

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

North Point PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N1		NSR N2		NSR N3		NSR N4		NSR N5		Remark
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>															
<i>PTW Building</i>															
Fine Screen (Mechanically-raked)	2	92	95	20	185	25	90	31	105	30	170	25	245	22	2 duty + 1 standby
Washpress	1	80	80	20	185	10	90	16	105	15	170	10	245	7	1 duty + 1 standby
Grit Classifier	2	80	83	20	185	13	90	19	105	18	170	13	245	10	2 duty + 1 standby
<i>Grit Trap Area</i>															
Grit Trap's Equipment #	2	92	95	20	195	24	98	30	105	30	165	26	255	22	2 duty + 1 standby
<i>Deodourization Unit</i>															
Ventilation Fan (20,000m ³ /hr)	2	89	92		145	44	100	47	140	44	220	40	195	41	2 duty + 1 standby
Ventilation Fan (4,400m ³ /hr)	1	83	83		145	35	100	38	140	35	220	31	195	32	1 duty + 1 standby
<i>Seawater Pumping Station</i>															
Seawater Pump (500 L/s)	1	98	98	20	150	29	110	32	150	29	225	26	195	27	1 duty + 1 standby
<i>Drop Shaft</i>															
Ventilation Fan (1,300m ³ /hr)	1	79	79		170	29	102	34	120	32	195	28	225	27	1 duty
Sub-Total SPL at NSR for New Equipment						45		48		45		41		42	
<u>Existing Equipment to be Retained after Upgrading Works</u>															
Inlet Pumping Station		91	91		160	42	65	50	98	46	175	41	230	39	
Transformer	1	91	91	20	78	28	45	33	115	25	205	20	200	20	
Total SPL at NSR (Existing and New Equipment)						47		52		49		44		44	

Notes:

Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment

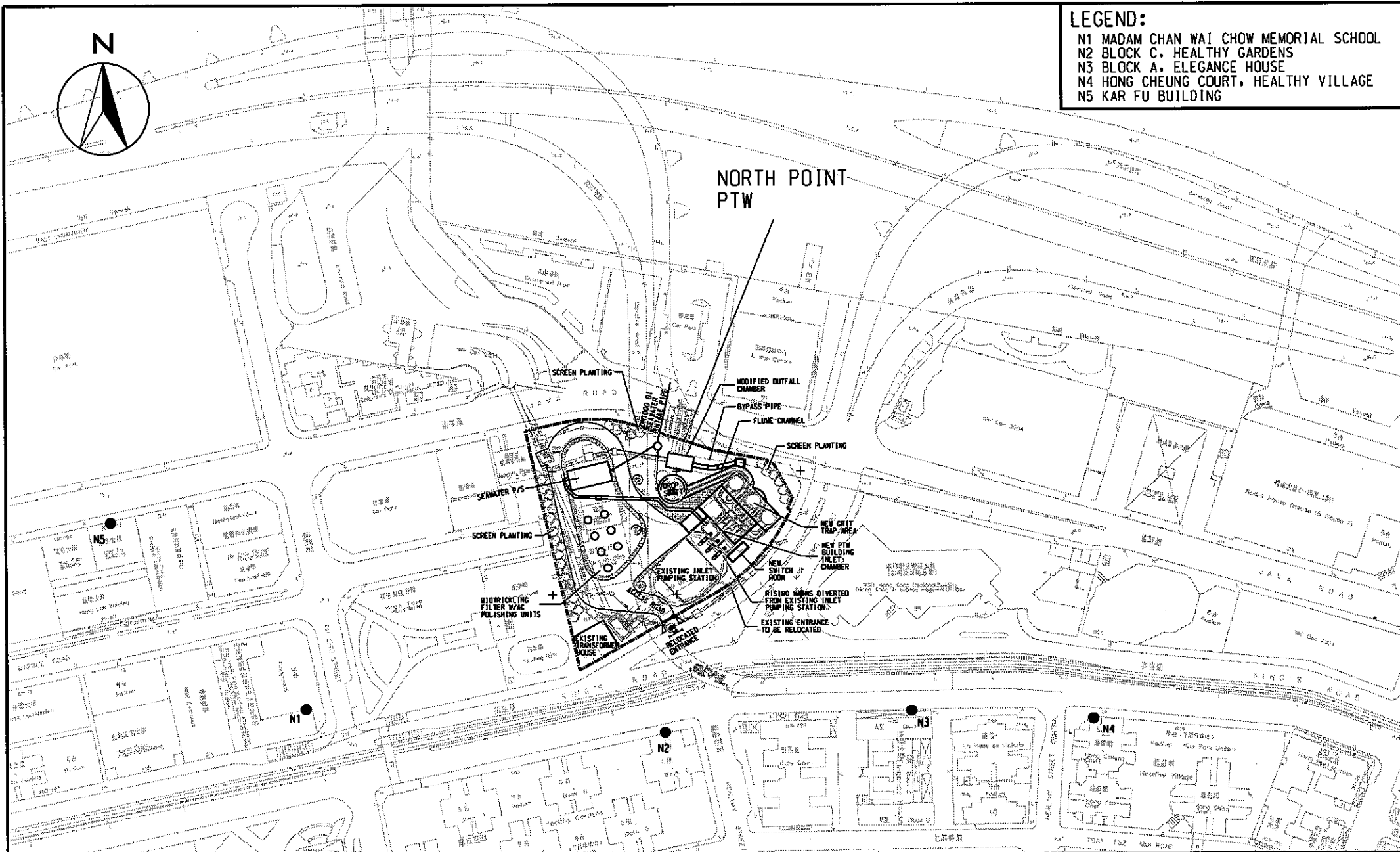
Grit trap's equipment will be partially enclosed to avoid line of sight between the noise source and the receiver. A reduction of 20 dB(A) is assumed in accordance with "Good Practices on Pumping System Noise Control"

* Standby item was not included in the noise assessment

See the attached Figure A4.7 for locations of treatment units



LEGEND:
 N1 MADAM CHAN WAI CHOW MEMORIAL SCHOOL
 N2 BLOCK C, HEALTHY GARDENS
 N3 BLOCK A, ELEGANCE HOUSE
 N4 HONG CHEUNG COURT, HEALTHY VILLAGE
 N5 KAR FU BUILDING



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AGREEMENT NO. CE 43/2005 (EP)
 HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
 ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
 LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE
 RECEIVERS - NORTH POINT PTW

SCALE	A4 1:2000	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB No.	60017198	DRAWING No.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

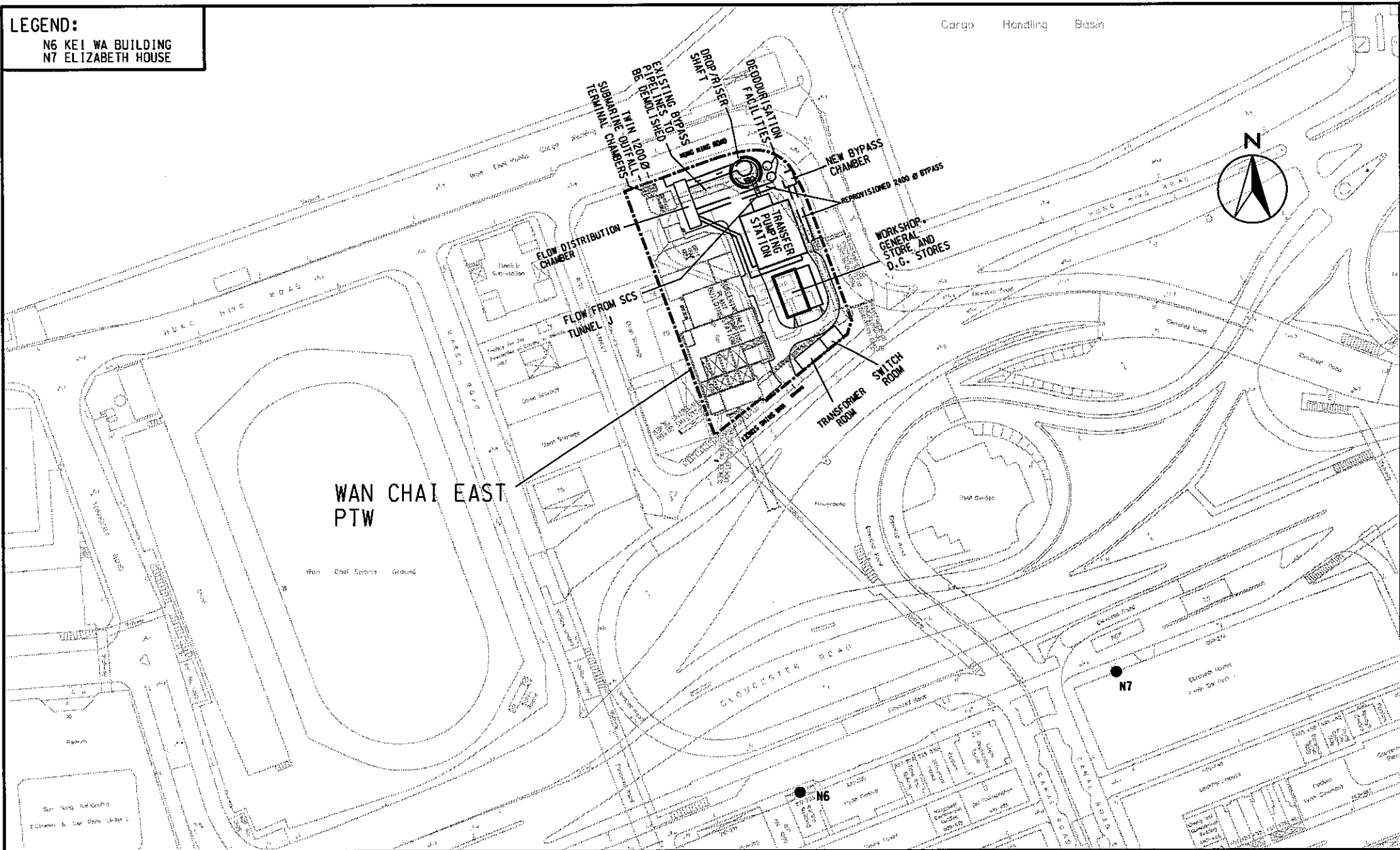
Wan Chai East PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N6		NSR N7		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>									
<i>Transfer Pumping Station</i>									
Sewage Pump (1,420 L/s)	2	98	101	20	230	29	220	29	2 duty + 1 standby
Fan for Deodourization Unit (13,000 m ³ /hr)	2	85	88		230	36	220	36	2 duty + 1 standby
Air Supply Fan for Motor Hall (23,400 m ³ /hr)	1	89	89		230	37	220	37	1 duty + 1 standby
Extraction Fan for Dry Well (45,000 m ³ /hr)	1	93	93		230	41	220	41	1 duty + 1 standby
Air Supply Fan for Dry Well (46,800 m ³ /hr)	1	93	93		230	41	220	41	1 duty + 1 standby
Transformer	2	91	94	20	230	22	220	22	2 duty
<i>Drop/Riser Shaft</i>									
Ventilation Fan (4,700m ³ /hr)	1	83	83		255	30	250	30	1 duty
Sub-Total SPL at NSR for New Equipment					45		46		
<u>Existing Equipment to be Retained after Upgrading Works</u>									
Inlet Pumping Station		101	101		180	51	200	50	
Screening Plant Building		103	103		200	52	215	51	
Grit Trap Area		103	103		220	51	240	50	
Total SPL at NSR (Existing and New Equipment)					56		56		
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
* Standby item was not included in the noise assessment									

See the attached Figure A4.7 for locations of treatment units

LEGEND:

N6 KEI WA BUILDING
N7 ELIZABETH HOUSE



WAN CHAI EAST
PTW

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AGREEMENT NO. CE 43/2005 (EP)
HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
**LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE
RECEIVERS - WAN CHAI EAST PTW**

SCALE	A4 1:2000	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB No.	60017198	DRAWING No.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Fung Mat Road Site

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N8		NSR N9		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for Fung Mat Road Site</u>									
<i>Drop Shaft</i> Ventilation Fan (9,900m ³ /hr)	1	85	85		200	34	230	33	1 duty
<i>Riser Shaft</i> Ventilation Fan (9,900m ³ /hr)	1	85	85		200	34	230	33	1 duty
Sub-Total SPL at NSR for New Equipment					37		36		
<u>Existing Equipment to be Retained for Fung Mat Road Site</u>									
No Existing Equipment									
Total SPL at NSR (Existing and New Equipment)					37		36		
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
* Standby item was not included in the noise assessment									

See the attached Figure A4.7 for locations of treatment units

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

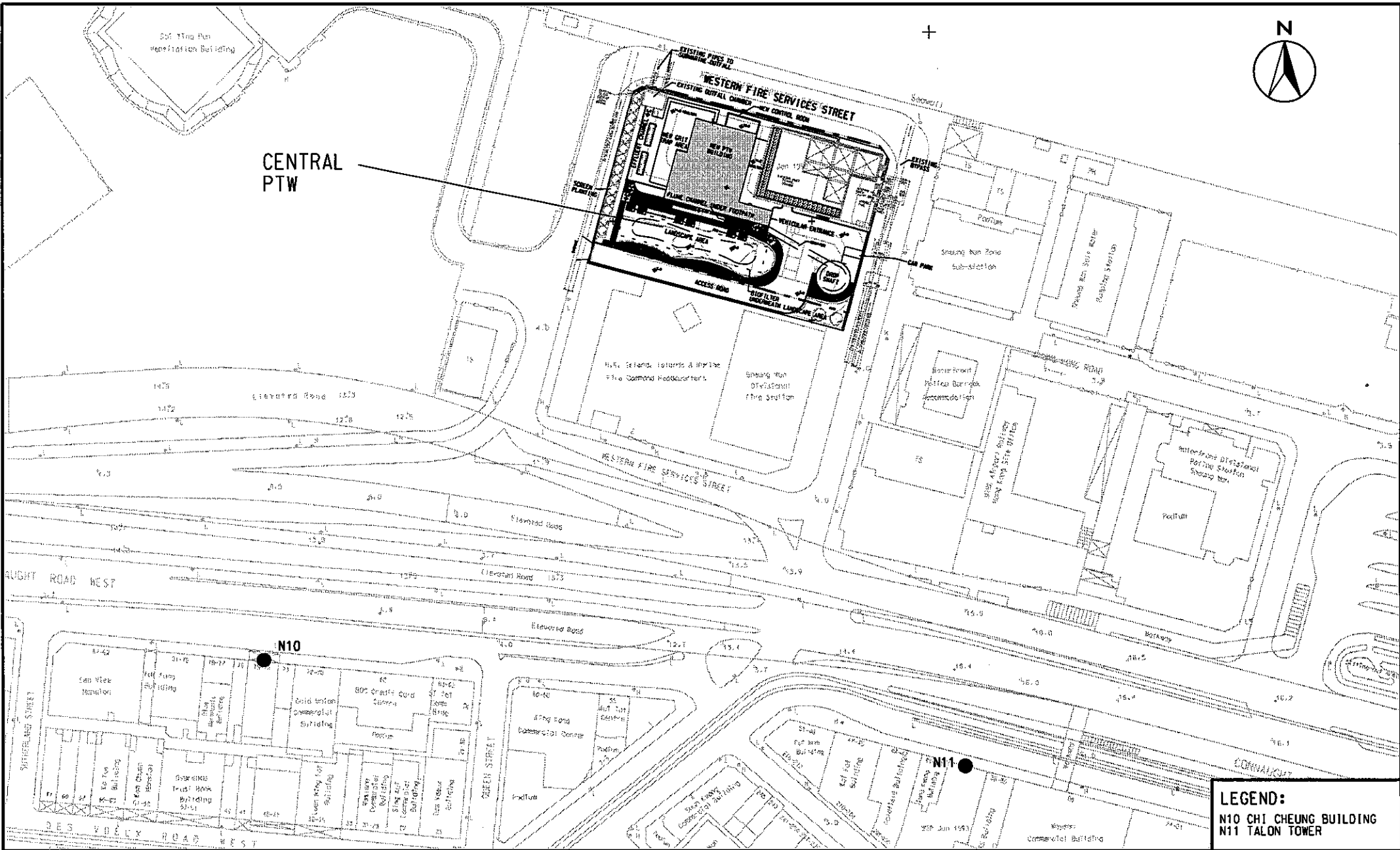
Central PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N10		NSR N11		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>									
<i>PTW Building</i>									
Fine Screen (Mechanically-raked)	2	92	95	20	205	24	200	24	2 duty + 1 standby
Washpress	1	80	80	20	205	9	200	9	1 duty + 1 standby
Grit Classifier	2	80	83	20	205	12	200	12	2 duty + 1 standby
<i>Grit Trap Area</i>									
Grit Trap's Equipment #	2	92	95	20	200	24	210	24	2 duty + 1 standby
<i>Deodourization Unit</i>									
Ventilation Fan (25,000m ³ /hr)	2	89	92		180	42	180	42	2 duty + 1 standby
Ventilation Fan (7,000m ³ /hr)	1	83	83		180	33	180	33	1 duty + 1 standby
<i>Drop Shaft</i>									
Ventilation Fan (5,200m ³ /hr)	1	83	83		210	32	155	34	1 duty
Sub-Total SPL at NSR for New Equipment					43		43		
<u>Existing Equipment to be Retained after Upgrading Works</u>									
Inlet Pumping Station		104	104		220	52	185	54	
Total SPL at NSR (Existing and New Equipment)					53		54		
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
# Grit trap's equipment will be partially enclosed to avoid line of sight between the noise source and the receiver. A reduction of 20 dB(A) is assumed in accordance with "Good Practices on Pumping System Noise Control"									
* Standby item was not included in the noise assessment									

See the attached Figure A4.7 for locations of treatment units



CENTRAL
PTW



LEGEND:
 N10 CHI CHEUNG BUILDING
 N11 TALON TOWER

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AGREEMENT NO. CE 43/2005 (EP)
 HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
 ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS - CENTRAL PTW

SCALE	A4 1:1500	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB NO.	60017198	DRAWING NO.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Sandy Bay PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N12		NSR N13		NSR N14		NSR N15		Remark
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>													
<i>Transfer Pumping Station</i>													
Sewage Pump (1,800 L/s)	2	98	101	20	195	30	85	37	200	30	300	26	2 duty + 1 standby
Ventilation Fan for Deodourization Unit (12,000 m ³ /hr)	2	85	88		195	37	85	44	200	37	300	33	2 duty + 1 standby
Air Supply Fan for Motor Hall (23,400 m ³ /hr)	1	89	89		195	38	85	45	200	38	300	34	1 duty + 1 standby
Extraction Fan for Dry Well (45,000 m ³ /hr)	1	93	93		195	42	85	49	200	42	300	38	1 duty + 1 standby
Air Supply Fan for Dry Well (46,800 m ³ /hr)	1	93	93		195	42	85	49	200	42	300	38	1 duty + 1 standby
Transformer	2	91	94	20	225	22	45	36	160	25	255	21	2 duty
<i>Drop/Riser Shaft</i>													
Ventilation Fan (3,500m ³ /hr)	1	83	83		200	32	105	38	215	31	320	28	1 duty
Sub-Total SPL at NSR for New Equipment						47		54		47		43	
<u>Existing Equipment to be Retained after Upgrading Works</u>													
Preliminary Treatment Works Complex		90	90		240	37	68	48	165	41	280	36	
Total SPL at NSR (Existing and New Equipment)						47		55		48		44	
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment													
* Standby item was not included in the noise assessment													
Exceedance of relevant noise limits													

See the attached Figure A4.7 for locations of treatment units

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

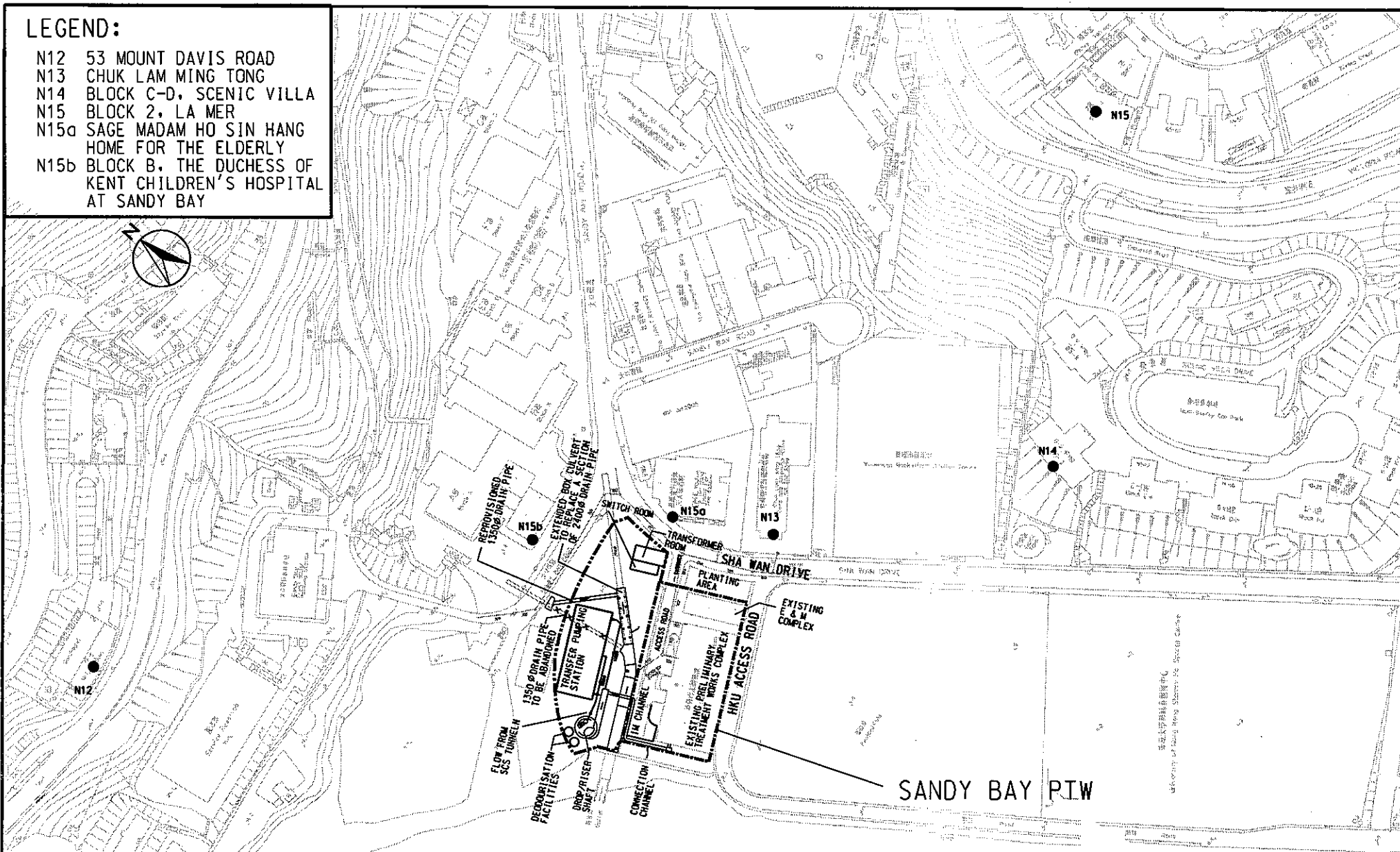
Sandy Bay PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N15a		NSR N15b		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>									
<i>Transfer Pumping Station</i>									
Sewage Pump (1,800 L/s)	2	98	101	20	64	40	52	42	2 duty + 1 standby
Ventilation Fan for Deodourization Unit (12,000 m ³ /hr)	2	85	88		64	47	52	49	2 duty + 1 standby
Air Supply Fan for Motor Hall (23,400 m ³ /hr)	1	89	89		64	48	52	50	1 duty + 1 standby
Extraction Fan for Dry Well (45,000 m ³ /hr)	1	93	93		64	52	52	54	1 duty + 1 standby
Air Supply Fan for Dry Well (46,800 m ³ /hr)	1	93	93		64	52	52	54	1 duty + 1 standby
Transformer	2	91	94	20	20	43	48	35	2 duty
<i>Drop/Riser Shaft</i>									
Ventilation Fan (3,500m ³ /hr)	1	83	83		94	39	80	40	1 duty
Sub-Total SPL at NSR for New Equipment						57		58	
<u>Existing Equipment to be Retained after Upgrading Works</u>									
<i>Preliminary Treatment Works Complex</i>									
		90	90		72	48	90	46	
Total SPL at NSR (Existing and New Equipment)						57		58	
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
* Standby item was not included in the noise assessment Exceedance of relevant noise limits									

See the attached Figure A4.7 for locations of treatment units

LEGEND:

- N12 53 MOUNT DAVIS ROAD
- N13 CHUK LAM MING TONG
- N14 BLOCK C-D, SCENIC VILLA
- N15 BLOCK 2, LA MER
- N15a SAGE MADAM HO SIN HANG HOME FOR THE ELDERLY
- N15b BLOCK B, THE DUCHESS OF KENT CHILDREN'S HOSPITAL AT SANDY BAY



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 HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
 ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS - SANDY BAY PTW

SCALE	A4 1:2000	DATE	FEB 08
CHECK	DCFL	DRAWN	IWSL
JOB No.	60017198	DRAWING No.	A4.7
		REV	-

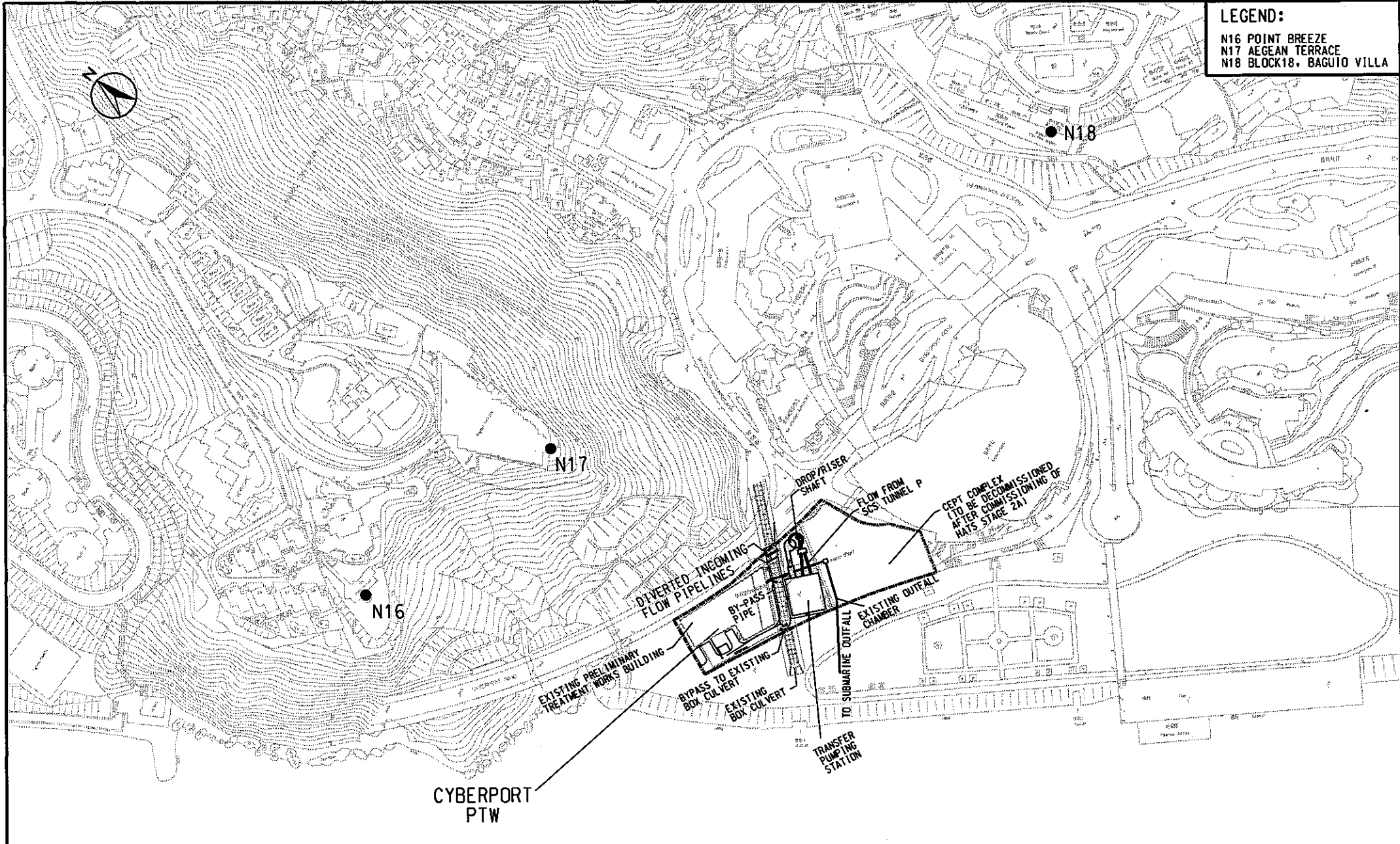
Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Cyberport PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N16		NSR N17		NSR N18		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<i><u>New Equipment to be Installed for the Proposed Upgrading Works</u></i>											
<i>Transfer Pumping Station</i>											
Sewage Pump (1,680 L/s)	2	98	101	20	260	28	175	31	320	26	2 duty + 1 standby
Ventilation Fan for Deodorization Unit (11,000 m ³ /hr)	2	85	88		260	35	175	38	320	33	2 duty + 1 standby
Air Supply Fan for Motor Hall (23,400 m ³ /hr)	1	89	89		260	36	175	39	320	34	1 duty + 1 standby
Extraction Fan for Dry Well (45,000 m ³ /hr)	1	93	93		260	40	175	43	320	38	1 duty + 1 standby
Air Supply Fan for Dry Well (46,800 m ³ /hr)	1	93	93		260	40	175	43	320	38	1 duty + 1 standby
Transformer	2	91	94	20	260	21	175	24	320	19	2 duty
<i>Drop/Riser Shaft</i>											
Ventilation Fan (2,900m ³ /hr)	1	83	83		260	30	160	34	295	29	
Sub-Total SPL at NSR for New Equipment						44		48		43	
<i><u>Existing Equipment to be Retained after Upgrading Works</u></i>											
Preliminary Treatment Works Building		101	101		215	49	150	52	350	45	
Total SPL at NSR (Existing and New Equipment)						51		54		47	
Notes:											
Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment											
* Standby item was not included in the noise assessment											
Exceedance of relevant noise limit											

See the attached Figure A4.7 for locations of treatment units

LEGEND:
 N16 POINT BREEZE
 N17 AEGEAN TERRACE
 N18 BLOCK18, BAGUIO VILLA



CYBERPORT
PTW

ENSR | AECOM

AGREEMENT NO. CE 43/2005 (EP)
 HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
 ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS - CYBERPORT PTW

SCALE	A4 1:3000	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB NO.	60017198	DRAWING NO.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Wah Fu PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N19		NSR N20		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>									
<i>PTW Building</i>									
Fine Screen (Mechanically-raked)	1	92	92	20	120	25	36	36	1 duty + 1 standby
Washpress	1	80	80	20	120	13	36	24	1 duty + 1 standby
Grit Classifier	1	80	80	20	120	13	36	24	1 duty + 1 standby
<i>Grit Trap Area</i>									
Grit Trap's Equipment #	1	92	92	20	110	26	32	37	1 duty + 1 standby
<i>Deodourization Unit</i>									
Ventilation Fan (11,000m ³ /hr)	2	85	88		120	41	36	52	2 duty + 1 standby
Ventilation Fan (900m ³ /hr)	1	79	79		120	32	36	43	1 duty + 1 standby
<i>Drop Shaft</i>									
Ventilation Fan (1,000m ³ /hr)	1	79	79		135	31	43	41	1 duty
Sub-Total SPL at NSR for New Equipment						43		53	
<u>Existing Equipment to be Retained after Upgrading Works</u>									
No existing equipment will be retained									
Total SPL at NSR (Existing and New Equipment)						43		53	
Notes:									
Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
# Grit trap's equipment will be partially enclosed to avoid line of sight between the noise source and the receiver. A reduction of 20 dB(A) is assumed in accordance with "Good Practices on Pumping System Noise Control"									
* Standby item was not included in the noise assessment									
Exceedance of relevant noise limit									

See the attached Figure A4.7 for locations of treatment units

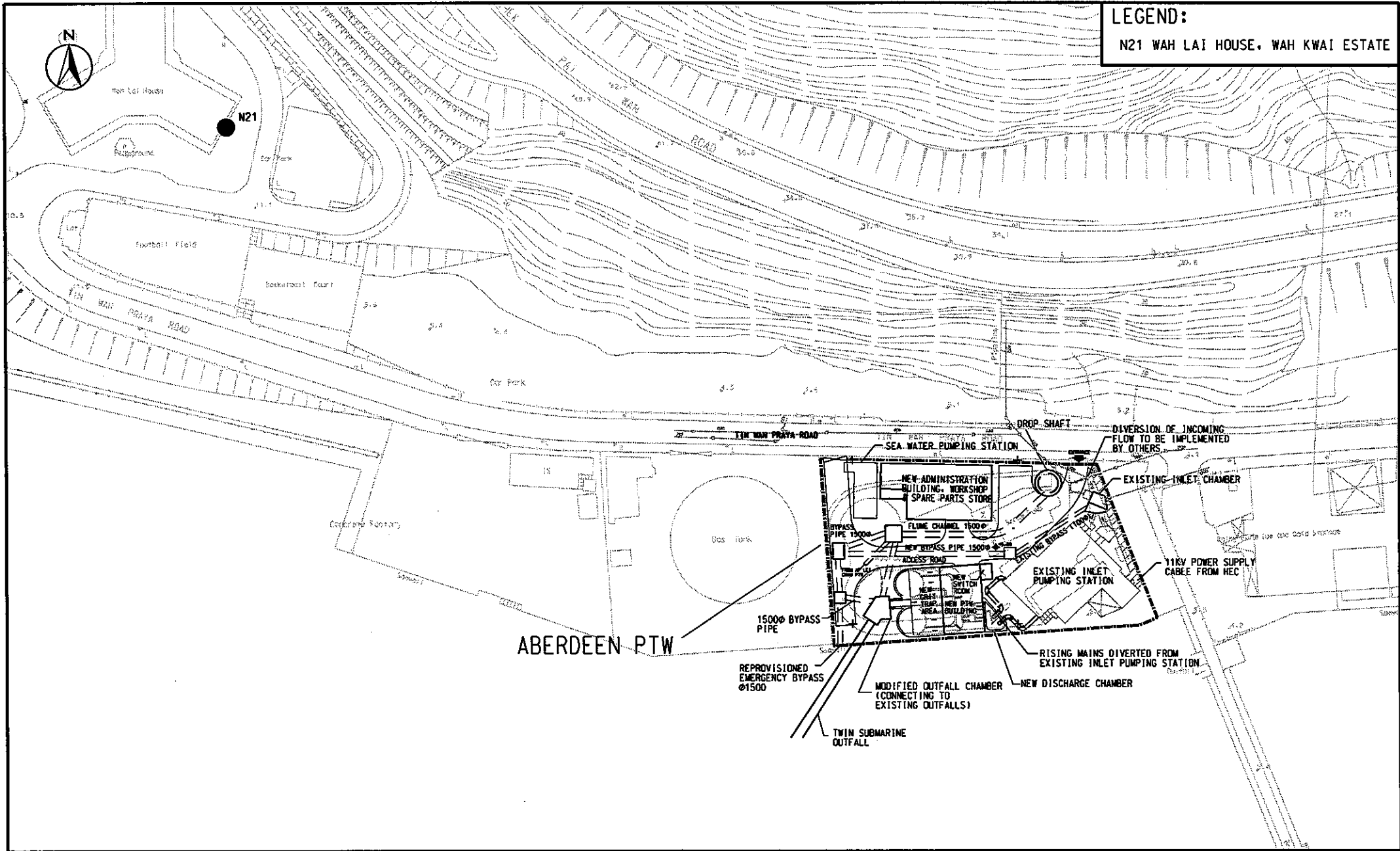
Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Aberdeen PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N21		Remark *
					Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>							
<i>PTW Building</i>							
Fine Screen (Mechanically-raked)	1	92	92	20	265	19	1 duty + 1 standby
Washpress	1	80	80	20	265	7	1 duty + 1 standby
Grit Classifier	1	80	80	20	265	7	1 duty + 1 standby
<i>Grit Trap Area</i>							
Grit Trap's Equipment #	1	92	92	20	255	19	1 duty + 1 standby
<i>Deodourization Unit</i>							
Ventilation Fan (17,500m ³ /hr)	2	89	92		265	39	2 duty + 1 standby
Ventilation Fan (5,100m ³ /hr)	1	83	83		265	30	1 duty + 1 standby
<i>Drop Shaft</i>							
Ventilation Fan (1,600m ³ /hr)	1	79	79		270	25	1 duty
<i>Seawater Pumping Station</i>							
Seawater Pump	1	98	98	20	220	26	1 duty + 1 standby
Sub-Total SPL at NSR for New Equipment					40		
<u>Existing Equipment to be Retained after Upgrading Works</u>							
Inlet Pumping Station		103	103		290	49	
Total SPL at NSR (Existing and New Equipment)					49		
<p>Notes:</p> <p>Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment</p> <p># Grit trap's equipment will be partially enclosed to avoid line of sight between the noise source and the receiver. A reduction of 20 dB(A) is assumed in accordance with "Good Practices on Pumping System Noise Control"</p> <p>* Standby item was not included in the noise assessment</p>							

See the attached Figure A4.7 for locations of treatment units

LEGEND:
 N21 WAH LAI HOUSE, WAH KWAI ESTATE



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 HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
 ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE RECEIVERS - ABERDEEN PTW

SCALE	A4 1:1500	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB No.	60017198	DRAWING No.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Ap Lei Chau PTW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N24		Remark *
					Distance (m)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>							
<i>PTW Building</i>							
Fine Screen (Mechanically-raked)	1	92	92	20	230	20	1 duty + 1 standby
Washpress	1	80	80	20	230	8	1 duty + 1 standby
Grit Classifier	1	80	80	20	230	8	1 duty + 1 standby
<i>Grit Trap Area</i>							
Grit Trap's Equipment #	1	92	92	20	245	19	1 duty + 1 standby
Ventilation Fan (15,000m ³ /hr)	2	85	88		245	35	2 duty + 1 standby
Ventilation Fan (4,500m ³ /hr)	2	83	86		245	33	2 duty + 1 standby
Transformer	2	91	94	20	250	21	2 duty
<i>Drop Shaft</i>							
Ventilation Fan (300m ³ /hr)	1	79	79		275	25	1 duty
<i>Transfer Pumping Station</i>							
Sewage Pump (440 L/s)	3	98	103	20	258	30	3 duty + 1 standby
Air Supply Fan for Motor Hall (23,400 m ³ /hr)	1	89	89		258	36	1 duty + 1 standby
Extraction Fan for Dry Well (45,000 m ³ /hr)	1	93	93		258	40	1 duty + 1 standby
Air Supply Fan for Dry Well (46,800 m ³ /hr)	1	93	93		258	40	1 duty + 1 standby
Sub-Total SPL at NSR for New Equipment						45	
<u>Existing Equipment to be Retained after Upgrading Works</u>							
No existing equipment to be retained							
Total SPL at NSR (Existing and New Equipment)						45	
<p>Notes:</p> <p>Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment</p> <p># Grit trap's equipment will be partially enclosed to avoid line of sight between the noise source and the receiver. A reduction of 20 dB(A) is assumed in accordance with "Good Practices on Pumping System Noise Control"</p> <p>* Standby item was not included in the noise assessment</p>							

See the attached Figure A4.7 for locations of treatment units

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

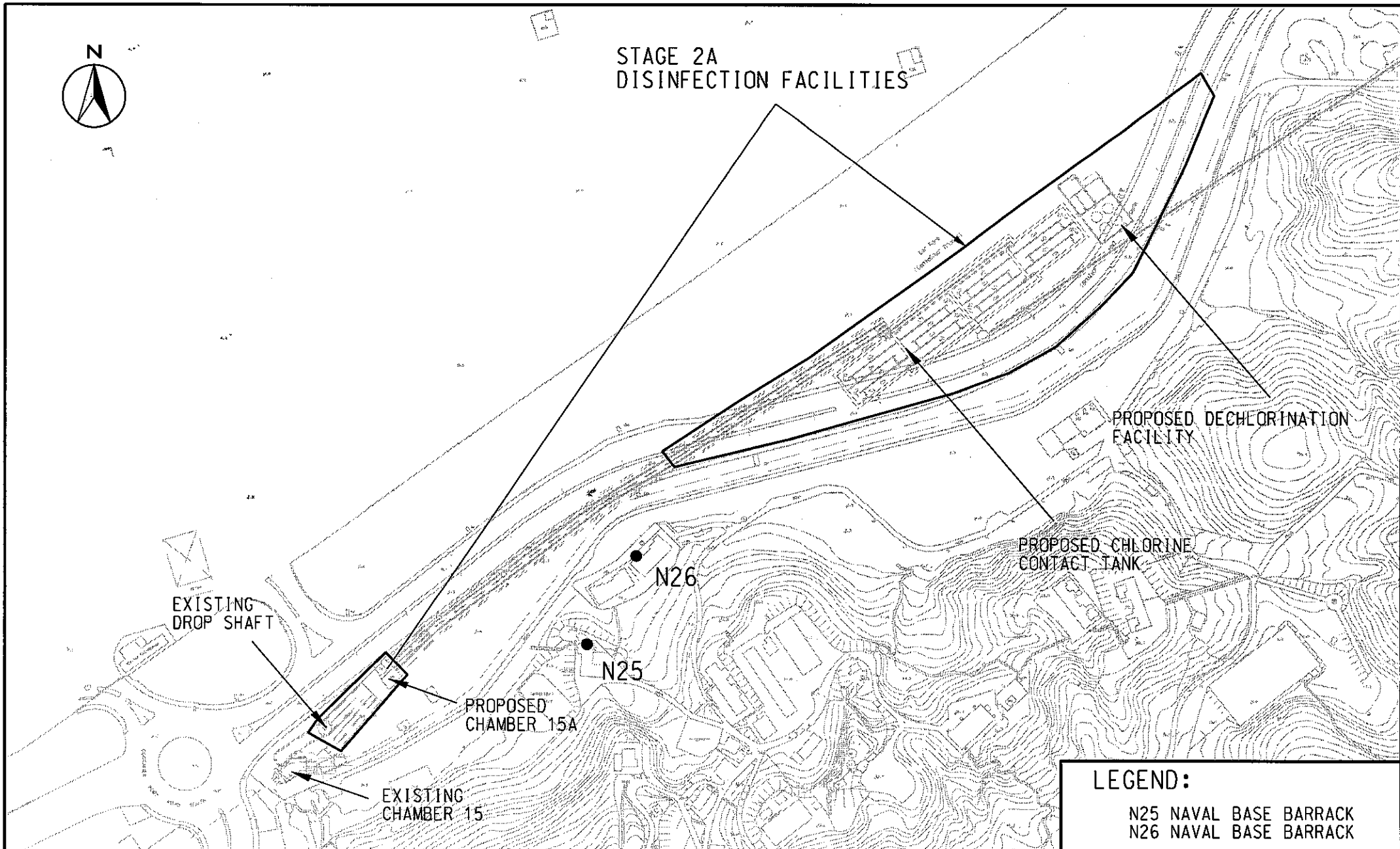
Disinfection Facilities at Stonecutters Island

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N25		NSR N26		Remark *
					Distance (m)	SPL dB(A)	Distance (m)	SPL dB(A)	
<i><u>New Equipment to be Installed for the Proposed Disinfection Facilities</u></i>									
Exhaust Fan at Chlorine Contact Tank Area	2	80	83		210	32	150	34	2 duty + 1 standby
Chemical Feed Pump	2	80	83	20	410	6	350	7	2 duty + 1 standby
Chemical Transfer Pump (from truck to tank)	1	80	80	20	410	3	350	4	1 duty + 1 standby
Tank Transfer Pump (from tank to tank)	1	80	80	20	410	3	350	4	1 duty + 1 standby
Sump Pump	2	80	83	20	410	6	350	7	2 duty
Sub-Total SPL at NSR for New Equipment					32		35		
<i><u>Existing Equipment to be Retained for the Proposed Disinfection Facilities</u></i>									
No existing equipment									
Total SPL at NSR (Existing and New Equipment)					32		35		
Notes: Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment									
* Standby item was not included in the noise assessment									

See the attached Figure A4.7 for locations of treatment units



STAGE 2A DISINFECTION FACILITIES



LEGEND:			
N25	NAVAL	BASE	BARRACK
N26	NAVAL	BASE	BARRACK

ENSR | AECOM

AGREEMENT NO. CE 43/2005 (EP)
HARBOUR AREA TREATMENT SCHEME (HATS) STAGE 2A
ENVIRONMENTAL IMPACT ASSESSMENT STUDY - INVESTIGATION
LOCATIONS OF REPRESENTATIVE NOISE SENSITIVE
RECEIVERS - DISINFECTION FACILITIES

SCALE	A4 1:3000	DATE	NOV 07
CHECK	DCFL	DRAWN	IWSL
JOB No.	60017198	DRAWING No.	A4.7
		REV	-

Appendix 4.7 Calculations of Operational Noise Levels at Representative Noise Sensitive Receivers (Unmitigated Scenario)

Stonecutters Island STW

Treatment Units	No of item	SWL dB(A)	Total SWL dB(A)	Enclosure Reduction dB(A)	NSR N27			Remark *
					Distance (m)	Screening Reduction, dB(A)	SPL dB(A)	
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>								
Influent Sewage Pumping Station Centrifugal Pump	6	80	88	20	210	10	6	6 duty + 2 standby
Influent Channel Blower	1	85	85	20	320	10	–	1 duty + 1 standby
Flocculation Tank Blower	2	85	88	20	320	10	3	2 duty + 2 standby
Sludge Pump (Stroke Piston-Membrane Type)	2	80	83	20	320	10	–	2 duty
Sedimentation Tank Sludge Pump (Stroke Piston-Membrane Type)	2	80	83	20	320	10	–	2 duty
Scum Pump (Torque-Flow Type)	2	80	83	20	320	10	–	2 duty
Main Distribution Channel Blower	1	85	85	20	320	10	–	1 duty + 1 standby
Scum Pump (Torque-Flow Type)	1	80	80	20	320	10	–	1 duty + 1 standby
Sludge Treatment System Recirculation Pump	1	80	80	20	365	10	–	1 duty
Sludge Centrifuge	4	100	106	20	365	10	20	4 duty + 2 standby
Sludge Feed Pump (Progressive Cavity Type)	4	80	86	20	365	10	–	4 duty + 2 standby
Northwest Kowloon PTW Building Exhaust Fan for odour control facility	4	80	86		260	10	23	4 duty + 1 standby
Odour Control Facilities (Option 2 - Decentralized System) Exhaust Fan at Existing MPS	2	80	83		490	10	14	2 duty + 1 Standby
Exhaust Fan at Stage 2A MPS	2	80	83		205	10	22	2 duty + 1 Standby
Exhaust Fan at Sludge Handling Area	6	80	88		365	10	22	6 duty + 1 Standby
Exhaust Fan at New Primary Sedimentation Tank Area	12	80	91		320	10	26	12 duty + 2 Standby
Exhaust Fan at Flow Distribution Chamber Area	2	80	83		535	10	13	2 duty + 1 Standby
Sub-Total SPL at NSR for New Equipment							30	
<u>Existing Equipment to be Retained after Upgrading Works</u> All existing equipment will be retained, including chlorination plant	With reference to an EIA Study for the Provision of Disinfection Facilities at Stonecutters Island STW, the predicted noise level at FSD Diving Rescue and Diving Centre would be adopted to calculate the cumulative noise level in this assessment						48	
Total SPL at NSR (Existing and New Equipment)					Total SPL, dB(A) at P1		48	
<p>Notes:</p> <p>Enclosure Reduction: Reduction of SWL due to the enclosure for the equipment</p> <p>Screening Reduction: Reduction of SPL due to the screening of line of sight by the structure of FSD diving training centre itself.</p> <p>– 0 dB(A) or negative noise level is not presented.</p> <p>* Standby item was not included in the noise assessment</p>								

See the attached Figure A4.7 for locations of treatment units

