

Appendix 4.5
Construction Plant Inventory (With Mitigation)

Work ID	Activities	Plant [4]	TM Ref. / BS / Other Ref. [1] [2]	No. of PME	Unit SWL, dB(A)	On-time %	Type of Noise Control	Noise Reduction	SWL, dB(A)	Total SWL for each Work, dB(A)	Max SWL for the Works, dB(A) [4]
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(A,B) Improvement Works to Tributary Sections TKL04, TKL05

1	Site Clearance	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	97	97
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95		
		Hand-held Percussive Breaker	EPD-04212	1	99	50%	Temporary Noise Barrier	-5	91		
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80		
2	Form work of Temporary Channel	Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80	86	97
		Crane, mobile	EPD-07164	1	92	50%	Temporary Noise Barrier	-5	84		
		Bar Bender and Cutter (Electric)	CNP 021	1	90	50%	Temporary Noise Barrier	-10	77		
3	Excavation to Formation Level	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	97	97
		Giken Piler and Power Pack	[4]	1	94	50%	Temporary Noise Barrier	-5	86		
		Generator, super silenced, 70dB(A) at 7m	CNP 103	4	95	100%	Enclosure	-15	86		
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95		
		Water pump, submersible (electric)	CNP 283	2	85	100%	Temporary Noise Barrier	-10	78		
		Hand-held Percussive Breaker	EPD-04212	1	99	50%	Temporart Noise Barrier	-5	91		
4	Construction of Channel and Crossings	Generator, super silenced, 70dB(A) at 7m	CNP 103	2	95	100%	Enclosure	-15	83	96	97
		Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86		
		Water pump, submersible (electric)	CNP 283	6	85	100%	Temporary Noise Barrier	-10	83		
		Concrete mixer (electric)	CNP 045	1	96	50%	Temporary Noise Barrier	-5	88		
		Poker, vibratory, hand-held (electric)	[1]	1	102	50%	Temporary Noise Barrier	-5	94		
5	Backfilling & Landscaping	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	96	97
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80		
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95		
		Roller, vibratory	EPD-09720	1	94	50%	Temporary Noise Barrier	-5	86		

Notes:

- [1] Extracted from EPD document namely, "Sound power levels of other commonly used PME" (https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWL.e.pdf)
- [2] Extracted from EPD database namely, "Quality powered mechanical equipment" (https://www.epd.gov.hk/cgi-bin/npg/qpme/search_gen.pl?lang=eng&st=sim&valid=Y)
- [3] Construction plants are reviewed by Engineer.
- [4] For each work front, only one type of work will be conducted at a time.
- [5] The PME for maintenance access ramps are incorporated to "Construction of Channel and Crossing"
- [6] Construction activities will not be carried out concurrently.
- [7] The worst case scenario has been adopted in the calculation using closest work front(s)

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Work ID	Activities	Plant [5]	TM Ref. / BS / Other Ref. [1] [2]	No. of PME	Unit SWL, dB(A)	On-time %	Type of Noise Control	Noise Reduction	SWL, dB(A)	Total SWL for each Work, dB(A)	Max SWL for the Works, dB(A) [4]
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(C) Construction of Road Drainage System at Ping Che Road

1	Earth Works	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	97	97		
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95				
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80				
		Hand-held Percussive Breaker	EPD-04212	1	99	50%	Temporary Noise Barrier	-5	91				
2	Trench Support & Ground Compaction	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	95		97	
		Roller, vibratory	EPD-09720	1	94	50%	Temporary Noise Barrier	-5	86				
		Giken Piler and Power Pack	[4]	1	94	50%	Temporary Noise Barrier	-5	86				
		Light goods vehicle, gross vehicle weight ≤ 5.5 tonne	[1]	1	101	50%	Temporary Noise Barrier	-5	93				
3	Pipe-laying Works	Concrete mixer (electric)	CNP045	1	96	50%	Temporary Noise Barrier	-5	88	96			97
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95				
		Winch (electric)	CNP 262	1	95	50%	Temporary Noise Barrier	-10	82				
		Air blower (electric)	[1]	1	95	50%	Temporary Noise Barrier	-10	82				
4	Backfilling & Landscaping	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	96	97		
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80				
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95				
		Roller, vibratory	EPD-09720	1	94	50%	Temporary Noise Barrier	-5	86				

Notes:

- [1] Extracted from EPD document namely, "Sound power levels of other commonly used PME" (https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLc.pdf)
- [2] Extracted from EPD database namely, "Quality powered mechanical equipment" (https://www.epd.gov.hk/cgi-bin/npq/qpme/search_gen.pl?lang=eng&st=sim&valid=Y)
- [3] The figures are rounded-up to a whole number.
- [4] Extracted from approved EIA report "Tsim Sha Tsui Station Northern Subway" (Register No.: AEIAR-127/2008) (https://www.epd.gov.hk/eia/register/report/eiareport/eia_1542008/EIA%20Report/html/Appendices/App_4-4_Final.pdf)
- [5] Construction plants are reviewed by Engineer.
- [6] Construction activities will not be carried out concurrently.
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(D) Construction of Road Drainage System at Ping Yeung Village													
1	Earth Works	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	97	97		
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95				
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80				
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2	Trench Support & Ground Compaction	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	95		97	
		Roller, vibratory	EPD-09720	1	94	50%	Temporary Noise Barrier	-5	86				
		Giken Piler and Power Pack	[4]	1	94	50%	Temporary Noise Barrier	-5	86				
		Light goods vehicle, gross vehicle weight ≤ 5.5 tonne	[1]	1	101	50%	Temporary Noise Barrier	-5	93				
3	Pipe-laying Works	Concrete mixer (electric)	CNP045	1	96	50%	Temporary Noise Barrier	-5	88	96			97
		Dump truck, with grab, 5.5 tonne <gross vehicle weight <=38 tonne	[1]	1	105	30%	Temporary Noise Barrier	-5	95				
		Winch (electric)	CNP 262	1	95	50%	Temporary Noise Barrier	-10	82				
		Air blower (electric)	[1]	1	95	50%	Temporary Noise Barrier	-10	82				
4	Backfilling & Landscaping	Excavator, mini-robot mounted (electric)	[1]	1	94	50%	Temporary Noise Barrier	-5	86	96	97		
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	95	100%	Enclosure	-15	80				
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- [2] Extracted from EPD database namely, "Quality powered mechanical equipment" (https://www.epd.gov.hk/cgi-bin/npg/qpme/search_gen.pl?lang=eng&st=sim&valid=Y)
- [3] The figures are rounded-up to a whole number.
- [4] Extracted from approved EIA report "Tsim Sha Tsui Station Northern Subway" (Register No.: AEIAR-127/2008) (https://www.epd.gov.hk/eia/register/report/eiareport/eia_1542008/EIA%20Report/html/Appndices/App_4-4_Final.pdf)
- [5] Construction plants are reviewed by Engineer.
- [6] Construction activities will not be carried out concurrently.
- [7] The worst case scenario has been adopted in the calculation using closest work front(s)