

Annex 5E : Construction Plant Inventory (Mitigated Scenario - Mainlaying only)

No.	Activities	Plant	TM Ref. / Other Ref. ^[1]	No. of PME	On- time %	Type of Noise Control	Noise reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A) ^[2]
Package B - Mainlaying										
1	Section A (Desalination Plant to Shek Kok Rd)									
a)	Sawcutting pavement	Saw/groover, concrete (petrol)	CNP 203	1	85%	Temporary Noise Barrier/Noise Enclosure ⁽⁴⁾	-5/-15	115	109/99	109/99
b)	Breaking up of pavement	Wheeled excavator fitted with hydraulic rock breaker	BS D8 12	1	85%	Temporary Noise Barrier	-5	106	100	100
c)	Excavation/Shoring ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	103
		Dump Truck	BS D9 39	1	50%		0	103	100	
		Piling, vibrating hammer	EPD/PME/18	1	50%	Acoustic Fabric	-10	115	102	
d)	Pipe laying	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	99
e)	Backfilling	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	102
		Compactor, vibratory	CNP 050	1	85%	Temporary Noise Barrier	-5	105	99	
		Piling, diaphragm wall, hydraulic extractor	CNP 163	1	85%	Acoustic Fabric	-10	90	79	
f)	Reinstatement (concrete)	Concrete truck mixer	BS D6 35	1	85%	Temporary Noise Barrier	-5	100	94	97
		Poker, vibratory, hand-held	BS D6 40	1	85%	Temporary Noise Barrier	-5	98	92	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	85%	Enclosure Type Noise Barrier	-15	95	79	
g)	Reinstatement (asphalt) ^[5]	Asphalt paver	BS D8 24	1	85%		0	101	100	103
		Dump Truck	BS D9 39	1	85%	Temporary Noise Barrier	-5	103	97	
		Road roller	BS D8 27	1	85%		0	104	103	
h)	Painting of roading marking	Paint line marker (low pressure)	EPD/PME/22	1	85%		0	87	86	86
i)	Pipe jacking (for trenchless method) ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	104
		Dump Truck	BS D9 39	1	85%		0	103	102	
		Piling, vibrating hammer	EPD/PME/18	1	85%	Acoustic Fabric	-10	115	104	
		Tunnelling machine	[3]	1	85%		0	88	87	
2	Section B (Shek kok Rd to Po Shun Rd)									
a)	Sawcutting pavement	Saw/groover, concrete (petrol)	CNP 203	1	85%	Temporary Noise Barrier/Noise Enclosure ⁽⁴⁾	-5/-15	115	109/99	109/99
b)	Breaking up of pavement	Wheeled excavator fitted with hydraulic rock breaker	BS D8 12	1	85%	Temporary Noise Barrier	-5	106	100	100
c)	Excavation/Shoring ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	103
		Dump Truck	BS D9 39	1	50%		0	103	100	
		Piling, vibrating hammer	EPD/PME/18	1	50%	Acoustic Fabric	-10	115	102	
d)	Pipe laying	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	99
e)	Backfilling	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	102
		Compactor, vibratory	CNP 050	1	85%	Temporary Noise Barrier	-5	105	99	
		Piling, diaphragm wall, hydraulic extractor	CNP 163	1	85%	Acoustic Fabric	-10	90	79	

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f)	Reinstatement (concrete)	Concrete truck mixer	BS D6 35	1	85%	Temporary Noise Barrier	-5	100	94	97
		Poker, vibratory, hand-held	BS D6 40	1	85%	Temporary Noise Barrier	-5	98	92	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	85%	Enclosure Type Noise Barrier	-15	95	79	
g)	Reinstatement (asphalt) ^[5]	Asphalt paver	BS D8 24	1	85%		0	101	100	103
		Dump Truck	BS D9 39	1	85%	Temporary Noise Barrier	-5	103	97	
		Road roller	BS D8 27	1	85%		0	104	103	
h)	Painting of roading marking	Paint line marker (low pressure)	EPD/PME/22	1	85%		0	87	86	86
i)	Pipe jacking (for trenchless method) ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	104
		Dump Truck	BS D9 39	1	85%		0	103	102	
		Piling, vibrating hammer	EPD/PME/18	1	85%	Acoustic Fabric	-10	115	104	
		Tunnelling machine	[3]	1	85%		0	88	87	
3	Section C (Po Shun Rd to TKOFWPSR)									
a)	Sawcutting pavement	Saw/groover, concrete (petrol)	CNP 203	1	85%	Temporary Noise Barrier/Noise Enclosure ⁽⁴⁾	-5/-15	115	109/99	109/99
b)	Breaking up of pavement	Wheeled excavator fitted with hydraulic rock breaker	BS D8 12	1	85%	Temporary Noise Barrier	-5	106	100	100
c)	Excavation/Shoring ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	103
		Dump Truck	BS D9 39	1	50%		0	103	100	
		Piling, vibrating hammer	EPD/PME/18	1	50%	Acoustic Fabric	-10	115	102	
d)	Pipe laying	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	99
e)	Backfilling	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%	Temporary Noise Barrier	-5	105	99	102
		Compactor, vibratory	CNP 050	1	85%	Temporary Noise Barrier	-5	105	99	
		Piling, diaphragm wall, hydraulic extractor	CNP 163	1	85%	Acoustic Fabric	-10	90	79	
f)	Reinstatement (asphalt) ^[5]	Concrete truck mixer	BS D6 35	1	85%	Temporary Noise Barrier	-5	100	94	97
		Poker, vibratory, hand-held	BS D6 40	1	85%	Temporary Noise Barrier	-5	98	92	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	85%	Enclosure Type Noise Barrier	-15	95	79	
g)	Reinstatement (asphalt)	Asphalt paver	BS D8 24	1	85%		0	101	100	103
		Dump Truck	BS D9 39	1	85%	Temporary Noise Barrier	-5	103	97	
		Road roller	BS D8 27	1	85%		0	104	103	
h)	Painting of roading marking	Paint line marker (low pressure)	EPD/PME/22	1	85%		0	87	86	86
i)	Pipe jacking (for trenchless method) ^[6]	Excavator/loader, wheeled/tracked	BS D3 97	1	85%	Temporary Noise Barrier	-5	105	99	104
		Dump Truck	BS D9 39	1	85%		0	103	102	
		Piling, vibrating hammer	EPD/PME/18	1	85%	Acoustic Fabric	-10	115	104	
		Tunnelling machine	[3]	1	85%		0	88	87	

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No.	Activities	Plant	TM Ref. / Other Ref. ^[1]	No. of PME	On- time %	Type of Noise Control	Noise reduction, dB(A)	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A) ^[2]
Package A - Desalination Plant										
4	Site Clearance and Ground Investigation									
		Drill rig, rotary type (diesel)	EPD/PME/12	2	85%			110	112	121
		Grout pump	EPD/PME/15	2	85%			105	107	
		Bull dozer	BS D3 27	2	85%			109	111	
		Dump Truck	BS D9 39	2	85%			103	105	
		Excavator/loader, wheeled/tracked	CNP 081	2	85%			112	114	
		Power rammer (petrol)	CNP 169	2	85%			108	110	
		Piling, vibrating hammer	EPD/PME/18	2	85%			115	117	
5	Foundation and Pilling									
		Mobile crane	BS D7 114	5	85%			101	107	120
		Excavator/loader, wheeled/tracked	BS D3 97	10	85%			105	114	
		Dump Truck	BS D9 39	10	85%			103	112	
		Drill rig, rotary type (diesel)	EPD/PME/12	5	85%			110	116	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	5	85%			95	101	
		Concrete truck mixer	BS D6 35	5	85%			100	106	
6	Building Works									
		Mobile crane	BS D7 114	5	85%			101	107	116
		Bar bender and cutter (electric)	CNP 021	5	30%			90	92	
		Saw, circular, wood	CNP 201	5	30%			108	110	
		Concrete truck mixer	BS D6 35	5	85%			100	106	
		Poker, vibratory, hand-held (electric)	EPD/PME/19	5	85%			102	108	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	5	85%			95	101	
		Concrete pump, stationary/lorry mounted	BS D6 36	5	30%			106	108	
		Water pump (petrol)	CNP 282	5	50%			103	107	
7	Architectural and Landscaping Work									
		Mobile crane	BS D7 114	3	85%			101	105	109
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	2	85%			105	107	

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8	Submarine Intake and Outfall									
	Ground investigation (Land based)	Drill rig, rotary type (diesel)	EPD/PME/12	1	85%			110	109	121
		Grout pump	EPD/PME/15	1	85%			105	104	
	Ground investigation (Marine based)	Derrick barge	CNP 061	1	85%			104	103	
		Drill rig, rotary type (diesel)	EPD/PME/12	1	85%			110	109	
		Grout pump	EPD/PME/15	1	85%			105	104	
	Tunnel boring machine	Excavator/loader, wheeled/tracked	BS D3 97	3	85%			105	109	
		Dump Truck	BS D9 39	3	85%			103	107	
		Piling, vibrating hammer	EPD/PME/18	3	85%			115	119	
		Tunnelling machine	[3]	1	85%			88	87	
	Marine dredging (Marine based)	Derrick barge	CNP 061	1	85%			104	103	
		Dredger, grab	CNP 063	1	85%			112	111	
	Intake structure/diffuser installation	Derrick barge	CNP 061	1	85%			104	103	
		Concrete mixer (petrol)	CNP 046	1	85%			96	95	
		Concrete pump, stationary/lorry mounted	BS D6 36	1	85%			106	105	
9	Slope Mitigation									
		Mobile crane	BS D7 114	2	85%			101	103	107
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%			105	104	
10	E&M Installation, Testing and Commissioning									
		Mobile crane	BS D7 114	2	85%			101	103	107
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	85%			105	104	

Notes:

[1] BS - British Standard BS 5228:2009, Part 1 Noise and Vibration Control on Construction and Open Sites
Other Ref. - SWLs refer to other PME documented by the Noise Control Authority (EPD/PME/no.)
(http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)

[2] The figures are rounded-up to a whole number.

[3] The SWL of the TBM has been made with reference to the approved EIA Report (Drainage Improvement in Tsuen Wan, Kwai Chung and Tsing Yi, Tsuen Wan Drainage Tunnel, Reference No.: EIA-108/2005)

[4] Noise enclosure will be adopted at the workfronts as identified in the Figure 5.7c, Figure 5.7d and Figure 5.7e during sawcutting pavement.

[5] Use of road roller will not take place concurrently with asphalt paver or dump truck

[6] Use of piling, vibration hammer will not take place concurrently with excavator/loader or dump truck