

Appendix 4.5 Fixed Plant Inventory

North Point PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>PTW Building</i>				
Fine Screen (Mechanically-raked)	2	Ref 1	92	95
Washpress	1	Ref 2	80	80
Grit Classifier	2	Ref 1	80	83
<i>Grit Trap Area</i>				
Grit Trap's Equipment	2	Ref 1	92	95
<i>Deodourization Unit</i>				
Ventilation Fan for Solids Handling Area (20,000m <sup>3</sup> /hr)	2	Ref 3	89	92
Ventilation Fan for Channels (4,400m <sup>3</sup> /hr)	1	Ref 3	83	83
<i>Seawater Pumping Station</i>				
Seawater Pump (500 L/s)	1	Ref 4	98	98
<i>Drop Shaft</i>				
Ventilation Fan (1,300m <sup>3</sup> /hr)	1	Ref 3	79	79
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Inlet Pumping Station #		Ref 5	91	91
Transformer	1	Ref 6	91	91
<p>Notes:</p> <p>Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i>.</p> <p>Ref 2: The estimated SWL was based on information provided by the supplier.</p> <p>Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i>.</p> <p>Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.</p> <p>Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing inlet pumping station using the standard acoustic principles.</p> <p>Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i>.</p> <p># A new inlet pumping station is being constructed and will be commissioned before the HATS Stage 2A works.</p>				

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### Wan Chai East PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , 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	Ref 4	98	101
Fan for Deodourization Unit (13,000m <sup>3</sup> /hr)	2	Ref 3	85	88
Air Supply Fan for Motor Hall (23,400 m <sup>3</sup> /hr)	1	Ref 3	89	89
Extraction Fan for Dry Well (45,000 m <sup>3</sup> /hr)	1	Ref 3	93	93
Air Supply Fan for Dry Well (46,800 m <sup>3</sup> /hr)	1	Ref 3	93	93
Transformer	2	Ref 6	91	94
<i>Drop/Riser Shaft</i>				
Ventilation Fan (4,700m <sup>3</sup> /hr)	1	Ref 3	83	83
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Inlet Pumping Station		Ref 5	101	101
Screening Plant Building		Ref 5	103	103
Grit Trap Area		Ref 5	103	103
Notes:				
Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i> .				
Ref 2: The estimated SWL was based on information provided by the supplier.				
Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i> .				
Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant..				
Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.				
Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i> .				

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### Fung Mat Road Site

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for Fung Mat Road Site</u>				
Drop Shaft and Riser Shaft Ventilation Fan (9,900m <sup>3</sup> /hr)	2	Ref 3	85	88
<u>Existing Equipment to be Retained for Fung Mat Road Site</u>				
No Existing Equipment				
<p>Notes:</p> <p>Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i>.</p> <p>Ref 2: The estimated SWL was based on information provided by the supplier.</p> <p>Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i>.</p> <p>Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.</p> <p>Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.</p> <p>Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i>.</p>				

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Central PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>PTW Building</i>				
Fine Screen (Mechanically-raked)	2	Ref 1	92	95
Washpress	1	Ref 2	80	80
Grit Classifier	2	Ref 1	80	83
<i>Grit Trap Area</i>				
Grit Trap's Equipment	2	Ref 1	92	95
<i>Deodorization Unit</i>				
Ventilation Fan for Solids Handling Area (25,000m <sup>3</sup> /hr)	2	Ref 3	89	92
Ventilation Fan for Channels (7,000m <sup>3</sup> /hr)	1	Ref 3	83	83
<i>Drop Shaft</i>				
Ventilation Fan (5,200m <sup>3</sup> /hr)	1	Ref 3	83	83
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Inlet Pumping Station		Ref 5	104	104
<p>Notes:</p> <p>Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i>.</p> <p>Ref 2: The estimated SWL was based on information provided by the supplier.</p> <p>Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i>.</p> <p>Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.</p> <p>Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing inlet pumping station using the standard acoustic principles.</p> <p>Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i>.</p>				

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Sandy Bay PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>Drop/Riser Shaft</i>				
Ventilation Fan (3,500m <sup>3</sup> /hr)	1	Ref 3	83	83
<i>Transfer Pumping Station</i>				
Sewage Pump (1,800 L/s)	2	Ref 2	98	101
Fan for Deodourization Unit (12,000m <sup>3</sup> /hr)	2	Ref 3	85	88
Air Supply Fan for Motor Hall (23,400 m <sup>3</sup> /hr)	1	Ref 3	89	89
Extraction Fan for Dry Well (45,000 m <sup>3</sup> /hr)	1	Ref 3	93	93
Air Supply Fan for Dry Well (46,800 m <sup>3</sup> /hr)	1	Ref 3	93	93
Transformer	2	Ref 6	91	94
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Preliminary Treatment Works Complex		Ref 5	90	90
Notes:				
Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i> .				
Ref 2: The estimated SWL was based on information provided by the supplier.				
Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i> .				
Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant..				
Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.				
Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i> .				

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### Cyberport PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>Transfer Pumping Station</i>				
Sewage Pump (1,680 L/s)	2	Ref 4	98	101
Fan for Deodourization Unit (11,000m <sup>3</sup> /hr)	2	Ref 3	85	88
Air Supply Fan for Motor Hall (23,400 m <sup>3</sup> /hr)	1	Ref 3	89	89
Extraction Fan for Dry Well (45,000 m <sup>3</sup> /hr)	1	Ref 3	93	93
Air Supply Fan for Dry Well (46,800 m <sup>3</sup> /hr)	1	Ref 3	93	93
Transformer	2	Ref 6	91	94
<i>Drop/Riser Shaft</i>				
Ventilation Fan (2,900m <sup>3</sup> /hr)	1	Ref 3	83	83
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Preliminary Treatment Works Building		Ref 5	101	101
Notes:				
Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i> .				
Ref 2: The estimated SWL was based on information provided by the supplier.				
Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i> .				
Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant..				
Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.				
Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i> .				

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**Wah Fu PTW**

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>PTW Building</i>				
Fine Screen (Mechanically-raked)	1	Ref 1	92	92
Washpress	1	Ref 2	80	80
Grit Classifier	1	Ref 1	80	80
<i>Grit Trap Area</i>				
Grit Trap's Equipment	1	Ref 1	92	92
<i>Deodourization Unit (Roof of PTW Building)</i>				
Ventilation Fan for Solids Handling Area (11,000m <sup>3</sup> /hr)	2	Ref 3	85	88
Ventilation Fan for Channels (900m <sup>3</sup> /hr)	1	Ref 3	79	79
<i>Drop Shaft</i>				
Ventilation Fan (1,000m <sup>3</sup> /hr)	1	Ref 3	79	79
<u>Existing Equipment to be Retained after Upgrading Works</u>				
No existing equipment will be retained				
<p>Notes:</p> <p>Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i>.</p> <p>Ref 2: The estimated SWL was based on information provided by the supplier.</p> <p>Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i>.</p> <p>Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.</p> <p>Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.</p> <p>Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i>.</p>				

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Aberdeen PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>PTW Building</i>				
Fine Screen (Mechanically-raked)	1	Ref 1	92	92
Washpress	1	Ref 2	80	80
Grit Classifier	1	Ref 1	80	80
<i>Grit Trap Area</i>				
Grit Trap's Equipment	1	Ref 1	92	92
<i>Deodourization Unit (Roof of PTW Building)</i>				
Ventilation Fan for Solids Handling Area (17,500m <sup>3</sup> /hr)	2	Ref 3	89	92
Ventilation Fan for Channels (5,100m <sup>3</sup> /hr)	1	Ref 3	83	83
<i>Seawater Pumping Station</i>				
Seawater Pump (500 L/s)	1	Ref 4	98	98
<i>Drop Shaft</i>				
Ventilation Fan (1,600m <sup>3</sup> /hr)	1	Ref 3	79	79
<u>Existing Equipment to be Retained after Upgrading Works</u>				
Inlet Pumping Station		Ref 5	103	103
<p>Notes:</p> <p>Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i>.</p> <p>Ref 2: The estimated SWL was based on information provided by the supplier.</p> <p>Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i>.</p> <p>Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.</p> <p>Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing inlet pumping station using the standard acoustic principles.</p> <p>Ref 6: The estimated SWL was made reference to an <i>EIA-Report on San Wai STW and Ha Tsuen Pumping Station</i>.</p>				

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Ap Lei Chau PTW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>PTW Building</i>				
Fine Screen (Mechanically-raked)	1	Ref 1	92	92
Washpress	1	Ref 2	80	80
Grit Classifier	1	Ref 1	80	80
<i>Grit Trap Area</i>				
Grit Trap's Equipment	1	Ref 1	92	92
Ventilation Fan for Solids Handling Area (15,000m <sup>3</sup> /hr)	2	Ref 3	85	88
Ventilation Fan for Channels (4,500m <sup>3</sup> /hr)	2	Ref 3	83	86
<i>Transformer</i>	2	Ref 6	91	94
<i>Transfer Pumping Station</i>				
Sewage Pump (440 L/s)	3	Ref 4	98	103
Air Supply Fan for Motor Hall (23,400 m <sup>3</sup> /hr)	1	Ref 3	89	89
Extraction Fan for Dry Well (45,000 m <sup>3</sup> /hr)	1	Ref 3	93	93
Air Supply Fan for Dry Well (46,800 m <sup>3</sup> /hr)	1	Ref 3	93	93
<i>Drop Shaft</i>				
Ventilation Fan (300m <sup>3</sup> /hr)	1	Ref 3	79	79
<u>Existing Equipment to be Retained after Upgrading Works</u>				
No existing equipment will be retained				
Notes:				
Ref 1: The estimated SWL was made reference to an <i>EIA Report on Tai Po Sewage Treatment Works Stage V</i> .				
Ref 2: The estimated SWL was based on information provided by the supplier.				
Ref 3: Based on the estimated volume flowrate, the SWL of the ventilation fan was made reference to <i>Good Practices on Ventilation System Noise Control</i> .				
Ref 4: The estimated SWL was made reference to Operation and Maintenance Manual for Central Pumping Station and Screening Plant.				
Ref 5: The SWL was backward calculated based on the on-site measured noise level at the existing facility using the standard acoustic principles.				
Ref 6: The estimated SWL was made reference to an <i>EIA Report on San Wai STW and Ha Tsuen Pumping Station</i> .				

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Disinfection Facilities at Stonecutters Island

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Disinfection Facilities</u>				
Exhaust Fan at Chlorine Contact Tank Area	2	Ref 1	80	83
Chemical Feed Pump	2	Ref 1	80	83
Chemical Transfer Pump (from truck to tank)	1	Ref 1	80	80
Tank Transfer Pump (from tank to tank)	1	Ref 1	80	80
Sump Pump	2	Ref 1	80	83

Notes:

Ref 1: The estimated SWL was made reference to the tender specification for Shatin STW Stage 3 Upgrading.

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### Stonecutters Island STW

Treatment Units	No of item	Reference	SWL, dB(A)	Total SWL , dB(A)
<u>New Equipment to be Installed for the Proposed Upgrading Works</u>				
<i>Influent Sewage Pumping Station</i> Centrifugal Pump	6	Ref 1	80	88
Influent Channel Blower	1	Ref 1	85	85
Flocculation Tank Blower	2	Ref 1	85	88
Sludge Pump (Stroke Piston-Membrane Type)	2	Ref 1	80	83
<i>Sedimentation Tank</i> Sludge Pump (Stroke Piston-Membrane Type)	2	Ref 1	80	83
Scum Pump (Torque-Flow Type)	2	Ref 1	80	83
<i>Main Distribution Chamber</i> Blower	1	Ref 1	85	85
Scum Pump (Torque-Flow Type)	1	Ref 1	80	80
<i>Sludge Treatment System</i> Recirculation Pump	1	Ref 1	80	80
Sludge Centrifuge	4	Ref 2	100	106
Sludge Feed Pump (Progressive Cavity Type)	4	Ref 1	80	86
<i>Northwest Kowloon PTW Building</i> Exhaust Fan for odour control facility	4	Ref 1	80	86
<i>Odour Control Facilities (Option 2 - Decentralized System)</i> Exhaust Fan at Existing MPS	2	Ref 1	80	83
Exhaust Fan at Stage 2A MPS	2	Ref 1	80	83
Exhaust Fan at Sludge Handling Area	6	Ref 1	80	88
Exhaust Fan at New Primary Sedimentation Tank Area	12	Ref 1	80	91
Exhaust Fan at Flow Distribution Chamber Area	2	Ref 1	80	83
<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.			
Notes: Ref 1: The estimated SWL was made reference to the tender specification for Shatin STW Stage 3 Upgrading. Ref 2: The maximum SWL of the pumpset at 1800 rpm as stated in <i>Good Practice on Pumping System Noise Control</i> (GPPSNC) was used in this assessment.				