

Appendix 4-9A Used Powered Mechanical Equipment (PME) under Mitigated Scenario

Equipment Name	Unmitigated		Quiet Plant		Mitigated Scenario		
	Identification Code	Sound Power Level (dB(A))	Identification Code	Description	Sound Power Level (dB(A))	Barrier/ acoustic mat correction, dB(A)	Mitigated SWL, dB(A)
Generator, super silenced, 70dB(A) at 7m	CNP 103	95	CNP 103				95
Breaker, mini-robot mounted	Other	115	Other	Breaker, mini-robot mounted		5	110
Excavator / Loader, wheeled / Tracked	CNP 081	112	EPD-01896	Excavator, wheeled/tracked	98	5	93
Dump Truck, with grab, ≤ 38 tonne	Other	105	Other			5	100
Lorry, ≤ 38 tonne	Other	105	Other			5	100
Lorry with crane / grab, ≤ 38 tonne	Other	105	Other			5	100
Crane, mobile	CNP 048	112	EPD-01516	Crane, mobile	101	5	96
Bar bender & cutter	CNP 021	90	CNP 021				90
Poker, vibratory, hand held	CNP 170	113	Other	Poker, vibratory, hand held (electric)	102	5	97
Piling, large diameter bored, grab & chisel	CNP 164	115	CNP 164			10	105
Road roller	CNP 185	108	EPD-01806	Road roller	95		95
Concrete lorry mixer	CNP 044	109	CNP 044			5	104
Saw, chain, hand-held	CNP 202	114	CNP 202			5	109
Concrete pump, lorry mounted	CNP 047	109	CNP 047			5	104
Asphalt Paver	CNP 004	109	EPD-01226	Asphalt Paver	104	5	99
Air compressor, air flow ≤ 10m ³ /min	CNP 001	100	CNP 001			5	95

Remarks:

1. Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly Used PMEs"
2. QPME data from http://www.epd.gov.hk/cgi-bin/mpg/qpme/search_gen.pl

Appendix 4-9B Plant Inventory (Mitigated)

Commencement of Works

Stage ID 1

101 Mobilization

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
Total Sound Power Level, dB(A)							97.9

102 Site Preparation + Tree Felling

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
3	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
4	Saw, chain, hand-held	1	30%	CNP 202	114.0	5.0	103.8
Total Sound Power Level, dB(A)							105.2

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Bridge H [H1-H8 + 1 x Abutment]

Stage ID 2

201 Bored Piles 1m dia

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-4	Piling, large diameter bored, grab & chisel	1	50%	CNP 164	115.0	10.0	102.0
<i>Total Sound Power Level for Activity 1</i>							103.6
A2-1	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 1</i>							98.8
Max. Sound Power Level for Activity Groups, dB(A)							103.6

202 Pile Caps

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-2	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-3	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	100.0	5.0	89.8
<i>Total Sound Power Level for Activity 1</i>							105.4
A2-1	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
<i>Total Sound Power Level for Activity 2</i>							90.0
A3-1	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
A3-2	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 3</i>							100.4
Max. Sound Power Level for Activity Groups, dB(A)							105.4

203 Columns (average 11.5m)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
4	Concrete pump, lorry mounted	1	50%	CNP 047	109.0	5.0	101.0
Total Sound Power Level, dB(A)							104.4

204 UU diversion

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
4	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							105.4

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

205 Abutment (125m long)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
4	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
Total Sound Power Level, dB(A)							101.8

206 Deck Spans (gen 40m)(including road drainage works)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
4	Concrete pump, lorry mounted	1	50%	CNP 047	109.0	5.0	101.0
Total Sound Power Level, dB(A)							104.4

207 Edge Barrier

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
Total Sound Power Level, dB(A)							97.0

210 Road Works and Installation of Road Lighting

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction	SWL B
1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
2	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
3	Road roller	1	50%	EPD-01806	95.0	0.0	92.0
4	Asphalt Paver	1	70%	EPD-01226	104.0	5.0	97.5
5	Air compressor, air flow ≤ 10m ³ /min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							106.3

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Noise Barrier [H3-H8 + Abutment]

Stage ID 3

303 Structural Steel Frame Erection

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Lorry with crane / grab, ≤ 38 tonne	2	50%	Other	105.0	5.0	100.0
3	Crane, mobile	2	50%	EPD-01516	101.0	5.0	96.0
Total Sound Power Level, dB(A)							102.3

304 Noise Panel Installation

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Crane, mobile	1	50%	EPD-01516	101.0	5.0	93.0
Total Sound Power Level, dB(A)							93.0

305 Finishing

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Crane, mobile	1	50%	EPD-01516	101.0	5.0	93.0
Total Sound Power Level, dB(A)							93.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Bridge G [G1-G5]

Stage ID 4

401 UU diversion

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
4	Air compressor, air flow ≤ 10m ³ /min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							105.4

402 Bored Piles 1m dia

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-2	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-3	Piling, large diameter bored, grab & chisel	1	50%	CNP 164	115.0	10.0	102.0
<i>Total Sound Power Level for Activity 1</i>							103.6
A2-1	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 2</i>							98.8
Max. Sound Power Level for Activity Groups, dB(A)							103.6

403 Pile Caps

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-3	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-4	Air compressor, air flow ≤ 10m ³ /min	1	30%	CNP 001	100.0	5.0	89.8
<i>Total Sound Power Level for Activity 1</i>							105.4
A2-1	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
<i>Total Sound Power Level for Activity 2</i>							90.0
A3-1	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
A3-2	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 3</i>							100.4
Max. Sound Power Level for Activity Groups, dB(A)							105.4

404 Columns (average 11m)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
4	Concrete pump, lorry mounted	1	50%	CNP 047	109.0	5.0	101.0
Total Sound Power Level, dB(A)							104.4

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

405 Deck Spans (gen 25m)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
4	Concrete pump, lorry mounted	1	50%	CNP 047	109.0	5.0	101.0
Total Sound Power Level, dB(A)							104.4

406 Edge Barrier

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
Total Sound Power Level, dB(A)							97.0

409 Road Works and Installation of Road Lighting

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
2	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
3	Road roller	1	50%	EPD-01806	95.0	0.0	92.0
4	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
5	Asphalt Paver	1	70%	EPD-01226	104.0	5.0	97.5
6	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							107.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Demolition of Existing Footbridge [1x main span + 2x staircase]

Stage ID 5

502 Breaking up & Removal of Columns

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
4	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							105.7

503 Breaking up & Removal of Staircases

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
4	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							105.7

504 Breaking up & Removal of Pile Caps

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
3	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
4	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
5	Air compressor, air flow ≤ 10m3/min	1	30%	CNP 001	0.0	100.0	0.0
Total Sound Power Level, dB(A)							105.7

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Reprovision of Footbridge [2x main span + 2x staircase + 2x lift]

Stage ID

6

601 Bored Piles 1m dia

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-3	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-4	Piling, large diameter bored, grab & chisel	1	50%	CNP 164	115.0	10.0	102.0
<i>Total Sound Power Level for Activity 1</i>							103.6
A2-1	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 2</i>							98.8
Max. Sound Power Level for Activity Groups, dB(A)							103.6

602 Pile Caps

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
A1-1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
A1-2	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
A1-3	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
A1-4	Air compressor, air flow ≤ 10m ³ /min	1	30%	CNP 001	100.0	5.0	89.8
<i>Total Sound Power Level for Activity 1</i>							105.4
A2-1	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
<i>Total Sound Power Level for Activity 2</i>							90.0
A3-1	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
A3-2	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
<i>Total Sound Power Level for Activity 3</i>							100.4
Max. Sound Power Level for Activity Groups, dB(A)							105.4

603 Central Column

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
4	Concrete pump, lorry mounted	1	50%	CNP 047	109.0	5.0	101.0
Total Sound Power Level, dB(A)							104.4

604 Staircases

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
2	Bar bender & cutter	1	100%	CNP 021	90.0	0.0	90.0
3	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
4	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
Total Sound Power Level, dB(A)							101.8

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

607 Lift Tower Wall

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	0.0	100.5
2	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
Total Sound Power Level, dB(A)							102.7

608 Lift Frame Erection

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Lorry with crane / grab, ≤ 38 tonne	2	50%	Other	105.0	5.0	100.0
3	Crane, mobile	2	50%	EPD-01516	101.0	5.0	96.0
Total Sound Power Level, dB(A)							102.3

609 Window Panel Installation

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Crane, mobile	1	50%	EPD-01516	101.0	5.0	93.0
Total Sound Power Level, dB(A)							93.0

615 E&M Installation (including lift)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
Total Sound Power Level, dB(A)							95.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Relocation / modification of existing bus lay-by

Stage ID 7

701 Relocation/modification of existing bus lay-by

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Generator, super silenced, 70dB(A) at 7m	1	100%	CNP 103	95.0	0.0	95.0
2	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
3	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
Total Sound Power Level, dB(A)							102.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Modification of Kwai Chung Road (outside Fung King House)

Stage ID

8

801 Modification of Kwai Chung Road (outside Fung King House)

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Breaker, mini-robot mounted	1	30%	Other	115.0	5.0	104.8
2	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
3	Road roller	1	50%	EPD-01806	95.0	0.0	92.0
4	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
5	Asphalt Paver	1	70%	EPD-01226	104.0	5.0	97.5
6	Air compressor, air flow ≤ 10m ³ /min	1	30%	CNP 001	100.0	5.0	89.8
Total Sound Power Level, dB(A)							107.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9B Plant Inventory (Mitigated)

Completion of Works

Stage ID 9

901 Ground Level Works Finalization

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Lorry with crane / grab, ≤ 38 tonne	1	50%	Other	105.0	5.0	97.0
2	Poker, vibratory, hand held (electric)	1	70%	Other	102.0	5.0	95.5
3	Concrete lorry mixer	1	30%	CNP 044	109.0	5.0	98.8
Total Sound Power Level, dB(A)							102.1

902 Tree Planting

				Mitigated			
	Equipment	No. of Items	On-time %	TM Ref. / other Ref.	SWL/Item dB(A)	Noise Barrier Reduction, dB(A)	Total SWL dB(A)
1	Excavator, wheeled/tracked	1	50%	EPD-01896	98.0	5.0	90.0
2	Dump Truck, with grab, ≤ 38 tonne	1	30%	Other	105.0	5.0	94.8
Total Sound Power Level, dB(A)							96.0

*Note: Other: PMEs listed in EPD's "Sound Power Levels of Other Commonly PMEs"

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard			Monthly Construction Noise Level, dB(A)																						
501 Fung King House			2021																						
Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	2020																			
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
Works Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	2019																			
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
A	101	Mobilization	98	185	53	44																			
	102	Site Preparation + Tree Felling	105	185	53	52	48																		
	401	UU diversion	105	135	53	52	46																		
A	402	Bored Piles 1m dia	104	185	53	50	50																		
	403	Pile Caps	105	185	53	52	52	52																	
	404	Columns (average 11m)	104	185	53	51	51	51																	
	405	Deck Spans (gen 25m)	104	185	53	51	51	51																	
	406	Edge Barrier	97	185	53	44	44	44																	
	409	Road Works and Installation of Road Lighting	107	185	53	54	54	54																	
A	901	Ground Level Works Finalization	102	185	53	49																			
	902	Tree Planting	96	185	53	43																			
B	101	Mobilization	98	91	47	51	51																		
	102	Site Preparation + Tree Felling	105	91	47	58	58																		
	601	Bored Piles 1m dia	104	91	47	56	56																		
B	602	Pile Caps	105	91	47	58	58																		
	603	Central Column	104	91	47	57	57																		
	604	Staircases	102	91	47	55	55																		
	607	Lift Tower Wall	103	91	47	56	56																		
	608	Lift Frame Erection	102	91	47	55	55																		
	609	Window Panel Installation	83	91	47	46	46																		
	615	E&M Installation (including lift)	95	91	47	48	48																		
	901	Ground Level Works Finalization	102	91	47	55	55																		
	902	Tree Planting	96	91	47	49	49																		
C	101	Mobilization	98	36	39	59	59																		
	102	Site Preparation + Tree Felling	105	36	39	66	64																		
	601	Bored Piles 1m dia	104	36	39	64	64																		
C	602	Pile Caps	105	36	39	66	66																		
	603	Central Column	104	36	39	65	65																		
	604	Staircases	102	36	39	63	63																		
	607	Lift Tower Wall	103	36	39	64	64																		
	608	Lift Frame Erection	102	36	39	63	63																		
	609	Window Panel Installation	83	36	39	54	54																		
C	615	E&M Installation (including lift)	95	36	39	56	56																		
	901	Ground Level Works Finalization	102	36	39	63	63																		
	902	Tree Planting	96	36	39	57	57																		
D	101	Mobilization	98	61	44	61	61																		
	102	Site Preparation + Tree Felling	105	61	44	61	61																		
	201	Bored Piles 1m dia	104	61	44	60	60																		
D	202	Pile Caps	105	61	44	62	62																		
	203	Columns (average 11.5m)	104	61	44	61	61																		
	204	UU diversion	105	61	44	62	62																		
	205	Abutment (125m long)	102	61	44	58	58																		
	206	Deck Spans (gen 40m)(including road drainage works)	104	61	44	61	61																		
	207	Edge Barrier	97	61	44	53	53																		
D	210	Road Works and Installation of Road Lighting	106	61	44	63	63																		
	303	Structural Steel Frame Erection	102	61	44	59	59																		
	304	Noise Panel Installation	93	61	44	49	49																		
D	305	Finishing	93	61	44	49	49																		
	502	Breaking up & Removal of Columns	106	61	44	62	62																		
	503	Breaking up & Removal of Staircases	106	61	44	62	62																		
D	504	Breaking up & Removal of Pile Caps	106	61	44	62	62																		
	701	Relocation/modification of existing bus lay-b	102	61	44	56	56																		
	801	Modification of Kwai Chung Road (outside Fung King Hou	107	61	44	63	63																		

Mitigated**

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard	Fung King House		Monthly Construction Noise Level, dB(A)																
	75	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	2019												
							2018			2020			2021						
Works Area							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
A	101	Mobilization	98	185	53	45													
	102	Site Preparation + Tree Felling	105	185	53	52	48	48											
	401	UU diversion	105	185	53	52	52	52											
	402	Bored Piles 1m dia	104	185	53	50	50	50											
	403	Pile Caps	105	185	53	52	52	52	52	52	52	52	52	52	52	52	52	52	52
A	404	Columns (average 11m)	104	185	53	51													
	405	Deck Spans (gen 25m)	104	185	53	44	51	51	51	51	51	51	51	51	51	51	51	51	51
	406	Edge Barrier	97	185	53	44	44	44	44	44	44	44	44	44	44	44	44	44	44
	409	Road Works and Installation of Road Lighting	107	185	53	54													
A	901	Ground Level Works Finalization	102	185	53	49													
	902	Tree Planting	96	185	53	43													
B	101	Mobilization	98	91	47	51	51	51											
	102	Site Preparation + Tree Felling	105	91	47	58	58												
	601	Bored Piles 1m dia	104	91	47	56	56	56											
	602	Pile Caps	105	91	47	58													
	603	Central Column	104	91	47	57													
B	604	Staircases	102	91	47	55													
	607	Lift Tower Wall	103	91	47	56													
	608	Lift Frame Erection	102	91	47	55													
	609	Window Panel Installation	93	91	47	46													
	615	E&M Installation (including lift)	95	91	47	48													
B	901	Ground Level Works Finalization	102	91	47	55													
	902	Tree Planting	96	91	47	49													
C	101	Mobilization	98	36	39	66													
	102	Site Preparation + Tree Felling	105	36	39	66													
	601	Bored Piles 1m dia	104	36	39	64													
	602	Pile Caps	105	36	39	66													
	603	Central Column	104	36	39	65													
C	604	Staircases	102	36	39	63													
	607	Lift Tower Wall	103	36	39	64													
	608	Lift Frame Erection	102	36	39	63													
	609	Window Panel Installation	93	36	39	54													
	615	E&M Installation (including lift)	95	36	39	56													
C	901	Ground Level Works Finalization	102	36	39	63													
	902	Tree Planting	96	36	39	57													
D	101	Mobilization	98	61	44	61													
	102	Site Preparation + Tree Felling	105	61	44	61													
	201	Bored Piles 1m dia	104	61	44	60													
	202	Pile Caps	105	61	44	62													
	203	Columns (average 11.5m)	104	61	44	61													
D	204	UU diversion	105	61	44	62													
	205	Abutment (125m long)	102	61	44	58													
	206	Deck Spans (gen 40m)(including road drainage works)	104	61	44	61													
	207	Edge Barrier	97	61	44	53													
	210	Road Works and Installation of Road Lighting	106	61	44	63													
	303	Structural Steel Frame Erection	102	61	44	59													
D	304	Noise Panel Installation	93	61	44	49													
	305	Finishing	93	61	44	49													
	502	Breaking up & Removal of Columns	106	61	44	62													
D	503	Breaking up & Removal of Staircases	106	61	44	62													
	504	Breaking up & Removal of Pile Caps	106	61	44	62													
D	701	Relocation/modification of existing bus lay-b	102	61	44	58													
D	801	Modification of Kwai Chung Road (outside Fung King Hou	107	61	44	63													

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard	504	Fung King House	Monthly Construction Noise Level, dB(A)																																				
			2018						2019						2020						2021																		
Works Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		
D	901	Ground Level Works Finalization	102	61	44	58																																	
	902	Tree Planting	96	61	44	52																																	
E	101	Mobilization	98	62	44	54																																	
	102	Site Preparation + Tree Felling	105	62	44	61						61																											
E	201	Bored Piles 1m dia	104	62	44	60																																	
	202	Pile Caps	105	62	44	62																																	
	203	Columns (average 11.5m)	104	62	44	61																																	
	204	UJ diversion	105	62	44	62																																	
	205	Abutment (125m long)	102	62	44	58																																	
	206	Deck Spans (gen 40m)(including road drainage works)	104	62	44	61																																	
	207	Edge Barrier	97	62	44	53																																	
	210	Road Works and Installation of Road Lighting	102	62	44	62																																	
	303	Structural Steel Frame Erection	102	62	44	58																																	
E	304	Noise Panel Installation	93	62	44	49																																	
	305	Finishing	93	62	44	49																																	
	502	Breaking up & Removal of Columns	106	62	44	62																																	
	503	Breaking up & Removal of Staircases	106	62	44	62																																	
	504	Breaking up & Removal of Pile Caps	106	62	44	62																																	
E	701	Relocation/modification of existing bus lay-b	102	62	44	56																																	
	701	Relocation/modification of existing bus lay-b	102	62	44	56																																	
F	901	Ground Level Works Finalization	102	62	44	56																																	
	902	Tree Planting	96	62	44	52																																	
	101	Mobilization	98	155	52	46																																	
	102	Site Preparation + Tree Felling	105	155	52	53																																	
	201	Bored Piles 1m dia	104	155	52	52																																	
	202	Pile Caps	105	155	52	54																																	
	203	Columns (average 11.5m)	104	155	52	53																																	
	204	UJ diversion	105	155	52	54																																	
	205	Abutment (125m long)	102	155	52	50																																	
	206	Deck Spans (gen 40m)(including road drainage works)	104	155	52	53																																	
	207	Edge Barrier	97	155	52	45																																	
	210	Road Works and Installation of Road Lighting	106	155	52	55																																	
	303	Structural Steel Frame Erection	102	155	52	51																																	
	304	Noise Panel Installation	93	155	52	41																																	
305	Finishing	93	155	52	41																																		
901	Ground Level Works Finalization	102	155	52	50																																		
902	Tree Planting	96	155	52	44																																		

Overall	Overall (CNL w/o façade effect), dB(A)		62	62	60	66	65	58	56	66	66	63	65	63	65	63	67	68	64	66	62	62	68	67	66	65	60	59	55	66	63	53	52	54	57	59	64	61		
	Façade effect, dB(A)		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	Overall (CNL w/ façade effect), dB(A)		65	65	63	69	68	61	61	69	62	62	61	60	67	67	60	59	66	68	66	68	68	70	71	67	66	65	65	71	67	66	66	66	68	68	68	68	67	64

Remark:

** calculation table above only show tasks for which there are PMEs in use during the day-time

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard	509	Fung King House	Monthly Construction Noise Level, dB(A)																							
			2018			2019			2020			2021														
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Works Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	Correction, dB(A)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
D	901	Ground Level Works Finalization	102	47	41	61																				61
	902	Tree Planting	96	47	41	55																				55
E	101	Mobilization	88	189	54	44	44																			
	102	Site Preparation + Tree Felling	105	189	54	52							52													
	201	Bored Piles 1m dia	104	189	54	50																				
	202	Pile Caps	105	189	54	52																				
	203	Columns (average 11.5m)	104	189	54	51																				
E	204	UU diversion	105	189	54	52																				
	205	Abutment (125m long)	102	189	54	48																				
	206	Deck Spans (gen 40m)(including road drainage works)	104	189	54	51																				
	207	Edge Barrier	97	189	54	43																				
	210	Road Works and Installation of Road Lighting	102	189	54	53																				
E	303	Structural Steel Frame Erection	102	189	54	49																				
	304	Noise Panel Installation	93	189	54	39																				
	305	Finishing	93	189	54	39																				
E	502	Breaking up & Removal of Columns	106	189	54	52																				
	503	Breaking up & Removal of Staircases	106	189	54	52																				
	504	Breaking up & Removal of Pile Caps	106	189	54	52																				
E	701	Relocation/modification of existing bus lay-b	102	189	54	48																				
E	901	Ground Level Works Finalization	102	189	54	49																				
	902	Tree Planting	96	189	54	43																				
F	101	Mobilization	98	318	58	40	40																			
	102	Site Preparation + Tree Felling	105	318	58	47																				
	201	Bored Piles 1m dia	104	318	58	46																				
	202	Pile Caps	105	318	58	47																				
	203	Columns (average 11.5m)	104	318	58	46																				
F	204	UU diversion	105	318	58	47																				
	205	Abutment (125m long)	102	318	58	44																				
	206	Deck Spans (gen 40m)(including road drainage works)	104	318	58	46																				
	207	Edge Barrier	97	318	58	39																				
	210	Road Works and Installation of Road Lighting	106	318	58	46																				
F	303	Structural Steel Frame Erection	102	318	58	44																				
	304	Noise Panel Installation	93	318	58	35																				
	305	Finishing	93	318	58	35																				
F	901	Ground Level Works Finalization	102	318	58	44																				
	902	Tree Planting	96	318	58	38																				

Overall	Overall (CNL w/o façade effect), dB(A)																							
	Façade effect, dB(A)																							
	Overall (CNL w/ façade effect), dB(A)																							
Remark:																								

** calculation table above only show tasks for which there are PMEs in use during the day-time

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard	701	Monthly Construction Noise Level, dB(A)																					
		2021																					
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec										
Works Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	2018	2019	2020	2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
D	901	Ground Level Works Finalization	102	50	42	60																	
	902	Tree Planting	96	50	42	54																	
E	101	Mobilization	88	229	55	43																	
	102	Site Preparation + Tree Felling	105	229	55	50		50															
E	201	Bored Piles 1m dia	104	229	55	48			48														
	202	Pile Caps	105	229	55	50				50	50												
	203	Columns (average 11.5m)	104	229	55	49																	
	204	UU diversion	105	229	55	50																	
	205	Abutment (125m long)	102	229	55	47																	
	206	Deck Spans (gen 40m)(including road drainage works)	104	229	55	49																	
E	207	Edge Barrier	97	229	55	42																	
	210	Road Works and Installation of Road Lighting	106	229	55	51															51		
	303	Structural Steel Frame Erection	102	229	55	47																47	
E	304	Noise Panel Installation	93	229	55	38																38	
	305	Finishing	93	229	55	38																38	
	502	Breaking up & Removal of Columns	106	229	55	51																51	
E	503	Breaking up & Removal of Staircases	106	229	55	51																51	
	504	Breaking up & Removal of Pile Caps	106	229	55	51																51	
E	701	Relocation/modification of existing bus lay-b	102	229	55	47																47	
	901	Ground Level Works Finalization	102	229	55	47																47	
E	902	Tree Planting	96	229	55	41																41	
	101	Mobilization	88	360	59	39																39	
F	102	Site Preparation + Tree Felling	105	360	59	46																46	
	201	Bored Piles 1m dia	104	360	59	45																45	
F	202	Pile Caps	105	360	59	46																46	
	203	Columns (average 11.5m)	104	360	59	45																45	
	204	UU diversion	105	360	59	46																46	
	205	Abutment (125m long)	102	360	59	43																43	
	206	Deck Spans (gen 40m)(including road drainage works)	104	360	59	45																45	
	207	Edge Barrier	97	360	59	38																	38
F	210	Road Works and Installation of Road Lighting	106	360	59	47																47	
	303	Structural Steel Frame Erection	102	360	59	43																43	
F	304	Noise Panel Installation	93	360	59	34																34	
	305	Finishing	93	360	59	34																34	
F	901	Ground Level Works Finalization	102	360	59	43																43	
	902	Tree Planting	96	360	59	37																37	
Overall			Overall (CNL w/o façade effect), dB(A)				57	57	52	53	51	49	49	50	50	50	50	50	50	50	50	50	50
			Façade effect, dB(A)				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
			Overall (CNL w/ façade effect), dB(A)				60	60	55	56	54	52	52	53	53	53	53	53	53	53	53	53	53

Remark: ** calculation table above only show tasks for which there are PMEs in use during the day-time

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard		Monthly Construction Noise Level, dB(A)												Cor- rection, dB(A)	Dist- ance, m	SWL, dB(A)	CNL, dB(A)	2021																			
		2018						2019										2020																			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
801	Yat King House																																				
75																																					
Works Area	Task ID																																				
D	901	Ground Level Works Finalization																																			
	902	Tree Planting	96	92	47	47	55																														
E	101	Mobilization	88	215	55	43																															
	102	Site Preparation + Tree Felling	105	215	55	51	51																														
	201	Bored Piles 1m dia	104	215	55	49	48																														
	202	Pile Caps	105	215	55	51	51																														
	203	Columns (average 11.5m)	104	215	55	50	50																														
E	204	UU diversion	105	215	55	51																															
	205	Abutment (125m long)	102	215	55	47																															
	206	Deck Spans (gen 40m)(including road drainage works)	104	215	55	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	207	Edge Barrier	97	215	55	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	210	Road Works and Installation of Road Lighting	106	215	55	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
E	303	Structural Steel Frame Erection	102	215	55	48	48																														
	304	Noise Panel Installation	93	215	55	38	38																														
	305	Finishing	93	215	55	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
E	502	Breaking up & Removal of Columns	106	215	55	51	51																														
	503	Breaking up & Removal of Staircases	106	215	55	51	51																														
	504	Breaking up & Removal of Pile Caps	106	215	55	51	51																														
E	701	Relocation/modification of existing bus lay-b	102	215	55	47	47																														
E	901	Ground Level Works Finalization	102	215	55	47																															
	902	Tree Planting	96	215	55	41																															
F	101	Mobilization	98	342	59	39	39																														
	102	Site Preparation + Tree Felling	105	342	59	47	47																														
	201	Bored Piles 1m dia	104	342	59	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45		
	202	Pile Caps	105	342	59	47	47																														
	203	Columns (average 11.5m)	104	342	59	46	46																														
F	204	UU diversion	105	342	59	47	46																														
	206	Abutment (125m long)	102	342	59	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43		
	207	Edge Barrier	97	342	59	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
	210	Road Works and Installation of Road Lighting	106	342	59	46	46																														
F	303	Structural Steel Frame Erection	102	342	59	44	44																														
	304	Noise Panel Installation	93	342	59	34	34																														
	305	Finishing	93	342	59	34	34																														
F	901	Ground Level Works Finalization	102	342	59	43	43																														
	902	Tree Planting	96	342	59	37	37																														
Overall	Overall (CNL w/o façade effect), dB(A)		53	53	53	54	51	50	50	53	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51		
	Façade effect, dB(A)		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			
	Overall (CNL w/ façade effect), dB(A)		56	56	56	57	54	53	53	56	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54		

Remark:

** calculation table above only show tasks for which there are PMEs in use during the day-time

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard		70	Monthly Construction Noise Level, dB(A)												2021																																								
Works Area		Task ID	Task Description	SWL, dB(A)	Dist-ance, m	Cor-rection, dB(A)	2018												2020												2021																								
Works Area		Task ID	Task Description	SWL, dB(A)	Dist-ance, m	Cor-rection, dB(A)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug																	
D	901	901	Ground Level Works Finalization	102	71	45																																																	
E	902	902	Tree Planting	96	71	45																																																	
E	101	101	Mobilization	88	257	56																																																	
E	102	102	Site Preparation + Tree Felling	105	257	56								43																																									
E	201	201	Bored Piles 1m dia	104	257	56												47																																					
E	202	202	Pile Caps	105	257	56																																																	
E	203	203	Columns (average 11.5m)	104	257	56																																																	
E	204	204	UU diversion	105	257	56																																																	
E	205	205	Abutment (125m long)	102	257	56																																																	
E	206	206	Deck Spans (gen 40m)(including road drainage works)	104	257	56																																																	
E	207	207	Edge Barrier	97	257	56																																																	
E	210	210	Road Works and Installation of Road Lighting	102	257	56																																																	
E	303	303	Structural Steel Frame Erection	102	257	56																																																	
E	304	304	Noise Panel Installation	93	257	56																																																	
E	305	305	Finishing	93	257	56																																																	
E	502	502	Breaking up & Removal of Columns	106	257	56																																																	
E	503	503	Breaking up & Removal of Staircases	106	257	56																																																	
E	504	504	Breaking up & Removal of Pile Caps	106	257	56																																																	
E	701	701	Relocation/modification of existing bus lay-b	102	257	56																																																	
E	701	701	Relocation/modification of existing bus lay-b	102	257	56																																																	
E	901	901	Ground Level Works Finalization	102	257	56																																																	
E	902	902	Tree Planting	96	257	56																																																	
F	101	101	Mobilization	88	387	60	38																																																
F	102	102	Site Preparation + Tree Felling	105	387	60	45							45																																									
F	201	201	Bored Piles 1m dia	104	387	60	44							44																																									
F	202	202	Pile Caps	105	387	60	46																																																
F	203	203	Columns (average 11.5m)	104	387	60	45																																																
F	204	204	UU diversion	105	387	60	46																																																
F	205	205	Abutment (125m long)	102	387	60	42																																																
F	206	206	Deck Spans (gen 40m)(including road drainage works)	104	387	60	45																																																
F	207	207	Edge Barrier	97	387	60	37																																																
F	210	210	Road Works and Installation of Road Lighting	102	387	60	47																																																
F	303	303	Structural Steel Frame Erection	102	387	60	43																																																
F	304	304	Noise Panel Installation	93	387	60	33																																																
F	305	305	Finishing	93	387	60	33																																																
F	901	901	Ground Level Works Finalization	102	387	60	42																																																
F	902	902	Tree Planting	96	387	60	36																																																
Overall	Overall (CNL w/o façade effect), dB(A)				54	54	51	52	50	48	48	51	49	49	48	48	49	49	48	48	48	49	50	49	47	49	60	52	48	53	65	66	62	64	51	51	51	51	63	61	61	60	62	56	57	47	62	61	48	49	49	49	50	51	58
	Façade effect, dB(A)				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3					
	During normal school time, overall (CNL w/ façade effect), dB(A)				57	57	54	55	53	51	51	54	52	52	51	51	52	53	52	50	52	63	55	51	61	68	68	65	67	54	54	68	65	61	61	68	65	61	60	65	61	60	65	61	60	65	64	51	52	52	52	53	54	61	
	During examination time, overall (CNL w/ façade effect), dB(A) *				57		54	55	53	51	51						51	52	52	50	52	63	55																																

Remark: * showing only examination months Dec-Jan, Mar-Jul, with exceedances highlighted

** calculation table above only show tasks for which there are PMEs in use during the day-time

Appendix 4-9D Detailed Construction Noise Calculations (Mitigated)

AP Standard	1102 Yin Lai Court - Yin Tak House (Block B)		Monthly Construction Noise Level, dB(A)																							
	Works Area	Task ID	Task Description	SWL, dB(A)	Distance, m	Correction, dB(A)	2019																			
							2018			2020			2021													
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
	A	101	Mobilization	98	506	62	36	36																		
		102	Site Preparation + Tree Felling	105	506	62	43																			
		401	UU diversion	105	506	62	43	43																		
		402	Bored Piles 1m dia	104	506	62	42	42																		
		403	Pile Caps	105	506	62	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
	A	404	Columns (average 11m)	104	506	62	42																			
		405	Deck Spans (gen 25m)	104	506	62	42																			
		406	Edge Barrier	97	506	62	35																			
		409	Road Works and Installation of Road Lighting	107	506	62	45																			
	A	901	Ground Level Works Finalization	102	506	62	40																			
		902	Tree Planting	96	506	62	34																			
	B	101	Mobilization	98	409	60	38	38																		
		102	Site Preparation + Tree Felling	105	409	60	45	45																		
		601	Bored Piles 1m dia	104	409	60	43	43																		
		602	Pile Caps	105	409	60	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
		603	Central Column	104	409	60	44																			
	B	604	Staircases	102	409	60	42																			
		607	Lift Tower Wall	103	409	60	42																			
		608	Lift Frame Erection	102	409	60	42																			
		609	Window Panel Installation	93	409	60	33																			
		615	E&M Installation (including lift	95	409	60	35																			
	B	901	Ground Level Works Finalization	102	409	60	42																			
		902	Tree Planting	96	409	60	36																			
	C	101	Mobilization	98	356	59	39	39																		
		102	Site Preparation + Tree Felling	105	356	59	46	46																		
		601	Bored Piles 1m dia	104	356	59	45	45																		
		602	Pile Caps	105	356	59	46	46																		
		603	Central Column	104	356	59	45	45																		
	C	604	Staircases	102	356	59	43																			
		607	Lift Tower Wall	103	356	59	44																			
		608	Lift Frame Erection	102	356	59	43																			
		609	Window Panel Installation	93	356	59	34																			
		615	E&M Installation (including lift	95	356	59	36																			
	C	901	Ground Level Works Finalization	102	356	59	43																			
		902	Tree Planting	96	356	59	37																			
	D	101	Mobilization	98	177	53	45	45																		
		102	Site Preparation + Tree Felling	105	177	53	52	52																		
		201	Bored Piles 1m dia	104	177	53	51	51																		
		202	Pile Caps	105	177	53	52	52																		
		203	Columns (average 11.5m)	104	177	53	51	51																		
	D	204	UU diversion	105	177	53	52																			
		205	Abutment (125m long)	102	177	53	49																			
		206	Deck Spans (gen 40m)(including road drainage works)	104	177	53	51																			
		210	Edge Barrier	97	177	53	44																			
		210	Road Works and Installation of Road Lighting	106	177	53	53																			
		303	Structural Steel Frame Erection	102	177	53	49																			
	D	304	Noise Panel Installation	93	177	53	40																			
		305	Finishing	93	177	53	40																			
		502	Breaking up & Removal of Columns	106	177	53	53																			
	D	503	Breaking up & Removal of Staircases	106	177	53	53																			
		504	Breaking up & Removal of Pile Caps	106	177	53	53																			
	D	701	Relocation/modification of existing bus lay-b-	102	177	53	49																			
		801	Modification of Kwai Chung Road (outside Fung King Hou	107	177	53	54																			

Appendix 4-9E Summary

Monthly Maximum Construction Noise Levels, dB(A)

ID	NSR	Description	Standard, dB(A)	2018												2019												2020												2021											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
202		2) Lingnam Dr. Chung Wing Memorial Secondary School	65/70	57	57	62	59	59	59	60	61	61	60	59	58	58	58	61	61	60	59	57	50	49	55	58	54	47	52	52	56	60	66	60																	
303		3) Lai King Catholic Secondary School	65/70	65	65	70	70	67	68	68	69	69	69	67	67	69	67	66	66	67	65	63	64	65	65	64	65	58	52	57	56	66	60	66	60																
304		3) Lai King Catholic Secondary School	65/70	65	65	69	70	68	67	67	70	68	68	67	66	68	69	66	65	68	66	62	65	66	66	66	64	65	64	65	56	65	61	67	62																
401		4) Ha Kwai Chung Polyclinic and Special Services Centre	70	55	60	60	60	57	57	57	58	58	58	57	56	58	57	55	56	57	58	55	57	59	60	58	59	53	50	54	53	55	52																		
404		4) Ha Kwai Chung Polyclinic and Special Services Centre	70	56	56	60	61	58	57	57	60	59	59	58	57	58	59	58	57	59	59	56	58	61	62	59	60	57	51	54	50	54	56	54																	
501		5) Fung King House	75	65	65	63	69	68	61	61	69	62	62	61	60	67	67	60	59	66	68	66	69	70	71	67	69	65	65	71	70	69	68	67	64																
504		5) Fung King House	75	65	65	63	69	68	61	61	69	62	62	61	60	67	67	60	59	66	68	66	69	70	71	67	69	65	65	71	70	69	68	63	62	57	60	62	67	64											
509		5) Fung King House	75	60	60	57	56	54	54	57	55	55	54	53	55	56	54	52	54	67	57	53	64	72	73	69	71	56	56	70	68	68	67	69	65	64	52	68	68	55	55	56	57	65							
701		7) Ming King House	75	60	60	55	56	54	52	52	55	53	53	52	53	54	53	51	52	66	56	52	64	71	72	68	70	54	55	69	67	66	68	65	63	50	68	67	54	55	55	55	56	66	64						
801		8) Yat King House	75	56	56	56	57	54	53	53	56	54	54	54	53	54	55	53	52	53	62	56	52	59	66	67	63	65	55	55	65	63	63	62	63	59	58	51	63	62	50	51	51	52	53	54	59				
901		9) HKEAA-Lai King Assessment Centre	65/70	57	57	54	55	53	51	51	54	52	52	51	51	52	53	52	50	52	63	55	51	61	68	69	65	67	54	54	66	64	64	63	65	61	60	50	65	64	51	52	52	52	53	54	61				
902		9) HKEAA-Lai King Assessment Centre	65/70	55	55	54	55	52	51	51	53	52	52	51	52	52	52	50	51	62	54	50	59	66	67	63	66	53	53	65	63	63	61	63	60	58	49	63	63	50	51	51	51	52	53	59	55				
1002		10) Wo King House	75	52	52	53	54	51	50	50	52	51	51	50	50	50	51	50	49	50	57	53	49	56	62	63	59	61	52	52	61	59	58	59	55	54	48	59	58	46	47	48	48	49	50	55					
1102		11) Ming King House	75	51	51	52	53	50	49	49	51	50	50	49	49	50	50	50	48	49	56	52	49	55	60	61	58	60	51	51	59	58	58	56	57	54	52	48	57	56	44	46	47	47	48	49	53				

Note: Noise standard = 65 dB(A) for educational institutions during examination periods; 70 dB(A) for normal school periods