Construction Noise Impact Assessment – KET Station

Works Area C - West of KET (Forbes Street Site)

Initial possession

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand Held Breaker	CNP024	3	108	50%	Movable Noise Barrier*	10	100
						Total	100

Utility Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mini backhoe	CNP082	2	94	50%	Movable Noise Barrier*	5	89
Truck	BS C9/39	2	103	30%			101
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Hand Held Breaker	CNP024	4	108	50%	Movable Noise Barrier*	10	101
						Total	104

Piling/walling

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pilling, earth auger	CNP167	4	114	70%	Fabric [#]	10		108
Air Compressor	CNP002	4	102	100%	Enclosure/Shed*	15		93
Crane	BS C7/114	2	101	30%				99
Truck	BS C9/39	10	103	30%			108	
						Total	108	109

Bulk Excavation - soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	2	105	90%	Temporary / Movable Noise Barrier*	5	103
Truck	BS C9/39	4	103	30%	Temporary / Movable Noise Barrier*	5	99
Crane	BS C7/114	2	101	30%	Temporary / Movable Noise Barrier*	5	94
Water pump, submersible (electric)	CNP283	2	85	100%	Temporary / Movable Noise Barrier*	10	78
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
						Total	105

Bulk Excavation - weak rock

Bulk Excavation - weak rock							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	2	106	50%	Temporary / Movable Noise Barrier*	10	96
Backhoe	BS C3/97	2	105	50%	Temporary / Movable Noise Barrier*	5	100
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Water pump, submersible (electric)	CNP283	2	85	100%	Temporary / Movable Noise Barrier*	10	78
Truck	BS C9/39	4	103	30%	Temporary / Movable Noise Barrier*	5	99
Crane	BS C7/114	2	101	30%	Temporary / Movable Noise Barrier*	5	94
						Total	105

Excavate rock and base

Excavate fock and base								
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%	Temporary / Movable Noise Barrier*	10	96	
Backhoe	BS C3/97	1	105	50%	Temporary / Movable Noise Barrier*	5	97	97
Ventilation fan	CNP241	1	108	100%	Silencer	15	93	93
Water pump, submersible (electric)	CNP283	1	85	100%	Temporary / Movable Noise Barrier*	10	75	75
Rock Drill	CNP182	1	123	70%	Acoustic Enclosure [^]	20		101
Truck	BS C9/39	2	103	30%	Temporary / Movable Noise Barrier*	5	96	96
Crane	BS C7/114	1	101	30%	Temporary / Movable Noise Barrier*	5	91	91
						Total	102	104

Works Area C - West of KET (Forbes Street Site)

Commence KET Turnback Tunnel

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Ventilation fan	CNP241	2	108	100%	Silencer	15	96	96
Drill Rig	CNP072	1	110	50%	Temporary / Movable Noise Barrier*	5		102
Grout Pump	CNP106	1	105	20%	Enclosure/Shed*	15	83	
Truck	BS C9/39	3	103	30%	Temporary / Movable Noise Barrier*	5	98	
Crane	BS C7/114	2	101	40%	Temporary / Movable Noise Barrier*	5	95	
						Total	101	103

Tunnel Lining for KET Turnback

runner Emilig for INET Turnback							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Grout Pump	CNP106	1	105	5%	Enclosure/Shed*	15	77
Concrete Pump	CNP054	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	3	100	30%	Temporary / Movable Noise Barrier*	5	95
Truck	BS C9/39	1	103	30%	Temporary / Movable Noise Barrier*	5	93
Crane	BS C7/114	1	101	40%	Temporary / Movable Noise Barrier*	5	92
						Total	102

Construct Station Box and Fitout ABWF

Temporary Barrier	(KET 1 to 3)	Movable Barrier (KET 4

Constituot Ctation Box and I itout	AD						(
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	Reduction	dB(A)
Air Compressor	CNP002	3	102	100%	Enclosure/Shed*	15	92	15	92
Concrete pump	CNP047	3	109	100%	Enclosure/Shed*	15	99	15	99
Concrete Lorry Mixer	BS C6/23	3	100	30%	Temporary / Movable Noise Barrier*	5	95	0	100
Poker, vibratory, hand-held	BS C6/40	12	98	100%	Temporary / Movable Noise Barrier*	10	99	10	99
Crane	BS C7/114	2	101	40%	Temporary / Movable Noise Barrier*	5	95	5	95
Water pump, submersible (electric)	CNP283	3	85	100%	Temporary / Movable Noise Barrier*	10	80	0	90
						Total	104	Total	105

Reinstate Forbes Street and Smithfield

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Truck	BS C9/39	1	103	30%			98		
Power Rammer	CNP169	1	108	100%	Fabric [#]	10	98		
Roller, vibratory	BS C8/30	1	101	100%			101		
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	1	100	100%				100	
Poker, vibratory, hand-held	BS C6/40	2	98	100%				101	
Asphalt Paver	BS C8/24	1	101	100%					101
						Total	101	104	101

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] According to Table B.1 of BS 5228: Part 1: 1997, rock drill in portable or fixed acoustic enclosure with suitable ventilation could achieve a noise reduction of 20dB(A).

Works Area D - East of KET (Swimming Pool Site)

Demolish Pools and Grandstand

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Hand Held Breaker	CNP024	2	108	50%			108	
Hydraulic Breaker	BS C8/13	2	110	80%				112
Backhoe	BS C3/97	2	105	70%				106
Truck	BS C9/39	3	103	30%				103
		•				Total	108	113

Piling/walling

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pilling, earth auger	CNP167	3	114	70%	Fabric [#]	10		107
Pilling, Hydraulic	BS C4/13	1	106	70%	Fabric [#]	10		94
Air Compressor	CNP002	4	102	100%	Enclosure/Shed*	15		93
Crane	BS C7/114	5	101	30%	Movable Noise Barrier*	5	98	98
Truck	BS C9/39	6	103	30%			106	
						Total	106	108

Bulk Excavation - soft

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	2	105	90%	Movable Noise Barrier*	5	103
Truck	BS C9/39	4	103	30%			104
Water pump, submersible (electric)	CNP283	2	85	100%			88
Crane	BS C7/114	2	101	30%	Movable Noise Barrier*	5	94
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
					•	Total	107

Bulk Excavation - weak rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	3	106	50%	Movable Noise Barrier*	10	98
Backhoe	BS C3/97	3	105	50%	Movable Noise Barrier*	5	102
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Water pump, submersible (electric)	CNP283	3	85	100%			90
Truck	BS C9/39	6	103	30%			106
Crane	BS C7/114	3	101	30%	Movable Noise Barrier*	5	96
						Total	108

Excavate rock and base

Excavate fock and base							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	2	106	50%	Movable Noise Barrier*	10	96
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97
Ventilation fan	CNP241	1	108	100%	Silencer	15	93
Water pump, submersible (electric)	CNP283	1	85	100%			85
Rock Drill	CNP182	1	123	70%	Acoustic Enclosure [^]	20	101
Truck	BS C9/39	2	103	30%			101
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5	91
						Total	106

Commence KET to SYP Tunnel

Commence KET to STP Tunner							_
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
Drill Rig	CNP072	1	110	50%	Movable Noise Barrier*	5	102
Grout Pump	CNP106	1	105	20%	Enclosure/Shed*	15	83
Truck	BS C9/39	3	103	30%			103
Crane	BS C7/114	2	101	40%	Movable Noise Barrier*	5	95
						Total	106

Works Area D - East of KET (Swimming Pool Site)

Tunnel Lining for SYP to KET Tunnel

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Grout Pump	CNP106	1	105	5%	Enclosure/Shed*	15	77
Concrete Pump	CNP054	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	3	100	30%			100
Truck	BS C9/39	1	103	30%			98
Crane	BS C7/114	1	101	40%			97
						Total	105

Construct Station Box and Fitout ABWF

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	3	102	100%	Enclosure/Shed*	15	92
Concrete pump	CNP047	3	109	100%	Enclosure/Shed*	15	99
Concrete Lorry Mixer	BS C6/23	3	100	30%			100
Poker, vibratory, hand-held	BS C6/40	12	98	100%	Movable Noise Barrier*	10	99
Crane	BS C7/114	2	101	40%	Movable Noise Barrier*	5	95
Water pump, submersible (electric)	CNP283	3	85	100%			90
						Total	105

Reinstate Site & Smithfield PTI Slab

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	l otal SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Truck	BS C9/39	1	103	30%			98		
Power Rammer	CNP169	1	108	100%	Fabric [#]	10	98		
Roller, vibratory	BS C8/30	1	101	100%			101		
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	1	100	100%				100	
Poker, vibratory, hand-held	BS C6/40	2	98	100%				101	
Asphalt Paver	BS C8/24	1	101	100%					101
						Total	104	104	101

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] According to Table B.1 of BS 5228: Part 1: 1997, rock drill in portable or fixed acoustic enclosure with suitable ventilation could achieve a noise reduction of 20dB(A).

Works Area A - Ex-Police Quarter

Utility Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Hand Held breaker	CNP024	1	108	50%			105
Mini backhoe	CNP082	1	94	80%			93
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
						Total	105

Demolition

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Noise Control Curtain^	5	97	
Hand Held breaker	CNP024	2	108	50%	Noise Control Curtain^	5	103	
Hydraulic Breaker	BS C8/13	2	110	70%	Noise Control Curtain^	5	106	
Backhoe	BS C3/97	2	105	70%				106
Truck	BS C9/39	2	103	30%				101
Mobile Crane	BS C7/114	1	101	70%				99
						Total	108	108

Piling/walling (only 5 days)

i iiiig/waiiiig (oiiiy 5 days)							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile rig	BS C11/2	1	112	80%			111
Mobile Crane	BS C7/114	1	101	80%			100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Generator, super silenced	CNP103	1	95	100%			95
						Total	111

Excavation of Shaft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	70%			103
Hydraulic breaker	BS C8/13	2	110	80%	Movable Noise Barrier*	5	107
Hand Held breaker	CNP024	2	108	60%	Movable Noise Barrier*	5	104
Ventilation fan	CNP241	1	108	100%	Silencer	15	93
Mobile Crane	BS C7/114	1	101	40%			97
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85
Compressor	CNP003	1	104	100%	Movable Noise Barrier*	10	94
Water pump, submersible (electric)	CNP283	1	85	100%	Movable Noise Barrier*	10	75
Grout plant	CNP046	1	96	15%	Movable Noise Barrier*	10	78
Concrete Mixer Truck	BS C6/23	1	100	50%			97
Shotcrete Pump	CNP047	1	109	20%	Enclosure/Shed*	15	87
Drill rig	CNP072	1	110	50%			107
Trucks	BS C9/39	2	103	30%			101
						Total	112

Excavation of Tunnel / Adits

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Ventilation fan	CNP241	1	108	100%	Silencer	15	93
Mobile Crane	BS C7/114	1	101	70%			99
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85
Compressor	CNP003	1	104	100%	Movable Noise Barrier*	10	94
Water pump, submersible (electric)	CNP283	1	85	100%	Movable Noise Barrier*	10	75
Grout plant	CNP046	1	96	15%	Movable Noise Barrier*	10	78
Concrete Mixer Truck	BS C6/23	1	100	50%			97
Shotcrete Pump	CNP047	1	109	20%	Movable Noise Barrier*	10	92
Truck	BS C9/39	2	103	30%			101
						Total	105

Lining

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Concrete Mixer Truck	BS C6/23	1	100	80%			99
Concrete Pump	CNP054	1	109	80%	Enclosure/Shed*	15	93
						Total	100

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[^] The noise control curtain is a noise insulating fabric which would be mounted on the steel scaffold of the building to be demolished to an extent such that the line of sight between the noise source and the NSR would be blocked. A noise reduction of 5dB(A) was assumed for this measure.

Works Area B - Abattoir Site

Construct Site Offices + Crusher + Barging Point

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Generator	CNP103	2	95	100%			98
Mobile Crane	BS C7/114	2	101	30%			99
Truck	BS C9/39	2	103	65%			104
Poker	BS C6/40	2	98	30%			96
Compressor	CNP003	1	104	60%	Enclosure/Shed*	15	87
Concrete Mixer Truck	BS C6/23	2	100	50%			100
						Total	107

Rock Crusher Operation

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Wheel Loader	BS C3/97	1	105	50%			102	
Truck	BS C9/39	2	103	65%			104	
Converyor	CNP041	4	90	70%				94
Crusher	EIA Ref.	1	118	40%				114
						Total	106	114

Reinstatement

ricinstatement							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	30%			101
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Concrete Lorry Mixer	BS C6/23	2	100	50%			100
Poker, vibratory, hand-held	BS C6/40	4	98	30%			99
Crane	BS C7/114	1	101	20%			94
Breaker	BS C8/12	1	106	25%			100
						Total	106

Transport spoil to the barge

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Barge	CNP061	1	104	80%			103
Truck	BS C9/39	10	103	70%			111
						Total	112

Note

 $\textbf{EIA Ref.}: \textbf{The SWL of crusher was made reference to the approved EIA Report of Development at Anderson Road, 1998. \\$

EIA Ref. : The SWL of cement tank and cement blower was made reference to the approved EIA of Proposed RMC Concrete Batching Plant at Telegraph Bay for Cyber-Port Development .

With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

Works Area MA - Underground Magazine Site

Possession of Site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Drill Rig	CNP072	1	110	60%	Fabric [#]	10	98	98
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	87
Generator, super silenced	CNP103	1	95	100%			95	95
Grout Pump	CNP106	1	105	50%			102	
Grout Mixer	CNP105	1	90	50%				87
Vibratory Roller	BS C8/30	1	101	70%			99	99
Backhoe	BS C3/97	1	105	80%			104	104
Truck	BS C9/39	1	103	50%			100	100
						Total	108	107

Construction of Magazine

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	87	
Generator, super silenced	CNP103	1	95	100%			95	95	95
Ventilation fan	CNP241	1	108	100%	Silencer	15			93
Breaker	BS C/8/12	2	106	70%			107	107	107
Drill Rig	CNP072	4	110	50%			113	113	
Jumbo drill rig	CNP072	1	110	20%			103	103	103
Grout Pump	CNP106	1	105	15%			97		
Grout Mixer	CNP105	1	90	15%				82	
Backhoe	BS C3/97	1	105	20%			98	98	98
Front end loader	BS C3/97	1	105	20%			98	98	98
Shotcrete Pump	CNP047	1	109	20%					102
Truck	BS C9/39	1	103	40%			99	99	99
						Total	115	115	111

Operation of Magazine - Ventilation Fan

opolation of magazine Tonthati							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
•						Total	96

Operation of Magazine - Truck

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	3	103	40%			104
						Total	104

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

NSR :KET 1 - Kwun Lung Lau (Block D)

								20									2010								2011								012								2013							2014		
Act No.	Construction Element	SWL	Diot ²	SPI	Feb Ma	ar Apr	May	Jun Ju	ıl Aug	Sep	Oct No	v Dec	Jan F	eb Mar	Apr	May Ju	n Jul	Aug Se	ep Oct	Nov E	ec Jar	n Feb M	√ar Apr	May J			ep Oct	Nov De	Jan	Feb M	lar Apr	May Jun	Jul A	Aug Sep	o Oct	Nov Dec	Jan	Feb Ma	ar Apr	May -	Jun .	Jul Aug S	Sep Oc	t Nov	Dec Ja	ın Feb	Mar Apr	r May	Jun Ju	ıl Auç
		0112	DISL	O. L	1 2	3	4	5 6	7	8	9 1) 11	12 1	3 14	15	16 17	18	19 2	0 21	22	23 24	25	26 27	28 2	29 30	31	32 33	34 35	36	37 3	8 39	40 41	42	43 44	45	46 47	48	49 50	51	52	53	54 55	56 57	7 58	59 60	0 61	62 63	64	65 66	3 67
Vorks Area C - We	est of KET (Forbes Street Site)																																																	
 Initial posse 				64										64	64	64 64																																		
2 Utility Diver			37	68													68				88																													
3 Piling/walling				73												73	73	73 7																																
4 Bulk Excav	vation - soft ^	105		69																69 (69	69	69 69	69																										
5 Bulk Excav	vation - weak rock ^			68																			68 68																											
6 Excavate re			43																				66 66																											
	e KET Turnback Tunnel ^		38	66																		66	66 66	66 6	66 66																									
	ing for KET Turnback ^			65																							65 65																					\perp		
	Station Box and Fitout ABWF			68																				6	68 68	68	68 68	68 68	68	68 6	8 68	68 68	68	68 68	68	68 68														
10 Reinstate F	Forbes Street and Smithfield	104	37	68																																	68	68 68	8 68	68	68	68 68	68 68	68	68					
	st of KET (Swimming Pool Site)																																																	
11 Demolish F	Pools and Grandstand ^		95	68															68	68																														
12 Piling/walling	ing ^			67																	67	67	67 67	67																										
13 Bulk Excav	vation - soft ^	107	104	62																				62 6	62 62	62	62	62																						
14 Bulk Excav	vation - weak rock	108	104	63																						63	63	63																						
15 Excavate ro	ock and base		104																							61	61	61																						
16 Commence	e KET to SYP Tunnel	106	166	57														5	7 57	57 !	57 57	1																												
17 Tunnel Lini	ing for SYP to KET Tunnel	105	166	56																					56	56	56 56	56 56	56	56																				
18 Construct S	Station Box and Fitout ABWF	105	104	60																								60 60	60	60 6	60	60 60	60	60 60	60	60 60	60	60 60	0 60	60										
19 Reinstate S	Site & Smithfield PTI Slab	104	95	59																																		59 59	9 59	59	59	59 59	59 59	59	59 59	9 59				
Vorks Area A - Ex-	-Police Quarter																																																	
20 Utility Diver	ersions	96	- 1	0										0	0	0 0																																		
21 Demolish ^	٨	103	-	0													0	0 (0 0	0																														
22 Piling/wallin	ing (only 5 days) ^	102	-	0																0																														
23 Excavation	of Shaft (soft) ^	106	-	0																0	0																													
24 Excavation	of Shaft (rock) ^	106	-	0																	0 0																													
25 Excavation	of Tunnel / Adits (rock) ^	100	-	0																	0	0																												
26 Excavation	of Tunnel / Adits (soft)	100	-	0																							0 0	0 0	0	0 (0 0	0																		
27 Lining		94		0																							0 0	0 0	0	0 (0 0	0																		
Works Area B - Aba	attoir Site																																																	
28 Construct S	Site Offices + Crusher + Barging Point	98	-	0	0 0) 0	0	0 0	0	0	0 0																															$\overline{}$				$\overline{}$			\neg	$\overline{}$
29 Rock Crush		104	-	0								0	0 (0 0	0	0 0	0	0 (0 0	0	0 0	0	0 0	0	0 0	0	0 0	0 0	0	0 (0 0	0 0	0	0								+	-			-	-	+	-	_
30 Reinstatem	•	97		0													-				-											-		-	0	0						+	-			-	-	+	-	_
31 Transport s		102		0								0	0 () ()	0	0 0	0	0 (0	0	0 0	0	0 0	0	0 0	0	0 0	0 0	0	0 (0 0	0 0	0	0								-	-		-	-	-	+-+	-	_
	Inderground Magazine Site	102		Ů								Ů		, ,	1	0 0	-	,	, ,	Ü	0		0 0		0 0			0 0	Ů		, ,	0 0	Ů																	
32 Possession		98		0	0 0)																																				+					-	+	_	_
33 Construction		105		0			0	0 0	0	0	0 0	0	0 ()		_	1 1	_								1 +							1		1 1		1		_			++	+		$=$ \vdash	+	-	+	+	+
	of Magazine - Ventilation Fan	86		0	-	, ,	-	0		U	, ,	0	0 1	_	0	0 0	0	0 (0	0	0 0	0	0 0	0	0 0	0	0 0	0 0	0	0 1	0 0	0 0		_	+		1		+-			-+-+	+	+	-+	+	-	+-+	-+	+
	of Magazine - Truck	94		0		-			+-	+				_	0	0 0	0	0 () 0	0	0 0	0	0 0	-	0 0	0			0) 0	0 0		_	+		1		+-			+	-	+	-+	+	-	++	-+	+
O.S Operation (or magazido - Italik		I SPL, d	-	_		+-	l	+ -	+ - 1	_	+-		- 64	-	64 70	73	73 7	3 74	74	72 71	74	74 74	74 7	71 71	72	72 72	72 70	70	70 7	0 70	70 60	69	69 69	69	69 69	69	69 60	9 60	69	69	69 69	69 60	69	69 50	9 59	_	+	_	+
		iota	. or L, u	-(~)			1 -			1 -		1 -		04	04	0+ /3	, , , ,	, 5 /	0 /4	/	·- /	/	, - /4	/ /	, , ,	16	- 16	12 /0	70	, 0 /	0 10	, 0 09	03	00 09	03	00 09	03	03 03	09	03	00	00 00	00 09	, 03	09 09	2 23			تــــــــــــــــــــــــــــــــــــــ	

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Stant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 4-7 in month 23, act. 11 & 12 in month 23, act. 12 & 13 in month 25, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET P1 - Kwun Lung Lau Planned Receiver

		Γ			200	09						2010)							2011						2012	2						2013						2014	1	
			Feb Mar	Apr Ma	ay Jun Ju	ıl Aua S	Sep Oct	Nov De	Jan F	eb Mar	Apr Ma	Jun ,	Jul Aug	Sep Oct	Nov I	Dec Jan	Feb Ma	ar Apr	Mav Ju	un Jul Aug	Sep	Oct Nov De	ec Jan	Feb Mar	Apr Ma	v Jun	Jul Au	Sep C	ct Nov [Dec J	an Feb Mai	r Apr	May Jun Jul	Aua	Sep Oct	Nov	Dec Jan	Feb Mar	Apr May	Jun	Jul Aug Sep
Act No.	Construction Element	SWL Dist ² SPL	1 2	3 4	5 6	7		10 11			15 16			20 21									_	37 38							18 49 50		•					61 62			66 67 68
Works A	rea C - West of KET (Forbes Street Site)																																								
1	Initial possession ^	100 62 59								59	59 59	59																													
2	Utility Diversions ^	104 38 67										67	67 67	67 67	67	67																									
3	Piling/walling ^	109 62 68										68	68 68	68 68	68																										
4	Bulk Excavation - soft ^	105 63 64													64	64 64	64 64	4 64	64																						
5	Bulk Excavation - weak rock ^	105 66 64															64 64	4 64	64																						
6	Excavate rock and base ^	104 52 65															65 6	5 65	65																						
7	Commence KET Turnback Tunnel ^	103 52 64															64 64	4 64	64 6	64 64 64	64																				
8	Tunnel Lining for KET Turnback ^	102 62 61																						61 61																	
9	Construct Station Box and Fitout ABWF	104 62 63																	6	63 63 63	63	63 63 6	3 63	63 63	63 63	3 63	63 63	63 6	3 63	63											
	Reinstate Forbes Street and Smithfield	104 139 56																												5	56 56 56	56	56 56 56	56	56 56	56	56				
	rea D - East of KET (Swimming Pool Site)																																								
11	Demolish Pools and Grandstand ^	113 140 65												65	65	65																									
12	Piling/walling ^	108 111 62														62 62	62 62	2 62																							
13	Bulk Excavation - soft ^	107 139 59																	59 5	59 59 59																					
14	Bulk Excavation - weak rock	108 139 60																				60 60																			
15	Excavate rock and base	106 139 58																		58	58	58 58																			
16	Commence KET to SYP Tunnel	106 213 54												54 54	54	54 54																									
17	Tunnel Lining for SYP to KET Tunnel	105 213 53																		53 53	53	53 53 5																			
	Construct Station Box and Fitout ABWF	105 139 57																				57 5	7 57	57 57	57 57	7 57	57 57	57 5	7 57	57 5	57 57 57										
	Reinstate Site & Smithfield PTI Slab	104 140 56																													56 56	56	56 56 56	56	56 56	56	56 56	56	\bot		
	rea A - Ex-Police Quarter																																								
20	Utility Diversions	96 - 0								0	0 0																														
	Demolish ^	103 - 0											0 0	0 0																									\perp		
	Piling/walling (only 5 days) ^	102 - 0													0																										
23	Excavation of Shaft (soft) ^	106 - 0													0	0																							\perp		
	Excavation of Shaft (rock) ^	106 - 0														0 0																									
25	Excavation of Tunnel / Adits (rock) ^	100 - 0														0	0																								
	Excavation of Tunnel / Adits (soft)	100 - 0																			0	0 0 0	0 0	0 0	0 0																
27		94 - 0																			0	0 0 0	0 0	0 0	0 0														\bot		
	rea B - Abattoir Site																																								
	Construct Site Offices + Crusher + Barging Point	98 - 0	0 0	0 0	0 0	0	0 0																																\perp		
	Rock Crusher Operation	104 - 0						0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0	0	0 0	0 0	0	0 0														
30	Reinstatement	97 - 0																										0	0										\perp		
	Transport spoil to the barge	102 - 0						0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0	0	0 0	0 0	0	0 0												\bot		
Works A	rea MA - Underground Magazine Site																																								
	Possession of Site		0 0																																				\perp		
	Construction of Magazine	105 - 0	0	0 0	0 0	0	0 0	0 0	0	_																													\bot		
	Operation of Magazine - Ventilation Fan	86 - 0								0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0	0 0	0 0	0 0	0													444		
34b	Operation of Magazine - Truck	94 - 0								0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0	0 0	0 0	0 0	0													$\perp \perp$		\bot
		Total SPL, dB(A)		- -		-			-	- 59	59 59	68	68 68	68 70	70	70 66	70 70	70	70 6	67 67 69	69	68 68 6	6 66	66 66	66 66	64	64 64	64 6	4 64	64 6	60 61 61	61	61 59 59	59	59 59	59	59 56	56 -		-	- - -
	Pomarka:	Exceedance	- -	- -	- -	1-1	- -	- -	1-1	- -		1 - 1	- -	- -	-	- -	- -	1 -	-	- - -	-	- - -	- -	- -		1 - 1	- -	1 - 1	1 - 1	-	- - -	<u> </u>	- - -	1 -	- -	1 - 1	- -	- -	1-1-	-	

Remarks:

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 1-3 in month 17, act. 2-4 in month 17-23, act. 4-7 in month 25-28, act. 7 & 8 in month 23, act. 11 & 12 in month 23, act. 21 & 13 in month 28, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR :KET 2- Luen Fat Apartments

					200	9						2	2010								2011								2012							20	113						2014		
Act No. Construction Element	SWL Dis	+2 SPI Fel	b Mar	Apr Ma	y Jun Jul	Aug S	Sep Oct	Nov	Dec Jan	Feb Ma	r Apr	May Jun	Jul	Aug Se	ep Oct	Nov E	Dec Jan	Feb	Mar A	or May	Jun Jul	Aug S	Sep O	ct Nov	Dec Ja	n Feb	Mar A	Apr May				ct Nov De	c Jan	Feb Ma	ar Apr	May Jun	Jul Au	g Sep C	Oct Nov	Dec Jan	Feb	Mar Apr	May Jur	n Jul	Aug 5
	SWL DIS	1	2	3 4	5 6	7	8 9	10	11 12	13 14	15	16 17	18	19 20	0 21	22	23 24	25	26 2	7 28	29 30	31	32 3	34	35 36	37	38 :	39 40	41 42	2 43	44 4	5 46 47	48	49 5	0 51	52 53	54 55	5 56	57 58	59 60	61	62 63	64 65	ó 66	67
Works Area C - West of KET (Forbes Street Site)																																													
1 Initial possession ^	100 45	62								62	62	62 62																																	
2 Utility Diversions ^	104 45												66				66																												
3 Piling/walling ^	109 40											72	72	72 72																															
4 Bulk Excavation - soft ^	105 45	67														67	67	67	67 6	7 67																									
5 Bulk Excavation - weak rock ^	105 45																	67	67 6	7 67																						السلس			
6 Excavate rock and base ^	104 46																		66 6																										
7 Commence KET Turnback Tunnel ^	103 46																	65	65 6	5 65	65 65																								
8 Tunnel Lining for KET Turnback ^	102 46																							64																					
9 Construct Station Box and Fitout ABWF	104 45																				66 66	66	66 6	66 66	66 66	66	66 (66 66	66 66	66	66 6	6 66 66													
10 Reinstate Forbes Street and Smithfield	104 45	66																															66	66 6	6 66	66 66	66 66	66 6	66 66	66					
Works Area D - East of KET (Swimming Pool Site)																																													
11 Demolish Pools and Grandstand ^	113 103	2 68													68	68 (
12 Piling/walling ^	108 68																66	66	66 6	6 66																						السلس			
13 Bulk Excavation - soft ^	107 98	62																		62	62 62	62	62 6	62																					
14 Bulk Excavation - weak rock	108 98																							63																					
15 Excavate rock and base	106 98																					61	61 6	61																					
16 Commence KET to SYP Tunnel	106 166													5	7 57	57	57 57																												
17 Tunnel Lining for SYP to KET Tunnel	105 166																				56	56	56 5	6 56		56																			
18 Construct Station Box and Fitout ABWF	105 98																							60	60 60	60	60 (60 60	60 60	60	60 6	0 60 60	60	60 6											
19 Reinstate Site & Smithfield PTI Slab	104 103	3 59																																59 5	9 59	59 59	59 59	59	59 59	59 59	59	السلس			
Works Area A - Ex-Police Quarter																																													
20 Utility Diversions	96 -	0								0	0	0 0																																	
21 Demolish [^]	103 -	0											0	0 0	0	0																													
22 Piling/walling (only 5 days) ^	102 -	0														0																													
23 Excavation of Shaft (soft) ^	106 -	0														0	0																												
24 Excavation of Shaft (rock) ^	106 -	0															0 0																												
25 Excavation of Tunnel / Adits (rock) ^	100 -	0															0	0																											
26 Excavation of Tunnel / Adits (soft)	100 -	0																					0 (0 0	0 0	0	0	0 0																	
27 Lining	94 -	0																					0 (0 0	0 0	0	0	0 0																	
Works Area B - Abattoir Site																																													
28 Construct Site Offices + Crusher + Barging Point		0 0	0	0 0	0 0	0	0 0	0																																					
29 Rock Crusher Operation	104 -	0							0 0	0 0	0	0 0	0	0 0	0	0	0 0	0	0 (0	0 0	0	0 (0 0	0 0	0	0	0 0	0 0	0															
30 Reinstatement	97 -	0																													0 (0													
31 Transport spoil to the barge	102 -	0							0 0	0 0	0	0 0	0	0 0	0	0	0 0	0	0 (0	0 0	0	0 (0 0	0 0	0	0	0 0	0 0	0															
Works Area MA - Underground Magazine Site																																													
32 Possession of Site	98 -	0 0	0																																										
33 Construction of Magazine	105 -	0	0	0 0	0 0	0	0 0	0	0 0	0																																			
34a Operation of Magazine - Ventilation Fan	86 -	0								0	0	0 0	0	0 0	0 0	0	0 0	0	0 (0	0 0	0	0 (0 0	0 0	0	0	0 0	0																
34b Operation of Magazine - Truck	94 -	0								0	0	0 0	0	0 0	0 0	0	0 0	0	0 (0	0 0	0	0 (0 0	0 0	0	0	0 0	0																
	Total SPL	L, dB(A) -	- 1			- 1		- 1	- -	- 62	62	62 72	72	72 72	2 73	73	71 70	73	73 7	3 73	69 70	71	71 7	1 71	69 69	69	69	69 69	67 67	67	67 6	7 67 67	67	68 6	8 68	68 67	67 67	7 67 6	67 67	67 59	59			- -	-
	Exce	edance -	-		T - 1 -	T - 1		1 - 1		- -	-		-		. -	-		1 - 1	- -	- 1		-		- -		-	-	- -		-			T - 1	- -	. -			-	- -		-	-		. T - 1	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

Noise Exceedance

No PMEs used at surface

A Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 4-7 in month 17, act. 11 & 12 in month 23, act. 11 & 12 in month 28, act. 21-23 in month 28, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 3- Luen Tak Apartments

						2009	9							2010								2011								201	12							2013	3						201	4	
Act Company of the Company	014/	Dist ² SP	. Feb	Mar /	Apr May	Jun Jul	Aug	Sep Oct	Nov D	ec Jan	Feb Ma	Apr I	May Ju	n Jul	Aug Se	p Oct	Nov	Dec Ja	n Feb	Mar /	Apr May	Jun Jul	Aug	Sep Oc	t Nov	Dec J	an Feb	Mar A	pr May	Jun	Jul Aug	Sep	Oct N	ov Dec	Jan Feb	Mar	Apr May	Jun	Jul A	ug Sep	Oct No	/ Dec	Jan	Feb Mar	Apr Ma	y Jun	Jul Aug Sep
Act Construction Element	SWL	Dist* SP	1	2	3 4	5 6	7	8 9	10 1	1 12	13 14	15	16 1	7 18	19 20	21	22	23 24	1 25	26	27 28	29 30	31	32 33	34	35 3	36 37	38 3	9 40	41	42 43	44	45 4	6 47	48 49	50	51 52	53	54 5	5 56	57 58	59	60	61 62	63 64	65	66 67 68
Works Area C - West of KET (Forbes Street Site)																																															
1 Initial possession ^	100	56 60)								60	60	60 6)																																	
2 Utility Diversions ^	104	56 64											6-	4 64	64 64	4 64	64	64																													
3 Piling/walling ^	109	34 74											7	1 74	74 74	4 74	74																														
4 Bulk Excavation - soft ^	105	56 65	5														65	65 65	65	65	65 65																										
5 Bulk Excavation - weak rock ^	105	56 65	5																65	65	65 65																										
6 Excavate rock and base ^	104	57 64																	64	64	64 64																										
7 Commence KET Turnback Tunnel ^	103	68 61																	61	61	61 61	61 61	61	61																							
8 Tunnel Lining for KET Turnback ^	102	68 60)																					60 60	60	60 6	60	60 6	60																		
9 Construct Station Box and Fitout ABWF	104	56 64	l l																			64 64	64	64 64	64	64 6	64	64 6	64	64	64 64	64	64 6	4 64													
10 Reinstate Forbes Street and Smithfield	104	56 64																																	64 64	64	64 64	64	64 6	64	64 64	64					
Works Area D - East of KET (Swimming Pool Site)																																															
11 Demolish Pools and Grandstand ^		63 72	2													72																															
12 Piling/walling ^	108	35 72	2															72 72	2 72	72	72 72																										
13 Bulk Excavation - soft ^	107	57 67	,																		67	67 67	67	67 67	67																						
14 Bulk Excavation - weak rock	108	57 68	3																				68	68 68	8 68																						
15 Excavate rock and base	106	57 66	5																				66	66 66	66																						
16 Commence KET to SYP Tunnel	106	114 60)												6	0 60	60	60 60)																												
17 Tunnel Lining for SYP to KET Tunnel	105	114 59)																			59	59	59 59	59	59 5	59 59																				
18 Construct Station Box and Fitout ABWF	105	57 65	i																						65	65 6	65	65 6	65	65	65 65	65	65 6	5 65	65 65	65	65 65	i l									
19 Reinstate Site & Smithfield PTI Slab	104	64 63	3																																63	63	63 63	63 /	63 6	3 63	63 63	63	63	63			
Works Area A - Ex-Police Quarter																																															
20 Utility Diversions	96	- 0									0	0	0 0																																		
21 Demolish ^	103	- 0												0	0 0	0	0																														
22 Piling/walling (only 5 days) ^	102	- 0															0																														
23 Excavation of Shaft (soft) ^	106	- 0															0	0																													
24 Excavation of Shaft (rock) ^	106	- 0																0 0																													
25 Excavation of Tunnel / Adits (rock) ^	100	- 0																0	0																												
26 Excavation of Tunnel / Adits (soft)	100	- 0																						0 0	0	0	0 0	0	0 0																		
27 Lining	94	- 0																						0 0	0	0	0 0	0	0 0																		
Works Area B - Abattoir Site																																															
28 Construct Site Offices + Crusher + Barging Point	98	- 0	0	0	0 0	0 0	0	0 0	0																																						
29 Rock Crusher Operation	104	- 0							(0	0 0	0	0 0	0	0 0	0	0	0 0	0	0	0 0	0 0	0	0 0	0	0	0 0	0	0 0	0	0 0																
30 Reinstatement	97	- 0																														0	0 ()													
31 Transport spoil to the barge	102	- 0							(0	0 0	0	0 0	0	0 0	0	0	0 0	0	0	0 0	0 0	0	0 0	0	0	0 0	0	0 0	0	0 0																
Works Area MA - Underground Magazine Site																																															
32 Possession of Site	98	- 0	0	0																																								\neg			
33 Construction of Magazine	105			0	0 0	0 0	0	0 0	0 (0 0	0	1 1																		\Box														\neg			
34a Operation of Magazine - Ventilation Fan	86		_									0	0 0	0	0 0	0	0	0 0	0	0	0 0	0 0	0	0 0	0	0	0 0	0	0 0	0		1 1						-			-			+	-		
34b Operation of Magazine - Truck	94		1 1									0	0 0	0	0 0	0	0	0 0	0	0	0 0	0 0	0	0 0	0	0	0 0		0 0			1 1						-			-			+	-		
		SPL, dB(A) -	-			-				- 60	60	60 7	1 74	74 7	4 76	76	73 73	3 74	74	74 74	69 70	73	73 73	3 74	69 6	9 69	68 6	8 68	68	68 68	68	68 6	8 68	68 69	69	69 69	67	67 6	7 67	67 67	67	63	63 -		-	
		Exceedand	'	-	- -		1 - 1	- -	1 - 1			1 -		+	<u> </u>	1	1			-	- -		1 -		1 - 1	-	- 50	1 - 1		1 - 1		1 -	-	-		-		- 	-			1 -	-	-		-	1 - 1 - 1 -
Remarks:		500000110								1					11															1 1		1 1				<u> </u>											

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)
3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 18, 12 in month 23, act. 11, 18, 12 in month 23, act. 12, 13 in month 28, act. 21-23 in month 29, act. 23, 24 in month 23, and act. 24, 25 in month 24.

Noise Exceedance

NSR :KET 4 - Smithfield Terrace (Block D)

		Г			2009	9				20	010								2011						201	12							20	013						7	2014		
Act Construction Element	SWL Dist ²	en f	eb Mar Apr N	Лау Jun	Jul	Aug Sep Oct No	ov Dec	c Jan Feb Mar Ap	r May	Jun	Jul Aug S	Sep Oct	Nov	Dec	Jan Fe	eb Mar	Apr N	May Ju	n Jul Aug	Sep C	Oct No	v Dec Jan Fe	eb Mar	r Apr	May Jun	Jul Au	ug Sep	Oct N	ov Dec	Jan F	eb M	ar Apr N	May Jun	Jul	Aug Sep	Oct N	lov Dec	Jan F	eb Ma	ır Apr	May Ju	ın Ju'	Aur
No.	SWL DIST	SPL	1 2 3	4 5	6	7 8 9 10	0 11	12 13 14 15	16	17	18 19	20 21	22	23	24 2	25 26	27 2	28 29	9 30 31	32 3	33 34	1 35 36 3	7 38	39	40 41	42 4	3 44	45 4	6 47	48 4	49 5	51	52 53	54	55 56	57 5	58 59	60 6	61 62	2 63	64 65	.5 66	67
orks Area C - West of KET (Forbes Street Site)																																											
1 Initial possession ^	100 91	56						56 56	56	56																																	
2 Utility Diversions ^	104 91	60									60 60			60																						,							T
3 Piling/walling ^		69								69	69 69	69 69	69																														
4 Bulk Excavation - soft ^	105 91	61											61	61	61 6	61	61 6	61																		,							T
5 Bulk Excavation - weak rock ^	105 91	61													6	61	61 6	61																									
6 Excavate rock and base ^	104 92	60													6	60	60 6	60																									
7 Commence KET Turnback Tunnel ^	103 96	58													5	8 58	58 5	58 58	3 58 58	58																							
8 Tunnel Lining for KET Turnback ^	102 96	57																		57 5	57 57	7 57 57 5	7 57	57	57																		
9 Construct Station Box and Fitout ABWF	105 91	61																61	1 61 61	61 6	31 61	1 61 61 6	1 61	61	61 61	61 6	1 61	61 6	1 61														
10 Reinstate Forbes Street and Smithfield	104 91	60																												60 6	60 6	60	60 60	60	60 60	60 /	60 60						
orks Area D - East of KET (Swimming Pool Site)																																											
11 Demolish Pools and Grandstand ^	113 46	75										75	75	75																							\neg		$\overline{}$	$\overline{}$	$\overline{}$		
12 Piling/walling ^	108 49	69												69	69 6	9 69	69 6	69																									
13 Bulk Excavation - soft ^	107 59	67																	7 67 67	67 6	67	7																					
14 Bulk Excavation - weak rock	108 59	68																			68 68																						
15 Excavate rock and base	106 59	66																			66 66															-	+	\vdash	-	+	-	+	+-
16 Commence KET to SYP Tunnel	106 93	62										62 62	62	62	62																					-	+	\vdash	-	+	-	+	+-
17 Tunnel Lining for SYP to KET Tunnel	105 93	61													-				61 61	61 6	31 61	61 61 6	1													-+		\vdash		+	-	-	+
18 Construct Station Box and Fitout ABWF	105 59	65																	0. 0.	0.		65 65 6		65	65 65	65 6	5 65	65 6	5 65	65 6	65 6	5 65	65			-+		\vdash		+	-	-	+
19 Reinstate Site & Smithfield PTI Slab	104 46						-														00	9 03 03 0	00	00	00 00	00 0	00	00 0	00		_			66	66 66	66	66 66	66 F	66	+	+	+	+
orks Area A - Ex-Police Quarter	104 40	00																													00 0	00	00 00	00	00 00	-00	70 00	00 0	70	\rightarrow	_		_
20 Utility Diversions	96 -	0						0 0	0	0																													_	-	_	_	+
21 Demolish ^	103 -	0							0	_	0 0	0 0	0															+								-+		+-+		+	-	+	+-
22 Piling/walling (only 5 days) ^	103 -	0						+			0 0	0 0	0															+								-+		+-+		+	-	+	+-
23 Excavation of Shaft (soft) ^	102 -	0											0	_										-												+		+-+	-	+	-	+	+
24 Excavation of Shaft (rock) ^	106 -	0											U	-	0									-												+		+-+	-	+	-	+	+
25 Excavation of Tunnel / Adits (rock) ^	100 -	0												U	0 0	0								-												+		+-+	-	+	-	+	+
26 Excavation of Tunnel / Adits (rock) ** 26 Excavation of Tunnel / Adits (soft)	100 -	0													0 (U				0	0 0	0 0 0		0	0											+		+-+	-	+	-	+	+
27 Lining	94 -	0																			0 0				0											+		+-+	-	+	-	+	+
orks Area B - Abattoir Site	94 -	U						+												U	0 0	0 0 0) 0	0	U											\rightarrow	+-	+	_	+	+	_	_
	98 -	0		0 0	_		,																																—	4	_	-	4
28 Construct Site Offices + Crusher + Barging Point		0	0 0	0 0	0	0 0 0 0)					0 0	_					0 0		0	0 0				0 0			+								-+	'	+-+		+	-	-	+-
29 Rock Crusher Operation	104 -						0	0 0 0 0	0	0	0 0	0 0	U	0	0 (0 0	0	0 0	0 0	0	0 0	0 0 0) 0	0	0 0	0 (——'	+-+		+	-	$-\!\!\!\!-\!\!\!\!\!-$	+-
30 Reinstatement	97 -	0						 				_															0	0 ()								——'	+-+		+	-	$-\!\!\!\!-\!\!\!\!\!-$	+-
31 Transport spoil to the barge	102 -	0					0	0 0 0 0	0	0	0 0	0 0	0	0	0 (0 0	0	0 0	0 0	0	0 0	0 0 0) 0	0	0 0	0 0)									\rightarrow		\vdash	_	\rightarrow	—	_	_
orks Area MA - Underground Magazine Site																																						\vdash					4
32 Possession of Site	98 -		0 0							1			1											_				\perp				\perp				\vdash	'	$\perp \perp$	-	+		_	4
33 Construction of Magazine	105 -	0	0 0	0 0	0	0 0 0 0	0																					\perp				\perp				\vdash	'	$\perp \perp$	-	+		_	4
34a Operation of Magazine - Ventilation Fan	86 -	0	\bot					0 0	0	0	0 0	0 0	0	0	0 (0 0	0	0 0	0 0	0	0 0	0 0 0	0	0	0 0			1				\perp				ightharpoonup	'	$\perp \perp$		44			4
34b Operation of Magazine - Truck	94 -	0			1			0 0	0	0	0 0	0 0	0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0 0	0	0	0 0		_	\perp	4		_	\perp	_	\sqcup			'	\vdash	_	+	_	_	4
	Total SPL,	/	- - -		<u> </u>	- - -	- -	56 56	56	69	69 69	69 76	76	75	70 7	1 71	71 7	71 68	8 69 72	72 7	72 73	8 68 68 6	8 67	67	67 66	66 6	6 66	66 6	6 66	66 6	69 6	69	69 67	67	67 67	67 F	37 67	66 6	<i>3</i> 6 -	النا	- -	ــــــــــــــــــــــــــــــــــــــ	نــــــــــــــــــــــــــــــــــــــ
	Exceed	lance			-	- - - -	- -	- - - -	-	-	- -	- 1	1	-	- -	- -	-	- -	- -	-	- -	- - -	-	-	- -	- -	. -	1 - 1	-	-	- -	1 - 1		-	- -		- - '	1 - 1	- -	-	- -	. -	- 1

Remarks:

1. Noise Exceedance

Noise Exceedance

Noise Exceedance

NSR :KET 5- Pokfield Garden

					2009							20	010							2011							2012							2013						2014		
Act Construction Element	SWL Dist ² SP	L Feb Ma	ar Apr	May Jur	n Jul Au	g Sep					_	_					_									Apr May Ju											t Nov De		eb Mar			_
No.	5.0t 5.	1 2	2 3	4 5	6 7	8	9 1	0 11	12 1	3 14	15	16 17	18	19 20	21	22 2	3 24 2	25 26	27 28	29 30	31 32	33 3	34 35	36 37	38 ;	39 40 4	1 42	43 44	45	46 47	48 49	50 5	1 52	53 54	55 5	56 57	58 59	9 60 6	61 62	63 64	65 66	67
/orks Area C - West of KET (Forbes Street Site)																																					4					
1 Initial possession ^	100 152 5									51	51	51 51																														
2 Utility Diversions ^	104 152 55															55 5	5																									
3 Piling/walling ^	109 122 62											62	62	62 62																												
4 Bulk Excavation - soft ^	105 152 56															56 5		_	56 56																							
5 Bulk Excavation - weak rock ^	105 153 56																		56 56																							\perp
6 Excavate rock and base ^	104 154 55																		55 55																							
7 Commence KET Turnback Tunnel ^	103 176 50																	53	53 53	53 53																						
8 Tunnel Lining for KET Turnback ^	102 176 52																						52 52																			
9 Construct Station Box and Fitout ABWF	104 152 55																			55 55	55 55	55 5	55 55	55 55	55 5	55 55 5	55 55	55 55	55													
10 Reinstate Forbes Street and Smithfield	104 152 5	5									ш																				55 55	55 5	5 55	55 55	55 5	55 55	55 55	5				
Vorks Area D - East of KET (Swimming Pool Site)																																										
11 Demolish Pools and Grandstand ^	113 40 76														76	76 7																										
12 Piling/walling ^	108 54 68															6	8 68 6	68	68 68																							
13 Bulk Excavation - soft ^	107 76 64																		64	64 64	64 64																					
14 Bulk Excavation - weak rock	108 76 65	5																			65 65	65 6	65																			
15 Excavate rock and base	106 76 63	3																			63 63	63 6	33																			
16 Commence KET to SYP Tunnel	106 60 65	5												65	65	65 6	5 65																									
17 Tunnel Lining for SYP to KET Tunnel	105 60 64	1																		64	64 64	64 6	64 64	64 64																		
18 Construct Station Box and Fitout ABWF	105 76 62	2																				6	62 62	62 62	62 6	62 62 6	62	62 62	62	62 62	62 62	62 6	2 62									
19 Reinstate Site & Smithfield PTI Slab	104 40 67	7																													67	67 6	7 67	67 67	67 6	67 67	67 67	7 67 6	67			
Vorks Area A - Ex-Police Quarter																																										
20 Utility Diversions	96 - 0									0	0	0 0																								$\overline{}$						
21 Demolish ^	103 - 0												0	0 0	0	0																										
22 Piling/walling (only 5 days) ^	102 - 0															0																										
23 Excavation of Shaft (soft) ^	106 - 0															0 ()																									1
24 Excavation of Shaft (rock) ^	106 - 0															(0																									1
25 Excavation of Tunnel / Adits (rock) ^	100 - 0																0	0																		-	+					_
26 Excavation of Tunnel / Adits (soft)	100 - 0																				0	0	0 0	0 0	0	0 0										-	+-+					_
27 Lining	94 - 0																					0	0 0	0 0		0 0										-	+-+					_
orks Area B - Abattoir Site																																										
28 Construct Site Offices + Crusher + Barging Point	98 - 0	0 0) 0	0 0	0 0	0	0	0					_																								+					-
29 Rock Crusher Operation	104 - 0		, ,	0 0			-	0	0 1	0 0	0	0 0	0	0 0	0	0 (0	0 0	0 0	0 0	0 0	0	0 0	0 0	0	0 0 0	0	0								$-\!\!\!-\!\!\!\!-$	+					_
30 Reinstatement	97 - 0							3	,	0		0	- 0	0		0 (5 5	5 0	0	0 0			0	"			-	0	0						-	++	1 +				+-
31 Transport spoil to the barge	102 - 0							0	0 (0 0	0	0 0	0	0 0	0	0 () 0	0 0	0 0	0 0	0 0	0	0 0	0 0	0	0 0 0	n n		0	-						-	+-+					+-
orks Area MA - Underground Magazine Site	102 - 0							J	0	0	0	0	U	0	U	0 (, 0	0	0 0	0 0	0 0	U	0	0	U	0 0	0	3								_	+					
32 Possession of Site	98 - 0	0 0)																																	_	+					-
33 Construction of Magazine	105 - 0			0 0	0 0	0	0	0 0	0 4	1	1 +		+						 	1 -	+ +		+		+ +				+				+		+ +	$-\!\!\!\!\!-$	++	+ +	\rightarrow			+-
33a Construction of Magazine 34a Operation of Magazine - Ventilation Fan	86 - 0	_	, 0	0 0	0 0	U	U	0 0	U	_	0	0 0	0	0 0	0	0 (0 0	0 0	0 0	0 0	0	0 0	0 0	0	0 0 0	0		+							-	+-+	+	-			+
34b Operation of Magazine - Ventilation Fan 34b Operation of Magazine - Truck	94 - 0								\vdash	0		0 0	0	0 0	0	0 (0	0 0	0 0	0 0	0 0	0	0 0	0 0		0 0 0	0		+				+			+	++	+	+			+
Operation of Magazine - Truck	Total SPL. dB(-		+				\vdash	- 51	-	51 60	62	62 67	77	77 7	, U	9 69	69 69	65 68	71 7	71 7	71 67	67 67	-	64 64 6	2 62	62 62	62	62 62	62 60	60 (0 60	67 67	67 6	67 67	67 6	7 67 6	27			+-
		'			1 - 1 -		-			- 51	51	oı 62	62	0∠ 67	77	// /	70 (b9 b9	09 69	05 68	/1 /	/1 /	1 6/	0/ 6/	64 (04 64 6	is 63	o3 63	63	D3 D3	DJ 69	69 E	9 69	0/ 6/	6/ 6	3/ 6/	6/ 6/	/ 6/ 6	- 10	- -	- -	+-
	Exceedand	cei - I -	- 1 - 1	- 1 -	1 - 1 -	- 1	- 1	- 1 -	1 - 1	- -	1 - 1	- -	1 - 1	- 1 -	2	9 '		- 1 -		1 -	1 - 1 -	1 - 1			1 - 1	- 1 - 1 -		- 1 -	1 - 1	- 1 -	- -	- 1	- 1 - 1	- 1 -	1 - 1	- 1 -		1 - 1	- 1 - 1	- 1 -	- 1 -	1 -

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 1-3 in month 17, act. 2-4 in month 17-23, act. 4-7 in month 32, act. 11 & 12 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 29, act. 23 & 24 in month 29, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 6- University Heights (Tower 2)

					2009							2010							2011			I		:	2012			1			2013			ı		21	014	
Act Construction Florent		Feh	Mar Anr	May .lı	ın .lul Aur	n Sen O	oct Nov	Dec Ja	n Feh	Mar An	r Mav .lı	ın .lul	Aug S	Sen Oct	Nov De	.lan	Feh Mar Anr	May .l	lun Jul Aug S	en Oct	Nov Dec	Jan Feh	Mar A	nr May Ju	n Jul	Aug Sen	Oct Nov	Dec	Jan Feb Mar Ap	r Mav	.lun .lı	ıl Aug Se	n Oct	Nov Dec	Jan Feh	Mar Anr M	lav .lun	Jul Aug S
No. Construction Element	SWL Dist ²	SPL 1	2 3	4 5	5 6 7	8 9	9 10												29 30 31 3				38 3				45 46		48 49 50 5		53 54		_		60 61		64 65	
Works Area C - West of KET (Forbes Street Site)																																						
1 Initial possession ^	100 193	49								49 49	49 4	9																										
2 Utility Diversions ^	104 193	53									5	3 53	53 5	53 53	53 53																							
3 Piling/walling ^	109 169	59									5	9 59	59 5	59 59	59																							
4 Bulk Excavation - soft ^	105 193	54													54 54	54	54 54 54	54																				
5 Bulk Excavation - weak rock ^	105 194																54 54 54	54																				
6 Excavate rock and base ^	104 196	53															53 53 53	53																				
7 Commence KET Turnback Tunnel ^	103 224	51															51 51 51	51 5	51 51 51 5	51																		
8 Tunnel Lining for KET Turnback ^	102 224																				50 50																	
9 Construct Station Box and Fitout ABWF	104 193	53																5	53 53 53 5	53 53	53 53	53 53	53 5	3 53 53	53	53 53	53 53	53										
10 Reinstate Forbes Street and Smithfield	104 193	53																											53 53 53 53	3 53	53 53	3 53 53	3 53	53 53				
Works Area D - East of KET (Swimming Pool Site)																																						
11 Demolish Pools and Grandstand ^	113 85													69	69 69																							
12 Piling/walling ^	108 66	67													67	67	67 67 67	67																				
13 Bulk Excavation - soft ^	107 112	61																61 6	61 61 61 6	61	61																	
14 Bulk Excavation - weak rock	108 112	62																		62																		
15 Excavate rock and base	106 112	60																	60 6	60	60																	
16 Commence KET to SYP Tunnel	106 76												(63 63	63 63	63																						
17 Tunnel Lining for SYP to KET Tunnel	105 76																		62 62 6	62		62 62																
18 Construct Station Box and Fitout ABWF	105 112																				59 59	59 59	59 5	9 59 59	59	59 59	59 59	59	59 59 59 59	59								
19 Reinstate Site & Smithfield PTI Slab	104 85	60																											60 60 60	60	60 60	60 60	60	60 60	60 60			
Works Area A - Ex-Police Quarter																																						
20 Utility Diversions	96 -	0								0 0	0 0	0																										
21 Demolish ^	103 -	0										0	0	0 0																								
22 Piling/walling (only 5 days) ^	102 -	0													0																							
23 Excavation of Shaft (soft) ^	106 -	0													0 0																							
24 Excavation of Shaft (rock) ^	106 -	0													0	0																						
25 Excavation of Tunnel / Adits (rock) ^	100 -	0														0	0																					
26 Excavation of Tunnel / Adits (soft)	100 -	0																		0 0	0 0																	
27 Lining	94 -	0																		0 0	0 0	0 0	0 (0 0														
Works Area B - Abattoir Site																																						
28 Construct Site Offices + Crusher + Barging Point	98 -	0 0	0 0	0 0	0 0	0 (0 0																															
29 Rock Crusher Operation	104 -	0						0 0	0	0 0	0 0	0 0	0	0 0	0 0	0	0 0 0	0	0 0 0	0 0	0 0	0 0	0 (0 0	0	0												
30 Reinstatement	97 -	0																								0	0 0											
31 Transport spoil to the barge	102 -	0						0 0	0	0 0	0 0	0 0	0	0 0	0 0	0	0 0 0	0	0 0 0	0 0	0 0	0 0	0 (0 0	0	0												
Works Area MA - Underground Magazine Site																																						
32 Possession of Site	98 -		0																																			
33 Construction of Magazine	105 -	0	0 0	0 0	0 0	0 (0 0	0 0	0																													
34a Operation of Magazine - Ventilation Fan	86 -	0								0 0		0 0		-	0 0				0 0 0	_		-		0 0														
34b Operation of Magazine - Truck		0											_						0 0 0																			
	Total SPL, o	IB(A)		- -					-	49 49	49 5	9 59	59 6	65 71	71 70	69	67 67 67	67 6	62 65 68 6	68 68	68 65	65 65	60 6	60 60	60	60 60	60 60	60	60 63 63 63	3 63	61 6	1 61 61	1 61	61 61	60 60		- -	- -
	Exceed	lance -	- -	- [-	. - -			- -		- -		- -	-	- -		-		-	- - -	- -				- - -	<u> </u>	- -		L-I		-						<u> </u>	- -	- -
Remarks:																													-									

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 2-4 in month 17-23, act. 11 & 12 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 29, act. 23 & 24 in month 29, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 7- Kam Po Mansion

					2009						201	110						2011						2012							2013						2014		
Act Construction Element	SWL Dist ² SPL	Feb Ma	r Apr M	ay Jun	Jul Aug S	Sep Oct	Nov D	ec Jan	Feb Mar	Apr Ma	ay Jun	Jul Au	g Sep Od	t Nov	Dec Ja	an Feb Mar Apr	May .	lun Jul Aug Sep	Oct	Nov D	ec Jan Fel	Mar A	Apr May	Jun Jul A	ug Sep	Oct N	lov Dec	Jan Feb M	∕lar Ap	or May	Jun Ju	I Aug Se	ep Oct	Nov Der	Jan Fe'	b Mar Ar	pr May	Jun Jul /	Aug S
No. Construction Element	SWL DIST SPL	1 2	3 4	4 5	6 7	8 9	10 1	1 12	13 14	15 16	6 17	18 19	20 21	22	23 2	4 25 26 27	28	29 30 31 32	33	34 3	5 36 37	38 3	39 40	41 42 4	13 44	45 4	46 47	48 49	50 51	1 52	53 54	55 5	6 57	58 59	60 61	1 62 6	.3 64	65 66	67 f
Works Area C - West of KET (Forbes Street Site)																																							
1 Initial possession ^	100 181 50								50	50 50	0 50																												
2 Utility Diversions ^	104 181 54										54	54 54	54 54	54	54																								
3 Piling/walling ^	109 146 61										61	61 6	61 61	61																									
4 Bulk Excavation - soft ^	105 181 55													55	55 5	55 55 55	55																						
5 Bulk Excavation - weak rock ^	105 181 55															55 55 55	55																						
6 Excavate rock and base ^	104 181 54															54 54 54																							
7 Commence KET Turnback Tunnel [^]	103 198 52															52 52 52	52	52 52 52 52																					
8 Tunnel Lining for KET Turnback ^	102 198 51																				1 51 51																		
9 Construct Station Box and Fitout ABWF	104 181 54																	54 54 54 54	54	54 5	4 54 54	54	54 54	54 54 5	54 54	54 5	54 54							1					
10 Reinstate Forbes Street and Smithfield	104 181 54																											54 54	54 54	4 54	54 54	54 5	4 54	54 54	4				
Works Area D - East of KET (Swimming Pool Site)																																							
11 Demolish Pools and Grandstand ^	113 41 76												76	76																									
12 Piling/walling ^	108 72 66														66 6	66 66 66	66																						
13 Bulk Excavation - soft ^	107 106 62																62	62 62 62 62																					
14 Bulk Excavation - weak rock	108 106 63																	63 63	63	63																			
15 Excavate rock and base	106 106 61																	61 61	61	61																			
16 Commence KET to SYP Tunnel	106 81 63												63 63	63	63 6	3																							
17 Tunnel Lining for SYP to KET Tunnel	105 81 62																	62 62 62	62	62 6	2 62 62																		
18 Construct Station Box and Fitout ABWF	105 106 60																			60 6	0 60 60	60 6	60 60	60 60 6	60	60 6	60	60 60	60 60	60									
19 Reinstate Site & Smithfield PTI Slab	104 98 59																											59	59 59	9 59	59 59	59 5	9 59	59 59	59 59	9			
Works Area A - Ex-Police Quarter																																							
20 Utility Diversions	96 - 0								0	0 0	0																												
21 Demolish ^	103 - 0											0 0	0 0	0																									
22 Piling/walling (only 5 days) ^	102 - 0													0																									
23 Excavation of Shaft (soft) ^	106 - 0													0	0																								
24 Excavation of Shaft (rock) ^	106 - 0														0 (0																							
25 Excavation of Tunnel / Adits (rock) ^	100 - 0														(0 0																							
26 Excavation of Tunnel / Adits (soft)	100 - 0																	0	0	0 (0 0	0	0 0																
27 Lining	94 - 0																	0	0	0 (0 0	0	0 0																
Works Area B - Abattoir Site																																							
28 Construct Site Offices + Crusher + Barging Point	98 - 0	0 0	0 (0 0	0 0	0 0	0																																
29 Rock Crusher Operation	104 - 0							0 0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0 0	0	0 (0 0	0	0 0	0 0	0														
30 Reinstatement	97 - 0																								0	0	0												
31 Transport spoil to the barge	102 - 0							0 0	0 0	0 0	0	0 0	0 0	0	0 (0 0 0	0	0 0 0 0	0	0 (0 0	0	0 0	0 0	0												\neg		
Works Area MA - Underground Magazine Site																																							
32 Possession of Site	98 - 0	0 0																																			\neg		
33 Construction of Magazine	105 - 0	0	0 (0 0	0 0	0 0	0	0 0	0										T																	+	+		\neg
34a Operation of Magazine - Ventilation Fan	86 - 0									0 0	0	0 0	0 0	0	0 (0 0 0 0	0	0 0 0 0	0	0 (0 0	0	0 0	0												+	+		\neg
34b Operation of Magazine - Truck	94 - 0		1 1						0		0	0 0	0 0	0	0 (0 0 0 0	-		-	0 (0 0			0											+	+	+		\neg
	Total SPL, dB(A)		-				-	- -	- 50	50 50	0 61	61 6	65 76	76	76 6	8 67 67 67	67	63 65 68 68	68	69 6	4 64 64	61 6	61 61	61 61 6	61	61 6	61	61 63	63 63	3 63	60 60	60 6	0 60	60 60	59 59	9	- -		-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 11 & 12 in month 23, act. 11 & 12 in month 28, act. 21-23 in month 28, act. 21-23 in month 29, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 8 - Kennedy Town Ex-Police Quarters (Block B)

						2009							20	10							201	1							20	112							20	13		—			—		2014		$\overline{}$
Act	0tt Flt	SWL Dist ² SPI	Feb Ma	ar Apı	May Jun	Jul .	Aug Se	Oct N	ov Dec	Jan	eb Mar	Apr Ma	y Jun	Jul Aug	g Sep	Oct N	lov De	c Jan F	eb Ma	r Apr	May Jun	Jul Au	g Sep	Oct Nov	Dec .	Jan F	eb Mar /	Apr Ma	y Jun	Jul Aug	Sep	Oct No	v Dec	Jan Feb	Mar	Apr N	lay Jun	Jul /	Aug Se	p Oct	Nov Dr	ec Jan	Feb	Mar Apr	May J	un Jul	Aug Sep
No.	Construction Element	SWL Dist SPI	1 2	2 3	4 5	6	7 8	9 1	0 11	12	13 14	15 16	17	18 19	20	21 2	22 23	24	25 26	27	28 29	30 3	1 32	33 34	35	36 3	7 38	39 40) 41	42 43	44	45 4	6 47	48 49	50	51 5	52 53	54	55 56	à 57	58 5	9 60	61	62 63	64 (66	67 68
Works A	ea C - West of KET (Forbes Street Site)																																														
1	nitial possession ^	100 - 0									0	0 0	0																																		
2	Jtility Diversions ^	102 - 0											0	0 0	0	0	0 0																														
3	Piling/walling ^	109 - 0											0	0 0	0	0	0																														
4	Bulk Excavation - soft ^	101 - 0															0 0	0	0 0	0	0																										
5	Bulk Excavation - weak rock ^	103 - 0																	0 0	0	0																										
6	excavate rock and base ^	102 - 0																	0 0	0	0																										
7	Commence KET Turnback Tunnel ^	100 - 0																	0 0	0	0 0	0 0	0																								
8	unnel Lining for KET Turnback ^	101 - 0																									0 0																				
9	Construct Station Box and Fitout ABWF	103 - 0																			0	0 0	0	0 0	0	0 (0 0	0 0	0	0 0	0	0 0	0														
10	Reinstate Forbes Street and Smithfield	94 - 0																																0 0	0	0	0 0	0	0 0	0	0 ()					
Works A	ea D - East of KET (Swimming Pool Site)																																														
11	Demolish Pools and Grandstand ^	103 - 0														0	0 0																														
12	Piling/walling ^	108 - 0															0	0	0 0	0	0																										
13	Bulk Excavation - soft ^	101 - 0																			0 0	0 0	0	0 0																							
14	Bulk Excavation - weak rock	104 - 0																				0	0	0 0																							
15	excavate rock and base	112 - 0																				0	0	0 0																							
16	Commence KET to SYP Tunnel	101 - 0													0	0	0 0	0																													
17	unnel Lining for SYP to KET Tunnel	101 - 0																				0 0	0	0 0	0	0 ()																				
18	Construct Station Box and Fitout ABWF	103 - 0																						0	0	0 (0 0	0 0	0	0 0	0	0 0	0	0 0	0	0	0										
19	Reinstate Site & Smithfield PTI Slab	99 - 0																																0	0	0	0 0	0	0 0	0	0 0	0	0				
Works A	ea A - Ex-Police Quarter																																														
20	Itility Diversions	105 29 71									71	71 71																																			
21	Demolish ^	108 30 74												74 74	74	74 7	74																														
22	Piling/walling (only 5 days) ^	111 56 71														7	71																														
23	excavation of Shaft (soft) ^	112 61 71														7	71 71																														
24	excavation of Shaft (rock) ^	112 61 71															71	71																													
25	excavation of Tunnel / Adits (rock) ^	105 61 64																64	64																												
26	excavation of Tunnel / Adits (soft)	105 61 64																					64	64 64	64	64 6	4 64	64 64	ı																		
27	ining	100 61 59																					59	59 59	59	59 5	9 59	59 59)																		
Works A	ea B - Abattoir Site																																														
	Construct Site Offices + Crusher + Barging Point	98 220 46		6 46	46 46	46	46 46	46 4																																							
29	Rock Crusher Operation	104 172 54							54	54	54 54	54 54	54	54 54	54	54 5	54 54	54	54 54	54	54 54	54 54	1 54	54 54	54	54 5	4 54	54 54	54	54 54																	
30	Reinstatement	97 220 45																													45	45 4	5														
31	ransport spoil to the barge	102 145 54							54	54	54 54	54 54	54	54 54	54	54 5	54 54	54	54 54	54	54 54	54 54	1 54	54 54	54	54 5	4 54	54 54	54	54 54																	
Works A	ea MA - Underground Magazine Site																																														
32	Possession of Site	98 - 0	0 0)																																											
33	Construction of Magazine	105 - 0	0	0 0	0 0	0	0 0	0 (0 0	0	0																																				
34a	Operation of Magazine - Ventilation Fan	86 - 0									0	0 0	0	0 0	0	0 (0 0	0	0 0	0	0 0	0 0	0	0 0	0	0 (0 0	0 0	0																		
	Operation of Magazine - Truck	94 - 0									0	0 0	0	0 0	0	0	0 0	0	0 0	0	0 0	0 0	0	0 0	0	0 (0 0	0 0	0															\neg			\neg
		Total SPL, dB(A) 46 46	6 46	46 46	46	46 46	46 4	6 57	57	57 71	71 71	71	74 74	74	74 7	74 71	71	65 57	57	57 57	57 57	7 66	66 66	66	66 6	6 66	66 66	5 57	57 57	45	45 4	5 -		-	-		-		T-		. -	1 - 1		-		
		Exceedanc	e		- -	1 - 1		- -		- 1			-		- 1	-		-		-		- -	- 1	- -	-	-	- -	- -	-	- -	-		-		-	l - l		-		T-		. -	1-1	-1-1	(- T		- -
	Remarks:			-			•		•													-		-		•								•			•										

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)
3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 2-4 in month 17-23, act. 4-7 in month 17-23, act. 11 & 12 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 29, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 9 - Hong Kong Institute of Vocation Education (Tsing Yi) Kennedy Town Centre

			2009					2010							2011						20	12						20	13						2014	
Act No. Construction Element	SWL Dist ² SF	Feb Mar Apr May Ju	n Jul Aug	Sep Oct	Nov Dec	Jan Fe	b Mar Apr May	Jun Jul A	Aug Sep O	ct Nov	Dec Jan	Feb N	lar Apr	May Ju	un Jul	Aug Sep	Oct Nov	Dec Jan	Feb Ma	ar Apr M	ay Jun	Jul Aug	Sep	Oct Nov D	ec Jan	Feb Mar	r Apr N	∕lay Jun	Jul Aug	Sep	Oct Nov	/ Dec	Jan Feb	Mar Ap	May .	Jun Jul Aur
Act No.	OWE DIST OF	1 2 3 4 5	6 7	8 9	10 11	12 13	14 15 16	17 18	19 20 2	1 22	23 24	25	26 27	28 2	29 30	31 32	33 34	35 36	37 38	3 39 4	0 41	42 43	44	45 46 4	48	49 50	51	52 53	54 55	56	57 58	59	60 61	62 63	64	65 66 67
Works Area C - West of KET (Forbes Street Site)																																				
1 Initial possession ^	100 - (0					0 0 0																													
2 Utility Diversions ^	102 - (0						0 0			0																									
3 Piling/walling ^	109 - (0						0 0	0 0 0	0 0																										
4 Bulk Excavation - soft ^	101 - (0								0	0 0	0	0 0	0																						
5 Bulk Excavation - weak rock ^	103 - 0	0										0	0 0	0																						
6 Excavate rock and base [^]	102 - 0	0										0	0 0	0																						
7 Commence KET Turnback Tunnel ^	100 - 0	0										0	0 0	0 (0 0	0 0																				
8 Tunnel Lining for KET Turnback ^	101 - 0	0														0	0 0	0 0	0 0	0 ()															
9 Construct Station Box and Fitout ABWF	103 - 0	0												(0 0	0 0	0 0	0 0	0 0	0 (0 (0 0	0	0 0	0											
10 Reinstate Forbes Street and Smithfield	94 - (0																							0	0 0	0	0 0	0 0	0	0 0	0				
Works Area D - East of KET (Swimming Pool Site)																																				
11 Demolish Pools and Grandstand ^	103 - 0	0							(0 0																										
12 Piling/walling ^	108 - 0	0									0 0	0	0 0	0																						
13 Bulk Excavation - soft ^	101 - (0												0 (0 0	0 0	0 0																			
14 Bulk Excavation - weak rock	104 - 0	0														0 0																				
15 Excavate rock and base	112 - (0														0 0	0 0																			
16 Commence KET to SYP Tunnel	101 - (0							0 (0 0	0 0																									
17 Tunnel Lining for SYP to KET Tunnel	101 - (0													0	0 0	0 0	0 0	0																	
18 Construct Station Box and Fitout ABWF	103 - (0															0	0 0	0 0	0 (0 (0 0	0	0 0	0 0	0 0	0	0								
19 Reinstate Site & Smithfield PTI Slab	99 - (0																								0 0	0	0 0	0 0	0	0 0	0	0 0			
Works Area A - Ex-Police Quarter																																				
20 Utility Diversions	105 42 6	88					68 68 68	68																												
21 Demolish ^	108 33 7	'3							73 73 7	3 73																										
22 Piling/walling (only 5 days) ^	111 89 6									67																										
23 Excavation of Shaft (soft) ^	112 97 6									67	67																									_
24 Excavation of Shaft (rock) ^	112 97 6										67 67																									
25 Excavation of Tunnel / Adits (rock) ^	105 97 6										60	60																								_
26 Excavation of Tunnel / Adits (soft)	105 97 6	50														60	60 60	60 60	60 60	60 6	0															_
27 Lining	100 97 5	55														55	55 55	55 55	55 55	5 55 5	5															_
Works Area B - Abattoir Site																																				
28 Construct Site Offices + Crusher + Barging Point	98 215 4	6 46 46 46 46 46	46 46	46 46	46																															
29 Rock Crusher Operation	104 189 5					54 54	54 54 54	54 54	54 54 5	4 54	54 54	54	54 54	54 5	54 54	54 54	54 54	54 54	54 54	1 54 5	4 54	54 54								1 1		1 1			1 1	
30 Reinstatement	97 270 4																							43 43	1							1 1				-
31 Transport spoil to the barge	102 158 5				53	53 53	53 53 53	53 53	53 53 5	3 53	53 53	53 !	3 53	53 5	53 53	53 53	53 53	53 53	53 53	3 53 5	3 53	53 53			1							1 1				-
Works Area MA - Underground Magazine Site																																				
32 Possession of Site	98 - (0 0 0																																		
33 Construction of Magazine		0 0 0 0	0 0	0 0	0 0	0 0																	+							+		+			1 1	-
34a Operation of Magazine - Ventilation Fan	86 - (J 0	3 0		0 0 0	0 0	0 0 0	0	0 0	0	0 0	0 (0 0	0 0	0 0	0 0	0 0	0 () 0		+		-1											-
34b Operation of Magazine - Truck	94 - (0					0 0 0				_					0 0				0 0) 0		+		-1							1 1				-
- - - - - - - - -	Total SPL. dB	(A) 46 46 46 46 46	46 46	46 46	46 56	56 56	68 68 68	0 0	73 73 7	, ,	0 0	62 !	6 56	56 5	0 0	0 0	63 63	0 0	0 0	3 63 6	3 56	56 56	43	43 43	- -	- -	1 - 1	- -	- -	1 - 1		1 - 1	- -	1 - 1 -	1 - 1	- 1 - 1 -
	Exceedan	, ,						- 3	3 3 3	3 3		- 1											-		. .	 	+ - +			1 - 1		1 - 1		1 - 1 -	1 - 1	- - -
Eva	eednace during Examinati		1 1			+ + + -	2 2 2	0 0	0 0				-	-+	-			++-		+ + +	+-		1		+		+ +	-		1	- -	+ +			+	+

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

The PMEs are assumed to be placed at the notional source position according to the "Technical Memora" 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 4-7 in month 25, act. 12 & 13 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 10- LMC Primary School

			Г				20	109						2010)								2011							201:	2							2013						2014	4		$\overline{}$
Act				Feb N	far Apr	May Ju	un Ji	ul Aug S	en Oct	Nov [Dec Jan Feb	Mar	Apr 1	May Jun	Jul Ar	ıa Se	en Oct	Nov De	ec Jan	Feb 1	∕ar Apr	May J	un Ji	ıl Aug Se	n Oct	Nov E	Dec Jan Fe	eb Mar	r Apr	May Jun	Jul Aug	Sen	Oct Nov I	Dec J	an Feb Ma	r Apr M	lav Jui	ın Jul	I Aug Sep C	et No	v Dec	Jan Feb	Mar F	or May	/ Jun J	Jul Aug	Sen
Act Construction Element	SWL	Dist	SPL -	1	2 3	4 5	5 6				11 12 13		_	_		_						_					_							_					55 56 5			60 61			65 6		
Works Area C - West of KET (Forbes Street Site)																																															
1 Initial possession ^	100	-	0									0	0	0 0																																	
2 Utility Diversions ^	102	-	0											0	0 0	0) 0	0 (0																												
3 Piling/walling ^	109	-	0														0																														
4 Bulk Excavation - soft ^	101	-	0															0 (0 0	0	0 0	0																									
5 Bulk Excavation - weak rock ^	103	-	0																		0 0																										
6 Excavate rock and base ^	102	-	0																	0	0 0	0																									
7 Commence KET Turnback Tunnel ^	100	-	0																	0	0 0	0	0 0	0 0																					1		
8 Tunnel Lining for KET Turnback ^	101		0																							0	0 0 0	0 0	0	0																	
9 Construct Station Box and Fitout ABWF	103	-	0																				0 0							0 0	0 0	0	0 0	0													
10 Reinstate Forbes Street and Smithfield	94		0																												-			_	0 0	0	0 0) ()	0 0	0	0		+	_	+-+	-	
Works Area D - East of KET (Swimming Pool Site)																																						Ť									
11 Demolish Pools and Grandstand ^	103	-	0														0	0 ()																									_		_	
12 Piling/walling ^	108		0														-	0 0		0	0 0	0																					+		+-+	+-	+
13 Bulk Excavation - soft ^	101		0																	-			0 0	0 0	0	0																	+		+-+	+-	+
14 Bulk Excavation - weak rock	104		0																	-		- U		0 0							 														+-+	-	+
15 Excavate rock and base	112		0									-			-									0 0																			\vdash		+-+	-	+
16 Commence KET to SYP Tunnel	101		0				-			+ +						0) 0	0 (2 0					0 0	0	U												_					+-+		+-+		+
17 Tunnel Lining for SYP to KET Tunnel	101		0									-				U	, 0	0 (0				0	0 0	0	0	0 0 0	2												_			+		+-+	-	+
18 Construct Station Box and Fitout ABWF	103		0									-							-				U	0 0		0			0	0 0	0 0	0	0 0	0	0 0 0	0	0			_			+		+-+	-	+
19 Reinstate Site & Smithfield PTI Slab	99		0									+													_	U	0 0 0	J	U	0 0	0 0	U	0 0	U			0 0		0 0			0 0	-	-	+-+		-
	99	-	0																																0 0	0	0 0) 0	0 0	0	0	0 0	\vdash	_	\vdash	$\overline{}$	
Works Area A - Ex-Police Quarter			- 10									- 10	40	10 10																													4		4	4	4
20 Utility Diversions	96											48	48	48 48																													+		+	-	-
21 Demolish ^	103														56 5	6 56	6 56																										+-+	_		\rightarrow	↓
22 Piling/walling (only 5 days) ^			52															52																									$\perp \perp$		\bot	\rightarrow	
23 Excavation of Shaft (soft) ^	106																	56 5																													
24 Excavation of Shaft (rock) ^	106																	5																													
25 Excavation of Tunnel / Adits (rock) ^			50																50	50																											
26 Excavation of Tunnel / Adits (soft)			50																								50 50 5																				
27 Lining	94	188	44																					44	44	44	44 44 4	4 44	44	44															\bot		
Works Area B - Abattoir Site																																															
28 Construct Site Offices + Crusher + Barging Point				60 (60	60 6	60 6	60 60	60																																		\perp		\perp		
29 Rock Crusher Operation	114										66 66 66	66	66	66 66	66 6	6 66	6 66	66 6	6 66	66	66 66	66 6	66 6	66 66	66	66	66 66 6	6 66	66	66 66	66 66												\perp		\perp		
30 Reinstatement	106																															59	59 59														
31 Transport spoil to the barge	112	110	66								66 66 66	66	66	66 66	66 6	6 66	6 66	66 6	6 66	66	66 66	66 6	66 66	66 66	66	66	66 66 6	6 66	66	66 66	66 66																
Works Area MA - Underground Magazine Site																																															A .
32 Possession of Site	98		0	0	0					\perp		ll_T													⊥L_T																						
33 Construction of Magazine	105	-	0		0 0	0 0	0 0	0 0	0 0	0	0 0 0																																				
34a Operation of Magazine - Ventilation Fan	86	-	0									0	0	0 0	0 0	0	0	0 (0 0	0	0 0	0	0 0	0 0	0	0	0 0 0	0 0	0	0 0																	
34b Operation of Magazine - Truck	94	_	0									0	0	0 0	0 0	0	0	0 (0 0	0	0 0	0	0 0	0 0	0	0	0 0 0	0 0	0	0 0																	
	Total	SPL,	dB(A)	60	60	60 6	60 6	60 6	60	60	69 69 69	69	69	69 69	69 6	9 69	9 69	70 6	9 69	69	69 69	69	69 69	9 69 69	69	69	69 69 6	9 69	69	69 69	69 69	59	59 59	-		-		-					-		-		-
	1	Excee	dance	-						-]		-	-			-	-			-		=			- 1	-			-			-		-		-		-		-	-		-	- -	-	- -	-
Exceedr	ace during	Exam	ination	-	- -					-	4 4 4	4	4	4 4	4 4	4	4	5 4	4 4	4	4 4	4	4 4	4 4	4	4	4 4 4	4 4	4	4 4	4 4	- 1		-		-		-		-	-		T - T	- 1	-	- 1 -	-
Remarks:	_		_																													_								_							

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs are assumed to be placed at the indicated assumed to be placed

NSR :KET 11- Cayman Rise (Block 1)

						200	9								201	0								2	2011								20	12									2013	3				$\overline{}$				2014			
Act		2 -	. Fe	eb Mar Apr Ma	ay Ju	ın Jul	Aug	Sep O	ct Nov	Dec	Jan F	eb Ma	ar Api	May	Jun	Jul A	ug S	Sep Oc	t Nov	Dec J	an Fe	eb Mar	Apr N	lay Jur	n Jul	Aug S	ep Oct	Nov	Dec J	an Feb	Mar	Apr 1	May Jun	Jul A	ug Ser	p Oct	Nov E	Dec Ja	n Feb	Mar	Apr	May .	Jun	Jul A	lug Ser	p Oct	Nov	Dec .	Jan Fr	eb Ma	ar Apr	May	Jun .	Jul Av	g Se
No. Construction Element	SWL	Dist* S		2 3 4	4 5	6	7	8 9	10																	31 :							40 41																				65 6		
Works Area C - West of KET (Forbes Street Site)																																																							
1 Initial possession ^	100	- 1	0									0	0	0	0																																								T
2 Utility Diversions ^	102	- 1	0												0	0	0	0 0	0	0																																			
3 Piling/walling ^	109	- 1	0												0	0	0	0 0	0																																				
4 Bulk Excavation - soft ^	101	- 1	0																0	0	0 0	0 0	0	0																															
5 Bulk Excavation - weak rock ^	103	- 1	0																		0	0 0	0	0																															
6 Excavate rock and base ^	102	- 1	0																		0	0 0	0	0																															
7 Commence KET Turnback Tunnel ^	100	- 1	0																		0	0	0	0 0	0	0	0																												
8 Tunnel Lining for KET Turnback ^	101	-	0																								0 0	0	0	0 0	0	0	0																						
9 Construct Station Box and Fitout ABWF	103	-	0																					0	0	0	0 0	0	0	0 0	0	0	0 0	0 (0 0	0	0	0																	
10 Reinstate Forbes Street and Smithfield	94	- 1	0																																			0	0	0	0	0	0	0	0 0	0	0	0							
Works Area D - East of KET (Swimming Pool Site)																																																							
11 Demolish Pools and Grandstand ^	103	- 1	0															0	0																																				
12 Piling/walling ^	108	- 1	0																	0	0 0	0	0	0																															
13 Bulk Excavation - soft ^	101	-	0																					0 0	0	0	0 0	0																											
14 Bulk Excavation - weak rock	104	-	0																							0	0 0	0																											
15 Excavate rock and base	112	- 1	0																							0	0 0	0																											
16 Commence KET to SYP Tunnel	101	- 1	0															0 0	0	0	0																																		
17 Tunnel Lining for SYP to KET Tunnel	101	- 1	0																						0	0	0 0	0	0	0 0																									
18 Construct Station Box and Fitout ABWF	103	- 1	0																									0	0	0 0	0	0	0 0	0 (0 0	0	0	0 0	0	0	0	0													
19 Reinstate Site & Smithfield PTI Slab	99	- 1	0																																				0	0	0	0	0	0	0 0	0	0	0	0 (0					
Works Area A - Ex-Police Quarter																																																							
20 Utility Diversions	96	186 4	16									46	3 46	46	46																																								
21 Demolish ^	103	169 5	53													53 5	53 5	53 53	53																																				
22 Piling/walling (only 5 days) ^	102	229 5	50																50																																				
23 Excavation of Shaft (soft) ^	106	233 5	i4																54	54																																			
24 Excavation of Shaft (rock) ^	106	233 5	i4																	54 5	64																																		
25 Excavation of Tunnel / Adits (rock) ^	100	233 4	18																	4	8 48	8																																	
26 Excavation of Tunnel / Adits (soft)	100	233 4	18																								18 48	48	48 4	48 48	48	48	48																						
27 Lining	94	233 4	12																								12 42	42	42 4	12 42	42	42	42																						
Works Area B - Abattoir Site																																																							
28 Construct Site Offices + Crusher + Barging Point	107	102 6	2 6	2 62 62 62	2 62	2 62	62	62 6	2 62																																														
29 Rock Crusher Operation	114	151 6	65							65	65	65 65	65	65	65	65 6	35 6	65 65	65	65 6	5 6	5 65	65 6	65	65	65	65	65	65 6	65	65	65	65 65	65 6	65																				
30 Reinstatement	106	102 6	61																																61	61	61																		
31 Transport spoil to the barge	112	125 6	55							65	65	65 65	65	65	65	65 6	35 6	65 65	65	65 6	5 6	5 65	65 6	65	65	65	65	65	65 6	65	65	65	65 65	65 6	35																				
Works Area MA - Underground Magazine Site																																																							
32 Possession of Site	98	- 1	0 (0																																											\Box	\neg					\Box		\Box
33 Construction of Magazine	105	- 1	0	0 0 0	0 0	0	0	0 0	0 (0	0	0																																			\Box								1
34a Operation of Magazine - Ventilation Fan	86	- 1	0									0	0	0	0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0														\Box								1
34b Operation of Magazine - Truck	94	- 1	0									0	0	0	0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0	0	0	0 0											\neg		\top				\neg	\top	T		+	\top
-	Total 9	SPL, dB	(A) 6	2 62 62 62	2 62	2 62	62	62 6	2 62	68	68	68 68	68	68	68	68 6	68	68 68	69	69 6	8 6	8 68	68 6	68	68	68	68	68	68 6	68	68	68	68 68	68 6	61	61	61		-	-	-	-	-	-	- -	1 -	-	- T			. -	1 - 1			-
	E	xceedar	ice		- -	-	1 - 1		T -	1 - 1	-	- -	T	1 - 1	-	-	-		-	- [- -		- 1		1 -	1 - 1		-	- 1		1 - 1	-	- -	- 1		-	-		-	- 1	-	-	-	-		1	1-1				. -	1-1			T
	_			1 1			1 1																								1			- 1		- 1				1		- 1													ь_

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 2-4 in month 25-28, act. 7 & 8 in month 32, act. 11 & 12 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 12- Cheong Kat Building

							200)9							2010)							2011						20)12							2013						2014		
Act	Construction Element	swi	Dist ² SF	Feb	Mar A	pr May	Jun Ju	ıl Aug	Sep O	ct Nov	Dec Ja	n Feb	Mar A	pr May	Jun -	Jul Aug	Sep	Oct N	lov Dec J	an Feb	Mar	Apr May Ju	ın Jul ı	Aug Sep	Oct Nov	Dec Ja	n Feb	Mar A	pr May Jun	Jul Au	ıg Sep	Oct No	v Dec Ja	ın Feb	Mar A	pr May	Jun Jul	l Aug	Sep C	Oct Nov E	ec Jan F	eb Mar	Apr May	Jun Jul	Aug
lo.		02	Dist o.	1	2 :	3 4	5 6	7	8 9	9 10	11 12	2 13	14 1	5 16	17	18 19	20	21	22 23	24 25	26	27 28 2	9 30	31 32	33 34	35 3	6 37	38 3	39 40 41	42 4	3 44	45 46	47 48	8 49	50	1 52	53 54	55	56 5	57 58	59 60 6	61 62	63 64	65 66	67
rks Area C - Wes	st of KET (Forbes Street Site)																																												
1 Initial posses			260 4										47 4	7 47																															
2 Utility Divers	rsions ^		260 49													49 49																													
B Piling/walling	ng ^		260 5												56	56 56	56	56	56																										
Bulk Excava	ation - soft ^		260 4															4	48 48																										
Bulk Excava	ation - weak rock ^	103	260 50)																50	50	50 50																							
Excavate ro	ock and base ^		260 49																			49 49																							
7 Commence	KET Turnback Tunnel ^		240 4																	47	47	47 47 4	7 47																						
Tunnel Linin	ng for KET Turnback ^	101	240 4	3																				48	48 48	48 4	8 48	48 4	18 48																
Construct St	Station Box and Fitout ABWF	103	260 50)																		5	0 50	50 50	50 50	50 5	0 50	50 5	50 50 50	50 5	0 50	50 50	50												
Reinstate For	orbes Street and Smithfield	94	260 4	1																													41	1 41	41 4	1 41	41 41	41	41 4	11 41 4	11				
s Area D - East	st of KET (Swimming Pool Site)																																												
1 Demolish Po	ools and Grandstand ^	103	- C															0	0 0																										T
2 Piling/walling	ng ^	108	- 0																0	0 0	0	0 0																							1
3 Bulk Excava		101	- C																			0 0	0	0 0	0 0																				
Bulk Excava	ation - weak rock	104	- 0																					0 0	0 0																				
Excavate ro	ock and base	112																							0 0																				+
Commence	KET to SYP Tunnel	101															0	0	0 0	0																									+
	ng for SYP to KET Tunnel	101																					0	0 0	0 0	0 (0																		+
	Station Box and Fitout ABWF	103																							0			0 (0 0 0	0 0) 0	0 0	0 0	0	0	0 0									+
	Site & Smithfield PTI Slab		- 0																									-						0	0		0 0	0	0	0 0	0 0	0			+
ks Area A - Ex-P																																		Ů			0 0	-							
0 Utility Divers		96	- C										0 0) 0	0																														_
1 Demolish ^		103											0 0	0		0 0	0	0	0																			+ +							+
2 Piling/wallin		102														0 0	-		0							+	_											+							+
3 Excavation		102								-							-		0 0																			-							+
4 Excavation of	. ,	106								-							-			0																		-							+-
	of Tunnel / Adits (rock) ^	100				_											+-+			0 0																									+
	of Tunnel / Adits (rock) ···	100													-					0 0				0	0 0	0 (0	0 1	0 0					_				-							+
	of Turifier / Adits (soft)	94	- 0												-									0	0 0	0 (0	0 1	0 0					_				-							+
Lining S Area B - Abat	attain Cita	94	- 0																					U	0 0	0 (U	0 1	0 0															-	_
		407	106 6	00	00 0	0 00	62 62	2 00	00 0	0 00																																		_	4
	Site Offices + Crusher + Barging Point				62 6	2 62	62 62	2 62	62 6	2 62																								-				+						-+	+
Rock Crush	17		271 6		_				_		60 60) 60	ь0 6	0 60	60	60	60	60 (50 60	ou 60	60	bU 6U 6	0 60	ьU 60	60 60	60 6	0 60	60 6	60 60 60	60 6		04 04						+				-		-+	+
Reinstateme			106 6								0.1		0.1			01 01						01 01 0		01 01				01 0		01 0		61 61													+
	poil to the barge	112	190 6					\perp			61 6	61	61 6	1 61	61	61 61	61	61 (51 61 (51 61	61	61 61 6	1 61	61 61	61 61	61 6	1 61	61 6	61 61	61 6	1		\perp	\perp				\perp				_		\rightarrow	\perp
_	nderground Magazine Site																																												4
Possession		98			0										\perp						\sqcup					\bot				\vdash								\perp						-+	+
3 Construction		105			0 (0 0	0 0	0	0 (0	0 0																																		
	of Magazine - Ventilation Fan	86											0 0		0	0 0	-	0	0 0	0 0	-	0 0 0			0 0				0 0 0									\perp							1
b Operation of	of Magazine - Truck	94											0 0		0	0 0	v	0	0 0	0 0	-	0 0 0	, ,		0 0				0 0 0																4
		Tota	SPL, dB(A) 62	62 6	2 62	62 62	2 62	62 6	2 62	64 64	1 64	64 6	4 64	65	65 65	65	65 (65 64	64	64	64 64 6	4 64	64 64	64 64	64 6	4 64	64 6	64 64 64	64 6	4 61	61 61	50 4	1 41	41 4	1 41	41 41	41	41 4	11 41 4	11 -	- -		- -	-
			Exceedan	ce -		- -	- -	-	-	- -		-		- -	-		-	-	- -		-	- - -	. -	- -		- -	-	-	- - -		. -			-	-	- -		-	-		- -	- -	- -	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 1-3 in month 17, act. 2-4 in month 17-23, act. 4-7 in month 32, act. 11 & 12 in month 23, act. 12 & 13 in month 28, act. 21-23 in month 29, act. 23 & 24 in month 29, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 13- The Merton (Block 2)

			Г				200)9							2	010								2011								2012								20	013							2014		
Act Constant of Florida			F	eb Ma	Apr N	Mav Ju	ın Ju	l Aua	Sep C	ct Nov	Dec	Jan Feb	Mar	Apr	Mav Jun	Jul	Aua S	Sep Od	t Nov	Dec Jan	Feb	Mar Ap	Mav	Jun J	Jul Aua	Sep O	ct Nov	Dec .	Jan Feb	Mar	Apr N	May Jun .	Jul Aua	Sep	Oct Nov	Dec .	an Feb	Mar A	Apr May	/ Jun	Jul	Aug Sep	Oct	Nov De	ec Jan	Feb M	ar Apr	Mav	Jun Ju	Aug
No. Construction Element	SWL	Dist ²	SPL	1 2	3	4 5	5 6	7	8 !																30 31							40 41														61 62				
Works Area C - West of KET (Forbes Street Site)																																																		
1 Initial possession ^		274											46	46	46 46																																			
2 Utility Diversions ^	102	274	48												48	48	48	48 48	3 48	48																														
3 Piling/walling ^	109	274	55												55	55	55 5	55 55	5 55																															
4 Bulk Excavation - soft ^	101	274	47																47	47 47	47	47 47	47																											
5 Bulk Excavation - weak rock ^	103	274	49																		49	49 49	49																											
6 Excavate rock and base ^	102	274	48																		48	48 48	48																											
7 Commence KET Turnback Tunnel ^	100	260	47																		47	47 47	47	47 4	47 47	47																								
8 Tunnel Lining for KET Turnback ^		260																											48 48																					
9 Construct Station Box and Fitout ABWF	103	274	49																					49	49 49	49 4	9 49	49	49 49	49	49	49 49	19 49	49	49 49	49														
10 Reinstate Forbes Street and Smithfield	94	274	40																																		40 40	40	40 40	40	40	40 40	40	40 40	0					
Works Area D - East of KET (Swimming Pool Site)																																																		
11 Demolish Pools and Grandstand ^	103	-	0															0	0	0																														
12 Piling/walling ^	108	-	0																	0 0	0	0 0	0																											
13 Bulk Excavation - soft ^	101	-	0																				0	0	0 0	0 0	0 0																							
14 Bulk Excavation - weak rock	104	-	0																						0	0 0	0																							
15 Excavate rock and base	112	-	0																						0	0 0	0																							
16 Commence KET to SYP Tunnel	101	-	0															0 0	0	0 0																														
17 Tunnel Lining for SYP to KET Tunnel	101	-	0																						0 0	0 0	0	0	0 0																					
18 Construct Station Box and Fitout ABWF	103	-	0																								0	0	0 0	0	0	0 0	0 0	0	0 0	0	0 0	0	0 0											
19 Reinstate Site & Smithfield PTI Slab	99	-	0																																		0	0	0 0	0	0	0 0	0	0 0	0	0				
Works Area A - Ex-Police Quarter																																																		
20 Utility Diversions	96	-	0										0	0	0 0																																			
21 Demolish ^	103	-	0													0	0	0 0	0																															
22 Piling/walling (only 5 days) ^	102	-	0																0																															
23 Excavation of Shaft (soft) ^	106	-	0																0	0																														
24 Excavation of Shaft (rock) ^	106	-	0																	0 0																														
25 Excavation of Tunnel / Adits (rock) ^	100	-	0																	0	0																													
26 Excavation of Tunnel / Adits (soft)	100	-	0																							0 0	0	0	0 0	0	0	0																		
27 Lining	94	-	0																							0 0	0	0	0 0	0	0	0																		
Works Area B - Abattoir Site																																																		
28 Construct Site Offices + Crusher + Barging Point	107	84	64	64 64	64	64 64	4 64	1 64	64 6	4 64																																								T
29 Rock Crusher Operation	114	280	60								60	60 60	60	60	60 60	60	60 6	60 60	60	60 60	60	60 60	60	60 6	60 60	60 6	0 60	60	60 60	60	60	60 60 6	60																	
30 Reinstatement	106	84	63																															63	63 63															
31 Transport spoil to the barge	112	185	62								62	62 62	62	62	62 62	62	62 6	62 62	2 62	62 62	62	62 62	62	62 6	62 62	62 6	2 62	62	62 62	62	62	62 62 6	62										ΠŢ							+
Works Area MA - Underground Magazine Site																																																		
32 Possession of Site	98	-	0	0 0																																														T
33 Construction of Magazine	105	-	0	0	0	0 0	0 0	0	0 (0 0	0	0 0																															ΠŢ							+
34a Operation of Magazine - Ventilation Fan	86		0										0	0	0 0	0	0	0 0	0	0 0	0	0 0	0	0	0 0	0 0	0 (0	0 0	0	0	0 0											ΠŢ							+
34b Operation of Magazine - Truck	94	-	0										0	0	0 0	0	0	0 0	0	0 0	0	0 0	0	0	0 0	0 0	0	0	0 0	0	0	0 0											ΠŢ							+
,	Total	SPL, d	B(A)	64 64	64	64 64	4 64	1 64	64 6	4 64	64	64 64	64	64	64 65	65	65 6	65 65	65	64 64	64	64 64	64	64 6	64 64	64 6	4 64	64	64 64	64	64	64 64 6	64 64	63	63 63	49	40 40	40	40 40	40	40	40 40	40	40 40	0 -	1 - 1 -	- 1 -	1 - 1		1-1
		Exceed	ance		1 - 1			- 1	-		1 - 1		-	-		- 1	-		1 - 1		1 -		- 1	-		- -	. -	1 - 1		1 - 1	-			-		-		- 1		T -	- 1		一		-		- -	1-1		1 - 1

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 2-4 in month 25, act. 11 & 12 in month 25, act. 11 & 12 in month 28, act. 21-23 in month 28, act. 21-23 in month 22, act. 23 & 24 in month 23, and act. 24 & 25 in month 24.

Noise Exceedance

NSR :KET 14- Kennedy Town Jockey Club Clinic

						2009								20	010									2011								20	012								2013	3				$\overline{}$			2014		
Act			Fe	o Mar Apr M	May Ju	n Jul	Aug Se	en Oct	Nov [Dec Jan	Feb	Mar A	or Ma	v Jun	Jul	Aug	Sen Oc	Nov	Dec	Jan F	eb Mar	Apr	Mav J	lun Jul	Aug S	en Oc	t Nov	Dec .	Jan Fe	b Mar	Apr M	av Jun	Jul	Aug Sep	Oct N	lov Dec	. Jan	Feb Mai	r Apr	Mav	Jun	Jul Auc	g Sen	Oct 1	Nov Dec	c Jan	Feb M	Jar Apr	May J	un Jul	Aug 5
No. Construction Element	SWL	Dist ² SI	7L 1	2 3	4 5	6	7 8	3 9	10															29 30										43 44											58 59				64 6		
Works Area C - West of KET (Forbes Street Site)																																																			
1 Initial possession ^	100	- ()									0 (0	0																													\top	-		T		$\overline{}$		$\overline{}$	
2 Utility Diversions ^	102	- ()											0	0	0	0 0	0	0																								+								
3 Piling/walling ^	109	- ()											0	0	0	0 0	0																												1 1					
4 Bulk Excavation - soft ^	101	- ()															0	0	0 (0 0	0	0																							1 1					
5 Bulk Excavation - weak rock ^	103	- ()																	(0 0	0	0																												
6 Excavate rock and base ^	102	- ()																	(0 (0	0																												
7 Commence KET Turnback Tunnel ^	100	- ()																	(0	0	0	0 0	0	0																									
8 Tunnel Lining for KET Turnback ^	101	- ()																							0 0	0	0	0 0	0	0)																			
9 Construct Station Box and Fitout ABWF	103	- ()																					0 0	0	0 0	0	0	0 0	0	0	0 0	0	0 0	0	0 0															
10 Reinstate Forbes Street and Smithfield	94	- ()																																		0	0 0	0	0	0	0 0	0	0	0 0						
Works Area D - East of KET (Swimming Pool Site)																																																			
11 Demolish Pools and Grandstand ^	103	- ()														0	0																																	
12 Piling/walling ^	108	- ()																0	0 (0	0	0																												
13 Bulk Excavation - soft ^	101	- ()																				0	0 0																											
14 Bulk Excavation - weak rock	104	- ()																						0																										
15 Excavate rock and base	112	- ()																						0	0 0	0																								
16 Commence KET to SYP Tunnel	101	- ()														0 0	0	0	0																															
17 Tunnel Lining for SYP to KET Tunnel	101	- ()																					0	0	0 0	0	0	0 0																						
18 Construct Station Box and Fitout ABWF	103	- ()																								0	0	0 0	0	0	0 0	0	0 0	0	0 0	0	0 0	0	0											
19 Reinstate Site & Smithfield PTI Slab	99	- ()																																			0 0	0	0	0	0 0	0	0	0 0	0	0				
Works Area A - Ex-Police Quarter																																																			
20 Utility Diversions	96		7									47 4	7 47																																						
21 Demolish ^		160 5													54	54	54 54																															'			
22 Piling/walling (only 5 days) ^		190 5																51																														'			
23 Excavation of Shaft (soft) ^		192 5																55																														'			
24 Excavation of Shaft (rock) ^		192 5	_																55	55																															$\perp \perp$
25 Excavation of Tunnel / Adits (rock) ^		192 4																		49 4	9																														
26 Excavation of Tunnel / Adits (soft)		192 4																													49 4																				$\perp \perp$
27 Lining	94	192 4	3																						4	13 43	3 43	43	43 43	3 43	43 4	.3												\longrightarrow							
Works Area B - Abattoir Site																																														4					
28 Construct Site Offices + Crusher + Barging Point		98 6		62 62 6	62 62	2 62	62 6	2 62																																			\perp	\vdash		\bot					\perp
29 Rock Crusher Operation		108 6								68 68	68	68 6	8 68	68	68	68	68 68	68	68	68 6	8 68	68	68 6	68 68	68 (68	68	68	68 6	68	68 6	8 68	68										\perp	\vdash		\bot					\perp
30 Reinstatement		98 6																																	61 (31															$\perp \perp$
31 Transport spoil to the barge	112	73 7	0							70 70	70	70 7	0 70	70	70	70	70 70	70	70	70 7	0 70	70	70 7	70 70	70	70 70	70	70	70 70	70	70 7	0 70	70	70										igspace		\bot			\perp		$\perp \perp$
Works Area MA - Underground Magazine Site																																												الک							
32 Possession of Site	98	- (0	0																																							\perp	\perp		\bot		'	$\perp \perp$	\bot	$\perp \perp \downarrow$
33 Construction of Magazine	105	- ()	0 0 0	0 0	0	0 0	0	0	0 0								1																									\perp	\perp		\bot		'	$\perp \perp$	\bot	$\perp \perp \downarrow$
34a Operation of Magazine - Ventilation Fan	86	- (,									0 (, ,	U	0	0	0 0	0	0	0 (0 (Ů	0	0 0	Ŭ	0 0	0	0	0 0	0		0 0											\perp	\perp		\bot		'	$\perp \perp$	\bot	$\perp \perp \downarrow$
34b Operation of Magazine - Truck	94		,			44			1 1			0 (0	0		0	0	0 (0	-		-	0 0		-	0 0		-	0 0					\perp			<u> </u>			4	ـــــــــــــــــــــــــــــــــــــــ		\bot		'	\bot		$\perp \perp$
		. , . ,	, , , , ,	62 62 6	62 62	2 62	62 6	2 62	62	72 72	72	72 7	2 72	72	72	72	72 72	72	72	72 7	2 72	72	72 7	72 72	72	72 72	72	72	72 7	2 72	72 7	2 72	72	72 61	61 (31 -	-		-	-	-	- -		بلنب		1-	-		 - '		1-1
	E	xceedan	ce -		- -	-		- -	-		-	- -	- -	-	-	-		-	-	-	- -	-	-	- -	-	- -	-	-		-	-	- -	-		-	- -	-	- -	-	-	-	- -	-	L		1 -	-	- - '	<u> </u>	- -	1 - 1

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 18, 12 in month 23, act. 11, 18, 12 in month 28, act. 21-23 in month 28, act. 21-23 in month 29, act. 23, 24 in month 23, act. 24, 25 in month 24.

Noise Exceedance

NSR :KET 15- Sisters of the Immaculate Heart of Mary

					2009						201	0							2011							2012							201	3					2'	014	
Act Construction Florent		Feb Mar	Anr Ma		Jul Aug S	Sen Oct	t Nov De	c Jan F	eh Mar	Anr M			Aug Sep	Oct Nov	Dec .	Jan Fel	Mar Apr	May		Aug Sen	Oct N	lov Dec	Jan Fel	h Mar	Anr May		Aug	Sen Oct	Nov Dec	lan F	eh Mar	Anr May		Jul Aug	Sen Or	ct Nov	Dec Jac	Feb M	1ar Apr M		Jul Ar
No. Construction Element	SWL Dist ² SPI	1 2	3 4	5	6 7	8 9	10 1	_	13 14				19 20				26 27		29 30	31 32		34 35	36 37			41 42		-	46 47	_		51 52			56 57		59 60	61 6			66 67
rks Area C - West of KET (Forbes Street Site)																																									
1 Initial possession ^	100 - 0								0	0	0																														
2 Utility Diversions ^	102 - 0										0	0	0 0	0 0	0																										
3 Piling/walling ^	109 - 0										0	0	0 0	0 0																											
4 Bulk Excavation - soft ^	101 - 0													0	0	0 0	0 0	0																							
5 Bulk Excavation - weak rock ^	103 - 0															0	0 0	0																							
6 Excavate rock and base ^	102 - 0															0	0 0	0																							
7 Commence KET Turnback Tunnel ^	100 - 0															0	0 0	0	0 0	0 0																					
8 Tunnel Lining for KET Turnback ^	101 - 0																			0	0	0 0	0 0	0	0 0																
9 Construct Station Box and Fitout ABWF	103 - 0																		0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0												
10 Reinstate Forbes Street and Smithfield	94 - 0																													0	0 0	0 0	0	0 0	0 0	0 0	0				
orks Area D - East of KET (Swimming Pool Site)																																									
11 Demolish Pools and Grandstand ^	103 - 0													0 0	0																										
12 Piling/walling ^	108 - 0														0	0 0	0 0	0																							
13 Bulk Excavation - soft ^	101 - 0																	0	0 0	0 0	0	0																			
14 Bulk Excavation - weak rock	104 - 0																			0 0	0	0																			
5 Excavate rock and base	112 - 0																			0 0	0	0																			
6 Commence KET to SYP Tunnel	101 - 0												0	0 0	0	0																									
7 Tunnel Lining for SYP to KET Tunnel	101 - 0																		0	0 0	0	0 0	0 0																		
18 Construct Station Box and Fitout ABWF	103 - 0																					0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0									
19 Reinstate Site & Smithfield PTI Slab	99 - 0																														0 0	0 0	0	0 0	0 0	0	0 0	0			
rks Area A - Ex-Police Quarter																																									
Utility Diversions	96 - 0								0	0	0 0																														
21 Demolish [^]	103 - 0											0	0 0	0 0																											
Piling/walling (only 5 days) ^	102 - 0													0																											
23 Excavation of Shaft (soft) ^	106 - 0													0	0																										
24 Excavation of Shaft (rock) ^	106 - 0														0	0																									
25 Excavation of Tunnel / Adits (rock) ^	100 - 0															0 0																									
26 Excavation of Tunnel / Adits (soft)	100 - 0																			0	0	0 0	0 0	0	0 0																
7 Lining	94 - 0																			0	0	0 0	0 0	0	0 0																
rks Area B - Abattoir Site																																									
8 Construct Site Offices + Crusher + Barging Point	98 - 0	0 0	0 0	0	0 0	0 0	0																																		
29 Rock Crusher Operation	104 - 0						0	0	0 0	0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0														
Reinstatement	97 - 0																											0 0	0												
Transport spoil to the barge	102 - 0						0	0	0 0	0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0														
ks Area MA - Underground Magazine Site																																									
Possession of Site	108 59 68	68 68																																\neg					\top		
33 Construction of Magazine	115 59 75			5 75	75 75 7	75 75	75 79	5 75 7	75						1 1												1 1							\neg		+		+	\top	\dashv	
34a Operation of Magazine - Ventilation Fan	91 121 44								_	44	4 44	44 4	44 44	44 44	44	44 44	44 44	44	44 44	44 44	44	14 44	44 44	44	44 44	44	1 1							\neg		+		+	\top	\dashv	
34b Operation of Magazine - Truck	104 59 64																64 64										1 1							\neg		+		+	\top	\dashv	
· ·	Total SPL, dB(A	68 75	75 7	5 75	75 75 7	75 75	75 7	5 75 7	75 64	64 6	4 64	64 6	64 64	64 64	64	64 64	64 64	64	64 64	64 64	64	64 64	64 64	64	64 64	64 -	-			-			-	- -		. T - T		1 - 1	- 1 - 1	- -	
	Exceedance	, —				. .		1:1	. -					- 1 -	+ +	+	1 1 1	+			+ + +	+		+			1 1	1 1	_	+ +		_	1 1	\rightarrow	-	+	-	+	-	+	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 17, act. 2-4 in month 17, act. 18, 12 in month 23, act. 11, 18, 12 in month 28, act. 21-23 in month 28, act. 21-23 in month 29, act. 23, 24 in month 23, act. 24, 25 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

The NSR would be adjacent to the construction site such that the use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be partially screened. According to GW-TM, a noise reduction of 5 dB(A) would be achieved.

Construction Noise Impact Assessment – UNI Station

Works Area J2 - UNI Entrance B1

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mini backhoe	CNP082	1	94	50%			91
Truck	BS C9/39	1	103	30%			98
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	1	108	50%	Enclosure/Shed*	15	90
						Total	99

Demolition of Whitty Public Toilet Block

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Concrete Corer	CNP042	1	117	80%	Enclosure/Shed*	15		101		
Saw, wire	CNP205	1	101	80%					100	
Concrete Crusher	CNP055	1	103	80%						102
Mini backhoe	CNP082	3	94	90%			98			
Truck	BS C9/39	1	103	30%			98			
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87			
						Total	101	101	100	102

Piling/Walling

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10		100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Generator, super silenced	CNP103	1	95	100%			95	
						Total	96	100

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Backhoe	BS C3/97	1	105	50%	Enclosure/Shed*	15		87	
Truck	BS C9/39	1	103	30%	Enclosure/Shed*	15		83	
Water pump, submersible (electric)	CNP283	1	85	100%	Enclosure/Shed*	15		70	
Ventilation fan	CNP241	1	108	100%	Silencer	15		93	
Conveyor	CNP041	1	90	30%	Enclosure/Shed*	15		70	
Drill Rig	CNP072	1	110	70%	Enclosure/Shed*	15			93
Grout Pump	CNP106	1	105	20%	Enclosure/Shed*	15	83		
Grout Mixer	CNP105	1	90	30%	Enclosure/Shed*	15	70		
Shotcrete Pump	CNP047	1	109	20%	Enclosure/Shed*	15	87		
						Total	89	94	93

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Enclosure/Shed*	15		88	
Backhoe	BS C3/97	1	105	50%	Enclosure/Shed*	15		87	
Ventilation fan	CNP241	1	108	100%	Silencer	15		93	
Water pump, submersible (electric)	CNP283	1	85	100%	Enclosure/Shed*	15		70	
Truck	BS C9/39	1	103	30%	Enclosure/Shed*	15		83	
Grout Pump	CNP106	1	105	20%	Enclosure/Shed*	15	83		
Grout Mixer	CNP105	1	90	30%	Enclosure/Shed*	15	70		
Drill Rig	CNP072	1	110	30%	Enclosure/Shed*	15			90
Conveyor	CNP041	1	90	30%	Enclosure/Shed*	15	70		
Electric Winch	CNP262	1	95	10%	Enclosure/Shed*	15	70		
Shotcrete Pump	CNP047	1	109	20%	Enclosure/Shed*	15	87		
						Total	89	95	90

Works Area J2 - UNI Entrance B1

Excavation - Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Enclosure/Shed*	15			88
Backhoe	BS C3/97	1	105	50%	Enclosure/Shed*	15		87	
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
Water pump, submersible (electric)	CNP283	1	85	100%	Enclosure/Shed*	15	70		
Rock Drill	CNP182	1	123	40%	Enclosure/Shed*	15	104		
Truck	BS C9/39	1	103	30%	Enclosure/Shed*	15	83		
Conveyor	CNP041	1	90	30%	Enclosure/Shed*	15	70		
Electric Winch	CNP262	1	95	10%	Enclosure/Shed*	15	70		
Shotcrete Pump	CNP047	1	109	20%	Enclosure/Shed*	15	87		
						Total	104	87	88

Construct Ground Level Entrance

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94	
Concrete Lorry Mixer	BS C6/23	1	100	30%	Enclosure/Shed*	15	80	
Poker, vibratory, hand-held	BS C6/40	2	98	100%	Enclosure/Shed*	15		86
Water pump, submersible (electric)	CNP283	1	85	100%	Enclosure/Shed*	15	70	
						Total	95	86

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area H - UNI Entrance C2

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	2	108	50%	Movable Noise Barrier*	10	98
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			98
	•					Total	101

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	2	108	50%	Movable Noise Barrier*	10	98
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			98
						Total	101

Piling/Walling

· ming/ waming							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10	100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Generator, super silenced	CNP103	1	95	100%			95
	•				•	Total	102

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97
Truck	BS C9/39	2	103	30%			101
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	102

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Breaker	BS C8/12	1	106	70%	Movable Noise Barrier*	10	94	
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97	
Ventilation fan	CNP241	2	108	100%	Silencer	15	96	
Water pump, submersible (electric)	CNP283	1	85	100%			85	
Truck	BS C9/39	2	103	30%				101
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91
						Total	101	101

Works Area H - UNI Entrance C2

Excavate Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Breaker	BS C8/12	1	106	70%	Movable Noise Barrier*	10	94	
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97	
Ventilation fan	CNP241	1	108	100%	Silencer	15	93	
Water pump, submersible (electric)	CNP283	1	85	100%			85	
Rock Drill	CNP182	1	123	35%	Acoustic Enclosure ^	20		98
Truck	BS C9/39	2	103	30%			101	
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5	91	
						Total	104	98

Construct Ground Level Entrance

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%			104
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	105

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] According to Table B.1 of BS 5228: Part 1: 1997, rock drill in portable or fixed acoustic enclosure with suitable ventilation could achieve a noise reduction of 20dB(A).

Works Area I - UNI Entrance C1 + VS + Chiller

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Hand-held Breaker	CNP024	3	108	50%	Movable Noise Barrier*	10	100
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			98
						Total	102

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Hand-held Breaker	CNP024	3	108	50%	Movable Noise Barrier*	10	100
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			98
						Total	102

Piling/Walling - Some 60 Nos. Bored Piles

gg							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10	100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Generator, super silenced	CNP103	1	95	100%			95
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Crane	BS C7/114	1	101	30%			96
						Total	103

Bulk Excavation-Soft

Duik Excavation-Soft							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	70%			103
Truck	BS C9/39	2	103	30%			101
Water pump, submersible (electric)	CNP283	1	85	100%			85
Crane	BS C7/114	1	101	10%			91
						Total	106

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	1	106	50%			103
Backhoe	BS C3/97	1	105	50%			102
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
Water pump, submersible (electric)	CNP283	1	85	100%			85
Truck	BS C9/39	2	103	30%			101
Crane	BS C7/114	1	101	30%			96
						Total	107

Permanent Shaft Lining

T CHINGHOTT CHARLES								
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Concrete pump	CNP047	2	109	100%	Enclosure/Shed*	15		97
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91
Concrete Lorry Mixer	BS C6/23	4	100	30%			101	
Poker, vibratory, hand-held	BS C6/40	6	98	100%	Movable Noise Barrier*	10	96	
						Total	102	98

Construct above-ground Lift Shaft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%	Movable Noise Barrier*	10	94
Crane	BS C7/114	1	101	20%	Movable Noise Barrier*	5	89
						Total	100

Works Area I - UNI Entrance C1 + VS + Chiller

Sheet Piling for Vent Ducts

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Sheet Piling Machine	BS C4/13	1	106	70%	Fabric [#]	10	94
						Total	94

Bulk Excavation-Soft for Vent Ducts

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97
Truck	BS C9/39	2	103	30%			101
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	102

Horizontal Duct

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Breaker	BS C8/12	1	106	20%				99
Backhoe	BS C3/97	1	105	50%				102
Water pump, submersible (electric)	CNP283	1	85	100%				85
Crane	BS C7/114	1	101	30%			96	
Truck	BS C9/39	2	103	30%			101	
						Total	102	104

Concreting Vent Ducts and Vent Building

Concreting vent bucts and vent i	bullaling						_
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%			104
Water pump, submersible (electric)	CNP283	1	85	100%			85
Mobile Crane	BS C7/114	1	101	20%			94
					_	Total	105

Reinstatement

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Pile Extractor	BS C4/22	1	125	20%	Fabric [#]	10	108			
Truck	BS C9/39	1	103	30%				98		
Power Rammer	CNP169	1	108	100%	Fabric [#]	10		98		
Roller, vibratory	BS C8/30	1	101	100%				101		
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15			87	
Concrete Lorry Mixer	BS C6/23	1	100	100%					100	
Poker, vibratory, hand-held	BS C6/40	2	98	100%					101	
Asphalt Paver	BS C8/24	1	101	100%						101
						Total	108	104	104	101

Station Fitout

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	100%			106
						Total	106

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area J - UNI Entrance B2

Possession of site / Mobilization

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Hand-held Breaker	CNP024	2	108	50%	Movable Noise Barrier*	10		98
Mini Backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86	
Truck	BS C9/39	1	103	30%			98	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Hand-held Breaker	CNP024	1	108	50%	Movable Noise Barrier*	10	95	
						Total	100	98

Demolition of Hill Road Rest Garden

20								
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Mini Backhoe	CNP082	2	94	50%	Movable Noise Barrier*	5	89	
Truck	BS C9/39	2	103	30%			101	
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15		90
Hand Held Breaker	CNP024	4	108	50%	Movable Noise Barrier*	10		101
						Total	101	101

Piling/Walling

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pile Rig	BS C11/2	2	112	70%	Fabric [#]	10		103
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90	
Generator, super silenced	CNP103	1	95	100%			95	
_					•	Total	96	103

Bulk Excavation-weak Rock

Duik Excavation-weak nock									
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	40%				105	
Backhoe	BS C3/97	2	105	50%			105		
Ventilation fan	CNP241	1	108	100%	Silencer	15		93	
Water pump, submersible (electric)	CNP283	2	85	100%				88	
Truck	BS C9/39	4	103	30%					104
Crane	BS C7/114	1	101	30%			96		
						Total	105	105	104

Excavation - Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%	Deck Over	20		86	
Backhoe	BS C3/97	2	105	70%	Deck Over	20		86	
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
Water pump, submersible (electric)	CNP283	2	85	100%	Deck Over	20	68		
Rock Drill	CNP182	1	123	20%	Deck Over	20	96		
Truck	BS C9/39	4	103	30%					104
Crane	BS C7/114	1	101	30%					96
						Total	98	89	104

Excavate adit and running tunnel

	l					Total	102	102	99	105
Ventilation fan	CNP241	2	108	100%	Silencer	15		96		
Concrete Mixer Truck	BS C6/23	2	100	65%				101		
Shotcrete Pump	CNP047	1	109	20%	Deck Over	20			82	
Truck	BS C9/39	2	103	65%						104
Mobile Crane	BS C7/114	1	101	30%						96
Rock Drill	CNP182	1	123	40%	Deck Over	20			99	
Excavator	BS C3/97	1	105	65%	Deck Over	20		83		
Ventilation fan	CNP241	4	108	100%	Silencer	15	99			
Water pump, submersible (electric)	CNP283	1	85	100%	Deck Over	20	65			
Concrete pump	CNP047	1	109	30%	Deck Over	20	84			
Concrete Lorry Mixer	BS C6/23	2	100	30%			98			
Air Compressor	CNP002	1	102	100%	Deck Over	20	82			
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWI

Works Area J - UNI Entrance B2

Concrete Adit

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97	
Truck	BS C9/39	2	103	30%				101
Water pump, submersible (electric)	CNP283	1	85	100%			85	
Ventilation fan	CNP241	4	108	100%	Silencer	15	99	
						Total	101	101

Construct Ground Level Entrance

Construct Ground Level Littlance							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%	Movable Noise Barrier*	10	94
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	99

Station Fitout

,					1	Total	106
Truck	BS C9/39	2	103	100%			106
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area J3 - UNI Entrance A

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Hand-held Breaker	CNP024	2	108	50%			108
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Mini backhoe	CNP082	1	94	50%			91
Truck	BS C9/39	1	103	30%			98
						Total	109

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	2	108	50%			108
Mini backhoe	CNP082	1	94	50%			91
Truck	BS C9/39	1	103	30%			98
						Total	109

Piling/Walling - Some 40 Nos. Bored Piles

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10	100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Generator, super silenced	CNP103	1	95	100%			95
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
						Total	102

Bulk Excavation-Soft

DUIK EXCAVALION-SOIL							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	70%			103
Truck	BS C9/39	2	103	30%			101
Water pump, submersible (electric)	CNP283	1	85	100%			85
_	•	-				Total	105

Bulk Excavation-weak Rock

Daik Excavation weak nook							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	1	106	50%			103
Backhoe	BS C3/97	1	105	50%			102
Ventilation fan	CNP241	1	108	100%	Silencer	15	93
Water pump, submersible (electric)	CNP283	1	85	100%			85
Truck	BS C9/39	1	103	30%			98
Crane	BS C7/114	1	101	30%			96
						Total	107

Horizontal Adit

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%	Deck Over	20		86
Backhoe	BS C3/97	1	105	50%	Deck Over	20		82
Ventilation fan	CNP241	1	108	100%	Silencer	15		93
Water pump, submersible (electric)	CNP283	1	85	100%	Deck Over	20		65
Crawler mounted rock drill trucks	CNP182	1	123	40%	Deck Over	20		99
Crane	BS C7/114	1	101	30%			96	
Truck	BS C9/39	2	103	30%			101	
	•	•	•	•		Total	102	100

Sheet Piling

Oncot i iiiig						.=	
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Sheet Piling Machine	BS C4/13	1	106	70%	Fabric [#]	10	94
						Total	0/1

Bulk Excavation-Soft for Lower Ground Lobby

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	50%			102
Truck	BS C9/39	1	103	30%			98
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	103

Works Area J3 - UNI Entrance A

Construct Lower Ground Lobby

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%			104
Water pump, submersible (electric)	CNP283	1	85	100%			85
_						Total	105

Permanent Shaft Lining

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Concrete pump	CNP047	2	109	100%	Enclosure/Shed*	15		97
Crane	BS C7/114	1	101	15%				93
Concrete Lorry Mixer	BS C6/23	2	100	30%			98	
Poker, vibratory, hand-held	BS C6/40	4	98	100%			104	
						Total	105	99

Construct above-ground Lift Shaft

Construct above-ground Lift Shai							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	4	98	100%			104
Water pump, submersible (electric)	CNP283	1	85	100%			85
_		-				Total	105

Reinstatement

Asphalt Paver	BS C8/24	1	101	100%						101
Poker, vibratory, hand-held	BS C6/40		98	100%					101	
Concrete Lorry Mixer	BS C6/23	1	100	100%					100	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15			87	
Roller, vibratory	BS C8/30	1	101	100%				101		
Power Rammer	CNP169	1	108	100%	Fabric [#]	10		98		
Truck	BS C9/39	1	103	30%				98		
Sheet Piling Machine	BS C4/13	1	106	70%	Fabric [#]	10	94			
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWL

Station Fitout

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	1	103	100%			103
						Total	103

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area J1 - UNI Vent Shaft VS Y

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Hand-held Breaker	CNP024	1	108	50%	Enclosure/Shed*	15		90
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86	
Truck	BS C9/39	1	103	30%			98	
		•				Total	98	90

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	1	108	50%	Enclosure/Shed*	15	90
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			
						Total	93

Piling/Walling

9							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile Rig	BS C11/2	1	112	40%	Fabric [#]	10	98
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85
Electric Winch	CNP262	1	95	10%			85
	•				_	Total	99

Bulk Excavation-Soft

Dain Excuration Cont							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover^	20	82
Truck	BS C9/39	1	103	30%			98
Water pump, submersible (electric)	CNP283	1	85	100%	Noise Insulating Cover [^]	20	65
•	•	•				Total	98

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Noise Insulating Cover^	20	83		
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover^	20	82		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Water pump, submersible (electric)	CNP283	1	85	100%	Noise Insulating Cover^	20	65		
Truck	BS C9/39	1	103	30%				98	
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5	91		
Rock Drill	CNP182	1	123	35%	Noise Insulating Cover^	20			98
			•			Total	97	98	98

Horizontal Adit

TIOTIZOTICAL ACIT									
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Noise Insulating Cover^	20	83		
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover^	20	82		
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
Water pump, submersible (electric)	CNP283	1	85	100%	Noise Insulating Cover [^]	20	65		
Crawler mounted rock drill trucks	CNP182	1	123	40%	Noise Insulating Cover^	20			99
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
Truck	BS C9/39	1	103	30%				98	
<u> </u>	•	•			•	Total	94	99	99

Permanent Shaft Lining

T CHINGHOTH CHARLES								
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15		94
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91
Concrete Lorry Mixer	BS C6/23	1	100	30%			95	
Poker, vibratory, hand-held	BS C6/40	2	98	100%	Movable Noise Barrier*	10	91	
						Total	96	96

Works Area J1 - UNI Vent Shaft VS Y

Concreting of above-ground Vent Shaft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Concrete Lorry Mixer	BS C6/23	1	100	30%			95
Poker, vibratory, hand-held	BS C6/40	2	98	100%	Movable Noise Barrier*	10	91
Water pump, submersible (electric)	CNP283	1	85	100%			85
Crane	BS C7/114	1	101	20%	Movable Noise Barrier*	5	89
						Total	99

Reinstatement

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Truck	BS C9/39	1	103	30%						98
Power Rammer	CNP169	1	108	70%	Fabric [#]	10	96			
Roller, vibratory	BS C8/30	1	101	70%			99			
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87		
Concrete Lorry Mixer	BS C6/23	1	100	30%				95		
Poker, vibratory, hand-held	BS C6/40	2	98	100%	Movable Noise Barrier*	10		91		
Asphalt Paver	BS C8/24	1	101	100%			•		101	
						Total	101	97	101	98

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] With reference to the Kowloon Southern LInk EIA Report, a noise insulating cover can achieve an overall noise reduction of 22dB(A). Typical configuration of acoustic panels that can achieve this insulation requirement is 1.5mm GS outer skin, 100mm acoustic infill (e.g. fibreglass) with 80kg/m3, and an inner perforated sheet. As a conservative approach, a noise reduction of 20dB(A) is assumed in this calculation.

Works Area G - UNI Construction Shaft (at Kennedy Town Praya) - Conveyor Options

Possession of site / Mobilization

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand-held Breaker	CNP024	2	108	50%			108
Mini backhoe	CNP082	1	94	50%			91
Truck	BS C9/39	1	103	30%			98
		•				Total	109

Piling/Walling - Some 40 Nos. Bored Piles

i iiiig/ waiiiiig Come 10 Noo. Do							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Pile Rig	BS C11/2	2	112	70%	Fabric [#]	10	103
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Generator, super silenced	CNP103	1	95	100%			95
Concrete Lorry Mixer	BS C6/23	2	100	30%			98
Crane	BS C7/114	1	101	30%			96
						Total	106

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	2	105	50%			105
Truck	BS C9/39	4	103	30%			104
Water pump, submersible (electric)	CNP283	2	85	100%			88
						Total	107

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	2	106	50%			106
Backhoe	BS C3/97	2	105	50%			105
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Water pump, submersible (electric)	CNP283	2	85	100%			88
Truck	BS C9/39	4	103	30%			104
Crane	BS C7/114	2	101	30%			99
						Total	110

Excavation - Rock (Horizontal Adit)

Orane	BO 07/114		101	0070		Total	97	98	105
Crane	BS C7/114	2	101	30%					99
Truck	BS C9/39	4	103	30%					104
Rock Drill	CNP182	1	123	35%	Deck Over	20		98	
Water pump, submersible (electric)	CNP283	2	85	100%	Deck Over	20	68		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Backhoe	BS C3/97	2	105	50%	Deck Over	20	85		
Breaker	BS C8/12	2	106	50%	Deck Over	20	86		
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL

Works Area G - UNI Construction Shaft (at Kennedy Town Praya) - Conveyor Options

Mucking-out / Transporting of spoil

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87		
Concrete pump	CNP047	1	109	50%			106		
Water pump, submersible (electric)	CNP283	1	85	100%			85		
Ventilation fan	CNP241	4	108	100%	Silencer	15	99		
Mobile Crane	BS C7/114	1	101	30%				96	
Truck	BS C9/39	2	103	65%				104	
Conveyor	CNP041	2	90	100%			93	93	93
Concrete Mixer Truck	BS C6/23	2	100	65%				101	
Barge	CNP061	2	104	100%					107
Crane	BS C7/114	2	101	30%					99
						Total	107	107	108

Construction Access

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	30%			101
Water pump, submersible (electric)	CNP283	1	85	100%			85
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
						Total	103

Station Fitout

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	100%			106
Ventilation fan	CNP241	4	108	100%	Silencer	15	99
Water pump, submersible (electric)	CNP283	1	85	100%			85
						Total	107

Backfill

Duolillii							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Concrete Lorry Mixer	BS C6/23	4	100	30%			101
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
	·		·	·		Total	102

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area E & F - PCWA Barging Point

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Breaker	BS C8/12	1	106	100%			106
Backhoe	BS C3/97	1	105	80%			104
Concrete saw	CNP203	1	115	60%			113
Compressor	CNP003	1	104	100%	Enclosure/Shed*	15	89
Hand held Breaker	CNP024	2	108	100%			111
Truck	BS C9/39	1	103	100%			103
	-					Total	116

Construction

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mobile Crane	BS C7/114	1	101	70%			99
Compressor	CNP003	1	104	100%	Enclosure/Shed*	15	89
Concrete Mixer Truck	BS C6/23	1	100	40%			96
Concrete poker	CNP170	2	113	40%			112
Truck	BS C9/39	1	103	70%			101
						Total	113

Operation

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Conveyor belts	CNP041	1	90	100%			90
Barge	CNP061	1	104	100%			104
Trucks	BS C9/39	3	103	100%			108
Crusher	EIA Ref.	1	118	100%	Enclosure ^	10	108
Front end loader	BS C3/97	1	105	60%			103
Mobile crane	BS C7/114	1	101	80%			100
						Total	113

EIA Ref.: The SWL of crusher was made reference to the approved EIA Report of Development at Anderson Road, 1998.

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[^] The material of enclosure should be of surface mass in excess of 7kg/m2 to achieve the predicted 10dB(A) noise reduction.

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NSR: UNI1 - Western Court (Block 1) Construction Flement Works Area J2 - UNI Entrance B1 1 Possession of site 76 83 83 2 Demolition of Whitty Public Toilet Block ^ 102 5.0 83 3 Piling/Walling ^ 4 Bulk Excavation-Soft 94 8.1 71 5 Bulk Excavation-weak R 6 Excavation - Rock 104 8.1 **81** 7 Construct Ground Level Entrance Works Area J - UNI Entrance B2 50 50 50 50 53 53 8 Possession of site / Mobilization 98 142 50 9 Demolition of Hill Road Rest Garde 101 142 53 10 Piling/Walling ^
11 Bulk Excavation-weak Rock 103 136 55 97 142 49 12 Excavation - Rock
13 Excavate adit and running tunn 99 142 51 14 Concrete Adit 100 142 52 98 142 50 15 Construct Ground Level Entrance 16 Station Fitout 96 142 48 Works Area H - UNI Entrance C2 17 Possession of site 99 - 0 101 - 0 18 Utilities Diversions 19 Piling/Walling 20 Bulk Excavation-Soft / 21 Bulk Excavation-weak Ro 0 22 Excavate Rock ^
23 Construct Ground Level Entrance 0 Works Area I - UNI Entrance C1 + VS + Chiller 24 Possession of site 100 284 46 100 284 46 25 Utilities Diversions 26 Piling/Walling - Some 60 Nos. Bored Piles ^
27 Bulk Excavation-Soft ^ 101 236 49 96 284 42 28 Bulk Excavation-weak Rock 29 Excavate Rock Shaft * 100 284 46 30 Permanent Shaft Lining 98 284 44 31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts 94 216 42 33 Bulk Excavation-Soft for Vent Ducts 34 Horizontal Duct 94 284 40 35 Concreting Vent Ducts and Vent Building 98 284 44 36 Reinstatement 108 284 54 37 Station Fitout Works Area J3 - UNI Entrance A 47 47 47 38 Possession of site 99 220 47 99 220 47 39 Utilities Diversions 40 Piling/Walling - Some 40 Nos. Bored Piles ^ 101 216 49 41 Bulk Excavation-Soft ^ 95 220 43 43 43 42 Bulk Excavation-weak Rock ⁴ 98 220 46 43 Excavate Rock * 0 0 0 0 0 0 0 0 0 0 44 Horizontal Adit ^ 45 Sheet Piling 100 220 48 94 216 42 93 220 41 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 98 220 46 98 220 46 49 Construct above-ground Lift Sha 50 Reinstatement 51 Station Fitout 99 220 47 Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 100 96 55 99 96 54 53 Utilities Diversions 54 Piling/Walling ^
55 Bulk Excavation-Soft / 101 92 57 94 96 49 56 Bulk Excavation-weak Rock *
57 Excavate Rock Shaft * 100 96 55 - - 0 100 96 55 95 96 50 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 98 96 53 99 96 54 53 53 53 53 Works Area G - UNI Construction Shaft (at Kenned Town Praya) 63 Piling/Walling - Some 40 Nos. Bored Piles ^
64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock * 0 0 0 0 66 Excavation - Rock (Horizontal Adit 0 67 Mucking-out / Transporting of spoil 0 69 Station Fitout 0 0 Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 101

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect
- 2. Slant distance (m)
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- * No PMEs used at surface
- ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 27, act. 40 & 41 in month 24, act. 44 & 48 in month 27, act. 45 & 47 in month 28, act. 47 & 48 in month 29, act. 48 in month 29, act. 49 & 49 in month 29, act. 40 & 41 in month 29, act. 40 & 42 in month 29, act. 40 & 41 in month 29, act. 40 & 41 in month 29, act. 40 & 42 in m 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act, 64, 65 & 66 in month 11,

Noise Exceedance

NSR: U	NI2 -	St	Louis	School
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NSR: UNI2 - St Louis School		2009	2010	2011	2012	2013	2014
Act No. Construction Element	SWL Dist ² SPL	Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan I		Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec		Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	Jan Feb Mar Apr May Jun Jul Aug Sep
Works Area J2 - UNI Entrance B1			10 10 11 10 10 11 12 23		30 00 10 11 12 10 17 40 40		55 5. 52 55 64 65 65 67 66
1 Possession of site	99 45.4 61		51				
Demolition of Whitty Public Toilet Block ^ Piling/Walling ^	102 45.0 64 100 43.4 62		64 64		 		
4 Bulk Excavation-Soft	94 45.4 56		56 56		 	 	
5 Bulk Excavation-weak Rock	95 45.4 57		57 57	57 57 57			
6 Excavation - Rock 7 Construct Ground Level Entrance	104 45.4 66 95 45.4 57	 	 	57	57 57 57 57 57 57 57 57 57	 	
Works Area J - UNI Entrance B2							
8 Possession of site / Mobilization	98 190.0 47	47 47 47					
9 Demolition of Hill Road Rest Garden ^ 10 Piling/Walling ^	101 190.0 50 103 182.0 53	50 50 50 53 53 53			 		
11 Bulk Excavation-weak Rock	97 190.0 46	53 53 53 53	 		 	 	
12 Excavation - Rock	99 190.0 48		48 48				
13 Excavate adit and running tunnel 14 Concrete Adit	101 190.0 50 100 190.0 49	 	50 50 50 50 50	49	 		
15 Construct Ground Level Entrance	98 190.0 47				47 47 47 47 47 47 47 47 47 47		
16 Station Fitout	96 190.0 45			45	45 45 45 45 45 45 45 45 45		
Works Area H - UNI Entrance C2 17 Possession of site							
17 Possession of site 18 Utilities Diversions	99 - 0 99 - 0		 	0 0 0	 		
19 Piling/Walling	101 - 0			0 0			
20 Bulk Excavation-Soft ^ 21 Bulk Excavation-weak Rock ^	94 - 0		 	0 0 0 0 0	101111111		
22 Excavate Rock ^	106 - 0			0 0 0 0 0	0		
23 Construct Ground Level Entrance	98 - 0				0 0 0 0 0 0		
Works Area I - UNI Entrance C1 + VS + Chiller 24 Possession of site	100 280.0 46		46 46 46				
25 Utilities Diversions	100 280.0 46		46 46		 	 	
26 Piling/Walling - Some 60 Nos. Bored Piles ^	101 278.0 47		47 47 47				
27 Bulk Excavation-Soft ^ 28 Bulk Excavation-weak Rock ^	96 280.0 42 100 280.0 46	 	42 42 42 46 46	46 46 46 46 46	 	- 	
29 Excavate Rock Shaft *	0		0 0	0 0 0 0 0			
30 Permanent Shaft Lining 31 Construct above-ground Lift Shaft	98 280.0 44 98 280.0 44	<u> </u>	++++++++	44 44	44 44		
32 Sheet Piling for Vent Ducts	94 254.0 41				41		
33 Bulk Excavation-Soft for Vent Ducts 34 Horizontal Duct	94 280.0 40 94 280.0 40		+++++++++		40 40 40		
35 Concreting Vent Ducts and Vent Building	98 280.0 44				44 44		
36 Reinstatement 37 Station Fitout	108 280.0 54 96 280.0 42				 	54	42 42
Works Area J3 - UNI Entrance A	30 200.0 42					72 72 72 72 72 72 72 72 72 72 72	72 72
38 Possession of site	99 232.0 47	 	47		 	 	
39 Utilities Diversions	99 232.0 47		47 47				
40 Piling/Walling - Some 40 Nos. Bored Piles ^ 41 Bulk Excavation-Soft ^	101 226.0 49 95 232.0 43		49 49 49 43	43	 		
42 Bulk Excavation-weak Rock ^	98 232.0 46			46 46 46 46 46 46 46			
43 Excavate Rock * 44 Horizontal Adit ^	0 100 232.0 48	 	+++++++++	0 0 0 0 0 0 0 0 0 0	 		
45 Sheet Piling	94 226.0 42			42 42			
46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby	93 232.0 41 98 232.0 46	 	+++++++++	41 41 46 46	 		
48 Permanent Shaft Lining ^	98 232.0 46				46 46 46 46 46 46		
49 Construct above-ground Lift Shaft ^ 50 Reinstatement	98 232.0 46 99 232.0 47				46 46 46		
51 Station Fitout	93 232.0 47	<u> </u>	 		47 47 41 41 41 41		
Works Area J1 - UNI Vent Shaft VS Y							
52 Possession of site	100 145.0 52			52			
53 Utilities Diversions 54 Piling/Walling ^	99 145.0 51 101 142.0 53			51 53 53 53 53	53		++++++++++++++++++++++++++++++++++++
55 Bulk Excavation-Soft ^	94 145.0 46				46		
56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	100 145.0 52				52 52 0 0		++++++++++++++++++++++++++++++++++++
58 Horizontal Adit ^	100 145.0 52				52 52 52		
59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft	95 145.0 47 98 145.0 50		 		47 47 47 50 50 50 50	+++++++	++++++
61 Reinstatement	99 145.0 51				30 30 30 30		51
Works Area G - UNI Construction Shaft (at Kennedy	/						
Town Praya) 62 Possession of site / Mobilization ^	99 - 0	0 0 0 0	 				
63 Piling/Walling - Some 40 Nos. Bored Piles ^	104 - 0	0 0 0					
64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^	97 - 0 103 - 0		0		 		++++++++++++++++++++++++++++++++++++
66 Excavation - Rock (Horizontal Adit) ^	101 - 0	0 0	0 0 0 0 0 0				
67 Mucking-out / Transporting of spoil 68 Construction Access	103 - 0		0 0 0 0 0		0 0 0 0	+++++++	++++++
69 Station Fitout	101 - 0		 		0 0 0 0 0	0 0 0 0 0 0	
70 Backfill	96 - 0					0 0 0 0 0	
Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	106 - 0		0				
72 Construction	103 - 0		0 0 0 0 0 0				
73 Operation	101 - 0			0 0 0 0 0 0 0 0 0 0 0 0 0 0		54 54 54 42 42 42 42 42 42 42 42 42 42	51 42
	Exceedance	o) 47 47 47 50 53 53 53 53 46 e	51 52 49 47 47 52 52 65 65 64 64	58 58 58 66 51 49 46 48 55 56 57 59	 	54 54 54 42 42 42 42 42 42 42 42 42 42 42 42 42	51 42
Exceedance				1			
							

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- * No PMEs used at surface
- Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 31, act. 28 3 in month 31, act. 28 44 in month 31, act. 28 44 in month 22, act. 40 8 41 in month 23, act. 41 8 42 in month 24, act. 44 8 48 in month 35, act. 48 8 49 in month 41, act. 54, 55 8 56 in month 36, act. 58 8 59 in month 40, act. 62 8 63 in month 7, and act. 64, 65 8 66 in month 11.

Noise Exceedance

NSR: UNI3 - Sun Court

	Construction Element					ug Sep C	oct Nov										Apr May Jun																				
ct No.	Construction Element	SWL DIST SPL 1	2 3	4 5	5 6 7	7 8 9	9 10	11 12	2 13	14 15	16 17	18 19	20 2	1 22	23 24 2	25 26	27 28 29	30 31 3	32 33	34 35	36 37	38 39	40 4	1 42 4	13 44	45 46	47 48	49 5	0 51 5	52 53	54 55	56 57	58 59	60 6	1 62 6	63 64 65	66 67
orks Area J	J2 - UNI Entrance B1																																				
		93 - 0		ш		\blacksquare			0																												
	•	101 - 0	 	$+\!+\!$	$+\!+\!+$	+			\bot				0	_	_		\longrightarrow																		\bot		
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		95 - 0	+ +	++	++	++	-		+	++	-	 	0	0	0 0	0 0	-						+ +	+			+		+		-				+		+ +
		104 - 0															0																				
7 Const	truct Ground Level Entrance	95 - 0		$\perp \perp$	\bot	\bot														0	0 0	0 0	0 (0	0 0												
orks Area J	J - UNI Entrance B2																																				
8 Posse	ession of site / Mobilization	98 287.0 44		44 4	4 44	\top				\neg					\neg																						
		101 287.0 47		44	47	17 47																															
		103 274.0 49 97 287.0 43	+	++	++	49 4	19 49	49 43	2			 					\rightarrow					-						\vdash						\vdash	+		+
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15 Const16 Statio		98 287.0 44 96 287.0 42	+	++	++	$+\!+\!+$						 					\rightarrow				44 44 42 42							\vdash						\vdash	+		+
		96 287.0 42		+	+	+														42	42 42	42 42	42 4	2 42 4	12 42												
	H - UNI Entrance C2																																				
		101 29.3 67	 	++	$+\!+\!$	++					_				67		07 07																				
		101 29.3 67 102 26.6 69	+	++	++	++	\dashv	\vdash	++	\dashv		\vdash	₩	++	+	+	b/ b/	69	+	\vdash	$\vdash \vdash$	\vdash	++	++	+	+	+	⊢⊢	++	+	+		\vdash	⊬⊬	++	++	+
		102 29.3 68	1	++	++	++	+	$\vdash \vdash$	+	\dashv			++	++	+	+	03	68			\vdash	++	++	++	+	++	+		++	+	+			\vdash	++		+ +
		101 29.3 67		II		$oldsymbol{\Box}$												67 6	67 67		67																
		104 29.3 70	$+$ \top	+ T	$+$ \top	$+$ \mp		$oxdot \Gamma$	$oldsymbol{\perp}$	\Box			ЩE	$+\Box$	\bot	\Box	\bot	70 7	70 70	70 70	70	$oxdot \Gamma$	L.I	, III				LТ	$\bot \bot \Box$	$oldsymbol{\sqcup}$				LΙ	ĻΓ		$+$ \top
		105 29.3 71		+	++	+			+														71 7	1 71 7	/1 71	/1											
orks Area I	- UNI Entrance C1 + VS + Chiller																																				
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		96 267.0 43	+	++	++	++	\dashv	$\vdash\vdash$	++	\dashv				3 43	+	$\dashv \dashv$		+	+	 	\vdash		++	++	+	+	+	++	++	+	\dashv		+	\vdash	++	+	+
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34 Horizo	ontal Duct	94 267.0 41		Ҵ	工厂	世																			11 41												
		98 267.0 45	$\bot \bot \bot$	$+$ \top	$+\top$	$+$ \mp		ЩI	$oldsymbol{\perp}$	\bot			LГ	$+\Box$	$+$ \top	47	\bot	$\perp \perp \Gamma$	43		oxdot	$+\Gamma$	$+$ \Box	$+$ \Box	$+\Box$	45 45			$\bot \bot \Box$	ot				LI	₩.		+ T
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42 Bulk E	Excavation-weak Rock ^	98 - 0			皿厂	坦									0	0 0	0 0 0	0 0																			
	vate Rock *	0	+	+	+	+	igspace	otag	+	ot			$\sqcup \!\!\! \perp$	+	0	0 0	0 0 0	0 0		0			+	+	44	\perp		$oxed{\Box}$	$\perp \perp \perp$	igspace	\Box			oxdot	+		+
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	truct Lower Ground Lobby	98 - 0		11		ユナ							口上	士士			0 0						上十	ШŤ					上上						<u>t</u> t		
48 Perma	anent Shaft Lining ^	98 - 0			ፗፗ	皿														0	0 0	0 0	0 ()													
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55 Bulk B	Excavation-Soft ^	94 - 0		ፗፗ	工厂	ፗ															0																
		100 - 0	$+$ \top	+ T	$+$ \top	$+$ \mp		$oxdot \Gamma$	$oldsymbol{\perp}$	\Box			ЩE	$+\Box$	\bot	\Box	\bot	$\perp \perp \Box$	\Box		0 0		ЦI	$+$ \square	Щ	\Box		LТ	$\bot \bot \Box$	$oldsymbol{\sqcup}$				LΙ	ĻΓ		$+$ \top
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	G - UNI Construction Shaft (at Kennedy																																				
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		103 76.0 60	上上	土十	士十	士士		60 60	0 60	士士			上十	士士		士士		\perp				口厂	上十	土土	士寸			上十	土土						土土		
66 Excav	vation - Rock (Horizontal Adit) ^	101 76.0 58		\Box		Ҵ				58 58	58 58					Ш	للللا																				
		103 164.0 54	+	+	++	+	+	$oxed{oxed}$	+	+		54	54 5	4 54	54 54 5	54 54	54 54 54	54 54 5	54 54					+	+	-		\vdash	+	+	\perp		lacksquare	\vdash	+		+
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70 Backf		96 76.0 53	+	++	++	++	+	$\vdash \vdash$	++	\dashv			++	++	+	\dashv		++	\dashv	 	\vdash		1 1	00 0		30 30	50 56	50 5	56 8		53 53	53 53			++	+	++
	E & F - PCWA Barging Point	. 5.0 00																												35	30	55 55					
orks Area E		106 - 0				工厂			0																												
71 Posse																	, — , — ,																		1 -		
71 Posse 72 Const	truction	103 - 0		$\bot \bot$	\bot	\bot				0 0	0 0	0 0					-													\perp							
71 Posse	truction ation	103 0 101 0 Fotal SPL, dB(A) -		${}$	#	#	\blacksquare			\Box						_	0 0 0 67 67 69			0 0					$\downarrow \downarrow$		#	H									

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

| Columbia CRITY | the DMEs are assumed to be placed at the notional source position according to the "Technical Memorar

- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- **No PMEs used at surface

 ^*Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 2 & 3 in month 31, act. 2 & 44 in month 31, act. 2 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

Noise Exceedance

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NSR: UNI4 - The Belcher's (Tower 8)

NSR: UNI4 - The Belcher's (Tower 8)		2009	2010	2011 2012 2013 2014
Act No. Construction Element	SWI Diet ² SDI Feb			Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Au
Act No. Construction Element	SWL Dist ² SPL 1	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24	24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 45 46 47 48 49 50 51 52 53 54 55 66 57 58 59 60 61 62 63 64 65 66 67 68
Works Area J2 - UNI Entrance B1				
Possession of site	93 - 0	0		
Demolition of Whitty Public Toilet Block ^ Piling/Walling ^	101 - 0 100 - 0	 	0 0 0	
4 Bulk Excavation-Soft	94 - 0	 	0 0	
5 Bulk Excavation-weak Rock	95 - 0		0 0 0	0 0 0
6 Excavation - Rock 7 Construct Ground Level Entrance	104 - 0 95 - 0	 		
Works Area J - UNI Entrance B2	95 - 0			
8 Possession of site / Mobilization	98 226.0 46	46 46 46		
9 Demolition of Hill Road Rest Garden ^	101 226.0 49	46 46 46 49 49	 	
10 Piling/Walling ^	103 212.0 52	52 52 52 52		
11 Bulk Excavation-weak Rock	97 226.0 45 99 226.0 47	45		
12 Excavation - Rock 13 Excavate adit and running tunnel	101 226.0 49	47 47	49 49 49 49 49	
14 Concrete Adit	100 226.0 48			48
15 Construct Ground Level Entrance	98 226.0 46			46 46 46 46 46 46 46 46 46
16 Station Fitout	96 226.0 44			44 44 44 44 44 44 44 44 44 44
Works Area H - UNI Entrance C2				
17 Possession of site 18 Utilities Diversions	101 45.4 63 101 45.4 63	 		63 63 63 63 63 63 64 65 65 65 65 65 65 65
19 Piling/Walling	102 43.5 64	 		66 64
20 Bulk Excavation-Soft ^	102 45.4 64			64
21 Bulk Excavation-weak Rock ^ 22 Excavate Rock ^	101 45.4 63 104 45.4 66	 	- 	
23 Construct Ground Level Entrance	105 45.4 67	, , , , , , , , , , , , , , , , , , , 	- 	67 67 67 67 67
Works Area I - UNI Entrance C1 + VS + Chiller				
24 Possession of site	100 215.0 48	48 48 48		
25 Utilities Diversions	100 215.0 48	48 48		
26 Piling/Walling - Some 60 Nos. Bored Piles ^ 27 Bulk Excavation-Soft ^	101 210.0 50 96 215.0 44	 	50 50 50 50 44 44 44	
28 Bulk Excavation-weak Rock ^	100 215.0 48	 		49 48 48 48 48 48 48 48 48 48 48 48 48 48
29 Excavate Rock Shaft *	0		0 0 0	0 0 0 0 0 0
30 Permanent Shaft Lining 31 Construct above-ground Lift Shaft	98 215.0 46 98 215.0 46			46 46
31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts	94 184.0 44	 	 	
33 Bulk Excavation-Soft for Vent Ducts	94 215.0 42			42 42
34 Horizontal Duct	94 215.0 42 98 215.0 46			42 42 46 46 46 46 46 46 46 46 46 46 46 46 46
35 Concreting Vent Ducts and Vent Building 36 Reinstatement	108 215.0 56	 	 	40 40 56 56 56
37 Station Fitout	96 215.0 44			44 44 44 44 44 44 44 44 44 44 44 44 44
Works Area J3 - UNI Entrance A				
38 Possession of site	99 - 0	0		
39 Utilities Diversions	99 - 0		~ 	
40 Piling/Walling - Some 40 Nos. Bored Piles ^ 41 Bulk Excavation-Soft ^	101 - 0 95 - 0	 	0 0 0	
42 Bulk Excavation-weak Rock ^	98 - 0		0	0 0 0 0 0 0 0 0 0
43 Excavate Rock *	0 100 - 0	 	<u> </u>	
44 Horizontal Adit ^ 45 Sheet Piling	94 - 0	 		
46 Bulk Excavation-Soft for Lower Ground Lobby	93 - 0			
47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^	98 - 0 98 - 0			
49 Construct above-ground Lift Shaft ^	98 - 0	 	 	
50 Reinstatement	99 - 0			
51 Station Fitout	93 - 0			
Works Area J1 - UNI Vent Shaft VS Y				
52 Possession of site	100 290.0 46	 	++++	46 55
53 Utilities Diversions 54 Piling/Walling ^	99 290.0 45 101 286.0 47	 	- 	47 47 47 47 47
55 Bulk Excavation-Soft ^	94 290.0 40			40
56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	100 290.0 46	 	+++++	46 46
57 Excavate Rock Shart * 58 Horizontal Adit ^	100 290.0 46	 	- 	46 46 46
59 Permanent Shaft Lining ^	95 290.0 41			41 41 41
60 Concreting of above-ground Vent Shaft	98 290.0 44	 	+++++	44 44 44 44
61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy	99 290.0 45			
Town Praya)				
62 Possession of site / Mobilization ^	99 138.0 51	51 51 51 51		
63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^	104 130.0 57 97 138.0 50	57 57 57 50 50	- 	
65 Bulk Excavation-soft ^	103 138.0 55	50 50 55	- 	
66 Excavation - Rock (Horizontal Adit) ^	101 138.0 53	53 53 53 53 53		
67 Mucking-out / Transporting of spoil 68 Construction Access	103 222.0 51 100 138.0 52	 	51 51 51 51 51 51	51 51 51 51 51 51 51 51 51 51 51 51 51 5
69 Station Fitout	100 138.0 52	 	- 	52 52 52 52 52 52 52 52 52 52 52 52 52 5
70 Backfill				48 48 48 48
Works Area E & F - PCWA Barging Point	100			
71 Possession of site / Mobilization 72 Construction	106 - 0 103 - 0		0 0 0	
73 Operation	101 - 0			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
•	Total SPL, dB(A) -	52 52 52 57 58 58 54 58 57 58 56 55 53	53 56 55 55 54 54 53 63	63 53 53 63 64 64 68 68 68 68 68 68 68 68 66 67 67 67 67 67 67 67 67 67 67 67 67
	Exceedance -	 	
	- LACCEUAIICE	1 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	1-1-1-1-1-1-1-	

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- * No PMEs used at surface
- ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 2 & 3 in month 31, act. 2 & 44 in month 31, act. 2 & 27 in month 20, act. 27 & 28 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

Noise Exceedance

NSR: UNI 5- Po Leung Kuk Chan Au Big Yan Home

		2009		2010	2011	2012	2013 2014
Act No. Construction Element							May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep
	Dist of E 1 2	3 4 5 6 7 8 9 1	11 12 13 14 15 16 1	/ 18 19 20 21 22 23 24	4 25 26 27 28 29 30 31 32 33 34 35	5 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51	52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68
Works Area J2 - UNI Entrance B1							
Possession of site Demolition of Whitty Public Toilet Block ^	93 - 0		0	0 0	 	 	
3 Piling/Walling ^	100 - 0			0 0 0			
4 Bulk Excavation-Soft 5 Bulk Excavation-weak Rock	94 - 0 95 - 0		+++++	0 0 0			
6 Excavation - Rock	104 - 0		 		0		
7 Construct Ground Level Entrance	95 - 0				0	0 0 0 0 0 0 0 0 0 0	
Works Area J - UNI Entrance B2							
Possession of site / Mobilization Demolition of Hill Road Rest Garden ^	98 270 44 101 270 47	44 44 44 47 47			 		
10 Piling/Walling ^	103 256 50	50 50 5	50	 	+ + + + + + + + + + + + + + + + + + + 	 	
11 Bulk Excavation-weak Rock	97 270 43		43				
12 Excavation - Rock 13 Excavate adit and running tunnel	99 270 45 101 270 47		45 45	47 47 47 47 47	+ + + + + + + + + + + + + + + + + + + 		
14 Concrete Adit	100 270 46		 	47 47 47 47	46		
15 Construct Ground Level Entrance	98 270 44					44 44 44 44 44 44 44 44 44 44	
16 Station Fitout	96 270 42				42	2 42 42 42 42 42 42 42 42 42 42	
Works Area H - UNI Entrance C2	101 01 70						
17 Possession of site 18 Utilities Diversions	101 21 70 101 21 70		 		70 70	 	
19 Piling/Walling	102 19 72				72 72		
20 Bulk Excavation-Soft ^	102 21 71				71 70 70 70 70 70 70	70	
21 Bulk Excavation-weak Rock ^ 22 Excavate Rock ^	101 21 70 104 21 73		 	 	70 70 70 70 70 70 70 70 70 70 70 70 70 7	70 70 70 70 70 70 70 70 70 70 70 70 70 7	╒┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋
23 Construct Ground Level Entrance	105 21 74					74 74 74 74 74 74	
Works Area I - UNI Entrance C1 + VS + Chiller							
24 Possession of site	100 227 48		48 48 48				
25 Utilities Diversions 26 Piling/Walling - Some 60 Nos. Bored Piles ^	100 227 48 101 230 49		48 48	49 49 49	++++++++++		╒╒┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋┋
27 Bulk Excavation-Soft ^	96 227 44			44 44 44			
28 Bulk Excavation-weak Rock ^	100 227 48			48 48 48	8 48 48 48 48		
29 Excavate Rock Shaft * 30 Permanent Shaft Lining	98 227 46		 	0 0 0	46 46		
31 Construct above-ground Lift Shaft	98 227 46					46 46	
32 Sheet Piling for Vent Ducts	94 196 43		 	 		43 42 42	
33 Bulk Excavation-Soft for Vent Ducts 34 Horizontal Duct	94 227 42 94 227 42		 	 	+ + + + + + + + + + + + + + + + + + + 	42 42	
35 Concreting Vent Ducts and Vent Building	98 227 46					46 46	
36 Reinstatement 37 Station Fitout	108 227 56 96 227 44		+++++	++++++	++++++++++	56 56 56	44 44 44 44 44 44 44 44 44 44
Works Area J3 - UNI Entrance A	90 227 44					144 144	44 44 44 44 44 44 44 44 44 44
38 Possession of site	99 - 0						
39 Utilities Diversions	99 - 0		0 0				
40 Piling/Walling - Some 40 Nos. Bored Piles ^	101 - 0			0 0 0			
41 Bulk Excavation-Soft ^	05						
	95 - 0 98 - 0		 	0 0			
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock *	98 - 0				0 0 0 0 0 0 0 0 0		
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^	98 - 0 0 100 - 0				0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock *	98 - 0				0 0 0 0 0 0 0 0 0		
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby	98 - 0 0 100 - 0 94 - 0 93 - 0 98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^	98 - 0 0 100 - 0 94 - 0 93 - 0 98 - 0					0 0 0 0 0 0	
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby	98 - 0 - 0 - 100 - 0 - 94 - 0 - 98 - 0 - 98 - 0 - 98 - 0 - 99 - 0 - 99 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout	98 - 0 - 0 - 100 - 0 - 0 - 0 - 0 - 0 - 0 -						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y	98 - 0 - 0 - 100 - 0 - 0 - 0 - 0 - 0 - 0 -						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site	98 - 0 - 0 - 100 - 0 - 0 - 0 - 0 - 0 - 0 -						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y	98 - 0 0 100 - 0 94 - 0 93 - 0 98 - 0 98 - 0 98 - 0 99 - 0 100 - 0 99 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-soft ^ 56 Bulk Excavation-weak Rock ^	98 - 0 - 0 - 100 - 0 - 0 - 0 - 0 - 0 - 0 -						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Soft ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock ^ 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Soft ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft Works Area G - UNI Construction Shaft (at Kennedy) Works Area G - UNI Construction Shaft (at Kennedy)	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya)	98 - 0						
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^	98 - 0	53 53 53 53 58 58					
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 64 Bulk Excavation-Soft ^	98 - 0	58 58 58	51				
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 80 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-soft ^	98 - 0	58 58 58	57 57 57				
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^	98 - 0	58 58 58					
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 80 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-weak Rock ^ 65 Bulk Excavation-Soft ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Rock (Horizontal Adit) ^ 66 Excavation-Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access	98 - 0	58 58 58	57 57 57			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 11 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Soft ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout	98 - 0 0 100 - 0 94 - 0 98 - 0 98 - 0 99 - 0 101 - 0 98 - 0 100 - 0 99 - 0 9 - 0 99 - 0 9 - 0 99 - 0	58 58 58	57 57 57				55
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Soft of Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Bulk Excavation-New Rock ^ 64 Bulk Excavation-New Rock ^ 65 Bulk Excavation-New Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access	98 - 0	58 58 58	57 57 57			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concerting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Soft ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	98	58 58 58	57 57 57 57 55 55 55 55 55 55 55 50 00 0 0 0 0 0 0			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Soft ^ 66 Excavation - Nos. Hos Piling ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F-PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	98 - 0 0 100 - 0 94 - 0 0 98 - 0 98 - 0 99 - 0 100 - 0 98 - 0 100 - 0 99 - 0 100 - 0 99 - 0 100 - 0 99 - 0 101 - 0 99 - 0 101 - 0 99 - 0 101 - 0 99 - 0 101 - 0 100 -	58 58 58	57 57 57 57 55 55 55 55 55 55 55			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Wak Rock ^ 65 Bulk Excavation-Wak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	98 - 0 0 100 - 0 94 - 0 98 - 0 98 - 0 99 - 0 100 - 0 99 - 0 100 - 0 99 - 0 9 - 0 99 - 0 9 - 0 99 - 0 9 - 0 99 - 0 9 - 0 9 - 0 9 - 0 9 - 0 9 - 0 9 - 0 9 - 0 9 - 0 9	58 58 58 5	57 57 57 57 55 55 55 55 55 55 55 55 55 5			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	55 50 50 50 50 50 50 50 50 50 50 50 50 5
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock * 44 Horizontal Adit ^ 45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^ 50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennedy Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Soft ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F-PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	98 - 0 0 100 - 0 94 - 0 0 98 - 0 98 - 0 99 - 0 100 - 0 98 - 0 100 - 0 99 - 0 100 - 0 99 - 0 100 - 0 99 - 0 101 - 0 99 - 0 101 - 0 99 - 0 101 - 0 99 - 0 101 - 0 100 -	58 58 58 5	57 57 57 57 55 55 55 55 55 55 55 55 55 5			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	55 50 50 50 50 50 50 50 50 50 50 50 50 5

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 *No PMEs used at surface
- No much used a suntage of the particular month 21, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

 Noise Exceedance

NSR: UNI 6- Sun Shing Building

		Eab Mar Ann	Mov. I	un Jul Aug Sep (Oct Nov D	oo loo E	ob Mor An	Most lun lul	Aug Con	Oot Nov D	lon Fob	Mor An	2011	Aug Con	Oot Nov F	oo loo Ec	h Mor A	or Mov	2012	ua Can	Oot Ney Do	o lon l	ob Mor	Apr Move him	Lui A	a Con O	ot Nov Doc	lon Fok	h Mor Ans	Most lun lui	ul Aug
ct No. Construction Element	ISWI Diet SPI -	1 2 3			9 10 11		13 14 15				23 24 25											_	_	51 52 53			7 58 59			64 65 66	_
orks Area J2 - UNI Entrance B1																															
Possession of site	93 - 0		+	++++	+	++	0																						+		
Demolition of Whitty Public Toilet Block ^	101 - 0								0	0																					
3 Piling/Walling ^	100 - 0		$\perp \perp$	\bot	\rightarrow	\bot				0 0	0																		\bot		
4 Bulk Excavation-Soft 5 Bulk Excavation-weak Rock	94 - 0 95 - 0		++	++++	++	++		+	0	0	0 0 0	0	+++	+		+	++	+++	++		++	+	_		++	++	++	++	+++		-
6 Excavation - Rock	104 - 0	++-	++	++++	++	++		+ + +		-	0 0 0	0					+ +		+	+++	+				+	+ +	++-	+	+++		
7 Construct Ground Level Entrance	95 - 0				$\neg \vdash$	+										0 0 0	0 (0	0 0	0 0									+		
orks Area J - UNI Entrance B2																															
8 Possession of site / Mobilization	98 246.0 45		45 45	5 45	+	+																-	_						+		
9 Demolition of Hill Road Rest Garden ^	101 246.0 48			48 48																											
10 Piling/Walling ^	103 238.0 51		\bot	51	51 51 51														\perp							4			\bot		
11 Bulk Excavation-weak Rock 12 Excavation - Rock	97 246.0 44 99 246.0 46		++	++++	++	44	46 46	+ + + + -	+			+ +	+ + +			+	+		+		+	+	_		+	+	++-	++	+++		-
13 Excavate adit and running tunnel	101 246.0 48	++-	++	++++	++	++	40 40	48	48 48	48 48		+ +					+ +		+	+++	+				+	+ +	++-	+	+++		
14 Concrete Adit	100 246.0 47														47																
15 Construct Ground Level Entrance	98 246.0 45		$\perp \perp$	\bot	$\perp \downarrow \downarrow$	44										5 45 4													$\perp \perp \downarrow \perp$		
16 Station Fitout	96 246.0 43		\vdash		+	+										3 43 4	3 43 4	3 43	43 43 4	43 43									+		
orks Area H - UNI Entrance C2																															
17 Possession of site	101 35.7 65					ш					65																				
18 Utilities Diversions 19 Piling/Walling	101 35.7 65 102 29.2 68	+	++	++++	++	+	+	++-	++	+	+	65	65 68 68	+	++	+	++	++	++	+	++	+		+++	++	++	+	++	+	\Box	+-
19 Piling/Walling 20 Bulk Excavation-Soft ^	102 29.2 68	++	++	+++	++	++	++	+++	+++	++	++	++	08 68	66	+++	++	++	++	++	++	++	++	_	 	++	++	++	 	+++		-
21 Bulk Excavation-weak Rock ^	101 35.7 65	\perp	上十		ユナ										65 65 6	5 65	上十	1	ユナ	1	\perp	₽Ť			上上	上上				шт	1
22 Excavate Rock ^	104 35.7 68		ፗ		\Box	$oldsymbol{\Box}$								68 68	68 68 6	8 68													\Box		
23 Construct Ground Level Entrance	105 35.7 69	\perp	+		_	+	\perp				+				\perp		\perp	69	69 69 6	69 69	69	\bot			\vdash		\perp		+		_
orks Area I - UNI Entrance C1 + VS + Chiller																															
24 Possession of site	100 254.0 47	$\perp \perp \perp$	$+$ \square	+	$\bot\!\!\!\!\bot\!\!\!\!\!\bot$		47 47 47		$\Box\Box$		\bot	$+$ \Box	$+ \Box \Box$	\Box	\Box	\bot \top	\bot	ш	\Box	\Box		μŢ		$\Box\Box$		$\perp \top$	\bot \Box	μЕ	$+$ \Box		
25 Utilities Diversions 26 Piling/Walling - Some 60 Nos. Bored Piles ^	100 254.0 47 101 248.0 48	+	++	++++	++	++	47 47		48 48		+	+	+++	++	++	+	++	++	++	+	+	++		+++	++	++	+	++	+		
27 Bulk Excavation-Soft ^	96 254.0 43	++	++	+++	++	++	+	48		43 43	+	++	+++	+	++	+	++	++	++	+	++	++			++	++	++	++	+++	$\vdash\vdash\vdash$	+
28 Bulk Excavation-weak Rock ^	100 254.0 47				$\neg \vdash$	+					47 47 47	47 47	47																+		
29 Excavate Rock Shaft *	0					ш				0	0 0 0	0 0	0																		
30 Permanent Shaft Lining	98 254.0 45 98 254.0 45		++	++++	++	++		+	+++			+ +		45	45			45	45			+			+	+		₽-	+++		
31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts	98 254.0 45 94 224.0 42		++	++++	++	++	+	+ + +	++	-+-+		++-		+			++	45	45		+		_		++	+	++		+++		
33 Bulk Excavation-Soft for Vent Ducts	94 254.0 41		+	+	-	+							1 1 1						41 41					1 1 1					+		
34 Horizontal Duct	94 254.0 41					ш													4	41 41											
35 Concreting Vent Ducts and Vent Building	98 254.0 45		++	++++	++	++		+	+++			+ +							+		45 45	55			+	+		₽-	+++		
36 Reinstatement 37 Station Fitout	108 254.0 55 96 254.0 43		++	++++	++	++		+ + +	+			+ +		+++		+	+	+ +	+		50) 55		43 43 43	43 43	43 4	3 43 43	43 43			
orks Area J3 - UNI Entrance A																															
38 Possession of site	99 - 0		-	-	+	_	0																						+		
39 Utilities Diversions	99 - 0		++	+	+	+		0 0									\pm	\pm	+			1 1				+			+		
40 Piling/Walling - Some 40 Nos. Bored Piles ^	101 - 0									0 0	0																				
41 Bulk Excavation-Soft ^	95 - 0		++	+	$\rightarrow \downarrow \downarrow$	++			\perp		0 0						\bot		\perp							\bot			+++		
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock *	98 - 0		++	++++	++	++		+	+++		0 0	0 0	0 0 0	0	\rightarrow		+		++		+	+	-		+	+	+	++	+++		
44 Horizontal Adit ^	100 - 0		++	++++	++	++		1 1 1			0 0	0 0		0 0	0 0	0	+ +						_			+ +			+		
45 Sheet Piling	94 - 0					ш					0 0																				
46 Bulk Excavation-Soft for Lower Ground Lobby	93 - 0		++	++++	++	++		+	+			0 0		+			+		+		-		_			+	+		+ + +		
47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^	98 - 0 98 - 0		++	++++	++	++		+	+++			+ +	0 0	1 1		0 0 0	0 0) 0	0		+	+	-		+	+	+	++	+++		
49 Construct above-ground Lift Shaft ^	98 - 0		上十		士士		上上												0 0	0	士士	土†			上上	上十	上上	上厂	╆		1
50 Reinstatement	99 - 0		ፗ		\Box	$oldsymbol{\Box}$										0 0		\Box											\Box		
51 Station Fitout	93 - 0	\perp	+		_	+	\perp				+				\perp		\perp	+	\perp	0	0 0	\bot			\vdash		\perp		+		
orks Area J1 - UNI Vent Shaft VS Y																															
52 Possession of site	100 - 0	\bot	$+$ \Box	$++\mp$	$+$ \top	$+$ \mp	\bot \bot \bot	$++$ \top	$+\Box$		$\perp \perp \perp$	+ T	\Box	$+\Box$	0	\bot \bot \bot	$+$ \square	$+\Box$	\bot	$+\Box$	$\perp \perp \perp$	HI	[$\Box\Box$	$+$ \top	$+$ \Box	+ T	\Box	$+\Box$		
53 Utilities Diversions 54 Piling/Walling ^	99 - 0	++	++	++++	++	++	++	++-	++	+	++	++	+++	0	0 0	0 0	++	++	++	+	++	++	-	++	++	++	++	\vdash	+++	+++	+
55 Bulk Excavation-Soft ^	94 - 0	++	+	+++	++	++	++	 	 	++	++	+ +	1 1 1		5 0	0	++	++	+	+	++	+	_		+ +	++	+ +	1 +	+ + +		+
56 Bulk Excavation-weak Rock ^	100 - 0		口口		工工	工工								Ш		0 0													ightharpoonup		
57 Excavate Rock Shaft *	0	+	++	++++	$+\!\!+\!\!\!+$	+	+	+++	+		+	+	+++	+	\rightarrow	0 0		\ \ \ \ \	+	+	+	+		+ + +	++	++	+	\vdash	+++		+
58 Horizontal Adit ^ 59 Permanent Shaft Lining ^	100 - 0 95 - 0	++	+	+++	++	++	++	+ + +	+ + +	+	++	++	+++	++	++	++	0 (0 0	+	++	++	\dashv	+++	++	++	++	\vdash	+++	+++	+
60 Concreting of above-ground Vent Shaft	98 - 0	++	++	+++	++	++		 	 	+	++	+ +	+ + +	1 1 1	++	1	++			0 0	0 0	++	\dashv	 	++	++	+ +		+ + +		+
61 Reinstatement	99 - 0																											0			
orks Area G - UNI Construction Shaft (at Kennedy																															
own Praya)	00 440 0 50		F2 -	2 52 50	44	44																							+		
62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^	99 113.0 53 104 106.0 58	+		58 58	58	++	+	+ + +	+ + +	++	++	+ +	+ + +	+ + -	++	+	++	++	++	++	++	++			+ +	++	++	+ +	+++		+
64 Bulk Excavation-Soft ^	97 113.0 51	+	+	30 33	51 51	1	+							+	\dashv		+	+	+	++	-	+	_		+	+	+		+		+
65 Bulk Excavation-weak Rock ^	103 113.0 57		\Box		57	57 57 5			ш																				$\Box\Box$		
66 Excavation - Rock (Horizontal Adit) ^	101 113.0 55	++	++	++++	55		55 55 55	55 55 55		50 50	50 50 50	50 50		52 52	E2 E2	2 52 5	2 50	++	++	+	+	++		+++	++	++	+	++	+	+++	-
67 Mucking-out / Transporting of spoil 68 Construction Access	103 190.0 52 100 113.0 54	+	+	+++	++		++	+ + +	52 52	ე∠ 52 5	52 52	52 52	52 52 52	52 52	o∠ 52 :		2 52 4 54 5	4 54	++	+	++	++	\dashv	+++	++	++	++	\vdash	+++	+++	+
69 Station Fitout	100 113.0 54	++	+	+++	++	++	++	+++	+ + +	++	++	+ +	+++	++	++	J-4 D-	. 54 5		55 55 5	55 55	55 55 55	55	55 55	55 55	++	++	++	+	+++		+
70 Backfill	96 113.0 50		ш		皿厂																				50 50	50 50	0				
orks Area E & F - PCWA Barging Point																															
71 Possession of site / Mobilization	106 - 0 103 - 0	+	+	+++	+		0				+	+	+++	+	-	+	+	+	+	+	+	+	_	+++	++	+	+	\vdash	+		
lo : ::	103 - 0	1 1	1 1			\bot	0 0	0 0 0		_ _	\perp	\bot	\bot			\perp	\bot			_	\bot	+			\bot \bot			$oldsymbol{\sqcup}$		$\vdash\vdash\vdash$	4—
				1 7 7 7	1 1			1 1 1				0 0	0 0 0	0 0	0 0			1 0	0 0												
73 Operation	101 - 0 Total SPL, dB(A)		$\overline{\Box}$	3 53 59 59		+							0 0 0									+							+++		+

Remarks:

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

- 2. Slant distance (m)
 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface
- **Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 2, act. 2 & 3 in month 2, act. 2 & 3 in month 3, act. 2 & 44 in month 3, act. 2 & 44 in month 3, act. 2 & 49 in month 40, act. 2 & 3 in month 40, act. 5 & 56 in month 40, act. 5 & 56 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

 Noise Exceedance

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NSR: UNI 7 - The Bauhinia

NSR: UNI 7 - The Bauhinia	0000	
	2009 Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec J	2010 2011 2012 2013 2014 2014 2016 2017 2018 2019 2019 2019 2019 2
Act No. Construction Element		1
Works Area J2 - UNI Entrance B1		
Possession of site	93 178.0 43	43
Demolition of Whitty Public Toilet Block ^	101 178.0 51	51 51
3 Piling/Walling ^ 4 Bulk Excavation-Soft	100 174.0 50 94 178.0 44	50 50 50
5 Bulk Excavation-weak Rock	95 178.0 45	45 45 45 45 45
6 Excavation - Rock	104 178.0 54	54
7 Construct Ground Level Entrance	95 178.0 45	45 45 45 45 45 45 45 45 45
Works Area J - UNI Entrance B2		
Possession of site / Mobilization Demolition of Hill Road Rest Garden ^	98 203.0 47 47 47 47 101 203.0 50 50 50	
10 Piling/Walling ^	101 203.0 50 50 50 103 186.0 53 53 53 53 53	
11 Bulk Excavation-weak Rock	97 203.0 46	46
12 Excavation - Rock	99 203.0 48	48 48
13 Excavate adit and running tunnel 14 Concrete Adit	101 203.0 50 100 203.0 49	50 50 50 50 50 49
15 Construct Ground Level Entrance	98 203.0 47	47 47 47 47 47 47 47 47 47 47 47 47 47 4
16 Station Fitout	96 203.0 45	45 45 45 45 45 45 45 45 45 45 45 45 45 4
Works Area H - UNI Entrance C2		
17 Possession of site	99 - 0	
18 Utilities Diversions 19 Piling/Walling	99 - 0	
20 Bulk Excavation-Soft ^	94 - 0	
21 Bulk Excavation-weak Rock ^	100 - 0	
22 Excavate Rock ^	106 - 0 98 - 0	
23 Construct Ground Level Entrance	98 - 0	
Works Area I - UNI Entrance C1 + VS + Chiller	100 1000 51	
24 Possession of site 25 Utilities Diversions	100 168.0 51 100 168.0 51	51 51 51 51 51 51 51 51 51 51 51 51 51 5
26 Piling/Walling - Some 60 Nos. Bored Piles ^	101 186.0 51	51 51 51
27 Bulk Excavation-Soft ^	96 168.0 47	47 47 47
28 Bulk Excavation-weak Rock ^ 29 Excavate Rock Shaft *	100 168.0 51	51 51 51 51 51 51 51
30 Permanent Shaft Lining	98 168.0 49	49 49
31 Construct above-ground Lift Shaft	98 168.0 49	49 49
32 Sheet Piling for Vent Ducts 33 Bulk Excavation-Soft for Vent Ducts	94 158.0 45 94 168.0 45	45 45 45
34 Horizontal Duct	94 168.0 45	45 45 45
35 Concreting Vent Ducts and Vent Building	98 168.0 49	49 49
36 Reinstatement 37 Station Fitout	108 168.0 59 96 168.0 47	59 59 59 59 59 59 59 59 59 59 59 59 59 5
Works Area J3 - UNI Entrance A	90 108.0 47	
38 Possession of site	109 27.6 75	75
39 Utilities Diversions	109 27.6 75	73 75 75
40 Piling/Walling - Some 40 Nos. Bored Piles ^	102 21.1 71	71 71 71
41 Bulk Excavation-Soft ^ 42 Bulk Excavation-weak Rock ^	105 27.6 71 107 27.6 73	71 71 71 73 73 73 73 73 73 73 73 73 73 73 73 73
43 Excavate Rock *	107 27.6 73	73 73 73 73 73 73 73 73 73 73 73 73 73 7
44 Horizontal Adit ^	102 27.6 68	68 68 68 68
45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby	94 21.1 63 103 27.6 69	63 63 63 63 63 63 63 63 64 64 65 65 65 65 65 65 65 65 65 65 65 65 65
47 Construct Lower Ground Lobby	105 27.6 69	09 09 71 71
48 Permanent Shaft Lining ^	105 27.6 71	71 71 71 71 71 71 71 71
49 Construct above-ground Lift Shaft ^ 50 Reinstatement	105 27.6 71	70 70
50 Reinstatement 51 Station Fitout	104 27.6 70 103 27.6 69	
Works Area J1 - UNI Vent Shaft VS Y		
52 Possession of site	100 150.0 52	52
53 Utilities Diversions	99 150.0 51	51
54 Piling/Walling ^ 55 Bulk Excavation-Soft ^	101 140.0 53 94 150.0 46	53 53 53 53 53
55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^	100 150.0 52	1 52 52
57 Excavate Rock Shaft *	100 150.0 52	
58 Horizontal Adit ^ 59 Permanent Shaft Lining ^	100 150.0 52 95 150.0 47	52 52 52 52 52 52 52 52 52 52 52 52 52 5
60 Concreting of above-ground Vent Shaft	98 150.0 50	97 97 97 95 95 95 95 95 95 95 95 95 95 95 95 95
61 Reinstatement	99 150.0 51	51
Works Area G - UNI Construction Shaft (at		
Kennedy Town Praya) 62 Possession of site / Mobilization ^	99 - 0 0 0 0 0	
63 Piling/Walling - Some 40 Nos. Bored Piles ^	104 - 0 0 0 0 0	
64 Bulk Excavation-Soft ^	97 - 0 0 0	
65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^		
66 Excavation - Hock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil	101 - 0	
68 Construction Access	100 - 0	0 0 0 0 0
69 Station Fitout	101 - 0	
70 Backfill Works Area E & F - PCWA Barging Point	96 - 0	
71 Possession of site / Mobilization	106 - 0	
72 Construction	103 - 0	
73 Operation	101 - 0	
	Total SPL, dB(A) 47 47 47 50 53 53 53 53 4	46 75 55 54 75 75 53 53 53 56 71 71 71 71 74 74 75 75 75 75 75 75
	Exceedance	- - - - - - - - - - - - - - - - - - - -
	<u> </u>	

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Slant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 2 & 3 in month 21, act. 9 & 10 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 44 & 49 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 42 & 44 in month 31, act. 42 & 44 in month 20, act. 47 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 21, act. 42 & 44 in month 31, act. 42 & 44 in mon

NSR: UNI 8 - HK Chiu Sheung School

Act No. Construction Element		2009 Apr May Jun Jul Aug	Sep Oct Nov Dec Jan Feb Mar Apr May		ep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov D	2013 2014 Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug
	SWL Dist SPL 1 2 3	3 4 5 6 7	8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 3	2 33 34 35 36 37 38 39 40 41 42 43 44 45 46 4	47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67
Works Area J2 - UNI Entrance B1						
Possession of site Demolition of Whitty Public Toilet Block ^	93 208.0 42 101 208.0 50		42	50 50		
2 Demolition of Whitty Public Tollet Block ^ 3 Piling/Walling ^	100 204.0 49		 	49 49 49	 	
4 Bulk Excavation-Soft	94 208.0 43			43 43		
5 Bulk Excavation-weak Rock 6 Excavation - Rock	95 208.0 44 104 208.0 53		++++++	44 44 44 44 44	+ 	
7 Construct Ground Level Entrance	95 208.0 44		+++++++++++++++++++++++++++++++++++++++	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	44 44 44 44 44 44 44 44 44 44	
Works Area J - UNI Entrance B2						
8 Possession of site / Mobilization	98 202.0 47	47 47 47				
9 Demolition of Hill Road Rest Garden ^	101 202.0 50	50				
10 Piling/Walling ^	103 188.0 53		53 53 53 53			
11 Bulk Excavation-weak Rock 12 Excavation - Rock	97 202.0 46 99 202.0 48		46 48 48			
13 Excavate adit and running tunnel	101 202.0 50			50 50 50 50 50		
14 Concrete Adit	100 202.0 49				49	
15 Construct Ground Level Entrance 16 Station Fitout	98 202.0 47 96 202.0 45	- - 			47 47 47 47 47 47 47 47 47 47 47 47 47 4	
Works Area H - UNI Entrance C2	30 202.0 43				43 43 43 43 43 43 43 43	
17 Possession of site	99 - 0	-				
18 Utilities Diversions	99 - 0	+	 	0 0	 	
19 Piling/Walling	101 - 0	+	++	0 0		
20 Bulk Excavation-Soft ^ 21 Bulk Excavation-weak Rock ^	94 - 0	 	++++++++			
22 Excavate Rock ^	106 - 0	<u> </u>	<u> </u>			
23 Construct Ground Level Entrance	98 - 0				0 0 0 0 0	
Works Area I - UNI Entrance C1 + VS + Chiller						
24 Possession of site	100 154.0 51		51 51 51			
25 Utilities Diversions 26 Piling/Walling - Some 60 Nos. Bored Piles ^	100 154.0 51 101 160.0 52	 	51 51	52 52 52	 	
27 Bulk Excavation-Soft ^	96 154.0 47		<u> </u>	92 92 92 47 47 47	<u> </u>	
28 Bulk Excavation-weak Rock ^	100 154.0 51			51 51 51 51 51 51 51		
29 Excavate Rock Shaft * 30 Permanent Shaft Lining	98 154.0 49		++++++		9 49	
31 Construct above-ground Lift Shaft	98 154.0 49		 		49 49	
32 Sheet Piling for Vent Ducts	94 134.0 47				47	
33 Bulk Excavation-Soft for Vent Ducts 34 Horizontal Duct	94 154.0 45 94 154.0 45		+ + + + + + + + + + + + + + + + + + + 		45 45 45	
35 Concreting Vent Ducts and Vent Building	98 154.0 49		 		49 49	
36 Reinstatement	108 154.0 59					59 59 59
37 Station Fitout Works Area J3 - UNI Entrance A	96 154.0 47					47 47 47 47 47 47 47 47 47 47 47 47 47 4
38 Possession of site	109 54.5 69	+				
39 Utilities Diversions	109 54.5 69		69	69	 	
40 Piling/Walling - Some 40 Nos. Bored Piles ^	102 50.0 63			63 63 63		
41 Bulk Excavation-Soft ^	105 54.5 65			65 65		
42 Bulk Excavation-weak Rock ^ 43 Excavate Rock *	107 54.5 67		 	0 0 0 0 0 0 0 0	 	
44 Horizontal Adit ^	102 54.5 62			62	2 62 62 62	
45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby	94 50.0 55 103 54.5 63		++++++	55 55		
46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby	103 54.5 65	+++	 	63 63 65 65	+ 	
48 Permanent Shaft Lining ^	105 54.5 65				65 65 65 65 65 65 65	
49 Construct above-ground Lift Shaft ^ 50 Reinstatement	105 54.5 65 104 54.5 64		++++++		65 65 65	
51 Station Fitout	103 54.5 63	++++	 	 	63 63 63	
Works Area J1 - UNI Vent Shaft VS Y						
52 Possession of site	100 160.0 51		 	 	51	
					50	
53 Utilities Diversions	99 160.0 50					
53 Utilities Diversions 54 Piling/Walling ^	101 140.0 53		* * * * * * * * * * * * * * * * * * * 		3 53 53 53 53 53	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^					3 53 53 53 53 53 45 51 51 51 51 51 51 51 51 51 51 51 51 51	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	101 140.0 53 94 160.0 45 100 160.0 51 - 0				45 51 51 51 51 51 51 51 51 51 51 51 51 51	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51				45 51 51 51 51 51 51 51 51 51 51 51 51 51	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	101 140.0 53 94 160.0 45 100 160.0 51 - 0				45 51 51 51 51 51 51 51 51 51 51 51 51 51	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement	101 140.0 53 94 160.0 45 100 160.0 51 - 0 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50				45 51 51 51 51 51 51 51 51 51 51 51 51 51	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne	101 140.0 53 94 160.0 45 100 160.0 51 - 0 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50				45	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya)	101 140.0 53 94 160.0 45 100 160.0 51 - 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50				45	50
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenner Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^	101 140.0 53 94 160.0 45 100 160.0 51 - 0 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy	0 0 0 0	0 0		45	50
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^	101 140.0 53 94 160.0 45 100 160.0 51 - 0 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy		0 0 0		45	50
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy 99 - 0 104 - 0 97 - 0		0 0 0 0 0 0		45	50
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^	94 160.0 45 100 160.0 51 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 99 160.0 50 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0		0 0 0		45	50
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0 100 - 0		0 0 0 0 0 0		45	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenner Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout	94 160.0 45 100 160.0 45 100 160.0 51 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 99 0 0 104 - 0 97 0 0 101 - 0 103 0 0 101 - 0 100 - 0 101 - 0		0 0 0 0 0 0		51 51 51 51 51 51 51 51 51 51 51 51 51 5	
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0 100 - 0		0 0 0 0 0 0		45	
□ Utilities Diversions ☐ Pilling/Walling ^ ☐ Bulk Excavation-Soft ^ ☐ Bulk Excavation-weak Rock ^ ☐ Excavate Rock Shaft * ☐ Horizontal Adit ^ ☐ Permanent Shaft Lining ^ ☐ Concreting of above-ground Vent Shaft ☐ Reinstatement ☐ Reinstatement ☐ Persessesion of site / Mobilization ^ ☐ Pling/Walling - Some 40 Nos. Bored Piles ^ ☐ Bulk Excavation-Soft ^ ☐ Bulk Excavation-Soft ^ ☐ Bulk Excavation-Wall Adit) ^ ☐ Bulk Excavation-Soft ^ ☐ Bulk Excavation-Soft ^ ☐ Bulk Excavation-Soft ^ ☐ Sulk Excavation-Soft ^ ☐ Sulk Excavation-Soft ^ ☐ Sulk Excavation-Soft ^ ☐ Sulk Excavation-Soft ^ ☐ Bulk Excavation-Soft ^ ☐ Sulk Excavation-Soft ^ ☐ Bulk Excavation-Soft ^ ☐ Sultion Flout / Transporting of spoil ☐ Construction Access ☐ Satation Flout ☐ Backfill ☐ Backfill ☐ Possession of site / Mobilization	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 dy 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0				45	
S3	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 4y 99 - 0 104 - 0 97 - 0 103 - 0 100 - 0 100 - 0 100 - 0 101 - 0 101 - 0 103 - 0 100 - 0 100 - 0 101 - 0		0 0 0 0 0 0 0 0 0 0 0			
Utilities Diversions	101 140.0 53 94 160.0 45 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 100 160.0 51 99 160.0 50 101 101 0 0 0 0 101 0 0 0 0 0 101 0 0 0 0					
53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenne Fown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Filout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	101 140.0 53 94 160.0 45 100 160.0 51 0 100 160.0 51 95 160.0 46 98 160.0 49 99 160.0 50 4y 99 - 0 104 - 0 97 - 0 103 - 0 100 - 0 100 - 0 100 - 0 101 - 0 101 - 0 103 - 0 100 - 0 100 - 0 101 - 0	- 47 47 47 50				

- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the 1 centrical Memorandum on Noise from Construction work other than Percussive Pilling* by EPD.

 *No PMEs used at surface

 ^Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 42 & 44 in month 30, act. 54 & 55 in month 40, act. 54 & 56 in month 40, act. 55 & 56 i

NSR: UNI 9 - The Belcher's (Tower 3)

NSR: UNI 9 - The Belcher's (Tower 3)	2009 2010 2011 2012 2013 2	2014
Act No. Construction Element	SWL Dist SPL 1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 12 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 65 60 61 6	May Jun Jul Aug Sep
Works Area J2 - UNI Entrance B1	1 2 3 4 5 6 7 6 9 10 11 12 3 14 13 10 17 10 19 20 21 22 23 24 23 20 27 20 23 30 31 32 33 40 41 42 43 44 43 40 47 40 49 30 31 32 33 34 33 30 37 30 33	64 65 66 67 68
1 Possession of site	93 298.0 39	
Demolition of Whitty Public Toilet Block ^	101 298.0 47	
3 Piling/Walling ^ 4 Bulk Excavation-Soft	100 296.0 46	
5 Bulk Excavation-weak Rock	55 288.0 41	
6 Excavation - Rock	104 298.0 50	
7 Construct Ground Level Entrance	95 298.0 41 41 41 41 41 41 41 41 41 41 41 41 41	
Works Area J - UNI Entrance B2		
Possession of site / Mobilization Demolition of Hill Road Rest Garden ^	98 152.0 49 49 49 49 49 49 10 11 152.0 52 10 10 152 52 52 10 10 152.0 52 10 10 152.0 52 10 10 152.0 52 10 10 152.0 52 10 10 10 152.0 52 10 10 10 10 10 10 10 10 10 10 10 10 10	
10 Piling/Walling ^	103 134.0 56	
11 Bulk Excavation-weak Rock	97 152.0 48 48 48 48 48 48 48 48 48 48 48 48 48	
12 Excavation - Rock 13 Excavate adit and running tunnel	99 152.0 50 50 50 50 50 50 50 50 50 50 50 50 50	
14 Concrete Adit	100 152.0 51	
15 Construct Ground Level Entrance 16 Station Fitout	98 152.0 49	
Works Area H - UNI Entrance C2	90 132.0 47	
17 Possession of site	99 192.0 48 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
18 Utilities Diversions	99 192.0 48	\square
19 Piling/Walling 20 Bulk Excavation-Soft ^	101 182.0 51 51 51 51 51 51 51 51 51 51 51 51 51	
21 Bulk Excavation-weak Rock ^	100 192.0 49	
22 Excavate Rock ^ 23 Construct Ground Level Entrance	106 192.0 55	
Works Area I - UNI Entrance C1 + VS + Chiller	96 192.0 47	
24 Possession of site 25 Utilities Diversions	102 42.0 65	
26 Piling/Walling - Some 60 Nos. Bored Piles ^	103 51.3 64 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
27 Bulk Excavation-Soft ^ 28 Bulk Excavation-weak Rock ^	106 42.0 69	
28 Bulk Excavation-weak Rock ^ 29 Excavate Rock Shaft *		
30 Permanent Shaft Lining	102 42.0 65 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts	100 42.0 63	
33 Bulk Excavation-Soft for Vent Ducts	94 10.3 04 102 42.0 65	
34 Horizontal Duct	104 42.0 67	
35 Concreting Vent Ducts and Vent Building 36 Reinstatement	105 42.0 68	
37 Station Fitout	106 42.0 69 1 1 1 69 69 69 69 69 69 69 69 69 69 69 69 69	
Works Area J3 - UNI Entrance A		
38 Possession of site	99 295.0 45	
39 Utilities Diversions	99 295.0 45	
40 Piling/Walling - Some 40 Nos. Bored Piles ^ 41 Bulk Excavation-Soft ^	101 280.0 47	
42 Bulk Excavation-weak Rock ^	98 295.0 44	
43 Excavate Rock *		
44 Horizontal Adit ^ 45 Sheet Piling	100 295.0 46	
46 Bulk Excavation-Soft for Lower Ground Lobby	93 295.0 39	
47 Construct Lower Ground Lobby	98 295.0 44	
48 Permanent Shaft Lining ^ 49 Construct above-ground Lift Shaft ^	98 295.0 44	
50 Reinstatement	99 295.0 45	
51 Station Fitout	93 295.0 39 39 39 39 39 39 39 39 39 39 39 39 39	
Works Area J1 - UNI Vent Shaft VS Y		
52 Possession of site 53 Utilities Diversions	100 192.0 49	
54 Piling/Walling ^	99 192.0 40 101 190.0 50	
55 Bulk Excavation-Soft ^	94 192.0 43	
56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	100 192.0 49 49 49 49 49 49 49 49 49 49 49 49 49	
58 Horizontal Adit ^	100 192.0 49 49 49 49 49 49 49 49 49 49 49 49 49	
59 Permanent Shaft Lining ^	95 192.0 44 44 44 44 44 44 44 44 44 44 44 44 44	
60 Concreting of above-ground Vent Shaft 61 Reinstatement	98 192.0 47 47 47 47 47 47 47 47 49 99 192.0 48 48 48 48 48 48 48 48 48 48 48 48 48	
Works Area G - UNI Construction Shaft (at Kenned Town Praya)		
62 Possession of site / Mobilization ^	99 297.0 44 44 44 44 44 44 44	
63 Piling/Walling - Some 40 Nos. Bored Piles ^	104 29.0 50	
64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^	97 297.0 43 43 43 43 4 1 1 1 1 1 1 1 1 1 1 1 1 1	
66 Excavation - Rock (Horizontal Adit) ^	103 297.0 47	
67 Mucking-out / Transporting of spoil	103 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	
68 Construction Access 69 Station Fitout	100 297.0 45	
70 Backfill	96 297.0 41	
Works Area E & F - PCWA Barging Point		
71 Possession of site / Mobilization 72 Construction	106 - 0 1 1 1 0 0 0 0 0 0	++++
72 Construction 73 Operation		
• •	Total SPL, dB(A) - - - 51 51 51 54 56 56 56 57 53 65 68 68 49 49 64 64 69 69 69 69	
		
	Exceedance - - - - - - - - - -	

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

- 2. Slart distance (m)
 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 *No PMEs used at surface

 ^Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 2 & 3 in month 21, act. 9 & 10 in month 8, act. 20, 21 & 22 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 40, act. 52 & 56 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

 Noise Exceedance

 The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: UNI 10 - St Paul's College Primary School (at 7/F mPD)

Act No. Construction Element	SWL Dist ² SPL Feb Ma		2009 un Jul Aug Sep C	Oct Nov Dec Jan Fe	b Mar Apr May	2010 Jun Jul Aug Sep				Oct Nov Dec Jan	eb Mar Apr May	Jun Jul Aug Sep Oct	Nov Dec Jan Feb Ma					ay Jun Jul Aug
	JWL DISC JPL 1 2	2 3 4 5	5 6 7 8 9	9 10 11 12 1	3 14 15 16	17 18 19 20	21 22 23	24 25 26 27	28 29 30 31 32	33 34 35 36	37 38 39 40	41 42 43 44 45	46 47 48 49 5	0 51 52 53 54	55 56 57	7 58 59 60 61	62 63 6	4 65 66 67
Vorks Area J2 - UNI Entrance B1		الالية																
1 Possession of site	93 242.0 40			4	0													
Demolition of Whitty Public Toilet Block ^	101 242.0 48	+++	++++	++++	+++	48			+	++++				+ $+$ $+$ $+$	+		\vdash	+++
3 Piling/Walling ^ 4 Bulk Excavation-Soft	100 237.0 48 94 242.0 41	+++	++++	++++	+++	41	48 48 48		- - - - - - - - -	 				+ $+$ $+$ $+$	+++	+ + + + +		+++
5 Bulk Excavation-weak Rock	95 242.0 42	+	++++		+++			42 42 42		 				+ + + + +		+ + + + +		+
6 Excavation - Rock	104 242.0 51							51										
7 Construct Ground Level Entrance	95 242.0 42	\longrightarrow	\longrightarrow		+	 '				42 42	42 42 42 42	42 42 42 42			\bot			
Norks Area J - UNI Entrance B2																		
Possession of site / Mobilization	98 94.0 54	54 5																
9 Demolition of Hill Road Rest Garden ^	101 94.0 57	+	57 57		+++	 '									++-			\bot
10 Piling/Walling ^ 11 Bulk Excavation-weak Rock	103 78.0 60 97 94.0 53	+++	60 6	60 60 60	+++	+++-	++-+	-	++++					+	+++	++++	+++	+++
12 Excavation - Rock	99 94.0 55	+++	++++	55	5 55					 				++++	+		 	+++
13 Excavate adit and running tunnel	101 94.0 57					57 57 57	57 57											
14 Concrete Adit	100 94.0 56									56								
15 Construct Ground Level Entrance	98 94.0 54 96 94.0 52	+++	++++	++++	+++	 '	\cdots		+			54 54 54 54			+++			+
16 Station Fitout	96 94.0 52									52 52	52 52 52 52	52 52 52 52						
Norks Area H - UNI Entrance C2																		
17 Possession of site	99 218.0 47	+++	++++	++++	+++	 '	\cdots	47	47	 					+++			+
18 Utilities Diversions 19 Piling/Walling	99 218.0 47 101 214.0 49	+++	+++	+++	+++	 		47	49 49	 	+++	+ + + + + +		++++	+++	+ + + +	++	+++
20 Bulk Excavation-Soft ^	94 218.0 42	+++	 	 	+++	 			49 49 42	 	 	 		 		 		1 1 1
21 Bulk Excavation-weak Rock ^	100 218.0 48								48 48									
22 Excavate Rock ^	106 218.0 54	$+$ \mp \mp	+		$+\Gamma\Gamma$	++			54 54	54 54 54 54				+	$+$ \top	$++\mp$		$+\Box\Box$
23 Construct Ground Level Entrance	98 218.0 46										46	46 46 46 46						
Norks Area I - UNI Entrance C1 + VS + Chiller																		
24 Possession of site	102 38.9 65	+	$++\mp$	6	65 65	++-	ЩП		+	\Box	\bot			$++$ \top \top	\Box	++	$\Box\Box$	++
25 Utilities Diversions 26 Piling/Walling - Some 60 Nos. Bored Piles ^	102 38.9 65 103 33.4 68	+++	++++	+++	65 65	68 68 68			+++	+ + + + +	+++	+ + + + +		+++	+++	+ + + +	++	+
27 Bulk Excavation-Soft ^	103 33.4 68	+++	++++	++++	+++		69 69		++++	 	- 			+++++	+++	+ + + +		+++
28 Bulk Excavation-weak Rock ^	107 38.9 70	+ + + +	++++		+++		70 70	70 70 70 70	70	1 1 1 1					111			
29 Excavate Rock Shaft *	0						0 0	0 0 0 0	0									
30 Permanent Shaft Lining	102 38.9 65	+++	++++	++++	+++	 '			65	65		00		+ $+$ $+$ $+$	+		\vdash	+++
31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts	100 38.9 63 94 35.4 58	+++	+++	++++	+++	+++-	++-		- - - - - - - - -	 	58	63		+ $+$ $+$ $+$	+++	+ + + + +		+++
33 Bulk Excavation-Soft for Vent Ducts	102 38.9 65	+	+ + + +	++++	+++					 	30	65 65			+++			
34 Horizontal Duct	104 38.9 67											67 67						
35 Concreting Vent Ducts and Vent Building	105 38.9 68	$\bot \bot \bot$	\bot	\bot	\bot			\Box				68			\bot			
36 Reinstatement 37 Station Fitout	108 38.9 71 106 38.9 69	+++	++++	++++	+++	 '	\cdots		+	 			71 71 71	0 00 00 00 00	0 00 00	9 69 69 69 69		+
	106 38.9 69												6	9 69 69 69 69	9 69 69 68	9 69 69 69 69		
Norks Area J3 - UNI Entrance A																		
38 Possession of site 39 Utilities Diversions	99 263.0 46 99 263.0 46	+++	++++	4	3 40	46	+++		- 	+ + + + +				+++++	+++	+ + + + +	+++	+++
40 Piling/Walling - Some 40 Nos. Bored Piles ^	101 258.0 48	+++	++++	++++	46		48 48 48		++++	 	- 			+++++	+++	+ + + +		+++
41 Bulk Excavation-Soft ^	95 263.0 42	+	+		+		42	42		 								
42 Bulk Excavation-weak Rock ^	98 263.0 45							45 45 45 45	45 45 45 45									
43 Excavate Rock *	0	+++	++++	++++	+++	 '		0 0 0 0	0 0 0 0	47 47 47				+ $+$ $+$ $+$	+		\vdash	+++
44 Horizontal Adit ^ 45 Sheet Piling	100 263.0 47 94 258.0 41	+++	+++	++++	+++	+++-	++-	41 41	4/ 4/	47 47 47				+ $+$ $+$ $+$	+++	+ + + + +		+++
46 Bulk Excavation-Soft for Lower Ground Lobby	93 263.0 40	+++	+ + + + +		+		1 1 1 1	40 40		 		 	 					
47 Construct Lower Ground Lobby	98 263.0 45									1 1 1 1 1						 		
48 Permanent Shaft Lining ^	98 263.0 45								45 45						+ + +			
		+	\bot		+++				45 45	45 45	45 45 45 45							
49 Construct above-ground Lift Shaft ^	98 263.0 45	+							45 45			45 45 45 45 45 45 45 45 45 45 45 45 45 4						
50 Reinstatement	99 263.0 46	+							45 45	45 45 46		45 45 45	40					
50 Reinstatement 51 Station Fitout									45 45				40					
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y	99 263.0 46 93 263.0 40								45 45			45 45 45	40					
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site	99 263.0 46 93 263.0 40 100 131.0 53								45 45	46		45 45 45	40					
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y	99 263.0 46 93 263.0 40											45 45 45	40					
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47									53 52 54 54 54 54 77	46	45 45 45	40					
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53									53 52 54 54 54 54 57 53 53	46	45 45 45	40					
50 Reinstatement	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0									53 52 54 54 54 54 77	53 0	45 45 45 40 40	40					
Station Fitout	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53									53 52 54 54 54 54 57 53 53	53 0 53 53 53 53	45 45 45 40 40	40					
50 Reinstatement	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53									53 52 54 54 54 54 57 53 53	53 0 53 53 53 53	45 45 45 40 40 40						
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52									53 52 54 54 54 54 57 53 53	53 53 53 53 53 48	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
Station Fitout	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52									53 52 54 54 54 54 57 53 53	46	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennectown Praya)	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52									53 52 54 54 54 54 57 53 53	46	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Fown Praya) 62 Possession of site / Mobilization ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52	0 (53 52 54 54 54 54 57 53 53	46	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kennectown Praya)	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52									53 52 54 54 54 54 57 53 53	46	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-weak Rock ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 54 94 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 55 99 131.0 55 101 102.0 54 97 - 0 104 - 0 107 - 0 103 - 0			0 0 0						53 52 54 54 54 54 57 53 53	46	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Fown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 124.0 54 100 131.0 53 100 131.0 53 100 131.0 53 101 52 101 124 102 134 103 - 0 104 - 0 104 - 0 105 - 0 106 - 0 107 - 0 107 - 0			0 0 0					54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	53 53 53 53 48	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Buk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Cown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 10240 54 94 131.0 53 0 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52			0 0 0			0 0 0		54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0	53 0 53 53 53 63 648	45 45 45 40 40 40 40 40 48 48 48 51 51 51 51				52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Fown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 124.0 54 100 131.0 53 100 131.0 53 100 131.0 53 101 52 101 124 102 134 103 - 0 104 - 0 104 - 0 105 - 0 106 - 0 107 - 0 107 - 0			0 0 0					54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	53 0 53 53 53 63 648	45 45 45 40 40 40 40 40 48 48 48 51 51 51 51	51			52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Fown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 ly 99 - 0 104 - 0 107 - 0 103 - 0 101 - 0 103 - 0 100 - 0			0 0 0					54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0	53 0 53 53 53 63 648	45 45 45 40 40 40 40 48 48 48 51 51 51 51	51			52		
Station Fitout	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 54 94 131.0 47 100 131.0 53 -			0 0 0					54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0	53 0 53 53 53 63 648	45 45 45 40 40 40 40 48 48 48 51 51 51 51	51			52		
Station Fitout	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 53 0 100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 101 - 0 103 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0			0 0 0	0 0 0 0	0 0			54	53 52 54 54 54 54 53 0 0 0 0 0 0 0 0 0 0	53 0 53 53 53 63 648	45 45 45 40 40 40 40 48 48 48 51 51 51 51	51			52		
50 Reinstatement 51 Station Fitout Works Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned Fown Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 52 101 124.0 54 94 131.0 47 100 131.0 53 9 131.0 55 101 131.0 53 9 131.0 55 101 131.0 53 9 131.0 55 9 131.0 55 9 131.0 52 19 131.0 52 19 131.0 52 10 10 10 10 10 10 10 10 10 10 10 10 10 1			0 0 0 0 0	0 0 0 0	0 0			54	53	53 53 53 53 63 48	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40	51			52		
50 Reinstatement 51 Station Fitout Vorks Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Vorks Area G - UNI Construction Shaft (at Kenned Comp Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-weak Rock ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Vorks Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 54 94 131.0 47 100 131.0 53 0 1100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 124.0 54 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0	0 0	0 0 0		0 0 0 0 0 0	53	53 53 53 53 53 63 648 648 648 648 648 648 648 648 648 648	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40	51		0 0 0			
50 Reinstatement 51 Station Fitout Vorks Area J1 - UNI Vent Shaft VS Y 52 Possession of site 53 Utilities Diversions 54 Piling/Walling ^ 55 Bulk Excavation-Soft ^ 56 Bulk Excavation-Weak Rock ^ 57 Exavate Rock Shaft * 58 Horizontal Adit ^ 59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft 61 Reinstatement Vorks Area G - UNI Construction Shaft (at Kenned own Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Work Rock ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 9 Station Filout 70 Backfill Vorks Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 71 Possession of site / Mobilization 72 Construction	99 263.0 46 93 263.0 40 100 131.0 53 99 131.0 54 94 131.0 47 100 131.0 53 0 1100 131.0 53 95 131.0 48 98 131.0 51 99 131.0 52 101 10 13.0 52 101 10 10 10 10 10 10 10 10 10 10 10 10	0 (0 0 0 0 0 0	0 0 0 0	0 0	0 0 0		54	53	53 53 53 53 53 63 648 648 648 648 648 648 648 648 648 648	45 45 45 40 40 40 40 40 40 40 40 40 40 40 40 40	51			52		

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface

 * Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 2 & 3 in month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

 Noise Exceedance

 The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: UNI 11- Sik On Building

NSR: UNI 11- Sik On Building		Г			2009				20	010					2011				I		2012		1			2013				2014	
Act No. Construction Element	SWL Dist ²		eb Mar Apr		Jul Aug			n Feb Mar Apr 2 13 14 15		Jul Aug Sep C 18 19 20 2									Jan Feb Mar Apr 36 37 38 39				t Nov Dec Jan Feb N 5 46 47 48 49			un Jul Aug Sep 53 54 55 56					
Works Area J2 - UNI Entrance B1								10 11 10		10 10 20 2			20 20	2, 20	20 00	01 02	00 0	. 00	55 57 55 55					50 0.	02 0	01 00 00	0, 0,	0 00 00 0.	02	0.	30 00 07 00
1 Possession of site	93 135.0							45																							
2 Demolition of Whitty Public Toilet Block ^	101 135.0									53 5																					
3 Piling/Walling ^ 4 Bulk Excavation-Soft	100 130.0 94 135.0			 			+ +	+ + + +		46 4	3 53 5	53			+++	+++	_			+			 				_	+++	++		- - - - - - - - -
5 Bulk Excavation-weak Rock	95 135.0	47										17 47	47 47																		
6 Excavation - Rock	104 135.0													56					47 47 47 47	47	43 43 43										
7 Construct Ground Level Entrance	95 135.0	4/																4/	47 47 47 47	4/	4/ 4/ 4/	4/								_	
Works Area J - UNI Entrance B2																															
Possession of site / Mobilization Demolition of Hill Road Rest Garden ^	100 37.1 101 37.1			64 64	65	65	+ +	+ + + +	_	 	+++	+	+ + +	_	+ +	+		-		+	+++		 		-	+ + + + + + + + + + + + + + + + + + + +		+++	+		- - - - - - - - -
10 Piling/Walling ^	103 28.2	69				69 69 69	69																								
11 Bulk Excavation-weak Rock	105 37.1						6	9																							
12 Excavation - Rock 13 Excavate adit and running tunnel	104 37.1 102 37.1			+ +		+++	+ +	68 68	_	66 66 66 6	6 66	+	+ + +	_	+ +	+		-		+	+++		 		-	+ + + + + + + + + + + + + + + + + + + +		+++	+		- - - - - - - - -
14 Concrete Adit	101 37.1	65															65	5													
15 Construct Ground Level Entrance	99 37.1																	63	63 63 63 63			63									
16 Station Fitout	106 37.1	70																70	70 70 70 70	70	70 70 70	70									
Works Area H - UNI Entrance C2																															
17 Possession of site 18 Utilities Diversions	99 296.0 99 296.0		++	++	++	++	++	+		+++	+	45	+++	45 45	+	++-	-	+		╁┼	+	\vdash	++++	++		+++	+	+++	++	++	+++
19 Piling/Walling	101 293.0	47					士士				士士	上		.0 40	47 47			╧		口			<u> </u>	世十					上十	士士	
20 Bulk Excavation-Soft ^	94 296.0						H									40							+	II							
21 Bulk Excavation-weak Rock ^ 22 Excavate Rock ^	100 296.0 106 296.0		++	++	+++	++	++	+		+++	++	+	+++	-	++	46 46 52 52		6 46 2 52	46 52	₩	+	\vdash	++++	++	+	+++	+	+++	++	+	+++
23 Construct Ground Level Entrance	98 296.0			世上			上十				士士				上上		32	J.		44	44 44 44	44 4	4	士士					上十		
Works Area I - UNI Entrance C1 + VS + Chiller																															
24 Possession of site	100 116.0							54 54 54																							
25 Utilities Diversions	100 116.0							54 54																							
26 Piling/Walling - Some 60 Nos. Bored Piles ^ 27 Bulk Excavation-Soft ^	101 114.0 96 116.0		++	+ +	+++	++	++	+		55 55 55	0 50		++		++	+	-			+-+			++++		-			+++	+		
28 Bulk Excavation-weak Rock ^	100 116.0				1 1 1		1 1			30 0		54 54	54 54	54 54						1 1			 					1 1 1	1 1		
29 Excavate Rock Shaft *		0									0	0 0	0 0	0 0																	
30 Permanent Shaft Lining 31 Construct above-ground Lift Shaft	98 116.0 98 116.0			\vdash	+++	++	++	+		+	+	_	++		++	52	52		\vdash	52	52		++++					+++	+		
32 Sheet Piling for Vent Ducts	94 104.0	49			1 1 1															49	<u> </u>		 								
33 Bulk Excavation-Soft for Vent Ducts	94 116.0																				48 48	40									
34 Horizontal Duct 35 Concreting Vent Ducts and Vent Building	94 116.0 98 116.0	48 52	++	+ +	+++	++	++	+			+++		++		++	+	-			+-+	48	48	2 52		-			+++	+		
36 Reinstatement	108 116.0																						62 62 62								
37 Station Fitout	96 116.0	50																		\blacksquare				50 50	50 5	50 50 50 50	50 5	0 50 50 50			
Works Area J3 - UNI Entrance A																															
38 Possession of site	99 228.0							47																							
39 Utilities Diversions 40 Piling/Walling - Some 40 Nos. Bored Piles ^	99 228.0 101 222.0		+	\vdash	+++	++	++	+	47 47		9 49	19	++		++	++-	_		\vdash				++++					+++	+		
41 Bulk Excavation-Soft ^	95 228.0	43			1 1 1		1 1					13 43								1 1			 					1 1 1	1 1		
42 Bulk Excavation-weak Rock ^	98 228.0											46	46 46	46 46	46 46	46															
43 Excavate Rock * 44 Horizontal Adit ^	100 228.0	0 48	++	+ +	+++	++	++	+			+++	0	0 0	0 0	0 0	48 48	48 48	3 48		+-+			++++		-			+++	+		
45 Sheet Piling	94 222.0	42										42	42																		
46 Bulk Excavation-Soft for Lower Ground Lobby	93 228.0												41		40																
47 Construct Lower Ground Lobby 48 Permanent Shaft Lining ^	98 228.0 98 228.0			+ +		+++	+ +	+ + + +	_	 	+++	+	+ + +	46	46	+		46	46 46 46 46	46	46		 		-	+ + + + + + + + + + + + + + + + + + + +		+++	+		- - - - - - - - -
49 Construct above-ground Lift Shaft ^	98 228.0	46																			46 46 46										
50 Reinstatement	99 228.0 93 228.0				+++		44	+					\vdash		++	+			47 47									+++	1		
51 Station Fitout	93 228.0	41																				41 4	1 41								
Works Area J1 - UNI Vent Shaft VS Y	00 400	70															70			-											
52 Possession of site 53 Utilities Diversions	98 10.3 93 10.3		++	++	+ + +	++	++	+ + + +	_	+++	++	+	+ + +		++		73	3	 	╁┼			++++	+		+++		+++	++	++	-
54 Piling/Walling ^	99 9.9	74														74	74 74	4 74													
55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^	98 10.3 98 10.3		+ $+$ $-$	\vdash	$++$ $\overline{1}$	++	++	+	_	+++	+	+	+		+	+	_	1	73 73 73	+	+	$ \downarrow$	+++	+	_	+++		+++	++	+	+++
57 Excavate Rock Shaft *	96 10.3		++	 	+++	+	++				+ +	+		_	+	+ + -		+	0 0	1 1			 		-	+++		+++	++	+++	- - - - - - - - - - - - - -
58 Horizontal Adit ^	99 10.3	74																	74 74					ш						ш	
59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft	96 10.3 99 10.3		++-	\vdash	+	+	++	+	-	+++	++	+		-	++	++-		-	 	71	71 71 74	74 7	4 74	++	\dashv	+++	+	+++	++	+	+++
61 Reinstatement	101 10.3			++	1 1 1	++	++	+ + + +		 	++	+	1 1 1	_	+							14 1	1 1	+				76	++	+	
Works Area G - UNI Construction Shaft (at Kennedy																															
Town Praya)	00																			H					_						
62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^	99 -	0	++	U 0	0 0	0 0	++	+ + + +	-	+ + + +	++	+	+++	+	++	++-	+	+	 	++	+	\vdash	 	++	+	+++	+	+++	++	++	
64 Bulk Excavation-Soft ^	97 -	0				0					廿	上	ш	士				┖		Ħ				虰	ᆂ		止		廿	T	
65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^		0		$+ \top$	\Box		0 (0 0		$+$ \top		$\Box\Box$	$ \Box$	H	\Box	$-\Box$			μŢ			$++\mp\mp$	\Box		$+\Pi\Pi$		+	$+$ \top	\Box	\Box
66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil	101 -	0	++	++	+ + +	++	U	0 0 0	UU	0 0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0	0 0 0	╁┼		-	 	++		+++		+++	++	++	-
68 Construction Access	100 -	0					廿					Ť		Ĭ	ĽĽ			Ľ	0 0 0 0					虰	ᆂ		止		廿	T	
69 Station Fitout		0					H														0 0 0	0 0	0 0 0 0	0 0	0						
70 Backfill Works Area E & F - PCWA Barging Point	96 -	U																								0 0 0 0	U				
71 Possession of site / Mobilization		0						0																							
72 Construction	103 -	0						0 0	0 0															ш							
73 Operation	101 -		++	+	+ + +	+++	++	+ + + +	-		$\overline{}$		0 0					_	0 0 0 0	-	-	\vdash	++++	+	+	+++	+		++	\dashv	+++
	Total SPL, di	B(A)	- - -	64 64	64 65	69 69 69	69 6	9 68 68 57	47 47	66 66 66 6	6 66 5	7 56	55 55	59 55	51 49	54 74	77 75	76	76 75 75 75	75	74 74 75	75 7	4 74 62 62 62 5	50 50	50 5	50 50 50 50	50 5	0 50 76 50	-	- -	
	Exceeda	ance	- - -	- -	- -	- - -	- -	. - - -	- -	- - - -	- -	- -	- -	- -	- -	- -	2 -	1	1	- 1	- - -	- -	- - - -	- -	- -	- - - -	- -	. - 1 -	l - l	- -	- - - -
		_										_																			

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

- 2. Slant distance (m)
 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 *No PMEs used at surface

 ^Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 2 & 3 in month 21, act. 9 & 10 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

 Noise Exceedance

 The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NSR:	UNI	12 -	Hill	Court	
	•				

	ill Court			2009				2010				2011			2012				2013			2014	
Act No.	Construction Element	SWL Dist ² SPL	Feb Mar Apr May	Jun Jul Aug				y Jun Jul Aug	Sep Oct Nov D		Apr May Ji	ın Jul Aug S		c Jan Feb Mar A	or May Jun Jul				Jun Jul Aug Se			Apr May Jun	
Works Area 12 -	- UNI Entrance B1		1 2 3 4	5 6 7	8 9	10 11 12 13	14 15 16	17 18 19	20 21 22 2	23 24 25 26	27 28 2	9 30 31	32 33 34 3	36 37 38 3	9 40 41 42	43 44 45 4	6 47 48 49	50 51 52 5	53 54 55 56	57 58 5	9 60 61 62	63 64 65 6	66 67
1 Possessio		93 185.0 43	+++	+		43																	
	on of Whitty Public Toilet Block ^	101 185.0 51				40			51 51														
3 Piling/Wal		100 184.0 50							50 50 5	50													
	avation-Soft avation-weak Rock	94 185.0 44 95 185.0 45		+++		- - - 			44 44	15 45 45 45		+++	+	+ + + +				+++					
6 Excavation		104 185.0 54	- 			 		1 1 1	43	10 40 40 40	54	++++	+ + +	1 1 1 1	1 1 1	1 1 1	1 1 1 1		- 	1 1 1	+ + + + +		
7 Construct	t Ground Level Entrance	95 185.0 45		\blacksquare									4.	45 45 45 4	5 45 45 45	45 45							
Works Area J - L	UNI Entrance B2																						
	on of site / Mobilization	100 22.0 68	68	68 68																			
 9 Demolition 10 Piling/Wal 	on of Hill Road Rest Garden ^	101 22.0 69 103 11.9 77	\longrightarrow	69	00	77 77		+++		+			+	++++	+++		++++	+	+	+ + +			
	avation-weak Rock	105 22.0 73			77 77	73				+		+	+++	++++	+++		+++	+++	+	+++	+		
12 Excavation	on - Rock	104 22.0 72				72	72																
	adit and running tunnel	102 22.0 70	+++	++++		++++		70 70	70 70 70	+++		+++	CO	++++	+++		++++	+	+++	+++	+		
14 Concrete	t Ground Level Entrance	101 22.0 69 99 22.0 67	 	 		- 		+ + +		+++		+++	69	67 67 67 6	7 67 67 67	67 67	- 		- - - - - - - - - - 	+++	+ + + +	-+	
16 Station Fit		106 22.0 74												74 74 74 7									
Works Area H - l	UNI Entrance C2																						
17 Possessio		99 240.0 46								46													
18 Utilities Di		99 240.0 46	+++	++++		-		++-		\bot	46 46	0 40	-		\bot		++++			1 1			
 Piling/Wal Bulk Exca 	alling avation-Soft ^	101 236.0 49 94 240.0 41	 	 	 	 	+	+++	 	+++	4	9 49 41	+++	+ + +	+++	+ + + +	+ + +	+++		+++		+++	\dashv
	avation-weak Rock ^	100 240.0 47											47 47 47 47	47									
22 Excavate I		106 240.0 53		\Box								53	53 53 53 50	53	45	45	+						$\Box\Box$
•	t Ground Level Entrance	98 240.0 45													45 45 45	45 45 45							
	JNI Entrance C1 + VS + Chiller			\Box																			
24 Possessio 25 Utilities Dir		100 114.0 54 100 114.0 54		+++	$\vdash\vdash$		54 54 54 54	++-	+++	+++	++	+++		+++	+++	+ + + +	+ + +	+++	+++	+++	+++	+++	+
	alling - Some 60 Nos. Bored Piles ^	101 116.0 55	- 				54 54	55 55	55					1 1 1 1	1 1 1								
	avation-Soft ^	96 114.0 50							50 50 50														
	avation-weak Rock ^ Rock Shaft *	100 114.0 54	++++	+++		- - - 		+++	54 5	54 54 54 54	54 54		+	++++	+++		++++	+	+	+++			
	ent Shaft Lining	98 114.0 52						+ + +		0 0 0	0 0		52 52	++++	+ + +		- 						
	t above-ground Lift Shaft	98 114.0 52													52 52								
	ing for Vent Ducts avation-Soft for Vent Ducts	94 120.0 47 94 114.0 48	++++	+++		- - - 		+++		+			+	++++	47 48 48		++++	+	+	+++			
34 Horizontal		94 114.0 48				- 				+		+++	+++	++++	48 48	48 48	+++	+++	+	+++	+		
35 Concreting	ng Vent Ducts and Vent Building	98 114.0 52														52 5							
36 Reinstater37 Station Fit		108 114.0 62 96 114.0 50	+++	+++				+++		+++		+++		++++	+++		62 62 62	50 50 50 5	50 50 50 50	E0 E0 E	0 50 50		_
	- UNI Entrance A	96 114.0 50																50 50 50 5	30 30 30 30	30 30 3	0 50 50		
38 Possessio		99 280.0 45		+		45																	
39 Utilities Di		99 280.0 45				45	45	45		+++							++++						
	alling - Some 40 Nos. Bored Piles ^	101 274.0 47							47 47 4														
	avation-Soft ^ avation-weak Rock ^	95 280.0 41 98 280.0 44	+++	+++		++++		+++	4	41 41 44 44 44 44 44 44 44 44 44 44 44 4	44 44 4	4 44 44	+++	+	+++		++++	+++	+++	+++		-	
43 Excavate I		0				- 				0 0 0	0 0	0 0 0	+++	++++	+++	 	+++	+++	+	+++	+		
44 Horizontal	al Adit ^	100 280.0 46										46	46 46 46 46	6									
45 Sheet Pilir 46 Bulk Exca	ing avation-Soft for Lower Ground Lobby	94 274.0 40 93 280.0 39	++++	+++		- - - 		+++		40 40	39		+	++++	+++		++++	+	+	+++			
	t Lower Ground Lobby	98 280.0 44						111		39		4			111		++++						
	ent Shaft Lining ^	98 280.0 44		\Box									44	44 44 44 4									
 49 Construct 50 Reinstater 	t above-ground Lift Shaft ^	98 280.0 44 99 280.0 45	+++	+++		++++		+++		+		+++	+++	45 45	44 44	44	++++	+++	+++	+++		-	
51 Station Fit		93 280.0 45				- 				+		+++	+++	45 45	+++	39 39 3	9	+++	+	+++	+		
	- UNI Vent Shaft VS Y																						
52 Possessio		98 80.0 55											55										
53 Utilities Di	liversions	93 80.0 50											50										
54 Piling/Wal55 Bulk Exca	alling ^ avation-Soft ^	99 68.0 57 98 80.0 55	+++	++	\vdash	+	++	+++		+++	++	+ +	57 57 57 5	55	+++	+++	+++	++	+++	+++	+++	+	$+$ \bot
			 	\vdash		 	++	++-	+++	+++	+++	++		55 55	+++	+ + +	+ + +	+++	+++	+++		+++	\dashv
56 Bulk Exca	avation-weak Rock ^	98 80.0 55		-t										0 0									
57 Excavate I	Rock Shaft *	0		$\sqcup \sqcup \sqcup$							1 1 1	\bot	1 1 1							1 1 1	1 1 1 1	1 1 1	
57 Excavate I 58 Horizontal	Rock Shaft * al Adit ^	0 99 80.0 56					++	+	+++	+++				56 5	6 56		+ + + +						
57 Excavate I 58 Horizontal 59 Permaner	Rock Shaft * al Adit ^ ent Shaft Lining ^	0										+++		56 5	53 53 53	56 56 56 5	6	+++					\dashv
57 Excavate 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater	Rock Shaft * al Adir ^ whi Shaft Lining ^ ng of above-ground Vent Shaft ement	0 99 80.0 56 96 80.0 53 99 80.0 56 101 80.0 58												56 5			6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - I	Rock Shaft * al Adit ^ ent Shaft Lining ^ ng of above-ground Vent Shaft	0 99 80.0 56 96 80.0 53 99 80.0 56 101 80.0 58												56 5			6				58		
57 Excavate 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - U Town Praya)	Rock Shaft * al Adir ^ ntt Shaft Lining ^ ng of above-ground Vent Shaft ment UNI Construction Shaft (at Kenned	0 99 80.0 56 96 80.0 53 99 80.0 56 101 80.0 58 y		0 0 0										56 5			6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - I Town Praya) 62 Possessio	Rock Shaft * al Adir ^ whi Shaft Lining ^ ng of above-ground Vent Shaft ement	99 80.0 56 96 80.0 53 99 80.0 56 101 80.0 58 y 99 - 0 104 - 0		0 0 0	0 0									56 5			6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - I Town Praya) 62 Possessio 63 Piling/Wal 64 Bulk Exca	Rock Shaft * al Adir ^ total Adir ^ total Shaft Lining ^ total Government UNI Construction Shaft (at Kenned on of site / Mobilization ^ aliling - Some 40 Nos. Bored Piles ^ avation-Soft ^	99 80.0 56 96 80.0 56 99 80.0 56 101 80.0 58 99 80.0 58 101 80.0 58 99 - 0 104 - 0 97 - 0			0 0	0 0								56 5			6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concretin 61 Reinstater Works Area G - I Town Praya) 62 Possessio 63 Pilling/Wal 64 Bulk Exca 65 Bulk Exca	Rock Shaft * al Adit ^ stal Adit ^ tal Adit ^ tal Shaft Lining ^ tal of above-ground Vent Shaft tenent UNI Construction Shaft (at Kenned on of site / Mobilization ^ alling - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-weak Rock ^	99 80.0 56 99 80.0 56 101 80.0 58 99 80.0 56 101 80.0 58 y 99 - 0 104 - 0 103 - 0			0 0	0 0 0								56 5			6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concretin 61 Reinstater Works Area G - I Town Praya) 62 Possessio 63 Piling/Wal 64 Bulk Exca 65 Bulk Exca 66 Excavatior	Rock Shaft * al Adir ^ total Adir ^ total Shaft Lining ^ total Government UNI Construction Shaft (at Kenned on of site / Mobilization ^ aliling - Some 40 Nos. Bored Piles ^ avation-Soft ^	99 80.0 56 96 80.0 56 99 80.0 56 101 80.0 58 99 80.0 58 101 80.0 58 99 - 0 104 - 0 97 - 0			0 0		0 0 0		0 0 0	0 0 0 0	0 0		0 0 0 0				6				58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concretin 61 Reinstater Town Praya Possessio 62 Possessio 63 Pilling/Wal 64 Bulk Exca 65 Bulk Exca 66 Excavation 67 Mucking-c 68 Constructi	Rock Shaft * al Adit ^ Int Shaft Lining ^ Ing of above-ground Vent Shaft Imment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alling - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-Weak Rock ^ In - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access	99 80.0 56 99 80.0 55 99 80.0 56 101 80.0 58 y 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0			0 0	0 0 0	0 0 0		0 0 0		0 0	0 0 0	0 0 0 0		53 53 53	56 56 56 5					58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstate I Works Area G - Town Praya) 62 Possessio 63 Piling/Wal 64 Bulk Exca 65 Bulk Exca 66 Excavatior 67 Mucking-0 68 Constructi 69 Station Fit	Rock Shaft * al Adit ^ Int Shaft Lining ^ Ing of above-ground Vent Shaft Imment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alling - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-Weak Rock ^ In - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access	99 80.0 56 99 80.0 56 101 80.0 58 99 - 0 104 - 0 97 - 0 103 - 0 100 - 0 101 - 0	0		0 0	0 0 0	0 0 0		0 0 0	0 0 0 0	0 0	0 0 0	0 0 0 0	0 0 0	53 53 53	56 56 56 5	6				58		
57 Excavate 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - I Town Praya) 62 Possessio 63 Piling/Wal 64 Bulk Exca 65 Bulk Exca 65 Bulk Exca 66 Excavatior 67 Mucking-c 68 Construct 69 Station Fit 70 Backfill	Rock Shaft * al Adir * nt Shaft Lining ^ ng of above-ground Vent Shaft ment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alling - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-weak Rock ^ on - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access itout	99 80.0 56 99 80.0 55 99 80.0 56 101 80.0 58 y 99 - 0 104 - 0 97 - 0 103 - 0 101 - 0 103 - 0	0		0 0	0 0 0	0 0 0		0 0 0	0 0 0 0	0 0	0 0 0	0 0 0 0	0 0 0	53 53 53	56 56 56 5			0 0 0 0		58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater Works Area G - I Town Praya) 62 Possessio 63 Pilling/Wal 64 Bulk Exca 65 Bulk Exca 65 Bulk Exca 66 Excavatior 67 Mucking-0 68 Constructi 69 Station Fit	Rock Shaft * al Adit ^ Int Shaft Lining ^ Ing of above-ground Vent Shaft Imment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alling - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-Weak Rock ^ In - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access	99 80.0 56 99 80.0 56 101 80.0 58 99 - 0 104 - 0 97 - 0 103 - 0 100 - 0 101 - 0	0		0 0	0 0 0	0 0 0		0 0 0	0 0 0 0	0 0 0	0 0 0	0 0 0 0	0 0 0	53 53 53	56 56 56 5			0 0 0 0	0	58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concreting 61 Reinstater works Area G - I Town Praya) 62 Possessio 63 Piling/Wal 64 Bulk Exca 65 Bulk Exca 66 Excavation 67 Mucking-c 68 Constructi 70 Backfill works Area E & T1 Possessio 72 Constructi 72	Rock Shaft * al Adir * nt Shaft Lining ^ ng of above-ground Vent Shaft ment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alting - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-weak Rock ^ on - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access itout F - PCWA Barging Point on of site / Mobilization tion	99 80.0 56 99 80.0 55 99 80.0 56 101 80.0 58 99 - 0 104 - 0 97 - 0 103 - 0 100 - 0 101 - 0 96 - 0	0		0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	0							53 53 53	56 56 56 5			0 0 0 0	0	58		
57 Excavate I 58 Horizontal 59 Permaner 60 Concretin 61 Reinstate Town Praya) 62 Possessio 63 Pilling/Wal 64 Bulk Exca 65 Bulk Exca 66 Excavatior 67 Mucking-c 68 Constructi 69 Station Fit 70 Backfill Works Area E & 71 Possessio	Rock Shaft * al Adir * nt Shaft Lining ^ ng of above-ground Vent Shaft ment UNI Construction Shaft (at Kenned on of site / Mobilization ^ alting - Some 40 Nos. Bored Piles ^ avation-Soft ^ avation-weak Rock ^ on - Rock (Horizontal Adit) ^ out / Transporting of spoil tion Access itout F - PCWA Barging Point on of site / Mobilization tion	99 80.0 56 101 80.0 58 99 9 0 0 104 - 0 103 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0 101 - 0	0	0	0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	0 0 0	0 0	0 0 0 0	0 0 0	0 0 0			53 53 53	0 0 0 0							

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Slant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD. No PMEs used at surface

 ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 40, act. 62 & 63 in month 41.

month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in in Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NCR.	HIMI	12.	Gracefu	I Com

NSR: UNI 13 - Graceful Court		2009	2010	2011	2012	2013	2014
Act No. Construction Element	SWL Dist ² SPL	b Mar Apr May Jun Jul Aug Sep Od		ec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov			
	JWE DIST JFE 1	2 3 4 5 6 7 8 9	9 10 11 12 13 14 15 16 17 18 19 20 21 22 2	3 24 25 26 27 28 29 30 31 32 33 34	35 36 37 38 39 40 41 42 43 44 45 4	46 47 48 49 50 51 52 53 54 55 56 57 58 59 46 47 48 49 50 51 52 53 54 55 56 57 58 59	9 60 61 62 63 64 65 66 67 68
Works Area J2 - UNI Entrance B1							
Possession of site Demolition of Whitty Public Toilet Block ^	93 126.0 46 101 126.0 54		46				
Demolition of Whitty Public Toilet Block ^ Piling/Walling ^	100 124.0 53	 	54 54	3		 	
4 Bulk Excavation-Soft	94 126.0 47	 	47 47			 	
5 Bulk Excavation-weak Rock	95 126.0 48		48 4	8 48 48 48			
6 Excavation - Rock 7 Construct Ground Level Entrance	104 126.0 57 95 126.0 48		 	57	48 48 48 48 48 48 48 48 48 48	 	+++++++++
Works Area J - UNI Entrance B2	95 126.0 46				40 40 40 40 40 40 40 40 40 40 40		
8 Possession of site / Mobilization	100 25.1 67	67 67 67					
9 Demolition of Hill Road Rest Garden ^	101 25.1 68	68 68	 	 		 	
10 Piling/Walling ^	103 24.2 70	70 70	0 70 70				
11 Bulk Excavation-weak Rock	105 25.1 72		72				
12 Excavation - Rock 13 Excavate adit and running tunnel	104 25.1 71 102 25.1 69	+++++++	71 71 69 69 69 69 69 69	 			+++++++++
14 Concrete Adit	101 25.1 68	 	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	68		 	
15 Construct Ground Level Entrance	99 25.1 66				66 66 66 66 66 66 66 66		
16 Station Fitout	106 25.1 73				73 73 73 73 73 73 73 73 73 73 73		
Works Area H - UNI Entrance C2							
17 Possession of site	99 298.0 45			45		 	
18 Utilities Diversions 19 Piling/Walling	99 298.0 45 101 292.0 47	 	 	45 45 47 47	 	 	
20 Bulk Excavation-Soft ^	94 298.0 40	<u> </u>	<u> </u>	40			<u> </u>
21 Bulk Excavation-weak Rock ^	100 298.0 46			46 46 46 46			
22 Excavate Rock ^ 23 Construct Ground Level Entrance	106 298.0 52 98 298.0 44	+++++	 	52 52 52 52	52 52 44 44 44 44 44 44	+++++++++++++	
Works Area I - UNI Entrance C1 + VS + Chiller	50 255.0 44				77 99 99 99 44		
24 Possession of site	100 138.0 52		52 52 52				
25 Utilities Diversions	100 138.0 52	 	52 52 52	 	 	 	
26 Piling/Walling - Some 60 Nos. Bored Piles ^	101 136.0 53		53 53 53				
27 Bulk Excavation-Soft ^	96 138.0 48 100 138.0 52	 	48 48 48	0 50 50 50 50			
28 Bulk Excavation-weak Rock ^ 29 Excavate Rock Shaft *	100 138.0 52	 	52 5	2 52 52 52 52 52 52		 	
30 Permanent Shaft Lining	98 138.0 50			50 50			
31 Construct above-ground Lift Shaft	98 138.0 50				50 50		
32 Sheet Piling for Vent Ducts 33 Bulk Excavation-Soft for Vent Ducts	94 128.0 47 94 138.0 46	 	 	 	47	 	+ + + + + + + + + + + + + + + + + + +
34 Horizontal Duct	94 138.0 46	 	 		46 46	 	
35 Concreting Vent Ducts and Vent Building	98 138.0 50				50 8		
36 Reinstatement 37 Station Fitout	108 138.0 60 96 138.0 48	+++++++	+ 			60 60 60 80 8 8 48 48 48 48 48 48 48 48 48 48 48 48	8 48 48
Works Area J3 - UNI Entrance A	00 100.0 10					10 10 10 10 10 10 10 10 10	5 1.5
38 Possession of site	99 245.0 46		46				
39 Utilities Diversions	99 245.0 46		46 46				
40 Piling/Walling - Some 40 Nos. Bored Piles ^	101 240.0 48		48 48 4				
41 Bulk Excavation-Soft ^ 42 Bulk Excavation-weak Rock ^	95 245.0 42 98 245.0 45	+++++++	 	12		 	++++++++
43 Excavate Rock *	0	 	 	0 0 0 0 0 0 0 0		 	
44 Horizontal Adit ^	100 245.0 47			47 47 47 47	47		
45 Sheet Piling 46 Bulk Excavation-Soft for Lower Ground Lobby	94 240.0 41 93 245.0 40	+++++++	+ 	41 41 40 40		 	++++++++
47 Construct Lower Ground Lobby	98 245.0 45	 	 	40 40 45 45		 	
48 Permanent Shaft Lining ^	98 245.0 45				45 45 45 45 45 45 45		
49 Construct above-ground Lift Shaft ^	98 245.0 45	 		 	45 45 45	 	
50 Reinstatement 51 Station Fitout	99 245.0 46 93 245.0 40	 	 	 	46 46 40 40 4	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Works Area J1 - UNI Vent Shaft VS Y							
52 Possession of site	98 24.1 65		 	65			
53 Utilities Diversions	93 24.1 60	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	60		<u> </u>	<u> </u>
54 Piling/Walling ^	99 20.1 68		+++++++++++++++++++++++++++++++++++++++	68 68 68	68 68	 	
55 Bulk Excavation-Soft ^ 56 Bulk Excavation-weak Rock ^	98 24.1 65 98 24.1 65	+++++	 		65 65 65	+++++++++++++	
57 Excavate Rock Shaft *	0	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	<u></u>	0 0	<u> </u>	<u> </u>
58 Horizontal Adit ^	99 24.1 66	 			66 66 66		
59 Permanent Shaft Lining ^ 60 Concreting of above-ground Vent Shaft	96 24.1 63 99 24.1 66	++++++	 		63 63 63		
61 Reinstatement	101 24.1 68	 	 	 	00 00 66	~	68
Works Area G - UNI Construction Shaft (at Kenned							
Town Praya)							
62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^	99 - 0	0 0 0 0	 		- 		
64 Bulk Excavation-Soft ^	97 - 0			 	 	 	
65 Bulk Excavation-weak Rock ^	103 - 0		0 0 0				
66 Excavation - Rock (Horizontal Adit) ^	101 - 0	+++++	0 0 0 0 0 0 0 0			 	+ + + + + + + + + + + + + + + + + + +
67 Mucking-out / Transporting of spoil 68 Construction Access	103 - 0	 		0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	 	
69 Station Fitout	101 - 0	<u> </u>	<u> </u>	<u> </u>		0 0 0 0 0 0 0	<u> </u>
70 Backfill	96 - 0					0 0 0 0 0	
Works Area E & F - PCWA Barging Point	106 - 0						
		<u> </u>	0				
71 Possession of site / Mobilization							
	103 - 0 101 - 0			0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0		
71 Possession of site / Mobilization 72 Construction	103 - 0	67 67 67 68 70 70	0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	67 60 60 60 48 48 48 48 48 48 48 48 48 48 48 48 48	8 68 48
71 Possession of site / Mobilization 72 Construction	103 - 0 101 - 0	- 67 67 68 70 70 67 67 68 70 70	0 0			67 60 60 60 48 48 48 48 48 48 48 48 48 48 48 48 48	8 68 48

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Slant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD. No PMEs used at surface

 ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 40, act. 62 & 63 in month 41.

month 35, act. 48 & 49 in month 41, act. 59, 50 & 50 in ...

Noise Exceedance
The use of PME would not be visible when viewed from
the assessment facade of NSR. The NSR is
considered to be totally screened. According to GWTM, a noise reduction of 10 dB(A) would be achieved.

NSR: UNI 14 - Wing Fu Lau

Section Processes and Processe	NSR: UNI 14 - Wing Fu Lau	2009	2010	2011 2012 2013	2014
See Property See P	Act No. Construction Element				
	Works Area J2 - UNI Entrance B1	1 2 3 4 5 6 7	9 10 11 12 13 14 13 10 17 10 19 20 21 22 23 24 23 20	27 20 29 30 31 32 33 34 33 30 37 30 37 30 39 40 41 42 43 44 43 40 47 40 49 30 31 32 33 34 33 30 37 30 39 00 01 0.	82 83 84 83 86 87 8
Part		93 92.0 49	49		
		101 92.0 57			
					
Part			51 51 51 51		+++++
Section				60	
Separate Members 1. 1		95 92.0 51		51 51 51 51 51 51 51 51 51 51 51	
Separate Proper legical proper legic					
3					
. Help and the control of the contro					
3. September 1. September 2. September 3. Se					
. Restard					
Well All Men Composition					
Mary Mary Mary Mary Mary Mary Mary Mary		106 78.4 63		05 05 05 05 05 05 05 05 05 05 05 05 05 0	
Separate properties of the control o		99 - 0			
Separation of the series of th	18 Utilities Diversions	99 - 0		0 0	
Mathematic			+++++++++++++++++++++++++++++++++++++++		++
Separation 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.			 		
West Assert 1998 1999 1999 1999 1999 1999 1999 199	22 Excavate Rock ^	106 - 0			
54 Periode Section 1. 1		98 - 0	 		
2. Stretches in the service of the s					
9. Payshary shore protective and the attractive and				╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒	
# Material Properties	26 Piling/Walling - Some 60 Nos. Bored Piles ^	101 142.0 53	53 53 53		
2. Supersyment files 1. Supers					+ $+$ $+$ $+$ $+$
2. Supermonthet true. We shall see the see the see that the see the se			0 0 0 0 0	92 32	+
	30 Permanent Shaft Lining				
3. Apperlia members of the control o					+
3. Superpose pose pose pose pose pose pose pose	33 Bulk Excavation-Soft for Vent Ducts	94 146.0 46			
E. Montholiste M. 100 M					+ $+$ $+$ $+$ $+$
West As 3:			 		
9		96 146.0 48		48 48 48 48 48 48 48 48 48 48 48 48 48 4	
93					
Exposiming Stand Allow Note Plane 1 191 191 191 191 191 191 191 191 191			19		+
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- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

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 Noise Exceedance

 The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: UNI 15 - Yick Fung Garden (Block A)

Month Memory 1	NSR: UNI 15 - Yick Fung Garden (Block A)		2009	2010	2011	2012	2013	2014
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Remarks:

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Noise Exceedance

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NSR: UNI 16 - Sunglow Bldg

Demolition of Whitty Public Tollet Block ^ 101	, I+e	_ Feb Mar	Apr May		Jul Aug Se	ep Oct No	ov Dec .ls	an Feb Ma	Apr Ma	2010 / Jun Jul /	ua Sen ∩	ct Nov D	ec Jan F	eb Mar An	r Mav	Jun Jul Aug Sep	Oct No	v Dec Jan	Feb Mar A	or Mav	2012 Jun Jul	Aug Sen	Oct Nov De	c Jan Fel	b Mar A		013 Jul Aud	a Sen ∩	ct Nov D	ec Jan Fe	Mar Anr	2014 May Jun	Jul Aua !
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- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Slant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.
- No PMEs used at surface

 ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 22, act. 40 & 41 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 36, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

Noise Exceedance

NSR: UNI 18 - Wah Po Building

Non. ON 10 - Wall FO Building			2009					2010					2011				20					2013					2014	
Act No. Construction Element	SWL Dist ² SPL Feb Mar Ap		un Jul <i>I</i> 5 6	Aug Sep 0	oct Nov De	ec Jan Feb M 1 12 13 1			g Sep O				y Jun Jul Aug 5 3 29 30 31			eb Mar Apr M 37 38 39				ct Nov Dec Jan F 5 46 47 48 4					ov Dec Jan 8 59 60		pr May Jun Jul 3 64 65 66	
Works Area J2 - UNI Entrance B1																												
1 Possession of site	93 - 0					0																						
Demolition of Whitty Public Toilet Block ^	101 - 0								0 0				\bot							\bot								
3 Piling/Walling ^ 4 Bulk Excavation-Soft	100 - 0 94 - 0	-		++	++	+++	+	+++	0 0	0 (++	++++		+++	+++	+		++	++++	++	+++	++	+	+		+++	++
5 Bulk Excavation-weak Rock	95 - 0		1 1		++	+ + +	+ +	+++	0 0		0 0	0	++++		+					++++	++			1 1				
6 Excavation - Rock	104 - 0											0																
7 Construct Ground Level Entrance	95 - 0				\perp	+	\perp		\perp	\perp	\perp		+		0 0	0 0 0	0 0	0 0	0	+	\perp	+					+	
Works Area J - UNI Entrance B2																												
8 Possession of site / Mobilization	98 - 0	0											++++							++++								
9 Demolition of Hill Road Rest Garden ^ 10 Piling/Walling ^	101 - 0	+		0 0	0 0		++	+++	++		+		++++		+++	+++	+		+ +	++++	++	+++	++-	+	+	-++	+	+
11 Bulk Excavation-weak Rock	97 - 0				0 0	0		+++				+ +	1 1 1							 		+ + +	+ +					
12 Excavation - Rock	99 - 0					0 (
13 Excavate adit and running tunnel 14 Concrete Adit	101 - 0	4	+			+	+	0 0	0 0	0	+		++++						 	++++	+	+++		+			+++	+
14 Concrete Adit 15 Construct Ground Level Entrance	98 - 0		-		+++	+++	+++	+++	+++			+++	++++		0 0	0 0 0	0 0	0 0	0	 	+++	+++	+++	+				-
16 Station Fitout	96 - 0														0 0	0 0 0	0 0	0 0	0									
Works Area H - UNI Entrance C2																												
17 Possession of site	99 - 0										0																	
18 Utilities Diversions	99 - 0											0 0																
19 Piling/Walling	101 - 0	$+ \top$	$+$ \Box	$+ \mathbb{T}$	$+\Gamma$	++	$+\Gamma$	++T	$+\Gamma$	$+\mathbb{I}$	++	$+\Gamma$	0 0	$\perp \Gamma$	+	+	$+\Box$		$+$ \square	$++\Box$	$+ \mathbb{T}$	++T	$+$ \square	$+\Gamma$	$+\Box$	\Box	++T	$+\Box$
20 Bulk Excavation-Soft ^ 21 Bulk Excavation-weak Rock ^	94 - 0	++	++	++	++	+++	++	+++	++	++	+++	++	0	0 0 0	0 0	+++	+		++	+++	++	+++	++	++	+	$\vdash \vdash \vdash$	+++	++
22 Excavate Rock ^	106 - 0	++	+	++	++	+ + +	+ +	+ + +	+ +	++	1	++			0 0		+		++	 	++	 	+ +	++	 			+ +
23 Construct Ground Level Entrance	98 - 0											ш					0 0	0 0	0 (
Works Area I - UNI Entrance C1 + VS + Chiller																												
24 Possession of site	100 - 0				$\overline{}$	0 0	0		$\overline{}$	$\overline{}$	$\overline{}$				$\overline{}$		\neg				$\overline{}$					-		
25 Utilities Diversions	100 - 0			\Box		(0						\bot		\Box													
26 Piling/Walling - Some 60 Nos. Bored Piles ^ 27 Bulk Excavation-Soft ^	101 - 0 96 - 0	+	+		-	+++	+ +	0 0	0 0		+		+ + + +		+++	+++			+ +	 		+++	++-	+				+
28 Bulk Excavation-soit ** 28 Bulk Excavation-weak Rock ^	100 - 0	+ +	+++			++++	+++		0 0	0 (0 0	0 0 0			++++	+++			+	++++	+	+++	+ +	+			+++	+ +
29 Excavate Rock Shaft *	0									0 (0 0	0 0 0																
30 Permanent Shaft Lining	98 - 0													0 0						+	\bot	\bot						
31 Construct above-ground Lift Shaft 32 Sheet Piling for Vent Ducts	98 - 0 94 - 0	+	+			+++	+	+++	+		+		++++		+		0 0		++	++++	+	+++	+ +	+			+++	+
33 Bulk Excavation-Soft for Vent Ducts	94 - 0	1 1	1 1	- 								1 1					0	0		1111			1 1					1 1
34 Horizontal Duct	94 - 0																	0	v									
35 Concreting Vent Ducts and Vent Building 36 Reinstatement	98 - 0 108 - 0		+++		+	+++	+ +	+++	+		+		++++		+++				(0 0	0	+	++-	+				
37 Station Fitout	96 - 0	+ +	+++			++++	+++		+			+++	++++		++++	+++			+	0 0	0	0 0 0 0	0 0	0 0	0 0	0	+++	+ +
Works Area J3 - UNI Entrance A																												
38 Possession of site	99 - 0					0																						
39 Utilities Diversions	99 - 0						0	0																				
40 Piling/Walling - Some 40 Nos. Bored Piles ^	101 - 0								0	0 ()																	
41 Bulk Excavation-Soft ^ 42 Bulk Excavation-weak Rock ^	95 - 0 98 - 0					+++	+	+++	-	(0 0	0 0 0	0 0 0		++++					++++		+++		+				
43 Excavate Rock *	0		1 1		++	+ + +	+ +	+++	+ +		0 0	0 0 0	0 0 0		+					++++	++			1 1				
44 Horizontal Adit ^	100 - 0												0	0 0 0	0													
45 Sheet Piling	94 - 0	4	+			+	+				0 0	0 0	++++		+	+++			 	++++	+	+++		+			+	+
46 Bulk Excavation-Soft for Lower Ground Lobby 47 Construct Lower Ground Lobby	93 - 0 98 - 0		-		+++	+++	+++	+++	+++		- 	0 0	0		++++	++++	-		++	 	+++	+++	+++	+				-
48 Permanent Shaft Lining ^	98 - 0														0 0	0 0 0	0 0											
49 Construct above-ground Lift Shaft ^	98 - 0												\bot \bot \bot \bot				0	0 0		\bot								
50 Reinstatement 51 Station Fitout	99 - 0	++	++	++	++	+++	++	+++	++	++	+++	++	+++	++	0	U	+		0 (++	+++	++	++	+	\vdash	+++	++
Works Area J1 - UNI Vent Shaft VS Y	30 0																			· ·								
52 Possession of site	100 - 0		+											0							++							
52 Possession of site 53 Utilities Diversions	99 - 0	++	++	++	++	+++	++	+++	++	++	+++	+	 	0 0	+++		+	\vdash	++	+++	++	+++	++	++	+ + +		+++	+
54 Piling/Walling ^	101 - 0														0 0													
55 Bulk Excavation-Soft ^	94 - 0	+	+	\perp	+	++	+	+++	\perp	44	++	+	+++	\perp	0		$+$ \downarrow		+	+++	\bot	+++	+	+	+		+++	11
56 Bulk Excavation-weak Rock ^ 57 Excavate Rock Shaft *	100 - 0	++	++	+	+	+++	+	+ + +	+	++	+++	+	+ + + +		0		+		++	+ + + +	++	+++	++-	++	+ + +			+++
58 Horizontal Adit ^	100 - 0		士士		1					士士						0 0	0				士士							
59 Permanent Shaft Lining ^	95 - 0	\Box															0 0	0							$\Box\Box$			
60 Concreting of above-ground Vent Shaft	98 - 0 99 - 0	++	++	++	++	++	++	+++	++	++	+++	++	+++	+	++	+++	+	0	0 (0	++	+++	+	++	0		+++	++-
61 Reinstatement	JJ - U	-																							U			
61 Reinstatement Works Area G - UNI Construction Shaft (at Kenned	vi i i i																											
Works Area G - UNI Construction Shaft (at Kenned Town Praya)							1					$\perp \perp \perp$	$++\mp$	\bot								1 1						1 1
Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^	99 250.0 46	46 4	6 46				+	+++												+ + + +		+++		+			+++	+
Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^	99 250.0 46 104 250.0 51	46 4		46 51 51 5		5	##		+ +		+++	+++	+ + + +		+++		+		H		+	+++						
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Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Hock (Horizontal Adit) ^	99 250.0 46 104 250.0 51 97 250.0 45 103 250.0 50 101 250.0 48	46 4			45 4 5		8 48 48																					
Works Area G - UNI Construction Shaft (at Kenned) Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil	99 250.0 46 104 250.0 51 97 250.0 45 11 101 250.0 50 101 250.0 48 1103 250.0 50	46 4			45 4 5	0 50 50	8 48 48		0 50 50	0 50 5	0 50 50 5	50 50 5	0 50 50 50	50 50 5	0 50 50 9													
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Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout	99 250.0 46 104 250.0 51 97 250.0 45 103 250.0 50 101 250.0 48 103 250.0 50 101 250.0 48 103 250.0 47 101 250.0 48	46 4			45 4 5	0 50 50	8 48 48		0 50 50	0 50 5	0 50 50 5	50 50 5	0 50 50 50	50 50 5				48 48	48 4	8 48 48 48 4	18 48 4		3 43 43	43				
Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Hortzontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Fitout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	99 250.0 46 1104 250.0 51 97 250.0 45 103 250.0 50 1101 250.0 48 1103 250.0 50 1100 250.0 47 101 250.0 48 96 250.0 43 116 62.1 75	46 4			45 4 5	0 50 50 8 48 48 4 4 48 4 75		50		0 50 5	0 50 50 5	50 50 5	0 50 50 50	50 50 51				48 48	48 4	8 48 48 48 4	18 48 4		3 43 43	43				
Works Area G - UNI Construction Shaft (at Kenned) Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Filout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	99 250.0 46 104 250.0 51 97 250.0 45 103 250.0 50 101 250.0 48 103 250.0 50 100 250.0 47 101 250.0 48 96 250.0 43 116 62.1 75 113 62.1 72	46 4			45 4 5	0 50 50 8 48 48 4 4 48 4 75			2						47	47 47 47	48		48 4	8 48 48 48 4	18 48 4		3 43 43	43				
Works Area G - UNI Construction Shaft (at Kenned Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Filout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization	99 250.0 46 1104 250.0 51 1 97 250.0 45 1103 250.0 50 1101 250.0 48 1103 250.0 50 1100 250.0 47 101 250.0 48 116 62.1 75 1116 62.1 75 113 62.1 72 113 62.1 72			51 51 5	45 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	0 50 50 8 48 48 4 75 75 7	2 72 72	2 72 72 72	2 72	2 72 7	2 72 72 7	72 72 72	2 72 72 72	72 72 72	47 4	47 47 47	72 72	72				43 43						
Works Area G - UNI Construction Shaft (at Kenned) Town Praya) 62 Possession of site / Mobilization ^ 63 Piling/Walling - Some 40 Nos. Bored Piles ^ 64 Bulk Excavation-Soft ^ 65 Bulk Excavation-Weak Rock ^ 66 Excavation - Rock (Horizontal Adit) ^ 67 Mucking-out / Transporting of spoil 68 Construction Access 69 Station Filout 70 Backfill Works Area E & F - PCWA Barging Point 71 Possession of site / Mobilization 72 Construction	99 250.0 46 1104 250.0 51 1 97 250.0 45 1103 250.0 50 1101 250.0 48 1103 250.0 50 1100 250.0 47 101 250.0 48 116 62.1 75 1116 62.1 75 113 62.1 72 113 62.1 72			51 51 5	45 4	0 50 50 8 48 48 4 75 75 7	2 72 72	2 72 72 72	2 72	2 72 7	2 72 72 7	72 72 72	2 72 72 72	72 72 72	47 4	47 47 47	72 72	72		8 48 48 48 48		43 43						

Remarks:

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface
- **Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 42 & 44 in month 30, act. 42 & 44 in month 30, act. 42 & 44 in month 41, act. 54, 55 & 56 in month 40, act. 54 & 59 in month 40, act. 62 & 63 in month 41, act. 54 & 66 in month 11.

Noise Exceedance

NSR: UNI 19 - Jade Court (Block A)

Mathematic Definition in Property and Company of the Company of th	NSR: UNI 19 - Jade Court (Block A)	·	2009	2010 2011 2012 2013 2014
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Exceedance		Exceedance		<u> </u>

Remarks:

- 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
- 2. Slant distance (m)
- 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface
- **Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 21, act. 42 & 44 in month 31, act. 42 & 44 in month 31, act. 26 & 27 in month 20, act. 27 & 28 in month 20, act. 41 & 42 in month 23, act. 41 & 42 in month 24, act. 44 & 48 in month 35, act. 48 & 49 in month 41, act. 54, 55 & 56 in month 40, act. 58 & 59 in month 40, act. 62 & 63 in month 7, and act. 64, 65 & 66 in month 11.

Noise Exceedance

Construction Noise Impact Assessment – SYP Station

Works Area N1 - SYP Entrance A1 & A2

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mini backhoe	CNP082	1	94	50%	Movable Noise Barrier*	5	86
Truck	BS C9/39	1	103	30%			98
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15	93
Lorry Crane	CNP145	1	105	30%	Movable Noise Barrier*	5	95
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85
						Total	101

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mini backhoe	CNP082	1	94	50%			91
Truck	BS C9/39	1	103	50%			100
Air Compressor	CNP002	3	102	100%	Enclosure/Shed*	15	92
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15	93
						Total	102

Demolition of Existing Building

3 3								
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Hydraulic Breaker	BS C8/13	2	110	80%				112
Mini backhoe	CNP082	3	94	50%			96	
Truck	BS C9/39	1	103	50%			100	
						Total	101	112

Install sheet piles and bored piles at playground

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10			100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Generator, super silenced	CNP103	1	95	100%				95	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Gikken Pile Drawer	other Ref.	1	100.8	40%			97		
						Total	97	100	100

Excavate to top slab level

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Backhoe	BS C3/97	1	105	70%	Movable Noise Barrier*	5	98	
Truck	BS C9/39	2	103	30%				101
Water pump, submersible (electric)	CNP283	2	85	100%			88	
						Total	99	101

Build up fill platform to +7mPD

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97
Roller, vibratory	BS C8/30	1	101	100%			101
						Total	102

Concrete roof slab

Concrete 1001 Slab							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Concrete Lorry Mixer	BS C6/23	2	100	30%			98
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Poker, vibratory, hand-held	BS C6/40	4	98	100%	Movable Noise Barrier*	10	94
						Total	101

Works Area N1 - SYP Entrance A1 & A2

Install bored piles and H-piles for shaft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pile Rig	BS C11/2	1	112	70%	Fabric [#]	10		100
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	
Generator, super silenced	CNP103	1	95	100%			95	
Concrete Lorry Mixer	BS C6/23	1	100	30%			95	
						Total	98	100

Excavate under top slab level

						Total	101	101
Crane	BS C7/114	1	101	30%			96	
Ventilation fan	CNP241	1	108	100%	Silencer	15	93	
Water pump, submersible (electric)	CNP283	2	85	100%			88	
Truck	BS C9/39	2	103	30%				101
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97	
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL

Excavate to tunnel level

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Hand Held Breaker	CNP024	1	108	50%	Movable Noise Barrier*	10	95		
Backhoe	BS C3/97	1	105	80%	Movable Noise Barrier*	5	99		
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
Water pump, submersible (electric)	CNP283	2	85	100%			88		
Truck	BS C9/39	1	103	30%					98
Rock Drill	CNP182	1	123	35%	Acoustic Enclosure **	20		98	
Steel Bender	CNP021	1	90	50%			87		
Welder	other Ref.	1	78	50%			75		
Crane	BS C7/114	1	101	30%					96
	•					Total	102	98	100

Concreting Air Compressor Room and Backfill top slab

Controlling Am Compression Recon	and Buokin	i top oldb					
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Concrete Lorry Mixer	BS C6/23	2	100	30%			98
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15	94
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Poker, vibratory, hand-held	BS C6/40	4	98	100%	Movable Noise Barrier*	10	94
						Total	101

Construct Noise Insulating Cover and Install Compressed Air Equipment

Construct Noise insulating Cover	anu mstan C	onipiesseu	All Equipili	CIII			
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85
Mobile Crane	BS C7/114	1	101	70%	Movable Noise Barrier*	5	94
Truck	BS C9/39	1	103	30%			98
-				· · · · · · · · · · · · · · · · · · ·		Total	100

Tunnel Construction

runner construction							
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	5	102	100%	Noise Insulating Cover ^	20	89
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
Water Cooling Tower	other Ref.	5	105	100%	Temporary Barrier	10	102
						Total	103

Works Area N1 - SYP Entrance A1 & A2

Construct Box Tunnel Adit

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Electric Winch	CNP262	1	95	10%	Noise Insulating Cover ^	20	65
Air Compressor	CNP002	2	102	100%	Noise Insulating Cover ^	20	85
Concrete Lorry Mixer	BS C6/23	2	100	30%			98
Concrete pump	CNP047	1	109	100%	Noise Insulating Cover ^	20	89
Poker, vibratory, hand-held	BS C6/40	6	98	100%	Noise Insulating Cover ^	20	86
Water pump, submersible (electric)	CNP283	2	85	100%	Noise Insulating Cover ^	20	68
Ventilation fan	CNP241	2	108	100%	Silencer	15	96
Truck	BS C9/39	2	103	30%			101
						Total	104

Construct Escalator Well at playground

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Hand Held Breaker	CNP024	1	108	50%	Noise Insulating Cover ^	20	85	
Backhoe	BS C3/97	2	105	50%	Noise Insulating Cover ^	20	85	
Ventilation fan	CNP241	1	108	100%	Silencer	15	93	93
Water pump, submersible (electric)	CNP283	2	85	100%	Noise Insulating Cover ^	20	68	
Truck	BS C9/39	2	103	30%				101
Crane	BS C7/114	1	101	30%	Noise Insulating Cover ^	20	76	
_	•					Total	94	101

Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Mobile Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5	91
Air Compressor	CNP002	2	102	100%	Noise Insulating Cover ^	20	85
Concrete Lorry Mixer	BS C6/23	2	100	30%			98
Concrete pump	CNP047	1	109	100%	Noise Insulating Cover ^	20	89
Poker, vibratory, hand-held	BS C6/40	6	98	100%	Noise Insulating Cover ^	20	86
Water pump, submersible (electric)	CNP283	1	85	100%	Noise Insulating Cover ^	20	65
						Total	99

Note:

Other Ref. : The SWL of welder was made reference to the Spur Line EIA

Other Ref. : The SWL of water cooling tower was made reference to the "Good Practices on Ventilation System Noise Control"

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant

and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] With reference to the Kowloon Southern Link EIA Report, a noise insulating cover can achieve an overall noise reduction of 22dB(A). Typical configuration of acoustic panels that can achieve this insulation requirement is 1.5mm GS outer skin, 100mm acoustic infill (e.g. fibreglass) with 80kg/m3, and an inner perforated sheet. As a conservative approach, a noise reduction of 20dB(A) is assumed in this calculation.

^{**} According to Table B.1 of BS5228: Part 1: 1997, rock drill in portable or fixed acoustic enclosure with suitable ventilation could achieve a noise reduction of 20dB(A).

Works Area M1 - SYP Entrance B1 & B2

Demolition of Existing Building

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)	dB(A)
Concrete Corer	CNP042	1	117	80%	Enclosure/Shed*	15		101		
Saw, wire	CNP205	1	101	80%					100	
Concrete Crusher	CNP055	1	103	80%						102
Backhoe	BS C3/97	1	105	50%			102			
Truck	BS C9/39	1	103	30%			98			
						Total	103	101	100	102

Piling/Walling

9									
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Pilling, auger	CNP167	2	114	70%	Fabric [#]	10		105	
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90		
Crane	BS C7/114	1	101	30%			96		
Truck	BS C9/39	1	103	30%					98
_						Total	97	105	98

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Noise Insulating Cover ^	20		83	
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover ^	20	82		
Ventilation fan	CNP241	2	108	100%	Silencer	15		96	
Water pump, submersible (electric)	CNP283	2	85	100%			88		
Truck	BS C9/39	1	103	60%					101
Crane	BS C7/114	1	101	60%			99		
						Total	99	96	101

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Noise Insulating Cover ^	20		83	
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover ^	20	82		
Ventilation fan	CNP241	2	108	100%	Silencer	15		96	
Water pump, submersible (electric)	CNP283	2	85	100%			88		
Truck	BS C9/39	1	103	60%					101
Crane	BS C7/114	1	101	60%			99		
						Total	99	96	101

Excavate Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Noise Insulating Cover ^	20		83	
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover ^	20	82		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Water pump, submersible (electric)	CNP283	2	85	100%				88	
Rock Drill	CNP182	1	123	70%	Noise Insulating Cover ^	20		101	
Truck	BS C9/39	1	103	30%					98
Crane	BS C7/114	1	101	30%			96		
	<u> </u>		·			Total	99	102	98

Concrete vertical shaft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15			94
Poker, vibratory, hand-held	BS C6/40	5	98	100%	Movable Noise Barrier*	10	95		
Water pump, submersible (electric)	CNP283	1	85	100%			85		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Crane	BS C7/114	1	101	50%	Movable Noise Barrier*	5	93		
			•	•		Total	100	98	94

Works Area M1 - SYP Entrance B1 & B2

Construct Ground Level Entrance

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Mobile Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15			94
Poker, vibratory, hand-held	BS C6/40	3	98	100%	Movable Noise Barrier*	10	93		
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
						Total	96	99	94

Station Fitout

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	70%			104
						Total	104

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of

¹⁰ dB(A) would be achieved with the use of noise insulating fabric.

[^] With reference to the Kowloon Southern LInk EIA Report, a noise insulating cover can achieve an overall noise reduction of 22dB(A). Typical configuration of acoustic panels that can achieve this insulation requirement is 1.5mm GS outer skin, 100mm acoustic infill (e.g. fibreglass) with 80kg/m3, and an inner perforated sheet. As a conservative approach, a noise reduction of 20dB(A) is assumed in this calculation.

Works Area L1 - SYP Entrance B3

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15	93
Truck	BS C9/39	1	103	30%			98
						Total	99

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Mini backhoe	CNP082	1	94	50%			91	
Truck	BS C9/39	1	103	30%			98	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15		93
	•	•			•	Total	99	94

Piling/Walling

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Pilling, auger	CNP167	1	114	70%	Fabric [#]	10		102
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15		90
Crane	BS C7/118	1	99	30%				94
Truck	BS C9/39	1	103	30%				98
Water pump, submersible (electric)	CNP283	1	85	100%			85	
Generator, super silenced	CNP103	1	95	100%			95	
						Total	95	104

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	1	106	50%	Movable Noise Barrier*	10		93	
Backhoe	BS C3/97	1	105	50%	Movable Noise Barrier*	5	97		
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
Water pump, submersible (electric)	CNP283	2	85	100%				88	
Truck	BS C9/39	2	103	30%					101
Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
						Total	98	96	101

Installation of Pipe Pile for Soft Ground Tunnel

						Total	98	92
Ventilation fan	CNP241	2	108	100%	Silencer	15	96	
Grout Pump	CNP106	1	105	20%	Deck Over	20	78	
Grout Mixer	CNP105	1	90	30%	Deck Over	20	65	
Crawler Crane	BS C7/112	1	102	30%	Movable Noise Barrier*	5	92	
Generator, super silenced	CNP103	1	95	100%	Movable Noise Barrier*	10	85	
Water pump, submersible (electric)	CNP283	1	85	100%			85	
Air Compressor	CNP002	1	102	100%	Deck Over	20	82	
Pilling, auger	CNP167	1	114	60%	Deck Over	20		92
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL

Excavation along soft ground tunnel

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Backhoe	BS C3/97	1	105	50%	Deck Over	20		82
Truck	BS C9/39	1	103	30%				98
Water pump, submersible (electric)	CNP283	1	85	100%				85
Ventilation fan	CNP241	2	108	100%	Silencer	15	96	
Shotcrete Pump	CNP047	1	109	100%	Deck Over	20	89	
Electric Winch	CNP262	1	95	100%	Deck Over	20	75	
Crane	BS C7/114	1	101	30%			96	
						Total	99	98

Works Area L1 - SYP Entrance B3

Concrete Soft Ground Tunnel

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Mobile Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15			94
Poker, vibratory, hand-held	BS C6/40	5	98	100%	Movable Noise Barrier*	10	95		
Water pump, submersible (electric)	CNP283	1	85	100%					85
Ventilation fan	CNP241	1	108	100%	Silencer	15			93
						Total	95	99	97

Concrete Escalator Inclined

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Mobile Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15		90	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	30%	Enclosure/Shed*	15			89
Poker, vibratory, hand-held	BS C6/40	5	98	100%	Movable Noise Barrier*	10	95		
Water pump, submersible (electric)	CNP283	1	85	100%			85		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Grout Mixer	CNP105	1	90	30%	Movable Noise Barrier*	5			80
Grout Pump	CNP106	1	105	20%	Enclosure/Shed*	15			83
						Total	99	99	90

Construct Ground Level Entrance

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Mobile Crane	BS C7/114	1	101	30%	Movable Noise Barrier*	5		91	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	30%	Enclosure/Shed*	15			89
Poker, vibratory, hand-held	BS C6/40	3	98	100%	Movable Noise Barrier*	10	93		
Water pump, submersible (electric)	CNP283	1	85	100%			85		
						Total	93	99	89

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant

and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

Works Area M3 - SYP Entrance C

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15	93
Truck	BS C9/39	1	103	30%			98
						Total	99

Demolition of Existing Building

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Hydraulic Breaker	BS C8/13	1	110	30%				105	
Concrete Crusher	CNP055	1	103	70%					101
Backhoe	BS C3/97	2	105	50%			105		
Truck	BS C9/39	2	103	30%			101		
						Total	106	105	101

Piling/Walling

Powered Mechanical Equipment	IM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	l otal SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Pilling, auger	CNP167	1	114	70%	Fabric [#]	10		102	
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90		
Crane	BS C7/114	1	101	30%			96		
Truck	BS C9/39	2	103	30%					101
						Total	97	102	101

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWI
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%	Noise Insulating Cover ^	20		86	
Backhoe	BS C3/97	2	105	50%	Noise Insulating Cover ^	20	85		
Ventilation fan	CNP241	2	108	100%	Silencer	15		96	
Water pump, submersible (electric)	CNP283	2	85	100%	Noise Insulating Cover ^	20	68		
Truck	BS C9/39	2	103	30%					101
Crane	BS C7/114	1	101	30%					96
Concrete Lorry Mixer	BS C6/23	1	100	20%			93		
						Total	94	96	102

Bulk Excavation-weak Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%	Noise Insulating Cover ^	20		86	
Backhoe	BS C3/97	2	105	50%	Noise Insulating Cover ^	20	85		
Ventilation fan	CNP241	2	108	100%	Silencer	15		96	
Water pump, submersible (electric)	CNP283	2	85	100%	Noise Insulating Cover ^	20	68		
Truck	BS C9/39	2	103	30%					101
Crane	BS C7/114	1	101	30%					96
Concrete Lorry Mixer	BS C6/23	1	100	20%			93		
						Total	94	96	102

Excavate Rock

						Total	96	102	102
Crane	BS C7/114	1	101	30%					96
Truck	BS C9/39	2	103	30%					101
Rock Drill	CNP182	2	123	35%	Noise Insulating Cover ^	20		101	
Water pump, submersible (electric)	CNP283	2	85	100%	Noise Insulating Cover ^	20		68	
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover ^	20	82		
Breaker	BS C8/12	2	106	80%	Noise Insulating Cover ^	20		88	
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL

Works Area M3 - SYP Entrance C

Excavate Rock Adit (Hard Rock Excavation)

						Total	103	94
Concrete Lorry Mixer	BS C6/23	1	100	20%			93	
Shotcrete Pump	CNP047	1	109	20%	Noise Insulating Cover ^	20	82	
Truck	BS C9/39	2	103	30%			101	
Crawler mounted rock drill trucks	CNP182	1	123	35%	Noise Insulating Cover ^	20	98	
Water pump, submersible (electric)	CNP283	1	85	100%				85
Ventilation fan	CNP241	1	108	100%	Silencer	15		93
Backhoe	BS C3/97	1	105	50%	Noise Insulating Cover ^	20		82
Breaker	BS C8/12	1	106	70%	Noise Insulating Cover ^	20		84
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL

Concrete vertical shaft

Concrete vertical shart									
Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15		94	
Poker, vibratory, hand-held	BS C6/40	5	98	100%	Movable Noise Barrier*	10			95
Water pump, submersible (electric)	CNP283	1	85	100%			85		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Crane	BS C7/114	1	101	50%	Movable Noise Barrier*	5	93		
						Total	98	100	95

Construct Ground Level Entrance, Plant Room and Vent Shaft

Dawared Machanical Equipment	TM Ref./	No. of Items	CM/L/Itam	On-time	Noise Mitigation	Noise Barrier	Tatal CM/I	Total CMI	Total CMI
Powered Mechanical Equipment	I IVI Ret./	No. of items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Mobile Crane	BS C7/114	1	101	30%				96	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87	
Concrete Lorry Mixer	BS C6/23	2	100	30%				98	
Concrete pump	CNP047	1	109	100%	Enclosure/Shed*	15			94
Poker, vibratory, hand-held	BS C6/40	3	98	100%	Movable Noise Barrier*	10	93		
Ventilation fan	CNP241	1	108	100%	Silencer	15	93		
						Total	96	100	94

Station Fitout

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Truck	BS C9/39	2	103	100%			106
						Total	106

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] With reference to the Kowloon Southern LInk EIA Report, a noise insulating cover can achieve an overall noise reduction of 22dB(A). Typical configuration of acoustic panels that can achieve this insulation requirement is 1.5mm GS outer skin, 100mm acoustic infill (e.g. fibreglass) with 80kg/m3, and an inner perforated sheet. As a conservative approach, a noise reduction of 20dB(A) is assumed in this calculation.

Works Area M - KGV Construction Shaft

Possession of site

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)
Air Compressor	CNP002	2	102	100%	Enclosure/Shed*	15	90
Hand Held Breaker	CNP024	1	108	50%			105
						Total	105

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Mini backhoe	CNP082	1	94	50%			91	
Truck	BS C9/39	1	103	30%			98	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Hand Held Breaker	CNP024	2	108	50%				108
						Total	99	108

Piling/Walling

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Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Pilling, auger	CNP167	1	114	70%	Fabric [#]	10		102	
Air Compressor	CNP002	4	102	100%	Enclosure/Shed*	15	93		
Crane	BS C7/114	1	101	30%			96		
Truck	BS C9/39	2	103	30%					101
Rock Drill	CNP182	1	123	70%	Acoustic Enclosure [^]	20	101		
	•		•	•		Total	103	102	101

Bulk Excavation-Soft

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%				106	
Backhoe	BS C3/97	2	105	50%			105		
Ventilation fan	CNP241	4	108	100%	Silencer	15		99	
Water pump, submersible (electric)	CNP283	2	85	100%			88		
Truck	BS C9/39	4	103	30%					104
Crane	BS C7/114	2	101	30%			99		
		•	•	•	•	Total	106	107	104

Excavate Rock

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Breaker	BS C8/12	2	106	50%				106	
Backhoe	BS C3/97	2	105	50%			105		
Ventilation fan	CNP241	2	108	100%	Silencer	15	96		
Water pump, submersible (electric)	CNP283	2	85	100%				88	
Rock Drill	CNP182	1	123	70%	Acoustic Enclosure^	20		101	
Truck	BS C9/39	3	103	30%					103
Crane	BS C7/114	1	101	30%			96		
						Total	106	107	103

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

[^] According to Table B.1 of BS 5228: Part 1: 1997, rock drill in portable or fixed acoustic enclosure with suitable ventilation could achieve a noise reducttion of 20dB(A).

Works Area O1, O2 and O3 - Ground Treatment

Utilities Diversions

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Mini backhoe	CNP082	1	94	50%			91	
Truck	BS C9/39	1	103	30%			98	
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15		87
Hand Held Breaker	CNP024	2	108	50%	Enclosure/Shed*	15		93
						Total	99	94

Ground Treatment

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)
Drill rig	CNP072	2	110	50%	Fabric [#]	10	100	
Truck	BS C9/39	1	103	30%			98	98
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87	87
Grout Mixer	CNP105	3	90	80%				94
Grout Pump	CNP106	3	105	60%	Enclosure/Shed*	15		93
						Total	102	100

Reinstatement

Powered Mechanical Equipment	TM Ref./	No. of Items	SWL/Item	On-time	Noise Mitigation	Noise Barrier	Total SWL	Total SWL	Total SWL
(PME)	other Ref.		dB(A)	%	Measure	Reduction	dB(A)	dB(A)	dB(A)
Truck	BS C9/39	1	103	30%				98	
Power Rammer	CNP169	1	108	100%	Fabric [#]	10		98	
Roller, vibratory	BS C8/30	1	101	100%					101
Air Compressor	CNP002	1	102	100%	Enclosure/Shed*	15	87		
Concrete Lorry Mixer	BS C6/23	1	100	30%			95		
Poker, vibratory, hand-held	BS C6/40	2	98	100%	Movable Noise Barrier*	10	91		
						Total	97	101	101

Remarks: Utilities diversions and ground treatment would not be carried out simultaneously, thus there would not be any cumulative effect for these two activities.

^{*} With reference to paragraph 4.5 of EIAO Guidance Note No. 9/2004, movable noise barrier would achieve a noise reduction of 5dB(A) and 10 dB(A) for movable plant and stationary plant respectively, while the use of enclosure/shed would achieve 15 dB(A) noise reduction.

[#] With reference to MTRC Contract C4420 Tsim Sha Tsui Modification Noise Assessment Report for Variation of Environmental Permit, July 2003, noise reduction of 10dB(A) would be achieved with the use of noise insulating fabric.

NSR: SYP1 - No. 18-20 Eastern St																																					
Act No. Construction Element	SWL	Dist	2 SP	L Feb	Mar Apr	Mav Ju	2009 n Jul Au	ua Sep (Oct Nov	Dec Jan	Feb Mai	r Apr	20 ⁻ Mav Jun		a Sep	Oct Nov	Dec Jan	eb Ma	ar Apr Mav	2011 Jun Jul A	Aua Sep C	oct Nov	Dec Jan	Feb Mar Apr		012 1 Jul Aug S	ep Oct Nov De	ec Jan Fe	b Mar Ap	r Mav .	2013 Jun Jul Aua	Sep Oct	Nov Dec	Jan Fe		2014 Mav Jun	Jul Aua Sei
		2.00	-	1	2 3	4 5	6 7	7 8	9 10	11 12	13 14	15	16 17	18 19	20	21 22	23 24	25 2	6 27 28	29 30	31 32 3	33 34	35 36	37 38 39	40 41	42 43 4	4 45 46 4	7 48 49	9 50 51	52	53 54 55	56 57	58 59	60 6	1 62 63	64 65	66 67 68
Works Area N1 - SYP Entrance A1 & A2																																					
Possession of site Utilities Diversions		12.6 12.6						74	_																												
Demolition of Existing Building		45.0							75 75	74 74	74 74																			+							
4 Install sheet piles and bored piles at playground [^]	100	12.6	73										73 73	73 73	73																						
5 Excavate to top slab level^		12.6													74																						
6 Build up fill platform to +7mPD 7 Concrete roof slab		50.0 12.6										63			-	74	-					-															
8 Install bored piles and H-piles for shaft		12.6										73	73 73	73		74																					
Excavate under top slab level		12.6														74																					
10 Excavate to tunnel level		12.6											75	75 75	75	75 75																					
11 Concreting Air Compressor Room and Backfill top slab	_	12.6						+								74		70 7				+															
12 Construct Noise Enclosure and Install Compressed Air Equipment	100																/3	73 7																			
13 Tunnel Construction 14 Construct Box Tunnel Adit		64.5 12.6																	62 62					62 62 62 77 77 77			2 62 62 63	2		+							
15 Not Used	-	-																		- 17	., ,, ,	1	,, ,,	77 77	77 77												
16 Construct Escalator Well at playground		12.6	74																									74 74	1 74 74	1							
Construct Ventilation Shaft and Plant Room / Construct Ground Leve	el 99	12.6	72																								72 7	2 72									
Works Area M1 - SYP Entrance B1 & B2																																					
			0																																		
18 Move the existing SYP Cooked Food Market to proposed location *		-	1																		$\perp \perp \perp$												$\sqcup \sqcup \sqcup$				
19 Demolition of Existing Building^ 20 Piling/Walling^		234.0					++	++				++		-	+		49 49	49 4		53 53	52	-	+		+	+++	+	+	++	++		\vdash	+++	$\vdash \vdash$	+	\rightarrow	
20 Plling/Walling* 21 Bulk Excavation-Soft^		234.0			-		++	+	-			+	\dashv	+	+	+	+	+	33 33	33 33		14 44	44			+++	+++			++		1	+ + -	\vdash		+	
22 Bulk Excavation-weak Rock^	98	234.0) 46																				46 46	46 46 46													
23 Excavate Rock [^]		234.0			_ _		+	\bot				+1	\perp	_ _	+1	$ \!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$							50 50	50 50 50	50		\perp	\perp		+	-		$\sqcup \sqcup \Box$		\bot	-	
24 Station Construction * 25 Concrete vertical shaft^	- 99	234.0	_				++	+			\vdash	+	\dashv	-	+	-	-					47	47 47	47		+++		++		++		\vdash	+++	\vdash	+	-	
26 Construct Ground Level Entrance		234.0																					4/ 4/	47	44	44 44 4	4 44 44 44	4 44 44	1 44								
27 Station Fitout		234.0																									2 42 42 43			ш			ш				
Works Area L1 - SYP Entrance B3																																					
28 Possession of site		236.0								43																											
29 Utilities Diversions		236.0								42				-								_															
30 Piling/Walling 31 Bulk Excavation-Soft^		236.0												51	44	44																					
32 Installation of Pipe Pile for Soft Ground Tunnel^		236.0														45 45			5 45 45																		
33 Excavation along soft ground tunnel [^]		236.0														45 45			5 45 45	45																	
34 Concrete soft ground tunnel^ 35 Concrete Escalator Inclined^		236.0															45	45 4	5 45	47 47	47 47 4	17															
36 Construct Ground Level Entrance		236.0																	47	4/ 4/	4/ 4/ 4	41	41														
Works Area M3 - SYP Entrance C																																					
37 Possession of site	95	284.0) 41														41	41 4	1																		
38 Demolition of Existing Building [^]		285.0																	42 42	42 42																	
39 Piling/Walling^		286.0													1					48	48 48	15 45	45														
40 Bulk Excavation-Soft^ 41 Bulk Excavation-weak Rock^		287.0																			45 4	15 45		45 45 45	45 45												
42 Excavate Rock [^]		289.0																						51 51 51													
43 Excavate Rock Adit (Hard Rock Excavation)^		289.0																						46	46 46												
44 Concrete vertical shaft		291.0		+								+-1															3 43 43 43			+							
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96	292.0	42																							42 4	2 42 42 43	2 42									
46 Station Fitout [^]	96	293.0) 42																						42 42	42 42 4	2 42 42 42	2 42 42	2								
Works Area M - KGV Construction Shaft																																					
47 Possession of site		210.0									45 45																										
48 Utilities Diversions^ 49 Piling/Walling^		210.0										47	47 51 51	E-1																							
50 Bulk Excavation-Soft^		210.0												50																							
51 Excavate Rock [^]	103	210.0	52											52 52	52	52 52	52 52																				
Works Area O1, O2 and O3 - Ground Treatment Works																																					
52 Mobilization *	_	-	0																																		
53 Utilities Diversions (Stage A)	94	178.0			\dashv		+	T		44		+		\dashv	+		+++	+	++	 	+	+				+ + +	+++	++		+	++	\vdash	 				++
54 Ground Treatment (Stage A)	100	178.0	50							50																											
55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1)		178.0 216.0			-	\vdash	++	+	-	_	48 42	\vdash	\rightarrow	+	+	\dashv	+	+	+		+	+	++		+	+	+	+	+	+	+	+	+ + +	\vdash		\rightarrow	+
56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1)		216.0			-		++	+	-		42		\dashv	+	+	+	+	+	+		++	+				+++		++		++			+++	\vdash	+++	+	
58 Reinstatement (Stage 1)	98	216.0	46									46																									
59 Utilities Diversions (Stage 2)		252.0				ĻΕ	+T	$+$ \Box					41		$+ \top$	$-\parallel$ $ \parallel$	$+\Box$	$ \mid$ \Box	$+\Gamma$	\Box	$+$ \mp	\perp		\Box		$++$ \top	++T	$+ \mathbb{T}$	\perp	$+$ \top	$+\Gamma$	\square	$++$ \Box	$-\Gamma$	+	\bot	$+$ \top
60 Ground Treatment (Stage 2) 61 Reinstatement (Stage 2)		252.0 252.0			-		++	++				+	47 45	+	++		-1	$ \vdash$	+		++	+			+	+++	+	+	+	++		+	+++	\vdash		+	+
62 Utilities Diversions (Stage 3)		295.0			\dashv		+	+	_			+		40	+			+	++	 	+	+				+ + +	+++	++		+	++	\vdash	 				
63 Ground Treatment (Stage 3)	100	295.0) 46											46																							
64 Reinstatement (Stage 3) 65 Utilities Diversions (Stage 4)	98 94	295.0	0 44			\vdash	++	+	-	_	\vdash	+	\rightarrow	44	0	\dashv	+	+	+		+	+	++		+	+	+	+	+	+	+	+	+ + +	\vdash		\rightarrow	+
66 Ground Treatment (Stage 4)	100		0		-		++	+	-			+	\dashv	+	0	+	-	+	+		++	+				+++		++		++			+++	\vdash	+++	+	
67 Reinstatement (Stage 4)	98	-	0													0																					
68 Utilities Diversions (Stage 5)	94		0			LI	+T					\Box			$+$ \Box	0	$ $ \Box $ $		+ T		-				+ T		\perp	$+\top$	$\perp \top$	+			\Box	LT			\Box
69 Ground Treatment (Stage 5) 70 Reinstatement (Stage 5)	100 98		0				++	+			\vdash	+	\dashv	-	+	0	0	+	+		++	+	+ +			+++		++		++		\vdash	+++	\vdash	+	-	++
70 Reinstatement (stage 5) 71 Utilities Diversions (Stage 6)^	98		0	_			++	+				+		-	+		0	+	+		+	+				+ + +	+ + +		++-	+			 	\vdash		+	+
72 Ground Treatment (Stage 6) ^A	100	-	0											╧			0					\perp															
73 Reinstatement (Stage 6)	98		0	_	-	$\vdash \vdash$	+ T	$\bot \top$	\perp	\Box	\Box	\Box	$\dashv \Box$	$-\Box$	$+ \exists$	$\dashv \exists$	\perp	0	$+ \Box$	\Box	$+$ \mp	\bot		\Box		++	+	$+ \mathbb{I}$	+	$+ \top$	$+ \mathbb{I}$	\Box	$\sqcup \sqcup$	oxdot	+	$-\downarrow$	\perp
74 Utilities Diversions (Stage 7) 75 Ground Treatment (Stage 7)	94		0		-		++	++				+		+	++		-1	0			++	+			+	+++	+	+	+	++		+	+++	\vdash		+	+
76 Reinstatement (Stage 7)	98		0		_ -		<u> </u>	17				L			1				0									$\pm \pm$		1							
	Tota	al SPL	, dB(Α) -		<u> </u>	<u>_</u> - -	74	75 75	74 74	74 74	76	76 79	79 77	7 78	78 79	79 73	73 7	3 62 63	63 77	77 77 7	77 77	77 77	77 77 77	77 77	77 62 6	2 62 72 73	2 76 74	1 74 74	1 -							
		Exce	edano	:е -				. -				1	1 4	4 2	3	3 4	4 -	- -	. - -	- 2	2 2 :	2 2	2 2	2 2 2	2 2	2 -	. - - -	1 -		-					1		
Remarks:																																					

Remarks:

Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
 Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 24, act. 21, 23 & 25 in month 24-27, act. 31, 32 & 33 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 49, 50 & 51 in month 16, act. 49, 50 & 51 in month 24.

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Act No. Construction Element	SWL Dist	SPL Feb Mar A	upr May Jun Ju 3 4 5 6	7 8 9	Nov Dec Ja 10 11 12	n Feb Ma 2 13 14	r Apr May	/ Jun Jul / 17 18	Aug Sep C 19 20 2	Oct Nov Do	ec Jan Feb 3 24 25	26 27	May Jun 28 29	Jul Aug 30 31	Sep Oct 32 33	Nov Dec 34 35	Jan Feb M 36 37 3	ar Apr M B 39 4	1ay Jun J 40 41 4	ul Aug Se 12 43 4	ep Oct No 4 45 46	v Dec Ja 3 47 4	an Feb Mar Ap 8 49 50 51	or May 1 52	Jun Jul Aug 53 54 55	Sep Oct 56 57	Nov Dec 58 59	Jan Feb 60 61	Mar Apr May 62 63 64	Jun Jul A 65 66	
Vorks Area N1 - SY	P Entrance A1 & A2																														
1 Possession of	site	101 15.4	72		72																										+
2 Utilities Divers		102 15.4			73																										
3 Demolition of I	xisting Building es and bored piles at playground^	112 57.0 100 15.4	72 71			72 72	2 72 72		71 71	71 71				-									+						-		
5 Excavate to to		101 15.4			 			71 71	7. 7.	72									+ +									+			
6 Build up fill pla		102 51.5						63																							
7 Concrete roof		101 15.4						74 74	74 74		72								44												\longrightarrow
 Install bored pi Excavate under 	es and H-piles for shaft	100 15.4 101 15.4	71 72	 	 			71 71	71 71		72 7	2							++												+
10 Excavate to tu		102 15.4	73		 				73 73	73 73 7	73 73 7	3							+ +									+			
11 Concreting Air	Compressor Room and Backfill top slab	101 15.4	72								72 7	2																			
12 Construct Nois	e Enclosure and Install Compressed Air Equipment	100 15.4	71									71 71	71																		
13 Tunnel Constru	ction	103 67.3	61										61	61 61	61 61	61 61	61 61	61 61 6	1 61 6	61 61 6	61 61 6	1 61 61	1 61								
14 Construct Box	Tunnel Adit	104 15.4	75												75 75	75 75	75 75	75 75 7	5 75 7	75 75 7	75							$\perp \perp \perp$			
15 Not Used 16 Construct Esca	lator Well at playground	101 15.4	72																+				7	2 72 72 72	2			+	 		+
Construct Veni	lation Shaft and Plant Room / Construct Ground Level		70		 														+ +			70	70 7					+			
Entrance	D 5-t D4 6 D0	99 13.4	70																			70	70 7					_			
	P Entrance B1 & B2																											4			
18 Move the exist	ng SYP Cooked Food Market to proposed location *		0																												
19 Demolition of I	xisting Building^	101 254.0									4	8 48 48																			
20 Piling/Walling/	2 SoftA							+	+++		+		52	52 52	52 52		42 42		+			\bot	++		+		+		$\vdash \vdash$		+
21 Bulk Excavation 22 Bulk Excavation		96 254.0 98 254.0	43 45								+		+ + -			43	43 43 45	45 45 4	5 45 4	45			+				++	+			+++
23 Excavate Rock	٨	102 254.0	49					ШT			11							49 49 4			<u>l</u> t	上上									
24 Station Constr			0														10	10										+			\Box
25 Concrete vertice 26 Construct Group		99 254.0 96 254.0															46 46	46 46	+	12 1	12 42 4	2 42 42	2 42 4	3 43 43	+			+	 		+
27 Station Fitout	no covo cittanos	94 254.0																	+					1 41 41				+			
Works Area L1 - SY	P Entrance B3																														
28 Possession of		95 245.0	42			42																									+
29 Utilities Divers						41	1																								
30 Piling/Walling		103 245.0	50							50																					
31 Bulk Excavation	n-Soft^ Pipe Pile for Soft Ground Tunnel^	96 245.0 97 245.0	43					+		43 4		4 44 44	44 44	44 44					+						+			+	 		+
33 Excavation alo		97 245.0	44		 							4 44 44							+									_			
34 Concrete soft (round tunnel^	97 245.0	44										44 44																		
35 Concrete Esca		99 245.0	46											46 46	46 46	46 46												$\perp \perp$			$\perp \perp \perp$
36 Construct Gro		93 245.0	40														40 40											_			\rightarrow
Works Area M3 - SY		0.5																													
37 Possession of 38 Demolition of I		95 - 96 -	0	 	 							0 0	0	0 0	0				++												+
39 Piling/Walling/		102 -	0											0 0		0												+ + -			
40 Bulk Excavation		99 -	0													0 0	0 0														
41 Bulk Excavation 42 Excavate Rock		99 -	0		+	-				-		+					0		0	0 0											\longrightarrow
	Adit (Hard Rock Excavation)^	100 -	0														0	0 0 0		0 0								+-	 		-
44 Concrete vertice		97 -	0																		0 0 0	0 0	0								
45 Construct Gro	nd Level Entrance, Plant Room and Vent Shaft	96 -	0																		0 (0 0	0 (0							
46 Station Fitout^		96 -	0																+	0 0 0	0 0 0	0 0	0 (0 0							
Works Area M - KG	/ Construction Shaft	30 -	Ů																	0 0 1		, 0 0		5 0							
47 Possession of		96 236.0	44				44 44	11																				-			+
48 Utilities Divers		98 236.0	46		 		44 44	46 46											+									_			
49 Piling/Walling/		102 236.0	50						50 50																						
50 Bulk Excavation		101 236.0		+	$+ + \Box$	\bot	\bot	$+$ \square	49 51	51 51 4	1 51 -	1 51			Щ		$\sqcup \sqcup \Box$	$-\Box$	+T	$+ \mathbb{T}$	$\perp \Gamma$	$+\Gamma$	$+ \mathbb{T}$	+	\Box	\perp	$+ \Gamma$	+	\square	\Box	+
51 Excavate Rock		103 236.0	31						51	oi 51 5	51 51 5	51																			
	and O3 - Ground Treatment Works																														
52 Mobilization *	(0)		0						\Box																П			$+$ \blacksquare			+
53 Utilities Divers 54 Ground Treatn		94 162.0 100 162.0				45 51	1	+	+++		++		+ +				\vdash	-	++		+	+	++				+	+-	\vdash		+
55 Reinstatement		98 162.0				51	49	+			++		+ + -						+		+							++-			+++
56 Utilities Divers	ons (Stage 1)	94 200.0	43				43												\top												Ш
57 Ground Treatn		100 200.0			+		49		+		+ $+$ $+$ $ +$ $+$ $ +$ $ +$ $ -$	+	+				$\sqcup \sqcup I$	+ $+$ $+$ $ +$ $ +$ $ +$ $ +$ $ -$	+		+	+	+	+		\perp	+			-	1
58 Reinstatement59 Utilities Divers		98 200.0 94 236.0		+++		+	++-	47 42	 	++	+	+	+ + -	+	\vdash	$\vdash\vdash$		+	++	++	++	++	++	+++	+	++-	++	++-	++-		+++
60 Ground Treatn		100 236.0						48					+ +						+				+					+			
61 Reinstatement	(Stage 2)	98 236.0	46						46																			ш			ш
62 Utilities Divers		94 283.0		+				+	40		+	+	+				$\sqcup \sqcup$	-	++	\perp	+	\bot	+		+		++		$\vdash \vdash$		+
63 Ground Treatn 64 Reinstatement		100 283.0 98 283.0		+			+	+	46	44	++	+	+ +		\vdash		\vdash \vdash \vdash	++	++	+		+	++	+++	+		++	+	+		+++
65 Utilities Divers	ons (Stage 4)	94 -	0					ШT		0									17			$\pm \pm$					$_{\perp}$	世一			
66 Ground Treatn		100 -	0							0																		\Box			\Box
67 Reinstatement 68 Utilities Divers		98 -	0			+		+	+++		0 0	+	+		\vdash		\vdash	+	++	+	+	++	++		+		++	++-	\vdash		+++
69 Ground Treatn		100 -	0				+ +		+ + +		0	++	+ +		\vdash				++		+	+++	++		+		++	+			+++
70 Reinstatement		98 -	0									0																			
71 Utilities Divers		94 -	0									0																			
72 Ground Treatn		100 -	0	+++		\perp	+	+	+++	++	++	0			\vdash		\vdash \vdash \vdash	+	++	+		+	+		+			+	\vdash		+++
 73 Reinstatement 74 Utilities Divers 		98 - 94 -	0					++	 	+	++	0	0	++	\vdash		 	++	++	+	+	++	++	+++	+	+	++	++-			+++
75 Ground Treatn	ent (Stage 7)	100 -	0					<u>L</u>			1		0						11												
	(Stage 7)	98 -	0				2 72 72						0																		

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 30, act. 39 & 40 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 39, 30 & 51 in month 18, and act. 71 & 72 in month 24.

**No PMEs used at surface

A construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 30, act. 39 & 40 in month 20, act. 19 & 20 in month 40-41, act. 48 & 49 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 39, 50 & 51 in month 18, and act. 71 & 72 in month 24.

**No PMEs used at surface

**No PMEs used at surface

**A solution of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

**No PMEs used at surface

**Construction activities would not be conducted simultaneously, so the max SPL among these activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 32, 33 & 35 in month 30, act. 39 & 40 in month 30, act. 48 & 5 in month 40-41, act. 48 & 5 in month 40-

32, at. 41, 42, 43 a 40 illinimit 40-41, at. 46 a 49 illinimit 16, at. Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would

NSR: SYP3 - No. 15 Tsz Mi Alley																													
Act No. Construction Element	SWL Dist	2 SPL		2009 or May Jun Jul Aug				pr May Ju						May Jur						I Aug Sep									
Works Area N1 - SYP Entrance A1 & A2			1 2 3	4 5 6 7	8 9 10	11 12	13 14 1	5 16 17	18 19	20 21	22 23	24 25	26 27	28 29	30 31	32 33 3	34 35 3	6 37 38 3	9 40 41 42	2 43 44	45 46 47	48 49	50 51 52	53 54	55 56 57	58 59 6	60 61 62	63 64 65	66 67 68
1 Possession of site	101 17.4	71			71																								
2 Utilities Diversions	102 17.4				72 72																								
Demolition of Existing Building Install sheet piles and bored piles at playground [^]	112 33.5 100 17.4					77 77		0 70 70	70 70	70																+++			
5 Excavate to top slab level^	101 17.4									71																			
6 Build up fill platform to +7mPD 7 Concrete roof slab	102 18.6 101 17.4						7	2		71																			
8 Install bored piles and H-piles for shaft	100 17.4						7	0 70 70	70	71																			
Excavate under top slab level	101 17.4										71 71																		
10 Excavate to tunnel level 11 Concreting Air Compressor Room and Backfill top slab	102 17.4 101 17.4							72	72 72		72 72 71 71															+			
12 Construct Noise Enclosure and Install Compressed Air Equipment												70 70	70																
13 Tunnel Construction	103 38.3													66 66	66 66	66 66 6	66 66 6	6 66 66 6	6 66 66 66	6 66 66	66 66 66								
14 Construct Box Tunnel Adit	104 17.4																	4 74 74 7											
15 Not Used 16 Construct Escalator Well at playground	101 17.4																+					71 71	71 71						
Construct Ventilation Shaft and Plant Room / Construct Ground	99 17.4																				69 69		7. 7.						
17 Level Entrance Works Area M1 - SYP Entrance B1 & B2																													
18 Move the existing SYP Cooked Food Market to proposed location	*	0																											
19 Demolition of Existing Building^	101 284.0) 47		+ + + +				+			47	47 47	47 47		++	+++	++	+							++	+++	+++		
20 Piling/Walling^	105 284.0	51												51 51	51 51														
21 Bulk Excavation-Soft^ 22 Bulk Excavation-weak Rock^	96 284.0 98 284.0			 				+		\square				\vdash	+	42 4	42	4 44 44 4	1 11	+	++-			+	+	+	+		
23 Excavate Rock [^]	102 284.0			+ + + +					+ +						++			8 48 48 4		+ +					++		+++		
24 Station Construction *		0																											
25 Concrete vertical shaft* 26 Construct Ground Level Entrance	99 284.0 96 284.0														+	4	15 45 4	5 45	42 43	2 42 42	42 42 42	42 42	42		++	+++	+++	+	
27 Station Fitout	94 284.0																				40 40 40								
Works Area L1 - SYP Entrance B3																													
28 Possession of site	95 284.0					41																							
29 Utilities Diversions 30 Piling/Walling	94 284.0 103 284.0					40			49																				
31 Bulk Excavation-Soft^	96 284.0									42 42																			
32 Installation of Pipe Pile for Soft Ground Tunnel^	97 284.0											43 43																	
33 Excavation along soft ground tunnel [^] 34 Concrete soft ground tunnel [^]	97 284.0 97 284.0									43	43 43	43 43	43 43																
35 Concrete Escalator Inclined [^]	99 284.0	45													45 45	45 45													
36 Construct Ground Level Entrance	93 284.0	39														3	39 39												
Works Area M3 - SYP Entrance C																													
37 Possession of site 38 Demolition of Existing Building ^A	95 - 96 -											0 0		0 0	0														
39 Piling/Walling^	102 -	0													0 0	0													
40 Bulk Excavation-Soft^ 41 Bulk Excavation-weak Rock^	99 -	0														0 0		0 0 0	0 0										
41 Bulk Excavation-weak hock** 42 Excavate Rock^	105 -	0																0 0 0											
43 Excavate Rock Adit (Hard Rock Excavation)^	100 -	0																С											
44 Concrete vertical shaft	97 -	0			 														0	0 0	0 0 0								
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96 -	0																		0 0	0 0 0	0							
46 Station Fitout [^]	96 -	0																	0 0 0	0 0	0 0 0	0 0							
Works Area M - KGV Construction Shaft																													
47 Possession of site 48 Utilities Diversions^	96 226.0 98 226.0						44 44 4	6 46																					
49 Piling/Walling^	102 226.0	50						50 50																					
50 Bulk Excavation-Soft^ 51 Excavate Rock^	101 226.0 103 226.0								49 51 51	E1 E1	E1 E1	51																	
Works Area O1, O2 and O3 - Ground Treatment Works	103 226.0	, 31							01 01	31 31	01 01	31																	
,																													
52 Mobilization * 53 Utilities Diversions (Stage A)	94 130.0	0 47	++	+ + + + + + + + + + + + + + + + + + + +		47	++	++	++-		\vdash				++	+++	++	+++	+	+					+	+++	+		
54 Ground Treatment (Stage A)	100 130.0	53				53																							
55 Reinstatement (Stage A)	98 130.0			 			51			\square					+	+++		++	+	11	++-			+	$+$ \perp	++	+	+	
56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1)	94 164.0 100 164.0			+ + + +			45 51										++	+++							+	+++			
58 Reinstatement (Stage 1)	98 164.0	49						.9																					
59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2)	94 200.0 100 200.0							43																		+			
61 Reinstatement (Stage 2)	98 200.0							45	7																				
62 Utilities Diversions (Stage 3)	94 245.0								41																				
63 Ground Treatment (Stage 3) 64 Reinstatement (Stage 3)	100 245.0 98 245.0								47 45																				
65 Utilities Diversions (Stage 4)	94 -	0								0																			
66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4)	100 - 98 -	0								0 0				\vdash	\vdash		+	+			+ + +			+	-	+ + 1	+		
68 Utilities Diversions (Stage 5)	94 -	0									0						+ +												
69 Ground Treatment (Stage 5)	100 -	0									0															\square			
70 Reinstatement (Stage 5) 71 Utilities Diversions (Stage 6)^	98 -	0		++++		\vdash					0	0			++	+++	+	+++	+++		+++				++	+++	+		
72 Ground Treatment (Stage 6)^	100 -	0										0																	
73 Reinstatement (Stage 6)	98 -	0							$\perp \top$			0			+ T	\Box	\bot	+ T = -		17				$+ \top $	\perp	\Box	$\perp \perp \perp \mid$		
74 Utilities Diversions (Stage 7) 75 Ground Treatment (Stage 7)	94 -	0		++++							\vdash		0	\vdash	++	+++	++	+++		+ +	+++				++	+++	+++		
76 Reinstatement (Stage 7)	98 -	0											0																
	Total SPL		-		71 72 72			6 73 76	76 74	75 75	76 76	70 70	70 66	66 66	75 75	75 75 7	75 75 7	5 75 75 7	5 75 75 75	66 66	66 71 71	73 71	71 71 -	- -		- -	- - -	- - -	- - -
Remarks:	Exce	edance	<u> </u>		- - -	2 2	2 2	- 1	1 -	- -	1 1	- -	- -	- -	1 - 1 -	- -	- -	<u> </u>	- - -	1-1-	- - -	<u> </u>	- - -	<u> </u>	- - -	- -		- - -	- - -

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

*No PMEs used at surface

^Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 70, act. 19 & 20 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated NSR: SYP4 - Ngan Yu Building (1-2F) 2012 2013 2014 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 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 SWL Dist² SPL Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr Ma Act No. Works Area N1 - SYP Entrance A1 & A2 73 74 74 2 Utilities Diversions Demolition of Existing Building Install sheet piles and bored piles at playground[^] 5 Excavate to top slab level^ 101 13.5 73 8 Install bored piles and H-piles for shaft 9 Excavate under top slab level 72 72 72 72 73 7 74 74 74 74 74 74 74 77 70 77 10 Excavate to tunnel level 102 13.5 74 Concreting Air Compressor Room and Backfill top slab 101 13.5 73 12 Construct Noise Enclosure and Install Compressed Air Equipment 100 13.5 72 13 Tunnel Construction 103 43.2 14 Construct Box Tunnel Adit 15 Not Used 104 13.5 76< 101 13.5 73 Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance 99 13.5 71 Works Area M1 - SYP Entrance B1 & B2 18 Move the existing SYP Cooked Food Market to proposed location * 19 Demolition of Existing Building^ 20 Piling/Walling^ 105 244.0 52 21 Bulk Excavation-Soft[^] 22 Bulk Excavation-weak Rock 23 Excavate Rock[^] 102 244.0 49 46 46 46 99 244.0 46 25 Concrete vertical shaft^ 43 43 43 43 43 43 43 43 43 43 43 43 41 41 41 41 41 41 41 41 41 41 41 41 41 96 244.0 43 94 244.0 41 26 Construct Ground Level Entrance ______ 27 Station Fitout Works Area L1 - SYP Entrance B3 95 258.0 42 94 258.0 41 28 Possession of site 29 Utilities Diversions 30 Piling/Walling 31 Bulk Excavation-Soft^ 96 258.0 43 32 Installation of Pipe Pile for Soft Ground Tunnel^ 97 258.0 44 44 44 44 44 44 44 44 44 33 Excavation along soft ground tunnel[^] 97 258.0 44 44 44 44 44 44 46 46 46 46 46 46 34 Concrete soft ground tunnel 35 Concrete Escalator Inclined^a 36 Construct Ground Level Entra Works Area M3 - SYP Entrance C 95 262.0 42 96 262.0 43 42 42 42 43 43 43 43 37 Possession of site 38 Demolition of Existing Building[^] 39 Piling/Walling^ 40 Bulk Excavation-Soft^ 102 262.0 49 99 262.0 46 46 46 46 4 41 Bulk Excavation-weak Rock[^] 42 Excavate Rock[^] 99 262.0 46 43 Excavate Rock Adit (Hard Rock Excavation)^ 47 47 47 97 262.0 44 44 Concrete vertical shaft 45 Construct Ground Level Entrance, Plant Room and Vent Shaft 96 262.0 43 96 262 0 43 46 Station Fitout[^] Works Area M - KGV Construction Shaft 47 Possession of site 96 188.0 46 46 46 46 48 48 FO FO FO FO 48 Utilities Diversions^ 98 188.0 48 49 Piling/Walling^ 50 Bulk Excavation-Soft 52 52 52 51 Excavate Rock[^] 103 188.0 53 Norks Area O1, O2 and O3 - Ground Treatment Works 53 Utilities Diversions (Stage A) 100 168.0 51 98 168.0 49 54 Ground Treatment (Stage A) 55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1) 94 202.0 43 100 202.0 49 58 Reinstatement (Stage 1 59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2) 94 234.0 42 100 234.0 48 61 Reinstatement (Stage 2) 40 46 94 - 0 66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4) 0 0 98 68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5) 70 Reinstatement (Stage 5) 94 - 0 71 Utilities Diversions (Stage 6)ⁿ 72 Ground Treatment (Stage 6)ⁿ 94 - 0

Remarks:

Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

Total SPL, dB(A)

2. Slant distance (m)

76 Reinstatement (Stage 7)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 24, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 40-41, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

loise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

			2009		ļ			010					2011					2012					201					2014		
Act No. Construction Element S	WL Dist ² SPL	Feb Mar Ap	or May Jun Jul A	Aug Sep Oct Nov De 7 8 9 10 11	Jan Feb	Mar Apr	May Jun	Jul Aug	Sep Oct	Nov Dec	Jan Feb Ma	r Apr May Ju	ın Jul Auç a 30 31	32 33	Nov De	Jan Feb Mar	Apr Ma	y Jun Jul Au	g Sep Oct	Nov Dec	Jan Feb	Mar Apr N	May Jun	Jul Aug Se	p Oct Nov	v Dec Jan	Feb Mar	Apr May	Jun Jul	I Au
Vorks Area N1 - SYP Entrance A1 & A2		1 2 3	4 5 6	7 8 9 10 11	12 13	14 15	16 17	10 19	20 21	22 23	24 25 20	21 20 2	9 30 31	32 33	34 33	36 37 36	39 40	41 42 43	44 45	46 47	46 49	50 51	52 53	54 55 50	3 5/ 56	39 60	01 02	03 04	65 66	, °
	101 105 70			73																					4		-			#
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	112 19.0 81			81	81 81	81																			+	+ +	+ + -		+ +	+
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	100 13.5 72				+ +	12	12 12	12		73 73															++	++	+		++	+
	102 13.5 74						74	74 74	74 74															-	+	++	+-		++	+
11 Concreting Air Compressor Room and Backfill top slab	101 13.5 73									73 73																				
12 Construct Noise Enclosure and Install Compressed Air Equipment	100 13.5 72										72 72 72																			
	103 43.2 65												5 65 65	65 65	65 65	65 65 65	65 65	65 65 65	65 65	65 65				$-\!\!+\!\!-\!\!\!+$	++	+	+-		+-	+
	104 13.5 76											-		76 76										-	+	++	+-		++	+
15 Not Used																														T
	101 13.5 73																				73 73	73 73								I
17 Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance	99 13.5 71																			71 71	71									
Vorks Area M1 - SYP Entrance B1 & B2																														
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18 Move the existing SYP Cooked Food Market to proposed location *	0							1 1																			1 1			
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1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Stant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

No remest used at surface

A Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 24-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facaded of NSR. The NSR is considered to be totally screened.

According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: SYP5 - Rich Court																															
Act No. Construction Element	swi	Diet ²	SPI Fol	n Mar Anr M		2009	Oct Nov D	lec lan Feb M	lar Anr May	2010	Sen Oct Nov	Dec Jan Feb	Mar Apr May Ju	2011 n Jul Aug S	en Oct No	v Dec I	lan Feh Mar	Anr May	2012	I Aug Sen	Oct Nov De	ıc lan Fe	n Mar A	anr May	2013		Oct Nov Dec	lan Eeh Ma	2014 Apr May		I Aug Sei
Act No. Construction Element	SWL	DIST											26 27 28 2																		
Works Area N1 - SYP Entrance A1 & A2																															
1 Possession of site		21.2				66																									
2 Utilities Diversions 3 Demolition of Existing Building		21.2 18.0					66 66	32 82 82 8	32																						+
4 Install sheet piles and bored piles at playground [^]	100	21.2	69							69 69 69																					
5 Excavate to top slab level^		21.2							05		63												\perp								
6 Build up fill platform to +7mPD 7 Concrete roof slab		18.0 21.2							65		67																				+
8 Install bored piles and H-piles for shaft	100	21.2	69						69 69	69 69																					
9 Excavate under top slab level 10 Excavate to tunnel level		21.2 21.2								CE CE CE	65 65 65												\perp								
Excavate to tunnel level Concreting Air Compressor Room and Backfill top slab		21.2								00 00 00	65 65 65					+							+								+
12 Construct Noise Enclosure and Install Compressed Air		21.2										62 62	62																		
Equipment 13 Tunnel Construction		36.7												7 67 67 6	67 67 67	7 67 (67 67 67	67 67	67 67	67 67	67 67 67	7	+								++-
14 Construct Box Tunnel Adit		21.2	68											68 68 6	68 68	3 68 (68 68 68	68 68	68 68	3											
15 Not Used 16 Construct Escalator Well at playground	- 96	21.2	- 65																			65 65	65 6	65							+
Construct Ventilation Shaft and Plant Room / Construct Ground		21.2	63																		63 63		00 (0.5							+
Level Entrance Works Area M1 - SYP Entrance B1 & B2	0.	21.2	00																		00 00	9 00									
W																															4
Move the existing SYP Cooked Food Market to proposed location	<u>'</u> -	-	0																												
19 Demolition of Existing Building^		254.0										48 48 48																			
20 Piling/Walling^ 21 Bulk Excavation-Soft^		254.0 254.0		+++		-+	+++	+++	+	+	+		52 52 5	2 52 52	43 43	3 42	+	_	\vdash		+	+	+	-	\vdash		++	++	+++	-	+
22 Bulk Excavation-Soft* 22 Bulk Excavation-weak Rock*		254.0		+++	+		+++		+					+++	43 43		45 45 45	45 45				++	++	+			+		+++	-	++
23 Excavate Rock [^]	102	254.0	49														49 49 49														
24 Station Construction * 25 Concrete vertical shaft^	- 99	- 254.0	0 46	+++		-++	+++		+	+					40	6 46 4	46 46				-	++	+	-	\vdash		+	\vdash	+++		+
26 Construct Ground Level Entrance		254.0		+ + +										+ + +	46	, 40 4	70 40		43 43	3 43 43	43 43 43	3 43 43	43	+							++
27 Station Fitout		254.0																	41 41	41 41	41 41 41	1 41 41	41								
Works Area L1 - SYP Entrance B3																															4
28 Possession of site		272.0					4	11																							
29 Utilities Diversions 30 Piling/Walling		272.0 272.0					\vdash	40		49																					+-
31 Bulk Excavation-Soft^		272.0									42 42																				+
32 Installation of Pipe Pile for Soft Ground Tunnel^		272.0											43 43 43 4																		
33 Excavation along soft ground tunnel^ 34 Concrete soft ground tunnel^		272.0 272.0									43 43	43 43 43	43 43 43 4	3		+							+								+
35 Concrete Escalator Inclined^		272.0										40 40		5 45 45 4	15 45																+
36 Construct Ground Level Entrance	93	272.0	39												39	39															
Works Area M3 - SYP Entrance C																															
37 Possession of site		260.0										42 42		2 40																	
38 Demolition of Existing Building [^] 39 Piling/Walling [^]		260.0 260.0											43 43 4	49 49 4	19																+
40 Bulk Excavation-Soft^	99	260.0	46													6 46															
41 Bulk Excavation-weak Rock^		260.0															46 46 46														
42 Excavate Rock^ 43 Excavate Rock Adit (Hard Rock Excavation)^		260.0 260.0														52	52 52 52	52 52 47 47													+
44 Concrete vertical shaft		260.0																		44 44	44 44 44	1									
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96	260.0	43																	43 43	43 43 43	3 43									
46 Station Fitout [^]	96	260.0	43															43	43 43	3 43 43	43 43 43	3 43 43									+ + -
Works Area M - KGV Construction Shaft																															
47 Possession of site	96	184.0	46					46	16 46														_								_
48 Utilities Diversions^		184.0							48 48																						
49 Piling/Walling^ 50 Bulk Excavation-Soft^		184.0 184.0		+++	-	-++	+++		52	52 52 51	++-			+++	++	++	++		\vdash		+	++	++	+	\vdash		+	\vdash	+++		+-
51 Excavate Rock^			53								53 53 53	53 53				⊥t								╧	L						
Works Area O1, O2 and O3 - Ground Treatment Works																															
52 Mobilization *	_	_	0																												+
53 Utilities Diversions (Stage A)		160.0	45		1		4	15								<u> </u>						上十			ШŤ						土十
54 Ground Treatment (Stage A)		160.0						51																							
55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1)		160.0 192.0		+++	-		+++	49	13	+	+		+++	+++	+	++	+	_	\vdash		+	++	++	-	\vdash	+		$\vdash\vdash$	+++	_	++-
57 Ground Treatment (Stage 1)	100	192.0	49		1				19							$\pm \dagger$									Lt						世一
58 Reinstatement (Stage 1)		192.0							47																						$\perp \perp$
59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2)		225.0 225.0		+++	-		+++		42				+++	+++	+	++	+					++	++	-				$\vdash\vdash\vdash$	+++	-	++
61 Reinstatement (Stage 2)		225.0			1					46						╁╂															$\pm \pm$
62 Utilities Diversions (Stage 3)		266.0								41																					
63 Ground Treatment (Stage 3) 64 Reinstatement (Stage 3)		266.0 266.0		+++	-		+++	+	+	47 45	+		+++	+++	+	++	+	+	\vdash			+	++	-	\vdash	+		++-	\vdash	-	+
65 Utilities Diversions (Stage 4)	94		0								0			+ + +		++							+								++-
66 Ground Treatment (Stage 4)	100	-	0								0																				
67 Reinstatement (Stage 4) 68 Utilities Diversions (Stage 5)	98 94		0	+++	-		+++		+		0 0		+++	+	++-	++	+	+	\vdash			++	+	-	\vdash	+++	_	\vdash	+++		++-
69 Ground Treatment (Stage 5)	100		0								0			+ + +	+	++	+	-											\Box		+
70 Reinstatement (Stage 5)	98	-	0									0				ш													$\Box\Box$		
71 Utilities Diversions (Stage 6) ^A	94		0	$++\top$	_		$++\top$	+	-		\perp	0	-	$++$ \top	$+\Gamma$	$+\mathbb{T}$	$+\Box$		H-F	++	$+\Gamma$	$+\Gamma$	$+\mathbb{T}$	\perp	ĻΤ		$+ \Box$	++T	\Box		$+$ Γ
72 Ground Treatment (Stage 6)^ 73 Reinstatement (Stage 6)	100 98		0	+++			+++		+			0 0	+++	+ + +	+	++	+					+	++	+	\vdash						+
74 Utilities Diversions (Stage 7)	94		0										0			\Box									П						
75 Ground Treatment (Stage 7)	100	-	0	+		-	$\sqcup \Box$	$+\Box$	$+\Box$	+T	\bot \bot \top	-	0	$+\Box$	$+\top$	+ T	$+ \top$		\Box	$+\square$	$+$ \top	$+$ \top	$+ \top$		H	$+$ \Box		\Box	\Box		$+\Gamma$
76 Reinstatement (Stage 7)	98 Total		0 dB(A) -	1 .	-		66 66	22 82 82	72 72	72 72 70	70 60 70	70 62 62	0 62 67 67 6	7 70 70 7	0 70 70	70	70 70 70	70 70	70 70	67 67	67 69 69	8 67 65	65 4	65	++	_ _ _			 	_	+ + + -
		Exceed		+ - + - + - +	- 1	- 00			7		.0 00 70	. 0 02 02		, 10 10 /		, ,,,		70 70		. 0/ 0/		- 0/ 63			H				 	- 1 -	+ + + + + + + + + + + + + + + + + + + +
Remarks:			-	لتل	1 -						1 1 1									1 1 1			1 1			لتلل		تلتلت	لتلل		خلب

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

¹ No PMEs used at surface

¹ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A)

NSR: SYP16 - Wai Lee Building SWL Dist² | 2009 | 2010 | 2011 | 2014 | 2015 | 2016 | 2016 | 2017 | 2017 | 2017 | 2017 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 2018 | 20 Act No. Construction Element Works Area N1 - SYP Entrance A1 & A2 69 70 70 70 1 Possession of site 2 Utilities Diversions Demolition of Existing Building Install sheet piles and bored piles at playground[^] 112 16.0 83 68 68 68 68 68 68 5 Excavate to top slab level^ 6 Build up fill platform to +7mPD 7 Concrete roof slab 101 23.7 69 68 68 68 68 7 Concrete roof slab 8 Install bored piles and H-piles for shaft 9 Excavate under top slab level 100 23.7 68 70 70 70 70 70 70 70 Excavate to tunnel level Concreting Air Compressor Room and Backfill top slab Construct Noise Enclosure and Install Compressed Air Equipment Tunnel Construction 102 23.7 70 100 23.7 68 103 27.8 69 14 Construct Box Tunnel Adit 15 Not Used 104 23.7 72 Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance 101 23.7 69 99 23.7 67 67 67 67 Works Area M1 - SYP Entrance B1 & B2 Move the existing SYP Cooked Food Market to p - 0 19 Demolition of Existing Building^ 20 Piling/Walling^ 21 Bulk Excavation-Soft^ 105 298.0 51 22 Bulk Excavation-weak Rock 23 Excavate Rock[^] 102 298.0 48 45 45 45 45 25 Concrete vertical shaft^ 99 298.0 45 26 Construct Ground Level Entrance 27 Station Fitout Works Area L1 - SYP Entrance B3 95 293.0 41 94 293.0 40 28 Possession of site 29 Utilities Diversions 30 Piling/Walling 31 Bulk Excavation-Soft^ 32 Installation of Pipe Pile for Soft Ground Tunnel^ 97 293.0 43 43 43 4 97 293.0 43 97 293.0 43 33 Excavation along soft ground tunnel[^] 34 Concrete soft ground tunnel 35 Concrete Escalator Inclined[^] 36 Construct Ground Level Entra Works Area M3 - SYP Entrance C 95 - 0 96 - 0 37 Possession of site 0 0 0 0 0 0 0 0 38 Demolition of Existing Building[^] 39 Piling/Walling^ 40 Bulk Excavation-Soft^ 102 - 0 99 - 0 0 0 0 0 41 Bulk Excavation-weak Rock[^] 42 Excavate Rock[^] 99 - 0 43 Excavate Rock Adit (Hard Rock Excavation)^ 100 - 0 97 - 0 44 Concrete vertical shaft 96 - 0 0 0 0 0 0 45 Construct Ground Level Entrance, Plant Room and Vent Shaft 46 Station Fitout[^] Works Area M - KGV Construction Shaft 47 Possession of site 48 Utilities Diversions^ 49 Piling/Walling^ 50 Bulk Excavation-Soft 51 Excavate Rock[^] Norks Area O1, O2 and O3 - Ground Treatment Works 94 125.0 47 47 53 Utilities Diversions (Stage A) 54 Ground Treatment (Stage A) 55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1) 58 Reinstatement (Stage 1) 59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2) 61 Reinstatement (Stage 2) 94 195.0 43 100 195.0 49 98 195.0 47 98 240.0 45 94 - 0 66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4) 100 - 0 98 - 0 68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5) 70 Reinstatement (Stage 5) 0 0 0 71 Utilities Diversions (Stage 6)ⁿ 72 Ground Treatment (Stage 6)ⁿ 94 - 0 100 - 0 76 Reinstatement (Stage 7)

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month.

Noise Exceedance
The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A)

The property of the property	NSR: SYP6 - Bon-Point																					
Note Note 1445 Second Secon	Act No. Construction Element	SWL Dist ²	SPL Feb Ma			/ Dec Jan Feb Mai			Nov Dec	Jan Feb Ma			Sen Oct	Nov Dec Jan Feb I	Mar Apr Ma		en Oct Nov De	c Jan Feb Mar Apr May	Oct Nov Dec	Jan Feb Ma		n Jul Aug Sen
Part		_ Dist																				
Company	Works Area N1 - SYP Entrance A1 & A2	27 200 2	40		10																	
Mathematical Mat																						
Mathematical Content of the conten		102 297.0	48			48 48 48 48		10 40 40														
March Marc	5 Excavate to top slab level^	94 286.0	40				46 46 46 4															
Mathematical Control of Control							41	44														
The state of the	8 Install bored piles and H-piles for shaft	100 286.0	46				46 46 46															
Control Cont							42															
March Marc							42															
Separate support suppo	12 Construct Noise Enclosure and Install Compressed Air Equipment	93 286.0	39							39 39 39	9											
											49 49 49						9 49 49 49					
Mathematical properties Mathematical pro			45									45 45	45 45	45 45 45 45	45 45 4	5 45 45						
Section 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	16 Construct Escalator Well at playground																	42 42 42 42				
Part		94 286.0	40														40 40	40				
Mathematical Control of the contro	Works Area M1 - SYP Entrance B1 & B2																					
## Manufacture	18 Move the existing SYP Cooked Food Market to proposed location *		0						I			\perp		$ \ \ \ \ $			$\parallel \parallel \parallel \parallel$	\perp		$ \ \ ^{-}$		
3									49	49 49 49												
Section									+	++	53 53 5	3 53 53		44 44	++	+++				++	+++	
*** *** *** *** *** *** *** *** *** **	22 Bulk Excavation-weak Rock [^]	98 220.0	46										44	46 46 46								
Mathematical Property of the content of the conte				+++										50 50 50	50 50 5	0		++++		++-	+++	
2. Section 1. Section	25 Concrete vertical shaft^	99 220.0	47											47 47 47 47								
Market M									+		+++	+++								+++	+++	
Mathematical Math	Works Area L1 - SYP Entrance B3	0. 220.0	-													12 72 4	12 42					
Part			0			0																
Mathematical Continue of Con						0																
Material Content of								-														
Manual Property Manual Prope																						
Mathematic Mat																						
Marke See Marke See											0 0	0 0	0 0	0 0								
3 Martine Mart		93 -	0											0 0								
30 May way way way way way way way way way w										68 68 68	8											
4. Security											75 75 79		74									
4. Secure Mochal Hills Plane Electron 1 1 2 2 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		102 23.9	69											69 69								
4. Supermont supermont work of the supermont of the super		102 23.9	69																			
## Company Control Lend Flamous and Well Planous and Well														69 69 69								
## Control Process From Process	44 Concrete vertical shaft																					
Processor Proc																67 6	7 67 67 67	67				
Part	·	106 23.9	73												7	3 73 73 73 7	3 73 73 73	3 73 73				
## Company March M		00 100 0	54			51 51	-															
5 Separe Service Servi	48 Utilities Diversions^					51 51																
1																						
Miles Demons (Stage A) Miles Demons (Stage								,0	58 58	58												
98	Works Area O1, O2 and O3 - Ground Treatment Works																					
Separatement (Clagae A) Separa			-																			
56						0		+	+I	+ $+$ $+$ $-$	+	+	\perp	$+$ $+$ $+$ \top	+	+++	+	+++-	+	++	++	+++
97 Government (Slage 1) 98 . 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	55 Reinstatement (Stage A)	98 -	0						\perp													
8 Resistationer (Stage 9) 94 S O S O S O S O S O S O S O S O S O S								+	$-\Box$			+	_	+++		+				\Box		\Box
0 Ground Treatment (Slage 2) 98 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	58 Reinstatement (Stage 1)	98 -	0				0															
61 Renstatement (Stage 2) 63 Ground Treatment (Stage 4) 64 Ground Treatment (Stage 4) 65 Utilities Diversions (Stage 5) 66 Ground Treatment (Stage 4) 67 Renstatement (Stage 4) 68 Ground Treatment (Stage 4) 68 Ground Treatment (Stage 4) 69 Ground Treatment (Stage 6) 68 Ground Treatment (Stage 6) 69 Ground Treatment (Stage 6) 60 Ground										$-\Pi$		$+\Box$			-	+				+	+	
Gound Treatment (Slage 3) 68	61 Reinstatement (Stage 2)	98 -	0																			
4 Reinstatement (Stage 4) 5 Utilities Diversions (Stage 4) 6 Ground Treatment (Stage 5) 6 Ground Treatment (Stage 6) 7 Reinstatement (Stage 6) 8 - 0 0 0 0 0 0 0 0 0 0									$-\Box$			+	_	+++		+				\Box		\Box
66 Ground Treatment (Stage 4) 98 - 0	64 Reinstatement (Stage 3)	98 -	0					0														
67 Reinstatement (Stage 4) 98 - 0				+					$+\Box$	$+ \mp$	$++\mp$	$++$ \mp	\perp	++	+ T	$++\Box$	$++$ \mp		$++$ \mp	$++$ \mp	$++\mp$	$++$ \Box
69 Ground Treatment (Stage 5) 70 Reinstatement (Stage 5) 98 - 0 100	67 Reinstatement (Stage 4)	98 -											土									
Reinstatement (Stage 5) 98 - 0 0 0 0 0 0 0 0 0 0										$-\Gamma$	+ TT	$+ \mp \mp$								\Box \Box	+ TT	
72 Ground Treatment (Stage 6)^ 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	70 Reinstatement (Stage 5)	98 -																				
73 Reinstatement (Stage 6) 98 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	71 Utilities Diversions (Stage 6)^																					
74 Utilities Diversions (Stage 7) 94 - 0 100 -													_									
76 Reinstatement (Stage 7) 98 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	74 Utilities Diversions (Stage 7)																					
Total SPL, dB(A) - - - - - - - - - -									+	0		+++	+	+ + + +			+++			 	+++	
Exceedance		Total SPL,	dB(A)		- 43 43 43	68 68 68 52	54 57 57 5	58 58 58 58	58 58	69 68 68	8 75 75 7	5 75 71	71 69	69 72 72 72	72 75 7	5 75 74 75 7	5 75 75 75	5 74 73 48 42 -	 			
		Excee	dance		- - - -			- - -	- [-]				- -		- - -	- - -	- - - -	<u> </u>	 - - -	- - -	- - -	

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Pilling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

NSR: SYP7 - Bonham Road Government Primary School			, ,																																			
Act No. Construction Element	SWL	Dist ²					g Sep Oct No					ıl Aug Se						Jul Aug													Jul Aug				b Mar Apr			
Works Area N1 - SYP Entrance A1 & A2			1	2 3	4 5	6 7	8 9 10	0 11	12 13 14	15 16	17 18	8 19 2	21 22	23 24	25 26	6 27	28 29	30 31	32 33	34 35	36 37	38 39	40	41 42	13 44	45 46	47 48	8 49 50	51 5	52 53	54 55	56	57 58 59	60 61	62 63	64 65	66 67	68
1 Possession of site		294.0					43																															
2 Utilities Diversions 3 Demolition of Existing Building		294.0 289.0					43 43		48 48 48																											++	++	-
4 Install sheet piles and bored piles at playground ^A	100	294.0	46								46 4	6 46 4																										1
5 Excavate to top slab level^ 6 Build up fill platform to +7mPD	95	294.0 294.0	41							41		41																								$\pm \pm$		+
7 Concrete roof slab 8 Install bored piles and H-piles for shaft		294.0 294.0						+		46 46	46 46	6	44																+							++	++	+
Excavate under top slab level	94	294.0	40							10 10			40																									
Excavate to tunnel level Concreting Air Compressor Room and Backfill top slab		294.0 294.0									42 42	2 42 4	42 42 44																							++	++-	+
12 Construct Noise Enclosure and Install Compressed Air Equipment		294.0													39 39	9																						
13 Tunnel Construction		298.0														49	49 49							49 49	19 49	49 49	49											
14 Construct Box Tunnel Adit 15 Not Used	-	294.0	-															45 45	45 45	45 45	45 45	45 45	3 45	45 45			-									++	+	+
16 Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level		294.0																										2 42 42	2 42							\perp	\perp	1
Entrance	94	294.0	40																							40	40 40	0								—		
Works Area M1 - SYP Entrance B1 & B2																																					4	4
18 Move the existing SYP Cooked Food Market to proposed location *	-	-	0																																	Ш		
19 Demolition of Existing Building [^] 20 Piling/Walling [^]		222.0 222.0	53											49 49	9 49 49		53 53	53 53																		++	+	+
21 Bulk Excavation-Soft*			44																44	44 44		46 46	2 46															1
22 Bulk Excavation-weak Rock^ 23 Excavate Rock^		222.0																				46 46 50 50								\pm						$\pm \pm$	$\pm \pm$	t
24 Station Construction * 25 Concrete vertical shaft^	- 99	222.0	0 47										\Box							47 47	47 47															+	+	F
26 Construct Ground Level Entrance	96	222.0	44																	., 4/	1 41			44 44												井	##	t
27 Station Fitout Works Area L1 - SYP Entrance B3	94	222.0	42																					42 42	12 42	42 42	42 42	2 42 42	2									t
28 Possession of site	95	-	0					0				-																								+	+	+
29 Utilities Diversions 30 Piling/Walling	94 103		0						0			0																										1
31 Bulk Excavation-Soft^	96	-	0										0																							$\pm \pm$		+
32 Installation of Pipe Pile for Soft Ground Tunnel^ 33 Excavation along soft ground tunnel^	97 97	-	0					+ +				++			0 0																					++		-
34 Concrete soft ground tunnel [^]	97	-	0												0 0	0																						
35 Concrete Escalator Inclined ^A 36 Construct Ground Level Entrance	99 93	-	0														0 0	0 0	0 0	0 0																++	++	+
Works Area M3 - SYP Entrance C																																						
37 Possession of site 38 Demolition of Existing Building^		26.1	66 72											66	6 66 66		72 72	72																		\vdash	+	1
39 Piling/Walling^	102	25.1	69													12	12 12	69 69																				
40 Bulk Excavation-Soft^ 41 Bulk Excavation-weak Rock^		27.3 27.3																	68 68	68 68		68 68	3 68	68								\vdash				++	++	+
42 Excavate Rock [^] 43 Excavate Rock Adit (Hard Rock Excavation) [^]	102	27.3 27.3	68																			68 68		68														
43 Excavate Rock Adit (Hard Rock Excavation)** 44 Concrete vertical shaft		27.3																				69	9 69		66 66	66 66	66									世		\pm
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	100	27.3	66																						66 66	66 66	66 66	6										
46 Station Fitout [^]	106	27.3	72																				72	72 72	72 72	72 72	72 72	2 72				ш				\perp		_
Works Area M - KGV Construction Shaft																																						4
47 Possession of site 48 Utilities Diversions^		88.0							52 52	54 54																										++	++-	+
49 Piling/Walling^ 50 Bulk Excavation-Soft^			58 57							58	58 5																									1	1	1
51 Excavate Rock^			59											59 59	9																					世		土
Works Area O1, O2 and O3 - Ground Treatment Works																																						
52 Mobilization * 53 Utilities Diversions (Stage A)	94	-	0					0							\Box	Ħ					H											H		H		\Box	##	Ŧ
54 Ground Treatment (Stage A)	100	-	0					_	0																											世	##	\pm
55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1)	98 94		0	++			+++	+	0 0			++	+		++	+			\vdash	+	\vdash	++	+	+			\vdash	++	++	+		++	+	++		++	++-	+
57 Ground Treatment (Stage 1) 58 Reinstatement (Stage 1)	100	-	0					+	0																											\perp	#	Ŧ
58 Reinstatement (Stage 1) 59 Utilities Diversions (Stage 2)	98	-	0							0																										世		$^{+}$
60 Ground Treatment (Stage 2) 61 Reinstatement (Stage 2)	100 98		0							0	0																									1	1	+
62 Utilities Diversions (Stage 3)	94	-	0								0																											T
63 Ground Treatment (Stage 3) 64 Reinstatement (Stage 3)	100 98	-	0					+			0	0																								++	+	+
65 Utilities Diversions (Stage 4)	94 100		0									C																										I
66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4)	98		0									С	0								Ш															世	世	±
68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5)	94 100	-	0			$+\mathbb{T}$	+	+ T		$+$ \Box	$+\mathbb{T}$		0		+ T	+				$+$ \top	$+ \Box$	$+ \mathbb{T}$	$+\Box$		$+\Box$				$+ \mathbb{T}$			H	$+ \mathbb{T}$	$+ \mathbb{T}$	$+$ \Box	+F	$+ \mp$	+
70 Reinstatement (Stage 5)	98		0											0							ш															二二	井上	#
71 Utilities Diversions (Stage 6)^ 72 Ground Treatment (Stage 6)^	94 100	-	0			++		++					+	0								++	+						+			++				++	++	+
73 Reinstatement (Stage 6) 74 Utilities Diversions (Stage 7)	98 94		0					Ħ							0 0																					\Box	#	Ŧ
75 Ground Treatment (Stage 7)	100	-	0												0)																				世	$\pm \pm$	+
76 Reinstatement (Stage 7)	98 Tota		0 dB(A) -	1.	1 - 1 -	1.	43 43 43	3 48	48 53 59	57 60	59 6	0 59 5	59 50	60 67	7 66 69	0 6 72	72 72	72 60	69 69	68 71	71 71	71 72	3 73	73 73	74 74	74 74	74 7	3 72 49	3 42	- -		++	_ _	1	1-1-	+	++-	+
			dance -	1 - 1 -		1-1-		-								_	2 2			- 1	1 1	1 3		-	4 4		4 3			- -		++		1-1-	1-1-	 	+++	+
Excee	dance					- -		-				- -		- 2	1 1	7	7 7	7 4	4 3	3 6	6 6	6 8	8	8 8	9 9	9 9	9 8	7 -	- -	- -		-					1-1-	1-
Remarks:																																						

- Remarks:

 1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

 2. Stant distance (m)

 3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

 * No PMEs used at surface
- ^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 21, act. 32, 33 & 34 in month 21, act. 32, 33 & 35 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 29, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

 Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: SYP8 - Ivy Tower																																			
Act No. Construction Element	SWL Dist ² SPL	Feb Mar /	Apr May J	2009 un Jul Au	g Sep Oct	Nov Dec	Jan Feb	Mar Apr N		Jul Aug Se	p Oct Nov D	ec Jan	Feb Mar	Apr May	2011 Jun Jul	Aug Ser	Oct No	ov Dec J	Jan Feb	Mar Apr		12 Jul Aug	Sep Oct	Nov Dec	Jan Feb	Mar Apr		13 Jul Aug	Sep Od	ct Nov De	ec Jan Fe	eb Mar A	2014 Apr May Jun	Jul A	Aug Sep
W 1 4 N/ OVD 5 : 44 0 40																																	63 64 65		
Works Area N1 - SYP Entrance A1 & A2 1 Possession of site	97 266.0 44				44																												+		4
2 Utilities Diversions	97 266.0 44					44																													
3 Demolition of Existing Building	102 285.0 48					48	48 48			47 47 4																									
Install sheet piles and bored piles at playground [^] Excavate to top slab level [^]	100 266.0 47 94 266.0 41							4/	4/ 4/	47 47 4		+																					+		\dashv
6 Build up fill platform to +7mPD	95 298.0 41							41																									+		
7 Concrete roof slab	98 266.0 45										45																								
Install bored piles and H-piles for shaft Excavate under top slab level	100 266.0 47 94 266.0 41							47	47 47	47	41 4	11																	+				+		+
10 Excavate to tunnel level	96 266.0 43								43	43 43 43	3 43 43 4																						+		+
11 Concreting Air Compressor Room and Backfill top slab	98 266.0 45										45 4																								
12 Construct Noise Enclosure and Install Compressed Air Equipment	93 266.0 40											40	40 40																						
13 Tunnel Construction	103 266.0 50													50 50									50 50	50 50									-		
14 Construct Box Tunnel Adit	99 266.0 46														46	46 46	46 46	6 46	46 46	46 46	46 46	46													
15 Not Used 16 Construct Escalator Well at playground	96 266.0 43										+++	+		-											43 43	13 13							+		\dashv
Construct Ventilation Shaft and Plant Room / Construct Ground Level	94 266.0 41																							41 41		40 40							+		$\neg \neg$
" Entrance Works Area M1 - SYP Entrance B1 & B2																																			
18 Move the existing SYP Cooked Food Market to proposed location *	0																																		
19 Demolition of Existing Building^			\rightarrow	\perp	\bot		$\vdash \vdash$	$\sqcup \sqcup$				70 70	78 78	70			$\perp \perp$	+		\perp		\Box	\vdash	\vdash		\perp		$\sqcup \bot$	+	+	\perp	++	+	\vdash	+
19 Demolition of Existing Building* 20 Piling/Walling*	103 9.5 78 105 4.8 86		\rightarrow	+	+			+++	-		+ +	0 /8	70 /8	86 86	86 86	86	++	++		-			+-			-		$\vdash \vdash$		++	+	+	+	++	+
21 Bulk Excavation-Soft^	101 10.2 76					Ш											76 76	6 76											ш		上十	ШT			
22 Bulk Excavation-weak Rock^	101 10.2 76							\Box			$+ \top \top$			$oxed{\Box}$						76 76													\bot		\Box
23 Excavate Rock [^] 24 Station Construction *	102 10.2 77		\rightarrow	+	+			+++			+++							17	17 77	77 77	77					-		$\vdash \vdash$	++	++	+	+	+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	\vdash	+
25 Concrete vertical shaft^	100 10.2 75		+								+++						75	5 75	75 75												+		+	\vdash	+
26 Construct Ground Level Entrance	99 10.2 74							ш																	74 74									ш	\Box
27 Station Fitout	104 10.2 79											\perp									79	79 79	79 79	79 79	79 79	79							\bot		
Works Area L1 - SYP Entrance B3																																			
28 Possession of site	95 108.0 49					49	40																										\bot		
29 Utilities Diversions 30 Piling/Walling	94 108.0 48 103 108.0 57						48			57	+++	+																					+		+
31 Bulk Excavation-Soft^	96 108.0 50									5	50																						+		+
32 Installation of Pipe Pile for Soft Ground Tunnel^	97 108.0 51										51 51 5																								
33 Excavation along soft ground tunnel^ 34 Concrete soft ground tunnel^	97 108.0 51 97 108.0 51										51 51 5		51 51 51 51	51 51	51														+				+		+
35 Concrete Escalator Inclined^	99 108.0 53											31	51 51		53 53	53 53	53																+		+
36 Construct Ground Level Entrance	93 108.0 47																	7 47																	
Works Area M3 - SYP Entrance C																																			
37 Possession of site	95 244.0 42											42	42 42																						
38 Demolition of Existing Building^	96 244.0 43										\perp			43 43																			$\perp \perp \perp$		\perp
39 Piling/Walling^ 40 Bulk Excavation-Soft^	102 244.0 49 99 244.0 46											+			49	49 49	46 46	6 46															+		+
41 Bulk Excavation-weak Rock^	99 244.0 46															40	40 40		46 46	46 46	46 46												+		+
42 Excavate Rock [^]	105 244.0 52																			52 52	52 52														
43 Excavate Rock Adit (Hard Rock Excavation)^ 44 Concrete vertical shaft	100 244.0 47 97 244.0 44																			47	47 47	44 44	44 44	44 44											-
						-						+										44 44									++		+		+
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96 244.0 43																					43	43 43												
46 Station Fitout [^]	96 244.0 43											\perp									43 43	43 43	43 43	43 43	43 43								\bot		
Works Area M - KGV Construction Shaft																																			
47 Possession of site	96 270.0 42						42	42 42																											
48 Utilities Diversions^ 49 Piling/Walling^	98 270.0 44 102 270.0 48							44	48 48	10																	_						+		$\dashv \dashv$
50 Bulk Excavation-Soft^	101 270.0 47									47																							+		+
51 Excavate Rock [^]	103 270.0 49									49 49 4	49 49 4	19 49																							
Works Area O1, O2 and O3 - Ground Treatment Works																																			
52 Mobilization *	0																																		
53 Utilities Diversions (Stage A)	94 - 0			$\perp \Box$	$+ T^{-}$	0		$\perp \Box$			\bot	\bot			$\Box \Box$	$\perp T$	$\perp T$						$\perp \Gamma$						$\perp T$				$\perp \perp \Box$	Ш	\Box
54 Ground Treatment (Stage A) 55 Reinstatement (Stage A)	100 - 0 98 - 0		++	+	+		0 0				+++	++	-				++	++	+									$\vdash \vdash$	++	++	++	++	+	+	+
56 Utilities Diversions (Stage 1)	94 - 0		\rightarrow		+ +		1	0	+		+++	$\pm \pm$	+		\vdash	++	++	+	\dashv	_						_			++	+	++	+	+	\vdash	+
57 Ground Treatment (Stage 1)	100 - 0							0																											4
58 Reinstatement (Stage 1)	98 - 0							0																									+		_
59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2)	94 - 0								0		+++	+																					+		-
61 Reinstatement (Stage 2)	98 - 0								0																								+		
62 Utilities Diversions (Stage 3)	94 - 0									0																									
63 Ground Treatment (Stage 3) 64 Reinstatement (Stage 3)	100 - 0 98 - 0									0 0																									
65 Utilities Diversions (Stage 4)	94 - 0									0									-										+				+		+
66 Ground Treatment (Stage 4)	100 - 0					ш				C								╧											ш	上上	上十	шt		LT	
67 Reinstatement (Stage 4)	98 - 0		\Box					\Box			0																				\Box				
68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5)	94 - 0		++	+	+		\vdash	+++			0	+	_	\vdash			++	++	+					\vdash	-		\vdash		++	+	++	++	+	\vdash	+
70 Reinstatement (Stage 5)	98 - 0		\rightarrow						-			0						++												++		+	+	+	+
71 Utilities Diversions (Stage 6)^	94 - 0											0																						口	\perp
72 Ground Treatment (Stage 6)^	100 - 0		$-\Box$	\perp	+	$\Box\Box$		$\sqcup \sqcup$			$+$ $+$ $+$ \mp	0		\Box			$\bot \Box$	\Box					$\Box\Box$		\Box				$oxed{\Box}$	$\perp \Gamma$	$+\Gamma$	+T	\Box	$\sqcup T$	
73 Reinstatement (Stage 6) 74 Utilities Diversions (Stage 7)	98 - 0 94 - 0		+	+	++	-	$\vdash\vdash$	+++	+	+++	+++	+	0 0	\vdash	\vdash	++	++	++	\dashv	_		-	 	\vdash	\vdash	_	\vdash	-	++	++	++	++	+	+	+
75 Ground Treatment (Stage 7)	100 - 0		\rightarrow					 	-		+++	+	0				++	+	+										++		+	++	+	++	+
76 Reinstatement (Stage 7)	98 - 0													0																				Ш	
	Total SPL, dB(A		- - [- - -	44 44	44 52	52 50	49 51	52 52	53 58 5	1 56 56		_				76 76						80 80			80 43			- -	- -	- - -	- -	<u>- - -]</u>	-	
	Exceedance	е	- -	- - -	- -	- -			- -	- - -	1-1-	3 3	3 3	11 11	11 11	11 -	1 1	2	2 2	4 4	4 5	5 5	5 5	5 5	5 5	5 -		- -	- -	- -	- - -	- -	- - -	-	- -
Remarks:																																			

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

NSR: SYP9 - Yee Shun Mansion																					
Act No. Construction Element	SWI Diet ²	SPI Feb Mar A	2009 Apr May Jun Jul		v Dec Jan Feh Ma	2010 Anr May Jun Ju		Nov Dec	Jan Feh Mar Anr N	201 1av Jun		Oct Nov Dec Jan Fe	eh Mar Anr I	2012 May Jun Jul Aug	Sen Oct Nov De	c Jan Feb Mar Apr N	2013 May Jun Jul Aug Se	en Oct Nov Dec	.lan Feh Mar	2014 Anr May Jun	Jul Aug Sen
	J Dist															7 48 49 50 51					
Works Area N1 - SYP Entrance A1 & A2																					
1 Possession of site 2 Utilities Diversions	97 256.0 97 256.0			44 44 44																	
Demolition of Existing Building Install sheet piles and bored piles at playground^	102 276.0 100 256.0	48			48 48 48 48		7 47 47														
Install sheet piles and bored piles at playground* Excavate to top slab level*	94 256.0					47 47 47 4	41 41														
6 Build up fill platform to +7mPD 7 Concrete roof slab	95 286.0					41	45														
Concrete root stab Install bored piles and H-piles for shaft	98 256.0 100 256.0					47 47 47 4	7 45														
9 Excavate under top slab level	94 256.0					40 4		41 41													
Excavate to tunnel level Concreting Air Compressor Room and Backfill top slab	96 256.0 98 256.0	45				43 4	3 43 43 43	43 43 45 45													
12 Construct Noise Enclosure and Install Compressed Air Equipment	93 256.0	40							40 40 40												
13 Tunnel Construction	103 296.0	49							49			49 49 49 49 4			49 49 49 4)					
14 Construct Box Tunnel Adit 15 Not Used	99 256.0	46									46 46 46	46 46 46 4	6 46 46	46 46 46							+++
16 Construct Escalator Well at playground	96 256.0	43														43 43 43 43					
17 Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance	94 256.0	41													41 4	41					
Works Area M1 - SYP Entrance B1 & B2																					
18 Move the existing SYP Cooked Food Market to proposed location *		0																			
19 Demolition of Existing Building^	103 19.0							72	72 72 72 72												
20 Piling/Walling^ 21 Bulk Excavation-Soft^	105 15.8 101 22.4	69						$ \mid$ $ \mid$	76	76 76		69 69 69	+			++++	+++		++-	-	+++
22 Bulk Excavation-weak Rock [^]	101 22.4	69										69 69 6	9 69 69	69							
23 Excavate Rock^ 24 Station Construction *	102 22.4	70 0										70 70 7	0 70 70	70		++++				-	
25 Concrete vertical shaft [^]	100 22.4	68										68 68 68 6	8								
26 Construct Ground Level Entrance 27 Station Fitout	99 22.4 104 22.4	72													67 67 67 6 72 72 72 72 73						
Works Area L1 - SYP Entrance B3	J. LE.,																				
28 Possession of site	95 132.0				48																
29 Utilities Diversions 30 Piling/Walling	94 132.0 103 132.0				47		56														
31 Bulk Excavation-Soft^	96 132.0	49					49 49														
32 Installation of Pipe Pile for Soft Ground Tunnel^ 33 Excavation along soft ground tunnel^	97 132.0 97 132.0	50							50 50 50 50 50 50 50 50												
34 Concrete soft ground tunnel [^]	97 132.0	50					30		50 50 50 50	30 30											
35 Concrete Escalator Inclined^ 36 Construct Ground Level Entrance	99 132.0 93 132.0	52								52 52	52 52 52	52 46 46									
Works Area M3 - SYP Entrance C	30 132.0	70										40 40									
37 Possession of site	95 212.0								44 44 44												
38 Demolition of Existing Building [^] 39 Piling/Walling [^]	96 212.0 102 212.0								45	45 45	45 51 51 51										
40 Bulk Excavation-Soft [^]	99 212.0	48										48 48 48									
41 Bulk Excavation-weak Rock^ 42 Excavate Rock^	99 212.0 105 212.0	48 54											8 48 48 4 54 54								
43 Excavate Rock Adit (Hard Rock Excavation)^	100 212.0	49										0. 0. 0		49 49							
44 Concrete vertical shaft	97 212.0														46 46 46 4						
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96 212.0	45												45	45 45 45 4						
46 Station Fitout^	96 212.0	45												45 45 45 45	45 45 45 4	5 45 45					
Works Area M - KGV Construction Shaft 47 Possession of site	96 244.0	43			43 43	43															
48 Utilities Diversions^	98 244.0	45			10 10	45 45															
49 Piling/Walling^ 50 Bulk Excavation-Soft^	102 244.0 101 244.0					49 49 4															
51 Excavate Rock^	103 244.0	50				5	0 50 50 50	50 50	50												
Works Area O1, O2 and O3 - Ground Treatment Works																					
52 Mobilization *	-	0																			
53 Utilities Diversions (Stage A) 54 Ground Treatment (Stage A)	94 -	0			0			-		+			+			+ + + + +				+	+++
55 Reinstatement (Stage A)	98 -	0			0																
56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1)	94 - 100 -	0			0		+++	+		++			+++			++++	+++	+++		+++	+++
58 Reinstatement (Stage 1)	98 -	0				0															
59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2)	94 - 100 -	0				0	+++	+		+			+			++++	+++	+++		+++	+++
61 Reinstatement (Stage 2)	98 -	0				0															
62 Utilities Diversions (Stage 3) 63 Ground Treatment (Stage 3)	94 - 100 -	0						+	- 	+						++++	+++			+	+++
64 Reinstatement (Stage 3)	98 -	0					0														$\Box\Box$
65 Utilities Diversions (Stage 4) 66 Ground Treatment (Stage 4)	94 -	0					0	-		+			+			+ + + + +				+	++
67 Reinstatement (Stage 4)	98 -	0					0	2													
68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5)	94 -	0						0		++			+			+ + + + +	 			+	
70 Reinstatement (Stage 5)	98 -	0						0		\perp											
71 Utilities Diversions (Stage 6) [^] 72 Ground Treatment (Stage 6) [^]	94 -	0							0	++			+			+ + + + +	 			+	
73 Reinstatement (Stage 6)	98 -	0							0	\perp											
74 Utilities Diversions (Stage 7) 75 Ground Treatment (Stage 7)	94 -	0						-	0	+			+					+++	++-	+	++
76 Reinstatement (Stage 7)	98 -	0							0	\perp											
	Total SPL, o		- - - -	- 44 44 44	52 51 50 49	52 53 53 5	3 57 54 55	55 72	72 72 72 76	76 76	76 76 56	69 69 70 70 7	0 73 73	73 73 73 73	73 73 73 73	3 73 73 73 43	- - - -		- - -		- - -
	Exceed	ance	- - - -	- - - -	1-1-1-1-	1-1-1-	1-1-1-	- -	- - - 1	1 1	1 1 -	- - - -	- - -	- - - -	- - - -	1-1-1-1-	- - - -	1-1-1-	1 - 1 - 1 -	- - -	- - -

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Pilling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

	P10 - Chun King Court								,																											
Act No.	Construction Element	SWL	Dist ² SF	PL Feb M	ar Apr M	ay Jun Ju	ul Aug Se	p Oct Nov	/ Dec Jar	Feb Mai	Apr May	2010 Jun Ju	I Aug S	ep Oct Nov	Dec Jan Fe	b Mar Ap	r May Jur	011 1 Jul Aug	Sep Oct 1	Nov Dec	Jan Feb M	lar Apr May	2012 Jun Ju	ıl Aug Se	o Oct No	Dec Jar	Feb Mar	Apr May	Jun Jul	Aug Sep	Oct Nov D	lec Jan	Feb Mar	Apr May	Jun Jul A	Aug 5
Vorks A	Area N1 - SYP Entrance A1 & A2			1 2	2 3	4 5 6	7 8	9 10	11 12	13 14	15 16	1/ 18	19 2	0 21 22	23 24 2	26 27	28 29	30 31	32 33	34 35	36 37 3	88 39 40	41 4	2 43 44	45 46	4/ 48	49 50	51 52	53 54	55 56	5/ 58 5	9 60	61 62	53 64	65 66	67
1	Possession of site	97 2	249.0 4	4			44	1																												\neg
	Utilities Diversions		249.0 4					44 44		40 40																								\rightarrow		_
	Demolition of Existing Building Install sheet piles and bored piles at playground [^]	102 2	270.0 4 249.0 4		+++				48 48	48 48	47 47	47 47	7 47 4	7																					-	\dashv
5	Excavate to top slab level^	94	249.0 4	1									4																							
	Build up fill platform to +7mPD		282.0 4								41			45																						\vdash
	Concrete roof slab Install bored piles and H-piles for shaft	100	249.0 4 249.0 4								47 47	47 47	,	45																						_
9	Excavate under top slab level	94 2	249.0 4											41	41																					-
	Excavate to tunnel level	96										43 43	3 43 4	3 43 43																						\vdash
	Concreting Air Compressor Room and Backfill top slab		249.0 4						-					45																						\dashv
	Construct Noise Enclosure and Install Compressed Air Equipment	93 2													40 4	0 40		10 10	10 10	10 10	10 10 1				10 10	10										\vdash
	Tunnel Construction Construct Box Tunnel Adit	103	290.0 4 249.0 4													48	9 49 49		49 49		49 49 4 46 46 4				49 49	49										_
	Not Used	-																																		-
	Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level		249.0 4																								43 43	43						\rightarrow		_
	Entrance	94	249.0 4	1																					41	41 41										
Vorks A	Area M1 - SYP Entrance B1 & B2																																			
18	Move the existing SYP Cooked Food Market to proposed location *	-	- 0																													П				
	Demolition of Existing Building^		16.0 7		+	\perp	+		+	\vdash	\vdash		1 -		74 74 7	1 74 74			\rightarrow	$ \mid$ $ \mid$		\perp	\vdash				\vdash	\vdash	\square		+	+		\rightarrow	\longrightarrow	\dashv
	Demolition of Existing Building [^] Piling/Walling [^]		16.0 7 7.7 8		++	++	++		++	++	\vdash		++	+++	74 74 7	4 74 74	2 82 82	82 82	\rightarrow	+		+	++			++	\vdash	\vdash	$\vdash\vdash\vdash$		++	+	+	+	\rightarrow	+
21	Bulk Excavation-Soft [^]	101	16.3 7	2															72	72 72						ш								士		
	Bulk Excavation-weak Rock^	101			$+$ \mp	$+$ \mp	$+ \top$	$+ \mathbb{T}$	+ T	\Box	\Box		+ T	$+\Box$	\Box	+ T	$+ \mathbb{T}$	$+\square$	$-\Box$		72 72 7		LΤ	$\perp \perp$		$\Box \Box$	\Box		\Box	$\Box\Box$	-1	$\perp \! \! \perp \! \! \! \perp \! \! \! \! \! \! \! \! \! \! \! \!$	\Box	$+\Box$	\dashv	Ţ
	Excavate Rock^ Station Construction *		16.3 7		++	++	++		++	++	\vdash		++							/3	73 73 7	73 73 73				++	\vdash	\vdash	$\vdash\vdash\vdash$		++	+	+	+	\rightarrow	+
25	Concrete vertical shaft [^]	100	16.3 7	1																71 71	71 71													\pm		二
	Construct Ground Level Entrance	99			+ T	+T	$\perp \Gamma$		$\bot \Box$	$\Box\Box$	$\Box\Box$		+T	+	$-\Box$	$+\Gamma$		\Box	$-\Box$	\Box		$+\Gamma$		0 70 70			70 70		$\Box\Box$	\Box	$-\Box$	$+\Box$	$+\Box$	$+$ \Box	\dashv	Æ
	Station Fitout Area L1 - SYP Entrance B3	104	16.3 7	5																			/5 7	5 75 75	/5 75	/5 75	75 75									_
		05	70.0 5	^					50																											_
	Possession of site Utilities Diversions	95 94	78.0 5 78.0 5		+++				52				+																						-	\dashv
	Piling/Walling	103	78.0 6	0									60																							
	Bulk Excavation-Soft ⁶		78.0 5										5	3 53	54 54 5	1 54 54	54 54																			\rightarrow
	Installation of Pipe Pile for Soft Ground Tunnel^ Excavation along soft ground tunnel^		78.0 5 78.0 5										+		54 54 5 54 54 5																	+		\rightarrow	-	\dashv
34	Concrete soft ground tunnel [^]		78.0 5													4 54 54																				
	Concrete Escalator Inclined [^]		78.0 5														56 56	56 56		F0 F0														\rightarrow		_
	Construct Ground Level Entrance Area M3 - SYP Entrance C	93	78.0 5	0																50 50														\rightarrow	\rightarrow	_
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	Demolition of Existing Building [^]	96 2	260.0 4 260.0 4										+		42 4.	2 42 43	3 43 43	43														+		\rightarrow	-	\dashv
39	Piling/Walling^	102	260.0 4	9														49 49																		
	Bulk Excavation-Soft [^] Bulk Excavation-weak Rock [^]		260.0 4																46 46		40 40 4	10 10 10	40													\rightarrow
	Excavate Rock [^]		260.0 4 260.0 5										+							46 52		6 46 46 2 52 52										+		\rightarrow	-	\dashv
43	Excavate Rock Adit (Hard Rock Excavation)^	100	260.0 4	7																		47 47	47													
44	Concrete vertical shaft	97 2	260.0 4	4				-															4	4 44 44	44 44	44										\rightarrow
45	Construct Ground Level Entrance, Plant Room and Vent Shaft	96	260.0 4	3																				43 43	43 43	43 43										,
46	Station Fitout [^]	96 2	260.0 4	3																		43	43 4	3 43 43	43 43	43 43	43									ᆂ
Vorks A	Area M - KGV Construction Shaft																																			
	Possession of site	96 2								42 42																							TI	\blacksquare	\Box	Į
	Utilities Diversions^ Piling/Walling^		274.0 4 274.0 4	8	++	++	++		++	++	44 44 48	48 48	3		++				+	+		+	++	++					+++	\vdash	++	+	+	+	+	+
50	Bulk Excavation-Soft^	101	274.0 4	7								47	7													ш								士		
51	Excavate Rock [^]	103	274.0 4	9								49	49 4	9 49 49	49 49							\perp									\perp			┰	\bot	Ţ
Vorks A	Area O1, O2 and O3 - Ground Treatment Works																																			
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	Ground Treatment (Stage A) Reinstatement (Stage A)	98	- (++	++	+		0	0	\vdash		++	+	++				+	+		++	++			++	\vdash		+++	+++	+	+	+	++	++	+
56	Utilities Diversions (Stage 1)	94	- 0)					\Box	0			\Box																					$\exists \exists$	ightharpoonup	二
	Ground Treatment (Stage 1)	100)	+		+		+ $+$ $-$	0	0			+	\perp				$-\!$	$ \!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$ $\!$		+	\Box				\Box		$\sqcup \sqcup \Box$	\Box	$\perp \perp \perp$	$+$ \Box	$+ \Gamma$	+	\bot	_#
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64	Reinstatement (Stage 3)	98	- 0)									0		ш																			世	世	士
	Utilities Diversions (Stage 4)	94	- (+	\perp	\perp			+	\Box)	\perp				$-\Box$	$ \mid$ $ \mid$		+	\Box				\Box		\Box	\Box	$\perp \perp \perp$	$+$ \bot	$+$ \bot	+	\dashv	
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68	Utilities Diversions (Stage 5)	94	- ()					\Box				\Box	0																				$\exists \exists$	ightharpoonup	二
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74	Utilities Diversions (Stage 7) Ground Treatment (Stage 7)	94 100	- (+	-	0															+			\rightarrow	\dashv	+
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1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

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3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

No PMEs used at surface

^Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 14, 24, 24, 8 4 de in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

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Seminary Manuscript	No. Construction Element	SWI Di-42 CD	Fals 11	Anr 11	2009	- C C	Ne: P	lan Ed C	or A	2010	- Cc	Nev: C	les Fri **	- Ac	2011	Num 0	at No	lan Fri er		2012	Aug 0 0	No:- C	lec = -	Mar A .	2013		Oat 1:	Dec 1		014
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A Area M. KOV Construction Shaft	5 Construct Ground Level Entrance, Plant Room and Vent Shaft	96 - 0																			0 0 0	0 0	0							
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Reinstatement (Stage 6) 98 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			\vdash		-++		+++	-++	+		++-			+		+	++		++-	+++	-+-	\vdash			+	++	+++		+++	+
Utilities Diversions (Stage 7) 94 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Reinstatement (Stage 6)						\Box												+ +	+						++	\vdash		+	+
Ground Treatment (Stage 7) 100 - 0	4 Utilities Diversions (Stage 7)																		1 1							+			+	\top
Reinstatement (Stage 7) 98 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ground Treatment (Stage 7)	100 - 0																												
	Reinstatement (Stage 7)	98 - 0												0																I

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of the Will would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be archieved.

	- 1				2009)		2010				2011						2012				20	013				2014		
Act No. Construction Element	SWL	Dist ²			Jun Jul	Aug Sep Oct Nov Dec		Mar Apr May Jun Ji				eb Mar Apr May Jun Ju 5 26 27 28 29 30						Jun Jul Aug Sep				r May Jun	Jul Aug Sep				or May Jun		
Works Area N1 - SYP Entrance A1 & A2																													Ī
		266.0				44																							_
		266.0				44 44																							
		294.0 266.0	48 47			48	48 48	48 47 47 47 4	7 47 47																				-
5 Excavate to top slab level^		266.0	41					47 47 47 4	41																				1
	95		0					0																					
		266.0 266.0	45 47					47 47 47 4		45																			_
		266.0						4/ 4/ 4/ 4		41	41									+									-
10 Excavate to tunnel level	96	266.0	43					43 4	3 43 43																				
		266.0	45							45	45																		
12 Construct Noise Enclosure and Install Compressed Air Equipment	93	266.0	40								40 4	0 40																	
	103		0															0 0 0 0	0 0 0)									
	99	266.0	46									41	6 46 46	46 46	46 46 4	16 46 46	6 46	46 46											_
		266.0	43																	43 4	3 43 43								-
Construct Ventilation Shaft and Plant Room / Construct Ground Level		266.0	41																41 4										
Littance	0.	200.0																											
Works Area M1 - SYP Entrance B1 & B2																													
18 Move the existing SYP Cooked Food Market to proposed location *	-	-	0																										
19 Demolition of Existing Building^	101	124.0	54								54 54 5	4 54 54																	-
20 Piling/Walling^	105	124.0	58									58 58 58 58]
		124.0 124.0							+	\perp	+		+	49 49	49 51 51 5	1 51 54	1 61	$\overline{}$		++	++	++			+	++	++	+++	4
		124.0		-	\vdash				+	-	+	++++	+		51 51 5					++	++	++			+		+	+++	1
24 Station Construction *	-	-	0																										1
		124.0							$+\square$					52	52 52 5	52		10 10 11	10		0 45	+ T				\Box	+ T	\perp	4
		124.0 124.0					-		+									49 49 49 49 47 47 47 47							+	-	++-	+	\dashv
Works Area L1 - SYP Entrance B3	54	124.0	-7/															7/ 7/ 7/ 7/	4/ 4/ 4	, 4, -	7 47								
	00	10.3	74			74																							
		10.3				74	74																						-
30 Piling/Walling	104	6.4	83						83																				
		10.3	76						76																				
		23.6										6 66 66 66 66 4 74 74 74 74 74								++									-
		10.3	74							14 14		4 74 74 74																	
35 Concrete Escalator Inclined [^]	99	10.3	74									74 74 74	4 74 74	74															
	99	10.3	74											74	74														_
Works Area M3 - SYP Entrance C																													
	95	-	0								0	0 0																	_
	96 102	-	0									0 0 0 0	0 0							+									-
	99	-	0											0 0	0														7
	99	-	0												0 0														
	105	-	0												0 0														
	100 97	-	0													0	0	0 0 0	0 0 0)									-
	96		0																0 0 0										
		·																											
	96	-	0														0	0 0 0 0	0 0 0	0	0				\rightarrow		_		_
Works Area M - KGV Construction Shaft																													
	96	-	0				0	0 0												4							-		
	98 102	-	0					0 0 0		+		++++					+			++	+				+		+		ᅦ
	101	-	0					0 0 0														ш							
51 Excavate Rock [^]	103	-	0						0 0	0 0	0 0										$\perp \perp$				\Box		$\perp I$		
Works Area O1, O2 and O3 - Ground Treatment Works																													
52 Mobilization *	-	-	0																										
53 Utilities Diversions (Stage A)	94	-	0			0																							1
	100	- 1	0		\Box		0		+	$-\Box$	$+$ \square	+++	+	\Box	$+$ \square	$+\Gamma$	$+$ \top	+	\Box \Box	+T	$+\Gamma$	+	++T	\Box	$+\Box$	$\perp \perp T$	$+ \Box$	$+$ $+$ $+$ \mp	4
	98 94	-	0	+			0	0	+++	+	+		+	$\vdash\vdash\vdash$	+	++	+		+++	++	++	+-			+	++	++	+++	┥
	100	-	0					0	+++		+				+		+			+	+						+	+++	
58 Reinstatement (Stage 1)	98	-	0					0																					
	94		0					0	+	\perp	\perp	+		$\sqcup \sqcup \Box$	\perp		44	\perp		44	+				$+$ \Box		+	\bot	_[
	100 98		0		$\vdash\vdash$			0 0	+++		+	++++	+		+	+	+	+	+++	++	+	++-			+		++-	+++	\dashv
	94	-	0					0	+ + +	\dashv	+	 		++	+	+	+		 	++	++	+			+	+	++	+++	┪
63 Ground Treatment (Stage 3)	100	-	0					(
, ,	98	-	0						0		\rightarrow				\rightarrow														4
	94 100	-	0						0		-	+			-		++	+		++	++	+			+		+		4
	98	-	0	_				 		0		++++	++-				++			++	++	+			+	++	++	+++	-
68 Utilities Diversions (Stage 5)	94		0							0																			
	100	- 7	0				\Box		\Box	0		+++	\Box		\bot	$\bot \bot \top$	\Box	$++$ \top	$\Box\Box$	+T	$+\Gamma$	$+ \Gamma$	$\Box\Box$	\Box	\Box	$\perp \downarrow \top$	$+\Gamma$	$+$ $+$ $+$ \mp	_]
	98 94	-	0	_			+		+++	+	0	++++	++-		+	+	+	+++	+++	++	++	++			+		++	+++	4
	100	-	0	_						\dashv	0									+	+				+	+	+		
73 Reinstatement (Stage 6)	98		0)																	
	94		0									0																	Ī
		-					 				-+	0		- + +				1 1 1				+	+++	++	-				\neg
75 Ground Treatment (Stage 7)	100 98	-	0									0 0					+												4

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

*No PMEs used at surface

*Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 32, 33 & 35 in month 24-28, act. 38 & 39 in month 18, and act. 71 & 72 in month 24.

**No PMEs used at surface

**Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 30, act. 19 & 20 in month 40-41, act. 48 & 49 in month 24-27, act. 32, 33 & 35 in month 18, and act. 71 & 72 in month 24.

**No PMEs used at surface in the month 30-37, act. 41, 42, 43 & 46 in month 40-41, act. 49 & 49 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 34 & 49 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 49 & 49 in month 40-41, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance
The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would

					2009						2010						20	011						2012					2013					2014		
Act No. Construction Element	SWL Dist ²	SPL	Feb Mar	Apr May	Jun Jul /	Aug Sep Od	t Nov D	ec Jan	Feb Mar	Apr May J	Jun Jul	Aug Se	Oct Nov	Dec Ja	n Feb N	Mar Apr	May Jun	n Jul Aug	g Sep Oc	t Nov D	ec Jan	eb Mar A	pr May J	ın Jul Aug	Sep Oct	Nov Dec	Jan Feb	Mar Apr May	Jun Jul A	ug Sep O	ct Nov D	ec Jan	Feb Mar	Apr May J	Jun Jul	Aug
V. I. A N. OVD 5 1			1 2	3 4	5 6	7 8 9	10	11 12	13 14	15 16	17 18	19 20	21 22	23 24	4 25 :	26 27	28 29	30 31	32 33	34 3	35 36	37 38 3	9 40 4	1 42 43	44 45	46 47	48 49	50 51 52	53 54 5	55 56 5	7 58 5	59 60	61 62	63 64	65 66	67
Vorks Area N1 - SYP Entrance A1 & A2																																				4
1 Possession of site 2 Utilities Diversions	97 242.0 97 242.0					44	1 44							+ +				+	+		-										_			\rightarrow	$-\!\!\!\!-\!\!\!\!\!-$	+
3 Demolition of Existing Building	102 268.0							48 48	48 48																									-+-+		+
4 Install sheet piles and bored piles at playground [^]	100 242.0	47								47 47	47 47	47 47																								
5 Excavate to top slab level^		41										41																							\perp	'
6 Build up fill platform to +7mPD 7 Concrete roof slab	95 278.0 98 242.0							_		41			45																					\rightarrow	-	+
7 Concrete roof slab 8 Install bored piles and H-piles for shaft	98 242.0 100 242.0		1					-		47 47	47 47		45							+ +														-		+
9 Excavate under top slab level	94 242.0							+		47 47	-1 -1		41	41																				\rightarrow		+
10 Excavate to tunnel level	96 242.0										43 43	43 43	43 43																						-	1
11 Concreting Air Compressor Room and Backfill top slab	98 242.0	45											45	45																						
12 Construct Noise Enclosure and Install Compressed Air Equipment	93 242.0	40												41	0 40	40																				
13 Tunnel Construction	103 288.0) 49													_	49	49 49	49 49	49 49	49 4	19 49	49 49 4	9 49 4	9 49 49	49 49	49 49								++	\dashv	+
14 Construct Box Tunnel Adit	99 242.0																					46 46 4													$\neg \neg$	1
15 Not Used		-																																		
16 Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level	96 242.0													↓ ↓														43 43				_				4
17 Construct Ventilation Shart and Plant Room / Construct Ground Level	94 242.0	41																								41 41	41									
Works Area M1 - SYP Entrance B1 & B2																																				
																																		+	+	+
18 Move the existing SYP Cooked Food Market to proposed location *		0																																		
19 Demolition of Existing Building [^]	101 102.0													56 5	6 56																					
20 Piling/Walling^		60		\Box			\perp			\Box		$\Box \Box$		$\Box \Box$		60	60 60	60 60		LT											$\perp \perp \top$			\bot	$\perp \! \! \perp \! \! \! \perp$	\bot
21 Bulk Excavation-Soft^ 22 Bulk Excavation-weak Rock^	96 102.0 98 102.0	51	+	+		-	+	_	+	-	_	\vdash	+	\vdash	+			++	51	51 5	-	EQ	2 50	+	\vdash	\vdash	+		-	++	+			++	\perp	+-
22 Bulk Excavation-weak Hock* 23 Excavate Rock*	102 102.0																				53 53	53 53 5 57 57 5	3 53											-+-+	-	+
24 Station Construction *		0						+		+											31	31 5	. 31							+	+			++	-	+
25 Concrete vertical shaft [^]	99 102.0																			54 5	54 54	54													\dashv	+
26 Construct Ground Level Entrance	96 102.0	51																						1 51 51		51 51		51								
27 Station Fitout	94 102.0	49																			\perp		4	9 49 49	49 49	49 49	49 49	49						\rightarrow		
Works Area L1 - SYP Entrance B3																																			الحريد	
28 Possession of site	99 8.9						7	75																												
29 Utilities Diversions	99 8.9							75																												
30 Piling/Walling	104 6.7											82									_													\rightarrow		4
31 Bulk Excavation-Soft [^] 32 Installation of Pipe Pile for Soft Ground Tunnel [^]		77					-	_				77	77	66 61	6 66	66 66	66 66			+														\longrightarrow	-	+
33 Excavation along soft ground tunnel ^A	99 8.9															75 75																		++	-	+
34 Concrete soft ground tunnel^	99 8.9														5 75																				_	+
35 Concrete Escalator Inclined [^]	99 8.9																75 75	75 75	75 75																	
36 Construct Ground Level Entrance	99 8.9	75																		75 7	75													\rightarrow		
Works Area M3 - SYP Entrance C																																				
37 Possession of site	95 -	0												C	0	0																				
38 Demolition of Existing Building [^]	96 -	0														0	0 0																	\perp		
39 Piling/Walling^ 40 Bulk Excavation-Soft^	102 -	0						-							+			0 0			0													\rightarrow		+
40 Bulk Excavation-Sort* 41 Bulk Excavation-weak Rock*	99 -	0						_						+ +	+				0 0	0		0 0	0 0	1										++	-+-	+
42 Excavate Rock^	105 -	0																				0 0												++	\dashv	+
43 Excavate Rock Adit (Hard Rock Excavation)^	100 -	0																					0 0												-	1
44 Concrete vertical shaft	97 -	0																						0 0	0 0	0 0										
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96 -	0																						0	0 0	0 0	0									
														↓ ↓													0 0					_				_
46 Station Fitout [^]	96 -	0																					0	0 0	0 0	0 0	0 0							\rightarrow	\rightarrow	
Works Area M - KGV Construction Shaft																																				
47 Possession of site	96 -	0						_	0 0																									\rightarrow	-	4
48 Utilities Diversions^ 49 Piling/Walling^	98 -	0		+			+			0 0	0 0	\vdash	+	++	+	+	-	++	++	++	+	+	+	+	\vdash				-+	++	+	-		++	$-\!$	+
50 Bulk Excavation-Soft^	101 -	0					+	-			0			++	+	\dashv				+	+	+	+						-+	+	++			++	$\overline{}$	+
51 Excavate Rock [^]		0					ш						0 0	0 0)																				\Box	
Works Area O1, O2 and O3 - Ground Treatment Works																																				
																																			لب	4
52 Mobilization * 53 Utilities Diversions (Stage A)	94 -	0	+	+				0		++	_	\vdash	++	++	+	+	-	++-	++-	++	+	+	++	++	\vdash	++	+		++	+	++	-		++	$-\!$	+-'
53 Offittes Diversions (Stage A) 54 Ground Treatment (Stage A)	100 -	0		+				0		++	_	\vdash	+	++		+	-	++	++	++	+		++				+		+	+	++			++	\rightarrow	+
55 Reinstatement (Stage A)	98 -	0							0																											1
56 Utilities Diversions (Stage 1)	94 -	0							0																											
57 Ground Treatment (Stage 1)	100 -	0		\Box	\Box		\perp	_	0				$\perp \perp \perp$			$\perp \!\!\! \perp \!\!\! \perp \!\!\! \perp$		+ $+$ $-$	+ $+$ $-$		\bot	\perp	$\perp \perp$	\perp				\Box	\Box	\perp	\perp		$\sqcup \sqcup \Box$	\bot		<u> </u>
58 Reinstatement (Stage 1)	98 -	0	+-	+	\Box	++	++	_	+++	0	_	\vdash	++	++	+	\dashv		++	++	++	+	++	++	++	\vdash	\vdash	++	+++	+	++	++	-	\vdash	++	$+\!\!\!-$	+
59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2)	94 -	0	+ +	+		-	+			0	-	\vdash	+	++	+	\dashv		++	++	++	+	+	+	+	\vdash	 	1		-+	+	+	-		++	-	+
61 Reinstatement (Stage 2)	98 -	0						-		U	0			++				+	+	++		+	+						+	+	+			+	\dashv	+
62 Utilities Diversions (Stage 3)	94 -	0									0																								\Box	I
63 Ground Treatment (Stage 3)	100 -	0									0																									┲
Reinstatement (Stage 3)	98 -	0	+	+			++	_		\rightarrow		0		+	+	\rightarrow	_	+	+	++	+	\perp	+	+	\vdash	\vdash	1		-	\perp	\perp			+	$oldsymbol{-}$	+
65 Utilities Diversions (Stage 4) 66 Ground Treatment (Stage 4)	94 -	0	+	+		-	++	_	+ + +	++	_	0		++		+		++	++	++	+	+	++	+	\vdash	\vdash	+	++++	+	++	++	-		++	\dashv	+
66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4)	98 -	0	+	+			++			+	-	0	0	++	+	+	-	++	++	++	+	+	++	+					+	++	++		\vdash	+	$-\!\!\!\!\!-$	+
68 Utilities Diversions (Stage 5)	94 -	0	++	+		++	++	\dashv	+++	+	+		0	+		\dashv	+	++	++	++	+	+	++	++-			++		\rightarrow	+	+		\vdash	++	\rightarrow	+
69 Ground Treatment (Stage 5)	100 -	0	\perp										0					\perp \vdash	\perp \vdash												1 T					1
70 Reinstatement (Stage 5)	98 -	0												0																						
71 Utilities Diversions (Stage 6)^	94 -	0		$\Box\Box$			$\perp T$			$-\Box$		$\vdash \vdash$		C				$\perp \perp \Box$	$\perp \perp \Box$	$\perp T$		$\perp \perp \perp$	$\perp T$	$\perp \perp$			$\perp \Box$	$\Box\Box$	$-\Box$	$\perp T$	$\perp T$			$\bot \bot \bot$		\perp
72 Ground Treatment (Stage 6)^	100 -	0	+	+			++			-		\vdash	+	C		-		+ +	+ +	++	+	\perp	++	\bot	\vdash	\vdash			-	\perp	\perp			\rightarrow	$\perp \!\!\!\!\perp \!\!\!\!\perp$	+
73 Reinstatement (Stage 6) 74 Utilities Diversions (Stage 7)	98 -	0	++	+	\vdash	++	++		++	+	_	\vdash	++	++	0	0	_	++	++	++	+	+	++	++	\vdash	\vdash	++	+++	+	++	++	-		++	$-\!$	+
74 Utilities Diversions (Stage 7) 75 Ground Treatment (Stage 7)	100 -	0		+			+			+	-	\vdash	+	++		0	-	++	++	++	+	+	+	+	\vdash				-+	++	+	-		++	$-\!$	+
		0	+				+			-	_	-	-	+		0		++	+	+	-		+		\vdash	-	++	-	-++			_		+	-	†
76 Reinstatement (Stage 7)	98 -															U						1 1				1 1	1 1		1 1	1 1	1 1					

Hemarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 40-41, act. 43 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

*Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Act No.	Construction Element	SWL	Dist ² SI	PL Feb Ma	ar Apr Mav Jur	2009 1 Jul Aug	Sep Ont	Nov Dec	Jan Feb	Mar Apr	2010 May Jun Jul	Aug Sen	Oct Nov F	ec Jan Feb Ma	20: Apr May Jun		Oct Nov	v Dec Jan	Feb Mar Ann	2012 May Jun Jul	Aug Sep	Oct Nov	Dec Jar	Feb Mar	Apr May Jun	Sep On	ct Nov Dec	Jan Feb Ma	2014 ir Apr May Ju	un Jul Ai	ug S
														23 24 25 26																	
Works Area N1 - SYP																															
1 Possession of si 2 Utilities Diversio			202.0 4				46	46																		\vdash	+				+
3 Demolition of Ex			200.0 5				40		51 51	51																	+				+
	es and bored piles at playground ^a		202.0 4							49	49 49 49																				
5 Excavate to top 6 Build up fill platf			202.0 4							44		43														 	+				+
7 Concrete roof sl			202.0 4							44			47													\vdash	+				+
	les and H-piles for shaft		202.0 4							49	49 49 49																				
9 Excavate under 10 Excavate to tunn			202.0 4 202.0 4								15 15	45 45	43 4													 	+				+
	Compressor Room and Backfill top slab		202.0 4								45 45	40 40	47 4													++-	+				-
12 Construct Noise	e Enclosure and Install Compressed Air Equipment	93 2		.2										42 42 42																	
13 Tunnel Construc			214.0 5													51 51 51	51 51	51 51	51 51 51	51 51 51	51 51	51 51	51	\vdash		++	+				+
14 Construct Box T	Tunnel Adit		202.0 4	8												48 48 48	48 48	3 48 48	48 48 48	48 48 48											
15 Not Used 16 Construct Escala	alator Well at playground		202.0 4																				45	45 45	45	\vdash	+++				_
Construct Ventil	ilation Shaft and Plant Room / Construct Ground	94 2		3																		43			45		+				+
Uorks Area M1 - SYF		34 2	.02.0 4																			43	45 45				+	_			
																										-	+				4
	ng SYP Cooked Food Market to proposed location *	-	- ()																								.			
19 Demolition of Ex			206.0 5											50 50 50 50		54 5:											\Box				4
20 Piling/Walling^ 21 Bulk Excavation			206.0 5 206.0 4		+++	+			\vdash				+		54 54 54	54 54	45 45	5 45			+++	-		+++		++	+			+	+
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1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

* Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A)

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated

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Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Stant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

**Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 40-41, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

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1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

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Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A)

Act No. Construction Element					2009					010					2011					2012						2013				2014	
	SWL	Dist ² SPL	Feb Mar Ap	pr May Jun	Jul Aug S	Sep Oct No	v Dec Jan Fe	eb Mar Ap	r May Jur	18 10	g Sep Oct 1	Nov Dec	Jan Feb M	ar Apr May	Jun Jul Ai	ig Sep Oct	Nov Dec 34 35	Jan Feb M	ar Apr May 8 39 40	Jun Jul Au 41 42 4	g Sep Oct	Nov Dec 46 47	Jan Feb	Mar Ap	or May Ju	ın Jul Au	ug Sep Oct	Nov Dec 58 59	Jan Feb Ma	r Apr May 63 64	Jun Jul Aug 65 66 67
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5 Excavate to top slab level^	94	- 0									0																				
6 Build up fill platform to +7mPD 7 Concrete roof slab	95 98	- 0						0			0		-						+		+							\vdash			
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10 Excavate to tunnel level 11 Concreting Air Compressor Room and Backfill top slab	96 98	- 0							0	0 0	0 0	0 0																			
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15 Not Used 16 Construct Escalator Well at playground	96																						0 0	0 0							
Construct Ventilation Shaft and Plant Room / Construct Ground	94	- 0																				0 0	0 0	0 0							
Level Entrance	34	- 0																				0 0	U								
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18 Move the existing SYP Cooked Food Market to proposed location *	-	- 0																													
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24 Station Construction * 25 Concrete vertical shaft^	99	- 0		+	\Box	-	+				$+ + \bar{1}$						0 0	0 0		-H	+	++1	_	+	+		+	++1	-H	+	$\Box\Box$
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43 Excavate Rock Adit (Hard Rock Excavation)^	100	- 0																	0 0												
44 Concrete vertical shaft	97	- 0											-						+		0 0							\vdash			
45 Construct Ground Level Entrance, Plant Room and Vent Shaft	96	- 0																		0	0 0	0 0	0								
46 Station Fitout [^]	96	- 0																	0	0 0 0	0 0	0 0	0 0								
Works Area M - KGV Construction Shaft																															
47 Possession of site	96	- 0						0 0																							
48 Utilities Diversions^ 49 Piling/Walling^	98 102	- 0						0	0 0	0		+		+			+				+				++						
50 Bulk Excavation-Soft^	101	- 0								0																					
	103	- 0								0 0	0 0	0 0	U																		
Works Area O1, O2 and O3 - Ground Treatment Works																															
52 Mobilization *	- 0.1	- 0					40					\Box									\Box										
		283.0 40 283.0 46			+++	+	40 46	+		+	+++	\dashv		+			\dashv	++		-	+	$\vdash\vdash\vdash$			++			+++		+	
55 Reinstatement (Stage A)	98 2	283.0 44					4	4																							
56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1)		240.0 41 240.0 47			++	+		41		++	+ + +	+	+		++		+	-	+		+	+		++	++	++		++		+	+
		240.0 47						47		$\pm \pm$							_								$\pm \pm$						
59 Utilities Diversions (Stage 2)	94 1	192.0 43							43																						
		92.0 49 192.0 47			+++	+		+	49 47		+ + +	- $+$ $+$		+			\dashv	++			+	$\vdash\vdash\vdash$		++	++	++		+	+		
62 Utilities Diversions (Stage 3)		154.0 45					+ + +	++	4/	45	+ + +	+	+		++		$\dashv \dashv$	++				++	_	++	++	+		1 1			
63 Ground Treatment (Stage 3)	100 1	154.0 51								51																					
64 Reinstatement (Stage 3) 65 Utilities Diversions (Stage 4)		154.0 49 29.8 65		+	++	+	+++	++	++	49	65	\dashv	++	+++	++	+	+	++	+	++	++	$\vdash \vdash \vdash$	_	++	++	++	+	+++	++	+	+++
66 Ground Treatment (Stage 4)	102	29.8 68									68											ш									
		29.8 67									67	10									\Box										
		98.0 49 98.0 55			+++	+	+++	+		++		49 55		+	+	+	+	++	+	++	+	$\vdash \vdash \vdash$		++	++	++					
70 Reinstatement (Stage 5)	98	98.0 53										53													ш						
71 Utilities Diversions (Stage 6)^	94 1	15.0 48						T					48		H										T						
		115.0 54 115.0 52			++	+	+++	+		+	+++	+	54 52	+			\dashv	++		++	+	+++	-		++		++-	+++	+	+	
		135.0 46											4	16										ш							
																			1 1		_							—			1 I T T
75 Ground Treatment (Stage 7)	100 1	35.0 52 35.0 50							+++	++	+++	\rightarrow	5	50	+			\rightarrow	+			$\vdash\vdash\vdash$					+	$\vdash \vdash \vdash$			

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

*No PMEs used at surface

*Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 19 & 20 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 48 & 49 in month 24-27, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 39, 50 & 51 in month 18, and act. 71 & 72 in month 24.

**No PMEs used at surface

**Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 27, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-27, act. 34 & 45 in month 40-41, act. 48 & 49 in month 40-41, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would

Appendix 3.4 Sample Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Mitigated NSR: GT4 - Yu Hing Mansion SWL Dist² SPL Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr Ma Act No. Construction Element Works Area N1 - SYP Entrance A1 & A2 1 Possession of site 2 Utilities Diversions Demolition of Existing Building Install sheet piles and bored piles at playground[^] 0 0 0 0 0 5 Excavate to top slab level^ 8 Install bored piles and H-piles for shaft Excavate under top slab level 0 0 0 0 0 0 0 10 Excavate to tunnel level Concreting Air Compressor Room and Backfill top slab 12 Construct Noise Enclosure and Install Compressed Air Equipmen 13 Tunnel Construction 14 Construct Box Tunnel Adit 15 Not Used 0 0 0 0 0 0 0 0 0 0 0 0 0 99 - 0 16 Construct Escalator Well at playground Construct Ventilation Shaft and Plant Room / Construct Ground Level Entrance 0 0 0 94 - 0 Works Area M1 - SYP Entrance B1 & B2 18 Move the existing SYP Cooked Food Market to proposed locatio 0 19 Demolition of Existing Building[^] 20 Piling/Walling[^] 21 Bulk Excavation-Soft^ 22 Bulk Excavation-weak Rock 23 Excavate Rock[^] 0 0 0 0 25 Concrete vertical shaft^ 26 Construct Ground Level Entrance 27 Station Fitout Works Area L1 - SYP Entrance B3 28 Possession of site 29 Utilities Diversions 30 Piling/Walling 31 Bulk Excavation-Soft^ 0 0 0 0 0 0 0 0 32 Installation of Pipe Pile for Soft Ground Tunnel^ 33 Excavation along soft ground tunnel[^] 0 34 Concrete soft ground tunnel 35 Concrete Escalator Inclined[^] 36 Construct Ground Level Entra Works Area M3 - SYP Entrance C 37 Possession of site - 0 - 0 38 Demolition of Existing Building[^] 39 Piling/Walling^ 40 Bulk Excavation-Soft^ 102 - 0 99 - 0 0 0 0 0 41 Bulk Excavation-weak Rock[^] 42 Excavate Rock[^] 43 Excavate Rock Adit (Hard Rock Excavation)^ 0 0 0 44 Concrete vertical shaft 0 0 0 0 0 45 Construct Ground Level Entrance, Plant Room and Vent Shaft 46 Station Fitout[^] Works Area M - KGV Construction Shaft 47 Possession of site 48 Utilities Diversions^ 49 Piling/Walling^ 50 Bulk Excavation-Soft^ 51 Excavate Rock[^] Norks Area O1, O2 and O3 - Ground Treatment Works 40 53 Utilities Diversions (Stage A) 54 Ground Treatment (Stage A) 55 Reinstatement (Stage A) 56 Utilities Diversions (Stage 1) 57 Ground Treatment (Stage 1) 58 Reinstatement (Stage 1) 59 Utilities Diversions (Stage 2) 60 Ground Treatment (Stage 2) 94 182.0 44 100 182.0 50 61 Reinstatement (Stage 2) 99 30.8 64 64 66 Ground Treatment (Stage 4) 67 Reinstatement (Stage 4) 102 30.8 67 101 30.8 66 68 Utilities Diversions (Stage 5) 69 Ground Treatment (Stage 5) 70 Reinstatement (Stage 5) 100 102.0 55 71 Utilities Diversions (Stage 6)ⁿ 72 Ground Treatment (Stage 6)ⁿ

Remarks:

Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

76 Reinstatement (Stage 7)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 20, act. 4 & 5 in month 20, act. 19 & 20 in month 27, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 24-

Noise Exceedance
The use of PME would not be visible when viewed from the
assessment facade of NSR. The NSR is considered to be totally
screened. According to GW-TM, a noise reduction of 10 dB(A)

N		CM// -: 2	2 65				2009							2010			1			2011						2012			_				013			—		2014	
Act No. Construction E	ement	SWL Dist ²	SPL																														Jul Aug S 54 55 5						
/orks Area N1 - SYP Entrance A1 & A2																																							
1 Possession of site		97 -	-					0																											\perp				
2 Utilities Diversions 3 Demolition of Existing Building		97 -	0	++					0 0		0	0					++																		+	+			
4 Install sheet piles and bored piles at plays	ound^	100 -	0								, ,		0 0	0	0 0																				1	\pm			
5 Excavate to top slab level [^]		94 -	0												0																								
6 Build up fill platform to +7mPD 7 Concrete roof slab		95 - 98 -	0	+ +								0)																			+	+			
8 Install bored piles and H-piles for shaft		100 -	0									0	0 0	0																					+	+			
Excavate under top slab level		94 -	0													0 0																							
10 Excavate to tunnel level	LEU A I. b	96 -	0	-									0	0	0 0	0 0																			4	-			
11 Concreting Air Compressor Room and Ba 12 Construct Noise Enclosure and Install Co		98 -	0													0 0	0 0	0																_	+-+	+			
	ipressed Air Equipment																0 0									0 0							$\sqcup \sqcup$		$\perp \perp$	\perp		$\perp \perp$	
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15 Not Used			-																		0 0		0 0												1	\pm			
16 Construct Escalator Well at playground		96 -	0																												0 0								
17 Construct Ventilation Shaft and Plant Roc Entrance	n / Construct Ground Level	94 -	0																										0 0	0									
Vorks Area M1 - SYP Entrance B1 & B2																																							
18 Move the existing SYP Cooked Food Mar	et to proposed location *		0																																				
19 Demolition of Existing Building^		101 -	0				\vdash	+		$\vdash \vdash$				+		C	0 0	0 0)	+				++	++	+	++		+				+++	_	++	++	+-	_	\vdash
20 Piling/Walling^		105 -	0	上十	1									шТ	エナ				0 0	0	0			\Box \Box	上上				╧						工十	#			
21 Bulk Excavation-Soft^	-	96 -	0																			0 0													$\perp \perp$	\perp		\Box	
22 Bulk Excavation-weak Rock [^] 23 Excavate Rock [^]		98 -	0		-	\vdash		+		\vdash				++	++	+		++	++			\vdash		0 0		\vdash		+	+	$\vdash\vdash$			+++	+	++	+	+-	++	
24 Station Construction *			0																				0 0	0 0	0 0										+	+			
25 Concrete vertical shaft [^]		99 -	0																			0	0 0	0															
26 Construct Ground Level Entrance 27 Station Fitout		96 - 94 -	0	++	-	\vdash		+	_					++	++			+	++			\vdash		++	+	0 0		0 0			0		+++	+	++	+	+	+	
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28 Possession of site		95 -	0							0																							+		4		_		
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48 Utilities Diversions^		98 -	0								0		0																						+	+			
49 Piling/Walling^		102 -	0			ш							0 0	0																				\equiv	$\pm \pm$	士士			
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51 Excavate Rock^		103 -	0											0	0 0	0 0	0																	_	 	+			
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56 Utilities Diversions (Stage 1)		94 -	0						\top			0		\Box	T	T		\Box	\Box					П	\Box			T						\blacksquare	\blacksquare		厂	厂	
57 Ground Treatment (Stage 1) 58 Reinstatement (Stage 1)		100 - 98 -	0		+			+		\vdash		0 0		++	++			+	++					++	++				+	\vdash			+++	_	++	\dashv	+-	+	
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62 Utilities Diversions (Stage 3) 63 Ground Treatment (Stage 3)		94 274.0 100 274.0					\vdash	+		$\vdash \vdash$				40					++	+				++	++	+	++		+				+++	_	++	++	+-	_	\vdash
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71 Utilities Diversions (Stage 6) [^] 72 Ground Treatment (Stage 6) [^]		99 10.5 102 10.5			-	 	\vdash	+		\vdash	-		+	+	+		74		+	+				++	++	+ +		+	+	\vdash			+++	_	++	++	+	++	
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74 Utilities Diversions (Stage 7)		99 18.7															T	69							\Box									\perp	耳	П	$\perp T$	LT.	
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1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.

2. Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Pilling" by EPD.

* No PMEs used at surface

No PMEs used at surface

^ Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month. These activities include: act. 4 & 5 in month 20, act. 21-23 & 25 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 30, act. 39 & 40 in month 32, act. 41, 42, 43 & 46 in month 40-41, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facaded of NSR. The NSR is considered to be totally screened.

According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

						2009					2010					2011					2012					2013					2014
Act No.	Construction Element	SWL D	ist ² SPI																												May Jun Jul Aug 64 65 66 67
Works Area	N1 - SYP Entrance A1 & A2			1 2 3	1	5 6 7	9 10	11 12	2 13 14 1	3 16	17 16	19 20	21 22 23	24 23	20 21 20	29 30 31	32 3	3 34 3	36	37 36 39 40	41 4.	2 43 44	45 46 47	40	19 50 51 52	55 54 55	36 3	56 59	60 61	62 63	64 65 66 67
1 Pos	session of site	97	- 0				0																								
	ties Diversions	97	- 0				0 0	0 0	0 0																						
	nolition of Existing Building all sheet piles and bored piles at playground^	102	- 0					0 0	0 0	0 0	0 0	0 0										++-									
5 Exc	avate to top slab level^	94	- 0									0																			
	d up fill platform to +7mPD	95	- 0						()			0																		
	all bored piles and H-piles for shaft	98 100	- 0							0 0	0 0		0	 																	
9 Exc	avate under top slab level	94	- 0										0 0																		
	avate to tunnel level creting Air Compressor Room and Backfill top slab	96 98	- 0 - 0								0 0	0 0	0 0 0																		
12 Con	struct Noise Enclosure and Install Compressed Air	93	- 0										0 0		0																
Equ	ipment nel Construction	103	- 0											0 0		0 0 0	0 0	0 0	0	0 0 0 0	0 0	0 0	0 0 0								
	struct Box Tunnel Adit	99	- 0																	0 0 0 0											
15 Not		-																													
0	struct Escalator Well at playground struct Ventilation Shaft and Plant Room / Construct Ground	96	- 0																-						0 0 0						
17 Leve	el Entrance	94	- 0																				0 0	0							
	M1 - SYP Entrance B1 & B2																														
	ve the existing SYP Cooked Food Market to proposed	-	- 0																												
	tion * nolition of Existing Building^	101	- 0										0	0 0	0 0		++		+		+	+			+++		+			++	
20 Pilir	ng/Walling^	105	- 0													0 0 0															
	Excavation-Soft ^a	96	- 0						$\perp \top$	$\downarrow \downarrow \downarrow$							C	0 0				$\perp \perp$								$+ \Box$	
	k Excavation-weak Rock^ avate Rock^	98 102	- 0	+++	+				+++			+	++-		+++		++			0 0 0 0		++	+++							+++	- - -
24 Stat	ion Construction *	-	- 0																												
	crete vertical shaft^	99	- 0															0 0	0 0	0											
26 Con 27 Stat	struct Ground Level Entrance	96 94	- 0						+++			+			+++		++	+	+			0 0 0			0 0						
	L1 - SYP Entrance B3																														
28 Pos	session of site	95	- 0					0																							
	ties Diversions		- 0					0																							
30 Pilir	ng/Walling « Excavation-Soft^	103 96	- 0									0 0	0																		
	allation of Pipe Pile for Soft Ground Tunnel [^]	97	- 0											0 0	0 0 0	0															
	avation along soft ground tunnel^		- 0										0 0 0		0 0 0	0															
	crete soft ground tunnel^	97 99	- 0											0 0	0 0	0 0 0	0 0)	-												
	struct Ground Level Entrance	93	- 0													0 0 0		0 0	0												
Works Area	M3 - SYP Entrance C																														
	session of site	95	- 0											0 0	0																
	nolition of Existing Building^	96	- 0												0 0	0 0															
39 Pilir 40 Bulk	g/wailing** « Excavation-Soft*	102 99	- 0											 		0 0		0 0	0												
41 Bulk	Excavation-weak Rock [^]	99	- 0															C	0 0	0 0 0 0											
	avate Rock^ avate Rock Adit (Hard Rock Excavation)^	105	- 0							_				— —				С	0 0	0 0 0 0											
	avate Hock Adit (Hard Hock Excavation)" acrete vertical shaft	100 97	- 0											 						0 0		0 0	0 0 0								
	struct Ground Level Entrance, Plant Room and Vent Shaft	96	- 0																			0 0		0							
46 Stat		96	- 0																		0 0		0 0 0	0	0						
	M - KGV Construction Shaft	30	- 0																			, 0 0	0 0 0	0	0						
	session of site	96	- 0						0 0 0)																					
48 Utili	ties Diversions^	98	- 0							0 0																					
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76 Reir		Total O	PL, dB(A	A							47		EO 70 00	77 70	72 69 -											1 1					

Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
 Slant distance (m)

3. For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

* No PMEs used at surface

**Construction activities would not be conducted simultaneously, so the max SPL among these activities would be used for the calculation of construction noise of that particular month 20, act. 4 & 5 in month 20, act. 19 & 20 in month 34-37, act. 31, 32 & 33 in month 21, act. 32, 33 & 34 in month 24-27, act. 32, 33 & 35 in month 28-29, act. 38 & 39 in month 40-41, act. 40, 40 in month 40-41, act. 48 & 49 in month 16, act. 49, 50 & 51 in month 18, and act. 71 & 72 in month 24.

An .4., 4.5 as 40 minorin 40-41, act. 40 & 49 minorin 10, act. 41 Moise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.