

APPENDIX 4A:

**Details of Construction Phase
Noise Assessment**

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Table 4A2.1 Noise Sensitive Receivers and Representative Assessment Points

Noise Sensitive Receivers	Representative Assessment Points	Construction Noise Criteria	Coordinates	
			E	N
Ho Ming Primary School	N1	70/65*	818007	834504
Pui Shing Catholic Secondary School	N2	70/65*	818053	834508
Ho Tak Sum Primary School	N3	70/65*	818142	834202
Tang Siu Tong Secondary School	N5	70/65*	818192	834160
Tin Shing Court	N6	75	818030	834394
Tin Shing Court	N7	75	818073	834310
Tin Shing Court	N8	75	818115	834226
Home for Aged at Sha Chau Lei Road	N11	75	817683	834039
Sha Chau Lei Tsuen	N12	75	817627	834046
Tseung Kong Wai	N15	75	816790	834612
Tseung Kong Wai	N16	75	816830	834551
Tseung Kong Wai	N17	75	816752	834526
Villa Oasis	N31	75	816863	834558
Villa Oasis	N32	75	816902	834502
Sunny Villas	N33	75	816961	834666
Sunny Villas	N34	75	816895	834648
King's Garden	N35	75	816970	834601
King's Garden	N36	75	816974	834575
San Wai village house	N37	75	816585	834504
San Wai village house	N38	75	816590	834450
San Wai village house	N39	75	816660	834463
San Wai village house	N40	75	816478	834648

Note: *65 dB(A) during examination periods

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Table 4A2.2 Distance of Noise Sensitive Receivers (NSRs) to Ha Tsuen PS, San Wai STW and Other Projects in the Vicinity

Distance of NSRs to Ha Tsuen PS and other projects with potential cumulative impacts in the vicinity within the study area

NSR	X	Y	Distance to site boundary of Ha Tsuen PS (m)	Distance to Notional Noise Source of Ha Tsuen PS (m)	Distance to DBL (m)	Distance to HSKNDA Roads (m)	Distance to HSKNDA Area 5A (m)	Distance to Bypass Culvert of Alternative 4 (m)	Distance to YLKSSD Stage 1 (m)	Distance to YLKSSD Stage 2 Original (m)	Distance to YLKSSD Stage 2 Alternative (m)
N1	818006.6	834503.6	134	275	>>300	447	>>300	>>300	362	90	>>300
N2	818052.8	834507.6	170	301	>>300	488	>>300	>>300	390	134	>>300
N3	818142.4	834201.8	173	231	>>300	581	>>300	>>300	305	310	>>300
N5	818191.8	834159.7	222	289	>>300	632	>>300	>>300	359	367	>>300
N6	818029.6	834394.4	99	186	>>300	469	>>300	>>300	286	139	>>300
N7	818072.5	834309.7	126	172	>>300	511	>>300	>>300	271	208	>>300
N8	818114.7	834226.0	153	199	>>300	551	>>300	>>300	283	276	>>300
N11	817682.9	834038.6	183	303	>>300	154	>>300	>>300	72	72	>>300
N12	817626.8	834045.6	225	346	>>300	104	>>300	>>300	43	43	>>300

Note : >>300 means the noise sources are outside study area of Ha Tsuen PS

Study area for Ha Tsuen PS could be referred to Figure A4.2

Notional noise source (NNS) is assumed to be located at a mid-way between the approximate geographical centre of the construction site and its boundary nearest to the NSR for the purpose of construction noise assessment.

Distance of NSRs to San Wai STW and Emergency Bypass Culvert (Alternative 4) and other projects with potential cumulative impacts in the vicinity within the study area

NSR	X	Y	Distance to site boundary of San Wai STW (m)	Distance to Notional Noise Source of San Wai STW (m)	Distance to DBL (m)	Distance to HSKNDA Roads (m)	Distance to HSKNDA Area 5A (m)	Distance to Bypass Culvert of Alternative 4 (m)	Distance to YLKSSD Stage 1 (m)	Distance to YLKSSD Stage 2 Original (m)	Distance to YLKSSD Stage 2 Alternative (m)
N15	816789.7	834611.6	443	612	598	340	465	92	508	488	335
N16	816829.6	834551.2	450	622	588	368	424	159	467	447	408
N17	816751.8	834526.4	368	545	516	296	373	132	418	398	350
N31	816863.3	834558.4	483	656	625	396	450	182	487	467	411
N32	816901.9	834501.7	504	673	628	392	427	246	445	425	466
N33	816961.4	834665.6	615	755	768	445	592	255	620	600	290
N34	816894.5	834648.3	549	723	699	402	546	187	580	560	316
N35	816969.7	834600.9	593	770	741	489	545	270	568	548	352
N36	816973.6	834574.7	594	765	723	490	528	278	542	522	374
N37	816585.1	834504.0	208	386	381	163	333	181	338	318	181
N38	816590.2	834449.5	190	362	344	128	280	163	287	267	181
N39	816660.4	834462.5	260	430	404	183	292	193	320	300	246
N40	816478.1	834648.4	270	420	463	85	501	37	446	426	84

Note: Study area for San Wai STW could be referred to Figure A4.1

Notional noise source (NNS) is assumed to be located at a mid-way between the approximate geographical centre of the construction site and its boundary nearest to the NSR for the purpose of construction noise assessment.

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Table 4A3.1 Inventory of Powered Mechanical Equipment for San Wai STW Construction Activities

Activity	Proposed Construction Plants	Nos	UNMITIGATED		MITIGATION LEVEL 1		MITIGATION LEVEL 2	
			CNP No./BS5228	SWL	Quiet Plant BS5228	SWL	Correction for temporary barrier	SWL
STW Construction								
Site Clearance & Site Formation	Backhoe	3	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	2	CNP030	115	Table C.9 Ref no. 2	104	-5	99
			TOTAL	120	TOTAL	112	TOTAL	107
			*Buffer distance (m)	100	*Buffer distance (m)	40	*Buffer distance (m)	22
Piling	Piling rig (large diameter bored, oscillator)	4	CNP 165	115	n/a	115	-10	105
			TOTAL	121	TOTAL	121	TOTAL	111
			*Buffer distance (m)	112	*Buffer distance (m)	112	*Buffer distance (m)	35
Detritors	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
			TOTAL	118	TOTAL	107	TOTAL	98
			*Buffer distance (m)	79	*Buffer distance (m)	22	*Buffer distance (m)	8
Modification of Existing Facilities	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Air compressor	1	CNP 002	102	CNP 002	102	-10	92
			TOTAL	122	TOTAL	112	TOTAL	102
			*Buffer distance (m)	126	*Buffer distance (m)	40	*Buffer distance (m)	13
Fine Screen Chamber	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
			TOTAL	119	TOTAL	110	TOTAL	103
			*Buffer distance (m)	89	*Buffer distance (m)	32	*Buffer distance (m)	14
Flow Separation Chamber	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
			TOTAL	119	TOTAL	110	TOTAL	103
			*Buffer distance (m)	89	*Buffer distance (m)	32	*Buffer distance (m)	14
Flowmeter Chamber & Flow Equalization Chamber	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	3	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
			TOTAL	120	TOTAL	112	TOTAL	104
			*Buffer distance (m)	100	*Buffer distance (m)	40	*Buffer distance (m)	16
Rapid Mixing Tank & Flocculation Tank	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96
	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	4	CNP170	113	Table C.6 Ref no.40	98	-10	88

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Activity	Proposed Construction Plants	Nos	UNMITIGATED CNP No./BS5228		MITIGATION LEVEL 1 Quiet Plant BS5228		MITIGATION LEVEL 2 Correction for temporary barrier		
			TOTAL	SWL	TOTAL	SWL	TOTAL	SWL	
			TOTAL	121	TOTAL	113	TOTAL	104	
			*Buffer distance (m)	112	*Buffer distance (m)	45	*Buffer distance (m)	16	
Primary Sedimentation Tank	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101	
	Concrete pump	2	CNP047	109	Table C.6 Ref. No. 36	106	-10	96	
	Concrete truck mixer	4	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	10	CNP170	113	Table C.6 Ref no.40	98	-10	88	
				TOTAL	124	TOTAL	115	TOTAL	106
			*Buffer distance (m)	158	*Buffer distance (m)	56	*Buffer distance (m)	20	
Sludge Buffer Tank	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96	
	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88	
				TOTAL	117	TOTAL	110	TOTAL	100
				*Buffer distance (m)	71	*Buffer distance (m)	32	*Buffer distance (m)	10
Centrifuge Building	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88	
	Tower crane	1	CNP048	112	CNP049	95	-5	90	
				TOTAL	118	TOTAL	107	TOTAL	98
				*Buffer distance (m)	79	*Buffer distance (m)	22	*Buffer distance (m)	8
Transfer Pumping Station	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96	
	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	4	CNP170	113	Table C.6 Ref no.40	98	-10	88	
	Tower crane	1	CNP048	112	CNP049	95	-5	90	
				TOTAL	121	TOTAL	112	TOTAL	102
			*Buffer distance (m)	112	*Buffer distance (m)	40	*Buffer distance (m)	13	
Potable Water Pumping Station	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88	
	Tower crane	1	CNP048	112	CNP049	95	-5	90	
				TOTAL	118	TOTAL	107	TOTAL	98
				*Buffer distance (m)	79	*Buffer distance (m)	22	*Buffer distance (m)	8
Return Liquor Pumping Station	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88	
	Tower crane	1	CNP048	112	CNP049	95	-5	90	
				TOTAL	118	TOTAL	107	TOTAL	98
				*Buffer distance (m)	79	*Buffer distance (m)	22	*Buffer distance (m)	8
Sludge Dewatering House & Storage Tank	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96	
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88	
	Tower crane	1	CNP048	112	CNP049	95	-5	90	
				TOTAL	118	TOTAL	107	TOTAL	98
				*Buffer distance (m)	79	*Buffer distance (m)	22	*Buffer distance (m)	8

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Activity	Proposed Construction Plants	Nos	UNMITIGATED		MITIGATION LEVEL 1		MITIGATION LEVEL 2	
			CNP No./BS5228	SWL	Quiet Plant BS5228	SWL	Correction for temporary barrier	SWL
Chemical Dosing House & Storage Building	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96
	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	4	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
	TOTAL			121	TOTAL	112	TOTAL	102
			*Buffer distance (m)	112	*Buffer distance (m)	40	*Buffer distance (m)	13
UV Substation & Facilities	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96
	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-5	90
	TOTAL			119	TOTAL	110	TOTAL	100
			*Buffer distance (m)	89	*Buffer distance (m)	32	*Buffer distance (m)	10
Admin. Building & Control Room	Concrete pump	1	CNP047	109	Table C.6 Ref. No. 36	106	-10	96
	Concrete truck mixer	3	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	4	CNP170	113	Table C.6 Ref no.40	98	-10	88
	TOTAL			120	TOTAL	113	TOTAL	103
			*Buffer distance (m)	100	*Buffer distance (m)	45	*Buffer distance (m)	14
Deodourization Unit	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	TOTAL			117	TOTAL	107	TOTAL	97
			*Buffer distance (m)	71	*Buffer distance (m)	22	*Buffer distance (m)	7
Pipes & Culverts	Backhoe	2	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Roller	1	CNP186	108	Table C.8 Ref no. 29	105	-5	100
	Piling, oscillator	1	CNP165	115	n/a	115	-10	105
	Air Compressor	1	CNP 002	102	CNP 002	102	-10	92
	TOTAL			121	TOTAL	119	TOTAL	111
			*Buffer distance (m)	112	*Buffer distance (m)	89	*Buffer distance (m)	35
Roadworks	Vibrator	1	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Roller	1	CNP186	108	Table C.8 Ref no. 29	105	-5	100
	TOTAL			115	TOTAL	109	TOTAL	102
			*Buffer distance (m)	56	*Buffer distance (m)	28	*Buffer distance (m)	13
Transformer House	Concrete truck mixer	1	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	2	CNP170	113	Table C.6 Ref no.40	98	-10	88
	TOTAL			117	TOTAL	107	TOTAL	97
	*Buffer distance (m)			71	*Buffer distance (m)	22	*Buffer distance (m)	7
Landscape works & Establishment works	Air compressor	2	CNP 002	102	CNP 002	102	-10	92
	TOTAL			105	TOTAL	105	TOTAL	95

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Activity	Proposed Construction Plants	Nos	UNMITIGATED		MITIGATION LEVEL 1		MITIGATION LEVEL 2	
			CNP No./BS5228	SWL	Quiet Plant BS5228	SWL	Correction for temporary barrier	SWL
			*Buffer distance (m)	18	*Buffer distance (m)	18	*Buffer distance (m)	6
Electricity Generators for General Purposes	Electricity generator	2	CNP102	100	Table C.7 Ref no.54	89	-10	79
			TOTAL	103	TOTAL	92	TOTAL	82
			*Buffer distance (m)	14	*Buffer distance (m)	4	*Buffer distance (m)	1

* Buffer distance required to meet 75 dB(A)

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 Table 4A3.2 Inventory of Powered Mechanical Equipment for Ha Tsuen Pumping Station (PS) Construction Activities

Activity	Proposed Construction Plants	Nos	UNMITIGATED CNP No./BS5228		MITIGATION LEVEL 1 Quiet Plant BS5228		MITIGATION LEVEL 2 Correction for site hoarding	
			SWL	SWL	SWL	SWL		
PS Construction Site Clearance	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	1	CNP030	115	Table C.9 Ref no. 2	104	-5	99
			TOTAL	117	TOTAL	108	TOTAL	103
			*Buffer distance (m)	71	*Buffer distance (m)	25	*Buffer distance (m)	14
Bulk Excavation for Sub-Structure and Site Formation	Backhoe	2	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Piling, oscillator	1	CNP165	115	n/a	115	-10	105
	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Roller	1	CNP186	108	Table C.8 Ref no. 29	105	-5	100
	Air Compressor	1	CNP 002	102	CNP 002	102	-10	92
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	124	TOTAL	118	TOTAL	109
		*Buffer distance (m)	158	*Buffer distance (m)	79	*Buffer distance (m)	28	
Steel Fixing & Concreting of Sub-Structure	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	8	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Backhoe	3	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	124	TOTAL	114	TOTAL	107
		*Buffer distance (m)	158	*Buffer distance (m)	50	*Buffer distance (m)	22	
Steel Fixing & Concreting of Roof and Columns	Concrete truck mixer	2	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	8	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	123	TOTAL	111	TOTAL	101
		*Buffer distance (m)	141	*Buffer distance (m)	35	*Buffer distance (m)	11	
Brick Work & Finishing	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
			TOTAL	112	TOTAL	106	TOTAL	101
			*Buffer distance (m)	40	*Buffer distance (m)	20	*Buffer distance (m)	11
M&E Installation & Pipeworks	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	115	TOTAL	106	TOTAL	101
			*Buffer distance (m)	56	*Buffer distance (m)	20	*Buffer distance (m)	11
Landscape Works & Roadworks	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
			TOTAL	122	TOTAL	113	TOTAL	105
			*Buffer distance (m)	126	*Buffer distance (m)	45	*Buffer distance (m)	18
Electricity Generation for General Purposes	Electricity generator	2	CNP102	100	Table C.7 Ref no.54	89	-10	79
			TOTAL	103	TOTAL	92	TOTAL	82
			*Buffer distance (m)	14	*Buffer distance (m)	4	*Buffer distance (m)	1

* Buffer distance required to meet 75 dB(A)

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Table 4A3.3A Inventory of Powered Mechanical Equipment for Emergency Bypass Box Culvert Construction Activities

Activity	Proposed Construction Plants	Nos	UNMITIGATED		MITIGATION LEVEL 1		MITIGATION LEVEL 2	
			CNP No./BS5228	SWL	Quiet Plant BS5228	SWL	Correction for temporary barrier	SWL
Bypass Culvert								
Site Clearance & Site Formation	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	1	CNP030	115	Table C.9 Ref no. 2	104	-5	99
	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Air compressor	1	CNP 002	102	CNP 002	102	-10	92
	TOTAL			123	TOTAL	114	TOTAL	106
			*Buffer distance (m)	141	*Buffer distance (m)	50	*Buffer distance (m)	20
Bulk Excavation for Box Culvert	Backhoe	4	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Piling, oscillator	1	CNP165	115	n/a	115	-10	105
	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Roller	1	CNP186	108	Table C.8 Ref no. 29	105	-5	100
	Air Compressor	1	CNP 002	102	CNP 002	102	-10	92
	Tower crane	1	CNP048	112	CNP049	95	-10	85
	TOTAL			124	TOTAL	118	TOTAL	110
			*Buffer distance (m)	158	*Buffer distance (m)	79	*Buffer distance (m)	32
Steel Fixing & Concreting of Box Culvert	Concrete truck mixer	4	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Vibrator	6	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Backhoe	2	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Tower crane	1	CNP048	112	CNP049	95	-10	85
	TOTAL			123	TOTAL	114	TOTAL	107
			*Buffer distance (m)	141	*Buffer distance (m)	50	*Buffer distance (m)	22
Reinstatement & Roadworks	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	1	CNP030	115	Table C.9 Ref no. 2	104	-5	99
	Roller	1	CNP186	108	Table C.3 Ref no. 115	102	-5	97
	TOTAL			117	TOTAL	109	TOTAL	104
				*Buffer distance (m)	71	*Buffer distance (m)	28	*Buffer distance (m)
Electricity Generation for General Purposes	Electricity generator	1	CNP102	100	Table C.7 Ref no.54	89	-10	79
	TOTAL			100	TOTAL	89	TOTAL	79
				*Buffer distance (m)	10	*Buffer distance (m)	3	*Buffer distance (m)

* Buffer distance required to meet 75 dB(A)

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Table 4A3.3B Inventory of Powered Mechanical Equipment for Emergency Bypass Box Culvert Construction Activities near N40

Activity	Proposed Construction Plants	Nos	UNMITIGATED		MITIGATION LEVEL 1		MITIGATION LEVEL 2	
			CNP No./BS5228	SWL	Quiet Plant BS5228	SWL	Correction for temporary barrier	SWL
Bypass Culvert								
Site Clearance & Site Formation								
Group 1	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	1	CNP030	115	Table C.9 Ref no. 2	104	-5	99
			TOTAL	117	TOTAL	108	TOTAL	103
			*Buffer distance (m)	71	*Buffer distance (m)	25	*Buffer distance (m)	14
Group 2	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Air compressor	1	CNP 002	102	CNP 002	102	-10	92
			TOTAL	122	TOTAL	112	TOTAL	102
			*Buffer distance (m)	126	*Buffer distance (m)	40	*Buffer distance (m)	13
Bulk Excavation for Box Culvert								
Group 1	Piling, oscillator	1	CNP165	115	n/a	115	-10	105
			TOTAL	115	TOTAL	115	TOTAL	105
			*Buffer distance (m)	56	*Buffer distance (m)	56	*Buffer distance (m)	18
Group 2	Pneumatic breaker	1	CNP027	122	Table C.3 Ref no. 100	112	-10	102
	Roller	1	CNP186	108	Table C.3 Ref no. 115	102	-5	97
	Air Compressor	1	CNP 002	102	CNP 002	102	-10	92
			TOTAL	122	TOTAL	113	TOTAL	104
		*Buffer distance (m)	126	*Buffer distance (m)	45	*Buffer distance (m)	16	
Group 3	Backhoe	4	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	119	TOTAL	112	TOTAL	107
		*Buffer distance (m)	89	*Buffer distance (m)	40	*Buffer distance (m)	22	
Steel Fixing & Concreting of Box Culvert								
Group 1	Vibrator	6	CNP170	113	Table C.6 Ref no.40	98	-10	88
	Backhoe	2	CNP081	112	Table C.3 Ref no. 35	106	-5	101
			TOTAL	122	TOTAL	111	TOTAL	105
			*Buffer distance (m)	126	*Buffer distance (m)	35	*Buffer distance (m)	18
Group 2	Concrete truck mixer	4	CNP044	109	Table C.6 Ref no.36	106	-10	96
	Tower crane	1	CNP048	112	CNP049	95	-10	85
			TOTAL	117	TOTAL	112	TOTAL	102
			*Buffer distance (m)	71	*Buffer distance (m)	40	*Buffer distance (m)	13
Reinstatement & Roadworks								
Group 1	Backhoe	1	CNP081	112	Table C.3 Ref no. 35	106	-5	101
	Bulldozer	1	CNP030	115	Table C.9 Ref no. 2	104	-5	99
			TOTAL	117	TOTAL	108	TOTAL	103
			*Buffer distance (m)	71	*Buffer distance (m)	25	*Buffer distance (m)	14
Group 2	Roller	1	CNP186	108	Table C.3 Ref no. 115	102	-5	97

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Activity	Proposed Construction Plants	Nos	UNMITIGATED CNP No./BS5228		MITIGATION LEVEL 1 Quiet Plant BS5228		MITIGATION LEVEL 2 Correction for temporary barrier	
				SWL		SWL		SWL
			TOTAL	108	TOTAL	102	TOTAL	97
			*Buffer distance (m)	25	*Buffer distance (m)	13	*Buffer distance (m)	7
Electricity Generation for General Purposes	Electricity generator	1	CNP102	100	Table C.7 Ref no.54	89	-10	79
			TOTAL	100	TOTAL	89	TOTAL	79
			*Buffer distance (m)	10	*Buffer distance (m)	3	*Buffer distance (m)	1

* Buffer distance required to meet 75 dB(A)

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Table 4A3.4 Predicted Noise Level of San Wai Sewage Treatment Works (STW) Construction Activities

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)	Predicted Noise Level															
				SWL dB(A)	N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40		
N15 Tseung Kong Wai	612	-63.7	3																
N16 Tseung Kong Wai	622	-63.9	3																
N17 Tseung Kong Wai	545	-62.7	3																
N31 Villa Oasis	656	-64.3	3																
N32 Villa Oasis	673	-64.6	3																
N33 Sunny Villas	755	-65.6	3																
N34 Sunny Villas	723	-65.2	3																
N35 King's Garden	770	-65.7	3																
N36 King's Garden	765	-65.7	3																
N37 San Wai village house	386	-59.7	3																
N38 San Wai village house	362	-59.2	3																
N39 San Wai village house	430	-60.7	3																
N40 San Wai village house	420	-60.5	3																
STW Construction																			
<u>Site Clearance & Site Formation</u>																			
	Unmitigated	120	59	59	60	59	58	57	58	57	57	63	64	62	63				
	Mitigated Level 1	112	51	51	52	51	50	49	50	49	49	55	56	54	55				
	Mitigated Level 2	107	46	46	47	46	45	44	45	44	44	50	51	49	50				
<u>Piling</u>																			
	Unmitigated	121	60	60	61	60	59	58	59	58	58	64	65	63	64				
	Mitigated Level 1	121	60	60	61	60	59	58	59	58	58	64	65	63	64				
	Mitigated Level 2	111	50	50	51	50	49	48	49	48	48	54	55	53	54				
<u>Detritors</u>																			
	Unmitigated	118	57	57	58	57	56	55	56	55	55	61	62	60	61				
	Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50				
	Mitigated Level 2	98	37	37	38	37	36	35	36	35	35	41	42	40	41				
<u>Modification of Existing Facilities</u>																			
	Unmitigated	122	61	61	62	61	60	59	60	59	59	65	66	64	65				
	Mitigated Level 1	112	51	51	52	51	50	49	50	49	49	55	56	54	55				
	Mitigated Level 2	102	41	41	42	41	40	39	40	39	39	45	46	44	45				
<u>Fine Screen Chamber</u>																			
	Unmitigated	119	58	58	59	58	57	56	57	56	56	62	63	61	62				
	Mitigated Level 1	110	49	49	50	49	48	47	48	47	47	53	54	52	53				

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	Mitigated Level 2	103	42	42	43	42	41	40	41	40	40	46	47	45	46
	SWL dB(A)	N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40	
<u>Flow Separation Chamber</u>															
	Unmitigated	119	58	58	59	58	57	56	57	56	56	62	63	61	62
	Mitigated Level 1	110	49	49	50	49	48	47	48	47	47	53	54	52	53
	Mitigated Level 2	103	42	42	43	42	41	40	41	40	40	46	47	45	46
<u>Flowmeter Chamber & Flow Equalization Chamber</u>															
	Unmitigated	120	59	59	60	59	58	57	58	57	57	63	64	62	63
	Mitigated Level 1	112	51	51	52	51	50	49	50	49	49	55	56	54	55
	Mitigated Level 2	104	43	43	44	43	42	41	42	41	41	47	48	46	47
<u>Rapid Mixing Tank & Flocculation Tank</u>															
	Unmitigated	121	60	60	61	60	59	58	59	58	58	64	65	63	64
	Mitigated Level 1	113	52	52	53	52	51	50	51	50	50	56	57	55	56
	Mitigated Level 2	104	43	43	44	43	42	41	42	41	41	47	48	46	47
<u>Primary Sedimentation Tank</u>															
	Unmitigated	124	63	63	64	63	62	61	62	61	61	67	68	66	67
	Mitigated Level 1	115	54	54	55	54	53	52	53	52	52	58	59	57	58
	Mitigated Level 2	106	45	45	46	45	44	43	44	43	43	49	50	48	49
<u>Sludge Buffer Tank</u>															
	Unmitigated	117	56	56	57	56	55	54	55	54	54	60	61	59	60
	Mitigated Level 1	110	49	49	50	49	48	47	48	47	47	53	54	52	53
	Mitigated Level 2	100	39	39	40	39	38	37	38	37	37	43	44	42	43
<u>Centrifuge Building</u>															
	Unmitigated	118	57	57	58	57	56	55	56	55	55	61	62	60	61
	Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50
	Mitigated Level 2	98	37	37	38	37	36	35	36	35	35	41	42	40	41
<u>Transfer Pumping Station</u>															
	Unmitigated	121	60	60	61	60	59	58	59	58	58	64	65	63	64
	Mitigated Level 1	112	51	51	52	51	50	49	50	49	49	55	56	54	55
	Mitigated Level 2	102	41	41	42	41	40	39	40	39	39	45	46	44	45
<u>Potable Water Pumping Station</u>															
	Unmitigated	118	57	57	58	57	56	55	56	55	55	61	62	60	61
	Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50
	Mitigated Level 2	98	37	37	38	37	36	35	36	35	35	41	42	40	41
<u>Return Liquor Pumping Station</u>															
	Unmitigated	118	57	57	58	57	56	55	56	55	55	61	62	60	61

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Table 4A3.4 Predicted Noise Level of San Wai Sewage Treatment Works (STW) Construction Activities

	SWL dB(A)	N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40	
Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50	
Mitigated Level 2	98	37	37	38	37	36	35	36	35	35	41	42	40	41	
<u>Sludge Dewatering House & Storage Tank</u>															
Unmitigated	118	57	57	58	57	56	55	56	55	55	61	62	60	61	
Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50	
Mitigated Level 2	98	37	37	38	37	36	35	36	35	35	41	42	40	41	
<u>Chemical Dosing House & Storage Building</u>															
Unmitigated	121	60	60	61	60	59	58	59	58	58	64	65	63	64	
Mitigated Level 1	112	51	51	52	51	50	49	50	49	49	55	56	54	55	
Mitigated Level 2	102	41	41	42	41	40	39	40	39	39	45	46	44	45	
<u>UV Substation & Facilities</u>															
Unmitigated	119	58	58	59	58	57	56	57	56	56	62	63	61	62	
Mitigated Level 1	110	49	49	50	49	48	47	48	47	47	53	54	52	53	
Mitigated Level 2	100	39	39	40	39	38	37	38	37	37	43	44	42	43	
<u>Admin. Building & Control Room</u>															
Unmitigated	120	59	59	60	59	58	57	58	57	57	63	64	62	63	
Mitigated Level 1	113	52	52	53	52	51	50	51	50	50	56	57	55	56	
Mitigated Level 2	103	42	42	43	42	41	40	41	40	40	46	47	45	46	
<u>Deodorization Unit</u>															
Unmitigated	117	56	56	57	56	55	54	55	54	54	60	61	59	60	
Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50	
Mitigated Level 2	97	36	36	37	36	35	34	35	34	34	40	41	39	40	
<u>Pipes & Culverts</u>															
Unmitigated	121	60	60	61	60	59	58	59	58	58	64	65	63	64	
Mitigated Level 1	119	58	58	59	58	57	56	57	56	56	62	63	61	62	
Mitigated Level 2	111	50	50	51	50	49	48	49	48	48	54	55	53	54	
<u>Roadworks</u>															
Unmitigated	115	54	54	55	54	53	52	53	52	52	58	59	57	58	
Mitigated Level 1	109	48	48	49	48	47	46	47	46	46	52	53	51	52	
Mitigated Level 2	102	41	41	42	41	40	39	40	39	39	45	46	44	45	
<u>Transformer House</u>															
Unmitigated	117	56	56	57	56	55	54	55	54	54	60	61	59	60	
Mitigated Level 1	107	46	46	47	46	45	44	45	44	44	50	51	49	50	
Mitigated Level 2	97	36	36	37	36	35	34	35	34	34	40	41	39	40	
<u>Landscape works & Establishment works</u>															

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Table 4A3.4 Predicted Noise Level of San Wai Sewage Treatment Works (STW) Construction Activities

	Unmitigated	105	44	44	45	44	43	42	43	42	42	48	49	47	48
	Mitigated Level 1	105	44	44	45	44	43	42	43	42	42	48	49	47	48
	Mitigated Level 2	95	34	34	35	34	33	32	33	32	32	38	39	37	38
		SWL dB(A)	N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40
<u>Electricity Generators for General Purposes</u>															
	Unmitigated	103	42	42	43	42	41	40	41	40	40	46	47	45	46
	Mitigated Level 1	92	31	31	32	31	30	29	30	29	29	35	36	34	35
	Mitigated Level 2	82	21	21	22	21	20	19	20	19	19	25	26	24	25

Note: Mitigated Level 1 - Use of Quiet Plant

Mitigated Level 2 - Use of Quiet Plant + Temporary Barrier

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Table 4A3.5A Predicted Noise Level of Alternative 4 Bypass Culvert Construction Activities

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15 Tseung Kong Wai	92	-47.3	3
N16 Tseung Kong Wai	159	-52.0	3
N17 Tseung Kong Wai	132	-50.4	3
N31 Villa Oasis	182	-53.2	3
N32 Villa Oasis	246	-55.8	3
N33 Sunny Villas	255	-56.1	3
N34 Sunny Villas	187	-53.4	3
N35 King's Garden	270	-56.6	3
N36 King's Garden	278	-56.9	3
N37 San Wai village house	181	-53.2	3
N38 San Wai village house	163	-52.2	3
N39 San Wai village house	193	-53.7	3

Predicted Noise Level

	SWL dB(A)	N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39
Alternative 4 Bypass Culvert Construction													
<u>Site Clearance & Site Formation</u>													
Unmitigated	123	79	74	76	73	70	70	73	69	69	73	74	72
Mitigated Level 1	114	70	65	67	64	61	61	64	60	60	64	65	63
Mitigated Level 2	106	62	57	59	56	53	53	56	52	52	56	57	55
<u>Bulk Excavation for Box Culvert</u>													
Unmitigated	124	80	75	77	74	71	71	74	70	70	74	75	73
Mitigated Level 1	118	74	69	71	68	65	65	68	64	64	68	69	67
Mitigated Level 2	110	66	61	63	60	57	57	60	56	56	60	61	59
<u>Steel Fixing & Concreting of Box Culvert</u>													
Unmitigated	123	79	74	76	73	70	70	73	69	69	73	74	72
Mitigated Level 1	114	70	65	67	64	61	61	64	60	60	64	65	63
Mitigated Level 2	107	63	58	60	57	54	54	57	53	53	57	58	56
<u>Reinstatement & Roadworks</u>													
Unmitigated	117	73	68	70	67	64	64	67	63	63	67	68	66
Mitigated Level 1	109	65	60	62	59	56	56	59	55	55	59	60	58
Mitigated Level 2	104	60	55	57	54	51	51	54	50	50	54	55	53
<u>Electricity Generation for General Purposes</u>													
Unmitigated	100	56	51	53	50	47	47	50	46	46	50	51	49
Mitigated Level 1	89	45	40	42	39	36	36	39	35	35	39	40	38
Mitigated Level 2	79	35	30	32	29	26	26	29	25	25	29	30	28

Note: Mitigated Level 1 - Use of Quiet Plant

Mitigated Level 2 - Use of Quiet Plant + Temporary Barrier
 App 4A3 Construction Equipment.xlsx PNL for Bypass Culvert

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 Table 4A3.5B Predicted Noise Level of Alternative 4 Bypass Culvert Construction Activities at N40

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N40 San Wai village house	37	-39.4	3

<u>Alternative 4 Bypass Culvert Construction</u>		Max Predicted Noise Level	
		SWL dB(A)	N40
<u>Site Clearance & Site Formation</u>			
	Unmitigated	122	86
	Mitigated Level 1	112	76
	Mitigated Level 2	103	67
<u>Bulk Excavation for Box Culvert</u>			
	Unmitigated	122	86
	Mitigated Level 1	115	79
	Mitigated Level 2	107	71
<u>Steel Fixing & Concreting of Box Culvert</u>			
	Unmitigated	122	86
	Mitigated Level 1	112	76
	Mitigated Level 2	105	69
<u>Reinstatement & Roadworks</u>			
	Unmitigated	117	81
	Mitigated Level 1	108	72
	Mitigated Level 2	103	67
<u>Electricity Generation for General Purposes</u>			
	Unmitigated	100	64
	Mitigated Level 1	89	53
	Mitigated Level 2	79	43

Note: Mitigated Level 1 - Use of Quiet Plant
 Mitigated Level 2 - Use of Quiet Plant + Temporary Barrier

Remarks: During construction of bypass culvert, each activity has further divided into sub-tasks involving small groups of PME working concurrently.

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Table 4A3.6 Predicted Noise Level of YLKTSSD Construction Activities

YLKTSSD Stage I Construction Activities

	Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15	Tseung Kong Wai	508	-62.1	3
N16	Tseung Kong Wai	467	-61.4	3
N17	Tseung Kong Wai	418	-60.4	3
N31	Villa Oasis	487	-61.8	3
N32	Villa Oasis	445	-61.0	3
N33	Sunny Villas	620	-63.8	3
N34	Sunny Villas	580	-63.3	3
N35	King's Garden	568	-63.1	3
N36	King's Garden	542	-62.7	3
N37	San Wai village house	338	-58.6	3
N38	San Wai village house	287	-57.2	3
N39	San Wai village house	320	-58.1	3
N40	San Wai village house	446	-61.0	3

YLKTSSD Stage II (Original) Construction

	Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15	Tseung Kong Wai	488	-61.8	3
N16	Tseung Kong Wai	447	-61.0	3
N17	Tseung Kong Wai	398	-60.0	3
N31	Villa Oasis	467	-61.4	3
N32	Villa Oasis	425	-60.6	3
N33	Sunny Villas	600	-63.6	3
N34	Sunny Villas	560	-63.0	3
N35	King's Garden	548	-62.8	3
N36	King's Garden	522	-62.4	3
N37	San Wai village house	318	-58.0	3
N38	San Wai village house	267	-56.5	3
N39	San Wai village house	300	-57.5	3
N40	San Wai village house	426	-60.6	3

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Table 4A3.6 Predicted Noise Level of YLKTSSD Construction Activities

YLKTSSD Stage II (Alternative) Construction

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15 Tseung Kong Wai	335	-58.5	3
N16 Tseung Kong Wai	408	-60.2	3
N17 Tseung Kong Wai	350	-58.9	3
N31 Villa Oasis	411	-60.3	3
N32 Villa Oasis	466	-61.4	3
N33 Sunny Villas	290	-57.2	3
N34 Sunny Villas	316	-58.0	3
N35 King's Garden	352	-58.9	3
N36 King's Garden	374	-59.5	3
N37 San Wai village house	181	-53.2	3
N38 San Wai village house	181	-53.2	3
N39 San Wai village house	246	-55.8	3
N40 San Wai village house	84	-46.5	3

	SWL dB(A)	Predicted Noise Level													
		N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40	
YLKTSSD Stage I Construction															
Unmitigated	123	64	65	66	64	65	62	63	63	63	67	69	68	65	
Mitigated Level 1	112	53	54	55	53	54	51	52	52	52	56	58	57	54	
YLKTSSD Stage II (Original) Construction															
Unmitigated	123	64	65	66	65	65	62	63	63	64	68	69	68	65	
Mitigated Level 1	112	53	54	55	54	54	51	52	52	53	57	58	57	54	
YLKTSSD Stage II (Alternative) Construction															
Unmitigated	123	67	66	67	66	65	69	68	67	67	73	73	70	80	
Mitigated Level 1	112	56	55	56	55	54	58	57	56	56	62	62	59	69	

Note: Mitigated Level 1 - Use of Quiet Plant

Remarks: The unmitigated and mitigated results are obtained from Agreement No. CE31/99 - YLKTSSD Stage 1 EIA Report.

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Appendix 4A - Construction Noise Assessment
Table 4A3.7 Predicted Noise Level of DBL Construction Activities

	Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15	Tseung Kong Wai	598	-63.5	3
N16	Tseung Kong Wai	588	-63.4	3
N17	Tseung Kong Wai	516	-62.3	3
N31	Villa Oasis	625	-63.9	3
N32	Villa Oasis	628	-64.0	3
N33	Sunny Villas	768	-65.7	3
N34	Sunny Villas	699	-64.9	3
N35	King's Garden	741	-65.4	3
N36	King's Garden	723	-65.2	3
N37	San Wai village house	381	-59.6	3
N38	San Wai village house	344	-58.7	3
N39	San Wai village house	404	-60.1	3
N40	San Wai village house	463	-61.3	3

Predicted Noise Level

DBL Construction	SWL dB(A)	Predicted Noise Level													
		N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40	
Unmitigated	122	61	62	63	61	61	59	60	60	60	65	66	65	64	
Mitigated Level 2	110	49	50	51	49	49	47	48	48	48	53	54	53	52	

Note: Mitigated Level 2 - Use of Quiet Plant + Site Hoarding

Remarks: The unmitigated and mitigated results are obtained from DBL I&PD EIA Report

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Table 4A3.8 Predicted Noise Level of HSKNDA Construction Activities

HSKNDA - Area 5A Construction

	Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15	Tseung Kong Wai	465	-61.3	3
N16	Tseung Kong Wai	424	-60.5	3
N17	Tseung Kong Wai	373	-59.4	3
N31	Villa Oasis	450	-61.1	3
N32	Villa Oasis	427	-60.6	3
N33	Sunny Villas	592	-63.4	3
N34	Sunny Villas	546	-62.7	3
N35	King's Garden	545	-62.7	3
N36	King's Garden	528	-62.5	3
N37	San Wai village house	333	-58.4	3
N38	San Wai village house	280	-56.9	3
N39	San Wai village house	292	-57.3	3
N40	San Wai village house	501	-62.0	3

HSKNDA - Road P1 Construction

	Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N15	Tseung Kong Wai	340	-58.6	3
N16	Tseung Kong Wai	368	-59.3	3
N17	Tseung Kong Wai	296	-57.4	3
N31	Villa Oasis	396	-60.0	3
N32	Villa Oasis	392	-59.9	3
N33	Sunny Villas	445	-61.0	3
N34	Sunny Villas	402	-60.1	3
N35	King's Garden	489	-61.8	3
N36	King's Garden	490	-61.8	3
N37	San Wai village house	163	-52.2	3
N38	San Wai village house	128	-50.1	3
N39	San Wai village house	183	-53.2	3
N40	San Wai village house	85	-46.6	3

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 Table 4A3.8 Predicted Noise Level of HSKNDA Construction Activities

		SWL dB(A)	Predicted Noise Level												
			N15	N16	N17	N31	N32	N33	N34	N35	N36	N37	N38	N39	N40
<u>HSKNDA Area 5A Construction</u>															
<u>Site Formation</u>															
	Unmitigated	120	62	62	64	62	62	60	60	60	61	65	66	66	61
	Mitigated Level 1	114	56	56	58	56	56	54	54	54	55	59	60	60	55
<u>HSKNDA Road P1 Construction</u>															
<u>Roadworks</u>															
	Unmitigated	119	63	63	65	62	62	61	62	60	60	70	72	69	75
	Mitigated Level 1	111	55	55	57	54	54	53	54	52	52	62	64	61	67

Note: Mitigated Level 1 - Use of Quiet Plant

Remarks: The unmitigated and mitigated results are obtained from Agreement No. CE 66/96 - Planning and Development Study on North West New Territories - Technical Paper No. 13 EIA (Draft) (Volume 2)

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Table 4A3.9 Predicted Noise Level of Ha Tsuen Pumping Station (PS) Construction Activities

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)	Predicted Noise Level										
				SWL dB(A)	N1	N2	N3	N5	N6	N7	N8	N11	N12	
N1 Ho Ming Primary School	275	-56.8	3											
N2 Pui Shing Catholic Secondary School	301	-57.6	3											
N3 Ho Tak Sum Primary School	231	-55.3	3											
N5 Tang Siu Tong Secondary School	289	-57.2	3											
N6 Tin Shing Court	186	-53.4	3											
N7 Tin Shing Court	172	-52.7	3											
N8 Tin Shing Court	199	-54.0	3											
N11 Home for Aged at Sha Chau Lei Road	303	-57.6	3											
N12 Sha Chau Lei Tsuen	346	-58.8	3											
PS Construction														
<u>Site Clearance</u>														
	Unmitigated	117	63	62	65	63	67	67	66	62	61			
	Mitigated Level 1	108	54	53	56	54	58	58	57	53	52			
	Mitigated Level 2	103	49	48	51	49	53	53	52	48	47			
<u>Bulk Excavation for Sub-Structure and Site Formation</u>														
	Unmitigated	124	70	69	72	70	74	74	73	69	68			
	Mitigated Level 1	118	64	63	66	64	68	68	67	63	62			
	Mitigated Level 2	109	55	54	57	55	59	59	58	54	53			
<u>Steel Fixing & Concreting of Sub-Structure</u>														
	Unmitigated	124	70	69	72	70	74	74	73	69	68			
	Mitigated Level 1	114	60	59	62	60	64	64	63	59	58			
	Mitigated Level 2	107	53	52	55	53	57	57	56	52	51			
<u>Steel Fixing & Concreting of Roof and Columns</u>														
	Unmitigated	123	69	68	71	69	73	73	72	68	67			
	Mitigated Level 1	111	57	56	59	57	61	61	60	56	55			
	Mitigated Level 2	101	47	46	49	47	51	51	50	46	45			
<u>Brick Work & Finishing</u>														
	Unmitigated	112	58	57	60	58	62	62	61	57	56			
	Mitigated Level 1	106	52	51	54	52	56	56	55	51	50			
	Mitigated Level 2	101	47	46	49	47	51	51	50	46	45			
<u>M&E Installation & Pipeworks</u>														
	Unmitigated	115	61	60	63	61	65	65	64	60	59			
	Mitigated Level 1	106	52	51	54	52	56	56	55	51	50			
	Mitigated Level 2	101	47	46	49	47	51	51	50	46	45			
<u>Landscape Works & Roadworks</u>														
	Unmitigated	122	68	67	70	68	72	72	71	67	66			
	Mitigated Level 1	113	59	58	61	59	63	63	62	58	57			
	Mitigated Level 2	105	51	50	53	51	55	55	54	50	49			
<u>Electricity Generation for General Purposes</u>														
	Unmitigated	103	49	48	51	49	53	53	52	48	47			
	Mitigated Level 1	92	38	37	40	38	42	42	41	37	36			
	Mitigated Level 2	82	28	27	30	28	32	32	31	27	26			

Note: Mitigated Level 1 - Use of Quiet Plant
Mitigated Level 2 - Use of Quiet Plant + Site Hoarding

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Appendix 4A - Construction Noise Assessment
Table 4A3.10 Predicted Noise Level of YLKTSSD Construction Activities

YLKTSSD Stage I Construction

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N1 Ho Ming Primary School	362	-59.2	3
N2 Pui Shing Catholic Secondary School	390	-59.8	3
N3 Ho Tak Sum Primary School	305	-57.7	3
N5 Tang Siu Tong Secondary School	359	-59.1	3
N6 Tin Shing Court	286	-57.1	3
N7 Tin Shing Court	271	-56.7	3
N8 Tin Shing Court	283	-57.0	3
N11 Home for Aged at Sha Chau Lei Road	72	-45.1	3
N12 Sha Chau Lei Tsuen	43	-40.7	3

YLKTSSD Stage II (Original) Construction

Nearest NSRs	Distance (m)	Distance Correction dB(A)	Façade Effect dB(A)
N1 Ho Ming Primary School	90	-47.1	3
N2 Pui Shing Catholic Secondary School	134	-50.5	3
N3 Ho Tak Sum Primary School	310	-57.8	3
N5 Tang Siu Tong Secondary School	367	-59.3	3
N6 Tin Shing Court	139	-50.9	3
N7 Tin Shing Court	208	-54.4	3
N8 Tin Shing Court	276	-56.8	3
N11 Home for Aged at Sha Chau Lei Road	72	-45.1	3
N12 Sha Chau Lei Tsuen	43	-40.7	3

Predicted Noise Level

	SWL dB(A)	N1	N2	N3	N5	N6	N7	N8	N11	N12
YLKTSSD Stage I Construction										
Unmitigated	123	67	66	68	67	69	69	69	81	85
Mitigated Level 1	112	56	55	57	56	58	58	58	70	74
YLKTSSD Stage II (Original) Construction										
Unmitigated	123	79	75	68	67	75	72	69	81	85
Mitigated Level 1	112	68	64	57	56	64	61	58	70	74

Note: Mitigated Level 1 - Use of Quiet Plant

Remarks: The unmitigated and mitigated results are obtained from Agreement No. CE31/99 - YLKTSSD Stage 1 EIA Report.
 For YLKTSSD Stage II noise levels, they are assumed the same as those obtained from YLKTSSD Stage 1 EIA Report.

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N15

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	59																																																																								
Piling	60																																																																								
Detritors	57																																																																								
Modification of Existing Facilities	61																																																																								
Fine Screen Chamber	58																																																																								
Flow Separation Chamber	58																																																																								
Flowmeter Chamber & Flow Equalization Chamber	59																																																																								
Rapid Mixing Tank & Flocculation Tank	60																																																																								
Primary Sedimentation Tank	63																																																																								
Sludge Buffer Tank	56																																																																								
Centrifuge Building	57																																																																								
Transfer Pumping Station	60																																																																								
Potable Water Pumping Station	57																																																																								
Return Liquor Pumping Station	57																																																																								
Sludge Dewatering House & Storage Tank	57																																																																								
Chemical Dosing House & Storage Building	60																																																																								
UV Substation & Facilities	58																																																																								
Admin. Building & Control Room	59																																																																								
Deodorization Unit	56																																																																								
Pipes & Culverts	60																																																																								
Roadworks	54																																																																								
Transformer House	56																																																																								
Landscape works & Establishment works	44																																																																								
Electricity Generators for General Purposes	42																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	79																																																																								
Bulk Excavation for Box Culvert	80																																																																								
Steel Fixing & Concreting of Box Culvert	79																																																																								
Reinstatement & Roadworks	73																																																																								
Electricity Generators for General Purposes	56																																																																								
Maximum at each month (3)																																																																									
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	62																																																																								
Roadworks	63																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	64																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	64																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	67																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option
 (3) activities of bypass culvert construction will not work concurrently at any moment

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N15

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	51																																																																								
Piling	60																																																																								
Detritors	46																																																																								
Modification of Existing Facilities	51																																																																								
Fine Screen Chamber	49																																																																								
Flow Separation Chamber	49																																																																								
Flowmeter Chamber & Flow Equalization Chamber	51																																																																								
Rapid Mixing Tank & Flocculation Tank	52																																																																								
Primary Sedimentation Tank	54																																																																								
Sludge Buffer Tank	49																																																																								
Centrifuge Building	46																																																																								
Transfer Pumping Station	51																																																																								
Potable Water Pumping Station	46																																																																								
Return Liquor Pumping Station	46																																																																								
Sludge Dewatering House & Storage Tank	46																																																																								
Chemical Dosing House & Storage Building	51																																																																								
UV Substation & Facilities	49																																																																								
Admin. Building & Control Room	52																																																																								
Deodorization Unit	46																																																																								
Pipes & Culverts	58																																																																								
Roadworks	48																																																																								
Transformer House	46																																																																								
Landscape works & Establishment works	44																																																																								
Electricity Generators for General Purposes	31																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	70																																																																								
Bulk Excavation for Box Culvert	74																																																																								
Steel Fixing & Concreting of Box Culvert	70																																																																								
Reinstatement & Roadworks	65																																																																								
Electricity Generators for General Purposes	45																																																																								
Maximum at each month (3)																																																																									
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	56																																																																								
Roadworks	55																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	53																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	53																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	56																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option
 (3) activities of bypass culvert construction will not work concurrently at any moment

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N16

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	59																																																																								
Piling	60																																																																								
Detritors	57																																																																								
Modification of Existing Facilities	61																																																																								
Fine Screen Chamber	58																																																																								
Flow Separation Chamber	58																																																																								
Flowmeter Chamber & Flow Equalization Chamber	59																																																																								
Rapid Mixing Tank & Flocculation Tank	60																																																																								
Primary Sedimentation Tank	63																																																																								
Sludge Buffer Tank	56																																																																								
Centrifuge Building	57																																																																								
Transfer Pumping Station	60																																																																								
Potable Water Pumping Station	57																																																																								
Return Liquor Pumping Station	57																																																																								
Sludge Dewatering House & Storage Tank	57																																																																								
Chemical Dosing House & Storage Building	60																																																																								
UV Substation & Facilities	58																																																																								
Admin. Building & Control Room	59																																																																								
Deodorization Unit	56																																																																								
Pipes & Culverts	60																																																																								
Roadworks	54																																																																								
Transformer House	56																																																																								
Landscape works & Establishment works	44																																																																								
Electricity Generators for General Purposes	42																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	74																																																																								
Bulk Excavation for Box Culvert	75																																																																								
Steel Fixing & Concreting of Box Culvert	74																																																																								
Reinstatement & Roadworks	68																																																																								
Electricity Generators for General Purposes	51																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	62																																																																								
Roadworks	63																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	65																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	65																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	66																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N16

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	51																																																																								
Piling	60																																																																								
Detritors	46																																																																								
Modification of Existing Facilities	51																																																																								
Fine Screen Chamber	49																																																																								
Flow Separation Chamber	49																																																																								
Flowmeter Chamber & Flow Equalization Chamber	51																																																																								
Rapid Mixing Tank & Flocculation Tank	52																																																																								
Primary Sedimentation Tank	54																																																																								
Sludge Buffer Tank	49																																																																								
Centrifuge Building	46																																																																								
Transfer Pumping Station	51																																																																								
Portable Water Pumping Station	46																																																																								
Return Liquor Pumping Station	46																																																																								
Sludge Dewatering House & Storage Tank	46																																																																								
Chemical Dosing House & Storage Building	51																																																																								
UV Substation & Facilities	49																																																																								
Admin. Building & Control Room	52																																																																								
Deodorization Unit	46																																																																								
Pipes & Culverts	58																																																																								
Roadworks	48																																																																								
Transformer House	46																																																																								
Landscape works & Establishment works	44																																																																								
Electricity Generators for General Purposes	31																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	65																																																																								
Bulk Excavation for Box Culvert	69																																																																								
Steel Fixing & Concreting of Box Culvert	65																																																																								
Reinstatement & Roadworks	60																																																																								
Electricity Generators for General Purposes	40																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	56																																																																								
Roadworks	55																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	54																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	54																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	55																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N31

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008	
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
San Wai STW																																																															
Site Clearance & Site Formation	51																																																														
Piling	60																																																														
Detritors	46																																																														
Modification of Existing Facilities	51																																																														
Fine Screen Chamber	49																																																														
Flow Separation Chamber	49																																																														
Flowmeter Chamber & Flow Equalization Chamber	51																																																														
Rapid Mixing Tank & Flocculation Tank	52																																																														
Primary Sedimentation Tank	54																																																														
Sludge Buffer Tank	49																																																														
Centrifuge Building	46																																																														
Transfer Pumping Station	51																																																														
Portable Water Pumping Station	46																																																														
Return Liquor Pumping Station	46																																																														
Sludge Dewatering House & Storage Tank	46																																																														
Chemical Dosing House & Storage Building	51																																																														
UV Substation & Facilities	49																																																														
Admin. Building & Control Room	52																																																														
Deodorization Unit	46																																																														
Pipes & Culverts	58																																																														
Roadworks	48																																																														
Transformer House	46																																																														
Landscape works & Establishment works	44																																																														
Electricity Generators for General Purposes	31																																																														
Alternative 4 Bypass Culvert																																																															
Site Clearance & Site Formation	64																																																														
Bulk Excavation for Box Culvert	68																																																														
Steel Fixing & Concreting of Box Culvert	64																																																														
Reinstatement & Roadworks	59																																																														
Electricity Generators for General Purposes	39																																																														
Construction of DBL alignment																																																															
HSKNDA - Area 5A																																																															
Site formation	56																																																														
Roadworks	54																																																														
YLKTSSD Stage I																																																															
Installation of sewer lines	53																																																														
YLKTSSD Stage II (Original)																																																															
Installation of sewer lines	54																																																														
YLKTSSD Stage II (Alternative)																																																															
Installation of sewer lines	55																																																														
Cumulative Impact from Fixed Sites (1)																																																															
Cumulative Impact from Fixed Sites (2)																																																															

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N32

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	50																																																																								
Piling	59																																																																								
Detritors	45																																																																								
Modification of Existing Facilities	50																																																																								
Fine Screen Chamber	48																																																																								
Flow Separation Chamber	48																																																																								
Flowmeter Chamber & Flow Equalization Chamber	50																																																																								
Rapid Mixing Tank & Flocculation Tank	51																																																																								
Primary Sedimentation Tank	53																																																																								
Sludge Buffer Tank	48																																																																								
Centrifuge Building	45																																																																								
Transfer Pumping Station	50																																																																								
Portable Water Pumping Station	45																																																																								
Return Liquor Pumping Station	45																																																																								
Sludge Dewatering House & Storage Tank	45																																																																								
Chemical Dosing House & Storage Building	50																																																																								
UV Substation & Facilities	48																																																																								
Admin. Building & Control Room	51																																																																								
Deodorization Unit	45																																																																								
Pipes & Culverts	57																																																																								
Roadworks	47																																																																								
Transformer House	45																																																																								
Landscape works & Establishment works	43																																																																								
Electricity Generators for General Purposes	30																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	61																																																																								
Bulk Excavation for Box Culvert	65																																																																								
Steel Fixing & Concreting of Box Culvert	61																																																																								
Reinstatement & Roadworks	56																																																																								
Electricity Generators for General Purposes	36																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	56																																																																								
Roadworks	54																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	54																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	54																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	54																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N33

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	57																																																																								
Piling	58																																																																								
Detritors	55																																																																								
Modification of Existing Facilities	59																																																																								
Fine Screen Chamber	56																																																																								
Flow Separation Chamber	56																																																																								
Flowmeter Chamber & Flow Equalization Chamber	57																																																																								
Rapid Mixing Tank & Flocculation Tank	58																																																																								
Primary Sedimentation Tank	61																																																																								
Sludge Buffer Tank	54																																																																								
Centrifuge Building	55																																																																								
Transfer Pumping Station	58																																																																								
Portable Water Pumping Station	55																																																																								
Return Liquor Pumping Station	55																																																																								
Sludge Dewatering House & Storage Tank	55																																																																								
Chemical Dosing House & Storage Building	58																																																																								
UV Substation & Facilities	56																																																																								
Admin. Building & Control Room	57																																																																								
Deodorization Unit	54																																																																								
Pipes & Culverts	58																																																																								
Roadworks	52																																																																								
Transformer House	54																																																																								
Landscape works & Establishment works	42																																																																								
Electricity Generators for General Purposes	40																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	70																																																																								
Bulk Excavation for Box Culvert	71																																																																								
Steel Fixing & Concreting of Box Culvert	70																																																																								
Reinstatement & Roadworks	64																																																																								
Electricity Generators for General Purposes	47																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	60																																																																								
Roadworks	61																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	62																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	62																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	69																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N34

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	50																																																																								
Piling	59																																																																								
Detritors	45																																																																								
Modification of Existing Facilities	50																																																																								
Fine Screen Chamber	48																																																																								
Flow Separation Chamber	48																																																																								
Flowmeter Chamber & Flow Equalization Chamber	50																																																																								
Rapid Mixing Tank & Flocculation Tank	51																																																																								
Primary Sedimentation Tank	53																																																																								
Sludge Buffer Tank	48																																																																								
Centrifuge Building	45																																																																								
Transfer Pumping Station	50																																																																								
Portable Water Pumping Station	45																																																																								
Return Liquor Pumping Station	45																																																																								
Sludge Dewatering House & Storage Tank	45																																																																								
Chemical Dosing House & Storage Building	50																																																																								
UV Substation & Facilities	48																																																																								
Admin. Building & Control Room	51																																																																								
Deodorization Unit	45																																																																								
Pipes & Culverts	57																																																																								
Roadworks	47																																																																								
Transformer House	45																																																																								
Landscape works & Establishment works	43																																																																								
Electricity Generators for General Purposes	30																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	64																																																																								
Bulk Excavation for Box Culvert	68																																																																								
Steel Fixing & Concreting of Box Culvert	64																																																																								
Reinstatement & Roadworks	59																																																																								
Electricity Generators for General Purposes	38																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	54																																																																								
Roadworks	54																																																																								
YLKTTSSD Stage I																																																																									
Installation of sewer lines	52																																																																								
YLKTTSSD Stage II (Original)																																																																									
Installation of sewer lines	52																																																																								
YLKTTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	57																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTTSSD Stage II Original Option
 (2) with YLKTTSSD Stage II Alternative Option

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FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
Final EIA Report
Appendix 4A - Construction Noise Assessment
Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N35

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	57																																																																								
Piling	58																																																																								
Detritors	55																																																																								
Modification of Existing Facilities	59																																																																								
Fine Screen Chamber	56																																																																								
Flow Separation Chamber	56																																																																								
Flowmeter Chamber & Flow Equalization Chamber	57																																																																								
Rapid Mixing Tank & Flocculation Tank	58																																																																								
Primary Sedimentation Tank	61																																																																								
Sludge Buffer Tank	54																																																																								
Centrifuge Building	55																																																																								
Transfer Pumping Station	58																																																																								
Potable Water Pumping Station	55																																																																								
Return Liquor Pumping Station	55																																																																								
Sludge Dewatering House & Storage Tank	55																																																																								
Chemical Dosing House & Storage Building	58																																																																								
UV Substation & Facilities	56																																																																								
Admin. Building & Control Room	57																																																																								
Deodorization Unit	54																																																																								
Pipes & Culverts	58																																																																								
Roadworks	52																																																																								
Transformer House	54																																																																								
Landscape works & Establishment works	42																																																																								
Electricity Generators for General Purposes	40																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	69																																																																								
Bulk Excavation for Box Culvert	70																																																																								
Steel Fixing & concreting of Box Culvert	69																																																																								
Reinstatement & Roadworks	63																																																																								
Electricity Generators for General Purposes	46																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	60																																																																								
Roadworks	60																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	63																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	63																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	67																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
(2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N36

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	57																																																																								
Piling	58																																																																								
Detritors	55																																																																								
Modification of Existing Facilities	59																																																																								
Fine Screen Chamber	56																																																																								
Flow Separation Chamber	56																																																																								
Flowmeter Chamber & Flow Equalization Chamber	57																																																																								
Rapid Mixing Tank & Flocculation Tank	58																																																																								
Primary Sedimentation Tank	61																																																																								
Sludge Buffer Tank	54																																																																								
Centrifuge Building	55																																																																								
Transfer Pumping Station	58																																																																								
Potable Water Pumping Station	55																																																																								
Return Liquor Pumping Station	55																																																																								
Sludge Dewatering House & Storage Tank	55																																																																								
Chemical Dosing House & Storage Building	58																																																																								
UV Substation & Facilities	56																																																																								
Admin. Building & Control Room	57																																																																								
Deodorization Unit	54																																																																								
Pipes & Culverts	58																																																																								
Roadworks	52																																																																								
Transformer House	54																																																																								
Landscape works & Establishment works	42																																																																								
Electricity Generators for General Purposes	40																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	69																																																																								
Bulk Excavation for Box Culvert	70																																																																								
Steel Fixing & Concreting of Box Culvert	69																																																																								
Reinstatement & Roadworks	63																																																																								
Electricity Generators for General Purposes	46																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	61																																																																								
Roadworks	60																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	63																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	64																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	67																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N36

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																																							
		2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	49																																																																								
Piling	58																																																																								
Detritors	44																																																																								
Modification of Existing Facilities	49																																																																								
Fine Screen Chamber	47																																																																								
Flow Separation Chamber	47																																																																								
Flowmeter Chamber & Flow Equalization Chamber	49																																																																								
Rapid Mixing Tank & Flocculation Tank	50																																																																								
Primary Sedimentation Tank	52																																																																								
Sludge Buffer Tank	47																																																																								
Centrifuge Building	44																																																																								
Transfer Pumping Station	49																																																																								
Portable Water Pumping Station	44																																																																								
Return Liquor Pumping Station	44																																																																								
Sludge Dewatering House & Storage Tank	44																																																																								
Chemical Dosing House & Storage Building	49																																																																								
UV Substation & Facilities	47																																																																								
Admin. Building & Control Room	50																																																																								
Deodorization Unit	44																																																																								
Pipes & Culverts	56																																																																								
Roadworks	46																																																																								
Transformer House	44																																																																								
Landscape works & Establishment works	42																																																																								
Electricity Generators for General Purposes	29																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	60																																																																								
Bulk Excavation for Box Culvert	64																																																																								
Steel Fixing & Concreting of Box Culvert	60																																																																								
Reinstatement & Roadworks	55																																																																								
Electricity Generators for General Purposes	35																																																																								
Construction of DBL alignment	48																																																																								
HSKND - Area 5A																																																																									
Site formation	55																																																																								
Roadworks	52																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	52																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	53																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	56																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N37

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	63																																																																								
Piling	64																																																																								
Detritors	61																																																																								
Modification of Existing Facilities	65																																																																								
Fine Screen Chamber	62																																																																								
Flow Separation Chamber	62																																																																								
Flowmeter Chamber & Flow Equalization Chamber	63																																																																								
Rapid Mixing Tank & Flocculation Tank	64																																																																								
Primary Sedimentation Tank	67																																																																								
Sludge Buffer Tank	60																																																																								
Centrifuge Building	61																																																																								
Transfer Pumping Station	64																																																																								
Portable Water Pumping Station	61																																																																								
Return Liquor Pumping Station	61																																																																								
Sludge Dewatering House & Storage Tank	61																																																																								
Chemical Dosing House & Storage Building	64																																																																								
UV Substation & Facilities	62																																																																								
Admin. Building & Control Room	63																																																																								
Deodorization Unit	60																																																																								
Pipes & Culverts	64																																																																								
Roadworks	58																																																																								
Transformer House	60																																																																								
Landscape works & Establishment works	48																																																																								
Electricity Generators for General Purposes	46																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	73																																																																								
Bulk Excavation for Box Culvert	74																																																																								
Steel Fixing & Concreting of Box Culvert	73																																																																								
Reinstatement & Roadworks	67																																																																								
Electricity Generators for General Purposes	50																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	65																																																																								
Roadworks	70																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	67																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	68																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	73																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N37

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	55																																																																								
Piling	64																																																																								
Detritors	50																																																																								
Modification of Existing Facilities	55																																																																								
Fine Screen Chamber	53																																																																								
Flow Separation Chamber	53																																																																								
Flowmeter Chamber & Flow Equalization Chamber	55																																																																								
Rapid Mixing Tank & Flocculation Tank	56																																																																								
Primary Sedimentation Tank	58																																																																								
Sludge Buffer Tank	53																																																																								
Centrifuge Building	50																																																																								
Transfer Pumping Station	55																																																																								
Potable Water Pumping Station	50																																																																								
Return Liquor Pumping Station	50																																																																								
Sludge Dewatering House & Storage Tank	50																																																																								
Chemical Dosing House & Storage Building	55																																																																								
UV Substation & Facilities	53																																																																								
Admin. Building & Control Room	56																																																																								
Deodorization Unit	50																																																																								
Pipes & Culverts	62																																																																								
Roadworks	52																																																																								
Transformer House	50																																																																								
Landscape works & Establishment works	48																																																																								
Electricity Generators for General Purposes	35																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	64																																																																								
Bulk Excavation for Box Culvert	68																																																																								
Steel Fixing & Concreting of Box Culvert	64																																																																								
Reinstatement & Roadworks	59																																																																								
Electricity Generators for General Purposes	39																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	59																																																																								
Roadworks	62																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	56																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	57																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	62																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

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UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																																							
		2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	64																																																																								
Piling	65																																																																								
Detritors	62																																																																								
Modification of Existing Facilities	66																																																																								
Fine Screen Chamber	63																																																																								
Flow Separation Chamber	63																																																																								
Flowmeter Chamber & Flow Equalization Chamb	64																																																																								
Rapid Mixing Tank & Flocculation Tank	65																																																																								
Primary Sedimentation Tank	68																																																																								
Sludge Buffer Tank	61																																																																								
Centrifuge Building	62																																																																								
Transfer Pumping Station	65																																																																								
Potable Water Pumping Station	62																																																																								
Return Liquor Pumping Station	62																																																																								
Sludge Dewatering House & Storage Tank	62																																																																								
Chemical Dosing House & Storage Building	65																																																																								
UV Substation & Facilities	63																																																																								
Admin. Building & Control Room	64																																																																								
Deodorization Unit	61																																																																								
Pipes & Culverts	65																																																																								
Roadworks	59																																																																								
Transformer House	61																																																																								
Landscape works & Establishment works	49																																																																								
Electricity Generators for General Purposes	47																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	74																																																																								
Bulk Excavation for Box Culvert	75																																																																								
Steel Fixing & Concreting of Box Culvert	74																																																																								
Reinstatement & Roadworks	68																																																																								
Electricity Generators for General Purposes	51																																																																								
Construction of DBL alignment																																																																									
Site formation	66																																																																								
Roadworks	72																																																																								
YlKTSSD Stage I																																																																									
Installation of sewer lines	69																																																																								
YlKTSSD Stage II (Original)																																																																									
Installation of sewer lines	69																																																																								
YlKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	73																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YlKTSSD Stage II Original Option
 (2) with YlKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

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MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008	
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2
San Wai STW																																																															
Site Clearance & Site Formation	56																																																														
Piling	65																																																														
Detritors	51																																																														
Modification of Existing Facilities	56																																																														
Fine Screen Chamber	54																																																														
Flow Separation Chamber	54																																																														
Flowmeter Chamber & Flow Equalization Chamb	56																																																														
Rapid Mixing Tank & Flocculation Tank	57																																																														
Primary Sedimentation Tank	59																																																														
Sludge Buffer Tank	54																																																														
Centrifuge Building	51																																																														
Transfer Pumping Station	56																																																														
Portable Water Pumping Station	51																																																														
Return Liquor Pumping Station	51																																																														
Sludge Dewatering House & Storage Tank	51																																																														
Chemical Dosing House & Storage Building	56																																																														
UV Substation & Facilities	54																																																														
Admin. Building & Control Room	57																																																														
Deodorization Unit	51																																																														
Pipes & Culverts	63																																																														
Roadworks	53																																																														
Transformer House	51																																																														
Landscape works & Establishment works	49																																																														
Electricity Generators for General Purposes	36																																																														
Alternative 4 Bypass Culvert																																																															
Site Clearance & Site Formation	65																																																														
Bulk Excavation for Box Culvert	69																																																														
Steel Fixing & Concreting of Box Culvert	65																																																														
Reinstatement & Roadworks	60																																																														
Electricity Generators for General Purposes	40																																																														
Construction of DBL alignment																																																															
HSKNDA - Area 5A																																																															
Site formation	60																																																														
Roadworks	64																																																														
YLKTTSSD Stage I																																																															
Installation of sewer lines	58																																																														
YLKTTSSD Stage II (Original)																																																															
Installation of sewer lines	58																																																														
YLKTTSSD Stage II (Alternative)																																																															
Installation of sewer lines	62																																																														
Cumulative Impact from Fixed Sites (1)																																																															
Cumulative Impact from Fixed Sites (2)																																																															

Note: (1) with YLKTTSSD Stage II Original Option
 (2) with YLKTTSSD Stage II Alternative Option

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N39

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	62																																																																								
Piling	63																																																																								
Detritors	60																																																																								
Modification of Existing Facilities	64																																																																								
Fine Screen Chamber	61																																																																								
Flow Separation Chamber	61																																																																								
Flowmeter Chamber & Flow Equalization Chamber	62																																																																								
Rapid Mixing Tank & Flocculation Tank	63																																																																								
Primary Sedimentation Tank	66																																																																								
Sludge Buffer Tank	59																																																																								
Centrifuge Building	60																																																																								
Transfer Pumping Station	63																																																																								
Portable Water Pumping Station	60																																																																								
Return Liquor Pumping Station	60																																																																								
Sludge Dewatering House & Storage Tank	60																																																																								
Chemical Dosing House & Storage Building	63																																																																								
UV Substation & Facilities	61																																																																								
Admin. Building & Control Room	62																																																																								
Deodorization Unit	59																																																																								
Pipes & Culverts	63																																																																								
Roadworks	57																																																																								
Transformer House	59																																																																								
Landscape works & Establishment works	47																																																																								
Electricity Generators for General Purposes	45																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	72																																																																								
Bulk Excavation for Box Culvert	73																																																																								
Steel Fixing & Concreting of Box Culvert	72																																																																								
Reinstatement & Roadworks	66																																																																								
Electricity Generators for General Purposes	49																																																																								
Construction of DBL alignment																																																																									
HSKNDA - Area 5A																																																																									
Site formation	66																																																																								
Roadworks	69																																																																								
YLKTSSD Stage I																																																																									
Installation of sewer lines	68																																																																								
YLKTSSD Stage II (Original)																																																																									
Installation of sewer lines	68																																																																								
YLKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	70																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YLKTSSD Stage II Original Option
 (2) with YLKTSSD Stage II Alternative Option

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N40

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																																							
		2003												2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	63																																																																								
Piling	64																																																																								
Detritors	61																																																																								
Modification of Existing Facilities	65																																																																								
Fine Screen Chamber	62																																																																								
Flow Separation Chamber	62																																																																								
Flowmeter Chamber & Flow Equalization Chamber	63																																																																								
Rapid Mixing Tank & Flocculation Tank	64																																																																								
Primary Sedimentation Tank	67																																																																								
Sludge Buffer Tank	60																																																																								
Centrifuge Building	61																																																																								
Transfer Pumping Station	64																																																																								
Potable Water Pumping Station	61																																																																								
Return Liquor Pumping Station	61																																																																								
Sludge Dewatering House & Storage Tank	61																																																																								
Chemical Dosing House & Storage Building	64																																																																								
UV Substation & Facilities	62																																																																								
Admin. Building & Control Room	63																																																																								
Deodorization Unit	60																																																																								
Pipes & Culverts	64																																																																								
Roadworks	58																																																																								
Transformer House	60																																																																								
Landscape works & Establishment works	48																																																																								
Electricity Generators for General Purposes	46																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	86																																																																								
Bulk Excavation for Box Culvert	86																																																																								
Steel Fixing & Concreting of Box Culvert	86																																																																								
Reinstatement & Roadworks	81																																																																								
Electricity Generators for General Purposes	64																																																																								
Maximum at each month (3)																																																																									
Construction of DBL alignment	64																																																																								
HSKNDA - Area 5A																																																																									
Site formation	61																																																																								
Roadworks	75																																																																								
YlKTSSD Stage I																																																																									
Installation of sewer lines	65																																																																								
YlKTSSD Stage II (Original)																																																																									
Installation of sewer lines	65																																																																								
YlKTSSD Stage II (Alternative)																																																																									
Installation of sewer lines	80																																																																								
Cumulative Impact from Fixed Sites (1)																																																																									
Cumulative Impact from Fixed Sites (2)																																																																									

Note: (1) with YlKTSSD Stage II Original Option
 (2) with YlKTSSD Stage II Alternative Option
 (3) activities of bypass culvert construction will not work concurrently at any moment

MITIGATED SCENARIO

Construction Noise Level at Different Periods of Time

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N17

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																		
		2004												2005												2006												2007												2008		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
San Wai STW																																																				
Site Clearance & Site Formation	52						52	52	52	52	52	52	52																																							
Piling	61						61	61	61	61	61	61	61																																							
Detritors	47																																																			
Modification of Existing Facilities	52																																																			
Fine Screen Chamber	50																																																			
Flow Separation Chamber	50																																																			
Flowmeter Chamber & Flow Equalization Chamber	52																																																			
Rapid Mixing Tank & Flocculation Tank	53																																																			
Primary Sedimentation Tank	55																																																			
Sludge Buffer Tank	50																																																			
Centrifuge Building	47																																																			
Transfer Pumping Station	52																																																			
Potable Water Pumping Station	47																																																			
Return Liquor Pumping Station	47																																																			
Sludge Dewatering House & Storage Tank	47																																																			
Chemical Dosing House & Storage Building	52																																																			
UV Substation & Facilities	50																																																			
Admin. Building & Control Room	53																																																			
Deodorization Unit	47																																																			
Pipes & Culverts	59																																																			
Roadworks	49																																																			
Transformer House	47																																																			
Landscape works & Establishment works	45																																																			
Electricity Generators for General Purposes	32																																																			
Alternative 4 Bypass Culvert																																																				
Site Clearance & Site Formation	67																																																			
Bulk Excavation for Box Culvert	71																																																			
Steel Fixing & Concreting of Box Culvert	67																																																			
Reinstatement & Roadworks	62																																																			
Electricity Generators for General Purposes	42																																																			
Noise Impact from Fixed Sites																																																				

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N31

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																																							
		2004												2005												2006												2007												2008																							
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
San Wai STW																																																																									
Site Clearance & Site Formation	59					59	59	59	59	59	59	59	59																																																												
Piling	60					60	60	60	60	60	60	60	60																																																												
Detritors	57																																																																								
Modification of Existing Facilities	61																																																																								
Fine Screen Chamber	58																																																																								
Flow Separation Chamber	58																																																																								
Flowmeter Chamber & Flow Equalization Chamber	59																																																																								
Rapid Mixing Tank & Flocculation Tank	60																																																																								
Primary Sedimentation Tank	63																																																																								
Sludge Buffer Tank	56																																																																								
Centrifuge Building	57																																																																								
Transfer Pumping Station	60																																																																								
Potable Water Pumping Station	57																																																																								
Return Liquor Pumping Station	57																																																																								
Sludge Dewatering House & Storage Tank	57																																																																								
Chemical Dosing House & Storage Building	60																																																																								
UV Substation & Facilities	58																																																																								
Admin. Building & Control Room	59																																																																								
Deodorization Unit	56																																																																								
Pipes & Culverts	60																																																																								
Roadworks	54																																																																								
Transformer House	56																																																																								
Landscape works & Establishment works	44																																																																								
Electricity Generators for General Purposes	42																																																																								
Alternative 4 Bypass Culvert																																																																									
Site Clearance & Site Formation	73																																																																								
Bulk Excavation for Box Culvert	74																																																																								
Steel Fixing & Concreting of Box Culvert	73																																																																								
Reinstatement & Roadworks	67																																																																								
Electricity Generators for General Purposes	50																																																																								
Noise Impact from Fixed Sites		73	73	77	77	78	79	79	79	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77																	

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N33

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																				
		2004												2005												2006												2007												2008				
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2			
San Wai STW																																																						
Site Clearance & Site Formation	49					49	49	49	49	49	49	49																																										
Piling	58					58	58	58	58	58	58	58																																										
Detritors	44					44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	
Modification of Existing Facilities	49					49	49	49	49	49	49	49																																										
Fine Screen Chamber	47					47	47	47	47	47	47	47																																										
Flow Separation Chamber	47					47	47	47	47	47	47	47																																										
Flowmeter Chamber & Flow Equalization Chamber	49					49	49	49	49	49	49	49																																										
Rapid Mixing Tank & Flocculation Tank	50					50	50	50	50	50	50	50																																										
Primary Sedimentation Tank	52					52	52	52	52	52	52	52																																										
Sludge Buffer Tank	47					47	47	47	47	47	47	47																																										
Centrifuge Building	44					44	44	44	44	44	44	44																																										
Transfer Pumping Station	49					49	49	49	49	49	49	49																																										
Potable Water Pumping Station	44					44	44	44	44	44	44	44																																										
Return Liquor Pumping Station	44					44	44	44	44	44	44	44																																										
Sludge Dewatering House & Storage Tank	44					44	44	44	44	44	44	44																																										
Chemical Dosing House & Storage Building	49					49	49	49	49	49	49	49																																										
UV Substation & Facilities	47					47	47	47	47	47	47	47																																										
Admin. Building & Control Room	50					50	50	50	50	50	50	50																																										
Deodorization Unit	44					44	44	44	44	44	44	44																																										
Pipes & Culverts	56					56	56	56	56	56	56	56																																										
Roadworks	46					46	46	46	46	46	46	46																																										
Transformer House	44					44	44	44	44	44	44	44																																										
Landscape works & Establishment works	42					42	42	42	42	42	42	42																																										
Electricity Generators for General Purposes	29					29	29	29	29	29	29	29																																										
Alternative 4 Bypass Culvert																																																						
Site Clearance & Site Formation	61					61	61	61	61	61	61	61																																										
Bulk Excavation for Box Culvert	65					65	65	65	65	65	65	65																																										
Steel Fixing & Concreting of Box Culvert	61					61	61	61	61	61	61	61																																										
Reinstatement & Roadworks	56					56	56	56	56	56	56	56																																										
Electricity Generators for General Purposes	36					36	36	36	36	36	36	36																																										
Noise Impact from Fixed Sites																																																						

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 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N37

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																										
		2004												2005												2006												2007												2008										
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2									
San Wai STW																																																												
Site Clearance & Site Formation	55												55	55	55	55	55	55	55																																									
Piling	64																																																											
Detritors	50																																																											
Modification of Existing Facilities	55																																																											
Fine Screen Chamber	53																																																											
Flow Separation Chamber	53																																																											
Flowmeter Chamber & Flow Equalization Chamber	55																																																											
Rapid Mixing Tank & Flocculation Tank	56																																																											
Primary Sedimentation Tank	58																																																											
Sludge Buffer Tank	53																																																											
Centrifuge Building	50																																																											
Transfer Pumping Station	55																																																											
Potable Water Pumping Station	50																																																											
Return Liquor Pumping Station	50																																																											
Sludge Dewatering House & Storage Tank	50																																																											
Chemical Dosing House & Storage Building	55																																																											
UV Substation & Facilities	53																																																											
Admin. Building & Control Room	56																																																											
Deodorization Unit	50																																																											
Pipes & Culverts	62																																																											
Roadworks	52																																																											
Transformer House	50																																																											
Landscape works & Establishment works	48																																																											
Electricity Generators for General Purposes	35																																																											
Alternative 4 Bypass Culvert																																																												
Site Clearance & Site Formation	64																																																											
Bulk Excavation for Box Culvert	68																																																											
Steel Fixing & concreting of Box Culvert	64																																																											
Reinstatement & Roadworks	59																																																											
Electricity Generators for General Purposes	39																																																											
Noise Impact from Fixed Sites																																																												
		65	67	71	71	71	72	72	72	72	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71		

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Appendix 4A - Construction Noise Assessment
Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N38

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																			
		2004												2005												2006												2007												2008			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2		
San Wai STW																																																					
Site Clearance & Site Formation	64				64	64	64	64	64	64	64	64																																									
Piling	65				65	65	65	65	65	65	65	65																																									
Detritors	62				62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62																												
Modification of Existing Facilities	66				66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66																													
Fine Screen Chamber	63				63	63	63	63	63	63	63	63	63																																								
Flow Separation Chamber	63				63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63																													
Flowmeter Chamber & Flow Equalization Chamb	64				64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64																													
Rapid Mixing Tank & Flocculation Tank	65				65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65																													
Primary Sedimentation Tank	68				68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68																													
Sludge Buffer Tank	61													61	61	61	61	61	61	61	61	61	61	61																													
Centrifuge Building	62													62	62	62	62	62	62	62	62	62	62	62																													
Transfer Pumping Station	65													65	65	65	65	65	65	65	65	65	65	65																													
Potable Water Pumping Station	62													62	62	62	62	62	62	62	62	62	62	62																													
Return Liquor Pumping Station	62													62	62	62	62	62	62	62	62	62	62	62																													
Sludge Dewatering House & Storage Tank	62				62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62																													
Chemical Dosing House & Storage Building	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					
UV Substation & Facilities	63																								63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63					
Admin. Building & Control Room	64																								64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64					
Deodorization Unit	61																								61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61					
Pipes & Culverts	65																																																		65	65	
Roadworks	59																																																		59	59	
Transformer House	61													61	61	61	61	61	61	61	61	61	61	61																											59	59	
Landscape works & Establishment works	49																																																		49	49	
Electricity Generators for General Purposes	47																																																		47	47	
Alternative 4 Bypass Culvert																																																					
Site Clearance & Site Formation	74				74	74	74	74	74	74	74	74																																									
Bulk Excavation for Box Culvert	75				75	75	75	75	75	75	75	75																																									
Steel Fixing & Concreting of Box Culvert	74				74	74	74	74	74	74	74	74																																									
Reinstatement & Roadworks	68				68	68	68	68	68	68	68	68																																									
Electricity Generators for General Purposes	51				51	51	51	51	51	51	51	51																																									
Noise Impact from Fixed Sites					74	75	78	78	79	80	81	81	81	79	79	79	79	79	79	79	79	79	79	79																													

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 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N40

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																														
		2004												2005												2006												2007												2008														
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
San Wai STW																																																																
Site Clearance & Site Formation	63																																																															
Piling	64																																																															
Detritors	61																																																															
Modification of Existing Facilities	65																																																															
Fine Screen Chamber	62																																																															
Flow Separation Chamber	62																																																															
Flowmeter Chamber & Flow Equalization Chamber	63																																																															
Rapid Mixing Tank & Flocculation Tank	64																																																															
Primary Sedimentation Tank	67																																																															
Sludge Buffer Tank	60																																																															
Centrifuge Building	61																																																															
Transfer Pumping Station	64																																																															
Potable Water Pumping Station	61																																																															
Return Liquor Pumping Station	61																																																															
Sludge Dewatering House & Storage Tank	61																																																															
Chemical Dosing House & Storage Building	64																																																															
UV Substation & Facilities	62																																																															
Admin. Building & Control Room	63																																																															
Deodorization Unit	60																																																															
Pipes & Culverts	64																																																															
Roadworks	58																																																															
Transformer House	60																																																															
Landscape works & Establishment works	48																																																															
Electricity Generators for General Purposes	46																																																															
Alternative 4 Bypass Culvert																																																																
Site Clearance & Site Formation	86																																																															
Bulk Excavation for Box Culvert	86																																																															
Steel Fixing & Concreting of Box Culvert	86																																																															
Reinstatement & Roadworks	81																																																															
Electricity Generators for General Purposes	64																																																															
Maximum at each month (3)																																																																
Noise Impact from Fixed Sites																																																																

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 FOR UPGRADING AND EXPANSION OF SAN WAI SEWAGE TREATMENT WORKS AND EXPANSION OF HA TSUEN PUMPING STATION
 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A4 Predicted Noise Levels for All Construction Activities in the Programme

NSR N40

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																														
		2004												2005												2006												2007												2008														
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
San Wai STW																																																																
Site Clearance & Site Formation	55																																																															
Piling	64																																																															
Detritors	50																																																															
Modification of Existing Facilities	55																																																															
Fine Screen Chamber	53																																																															
Flow Separation Chamber	53																																																															
Flowmeter Chamber & Flow Equalization Chamber	55																																																															
Rapid Mixing Tank & Flocculation Tank	56																																																															
Primary Sedimentation Tank	58																																																															
Sludge Buffer Tank	53																																																															
Centrifuge Building	50																																																															
Transfer Pumping Station	55																																																															
Potable Water Pumping Station	50																																																															
Return Liquor Pumping Station	50																																																															
Sludge Dewatering House & Storage Tank	50																																																															
Chemical Dosing House & Storage Building	55																																																															
UV Substation & Facilities	53																																																															
Admin. Building & Control Room	56																																																															
Deodorization Unit	50																																																															
Pipes & Culverts	62																																																															
Roadworks	52																																																															
Transformer House	50																																																															
Landscape works & Establishment works	48																																																															
Electricity Generators for General Purposes	35																																																															
Alternative 4 Bypass Culvert																																																																
Site Clearance & Site Formation	67																																																															
Bulk Excavation for Box Culvert	71																																																															
Steel Fixing & Concreting of Box Culvert	69																																																															
Reinstatement & Roadworks	67																																																															
Electricity Generators for General Purposes	43																																																															
Maximum at each month (3)																																																																
Noise Impact from Fixed Sites																																																																

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 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A5 Predicted Noise Levels for All Construction Activities in the Programme

NSR N6

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																											
		2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2										
Ha Tsuen PS																																																													
Site Clearance	67	67																																																											
Bulk Excavation for Sub-Structure and Site Formator	74	74												74												74												74												74											
Steel Fixing & Concreting of Sub-Structure	74	74												74												74												74												74											
Steel Fixing & Concreting of Roof and Columns	73	74												74												74												74												73											
Brick Work & Finishing	62	73												73												73												73												62											
M&E Installation & Pipeworks	65	73												73												73												73												65											
Landscape Works & Roadworks	72	73												73												73												73												72											
Testing & Commissioning	N/A	72												72												72												72												65											
Electricity Generation for General Purposes	53	53												53												53												53												53											
Noise Impact from Fixed Sites		67 74 73 73 73 73 73 73 73 73 73 73 73 73 73 63 73 73 73 67 67 53 53 53																																																											

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																											
		2004												2005												2006												2007												2008											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2																						
Ha Tsuen PS																																																													
Site Clearance	53	53																																																											
Bulk Excavation for Sub-Structure and Site Formator	59	59												59												59												59												59											
Steel Fixing & Concreting of Sub-Structure	57	59												59												59												59												57											
Steel Fixing & Concreting of Roof and Columns	51	57												57												57												57												51											
Brick Work & Finishing	51	57												57												57												57												51											
M&E Installation & Pipeworks	51	57												57												57												57												51											
Landscape Works & Roadworks	55	51												51												51												51												55											
Testing & Commissioning	N/A	51												51												51												51												51											
Electricity Generation for General Purposes	32	51												51												51												51												32											
Noise Impact from Fixed Sites		53 59 59 59 59 59 59 59 59 57 57 57 57 57 57 57 57 57 57 57 57 57 57 57 51 51 51 51 51 51 51 51 51 51 51 51 51 58 58 58 54 54 54 32 32 32																																																											

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 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A5 Predicted Noise Levels for All Construction Activities in the Programme

NSR N12

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																						
		2004												2005												2006												2007												2008						
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2					
Ha Tsuen PS																																																								
Site Clearance	61	61																																																						
Bulk Excavation for Sub-Structure and Site Formator	68	68	68	68	68	68	68	68	68	68																																														
Steel Fixing & Concreting of Sub-Structure	68												68	68	68	68	68	68	68	68	68	68	68	68	68																															
Steel Fixing & Concreting of Roof and Columns	67																		67	67	67	67	67	67	67	67	67	67	67	67																										
Brick Work & Finishing	56																			56	56	56	56	56	56	56	56	56	56	56	56																									
M&E Installation & Pipeworks	59																			59	59	59	59	59	59	59	59	59	59	59	59																									
Landscape Works & Roadworks	66																				66	66	66																																	
Testing & Commissioning	N/A																																																							
Electricity Generation for General Purposes	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	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47							
Noise Impact from Fixed Sites		61	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																								
		2004												2005												2006												2007												2008								
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2							
Ha Tsuen PS																																																										
Site Clearance	47	47																																																								
Bulk Excavation for Sub-Structure and Site Formator	53	53	53	53	53	53	53																																																			
Steel Fixing & Concreting of Sub-Structure	51									51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51																															
Steel Fixing & Concreting of Roof and Columns	45																		45	45	45	45	45	45	45	45	45	45	45	45	45	45																										
Brick Work & Finishing	45																			45	45	45	45	45	45	45	45	45	45	45	45	45	45																									
M&E Installation & Pipeworks	45																			45	45	45	45	45	45	45	45	45	45	45	45	45	45																									
Landscape Works & Roadworks	49																				49	49	49																																			
Testing & Commissioning	N/A																																																									
Electricity Generation for General Purposes	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26				
Noise Impact from Fixed Sites		47	53	53	53	53	53	53	53	53	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51

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 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A5 Predicted Noise Levels for All Construction Activities in the Programme

NSR N2

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																		
		2004												2005												2006												2007												2008		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
Ha Tsuen PS																																																				
Site Clearance	62	62																																																		
Bulk Excavation for Sub-Structure and Site Formatio	69	69	69	69	69	69	69	69																																												
Steel Fixing & Concreting of Sub-Structure	69																																																			
Steel Fixing & Concreting of Roof and Columns	68																																																			
Brick Work & Finishing	57																																																			
M&E Installation & Pipeworks	60																																																			
Landscape Works & Roadworks	67																																																			
Testing & Commissioning	N/A																																																			
Electricity Generation for General Purposes	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	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
YLKTSSD Stage I																																																				
Installation of sewer lines	66																																																			
YLKTSSD Stage II (Original)																																																				
Installation of sewer lines	75																																																			
Cumulative Impact from Fixed Sites		62	69	69	69	69	69	69	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	66	66		

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																		
		2004												2005												2006												2007												2008		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
Ha Tsuen PS																																																				
Site Clearance	48	48																																																		
Bulk Excavation for Sub-Structure and Site Formatio	54	54	54	54	54	54	54	54																																												
Steel Fixing & Concreting of Sub-Structure	52																																																			
Steel Fixing & Concreting of Roof and Columns	46																																																			
Brick Work & Finishing	46																																																			
M&E Installation & Pipeworks	46																																																			
Landscape Works & Roadworks	50																																																			
Testing & Commissioning	N/A																																																			
Electricity Generation for General Purposes	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
YLKTSSD Stage I																																																				
Installation of sewer lines	55																																																			
YLKTSSD Stage II (Original)																																																				
Installation of sewer lines	64																																																			
Cumulative Impact from Fixed Sites		48	54	54	54	54	54	54	58	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	55	55		

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 Final EIA Report
 Appendix 4A - Construction Noise Assessment
 Table 4A5 Predicted Noise Levels for All Construction Activities in the Programme

NSR N12

UNMITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																			
		2004												2005												2006												2007												2008			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2		
Ha Tsuen PS																																																					
Site Clearance	61	61																																																			
Bulk Excavation for Sub-Structure and Site Formator	68		68	68	68	68	68	68	68																																												
Steel Fixing & Concreting of Sub-Structure	68									68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68																											
Steel Fixing & Concreting of Roof and Columns	67																																																				
Brick Work & Finishing	56																																																				
M&E Installation & Pipeworks	59																																																				
Landscape Works & Roadworks	66																																																				
Testing & Commissioning	N/A																																																				
Electricity Generation for General Purposes	47																																																				
YlKTSSD Stage I																																																					
Installation of sewer lines	85									85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85																												
YlKTSSD Stage II (Original)																																																					
Installation of sewer lines																																																					
Cumulative Impact from Fixed Sites		61	68	68	68	68	68	68	68	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85																												

MITIGATED SCENARIO

Construction Activities	Max Predicted Noise Level (PNL)	Construction Noise Level at Different Periods of Time																																																		
		2004												2005												2006												2007												2008		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	
Ha Tsuen PS																																																				
Site Clearance	47	47																																																		
Bulk Excavation for Sub-Structure and Site Formator	53		53	53	53	53	53	53																																												
Steel Fixing & Concreting of Sub-Structure	51									51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51																											
Steel Fixing & Concreting of Roof and Columns	45																																																			
Brick Work & Finishing	45																																																			
M&E Installation & Pipeworks	45																																																			
Landscape Works & Roadworks	49																																																			
Testing & Commissioning	N/A																																																			
Electricity Generation for General Purposes	26																																																			
YlKTSSD Stage I																																																				
Installation of sewer lines	74									74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74																											
YlKTSSD Stage II (Original)																																																				
Installation of sewer lines																																																				
Cumulative Impact from Fixed Sites		47	53	53	53	53	53	53	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74																											