

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	317	-58	3	37	49
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	317	-58	3	40	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	317	-58	3	20	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	317	-58	3	34	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	317	-58	3	35	
			Dump truck , 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	317	-58	3	43	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	317	-58	3	41	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	317	-58	3	36	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	317	-58	3	41	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	317	-58	3	41	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	317	-58	3	18	
CNL at NAP dB(A)												49		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	49
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	234	-55	3	37	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	234	-55	3	38	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [8]	EPD	1	105	70%	Movable Noise Barrier	-5	234	-55	3	46	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	234	-55	3	21	
			CNL at NAP dB(A)											
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel [5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [6]	218	-55	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	234	-55	3	31	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	234	-55	3	41	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	234	-55	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	234	-55	3	24	
			CNL at NAP dB(A)											
		B2.B	Piling, large diameter bored, oscillator [5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [6]	218	-55	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	234	-55	3	31	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	234	-55	3	41	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	234	-55	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	234	-55	3	24	
			CNL at NAP dB(A)											
		B2.C	Piling, large diameter bored, reverse circulation drill [5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [6]	218	-55	3	37	46
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	234	-55	3	31	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	234	-55	3	41	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	234	-55	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	234	-55	3	24	
			CNL at NAP dB(A)											
		B2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	234	-55	3	43	49
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	234	-55	3	44	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	234	-55	3	42	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	234	-55	3	28	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	234	-55	3	39	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	234	-55	3	24	
CNL at NAP dB(A) [7]												53		
B3	Superstructure	B3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	234	-55	3	43	51
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	234	-55	3	26	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	234	-55	3	44	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	234	-55	3	39	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	234	-55	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	234	-55	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	234	-55	3	28	
			Asphalt Paver [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	234	-55	3	44	
Roller, vibratory [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	234	-55	3	44				
CNL at NAP dB(A)												51		
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	234	-55	3	23	53
			Cherry picker [4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	234	-55	3	53	
CNL at NAP dB(A)												53		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
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Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	194	-54	3	41	49
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	194	-54	3	48	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	194	-54	3	38	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	194	-54	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	194	-54	3	24	
CNL at NAP dB(A)												49		
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	195	-54	3	53	54
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	194	-54	3	33	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	194	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	194	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	194	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	194	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	194	-54	3	25		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	195	-54	3	53	54
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	194	-54	3	33	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	194	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	194	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	194	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	194	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	194	-54	3	25		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	195	-54	3	38	47
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	194	-54	3	33	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	194	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	194	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	194	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	194	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	194	-54	3	25		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	194	-54	3	44	51
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	194	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	194	-54	3	44	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	194	-54	3	24			
Water pump (electric)	CNP 281		2	88	100%	Noise Enclosure	-15	194	-54	3	25			
Concrete Pump [5]	Ref: AEIAR-173/2013		1	106	100%	Movable Noise Barrier	-10	194	-54	3	45			
Bar bender and cutter (electric)	CNP 021		1	90	100%	Movable Noise Barrier	-10	194	-54	3	29			
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	194	-54	3	43				
CNL at NAP dB(A) [6]												54		
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	194	-54	3	44	45
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	194	-54	3	36	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	194	-54	3	44	48
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	194	-54	3	34	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	194	-54	3	27	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	194	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	194	-54	3	44	
		C3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	194	-54	3	45	46
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	194	-54	3	40	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	194	-54	3	27	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	194	-54	3	27	31
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	194	-54	3	29	
		C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	194	-54	3	45	48
Roller, vibratory [5]	Ref: AEIAR-173/2013		1	101	100%	Movable Noise Barrier	-5	194	-54	3	45			
CNL at NAP dB(A) [6]												48		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

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 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	202	-54	3	41	49
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	202	-54	3	47	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	202	-54	3	38	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	202	-54	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24	
												CNL at NAP dB(A)	49	
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	201	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	202	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25	53
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	201	-54	3	52	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	202	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24	46
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	201	-54	3	37	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	202	-54	3	41	
		D2.D	Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42	50
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	202	-54	3	45	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	202	-54	3	29	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	202	-54	3	43	
Crane, mobile	EPD-10143		1	100	100%	Movable Noise Barrier	-5	202	-54	3	44			
												CNL at NAP dB(A) [6]	53	
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	202	-54	3	44	45
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	202	-54	3	36	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	202	-54	3	44	48
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	202	-54	3	34	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	202	-54	3	27	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	202	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	202	-54	3	45	46
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	202	-54	3	40	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	202	-54	3	27	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	202	-54	3	27	31
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	202	-54	3	29	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	202	-54	3	45	48
Roller, vibratory [5]	Ref: AEIAR-173/2013		1	101	100%	Movable Noise Barrier	-5	202	-54	3	45			
												CNL at NAP dB(A) [6]	48	

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5
- [3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.
- [5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [6]: The highest CNL at NAP among the groups is adopted.
- [7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- [8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.
- [9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	269	-57	3	38	47
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	269	-57	3	21	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	269	-57	3	45	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	269	-57	3	36	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	269	-57	3	35	
CNL at NAP dB(A)												47		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	261	-56	3	35	54
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	261	-56	3	50	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	269	-57	3	31	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	269	-57	3	41	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	269	-57	3	21	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	261	-56	3	50	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	269	-57	3	37	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	269	-57	3	42	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	269	-57	3	40	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	269	-57	3	26	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	269	-57	3	41	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	269	-57	3	22				
CNL at NAP dB(A)												54		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	269	-57	3	41	50
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	269	-57	3	33	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	269	-57	3	31	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	269	-57	3	24	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	269	-57	3	42	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	269	-57	3	37	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	269	-57	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	269	-57	3	41	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	269	-57	3	26	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	269	-57	3	42	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	269	-57	3	42				
CNL at NAP dB(A)												50		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	269	-57	3	38	48
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	269	-57	3	37	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	269	-57	3	21	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	269	-57	3	46	
CNL at NAP dB(A)												48		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N01a - Seaview Crescent Block 1

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	327	-58	3	43	56
			Air Compressor	EPD-11726	1	100	70%	N/A	0	348	-59	3	43	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	348	-59	3	43	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	348	-59	3	41	
			Generator	EPD-12349	2	90	100%	N/A	0	348	-59	3	37	
			Derrick barge	CNP 061	1	104	100%	N/A	0	348	-59	3	48	
			Tug boat	CNP 221	1	110	100%	N/A	0	348	-59	3	54	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	348	-59	3	32	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	327	-58	3	58	60
			Air Compressor	EPD-11726	1	100	70%	N/A	0	348	-59	3	43	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	348	-59	3	43	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	348	-59	3	41	
			Generator	EPD-12349	2	90	100%	N/A	0	348	-59	3	37	
			Derrick barge	CNP 061	1	104	100%	N/A	0	348	-59	3	48	
			Tug boat	CNP 221	1	110	100%	N/A	0	348	-59	3	54	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	348	-59	3	32	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	327	-58	3	58	60
			Air Compressor	EPD-11726	1	100	70%	N/A	0	348	-59	3	43	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	348	-59	3	43	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	348	-59	3	41	
			Generator	EPD-12349	2	90	100%	N/A	0	348	-59	3	37	
			Derrick barge	CNP 061	1	104	100%	N/A	0	348	-59	3	48	
			Tug boat	CNP 221	1	110	100%	N/A	0	348	-59	3	54	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	348	-59	3	32	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	348	-59	3	44	57
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	348	-59	3	41	
			Generator	EPD-12349	2	90	100%	N/A	0	348	-59	3	37	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	348	-59	3	32	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	348	-59	3	50	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	348	-59	3	40	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	348	-59	3	34	
			Derrick barge	CNP 061	1	104	100%	N/A	0	348	-59	3	48	
Tug boat	CNP 221	1	110	100%	N/A	0	348	-59	3	54				
CNL at NAP dB(A) ^[4]												60		
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	348	-59	3	44	55
			Derrick barge	CNP 061	1	104	100%	N/A	0	348	-59	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	348	-59	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	348	-59	3	46	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	348	-59	3	39	
			Generator	EPD-12349	2	90	100%	N/A	0	348	-59	3	37	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	348	-59	3	50	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	348	-59	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	348	-59	3	44	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	348	-59	3	34	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	348	-59	3	45	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	348	-59	3	45	
			CNL at NAP dB(A) ^[4]											

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	263	-56	3	39	51
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	263	-56	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	263	-56	3	22	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	263	-56	3	36	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	263	-56	3	37	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	263	-56	3	45	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	263	-56	3	43	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	263	-56	3	38	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	263	-56	3	43	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	263	-56	3	43	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	263	-56	3	20	
CNL at NAP dB(A)												51		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group ^[1]	Description											TM or other ref.		
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44	51		
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	202	-54	3	44			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24			
			Hydraulic Concrete Crusher ^[3]	EPD	1	94	100%	Movable Noise Barrier	-5	202	-54	3	38			
			Press-in piling ^[3]	EPD	1	95	100%	Movable Noise Barrier	-5	202	-54	3	39			
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[8]	EPD	1	105	70%	Movable Noise Barrier	-5	202	-54	3	47			
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	202	-54	3	22			
CNL at NAP dB(A)												51				
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel ^[5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 ^[6]	210	-54	3	52	53		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44			
		B2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25	53		
			Piling, large diameter bored, oscillator ^[5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 ^[6]	210	-54	3	52			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38			
		B2.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44	47		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25			
			Piling, large diameter bored, reverse circulation drill ^[5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 ^[6]	210	-54	3	37			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	202	-54	3	32			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	202	-54	3	42			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24			
		B2.D	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	202	-54	3	38	50		
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	202	-54	3	25			
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	202	-54	3	44			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24			
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	202	-54	3	45			
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	202	-54	3	43			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	202	-54	3	29			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44			
		B3	Superstructure	B3.A	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	202	-54	3	40	52
					Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	202	-54	3	44	
					Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	202	-54	3	29	
					Asphalt Paver ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	202	-54	3	45	
					Roller, vibratory ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	202	-54	3	45	
					Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	202	-54	3	44	
					Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	202	-54	3	27	
					Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	202	-54	3	45	
		CNL at NAP dB(A)^[7]												52		
		B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	202	-54	3	24	54
					Cherry picker ^[4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	202	-54	3	54	
		CNL at NAP dB(A)												54		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	205	-54	3	41	49
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	205	-54	3	47	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	205	-54	3	38	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	205	-54	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	205	-54	3	24	
												CNL at NAP dB(A)	49	
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	204	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	205	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	205	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	205	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	205	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	205	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	205	-54	3	25		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	204	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	205	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	205	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	205	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	205	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	205	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	205	-54	3	25		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	204	-54	3	37	46
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	205	-54	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	205	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	205	-54	3	41	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	205	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	205	-54	3	24	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	205	-54	3	25		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	205	-54	3	44	50
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	205	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	205	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	205	-54	3	24	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	205	-54	3	25	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	205	-54	3	45	
Bar bender and cutter (electric)	CNP 021		1	90	100%	Movable Noise Barrier	-10	205	-54	3	29			
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	205	-54	3	43				
												CNL at NAP dB(A) [6]	53	
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	205	-54	3	44	44
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	205	-54	3	36	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	205	-54	3	44	48
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	205	-54	3	34	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	205	-54	3	27	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	205	-54	3	40	
		C3.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	205	-54	3	44	46
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	205	-54	3	45	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	205	-54	3	40	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	205	-54	3	27	31
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	205	-54	3	29	
		C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	205	-54	3	45	48
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	205	-54	3	45	
												CNL at NAP dB(A) [6]	48	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)

NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	245	-56	3	39	47
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	245	-56	3	46	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	245	-56	3	36	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	245	-56	3	37	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	245	-56	3	22	
												CNL at NAP dB(A)	47	
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	239	-56	3	51	52
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	245	-56	3	31	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	245	-56	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	245	-56	3	39	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	245	-56	3	41	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	245	-56	3	22	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	245	-56	3	23	
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	239	-56	3	51	52
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	245	-56	3	31	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	245	-56	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	245	-56	3	39	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	245	-56	3	41	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	245	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	245	-56	3	23	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	239	-56	3	36	45
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	245	-56	3	31	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	245	-56	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	245	-56	3	39	
		Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	245	-56	3	41		
		Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	245	-56	3	22		
		D2.D	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	245	-56	3	23	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	245	-56	3	42	49
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	245	-56	3	38	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	245	-56	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	245	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	245	-56	3	23	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	245	-56	3	43	
		Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	245	-56	3	27		
D2.D	Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	245	-56	3	41			
													CNL at NAP dB(A) [6]	52
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	245	-56	3	42	43
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	245	-56	3	34	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	245	-56	3	42	46
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	245	-56	3	32	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	245	-56	3	25	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	245	-56	3	38	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	245	-56	3	42	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	245	-56	3	43	44
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	245	-56	3	38	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	245	-56	3	25	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	245	-56	3	25	29
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	245	-56	3	27	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	245	-56	3	43	46
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	245	-56	3	43	
														CNL at NAP dB(A) [6]

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
 NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	316	-58	3	37	45
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	316	-58	3	20	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	316	-58	3	43	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	316	-58	3	35	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	316	-58	3	34	
CNL at NAP dB(A)												45		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	325	-58	3	33	53
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	325	-58	3	48	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	316	-58	3	30	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	316	-58	3	40	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	316	-58	3	20	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	325	-58	3	48	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	316	-58	3	36	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	316	-58	3	41	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	316	-58	3	39	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	316	-58	3	25	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	316	-58	3	40	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	316	-58	3	21				
CNL at NAP dB(A)												53		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	316	-58	3	40	48
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	316	-58	3	32	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	316	-58	3	30	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	316	-58	3	23	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	316	-58	3	41	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	316	-58	3	36	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	316	-58	3	36	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	316	-58	3	40	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	316	-58	3	25	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	316	-58	3	41	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	316	-58	3	41				
CNL at NAP dB(A)												48		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	316	-58	3	37	46
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	316	-58	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	316	-58	3	20	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	316	-58	3	45	
CNL at NAP dB(A)												46		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N01b - Seaview Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	396	-60	3	42	54
			Air Compressor	EPD-11726	1	100	70%	N/A	0	419	-60	3	41	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	419	-60	3	41	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	419	-60	3	40	
			Generator	EPD-12349	2	90	100%	N/A	0	419	-60	3	36	
			Derrick barge	CNP 061	1	104	100%	N/A	0	419	-60	3	47	
			Tug boat	CNP 221	1	110	100%	N/A	0	419	-60	3	53	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	419	-60	3	31	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	396	-60	3	57	59
			Air Compressor	EPD-11726	1	100	70%	N/A	0	419	-60	3	41	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	419	-60	3	41	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	419	-60	3	40	
			Generator	EPD-12349	2	90	100%	N/A	0	419	-60	3	36	
			Derrick barge	CNP 061	1	104	100%	N/A	0	419	-60	3	47	
			Tug boat	CNP 221	1	110	100%	N/A	0	419	-60	3	53	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	419	-60	3	31	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	396	-60	3	57	59
			Air Compressor	EPD-11726	1	100	70%	N/A	0	419	-60	3	41	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	419	-60	3	41	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	419	-60	3	40	
			Generator	EPD-12349	2	90	100%	N/A	0	419	-60	3	36	
			Derrick barge	CNP 061	1	104	100%	N/A	0	419	-60	3	47	
			Tug boat	CNP 221	1	110	100%	N/A	0	419	-60	3	53	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	419	-60	3	31	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	419	-60	3	43	55
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	419	-60	3	40	
			Generator	EPD-12349	2	90	100%	N/A	0	419	-60	3	36	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	419	-60	3	31	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	419	-60	3	49	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	419	-60	3	39	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	419	-60	3	33	
			Derrick barge	CNP 061	1	104	100%	N/A	0	419	-60	3	47	
		Tug boat	CNP 221	1	110	100%	N/A	0	419	-60	3	53		
		CNL at NAP dB(A) ^[4]												59
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	419	-60	3	43	53
			Derrick barge	CNP 061	1	104	100%	N/A	0	419	-60	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	419	-60	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	419	-60	3	45	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	419	-60	3	38	
			Generator	EPD-12349	2	90	100%	N/A	0	419	-60	3	36	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	419	-60	3	49	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	419	-60	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	419	-60	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	419	-60	3	33	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	419	-60	3	44	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	419	-60	3	44	
			CNL at NAP dB(A) ^[4]											

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Overall Construction Noise Level (Mitigated Scenario) at NSR (N01)
 NAP: N01b - Seaview Crescent Block 3

Works Areas	Activity ID	Description of Activity	CNL dB(A)	2025					2026												2027												2028						
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR						
TCC Station (Construction Works Area A)	A1	Site Establishment	51	51	51	51																																	
	B1	Site Establishment	51	51	51	51																																	
TCC Station (Construction Works Area B)	B2	Substructure	53		53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53		
	B3	Superstructure	52													52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52		
	B4	Building Service and Finishes	54																																	54	54	54	54
Land Viaduct (Construction Works Area C)	C1	Site Establishment	49	49	49	49																																	
	C2	Substructure	53		53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53		
	C3	Superstructure	48							48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
Land Viaduct (Construction Works Area D)	D1	Site Establishment	47	47	47	47																																	
	D2	Substructure	52													52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52		
	D3	Superstructure	46																		46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	
Land Viaduct (Construction Works Area E)	E1	Site Establishment	45												45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45		
	E2	Substructure	53																	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53		
	E3	Superstructure	48																		48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
	E4	Landscape Softworks and Cycle Track	46																																46	46	46	46	
Marine Viaduct (Construction Works Area F)	F1	Substructure	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59		
	F2	Superstructure	53																		53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53		
Overall CNL dB(A)				60	60	60	60	61	61	61	61	61	61	61	61	61	61	61	61	61	61	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	
Criteria dB(A)				75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Exceedances				--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Note:
 No construction impact to the proposed church development is anticipated in 2025, since the tentative intake of proposed church development will be early 2026 according to the best available information. However, construction noise impact assessment before the intake date was conducted, in case there is a mis-match of the programme.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	221	-55	3	40	52
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	221	-55	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	221	-55	3	23	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	221	-55	3	37	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	221	-55	3	38	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	221	-55	3	47	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	221	-55	3	44	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	221	-55	3	39	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	221	-55	3	44	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	221	-55	3	44	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	221	-55	3	21	
CNL at NAP dB(A)												52		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group ^[1]	Description											TM or other ref.		
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	309	-58	3	40	47		
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	309	-58	3	40			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20			
			Hydraulic Concrete Crusher ^[3]	EPD	1	94	100%	Movable Noise Barrier	-5	309	-58	3	34			
			Press-in piling ^[3]	EPD	1	95	100%	Movable Noise Barrier	-5	309	-58	3	35			
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[8]	EPD	1	105	70%	Movable Noise Barrier	-5	309	-58	3	44			
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	309	-58	3	18			
			CNL at NAP dB(A)												47	
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel ^[5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 ^[6]	305	-58	3	49	50		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	309	-58	3	29			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	309	-58	3	39			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	309	-58	3	35			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	309	-58	3	40			
		B2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	309	-58	3	21	50		
			Piling, large diameter bored, oscillator ^[5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 ^[6]	305	-58	3	49			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	309	-58	3	29			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	309	-58	3	39			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	309	-58	3	35			
		B2.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	309	-58	3	40	44		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	309	-58	3	21			
			Piling, large diameter bored, reverse circulation drill ^[5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 ^[6]	305	-58	3	34			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	309	-58	3	29			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	309	-58	3	39			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20			
		B2.D	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	309	-58	3	35	47		
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	309	-58	3	40			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	309	-58	3	21			
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	309	-58	3	40			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20			
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	309	-58	3	41			
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	309	-58	3	39			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	309	-58	3	25			
		B3	Superstructure	B3.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	309	-58	3	40	48
					Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	309	-58	3	25	
Asphalt Paver ^[4]	Ref: AEIAR-173/2013				1	101	100%	Movable Noise Barrier	-5	309	-58	3	41			
Roller, vibratory ^[4]	Ref: AEIAR-173/2013				1	101	100%	Movable Noise Barrier	-5	309	-58	3	41			
Crane, mobile	EPD-10143				1	100	100%	Movable Noise Barrier	-5	309	-58	3	40			
Generator	EPD-12349				2	90	100%	Noise Enclosure	-15	309	-58	3	23			
Concrete Pump ^[4]	Ref: AEIAR-173/2013				1	106	100%	Movable Noise Barrier	-10	309	-58	3	41			
Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013				1	96	100%	Movable Noise Barrier	-5	309	-58	3	36			
CNL at NAP dB(A)												48				
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	309	-58	3	20	50		
			Cherry picker ^[4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	309	-58	3	50			
CNL at NAP dB(A)												50				

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	424	-61	3	34	43
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	424	-61	3	41	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	424	-61	3	31	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	424	-61	3	32	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	424	-61	3	17	
CNL at NAP dB(A)												43		
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	46	47
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	424	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	424	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	424	-61	3	34	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	424	-61	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	424	-61	3	17	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	424	-61	3	18		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	46	47
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	424	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	424	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	424	-61	3	34	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	424	-61	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	424	-61	3	17	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	424	-61	3	18		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	31	40
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	424	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	424	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	424	-61	3	34	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	424	-61	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	424	-61	3	17	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	424	-61	3	18		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	424	-61	3	37	44
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	424	-61	3	33	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	424	-61	3	37	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	424	-61	3	17	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	424	-61	3	18	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	424	-61	3	38	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	424	-61	3	22	
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	424	-61	3	36				
CNL at NAP dB(A) [6]												47		
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	424	-61	3	37	38
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	424	-61	3	29	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	424	-61	3	37	41
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	424	-61	3	27	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	424	-61	3	20	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	424	-61	3	33	
		C3.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	424	-61	3	37	40
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	424	-61	3	38	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	424	-61	3	33	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	424	-61	3	20	25
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	424	-61	3	22	
		C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	424	-61	3	38	41
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	424	-61	3	38	
CNL at NAP dB(A) [6]												41		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	512	-62	3	33	41
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	512	-62	3	39	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	512	-62	3	30	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	512	-62	3	31	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	512	-62	3	16	
CNL at NAP dB(A)												41		
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	508	-62	3	44	45
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	512	-62	3	24	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	512	-62	3	30	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	512	-62	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	512	-62	3	34	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	512	-62	3	16	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	512	-62	3	17	
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	508	-62	3	44	45
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	512	-62	3	24	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	512	-62	3	30	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	512	-62	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	512	-62	3	34	
		Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	512	-62	3	16		
		D2.C	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	512	-62	3	17	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	508	-62	3	29	38
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	512	-62	3	24	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	512	-62	3	30	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	512	-62	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	512	-62	3	34	
		Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	512	-62	3	16		
		D2.D	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	512	-62	3	17	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	512	-62	3	36	42
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	512	-62	3	32	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	512	-62	3	36	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	512	-62	3	16			
Water pump (electric)	CNP 281		2	88	100%	Noise Enclosure	-15	512	-62	3	17			
Concrete Pump [5]	Ref: AEIAR-173/2013		1	106	100%	Movable Noise Barrier	-10	512	-62	3	37			
Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	512	-62	3	21				
D2.D	Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	512	-62	3	35			
	CNL at NAP dB(A) [6]												45	
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	512	-62	3	36	36
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	512	-62	3	28	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	512	-62	3	36	40
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	512	-62	3	26	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	512	-62	3	19	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	512	-62	3	32	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	512	-62	3	36	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	512	-62	3	37	38
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	512	-62	3	32	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	512	-62	3	19	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	512	-62	3	19	23
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	512	-62	3	21	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	512	-62	3	37	40
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	512	-62	3	37	
CNL at NAP dB(A) [6]												40		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
 NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	671	-65	3	30	39
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	671	-65	3	13	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	671	-65	3	37	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	671	-65	3	28	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	671	-65	3	27	
CNL at NAP dB(A)													39	
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	626	-64	3	28	47
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	626	-64	3	43	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	671	-65	3	23	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	671	-65	3	33	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	671	-65	3	13	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	626	-64	3	43	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	671	-65	3	29	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	671	-65	3	34	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	671	-65	3	32	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	671	-65	3	18	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	671	-65	3	33	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	671	-65	3	14				
CNL at NAP dB(A)													47	
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	671	-65	3	33	42
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	671	-65	3	25	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	671	-65	3	23	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	671	-65	3	16	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	671	-65	3	34	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	671	-65	3	29	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	671	-65	3	29	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	671	-65	3	33	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	671	-65	3	18	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	671	-65	3	34	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	671	-65	3	34				
CNL at NAP dB(A)													42	
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	671	-65	3	30	40
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	671	-65	3	29	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	671	-65	3	13	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	671	-65	3	38	
CNL at NAP dB(A)													40	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N03a - Ling Liang Church E Wun Secondary School

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	703	-65	3	37	50
			Air Compressor	EPD-11726	1	100	70%	N/A	0	720	-65	3	36	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	720	-65	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	720	-65	3	35	
			Generator	EPD-12349	2	90	100%	N/A	0	720	-65	3	31	
			Derrick barge	CNP 061	1	104	100%	N/A	0	720	-65	3	42	
			Tug boat	CNP 221	1	110	100%	N/A	0	720	-65	3	48	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	720	-65	3	26	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	703	-65	3	52	54
			Air Compressor	EPD-11726	1	100	70%	N/A	0	720	-65	3	36	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	720	-65	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	720	-65	3	35	
			Generator	EPD-12349	2	90	100%	N/A	0	720	-65	3	31	
			Derrick barge	CNP 061	1	104	100%	N/A	0	720	-65	3	42	
			Tug boat	CNP 221	1	110	100%	N/A	0	720	-65	3	48	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	720	-65	3	26	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	703	-65	3	52	54
			Air Compressor	EPD-11726	1	100	70%	N/A	0	720	-65	3	36	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	720	-65	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	720	-65	3	35	
			Generator	EPD-12349	2	90	100%	N/A	0	720	-65	3	31	
			Derrick barge	CNP 061	1	104	100%	N/A	0	720	-65	3	42	
			Tug boat	CNP 221	1	110	100%	N/A	0	720	-65	3	48	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	720	-65	3	26	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	720	-65	3	38	51
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	720	-65	3	35	
			Generator	EPD-12349	2	90	100%	N/A	0	720	-65	3	31	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	720	-65	3	26	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	720	-65	3	44	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	720	-65	3	34	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	720	-65	3	28	
			Derrick barge	CNP 061	1	104	100%	N/A	0	720	-65	3	42	
Tug boat	CNP 221	1	110	100%	N/A	0	720	-65	3	48				
CNL at NAP dB(A) ^[4]												54		
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	720	-65	3	38	49
			Derrick barge	CNP 061	1	104	100%	N/A	0	720	-65	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	720	-65	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	720	-65	3	40	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	720	-65	3	33	
			Generator	EPD-12349	2	90	100%	N/A	0	720	-65	3	31	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	720	-65	3	44	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	720	-65	3	34	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	720	-65	3	38	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	720	-65	3	28	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	720	-65	3	39	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	720	-65	3	39	
			CNL at NAP dB(A) ^[4]											

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [4]: The highest CNL at NAP among the groups is adopted.
- [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Overall Construction Noise Level (Mitigated Scenario) at NSR (N03)
NAP: N03a - Ling Liang Church E Wun Secondary School

Works Areas	Activity ID	Description of Activity	CNL dB(A)	2025			2026												2027												2028								
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR						
TCC Station (Construction Works Area A)	A1	Site Establishment	52	52	52	52																																	
TCC Station (Construction Works Area B)	B1	Site Establishment	47	47	47	47																																	
	B2	Substructure	50				50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	B3	Superstructure	48																																				
	B4	Building Service and Finishes	50																																				
Land Viaduct (Construction Works Area C)	C1	Site Establishment	43	43	43	43																																	
	C2	Substructure	47				47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	
	C3	Superstructure	41																																				
Land Viaduct (Construction Works Area D)	D1	Site Establishment	41	41	41	41																																	
	D2	Substructure	45																																				
	D3	Superstructure	40																																				
Land Viaduct (Construction Works Area E)	E1	Site Establishment	39																																				
	E2	Substructure	47																																				
	E3	Superstructure	42																																				
	E4	Landscape Softworks and Cycle Track	40																																				
Marine Viaduct (Construction Works Area F)	F1	Substructure	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54		
	F2	Superstructure	49																																				
Overall CNL dB(A)				57	57	57	55	55	56	56	56	56	56	56	56	56	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	
Criteria dB(A)				65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Exceedances				--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Note:
No construction impact to the proposed church development is anticipated in 2025, since the tentative intake of proposed church development will be early 2026 according to the best available information. However, construction noise impact assessment before the intake date was conducted, in case there is a mis-match of the programme.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	161	-52	3	43	55
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	161	-52	3	46	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	161	-52	3	26	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	161	-52	3	40	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	161	-52	3	41	
			Dump truck , 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	161	-52	3	49	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	161	-52	3	47	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	161	-52	3	42	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	161	-52	3	47	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	161	-52	3	47	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	161	-52	3	24	
CNL at NAP dB(A)												55		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)		
		Group ^[1]	Description	TM or other ref.												
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	242	-56	3	42	49		
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	242	-56	3	42			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22			
			Hydraulic Concrete Crusher ^[3]	EPD	1	94	100%	Movable Noise Barrier	-5	242	-56	3	36			
			Press-in piling ^[3]	EPD	1	95	100%	Movable Noise Barrier	-5	242	-56	3	37			
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[8]	EPD	1	105	70%	Movable Noise Barrier	-5	242	-56	3	46			
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	242	-56	3	20			
			CNL at NAP dB(A)												49	
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel ^[5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 ^[6]	233	-55	3	51	52		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	242	-56	3	31			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	242	-56	3	41			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	242	-56	3	37			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	242	-56	3	42			
		B2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	242	-56	3	23	52		
			Piling, large diameter bored, oscillator ^[5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 ^[6]	233	-55	3	51			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	242	-56	3	31			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	242	-56	3	41			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	242	-56	3	37			
		B2.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	242	-56	3	42	46		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	242	-56	3	23			
			Piling, large diameter bored, reverse circulation drill ^[5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 ^[6]	233	-55	3	36			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	242	-56	3	31			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	242	-56	3	41			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22			
		B2.D	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	242	-56	3	37	49		
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	242	-56	3	42			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	242	-56	3	23			
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	242	-56	3	42			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22			
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	242	-56	3	43			
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	242	-56	3	41			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	242	-56	3	27			
		B3	Superstructure	B3.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	242	-56	3	42	51
					Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	242	-56	3	27	
					Asphalt Paver ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	242	-56	3	43	
					Roller, vibratory ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	242	-56	3	43	
					Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	242	-56	3	42	
					Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	242	-56	3	25	
Concrete Pump ^[4]	Ref: AEIAR-173/2013				1	106	100%	Movable Noise Barrier	-10	242	-56	3	43			
Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013				1	96	100%	Movable Noise Barrier	-5	242	-56	3	38			
Lorry (24t) ^[4]	Ref: AEIAR-173/2013				1	96	100%	Movable Noise Barrier	-5	242	-56	3	38			
CNL at NAP dB(A)												51				
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	242	-56	3	22	52		
			Cherry picker ^[4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	242	-56	3	52			
			CNL at NAP dB(A)												52	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group [1]	Description											TM or other ref.		
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	344	-59	3	36	44		
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	344	-59	3	43			
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	344	-59	3	33			
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	344	-59	3	34			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	344	-59	3	19			
CNL at NAP dB(A)												44				
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	353	-59	3	48	48		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	344	-59	3	28			
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	344	-59	3	34			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	344	-59	3	36			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	344	-59	3	38			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	344	-59	3	19			
		C2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	344	-59	3	20	48		
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	353	-59	3	48			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	344	-59	3	28			
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	344	-59	3	34			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	344	-59	3	36			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	344	-59	3	38			
		C2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	344	-59	3	19	42		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	344	-59	3	20			
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	353	-59	3	33			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	344	-59	3	28			
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	344	-59	3	34			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	344	-59	3	36			
		C2.D	Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	344	-59	3	38	46		
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	344	-59	3	19			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	344	-59	3	20			
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	344	-59	3	39			
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	344	-59	3	35			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	344	-59	3	39			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	344	-59	3	19			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	344	-59	3	20			
		CNL at NAP dB(A) [6]												48		
		C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	344	-59	3	39	40
					Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	344	-59	3	31	
				C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	344	-59	3	39	43
					Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	344	-59	3	29	
					Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	344	-59	3	22	
Lorry (24t) [5]	Ref: AEIAR-173/2013				1	96	100%	Movable Noise Barrier	-5	344	-59	3	35			
Excavator, wheeled/tracked	EPD-12254				2	97	100%	Movable Noise Barrier	-5	344	-59	3	39			
C3.C	Concrete Pump [5]			Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	344	-59	3	40	42		
	Concrete Lorry Mixer [5]			Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	344	-59	3	35			
	Generator			EPD-12349	2	90	100%	Noise Enclosure	-15	344	-59	3	22			
C3.D	Generator			EPD-12349	2	90	100%	Noise Enclosure	-15	344	-59	3	22	26		
	Bar bender and cutter (electric)			CNP 021	1	90	100%	Movable Noise Barrier	-10	344	-59	3	24			
C3.E	Asphalt Paver [5]			Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	344	-59	3	40	43		
	Roller, vibratory [5]			Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	344	-59	3	40			
CNL at NAP dB(A) [6]												43				

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	434	-61	3	34	42
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	434	-61	3	41	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	434	-61	3	31	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	434	-61	3	32	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	434	-61	3	17	
												CNL at NAP dB(A)	42	
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	46	47
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	434	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	434	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	434	-61	3	34	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	434	-61	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	434	-61	3	17	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	434	-61	3	18	47
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	46	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	434	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	434	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	434	-61	3	34	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	434	-61	3	36	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	434	-61	3	17	40
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	434	-61	3	18	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	434	-61	3	31	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	434	-61	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	434	-61	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	434	-61	3	34	
		D2.D	Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	434	-61	3	36	44
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	434	-61	3	17	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	434	-61	3	18	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	434	-61	3	38	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	434	-61	3	22	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	434	-61	3	36	
Crane, mobile	EPD-10143		1	100	100%	Movable Noise Barrier	-5	434	-61	3	37			
												CNL at NAP dB(A) [6]	47	
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	434	-61	3	37	38
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	434	-61	3	29	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	434	-61	3	37	41
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	434	-61	3	27	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	434	-61	3	20	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	434	-61	3	33	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	434	-61	3	37	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	434	-61	3	38	40
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	434	-61	3	33	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	434	-61	3	20	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	434	-61	3	20	24
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	434	-61	3	22	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	434	-61	3	38	41
Roller, vibratory [5]	Ref: AEIAR-173/2013		1	101	100%	Movable Noise Barrier	-5	434	-61	3	38			
												CNL at NAP dB(A) [6]	41	

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5
- [3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.
- [5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [6]: The highest CNL at NAP among the groups is adopted.
- [7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- [8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.
- [9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
 NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	554	-63	3	32	40
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	554	-63	3	15	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	554	-63	3	39	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	554	-63	3	30	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	554	-63	3	29	
CNL at NAP dB(A)												40		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	551	-63	3	29	48
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	551	-63	3	44	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	554	-63	3	25	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	554	-63	3	35	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	554	-63	3	15	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	551	-63	3	44	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	554	-63	3	31	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	554	-63	3	36	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	554	-63	3	34	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	554	-63	3	20	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	554	-63	3	35	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	554	-63	3	16				
CNL at NAP dB(A)												48		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	554	-63	3	35	44
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	554	-63	3	27	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	554	-63	3	25	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	554	-63	3	18	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	554	-63	3	36	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	554	-63	3	31	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	554	-63	3	31	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	554	-63	3	35	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	554	-63	3	20	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	554	-63	3	36	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	554	-63	3	36				
CNL at NAP dB(A)												44		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	554	-63	3	32	41
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	554	-63	3	31	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	554	-63	3	15	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	554	-63	3	40	
CNL at NAP dB(A)												41		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N08a - Fu Tung Estate Tung Ma House

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	619	-64	3	38	51
			Air Compressor	EPD-11726	1	100	70%	N/A	0	649	-64	3	37	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	649	-64	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	649	-64	3	36	
			Generator	EPD-12349	2	90	100%	N/A	0	649	-64	3	32	
			Derrick barge	CNP 061	1	104	100%	N/A	0	649	-64	3	43	
			Tug boat	CNP 221	1	110	100%	N/A	0	649	-64	3	49	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	649	-64	3	27	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	619	-64	3	53	55
			Air Compressor	EPD-11726	1	100	70%	N/A	0	649	-64	3	37	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	649	-64	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	649	-64	3	36	
			Generator	EPD-12349	2	90	100%	N/A	0	649	-64	3	32	
			Derrick barge	CNP 061	1	104	100%	N/A	0	649	-64	3	43	
			Tug boat	CNP 221	1	110	100%	N/A	0	649	-64	3	49	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	649	-64	3	27	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	619	-64	3	53	55
			Air Compressor	EPD-11726	1	100	70%	N/A	0	649	-64	3	37	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	649	-64	3	37	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	649	-64	3	36	
			Generator	EPD-12349	2	90	100%	N/A	0	649	-64	3	32	
			Derrick barge	CNP 061	1	104	100%	N/A	0	649	-64	3	43	
			Tug boat	CNP 221	1	110	100%	N/A	0	649	-64	3	49	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	649	-64	3	27	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	649	-64	3	39	52
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	649	-64	3	36	
			Generator	EPD-12349	2	90	100%	N/A	0	649	-64	3	32	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	649	-64	3	27	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	649	-64	3	45	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	649	-64	3	35	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	649	-64	3	29	
			Derrick barge	CNP 061	1	104	100%	N/A	0	649	-64	3	43	
Tug boat	CNP 221	1	110	100%	N/A	0	649	-64	3	49				
CNL at NAP dB(A) ^[4]												55		
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	649	-64	3	39	50
			Derrick barge	CNP 061	1	104	100%	N/A	0	649	-64	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	649	-64	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	649	-64	3	41	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	649	-64	3	34	
			Generator	EPD-12349	2	90	100%	N/A	0	649	-64	3	32	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	649	-64	3	45	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	649	-64	3	35	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	649	-64	3	39	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	649	-64	3	29	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	649	-64	3	40	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	649	-64	3	40	
			CNL at NAP dB(A) ^[4]											

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	210	-54	3	41	53
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	210	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	210	-54	3	24	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	210	-54	3	38	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	210	-54	3	39	
			Dump truck , 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	210	-54	3	47	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	210	-54	3	45	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	210	-54	3	40	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	210	-54	3	45	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	210	-54	3	45	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	210	-54	3	22	
CNL at NAP dB(A)												53		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	52
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	179	-53	3	39	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	179	-53	3	40	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [8]	EPD	1	105	70%	Movable Noise Barrier	-5	179	-53	3	48	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	179	-53	3	23	
			CNL at NAP dB(A)											
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel [5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [6]	188	-53	3	53	54
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	179	-53	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	179	-53	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	179	-53	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	179	-53	3	26	
			CNL at NAP dB(A)											
		B2.B	Piling, large diameter bored, oscillator [5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [6]	188	-53	3	53	54
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	179	-53	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	179	-53	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	179	-53	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	179	-53	3	26	
			CNL at NAP dB(A)											
		B2.C	Piling, large diameter bored, reverse circulation drill [5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [6]	188	-53	3	38	49
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	179	-53	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	179	-53	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	179	-53	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	179	-53	3	26	
			CNL at NAP dB(A)											
		B2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	179	-53	3	45	52
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	179	-53	3	46	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	179	-53	3	44	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	179	-53	3	30	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	179	-53	3	41	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	179	-53	3	26	
CNL at NAP dB(A)												52		
B3	Superstructure	B3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	179	-53	3	45	53
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	179	-53	3	28	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	179	-53	3	46	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	179	-53	3	41	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	179	-53	3	41	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	179	-53	3	45	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	179	-53	3	30	
			Asphalt Paver [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	179	-53	3	46	
Roller, vibratory [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	179	-53	3	46				
CNL at NAP dB(A)												53		
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	179	-53	3	25	55
			Cherry picker [4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	179	-53	3	55	
CNL at NAP dB(A)												55		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	216	-55	3	40	48
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	216	-55	3	47	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	216	-55	3	37	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	216	-55	3	38	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	216	-55	3	23	
CNL at NAP dB(A)												48		
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	211	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	216	-55	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	216	-55	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	216	-55	3	40	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	216	-55	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	216	-55	3	23	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	216	-55	3	24		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	211	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	216	-55	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	216	-55	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	216	-55	3	40	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	216	-55	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	216	-55	3	23	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	216	-55	3	24		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	211	-54	3	37	46
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	216	-55	3	32	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	216	-55	3	38	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	216	-55	3	40	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	216	-55	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	216	-55	3	23	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	216	-55	3	24		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	216	-55	3	43	50
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	216	-55	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	216	-55	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	216	-55	3	23	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	216	-55	3	24	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	216	-55	3	44	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	216	-55	3	28	
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	216	-55	3	42				
CNL at NAP dB(A) [6]												53		
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	216	-55	3	43	44
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	216	-55	3	35	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	216	-55	3	43	47
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	216	-55	3	33	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	216	-55	3	26	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	216	-55	3	39	
		C3.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	216	-55	3	43	46
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	216	-55	3	44	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	216	-55	3	39	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	216	-55	3	26	30
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	216	-55	3	28	
		C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	216	-55	3	44	47
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	216	-55	3	44	
CNL at NAP dB(A) [6]												47		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	284	-57	3	38	46
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	284	-57	3	44	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	284	-57	3	35	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	284	-57	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	284	-57	3	21	
CNL at NAP dB(A)												46		
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	275	-57	3	50	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	284	-57	3	29	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	284	-57	3	35	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	284	-57	3	38	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	284	-57	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	284	-57	3	21	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	284	-57	3	22	
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	275	-57	3	50	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	284	-57	3	29	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	284	-57	3	35	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	284	-57	3	38	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	284	-57	3	39	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	284	-57	3	21	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	284	-57	3	22	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	275	-57	3	35	44
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	284	-57	3	29	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	284	-57	3	35	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	284	-57	3	38	
		Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	284	-57	3	39		
		D2.D	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	284	-57	3	21	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	284	-57	3	22	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	284	-57	3	41	48
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	284	-57	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	284	-57	3	41	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	284	-57	3	21			
Water pump (electric)	CNP 281		2	88	100%	Noise Enclosure	-15	284	-57	3	22			
Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	284	-57	3	42				
Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	284	-57	3	26				
D2.D	Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	284	-57	3	40			
	CNL at NAP dB(A) [6]												51	
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	284	-57	3	41	42
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	284	-57	3	33	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	284	-57	3	41	45
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	284	-57	3	31	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	284	-57	3	24	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	284	-57	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	284	-57	3	41	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	284	-57	3	42	43
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	284	-57	3	37	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	284	-57	3	24	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	284	-57	3	24	28
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	284	-57	3	26	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	284	-57	3	42	45
Roller, vibratory [5]	Ref: AEIAR-173/2013		1	101	100%	Movable Noise Barrier	-5	284	-57	3	42			
CNL at NAP dB(A) [6]												45		

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5
- [3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.
- [5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [6]: The highest CNL at NAP among the groups is adopted.
- [7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- [8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.
- [9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
 NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	361	-59	3	36	44
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	361	-59	3	19	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	361	-59	3	42	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	361	-59	3	34	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	361	-59	3	33	
CNL at NAP dB(A)												44		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	373	-59	3	32	51
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	373	-59	3	47	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	361	-59	3	29	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	361	-59	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	361	-59	3	19	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	373	-59	3	47	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	361	-59	3	35	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	361	-59	3	40	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	361	-59	3	38	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	361	-59	3	24	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	361	-59	3	39	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	361	-59	3	20	
CNL at NAP dB(A)												51		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	361	-59	3	39	47
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	361	-59	3	31	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	361	-59	3	29	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	361	-59	3	22	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	361	-59	3	40	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	361	-59	3	35	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	361	-59	3	35	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	361	-59	3	39	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	361	-59	3	24	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	361	-59	3	40	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	361	-59	3	40				
CNL at NAP dB(A)												47		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	361	-59	3	36	45
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	361	-59	3	35	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	361	-59	3	19	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	361	-59	3	44	
CNL at NAP dB(A)												45		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N09a - Tung Chung Crescent Block 5 (Point 1)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group ^[1]	Description											TM or other ref.		
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	432	-61	3	41	54		
			Air Compressor	EPD-11726	1	100	70%	N/A	0	458	-61	3	40			
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	458	-61	3	40			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	458	-61	3	39			
			Generator	EPD-12349	2	90	100%	N/A	0	458	-61	3	35			
			Derrick barge	CNP 061	1	104	100%	N/A	0	458	-61	3	46			
			Tug boat	CNP 221	1	110	100%	N/A	0	458	-61	3	52			
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	458	-61	3	30			
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	432	-61	3	56	58		
			Air Compressor	EPD-11726	1	100	70%	N/A	0	458	-61	3	40			
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	458	-61	3	40			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	458	-61	3	39			
			Generator	EPD-12349	2	90	100%	N/A	0	458	-61	3	35			
			Derrick barge	CNP 061	1	104	100%	N/A	0	458	-61	3	46			
			Tug boat	CNP 221	1	110	100%	N/A	0	458	-61	3	52			
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	458	-61	3	30			
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	432	-61	3	56	58		
			Air Compressor	EPD-11726	1	100	70%	N/A	0	458	-61	3	40			
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	458	-61	3	40			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	458	-61	3	39			
			Generator	EPD-12349	2	90	100%	N/A	0	458	-61	3	35			
			Derrick barge	CNP 061	1	104	100%	N/A	0	458	-61	3	46			
			Tug boat	CNP 221	1	110	100%	N/A	0	458	-61	3	52			
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	458	-61	3	30			
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	458	-61	3	42	55		
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	458	-61	3	39			
			Generator	EPD-12349	2	90	100%	N/A	0	458	-61	3	35			
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	458	-61	3	30			
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	458	-61	3	48			
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	458	-61	3	38			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	458	-61	3	32			
			Derrick barge	CNP 061	1	104	100%	N/A	0	458	-61	3	46			
			Tug boat	CNP 221	1	110	100%	N/A	0	458	-61	3	52			
		CNL at NAP dB(A) ^[4]												58		
		F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	458	-61	3	42	53
Derrick barge	CNP 061				1	104	100%	N/A	0	458	-61	3	40			
Tug boat	CNP 221				1	110	100%	N/A	0	458	-61	3	40			
Winch (petrol)	CNP 263				1	102	100%	N/A	0	458	-61	3	44			
Winch (electric)	CNP 262				1	95	100%	N/A	0	458	-61	3	37			
Generator	EPD-12349				2	90	100%	N/A	0	458	-61	3	35			
Concrete Pump ^[3]	Ref: AEIAR-173/2013				1	106	100%	N/A	0	458	-61	3	48			
Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013				1	96	100%	N/A	0	458	-61	3	38			
Excavator, wheeled/tracked	EPD-12254				2	97	100%	N/A	0	458	-61	3	42			
Bar bender and cutter (electric)	CNP 021				1	90	100%	N/A	0	458	-61	3	32			
Asphalt Paver ^[3]	Ref: AEIAR-173/2013				1	101	100%	N/A	0	458	-61	3	43			
Roller, vibratory ^[3]	Ref: AEIAR-173/2013				1	101	100%	N/A	0	458	-61	3	43			
CNL at NAP dB(A) ^[4]												53				

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
 NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	190	-54	3	41	54
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	190	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	190	-54	3	24	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	190	-54	3	38	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	190	-54	3	39	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	190	-54	3	48	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	190	-54	3	45	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	190	-54	3	40	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	190	-54	3	45	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	190	-54	3	45	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	190	-54	3	22	
CNL at NAP dB(A)												54		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	51
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	
			Hydraulic Concrete Crusher ^[3]	EPD	1	94	100%	Movable Noise Barrier	-5	207	-54	3	38	
			Press-in piling ^[3]	EPD	1	95	100%	Movable Noise Barrier	-5	207	-54	3	39	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[8]	EPD	1	105	70%	Movable Noise Barrier	-5	207	-54	3	47	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	207	-54	3	22	
			CNL at NAP dB(A)											
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel ^[5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 ^[6]	212	-55	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	207	-54	3	32	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	207	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	207	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	207	-54	3	25	
			CNL at NAP dB(A)											
		B2.B	Piling, large diameter bored, oscillator ^[5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 ^[6]	212	-55	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	207	-54	3	32	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	207	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	207	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	207	-54	3	25	
			CNL at NAP dB(A)											
		B2.C	Piling, large diameter bored, reverse circulation drill ^[5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 ^[6]	212	-55	3	37	47
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	207	-54	3	32	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	207	-54	3	42	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	207	-54	3	38	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	207	-54	3	25	
			CNL at NAP dB(A)											
		B2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	207	-54	3	44	50
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	207	-54	3	45	
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	207	-54	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	207	-54	3	29	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	207	-54	3	40	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	207	-54	3	25	
CNL at NAP dB(A)												50		
B3	Superstructure	B3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	207	-54	3	44	52
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	207	-54	3	27	
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	207	-54	3	45	
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	207	-54	3	40	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	207	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	207	-54	3	44	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	207	-54	3	29	
			Asphalt Paver ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	207	-54	3	45	
Roller, vibratory ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	207	-54	3	45				
CNL at NAP dB(A)												52		
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	207	-54	3	24	54
			Cherry picker ^[4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	207	-54	3	54	
CNL at NAP dB(A)												54		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)

NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	274	-57	3	38	46
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	274	-57	3	45	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	274	-57	3	35	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	274	-57	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	274	-57	3	21	
CNL at NAP dB(A)												46		
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	271	-57	3	50	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	274	-57	3	30	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	274	-57	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	274	-57	3	38	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	274	-57	3	40	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	274	-57	3	21	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	274	-57	3	22		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	271	-57	3	50	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	274	-57	3	30	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	274	-57	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	274	-57	3	38	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	274	-57	3	40	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	274	-57	3	21	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	274	-57	3	22		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	271	-57	3	35	44
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	274	-57	3	30	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	274	-57	3	36	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	274	-57	3	38	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	274	-57	3	40	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	274	-57	3	21	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	274	-57	3	22		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	274	-57	3	41	48
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	274	-57	3	37	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	274	-57	3	41	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	274	-57	3	21			
Water pump (electric)	CNP 281		2	88	100%	Noise Enclosure	-15	274	-57	3	22			
Concrete Pump [5]	Ref: AEIAR-173/2013		1	106	100%	Movable Noise Barrier	-10	274	-57	3	42			
Bar bender and cutter (electric)	CNP 021		1	90	100%	Movable Noise Barrier	-10	274	-57	3	26			
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	274	-57	3	40				
CNL at NAP dB(A) [6]												51		
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	274	-57	3	41	42
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	274	-57	3	33	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	274	-57	3	41	45
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	274	-57	3	31	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	274	-57	3	24	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	274	-57	3	37	
		C3.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	274	-57	3	41	44
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	274	-57	3	42	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	274	-57	3	37	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	274	-57	3	24	28
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	274	-57	3	26	
C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	274	-57	3	42	45		
	Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	274	-57	3	42			
CNL at NAP dB(A) [6]												45		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	350	-59	3	36	44
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	350	-59	3	43	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	350	-59	3	33	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	350	-59	3	34	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	350	-59	3	19	
												CNL at NAP dB(A)	44	
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	342	-59	3	48	49
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	350	-59	3	28	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	350	-59	3	34	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	350	-59	3	36	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	350	-59	3	38	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	350	-59	3	19	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	350	-59	3	20	
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	342	-59	3	48	49
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	350	-59	3	28	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	350	-59	3	34	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	350	-59	3	36	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	350	-59	3	38	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	350	-59	3	19	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	350	-59	3	20	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	342	-59	3	33	42
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	350	-59	3	28	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	350	-59	3	34	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	350	-59	3	36	
		Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	350	-59	3	38		
		Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	350	-59	3	19		
		D2.D	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	350	-59	3	20	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	350	-59	3	39	46
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	350	-59	3	35	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	350	-59	3	39	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	350	-59	3	19			
Water pump (electric)	CNP 281		2	88	100%	Noise Enclosure	-15	350	-59	3	20			
Concrete Pump [5]	Ref: AEIAR-173/2013		1	106	100%	Movable Noise Barrier	-10	350	-59	3	40			
Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	350	-59	3	24				
D2.E	Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	350	-59	3	38			
													CNL at NAP dB(A) [6]	49
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	350	-59	3	39	40
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	350	-59	3	31	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	350	-59	3	39	43
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	350	-59	3	29	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	350	-59	3	22	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	350	-59	3	35	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	350	-59	3	39	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	350	-59	3	40	41
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	350	-59	3	35	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	350	-59	3	22	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	350	-59	3	22	26
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	350	-59	3	24	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	350	-59	3	40	43
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	350	-59	3	40	
												CNL at NAP dB(A) [6]	43	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)

NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	437	-61	3	34	42
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	437	-61	3	17	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	437	-61	3	41	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	437	-61	3	32	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	437	-61	3	31	
CNL at NAP dB(A)												42		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	446	-61	3	30	50
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	446	-61	3	45	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	437	-61	3	27	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	437	-61	3	37	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	437	-61	3	17	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	446	-61	3	45	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	437	-61	3	33	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	437	-61	3	38	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	437	-61	3	36	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	437	-61	3	22	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	437	-61	3	37	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	437	-61	3	18				
CNL at NAP dB(A)												50		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	437	-61	3	37	46
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	437	-61	3	29	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	437	-61	3	27	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	437	-61	3	20	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	437	-61	3	38	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	437	-61	3	33	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	437	-61	3	33	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	437	-61	3	37	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	437	-61	3	22	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	437	-61	3	38	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	437	-61	3	38				
CNL at NAP dB(A)												46		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	437	-61	3	34	43
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	437	-61	3	33	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	437	-61	3	17	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	437	-61	3	42	
CNL at NAP dB(A)												43		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N09b - Tung Chung Crescent Block 3

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	507	-62	3	39	52
			Air Compressor	EPD-11726	1	100	70%	N/A	0	534	-63	3	39	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	534	-63	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	534	-63	3	37	
			Generator	EPD-12349	2	90	100%	N/A	0	534	-63	3	33	
			Derrick barge	CNP 061	1	104	100%	N/A	0	534	-63	3	44	
			Tug boat	CNP 221	1	110	100%	N/A	0	534	-63	3	50	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	534	-63	3	28	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	507	-62	3	54	56
			Air Compressor	EPD-11726	1	100	70%	N/A	0	534	-63	3	39	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	534	-63	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	534	-63	3	37	
			Generator	EPD-12349	2	90	100%	N/A	0	534	-63	3	33	
			Derrick barge	CNP 061	1	104	100%	N/A	0	534	-63	3	44	
			Tug boat	CNP 221	1	110	100%	N/A	0	534	-63	3	50	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	534	-63	3	28	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	507	-62	3	54	56
			Air Compressor	EPD-11726	1	100	70%	N/A	0	534	-63	3	39	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	534	-63	3	39	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	534	-63	3	37	
			Generator	EPD-12349	2	90	100%	N/A	0	534	-63	3	33	
			Derrick barge	CNP 061	1	104	100%	N/A	0	534	-63	3	44	
			Tug boat	CNP 221	1	110	100%	N/A	0	534	-63	3	50	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	534	-63	3	28	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	534	-63	3	40	53
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	534	-63	3	37	
			Generator	EPD-12349	2	90	100%	N/A	0	534	-63	3	33	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	534	-63	3	28	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	534	-63	3	46	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	534	-63	3	36	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	534	-63	3	30	
			Derrick barge	CNP 061	1	104	100%	N/A	0	534	-63	3	44	
Tug boat	CNP 221	1	110	100%	N/A	0	534	-63	3	50				
CNL at NAP dB(A) ^[4]												56		
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	534	-63	3	40	52
			Derrick barge	CNP 061	1	104	100%	N/A	0	534	-63	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	534	-63	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	534	-63	3	42	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	534	-63	3	35	
			Generator	EPD-12349	2	90	100%	N/A	0	534	-63	3	33	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	534	-63	3	46	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	534	-63	3	36	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	534	-63	3	40	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	534	-63	3	30	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	534	-63	3	41	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	534	-63	3	41	
			CNL at NAP dB(A) ^[4]											

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	210	-54	3	41	53
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	210	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	210	-54	3	24	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	210	-54	3	38	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	210	-54	3	39	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	210	-54	3	47	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	210	-54	3	45	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	210	-54	3	40	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	210	-54	3	45	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	210	-54	3	45	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	210	-54	3	22	
CNL at NAP dB(A)												53		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	51
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	196	-54	3	38	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	196	-54	3	39	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [8]	EPD	1	105	70%	Movable Noise Barrier	-5	196	-54	3	48	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	196	-54	3	22	
			CNL at NAP dB(A)											
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel [5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [6]	206	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	196	-54	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	196	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	196	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	196	-54	3	25	
			CNL at NAP dB(A)											
		B2.B	Piling, large diameter bored, oscillator [5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [6]	206	-54	3	52	53
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	196	-54	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	196	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	196	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	196	-54	3	25	
			CNL at NAP dB(A)											
		B2.C	Piling, large diameter bored, reverse circulation drill [5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [6]	206	-54	3	37	48
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	196	-54	3	33	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	196	-54	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	196	-54	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	196	-54	3	25	
			CNL at NAP dB(A)											
		B2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	196	-54	3	44	51
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	196	-54	3	45	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	196	-54	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	196	-54	3	29	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	196	-54	3	40	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	196	-54	3	25	
CNL at NAP dB(A)												51		
CNL at NAP dB(A) [7]												53		
B3	Superstructure	B3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	196	-54	3	44	52
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	196	-54	3	27	
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	196	-54	3	45	
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	196	-54	3	40	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	196	-54	3	40	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	196	-54	3	44	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	196	-54	3	29	
			Asphalt Paver [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	196	-54	3	45	
Roller, vibratory [4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	196	-54	3	45				
CNL at NAP dB(A)												52		
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	196	-54	3	24	54
			Cherry picker [4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	196	-54	3	54	
CNL at NAP dB(A)												54		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	243	-56	3	34	43
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[6]	EPD	1	105	70%	No Direct Line-of-Sight	-10	243	-56	3	41	
			Hydraulic Concrete Crusher ^[7]	EPD	1	94	100%	No Direct Line-of-Sight	-10	243	-56	3	31	
			Press-in piling ^[7]	EPD	1	95	100%	No Direct Line-of-Sight	-10	243	-56	3	32	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	243	-56	3	22	
												CNL at NAP dB(A)	43	
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel ^[3]	CNP 164	1	115	70%	No Direct Line-of-Sight	-10	238	-56	3	51	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	243	-56	3	31	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	243	-56	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	243	-56	3	34	
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	243	-56	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	243	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	243	-56	3	23	
		C2.B	Piling, large diameter bored, oscillator ^[3]	CNP 165	1	115	70%	No Direct Line-of-Sight	-10	238	-56	3	51	51
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	243	-56	3	31	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	243	-56	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	243	-56	3	34	
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	243	-56	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	243	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	243	-56	3	23	
		C2.C	Piling, large diameter bored, reverse circulation drill ^[3]	CNP 166	1	100	70%	No Direct Line-of-Sight	-10	238	-56	3	36	41
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	243	-56	3	31	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	243	-56	3	32	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	243	-56	3	34	
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	243	-56	3	36	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	243	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	243	-56	3	23	
		C2.D	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	243	-56	3	37	46
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	243	-56	3	33	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	243	-56	3	37	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	243	-56	3	22	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	243	-56	3	23	
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	243	-56	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	243	-56	3	27	
Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013		2	96	100%	No Direct Line-of-Sight	-10	243	-56	3	36			
												CNL at NAP dB(A)^[5]	51	
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	243	-56	3	37	39
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	243	-56	3	34	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	243	-56	3	37	42
			Winch (electric)	CNP 262	1	95	100%	No Direct Line-of-Sight	-10	243	-56	3	32	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	243	-56	3	25	
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	243	-56	3	33	
		C3.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	243	-56	3	37	44
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	243	-56	3	43	
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	243	-56	3	33	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	243	-56	3	25	29
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	243	-56	3	27	
		C3.E	Asphalt Paver ^[4]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	243	-56	3	38	41
			Roller, vibratory ^[4]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	243	-56	3	38	
												CNL at NAP dB(A)^[5]	44	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The highest CNL at NAP among the groups is adopted.

[6]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[7]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)		
		Group [1]	Description											TM or other ref.	
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	313	-58	3	32	40	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [6]	EPD	1	105	70%	No Direct Line-of-Sight	-10	313	-58	3	39		
			Hydraulic Concrete Crusher [7]	EPD	1	94	100%	No Direct Line-of-Sight	-10	313	-58	3	29		
			Press-in piling [7]	EPD	1	95	100%	No Direct Line-of-Sight	-10	313	-58	3	30		
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	313	-58	3	20		
												CNL at NAP dB(A)	40		
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	No Direct Line-of-Sight	-10	304	-58	3	49	49	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	313	-58	3	29		
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	313	-58	3	30		
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	313	-58	3	32		
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	313	-58	3	34		
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	313	-58	3	20		
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	313	-58	3	21	49	
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	No Direct Line-of-Sight	-10	304	-58	3	49		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	313	-58	3	29		
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	313	-58	3	30		
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	313	-58	3	32		
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	313	-58	3	34		
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	313	-58	3	20	39	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	313	-58	3	21		
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	No Direct Line-of-Sight	-10	304	-58	3	34		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	313	-58	3	29		
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	70%	No Direct Line-of-Sight	-10	313	-58	3	30		
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	313	-58	3	32		
		D2.D	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	313	-58	3	35	44	
			Lorry (24t) [4]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	313	-58	3	31		
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	313	-58	3	35		
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	313	-58	3	20		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	313	-58	3	21		
			Concrete Pump [4]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	313	-58	3	41		
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	313	-58	3	25		
			Concrete Lorry Mixer [4]	Ref: AEIAR-173/2013	2	96	100%	No Direct Line-of-Sight	-10	313	-58	3	34		
														CNL at NAP dB(A) [5]	49
		D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	313	-58	3	35
Winch (petrol)	CNP 263				1	102	100%	Noise Enclosure	-15	313	-58	3	32		
D3.B	Crane, mobile			EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	313	-58	3	35	40	
	Winch (electric)			CNP 262	1	95	100%	No Direct Line-of-Sight	-10	313	-58	3	30		
	Generator			EPD-12349	2	90	100%	Noise Enclosure	-15	313	-58	3	23		
	Lorry (24t) [4]			Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	313	-58	3	31		
D3.C	Excavator, wheeled/tracked			EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	313	-58	3	35	42	
	Concrete Pump [4]			Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	313	-58	3	41		
	Concrete Lorry Mixer [4]			Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	313	-58	3	31		
D3.D	Generator			EPD-12349	2	90	100%	Noise Enclosure	-15	313	-58	3	23	27	
	Bar bender and cutter (electric)			CNP 021	1	90	100%	No Direct Line-of-Sight	-10	313	-58	3	25		
D3.E	Asphalt Paver [4]			Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	313	-58	3	36	39	
	Roller, vibratory [4]			Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	313	-58	3	36		
												CNL at NAP dB(A) [5]	42		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The highest CNL at NAP among the groups is adopted.

[6]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[7]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	391	-60	3	30	38
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	391	-60	3	18	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [6]	EPD	1	105	70%	No Direct Line-of-Sight	-10	391	-60	3	37	
			Press-in piling [3]	EPD	1	95	100%	No Direct Line-of-Sight	-10	391	-60	3	28	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	No Direct Line-of-Sight	-10	391	-60	3	27	
CNL at NAP dB(A)												38		
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	No Direct Line-of-Sight	-10	403	-60	3	31	50
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	No Direct Line-of-Sight	-10	403	-60	3	46	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	391	-60	3	28	
			Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	391	-60	3	33	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	391	-60	3	18	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	No Direct Line-of-Sight	-10	403	-60	3	46	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	391	-60	3	29	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	391	-60	3	39	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	No Direct Line-of-Sight	-10	391	-60	3	32	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	391	-60	3	23	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	391	-60	3	33	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	391	-60	3	19				
CNL at NAP dB(A)												50		
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	391	-60	3	33	43
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	391	-60	3	30	
			Winch (electric)	CNP 262	1	95	100%	No Direct Line-of-Sight	-10	391	-60	3	28	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	391	-60	3	21	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	391	-60	3	39	
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	391	-60	3	29	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	391	-60	3	29	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	391	-60	3	33	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	391	-60	3	23	
			Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	391	-60	3	34	
Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	391	-60	3	34				
CNL at NAP dB(A)												43		
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	391	-60	3	30	39
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	391	-60	3	29	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	391	-60	3	18	
			Compactor, vibratory	CNP 050	1	105	100%	No Direct Line-of-Sight	-10	391	-60	3	38	
CNL at NAP dB(A)												39		

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[7]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N09c - Tung Chung Crescent Block 5 (Point 2)

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group ^[1]	Description											TM or other ref.		
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	No Direct Line-of-Sight	-10	461	-61	3	30	43		
			Air Compressor	EPD-11726	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	487	-62	3	28			
			Generator	EPD-12349	2	90	100%	No Direct Line-of-Sight	-10	487	-62	3	24			
			Derrick barge	CNP 061	1	104	100%	No Direct Line-of-Sight	-10	487	-62	3	35			
			Tug boat	CNP 221	1	110	100%	No Direct Line-of-Sight	-10	487	-62	3	41			
			Water pump, submersible (electric)	CNP 283	2	85	100%	No Direct Line-of-Sight	-10	487	-62	3	19			
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	No Direct Line-of-Sight	-10	461	-61	3	45	47		
			Air Compressor	EPD-11726	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	487	-62	3	28			
			Generator	EPD-12349	2	90	100%	No Direct Line-of-Sight	-10	487	-62	3	24			
			Derrick barge	CNP 061	1	104	100%	No Direct Line-of-Sight	-10	487	-62	3	35			
			Tug boat	CNP 221	1	110	100%	No Direct Line-of-Sight	-10	487	-62	3	41			
			Water pump, submersible (electric)	CNP 283	2	85	100%	No Direct Line-of-Sight	-10	487	-62	3	19			
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	No Direct Line-of-Sight	-10	461	-61	3	45	47		
			Air Compressor	EPD-11726	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Crane, mobile	EPD-10143	1	100	70%	No Direct Line-of-Sight	-10	487	-62	3	30			
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	487	-62	3	28			
			Generator	EPD-12349	2	90	100%	No Direct Line-of-Sight	-10	487	-62	3	24			
			Derrick barge	CNP 061	1	104	100%	No Direct Line-of-Sight	-10	487	-62	3	35			
			Tug boat	CNP 221	1	110	100%	No Direct Line-of-Sight	-10	487	-62	3	41			
			Water pump, submersible (electric)	CNP 283	2	85	100%	No Direct Line-of-Sight	-10	487	-62	3	19			
		F1.D	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	487	-62	3	31	44		
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	No Direct Line-of-Sight	-10	487	-62	3	28			
			Generator	EPD-12349	2	90	100%	No Direct Line-of-Sight	-10	487	-62	3	24			
			Water pump, submersible (electric)	CNP 283	2	85	100%	No Direct Line-of-Sight	-10	487	-62	3	19			
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	487	-62	3	37			
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	487	-62	3	27			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	487	-62	3	21			
			Derrick barge	CNP 061	1	104	100%	No Direct Line-of-Sight	-10	487	-62	3	35			
Tug boat	CNP 221		1	110	100%	No Direct Line-of-Sight	-10	487	-62	3	41					
CNL at NAP dB(A) ^[4]												47				
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	No Direct Line-of-Sight	-10	487	-62	3	31	45		
			Derrick barge	CNP 061	1	104	100%	No Direct Line-of-Sight	-10	487	-62	3	40			
			Tug boat	CNP 221	1	110	100%	No Direct Line-of-Sight	-10	487	-62	3	40			
			Winch (petrol)	CNP 263	1	102	100%	No Direct Line-of-Sight	-10	487	-62	3	33			
			Winch (electric)	CNP 262	1	95	100%	No Direct Line-of-Sight	-10	487	-62	3	26			
			Generator	EPD-12349	2	90	100%	No Direct Line-of-Sight	-10	487	-62	3	24			
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	No Direct Line-of-Sight	-10	487	-62	3	37			
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	No Direct Line-of-Sight	-10	487	-62	3	27			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	No Direct Line-of-Sight	-10	487	-62	3	31			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	No Direct Line-of-Sight	-10	487	-62	3	21			
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	487	-62	3	32			
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	No Direct Line-of-Sight	-10	487	-62	3	32			
			CNL at NAP dB(A) ^[4]												45	

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [4]: The highest CNL at NAP among the groups is adopted.
- [5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area A)
NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[1]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group	Description											TM or other ref.
A1	Site Establishment	A1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	226	-55	3	40	52
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	226	-55	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	226	-55	3	23	
			Hydraulic Concrete Crusher ^[2]	EPD	1	94	100%	Movable Noise Barrier	-5	226	-55	3	37	
			Press-in piling ^[2]	EPD	1	95	100%	Movable Noise Barrier	-5	226	-55	3	38	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[4]	EPD	1	105	70%	Movable Noise Barrier	-5	226	-55	3	46	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	226	-55	3	44	
			Concrete Lorry Mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	226	-55	3	39	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	226	-55	3	44	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	226	-55	3	44	
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	226	-55	3	21	
CNL at NAP dB(A)												52		

Notes:

[1]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[2]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[4]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[5]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area B)
 NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) ^[2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)			
		Group ^[1]	Description											TM or other ref.		
B1	Site Establishment	B1.A	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51	57		
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	93	-47	3	51			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31			
			Hydraulic Concrete Crusher ^[3]	EPD	1	94	100%	Movable Noise Barrier	-5	93	-47	3	45			
			Press-in piling ^[3]	EPD	1	95	100%	Movable Noise Barrier	-5	93	-47	3	46			
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne ^[8]	EPD	1	105	70%	Movable Noise Barrier	-5	93	-47	3	54			
			Water pump (electric)	CNP 281	1	88	100%	Noise Enclosure	-15	93	-47	3	29			
			CNL at NAP dB(A)												57	
B2	Substructure	B2.A	Piling, large diameter bored, grab and chisel ^[5]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 ^[6]	54	-43	3	64	64		
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	93	-47	3	39			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	93	-47	3	49			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	93	-47	3	45			
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51			
		B2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	93	-47	3	32	64		
			Piling, large diameter bored, oscillator ^[5]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 ^[6]	54	-43	3	64			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	93	-47	3	39			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	93	-47	3	49			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31			
			Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	93	-47	3	45			
		B2.C	Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51	55		
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	93	-47	3	32			
			Piling, large diameter bored, reverse circulation drill ^[5]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 ^[6]	54	-43	3	49			
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	93	-47	3	39			
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	93	-47	3	49			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31			
		B2.D	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	93	-47	3	45	57		
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51			
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	93	-47	3	32			
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	93	-47	3	51			
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31			
			Concrete Pump ^[4]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	93	-47	3	52			
			Concrete Lorry Mixer ^[4]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	93	-47	3	50			
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	93	-47	3	36			
		Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51				
		B3	Superstructure	B3.A	Lorry (24t) ^[4]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	93	-47	3	47	59
					Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	93	-47	3	51	
					Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	93	-47	3	36	
					Asphalt Paver ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	93	-47	3	52	
					Roller, vibratory ^[4]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	93	-47	3	52	
Crane, mobile	EPD-10143				1	100	100%	Movable Noise Barrier	-5	93	-47	3	51			
Generator	EPD-12349				2	90	100%	Noise Enclosure	-15	93	-47	3	34			
Concrete Pump ^[4]	Ref: AEIAR-173/2013				1	106	100%	Movable Noise Barrier	-10	93	-47	3	52			
CNL at NAP dB(A)^[7]												59				
B4	Building Service and Finishes	B4.A	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	93	-47	3	31	61		
			Cherry picker ^[4]	Ref: AEIAR-173/2013	2	107	100%	Movable Noise Barrier	-5	93	-47	3	61			
CNL at NAP dB(A)												61				

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[5]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[6]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[7]: The highest CNL at NAP among the groups is adopted.

[8]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area C)
 NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
C1	Site Establishment	C1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	12	-30	3	65	73
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	12	-30	3	72	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	12	-30	3	62	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	12	-30	3	63	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	12	-30	3	48	
CNL at NAP dB(A)												73		
C2	Substructure	C2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	19	-34	3	73	75
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	12	-30	3	57	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	12	-30	3	63	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	12	-30	3	65	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	12	-30	3	67	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	12	-30	3	48	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	12	-30	3	49		
		C2.B	Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	19	-34	3	73	75
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	12	-30	3	57	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	12	-30	3	63	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	12	-30	3	65	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	12	-30	3	67	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	12	-30	3	48	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	12	-30	3	49		
		C2.C	Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	19	-34	3	58	70
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	12	-30	3	57	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	12	-30	3	63	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	12	-30	3	65	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	12	-30	3	67	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	12	-30	3	48	
		Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	12	-30	3	49		
		C2.D	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	12	-30	3	68	75
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	12	-30	3	64	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	12	-30	3	68	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	12	-30	3	48	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	12	-30	3	49	
			Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	12	-30	3	69	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	12	-30	3	53	
Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	12	-30	3	67				
CNL at NAP dB(A) [6]												75		
C3	Superstructure	C3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	12	-30	3	68	69
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	12	-30	3	60	
		C3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	12	-30	3	68	72
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	12	-30	3	58	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	12	-30	3	51	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	12	-30	3	64	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	12	-30	3	68	
		C3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	12	-30	3	69	71
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	12	-30	3	64	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	12	-30	3	51	
		C3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	12	-30	3	51	55
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	12	-30	3	53	
		C3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	12	-30	3	69	72
Roller, vibratory [5]	Ref: AEIAR-173/2013		1	101	100%	Movable Noise Barrier	-5	12	-30	3	69			
CNL at NAP dB(A) [6]												72		

Notes:

- [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
- [2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5
- [3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
- [4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.
- [5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
- [6]: The highest CNL at NAP among the groups is adopted.
- [7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf
- [8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.
- [9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area D)
 NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group [1]	Description											TM or other ref.
D1	Site Establishment	D1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	61	-44	3	51	59
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	61	-44	3	58	
			Hydraulic Concrete Crusher [8]	EPD	1	94	100%	Movable Noise Barrier	-5	61	-44	3	48	
			Press-in piling [8]	EPD	1	95	100%	Movable Noise Barrier	-5	61	-44	3	49	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	61	-44	3	34	
												CNL at NAP dB(A)	59	
D2	Substructure	D2.A	Piling, large diameter bored, grab and chisel [3]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [4]	67	-44	3	62	63
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	61	-44	3	43	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	61	-44	3	49	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	61	-44	3	51	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	61	-44	3	53	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	61	-44	3	34	
		D2.B	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	61	-44	3	35	63
			Piling, large diameter bored, oscillator [3]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [4]	67	-44	3	62	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	61	-44	3	43	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	61	-44	3	49	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	61	-44	3	51	
			Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	61	-44	3	53	
		D2.C	Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	61	-44	3	34	57
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	61	-44	3	35	
			Piling, large diameter bored, reverse circulation drill [3]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [4]	67	-44	3	47	
			Air Compressor	EPD-11726	1	100	70%	Noise Enclosure	-15	61	-44	3	43	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	70%	Movable Noise Barrier	-5	61	-44	3	49	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	61	-44	3	51	
		D2.D	Crane, mobile	EPD-10143	1	100	70%	Movable Noise Barrier	-5	61	-44	3	53	61
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	61	-44	3	34	
			Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	61	-44	3	35	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	61	-44	3	54	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	61	-44	3	50	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	61	-44	3	54	
Generator	EPD-12349		1	90	100%	Noise Enclosure	-15	61	-44	3	34			
D2.D	Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	61	-44	3	35	61		
	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	61	-44	3	55			
	Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	61	-44	3	39			
	Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	61	-44	3	53			
													CNL at NAP dB(A) [6]	63
D3	Superstructure	D3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	61	-44	3	54	55
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	61	-44	3	46	
		D3.B	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	61	-44	3	54	58
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	61	-44	3	44	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	61	-44	3	37	
			Lorry (24t) [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	61	-44	3	50	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	61	-44	3	54	
		D3.C	Concrete Pump [5]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	61	-44	3	55	57
			Concrete Lorry Mixer [5]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	61	-44	3	50	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	61	-44	3	37	
		D3.D	Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	61	-44	3	37	41
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	61	-44	3	39	
		D3.E	Asphalt Paver [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	61	-44	3	55	58
			Roller, vibratory [5]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	61	-44	3	55	
												CNL at NAP dB(A) [6]	58	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[4]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[5]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[6]: The highest CNL at NAP among the groups is adopted.

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[9]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area E)
NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME			No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A) [2]	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)
		Group [1]	Description	TM or other ref.										
E1	Site Establishment	E1.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	215	-55	3	40	49
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	215	-55	3	23	
			Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne [7]	EPD	1	105	70%	Movable Noise Barrier	-5	215	-55	3	47	
			Press-in piling [3]	EPD	1	95	100%	Movable Noise Barrier	-5	215	-55	3	38	
			Hydraulic Concrete Crusher [3]	EPD	1	94	100%	Movable Noise Barrier	-5	215	-55	3	37	
CNL at NAP dB(A)													49	
E2	Substructure	E2.A	Piling, large diameter bored, reverse circulation drill [4]	CNP 166	1	100	70%	Noise Insulating Fabric	-10 [5]	188	-53	3	38	57
			Piling, large diameter bored, oscillator [4]	CNP 165	1	115	70%	Noise Insulating Fabric	-10 [5]	188	-53	3	53	
			Air Compressor	EPD-11726	1	100	100%	Noise Enclosure	-15	215	-55	3	33	
			Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	215	-55	3	43	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	215	-55	3	23	
			Piling, large diameter bored, grab and chisel [4]	CNP 164	1	115	70%	Noise Insulating Fabric	-10 [5]	188	-53	3	53	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	215	-55	3	39	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	215	-55	3	44	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	2	96	100%	Movable Noise Barrier	-5	215	-55	3	42	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	215	-55	3	28	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	215	-55	3	43	
Water pump (electric)	CNP 281	2	88	100%	Noise Enclosure	-15	215	-55	3	24				
CNL at NAP dB(A)													57	
E3	Superstructure	E3.A	Crane, mobile	EPD-10143	1	100	100%	Movable Noise Barrier	-5	215	-55	3	43	52
			Winch (petrol)	CNP 263	1	102	100%	Noise Enclosure	-15	215	-55	3	35	
			Winch (electric)	CNP 262	1	95	100%	Movable Noise Barrier	-10	215	-55	3	33	
			Generator	EPD-12349	2	90	100%	Noise Enclosure	-15	215	-55	3	26	
			Concrete Pump [6]	Ref: AEIAR-173/2013	1	106	100%	Movable Noise Barrier	-10	215	-55	3	44	
			Concrete Lorry Mixer [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	215	-55	3	39	
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	215	-55	3	39	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	Movable Noise Barrier	-5	215	-55	3	43	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	Movable Noise Barrier	-10	215	-55	3	28	
			Asphalt Paver [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	215	-55	3	44	
Roller, vibratory [6]	Ref: AEIAR-173/2013	1	101	100%	Movable Noise Barrier	-5	215	-55	3	44				
CNL at NAP dB(A)													52	
E4	Landscape Softworks and Cycle Track	E4.A	Excavator, wheeled/tracked	EPD-12254	1	97	100%	Movable Noise Barrier	-5	215	-55	3	40	49
			Lorry (24t) [6]	Ref: AEIAR-173/2013	1	96	100%	Movable Noise Barrier	-5	215	-55	3	39	
			Generator	EPD-12349	1	90	100%	Noise Enclosure	-15	215	-55	3	23	
			Compactor, vibratory	CNP 050	1	105	100%	Movable Noise Barrier	-5	215	-55	3	48	
CNL at NAP dB(A)													49	

Notes:

[1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.

[2]: According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed (depending on the actual design). Schematic Drawings of the proposed mitigation measures are presented at Figure 4.5

[3]: The SWL is converted from SPL by distance attenuation in point source, and the SPL at 7m from the equipment is referenced to EPD website: https://www.epd.gov.hk/epd/misc/construction_noise/contents/index.php/en/home2/quieter-construction-methods.html.

[4]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.

[5]: According to approved EIA report of West Island Line (Register No.: AEIAR 153/2008), noise reduction of 10dB(A) can be achieved for the PME lapped with the noise insulating fabric.

[6]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).

[7]: The SWL is referenced to EPD website: https://www.epd.gov.hk/epd/sites/default/files/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf

[8]: The boundary of the construction works areas are shown in Figure 4.3.

Appendix 4.7 - Details of Construction Noise Assessment (Mitigated Scenario)
 Airport Tung Chung Link Project Environmental Impact Assessment

Calculation of Construction Noise Level (Mitigated Scenario) (Construction Works Area F)
 NAP: N10a - Priests' Quarters of the Planned Visitation Church Development

Activity ID	Description of Activity	PME		No. of PME	SWL dB(A)/unit	% on time	Type of Noise Screening	Screening Correction dB(A)	Horizontal Distance, m	Distance Correction, dB(A)	Façade Correction dB(A)	CNL at NAP dB(A) from each PME	CNL at NAP dB(A)	
		Group ^[1]	Description											TM or other ref.
F1	Substructure	F1.A	Piling, large diameter bored, reverse circulation drill ^[2]	CNP 166	1	100	70%	N/A	0	261	-56	3	45	58
			Air Compressor	EPD-11726	1	100	70%	N/A	0	290	-57	3	44	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	290	-57	3	44	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	290	-57	3	43	
			Generator	EPD-12349	2	90	100%	N/A	0	290	-57	3	39	
			Derrick barge	CNP 061	1	104	100%	N/A	0	290	-57	3	50	
			Tug boat	CNP 221	1	110	100%	N/A	0	290	-57	3	56	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	290	-57	3	34	
		F1.B	Piling, large diameter bored, oscillator ^[2]	CNP 165	1	115	70%	N/A	0	261	-56	3	60	62
			Air Compressor	EPD-11726	1	100	70%	N/A	0	290	-57	3	44	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	290	-57	3	44	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	290	-57	3	43	
			Generator	EPD-12349	2	90	100%	N/A	0	290	-57	3	39	
			Derrick barge	CNP 061	1	104	100%	N/A	0	290	-57	3	50	
			Tug boat	CNP 221	1	110	100%	N/A	0	290	-57	3	56	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	290	-57	3	34	
		F1.C	Piling, large diameter bored, grab and chisel ^[2]	CNP 164	1	115	70%	N/A	0	261	-56	3	60	62
			Air Compressor	EPD-11726	1	100	70%	N/A	0	290	-57	3	44	
			Crane, mobile	EPD-10143	1	100	70%	N/A	0	290	-57	3	44	
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	290	-57	3	43	
			Generator	EPD-12349	2	90	100%	N/A	0	290	-57	3	39	
			Derrick barge	CNP 061	1	104	100%	N/A	0	290	-57	3	50	
			Tug boat	CNP 221	1	110	100%	N/A	0	290	-57	3	56	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	290	-57	3	34	
		F1.D	Crane, mobile	EPD-10143	1	100	100%	N/A	0	290	-57	3	46	59
			Excavator, wheeled/tracked	EPD-12254	1	97	100%	N/A	0	290	-57	3	43	
			Generator	EPD-12349	2	90	100%	N/A	0	290	-57	3	39	
			Water pump, submersible (electric)	CNP 283	2	85	100%	N/A	0	290	-57	3	34	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	290	-57	3	52	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	290	-57	3	42	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	290	-57	3	36	
			Derrick barge	CNP 061	1	104	100%	N/A	0	290	-57	3	50	
Tug boat	CNP 221	1	110	100%	N/A	0	290	-57	3	56				
CNL at NAP dB(A) ^[4]												62		
F2	Superstructure	F2.A	Crane, mobile	EPD-10143	1	100	100%	N/A	0	290	-57	3	46	56
			Derrick barge	CNP 061	1	104	100%	N/A	0	290	-57	3	40	
			Tug boat	CNP 221	1	110	100%	N/A	0	290	-57	3	40	
			Winch (petrol)	CNP 263	1	102	100%	N/A	0	290	-57	3	48	
			Winch (electric)	CNP 262	1	95	100%	N/A	0	290	-57	3	41	
			Generator	EPD-12349	2	90	100%	N/A	0	290	-57	3	39	
			Concrete Pump ^[3]	Ref: AEIAR-173/2013	1	106	100%	N/A	0	290	-57	3	52	
			Concrete lorry mixer ^[3]	Ref: AEIAR-173/2013	1	96	100%	N/A	0	290	-57	3	42	
			Excavator, wheeled/tracked	EPD-12254	2	97	100%	N/A	0	290	-57	3	46	
			Bar bender and cutter (electric)	CNP 021	1	90	100%	N/A	0	290	-57	3	36	
			Asphalt Paver ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	290	-57	3	47	
			Roller, vibratory ^[3]	Ref: AEIAR-173/2013	1	101	100%	N/A	0	290	-57	3	47	
			CNL at NAP dB(A) ^[4]											

Notes:
 [1]: PMEs in each works group are assigned to sub-groups by considering the work process, such that each sub-group would not take place with others at the same time.
 [2]: The PME will be used at the exact fixed locations as shown in Figure 4.3, the nearest fixed location have been used for this assessment.
 [3]: The SWL of the PME is referenced to the EIA report of the Tseung Kwan O – Lam Tin Tunnel and Associated Works (Register No. AEIAR-173/2013).
 [4]: The highest CNL at NAP among the groups is adopted.
 [5]: The boundary of the construction works areas are shown in Figure 4.3.

