaining Walls

5.1 Foundation for Retaining Wall

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat	-10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	2	50%	94
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	2	30%	99	
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	- -	88	4	100%	94	
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%	104
Sub-Total SWL									106	

5.2 Retaining Wall Structure

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 2*										
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105	
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97	
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%	91
Sub SWL:									106	
Group 3*										
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97	
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96	
Sub SWL:									100	
Group 4*										
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	- -	90	1	50%	87	
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	-5	98	1	50%	95
Sub SWL:									96	
Group 5*										
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96	
Sub SWL:									105	
Total SWL:									106	

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1203 6 Backfilling of Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Sub SWL:									103
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	- -	97	1	80%	96
Sub SWL:									96
Total SWL:									103

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1204 7 Slope Drainage

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	1	30%	92
Total SWL:									101	

1205 8 Landscape Works for Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	- -	105	2	50%	105
Total SWL:									106

1206 9 Demolition Works of Existing Carriageway / Verge

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105	
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97	
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	1	65%	103
Sub SWL:									108	
Group 2*										
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105	
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	2	65%	106
Sub SWL:									109	
Group 3*										
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105	
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100	
Sub SWL:									106	
Total SWL:									109	

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

J/O New Clear Water Bay Road and Shun Lee Tsuen Road (Mitigated)

Task No.

1207 10 Utility Installation

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	2	50%
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%
Total SWL:									104

1208 11 Formation of Carriageway

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%
Road Roller	CNP 185	108	EPD-02216##	97	-	-	97	1	80%
Total SWL:									106

1209 12 Pavement Construction

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Sub SWL:									105
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	-	97	1	80%
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	-5	99	1	80%
Sub SWL:									100
<u>Group 3*</u>									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	-5	85	1	65%
Sub SWL:									83
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	2	30%
Sub SWL:									104
Total SWL:									105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1301 15 Demolition of Existing Subway

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	1	65%
Sub SWL:									108
<u>Group 2*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	2	65%
Sub SWL:									109
<u>Group 3*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	2	65%
Sub SWL:									106
Total SWL:									109

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1302 16 Re provisioning of Existing Subway

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	1	50%
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	1	100%
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	-	90	1	50%
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	-5	98	1	50%
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	1	50%
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	1	30%
Total SWL:									106

1303 17 Utility Installation

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%
Total SWL:									101

1304 18 Formation of Carriageway

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%
Road Roller	CNP 185	108	EPD-02216##	97	-	-	97	1	80%
Total SWL:									106

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

J/O New Clear Water Bay Road and Shun Lee Tsuen Road (Mitigated)

Task No.

1305 19 Pavement Construction

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Sub SWL:									105
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	- -	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
Sub SWL:									100
<u>Group 3*</u>									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
Sub SWL:									83
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Sub SWL:									104
Total SWL:									105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1306 20 Demolition Works of Existing Carriageway / Central Median

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	1	65%	103
Sub SWL:									108
<u>Group 2*</u>									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	2	65%	106
Sub SWL:									109
<u>Group 3*</u>									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Sub SWL:									106
Total SWL:									109

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

22 NE and NB of NCWBR Kowloon Bound

1401 23 Pile Foundation at Verge

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	2	30%	99
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	- -	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Total SWL:									106

1402 24 Pile Cap at Verge

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Sub SWL:									104
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Sub SWL:									100
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	- -	90	1	50%	87
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	1	50%	95
Sub SWL:									96
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Sub SWL:									103
Total SWL:									104

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1403 25 NE Column Post at Verge

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Lorry	CNP 141	112	CNP 069	105	- -	105	1	50%	102
Total SWL:									103

1404 26 Pile foundation at Central Median

PME	TM Ref / other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	2	50%	90
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	2	50%	94
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	2	30%	99
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Water Pump (electric)	CNP 281	88	CNP 281	88	- -	88	4	100%	94
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Total SWL:									106

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

J/O New Clear Water Bay Road and Shun Lee Tsuen Road (Mitigated)

Task No.

1405 <u>27 Pile Cap at Central Median</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*										
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	2	50%	94
	Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	40%	94
										Sub SWL: 107
Group 2*										
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
										Sub SWL: 103
Group 3*										
	Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
	Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
	Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	50%	98
										Sub SWL: 99
Group 4*										
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
	Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
										Sub SWL: 106
										Total SWL: 107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

1406 <u>28 NE Column Post at Central Median</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
	Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
										Total SWL: 103

1407 <u>29 NE Roof Installation</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
	Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	99	2	30%	97
	Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
										Total SWL: 106

1408 <u>30 NE Column Post at Central Median</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
	Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
										Total SWL: 103

1409 <u>31 Panel Installation</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
	Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	99	2	30%	97
	Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
										Total SWL: 106

1501 <u>32 NB of NCWBR SK Bound</u> <u>33 Pile Foundation at Verge</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
	Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat	90	2	50%	90
	Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	2	50%	94
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
	Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
	Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	4	100%	94
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
										Total SWL: 106

1502 <u>34 Pile Cap at Verge</u>	PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*										
	Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	2	50%	94
	Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	40%	94
										Sub SWL: 107
Group 2*										
	Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
										Sub SWL: 103
Group 3*										
	Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
	Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
	Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	50%	98
										Sub SWL: 99
Group 4*										
	Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
	Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
	Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
										Sub SWL: 106
										Total SWL: 107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

J/O New Clear Water Bay Road and Shun Lee Tsuen Road (Mitigated)

Task No.

1503 35 NB Column Post at Verge

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Lorry	CNP 141	112	CNP 069	105	- -	105	1	50%	102
Total SWL:									103

1504 36 Panel Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	SWL/ Item dB(A)	Noise Reduction measures	SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier -5	99	2	30%	97
Lorry	CNP 141	112	CNP 069	105	- -	105	1	50%	102
Total SWL:									104

Model for quiet plant is for reference only. The Contrator might adpot other models of plant with lower SWL.

Reference for Hilti - TE 1500-AVR (Breaker): <https://www.us.hilti.com/drilling-%26-demolition/demolition-hammers-%26-breakers/r4422>

Reference for Sandhurst - XT-200 (Breaker), Makita - BSS501Z (Saw) and Hitachi Sumitomo SCX700 (Mobile crane) are made from Development of Anderson Road Quarry Schedule III EIA.

Reference is made to the QPME listed on the EPD website. Model for quiet plant is for reference only. The Contrator might adpot other models od plant with lower SWL.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated)

Task No.

1. General

2101 2 Site Clearance

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
Total SWL:									109

3 U-turn Facility at CWBR

2201 4 Cut Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Total SWL:									106

2202 5 Slope Drainage

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	1	30%	92
Total SWL:									101

2203 6 Retaining Walls

6.1 Foundation for Retaining Wall

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
<u>Group 1*</u>										
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat	-10	90	1	50%	87
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%	91
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	-	101	1	30%	96
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	1	100%	85
Water Pump (electric)	CNP 281	88	CNP 281	88	-	-	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	1	50%	101
Sub-Total SWL									103	

6.2 Retaining Wall Structure

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
<u>Group 2*</u>										
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%	91
Sub SWL:									106	
<u>Group 3*</u>										
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%	97
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	-	101	1	30%	96
Sub SWL:									100	
<u>Group 4*</u>										
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	-	90	1	50%	87
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	-5	98	1	50%	95
Sub SWL:									96	
<u>Group 5*</u>										
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	-	101	1	30%	96
Sub SWL:									105	
Total SWL:									106	

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2204 7 Backfilling of Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
<u>Group 1*</u>										
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	2	65%	100
Sub SWL:									106	
<u>Group 2*</u>										
Road Roller	CNP 185	108	EPD-02216##	97	-	-	97	2	80%	99
Sub SWL:									99	
Total SWL:									106	

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2205 8 Landscape Works for Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	-	-	105	2	50%	105
Total SWL:									106	

2206 9 Demolition Works of Existing Carriageway / Verge

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
<u>Group1*</u>										
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	1	65%	97
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	1	65%	103
Sub SWL:									108	
<u>Group2*</u>										
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%	105
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	2	65%	106
Sub SWL:									109	
<u>Group3*</u>										
Dump Truck	CNP 067	117	CNP 069	105	-	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	-	99	2	65%	100
Sub SWL:									106	
Total SWL:									109	

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated)

Task No.

2207 10 Utility Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Total SWL:									101

2208 11 Formation of Carriageway

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Total SWL:									108

2209 12 Pavement Construction

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Sub SWL:									107
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
Sub SWL:									100
<u>Group 3*</u>									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
Sub SWL:									83
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Sub SWL:									104
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

14 Slopeworks at CWBR SK Bound

2301 15 Cut Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Total SWL:									106

2302 16 Retaining Wall Structure

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Sub SWL:									106
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Sub SWL:									100
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	1	50%	87
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	1	50%	95
Sub SWL:									96
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	1	30%	96
Sub SWL:									105
Total SWL:									106

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2303 17 Backfilling of Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	1	50%	102
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Sub SWL:									103
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Sub SWL:									96
Total SWL:									103

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2304 18 Slope Drainage

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Total SWL:									101

2305 19 Landscape Works for Slope

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
Total SWL:									106

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated)

Task No.

20 CWBR SK Bound

2401 21 Demolition Works of Existing Carriageway / Footpath / Central Median

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	1	65%	103
									Sub SWL:
									108
Group 2*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	2	65%	106
									Sub SWL:
									109
Group 3*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
									Sub SWL:
									106
									Total SWL:
									109

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2402 22 Utility Installation

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
									Total SWL:
									101

2403 23 Formation of Carriageway

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
									Total SWL:
									108

2404 24 Pavement Construction

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
									Sub SWL:
									107
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
									Sub SWL:
									100
Group 3*									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
									Sub SWL:
									83
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
									Sub SWL:
									104
									Total SWL:
									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2405 26 Roadside Landscape

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
									Total SWL:
									103

27 CWBR Kowloon Bound & OSR

2501 28 Cut Slope

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
									Total SWL:
									107

2502 29 Demolition Works of Existing Carriageway / Footpath / Central Median

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	1	65%	103
									Sub SWL:
									108
Group 2*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	2	65%	106
									Sub SWL:
									109
Group 3*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
									Sub SWL:
									106
									Total SWL:
									109

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2503 30 Utility Installation

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
									Total SWL:
									101

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated)

Task No.

2504 31 Formation of Carriageway

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Total SWL:									106

2505 32 Pavement Construction

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Sub SWL:									107
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	99	1	80%	98
Sub SWL:									100
Group 3*									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	85	1	65%	83
Sub SWL:									83
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
Sub SWL:									104
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2506 34 Roadside Landscape

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Lorry	CNP 141	112	CNP 069	105	-	105	1	50%	102
Total SWL:									103

35. Semi-NE and NB of CWBR SK Bound

2601 36 Pile Foundation at Verge

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat	90	3	50%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	3	50%	96
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	3	30%	101
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	3	100%	90
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	6	100%	96
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	3	50%	106
Total SWL:									108

2602 37 Pile Cap at Verge

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	40%	94
Sub SWL:									107
Group 2*									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Sub SWL:									103
Group 3*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	50%	98
Sub SWL:									99
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Sub SWL:									106
Total SWL:									107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2603 38 Semi-NE Column Post at Verge

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
Total SWL:									106

2604 39 Pile foundation at Central Median

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat	90	3	50%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	3	50%	96
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	3	30%	101
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	3	100%	90
Water Pump (electric)	CNP 281	88	CNP 281	88	-	88	6	100%	96
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	3	50%	106
Total SWL:									108

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated)

Task No.

2605 40 Pile Cap at Central Median

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	-	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	3	50%	96
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	2	40%	94
								Sub SWL:	107
Group 2*									
Excavator	CNP 081	112	EPD-01145##	99	-	99	2	65%	100
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
								Sub SWL:	103
Group 3*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	-	90	2	50%	90
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	2	50%	98
								Sub SWL:	99
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
								Sub SWL:	106
								Total SWL:	107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2606 41 Semi-NE Column Post at Central Median

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
								Total SWL:	106

2607 42 Semi-NE Roof Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	99	2	30%	97
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
								Total SWL:	106

2608 43 Semi-NE Panel Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	-	101	2	30%	99
Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	99	2	30%	97
Lorry	CNP 141	112	CNP 069	105	-	105	2	50%	105
								Total SWL:	106

Model for quiet plant is for reference only. The Contractor might adpot other models of plant with lower SWL.

Reference for Hilti - TE 1500-AVR (Breaker): <https://www.us.hilti.com/drilling-%26-demolition/demolition-hammers-%26-breakers/r4422>

Reference for Sandhurst - XT-200 (Breaker), Makita - BSS501Z (Saw) and Hitachi Sumitomo SCX700 (Mobile crane) are made from Development of Anderson Road Quarry Schedule III EIA.

Reference is made to the QPME listed on the EPD website. Model for quiet plant is for reference only. The Contractor might adpot other models od plant with lower SWL.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated) (For NFNS-202 and NFNS-302 Only)

Task No.

1. General

2101 2 Site Clearance

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	^ -5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^ -5	94	2	65%	95
Lorry	CNP 141	112	CNP 069	105	^ -5	100	2	50%	100
Total SWL:									104

3 U-turn Facility at CWBR

2201 4 Cut Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Total SWL:									106

2202 5 Slope Drainage

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Total SWL:									101

2203 6 Retaining Walls

6.1 Foundation for Retaining Wall

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	1	50%	87
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	1	100%	85
Water Pump (electric)	CNP 281	88	CNP 281	88	- -	88	2	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	1	50%	101
Sub-Total SWL									103

6.2 Retaining Wall Structure

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 2*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	1	40%	91
Sub SWL:									106
Group 3*									
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Sub SWL:									100
Group 4*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	- -	90	1	50%	87
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	1	50%	95
Sub SWL:									96
Group 5*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	- -	101	1	30%	96
Sub SWL:									105
Total SWL:									106

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2204 7 Backfilling of Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Sub SWL:									106
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	- -	97	2	80%	99
Sub SWL:									99
Total SWL:									106

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2205 8 Landscape Works for Slope

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Lorry	CNP 141	112	CNP 069	105	- -	105	2	50%	105
Total SWL:									106

2206 9 Demolition Works of Existing Carriageway / Verge

PME

	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group1*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	1	65%	97
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	1	65%	103
Sub SWL:									108
Group2*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier -5	105	2	65%	106
Sub SWL:									109
Group3*									
Dump Truck	CNP 067	117	CNP 069	105	- -	105	2	50%	105
Excavator	CNP 081	112	EPD-01145##	99	- -	99	2	65%	100
Sub SWL:									106
Total SWL:									109

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated) (For NFNS-202 and NFNS-302 Only)

Task No.

2207 10 Utility Installation
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	-	99	1	65%	97
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	1	40%	91
								Total SWL:	101

2208 11 Formation of Carriageway
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
								Total SWL:	108

2209 12 Pavement Construction
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	-	105	3	50%	107
								Sub SWL:	107
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	-	97	1	80%	96
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	99	1	80%	98
								Sub SWL:	100
<u>Group 3*</u>									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	85	1	65%	83
								Sub SWL:	83
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	2	30%	95
								Sub SWL:	104
								Total SWL:	107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

14 Slopeworks at CWBR SK Bound

2301 15 Cut Slope
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	^	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	94	1	65%	92
								Total SWL:	101

2302 16 Retaining Wall Structure
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	^	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	94	1	65%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	95	1	40%	91
								Sub SWL:	102
<u>Group 2*</u>									
Excavator	CNP 081	112	EPD-01145##	99	^	94	1	65%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	96	1	30%	91
								Sub SWL:	95
<u>Group 3*</u>									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	85	1	100%	85
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	^	85	1	50%	82
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	98	1	50%	95
								Sub SWL:	96
<u>Group 4*</u>									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	1	30%	92
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	96	1	30%	91
								Sub SWL:	104
								Total SWL:	104

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2303 17 Backfilling of Slope
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
<u>Group 1*</u>									
Dump Truck	CNP 067	117	CNP 069	105	^	100	1	50%	97
Excavator	CNP 081	112	EPD-01145##	99	^	94	1	65%	92
								Sub SWL:	98
<u>Group 2*</u>									
Road Roller	CNP 185	108	EPD-02216##	97	^	92	1	80%	91
								Sub SWL:	91
								Total SWL:	98

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2304 18 Slope Drainage
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	104	1	50%	101
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	97	1	30%	92
								Total SWL:	101

2305 19 Landscape Works for Slope
PME

	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	^	94	2	65%	95
Lorry	CNP 141	112	CNP 069	105	^	100	2	50%	100
								Total SWL:	101

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated) (For NFNS-202 and NFNS-302 Only)

Task No.

20 CWBR SK Bound

2401 21 Demolition Works of Existing Carriageway / Footpath / Central Median

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	1	65%	103
									Sub SWL:	105
Group 2*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	2	65%	106
									Sub SWL:	107
Group 3*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	2	65%	95
									Sub SWL:	101
									Total SWL:	107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2402 22 Utility Installation

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%	91
									Total SWL:	100

2403 23 Formation of Carriageway

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	3	50%	102
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	^	-5	92	1	80%	91
									Total SWL:	103

2404 24 Pavement Construction

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	3	50%	102
									Sub SWL:	102
Group 2*										
Road Roller	CNP 185	108	EPD-02216##	97	^	-5	92	1	80%	91
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier	-5	99	1	80%	98
									Sub SWL:	99
Group 3*										
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier	-5	85	1	65%	83
									Sub SWL:	83
Group 4*										
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	2	30%	95
									Sub SWL:	104
									Total SWL:	104

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2405 26 Roadside Landscape

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
Lorry	CNP 141	112	CNP 069	105	^	-5	100	1	50%	97
									Total SWL:	98

27 CWBR Kowloon Bound & OSR

2501 28 Cut Slope

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	3	50%	102
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
									Total SWL:	102

2502 29 Demolition Works of Existing Carriageway / Footpath / Central Median

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	1	65%	103
									Sub SWL:	105
Group 2*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Breaker, Excavator Mounted	CNP 027	122	(Ref: Sandhurst - XT-200)#	110	Barrier	-5	105	2	65%	106
									Sub SWL:	107
Group 3*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	2	65%	95
									Sub SWL:	101
									Total SWL:	107

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2503 30 Utility Installation

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	1	65%	92
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier	-5	100	1	50%	97
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	1	40%	91
									Total SWL:	100

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated) (For NFNS-202 and NFNS-302 Only)

Task No.

2504 31 Formation of Carriageway

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Dump Truck	CNP 067	117	CNP 069	105	^ -5	100	2	50%	100
Compactor, Vibratory	CNP 050	105	CNP 050	105	Barrier -5	100	1	50%	97
Road Roller	CNP 185	108	EPD-02216##	97	^ -5	92	1	80%	91
								Total SWL:	102

2505 32 Pavement Construction

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	^ -5	100	3	50%	102
								Sub SWL:	102
Group 2*									
Road Roller	CNP 185	108	EPD-02216##	97	^ -5	92	1	80%	91
Asphalt Paver	CNP 004	109	EPD-01226##	104	Barrier -5	99	1	80%	98
								Sub SWL:	99
Group 3*									
Paint Line Marker	CNP 161	90	CNP 161	90	Barrier -5	85	1	65%	83
								Sub SWL:	83
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
								Sub SWL:	104
								Total SWL:	104

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2506 34 Roadside Landscape

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Excavator	CNP 081	112	EPD-01145##	99	^ -5	94	1	65%	92
Lorry	CNP 141	112	CNP 069	105	^ -5	100	1	50%	97
								Total SWL:	98

35 Semi-NE and NB of CWBR SK Round

2601 36 Pile Foundation at Verge

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	3	50%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	3	50%	96
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^ -5	96	3	30%	96
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	3	100%	90
Water Pump (electric)	CNP 281	88	CNP 281	88	^ -5	83	6	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	3	50%	106
								Total SWL:	107

2602 37 Pile Cap at Verge

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Group 1*									
Dump Truck	CNP 067	117	CNP 069	105	^ -5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^ -5	94	2	65%	95
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	1	50%	91
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier -5	95	2	40%	94
								Sub SWL:	102
Group 2*									
Excavator	CNP 081	112	EPD-01145##	99	^ -5	94	2	65%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^ -5	96	2	30%	94
								Sub SWL:	98
Group 3*									
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	^ -5	85	2	50%	85
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier -5	98	2	50%	98
								Sub SWL:	99
Group 4*									
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier -5	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^ -5	96	2	30%	94
								Sub SWL:	105
								Total SWL:	105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2603 38 Semi-NE Column Post at Verge

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^ -5	96	2	30%	94
Lorry	CNP 141	112	CNP 069	105	^ -5	100	2	50%	100
								Total SWL:	101

2604 39 Pile foundation at Central Median

PME	TM Ref/ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL
Piling Rig	CNP 166	100	CNP 166	100	Acoustic Mat -10	90	3	50%	92
Air Compressor	CNP 003	104	CNP 003	104	Enclosure -10	94	3	50%	96
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^ -5	96	3	30%	96
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure -10	85	3	100%	90
Water Pump (electric)	CNP 281	88	CNP 281	88	^ -5	83	6	100%	91
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier -5	104	3	50%	106
								Total SWL:	107

Appendix 5.9 Quiet Powered Mechanical Equipment (PME) for the Different Construction Tasks (With Mitigation Measures)

For J/O Clear Water Bay Road and On Sau Road. (Mitigated) (For NFNS-202 and NFNS-302 Only)

Task No.

2605 40 Pile Cap at Central Median

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Group 1*										
Dump Truck	CNP 067	117	CNP 069	105	^	-5	100	2	50%	100
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	2	65%	95
Air Compressor	CNP 003	104	CNP 003	104	Enclosure	-10	94	3	50%	96
Breaker, Hand-held	CNP 024	108	(Ref: Hilti - TE 1500-AVR)#	100	Barrier	-5	95	2	40%	94
									Sub SWL:	103
Group 2*										
Excavator	CNP 081	112	EPD-01145##	99	^	-5	94	2	65%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	-5	96	2	30%	94
									Sub SWL:	98
Group 3*										
Generator, Silenced	CNP 102	100	CNP 103	95	Enclosure	-10	85	2	100%	88
Bar Bender and Cutter (electric)	CNP 021	90	CNP 021	90	^	-5	85	2	50%	85
Saw, Circular, Wood	CNP 201	108	(Ref: Makita - BSS501Z, 2.6kg)#	103	Barrier	-5	98	2	50%	98
									Sub SWL:	99
Group 4*										
Concrete Lorry Mixer	CNP 044	109	CNP 044	109	Barrier	-5	104	2	50%	104
Poker, Vibratory, Hand-held	CNP 170	113	CNP 173	102	Barrier	-5	97	2	30%	95
Crane, mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	-5	96	2	30%	94
									Sub SWL:	105
									Total SWL:	105

*Only 1 group of PME will be operate a the same time. Maximum of sub-SWL is adpoted as conservative approach.

2606 41 Semi-NE Column Post at Central Median

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	-5	96	2	30%	94
Lorry	CNP 141	112	CNP 069	105	^	-5	100	2	50%	100
									Total SWL:	101

2607 42 Semi-NE Roof Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	-5	96	2	30%	94
Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	-5	99	2	30%	97
Lorry	CNP 141	112	CNP 069	105	^	-5	100	2	50%	100
									Total SWL:	102

2608 43 Semi-NE Panel Installation

PME	TM Ref./ other Ref	SWL/ Item dB(A)	Quiet Plant Ref	Quiet Plant SWL/ Item dB(A)	Noise Reduction measures	Mitigated SWL/ Item dB(A)	No. of Plant	Utilization Rate	Sub-Total SWL	
Crane, Mobile	CNP 048	112	(Hitachi Sumitomo SCX700, 132 kW)#	101	^	-5	96	2	30%	94
Cherry Picker	BS C4/54	104	BS C4/54	104	Barrier	-5	99	2	30%	97
Lorry	CNP 141	112	CNP 069	105	^	-5	100	2	50%	100
									Total SWL:	102

Model for quiet plant is for reference only. The Contractor might adpot other models of plant with lower SWL.

Reference for Hilti - TE 1500-AVR (Breaker): <https://www.us.hilti.com/drilling-%26-demolition/demolition-hammers-%26-breakers/r4422>

Reference for Sandhurst - XT-200 (Breaker), Makita - BSS501Z (Saw) and Hitachi Sumitomo SCX700 (Mobile crane) are made from Development of Anderson Road Quarry Schedule III EIA.

Reference is made to the QPME listed on the EPD website. Model for quiet plant is for reference only. The Contractor might adpot other models od plant with lower SWL.

^ -5 dB(A) of screening correction is applied for the Construction Noise Barrier at Sienna Garden.