

**Contract No. SPW 01/2025  
Environmental Team for  
Construction of Yuen Long  
Effluent Polishing Plant Stage  
1**

**Monthly EM&A Report (November 2025)  
Drainage Services Department**

2025-12-11



**Contract No. SPW 02/2025**

**Independent Environmental Checker for  
Construction of Yuen Long Effluent Polishing Plant  
Stage 1 (2025-2026)**

**Environmental Permit No. EP-565/2019/A**

**EP Condition 3.4 – Monthly EM&A Report for  
November 2025**

12 December 2025

**By Hand and By E-mail**

**For the attention of: Mr. Simon H.M. YEUNG – CRE(C)**

Dear Sir,

I refer to the captioned Monthly EM&A Report for November 2025 (Revision 1) which was received via e-mail and certified by the Environmental Team Leader on 11 December 2025 (ref.: PL-202512017).

I have no comment on the captioned report and hereby verify that this submission has complied with the requirements set out in the EM&A Manual (in particular Sections 12.4.1 and 12.4.4) for the captioned project, in accordance with Condition 3.4 of Environmental Permit No. EP-565/2019/A.

Should you have any queries regarding the captioned or require any further information, please contact the undersigned at 2828 5875.

Yours faithfully  
for MOTT MACDONALD HONG KONG LIMITED

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Ref: PL-202512017

**By Email**

11 December 2025

**Mott MacDonald**  
**3/F Manulife Tower,**  
**348 Kwun Tong Road,**  
**Kwun Tong, Kowloon,**  
**Hong Kong**

**Attn: Mr. Brandon Wong, IEC**

**Dear Sir,**

**Contract No. SPW 01/2025**  
**Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1**  
**Environmental Permit No. EP-565/2019/A**  
**EP Condition 3.4 – Monthly EM&A Report for November 2025**

Pursuant to Clause 3.4 of Environmental Permit No. EP-565/2019/A for the captioned project, we are pleased to submit the certified Monthly EM&A Report for November 2025 (Rev.1) for your verification.

Should you have any queries regarding the captioned or require any further information, please contact the undersigned at 2531 0243.

Yours faithfully,  
For and on behalf of  
Aurecon Hong Kong Limited

A handwritten signature in black ink, appearing to be "V. Lu", written over a horizontal line.

Vincent M. J. Lu  
Environmental Team Leader

Encl.

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# EXECUTIVE SUMMARY

This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. SPW 01/2025 “Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1”. Drainage Services Department (DSD) has appointed Aurecon Hong Kong Limited (Aurecon) to undertake the Environmental Team services for the project and implement the EM&A works.

This is the 56<sup>th</sup> Monthly EM&A Report for the construction phase which summaries findings of the EM&A programme during the reporting period from 1 November 2025 to 30 November 2025. As informed by the Contractor, major activities in the reporting month were:

- Fixing GRC panel at CLP Substation
- ELS Works for Modification of Existing Inspection Chamber and Inlet Effluent Pipes from NSWSPS
- T&C Works at IW
- ELS works at IW (Remaining area)
- ELS works at PST Stage 2
- ELS work at SDB
- demolition work of existing building at ADB
- External works at site-wide include water meter cabinet
- RC works at AGS
- RC structure at TTS
- ABWF and E&M works at STB
- Demolish Existing SDT 1-4
- RC work at Sludge Digester no. 1-3
- T&C work at Biogas Holder no. 1
- Disposal of construction waste as indicated in **Appendix I**.

## **Breaches of Environmental Quality Performance Limits (AL levels)**

No Action and Limit Level exceedance was recorded for air quality monitoring and construction noise monitoring in the reporting month.

No Action and Limit Level exceedance was recorded for water quality monitoring in the reporting month.

No Action / Limit exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the two active ardeid night roosts (ANR1 and ANR2) observed within the Survey Area during the reporting month.

No Action / Limit exceedance for the ecological monitoring of birds in the reporting month.

No corrective actions were required according to the Event and Action Plans for the Monitoring Parameters.

## **Land Contamination**

Regular site inspection was carried out to ensure the recommended mitigation measures are properly implemented. The signed final Contamination Assessment Report (CAR) for “Main Storeroom & Workshops”, “Mechanical Workshop”, “Waste Storage Area”, “SAS Thickener House-1”, “SAS Thickener House-2” and “Screening Press House” were submitted to EPD respectively on 1<sup>st</sup> November 2021, 23<sup>rd</sup> November 2021, 29<sup>th</sup> April 2022, 6<sup>th</sup> July 2022, 19<sup>th</sup> June 2023 and 29<sup>th</sup> October 2024. No contaminated soil and ground water was found within the Main Storeroom & Workshop, Mechanical Workshop, Waste Storage Area, SAS Thickener House-1, SAS Thickener House-2 and Screening Press House, and no remedial action is required for these locations.

## **Complaint Log**

No complaints were received in the reporting period.

## **Notifications of Summons and Successful Prosecutions**

No notifications of summons and successful prosecutions were received in the reporting period.

## **Reporting Change**

There were no reporting changes during the reporting month.

## **Future Key Issues**

The main works anticipated in the next three months are as follow:

- Fixing GRC panel at CLP Substation
- ELS Works and Pipe works for Modification of Existing Inspection Chamber and Inlet Effluent Pipes from NSWSPS
- T&C Works at IW
- RC, ABWF and E&M works at IW (Remaining area)
- RC, ABWF and E&M works at PST Stage 2
- ELS work and RC work at SDB
- Predrill works and ELS work at ADB
- External works at site-wide include water meter cabinet
- RC structure at AGS
- RC structure at TTS
- ABWF and E&M work at STB
- RC and E&M work at H2S
- ELS work at UC3
- RC structure at Sludge Digester no. 1-3 with PP1
- ELS work at Sludge Digester no. 4-6
- RC work at Biogas Holder no. 2-3 foundation



# 1 INTRODUCTION

## 1.1 Background

- 1.1.1 The existing Yuen Long Sewage Treatment Works (YLSTW) is a secondary sewage treatment works, located at Yuen Long Industrial Estate serves Yuen Long Town, Yuen Long Industrial Estate and Kam Tin areas with a design capacity of 70,000 m<sup>3</sup> per day. Based on the latest planning data, the volume of sewage generation from the YLSTW catchment is estimated to increase to 150,000 m<sup>3</sup> per day after 20 years. In addition, since YLSTW has been operating for over 30 years and most of its facilities are of out-dated design and reaching the end of their design life, the environmental facilities of the plant will also be upgraded and hence improving the adjacent environment through upgrading the YLSTW to Yuen Long Effluent Polishing Plant (YLEPP). The Location of Proposed Yuen Long Effluent Polishing Plant is given in **Figure 1**.
- 1.1.2 YLSTW will be reconstructed in two stages to increase its capacity to 150,000 m<sup>3</sup> per day. The proposed works, as Stage 1 of the project, will firstly increase the treatment capacity to 100,000 m<sup>3</sup> per day. In the course of Stage 1 construction, about half of the existing facilities of YLSTW would be demolished, while the other half would be kept in operation to maintain the sewage treatment service for Yuen Long area. This 72-month works contract commenced on 9 November 2020. Demolition of existing YLSTW for construction of new treatment facilities are in progress.
- 1.1.3 The Project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) for which Environmental Impact Assessment (EIA) report and Environmental Monitoring and Audit (EM&A) Manual was approved by EPD (Register No.: AEIAR-220/2019) on 25 April 2019. The Environmental Permit (EP) (EP No. EP-565/2019) was issued by EPD on 26 April 2019. Variation of the Environmental Permit (EP) (EP No. EP-565/2019/A) was issued by EPD on 26 November 2024.
- 1.1.4 Fugro Technical Services Limited was appointed as the Environmental Team (ET) by Drainage Services Department (DSD) to undertake the Environmental Team services for the Project and implement the EM&A works under the Contract No. DC/2019/10 Yuen Long Effluent Polishing Plant -Main Works for Stage 1 (hereinafter referred as “the Contract”) for the period from July 2020 to 6 July 2023.
- 1.1.5 Aurecon Hong Kong Limited (Aurecon) has been appointed as the Environmental Team (ET) by Drainage Services Department (DSD) to undertake the Environmental Team services for the Project and implement the EM&A works under the Contract from July 2023. Air quality, noise, water quality and ecological monitoring, site inspections and auditing (as scheduled) under EM&A programme with effect from 7 July 2023 was conducted by Aurecon. Aurecon is undertaking the preparation (including reporting of monitoring results), certification by ET Leader and submission of this report to EPD.
- 1.1.6 All ET roles and responsibilities under the EP for this Project were undertaken by Fugro up to 6 July 2023 and by Aurecon with effect from 7 July 2023. Air quality, noise, water quality and ecological monitoring, site inspections and auditing (as scheduled) under EM&A programme up to 6 July 2023 was conducted by Fugro, and the corresponding monitoring results were shared with Aurecon for the purposes of reporting in this report.
- 1.1.7 This is the 56<sup>th</sup> Monthly EM&A report to document the findings of site inspection activities and EM&A programme for this project from 1 November 2025 to 30 November 2025 (reporting period) and is submitted to fulfil Condition 3.4 of the EP and Section 12.4.1 of the EM&A Manual. According to Condition 4 of the EP, electronic reporting is provided on the internet website to facilitate public inspection of the report.

## 1.2 Project Organization

1.2.1 The Project Organization structure is shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1**.

**Table 1** Contact Information of Key Personnel

Party	Position	Name	Telephone
Project Proponent (Drainage Services Department)	Engineer	Mr. Wallace Cheng	2594 7473
	Engineer	Mr. Ricky Li	2594 7572
Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Mr. Simon Yeung	9075 7172
	Senior Resident Engineer	Mr. Patrick Leung	6124 8838
Independent Environmental Checker (Mott MacDonald Hong Kong Limited)	Independent Environmental Checker (IEC)	Mr. Brandon Wong	2828 5875
Contractor (Paul Y. - CREC Joint Venture)	Environmental Specialist	Mr. Gabriel Wong	5269 5723
	Environmental Officer	Mr. Henry Lau	5490 5271
Environmental Team (Aurecon Hong Kong Limited)	Environmental Team Leader (ETL)	Mr. Vincent Lu	6346 5908

## 1.3 Construction Programme and Activities

1.3.1 The construction programme of this project is shown in **Appendix A**.

## 1.4 Works undertaken during the month

1.4.1 The main construction works carried out in the reporting period were as follow:

- Fixing GRC panel at CLP Substation
- ELS Works for Modification of Existing Inspection Chamber and Inlet Effluent Pipes from NSWSPS
- T&C Works at IW
- ELS works at IW (Remaining area)
- ELS works at PST Stage 2
- ELS work at SDB
- demolition work of existing building at ADB
- External works at site-wide include water meter cabinet
- RC works at AGS
- RC structure at TTS
- ABWF and E&M works at STB
- Demolish Existing SDT 1-4
- RC work at Sludge Digester no. 1-3
- T&C work at Biogas Holder no. 1

1.4.2 The environmental mitigation measures corresponding to the main construction works implemented in the reporting period can be referred to **Appendix J**.

## 1.5 Status of Environmental Licences, Notification and Permits

1.5.1 A summary of the status of the relevant permits, licenses and/or notifications on environmental protection for this project is presented in **Table 2**.

**Table 2 Environmental Licenses, Notification and Permits Summary**

Permit/ Notification/ License	Reference No	Valid From	Valid Till
Environmental Permit	EP-565/2019/A	26-Nov-2024	The whole construction and operation period of the Project
Notification of Works under APCO	461616	6-Nov-2020	The whole construction and operation period of the Project
Construction Waste Disposal Billing Account	7038933	20-Nov-2020	The whole construction and operation period of the Project
Registration as Chemical Waste Producer under WDO	WPN5213-528-P2796-03	4-Feb-2021	The whole construction and operation period of the Project
Construction Noise Permit	GW-RN0850-25	6-Aug-2025	5-Feb-2026
Construction Noise Permit	GW-RN1018-25	4-Sep-2025	3-Dec-2025
Water Pollution Control Ordinance (WPCO) (CAP. 358) Licence pursuant to Section 20 (Variation of Licence Pursuant to Section 28 of WPCO)	WT00038102-2021	1-Dec-2022	31-Aug-2026
Wastewater Discharge License (YLEPP)(Variation) 4 nos. Wetsep	Ref. 493768	11-Dec-2023	31-Aug-2026
Wastewater Discharge Licence (WA1)	WT00041585-2022	27-July-2022	31-July-2027
Marine Dumping Permit (Excavated Sediment of Category L - Suitable for Capping Exhausted Contaminated Mud Pits)	EP/MD/26-019	26-Aug-2025	3-Dec-2025
Marine Dumping Permit (Type 1 – Open Sea Disposal (Dedicated Site) and Type 2 – Confined)	EP/MD/26-027	28-Sep-2025	3-Dec-2025
Disposal of Special waste at Landfills Admission Ticket (Pond Sediment)	Admission Ticket Number: 114319	7-Oct-2025	6-Dec-2025
Revised Sediment Quality Report (SQR)	(35) in EP60/G1/12-583V	4-Dec-2024	3-Dec-2025

## 2 AIR QUALITY

### 2.1 Monitoring Requirement

- 2.1.1 In accordance with the EM&A Manual, 1-hour Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring stations to ensure that any deteriorating air quality could be readily detected and timely action shall be undertaken to rectify such situation. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days when the highest dust impact occurs.

### 2.2 Monitoring Equipment

- 2.2.1 A portable direct reading dust meter was used to carry out the 1-hour TSP monitoring at the designated monitoring stations.
- 2.2.2 Wind data monitoring equipment is provided at the conspicuous locations for logging wind speed and wind direction near to the dust monitoring locations. The equipment installation location is agreed with the ER and the IEC.
- 2.2.3 The details of the air quality monitoring equipment used are summarized in **Table 3**.

**Table 3** Air Quality Monitoring Equipment

Item	Location	Brand	Model	Equipment	Serial No.
1	AM1	Sibata	Model LD-5R	SIBATA LD-5R Digital Dust Indicator	851816, 882106
2	AM2				

### 2.3 Monitoring Methodology for Direct Reading Dust Meter

- 2.3.1 SIBATA LD-5R Digital Dust Indicator complete with appropriate sampling inlets are employed for 1-hour TSP measurement.

#### Measuring Procedures

- Pulling up the air sampling inlet cover
- Changing the Mode 0 to BG
- Pressing Start/Stop switch
- Turning the knob to SENSI.ADJ and press it
- Pressing Start/Stop switch again
- Returning the knob to the position MEASURE slowly
- Pressing the timer set switch to set measuring time
- Removing the cap and start the measurement

#### Equipment Calibration

1-hour dust meter should be calibrated at 1 year intervals. The calibration certificates are presented in **Appendix D**.

## 2.4 Maintenance and Calibration for Direct Reading Dust Meter

- 2.4.1 ET shall submit sufficient information to the IEC to prove that the instrument is capable of achieving comparable results to the HVS. The instrument should also be calibrated regularly, and the 1-hour sampling shall be determined periodically by the HVS to check the validity and accuracy of the results measured by direct reading method. The calibration certificate for the direct reading dust meter is provided in **Appendix D**.

## 2.5 Monitoring Locations

- 2.5.1 In accordance with the EM&A Manual, two air quality monitoring locations, namely AM1, AM2 are covered under Contract No. SPW 01/2025 “Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1”.
- 2.5.2 The most updated locations are summarized in **Table 4** and the locations of the air monitoring stations shown in **Figure 2**.

**Table 4 Air Quality Monitoring Location**

Monitoring Station	Location
AM1	Topfine Machinery (China) Co. Ltd
AM2	Squatter house at the west of YLSTW

## 2.6 Monitoring Results

- 2.6.1 The schedule of air quality monitoring in reporting month is provided in **Appendix E**.
- 2.6.2 No Action / Limit Level exceedance was recorded for 1-hr TSP at AM1 and AM2.
- 2.6.3 No effect that arose from the other special phenomena and work progress of the concerned site was noted during the current monitoring month.
- 2.6.4 The weather and meteorological conditions during the monitoring are provided in **Appendix K**.
- 2.6.5 The Air Quality Monitoring Results of 1-hr TSP are summarized in **Table 5**. Detailed monitoring data are presented in **Appendix F**.

**Table 5 Summary of Air Quality Monitoring Results**

Monitoring Station	Average ( $\mu\text{g}/\text{m}^3$ )	Range ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
1-hour TSP				
AM1	44	36-52	291	500
AM2	44	39-53	296	

- 2.6.6 The Action and Limit Levels for air quality monitoring have been set and are presented in **Appendix C**.
- 2.6.7 The Event and Action Plan for air quality is given in **Appendix H**.
- 2.6.8 The wind data obtained from the on-site wind station during the reporting period is provided in **Appendix G**.

## 2.7 Comparison of 1-hr TSP Monitoring Results with EIA Predictions

2.7.1 The monitoring data of 1-hr TSP was compared with the EIA predictions as summarized in **Table 6**.

**Table 6** Comparison of 1-hr TSP data with EIA predictions

Monitoring Station	EIA ID	Predicted Maximum Hourly Average TSP Concentration (µg/ m <sup>3</sup> )	Maximum 1-hr TSP Monitoring Results in November 2025 (µg/ m <sup>3</sup> )
Content			
AM1	ASR A09	205-451	52
AM2	ASR A11		53

Notes: Predicted TSP Concentration extracted from Table 3.20 of EIA Report, AEIAR-220/2019

2.7.2 The 1-hr TSP monitoring results at AM1 and AM2 were below the Predicted Maximum Hourly Average TSP Concentration in the approved Environmental Impact Assessment (EIA) Report.

## 3 NOISE

### 3.1 Monitoring Requirement

- 3.1.1 In accordance with the EM&A Manual, Leq (30min) monitoring is conducted at least once a week when there are Project-related construction activities being undertaken within a radius of 300 m from the monitoring stations. The monitoring is conducted during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.

### 3.2 Monitoring Equipment

- 3.2.1 As referred to the requirements of the Technical Memorandum (TM) issued under the NCO, the sound level meters in compliance with the International Electro technical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications should be used for carrying out the noise monitoring. Immediately prior to and following each noise measurement, the accuracy of the sound level meter should be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The measurements may be accepted as valid only if the difference between calibration levels obtained before and after the noise measurement is less than 1.0 dB (94 dB  $\pm$  0.1 dB).
- 3.2.2 The details of the noise monitoring equipment used are summarized in **Table 7**.

**Table 7 Construction Noise Monitoring Equipment**

Item	Brand	Model	Equipment	Serial No.
1	RION	NL-53	RION NL-53 Sound Level Meter	01130785
2	RION	NL-53	RION NL-53 Sound Level Meter	01130783
3	RION	NL-53	RION NL-53 Sound Level Meter	01130784
4	RION	NC-75	RION NC-75 Acoustic Calibrator	34724244
5	RION	NC-75	RION NC-75 Acoustic Calibrator	34724245
6	RION	NC-75	RION NC-75 Acoustic Calibrator	35124530

### 3.3 Monitoring Parameters and Frequency

- 3.3.1 The parameters and frequencies of impact noise monitoring is summarized in **Table 8**.

**Table 8 Monitoring Parameters and Frequencies of Noise Monitoring**

Parameter	Frequency
L <sub>Aeq</sub> (30 min) (L <sub>10</sub> and L <sub>90</sub> will be recorded for reference)	At each station at 0700-1900 hours on normal weekdays at a frequency of once a week when construction activities are underway

### 3.4 Monitoring Methodology

- 3.4.1 Noise measurement should be conducted as the following procedures:
- The monitoring station will set at a point 1m from the exterior of the sensitive receivers building façade and set at a position 1.2m above the ground. (In case façade measurement is not feasible on-site, a free field correction of +3dB(A) will be applied.)

- The battery condition was checked to ensure good functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time will set as follows:
  - frequency weighting: A
  - time weighting: Fast
  - measurement time: 30 minutes
- Prior to and after noise measurement, the meter shall be calibrated using the calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement will consider invalid and repeat of noise measurement is required after re-calibration or repair of the equipment.
- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s. Calibration certificate of the anemometer is provided in **Appendix D**.

## 3.5 Maintenance and Calibration

3.5.1 Maintenance and calibration procedures should also be carried out, including:

- The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.
- The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory.
- Relevant calibration certificates are provided in **Appendix D**.

## 3.6 Monitoring Locations

3.6.1 In accordance with the EM&A Manual, three noise monitoring locations, namely CM1, CM2 and CM3 are covered under Contract No. SPW 01/2025 “Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1”.

3.6.2 The most updated locations are summarized in **Table 9** and the locations of the noise monitoring stations shown in **Figure 3**.

**Table 9 Construction Noise Monitoring Location**

Monitoring Station ID	Location	Measurements
CM1	Squatter house at the north of YLSTW	Free Field
CM2	Squatter house at the west of YLSTW	Free Field
CM3	Squatter house at the east of YLSTW	Free Field

Note: Correction of +3 dB(A) shall be made to the free field measurements.

## 3.7 Monitoring Results

3.7.1 The schedule of noise monitoring in reporting month is provided in **Appendix E**.

3.7.2 No Action / Limit Level exceedance of location CM1, CM2 and CM3 was recorded for construction noise in the reporting month.



- 3.7.3 During the monitoring month, at CM2, road traffic from the squatter house at the west of Yuen Long STW was observed, at CM3, road traffic from the Nam Sang Wai Road was observed. No effect that arose from the other special phenomena and work progress of the concerned site for CM1 was noted during the current monitoring month.
- 3.7.4 No raining and wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation. The weather and meteorological conditions during the monitoring month are provided in **Appendix K**.
- 3.7.5 The Construction Noise Monitoring Results are summarized in **Table 10**. Detailed monitoring data are presented in **Appendix F**.

**Table 10 Summary of Construction Noise Monitoring Results**

Time Period	Noise Monitoring Stations	Leq (30min) dB(A) (Range)	Action Level	Limit Level dB(A)
0700-1900 hrs on normal weekdays	CM1	55.2 – 60.3	When one documented complaint is received	75
	CM2	56.4 – 59.4		75
	CM3	56.3 – 58.2		75

Remark: CM1, CM2 and CM3: Free-field measurement (+3 dB(A) correction has been applied).

- 3.7.6 The Action and Limit Levels for Construction Noise have been set and are presented in **Appendix C**.
- 3.7.7 The Event and Action Plan for Construction Noise is given in **Appendix H**.

## 3.8 Comparison of Noise Monitoring data with EIA Predictions

- 3.8.1 The noise monitoring data was compared with the EIA predictions as summarized in **Table 11**.

**Table 11 Comparison of Noise monitoring data with EIA predictions**

Monitoring Station	EIA ID	Maximum Predicted Mitigated Construction Noise Level $L_{eq}$ (30min) dB(A)	Maximum Construction Noise Level in November 2025 $L_{eq}$ (30min) dB(A)
CM1	NSR1	72	60.3
CM2	NSR2	74	59.4
CM3	NSR3	75	58.2

Notes: Predicted TSP Concentration extracted from Table 4.9 of EIA Report, AEIAR-220/2019

- 3.8.2 The construction noise monitoring results at CM1, CM2 and CM3 were below the Maximum Predicted mitigated Construction Noise Level in the approved Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-220/2019).

## 4 WATER QUALITY

### 4.1 Monitoring Requirement

- 4.1.1 In accordance with the EM&A Manual, impact monitoring is conducted for three days per week at mid-flood and mid-ebb with sampling and measurement at the designated monitoring stations.

### 4.2 Monitoring Equipment

- 4.2.1 Equipment used for in-situ measurement and water sampling during impact water quality monitoring is summarised in **Table 12**. The equipment is in compliance with the requirements set out in the EM&A Manual. All in-situ monitoring instruments were calibrated by a HOKLAS- accredited laboratory. Calibration of temperature, DO, salinity, pH and turbidity is conducted in three-month interval. Calibration certificates for the water quality monitoring equipment are attached in **Appendix D**.

**Table 12 Water Quality Monitoring and Sampling Equipment**

Parameter	Equipment	Model	Range	Equipment Accuracy	Serial No.
Temperature Dissolved Oxygen Salinity pH Turbidity	YSI Water Quality Multipara meter Sonde	Xylem ProDSS	Tem: -5 to 50°C DO: 0-50mg/L DO%: 0-500% Sal: 0 to 70ppt pH: 0 to 14 pH units Turb: 0- 4000NTU	Temp: $\pm 0.2^{\circ}\text{C}$ ; DO: $\pm 0.1\text{mg/L}$ or 1% for 0-20mg/L; $\pm 8\%$ for 20-50mg/L Sal: $\pm 1\%$ of reading or 0.1 ppt (whichever is greater) pH: $\pm 0.2$ units Turb: $\pm 3\%$ or 0.3NTU (FNU) (whichever greater)	24G101660
Current Velocity and Direction	Current Meter	Valeport Model 106	Speed: 0.03 to 5 m/s Direction: 0 to 360	Speed: $\pm 1.5\%$ of reading above 0.15m/s, $\pm 0.004$ m/s below 0.15m/s Direction: $\pm 2.5^{\circ}$	N/A
Water Sampling	Water Sampler	Aquatic Research Instruments 2.2L Horizontal Water Sampler HWS2.2CP	N/A	N/A	N/A
Positioning	DGPS	GARMIN GPSMAP 78s	N/A	GPS: $\pm 1\text{m}$	N/A
Water Depth	Echo Sounder	Garmin ECHO 101	Maximum depth: 457.2 m	0.1 m	N/A

### 4.3 Equipment Calibration

- 4.3.1 All in-situ monitoring instruments shall be checked, calibrated and certified by a laboratory accredited under HOKLAS before use and subsequently re-calibrated at three monthly intervals throughout all stages of the water quality monitoring programme. Responses of sensors and electrodes shall be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.

- 4.3.2 Sufficient stocks of spare parts shall be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring is uninterrupted even when some equipment is under maintenance or calibration etc.

## 4.4 Monitoring Parameters

The monitoring parameters and frequency for both in-situ measurement and laboratory analysis are summarised in **Table 13**.

**Table 13 Monitoring Parameters and Frequency**

Parameters	Monitoring Frequency
<u>In-situ Measurement</u> Turbidity (in NTU), pH, DO (in mg/L and % of saturation), Temperature (in °C), Salinity (in ppt)	3 days per week, at mid-flood and mid-ebb tides (The interval between two sets of monitoring shall not be less than 36 hours.)
<u>Laboratory Analysis</u> Suspended Solids	

## 4.5 Monitoring Operation

- 4.5.1 The position of water monitoring station will be located by the Differential Global Positioning System (DGPS) or equivalent. The water depth of water monitoring station will be determined by the echo sounder affixed to the bottom of the monitoring vessel or a portable echo sounder depth detector.
- 4.5.2 Once the location and water depth are confirmed, water samples shall be collected at 3 depths (1m below the surface, mid-depth, and 1m above the seabed) of the water column at each location, except where water depth is less than 6m, the mid-depth will be omitted and if the water depth is less than 3m only the mid-depth station will be monitored. Duplicate marine samples will be collected in each sampling event. The water samples are decanted from the water sampler into the water sample bottles. The bottles are labelled, tightly sealed, placed into a cool-box and packed with ice ready for delivery to the laboratory.
- 4.5.3 Two consecutive measurements of water quality data, including pH, salinity, dissolved oxygen and turbidity will be recorded according to the monitoring locations. Separate deployment of the monitoring instruments and water samplers will be conducted for the consecutive measurements or samplings. The monitoring location / position, time, water depth, sampling depth, tidal stages, weather conditions, sea condition and any special phenomena or work underway nearby shall also be recorded. If the difference in value between the first and second measurement of DO or turbidity parameters is more than 25% of the value of the first reading, the reading shall be discarded and further readings should be taken.

## 4.6 Laboratory Measurement / Analysis

### Background

- 4.6.1 Acumen Laboratory and Testing Limited (HOKLAS Reg: No.241) has been appointed to conduct the laboratory measurement or analysis of water sample in this project.

### Quality Assurance / Quality Control

4.6.2 The laboratory incorporates a variety of QA/QC monitoring programme into their testing system. Where applicable or available, the quality of the analysis will be monitored by conducting the following QC analysis:

For each batch of 20 samples:

- A minimal of 1 laboratory method blank will be analyzed;
- A minimal of 1 sample duplicate will be analyzed;
- A minimal of 1 sample matrix spike will be analyzed.

## 4.7 Monitoring Locations

4.7.1 In accordance with the EM&A Manual, water quality monitoring should be carried out at 3 designated monitoring locations.

4.7.2 The coordinates of the monitoring location stated in the EM&A Manual is summarised in **Table 14** and the locations of the water quality monitoring stations shown in **Figure 4**.

**Table 14** Coordinates of Water Quality Monitoring Locations

Sampling Location		Easting	Northing
M1	Serve as the control station at upstream location of construction site (Flood Tide) / Serve as the impact station at downstream location of construction site (Ebb Tide)	821 086	836 656
M2	Serve as the impact station at downstream location of construction site (Flood Tide)/ Serve as the control station at upstream location of construction site (Ebb Tide)	820 996	836 246
M3	Serve as the impact station at downstream location of construction site (Flood Tide) / Serve as the control station at upstream location of construction site (Ebb Tide)	820 645	820 335

## 4.8 Monitoring Results

4.8.1 The schedule of water quality monitoring in reporting month is provided in **Appendix E**.

4.8.2 Impact water quality monitoring was conducted at all designated monitoring stations in the reporting month. Impact water quality monitoring results and graphical presentations are provided in **Appendix F**.

4.8.3 The weather and meteorological conditions during the monitoring are provided in **Appendix K**.

4.8.4 Number of Action/ Limit exceedance recorded in the reporting month at each impact stations is summarized in **Table 15**.

**Table 15 Summary of Water Quality Exceedance**

Sampling Location	Exceedance Level	DO		Turbidity		Suspended Solids		Total	
		Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb
M1	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
M2	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
M3	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0
Total	Action	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0

4.8.5 During the reporting period, no Action and Limit Level exceedance was recorded for water quality monitoring.

4.8.6 The Event and Action Plan for water quality is given in **Appendix H**.

## 4.9 WetSeps

Four WetSeps are deployed within the site for treatment of the site runoff prior to disposal in compliance with the conditions stipulated in the water discharge license (Variation of WPCO Discharge Licence was approved by EPD on 11 December 2023 with immediate effect).

## 5 ECOLOGY MONITORING

### 5.1 Ardeid Night Roost Monitoring

#### 5.1.1 Monitoring Requirement

With reference to the Pre-construction Ardeid Night Roost survey (January 2021) findings that identified two active ardeid night roosts within 100 m from the Project boundary (one approximately 40 m east of the Project boundary and the other one approximately 45 m northeast of the Project boundary), consequent monthly monitoring of these active ardeid night roosts was done in accordance to the **EM&A Manual Sections 7.3.10 and 7.3.11**; and **EIA Report Section 8.12.1.3**.

The Ardeid Night Roost Monitoring survey was conducted with the following objectives:

- Check the status and location of any active ardeid night roosts within 100 m from the Project boundary (Survey Area) with reference to **EM&A Manual Section 7.3.10**;
- Monitor the effectiveness of proposed mitigation measures and detect any unpredicted indirect ecological impacts arising from the proposed Project as specified in **EIA Report Section 8.12.1.3**; and
- Recommend remedial actions, where appropriate, based on the impact monitoring results (**EIA Report Section 8.12.1.3**) for the implementation of the contractor as only necessary.

#### 5.1.2 Monitoring Methodology

##### 5.1.2.1 Monitoring Area

With reference from **Section 7.3.10** of the **approved EM&A Manual**, the monitoring was conducted in areas within 100 m from the Project boundary. The monitoring area and vantage points for direct observation of any active night roosts are shown in **Appendix O**.

##### 5.1.2.2 Monitoring Activity

##### 5.1.2.2.1 Active Ardeid Night Roost

Current Ardeid Night Roost Monitoring Survey focused on the two active night roosts within the Survey Area (100 m from the Project boundary) that were previously confirmed during the pre-construction Survey. These roosts include one that was approximately 40 m east of the Project boundary and another around 45 m northeast of the mentioned boundary (**Section 3** of the **approved Pre-construction Survey Report of Ardeid Night Roost**). Primary data collection with the use of 8x and 10x binoculars; and field guides including the Avifauna of Hong Kong (Carey et al., 2001) and The Birds of Hong Kong and South China (Viney et al., 2005), was from about one hour before sunset time until one hour after sunset with reference to **Section 7.3.10 of the approved EM&A Manual**. Sunset time was according to Hong Kong Observatory (HKO). The survey was conducted on 21 November 2025.

Species composition, abundance and locations of night roosts were recorded. Species composition, abundance and location of pre-roosting aggregations (PRA) were also noted. PRAs are gatherings of avian individuals prior to flying into a night roost (Moore and Switzer, 1998). The time of return of the ardeids to the pre-roost and the final night roost were also recorded. Direct observations were made from vantage points adjacent the Project site with clear and unobstructed view of any active roosting location (s) within the Survey Area. However, aside from the established vantage points for the focused mangrove strips along Shan Pui River, observations were also conducted throughout the whole 100 m study site to cover other areas aside from the mangrove strips.

Observations such as any changes in site condition or disturbances detected or observed at the monitoring locations, including both construction and non-construction related activities, during the monitoring activity was recorded with reference to **Section 7.3.10** of the **approved EM&A Manual**. Additionally, other observations such as bird droppings on the ground which may possibly indicate presence of night roosts were noted in addition to noting of the roosting substrate (i.e. substrate species and approximate height). Any breeding activity usage of the roosting locations within the Survey Area was also noted.

#### 5.1.2.2.2 Noise Monitoring

##### Monitoring Locations, Frequency, Time and Parameters

The noise monitoring locations were established at 22°28'4.25"N, 114°1'41.32"E; and 22°28'10.43"N, 114°1'42.17"E for NMS1 and NMS2 stations, respectively. Monitoring frequency was only once a month in concurrence with the construction phase monthly monitoring of the active night roosts for correlation. Monitoring time for both stations started around 17:29, the earliest final night roost period recorded during the survey and lasted for 30 minutes. **Table 16** presents the monitoring parameters.

**Table 16 Noise Monitoring Parameters (For Active Ardeid Night Roost Survey)**

Parameter	Frequency and Period
LAeq (30 min) (L10 and L90 will be recorded for reference)	Monthly in concurrence with the construction phase monthly monitoring of the active night roosts

The Action and Limit Levels for Active Ardeid Night Roost Survey have been set and are presented in **Appendix C**.

However, exceedances to the limit level were endeavoured to be prevented by the full implementation of mitigation measures (**Section 4.2** of the **approved Pre-construction Survey Report of Ardeid Night Roost** and **Sections 5.2.1-5.2.2** of this **Report**) during the construction phase.

##### Event and Action Plan

In instances of exceedance/s in the action and/or limit levels, the different measures as specified in **Table 3.3 Event and Action Plan for Construction Noise** of the **approved EM&A Manual** and likewise presented in **Appendix H** of this report shall be implemented as responses.

### 5.1.3 Monitoring Results

#### 5.1.3.1 Active Ardeid Night Roost

The monitoring activity was conducted on 21 November 2025 and started around 16:38 (one hour before sunset) on a low tide condition. During the pre-roost period (PRP), the period when avian individuals gather first before flying into a night roost, individuals of Chinese Pond Heron *Ardeola bacchus* (3), Great Egret *Ardea alba* (1) and Grey Heron *Ardea cinerea* (1) were observed in pre-roost aggregate (PRA) around 17:15 at the mudflat east side ANR1 of the Project boundary while individuals of Chinese Pond Heron *Ardeola bacchus* (7), Great Egret *Ardea alba* (2), Little Egret *Egretta garzetta* (1) and Grey Heron *Ardea cinerea* (3) were concurrently noted at the mudflat northeast side ANR2 of the Project boundary (Table 17).

For the final night roost at around 17:29, individuals of Chinese Pond Heron *Ardeola bacchus* (4) and Grey Heron *Ardea cinerea* (1) were observed at the roosting area ANR1 utilizing the understory to canopy layer of the roosting substrate *Sonneratia apetala* and *S. caseolaris*; while other individuals of Chinese Pond Heron *Ardeola bacchus* (24), Great Egret *Ardea alba* (7), Little Egret *Egretta garzetta* (2) and Grey Heron *Ardea cinerea* (4) were noted at ANR2 that utilized the understory to canopy layer of the aforementioned roosting substrate.

No disturbance (construction related and/or otherwise) to the active night roost areas was observed during the period. Bird droppings were observed within the vicinity of the roosting area located east of the Project boundary.



Table 17 Active Ardeid Night Roost Survey Findings

Date: 21 November 2025			Sunset Time: 17:38 Tidal Condition: Low Tide			
Pre-roost Period			Final roost Period			
Time of Return:	Chinese Pond Heron <i>Ardeola bacchus</i> , Great Egret <i>Ardea alba</i> , Little Egret <i>Egretta garzetta</i> and Grey Heron <i>Ardea cinerea</i> (17:15)		Time of Return:	Chinese Pond Heron <i>Ardeola bacchus</i> , Great Egret <i>Ardea alba</i> , Little Egret <i>Egretta garzetta</i> and Grey Heron <i>Ardea cinerea</i> (17:29)		
Parameters	Location		Parameters	Location		
	ANR1	ANR2		ANR1	ANR2	
Pre-roost Aggregation (Y/N):	N	Y	Substrate Species:	<i>Sonneratia apetala</i> and <i>S. caseolaris</i>		<i>Sonneratia apetala</i> and <i>S. caseolaris</i>
Substrate Species:	<i>Sonneratia apetala</i> and <i>S. caseolaris</i>	<i>Sonneratia apetala</i> and <i>S. caseolaris</i>	Substrate Height (m):	Approx. 5 m.		Approx. 3-4 m.
Substrate Height (m):	Approx. 5 m.	Approx. 3-4 m.				
Ardeid Species Composition	Abundance (individuals)		Ardeid Species Composition	Abundance (individuals)		
	ANR1	ANR2		ANR1	ANR2	
Chinese Pond Heron <i>Ardeola bacchus</i>	3	7	Chinese Pond Heron <i>Ardeola bacchus</i>	4	24	
Great Egret <i>Ardea alba</i>	1	2	Great Egret <i>Ardea alba</i>	-	7	
Little Egret <i>Egretta garzetta</i>	-	1	Little Egret <i>Egretta garzetta</i>	-	2	
Grey Heron <i>Ardea cinerea</i>	1	3	Grey Heron <i>Ardea cinerea</i>	1	4	
Breeding Activity (Y/N):	ANR1	N				
	ANR2	N				

## Notes:

Pre-roost Period: Period when avian individuals gather first before flying into a night roost

ANR1: Active ardeid night roost area east of the Project boundary

ANR2: Active ardeid night roost area northeast of the Project boundary

-: not recorded

#### 5.1.3.2 Noise Monitoring

Noise monitoring activities were conducted on 21 November 2025 in concurrence with the construction phase monthly monitoring of the pre-identified active night roosts. Noise monitoring started at 17:29 and lasted for 30 minutes, until 17:59.

Current survey results showed noise levels (LAeq (30 min.)) at both monitoring stations to be well below the action and limit levels as presented in **Table 18**.

**Table 18 Noise Monitoring Parameters (For Active Ardeid Night Roost Survey)**

Frequency and Period	Location	Start Time	LAeq (30 min.)	Action Level	Limit Level
Monthly in concurrence with the construction phase monthly monitoring of the active night roosts	NMS1	17:29	54.5	65.5 dB(A) <sup>1</sup>	72.2 dB(A) <sup>2</sup>
	NMS2	17:29	53.2		

Notes:

NMS1= Noise monitoring station 1 located east of the Project boundary

NMS2= Noise monitoring station 2 located northeast of the Project boundary

<sup>1</sup>= Behavioural response of some kind more likely to occur (Wright et al. 2010)

<sup>2</sup>= Flight with abandonment of the site becomes the most likely outcome of the disturbance (Wright et al. 2010)

No Action / Limit exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the two active ardeid night roosts (ANR1 and ANR2) observed within the Survey Area during the reporting month.

#### 5.1.4 Detection of Any Unpredicted Indirect Ecological Impacts Arising from the Project

No unpredicted indirect ecological impacts that arose from the project were noted during the current monitoring period.

#### 5.1.5 Summary

##### 5.1.5.1 Status and Location of Any Active Ardeid Night Roost

Two active ardeid night roost areas (ANR1 and ANR2) were observed within the Survey Area during the November 2025 monitoring period. These roosts were located at the mangrove strips in the east and northeast portions of the Project boundary. These were used by individuals of Chinese Pond Heron *Ardeola bacchus*, Great Egret *Ardea alba*, Little Egret *Egretta garzetta* and Grey Heron *Ardea cinerea*.

##### 5.1.5.2 Noise Monitoring Results

Both noise levels at each of the monitoring stations were below the action and limit levels.

## 5.2 Ecological Monitoring of Birds

#### 5.2.1 Monitoring Requirement

With reference to **Section 7.3.6** of the **EM&A Manual**, monthly ecological monitoring of birds, focusing on avifauna species of conservation interest, and overwintering waterbirds utilising wetland habitats in Fung Lok Wai and Nam Sang Wai as well as along Shan Pui River and Kam Tin River within the monitoring area (500 m from the Project Boundary)

was conducted in addition to monitoring on the utilization of wetland habitats by birds also within the same monitoring area as required by **Section 7.3.1** of the **EM&A Manual**.

## 5.2.2 Monitoring Methodology

### 5.2.2.1 Monitoring Area

The monitoring area included wetland habitats in Fung Lok Wai and Nam Sang Wai as well as along Shan Pui River and Kam Tin River within 500m from the Project boundary with reference to **Section 7.3.6** of the **EM&A Manual**. The location of point count sites and transect routes is shown in **Appendix P**.

### 5.2.2.2 Monitoring Activity

Avifauna surveys on the different wetland habitats using the transect count and point count methods were conducted last 11 November 2025 (daytime) which started at around 07:15. Additionally, the survey overlooking the mudflats and mangroves in the Shan Pui River was concurrently conducted on the same date with the daytime survey during the low tide (generally 1.5m or below) period, and also started at around 07:15. The methodology for the monitoring activity followed **Sections 8.3.3.6** and **8.3.3.7** of the **EIA Report (AEIAR-220/2019)** and as detailed below.

For the transect count and point count methods, the presence and relative abundance of avifauna species at various wetland habitats were recorded visually and aurally.

Avifauna species were detected either by direct sighting or by their call and identified to species level. Any notable behaviours such as feeding, roosting and breeding were also recorded. Bird species encountered outside the point count locations and walk transects were also recorded. A comprehensive list of species recorded from the Assessment Area was prepared, with wetland-dependence, conservation and/or protection status indicated. Ornithological nomenclature in this report follows Carey et al. (2001), Viney et al. (2005) and the most recent updated list from Hong Kong Bird Watching Society (HKBWS).

Noise levels were recorded with the methodology and equipment as mentioned in **Section 3.4** and **Section 3.2**, respectively, of this EM&A report. The parameter as shown in was recorded at each of the point count locations.

**Table 19 Noise Monitoring Parameters**

Parameter	Frequency and Period
LAeq (30 min) (L10 and L90 will be recorded for reference)	Monthly in concurrence with the monthly ecological bird monitoring at the different point count locations

In addition to recording of noise levels, any changes in site condition or disturbances detected or observed at the monitoring locations, including both construction and non-construction related activities with reference to **Section 7.3.7** of the **EM&A Manual** were also noted.

### 5.2.2.3 Data Analysis

For the bird communities, the monitoring results were compared to pre-construction baseline condition during the dry and wet seasons as summarized in the Baseline Bird Survey Report with reference to **Section 7.3.8** of the **EM&A Manual**. However, to further account the seasonality, monitoring results of the current month were compared to the results of the corresponding month of the baseline data.

The data for point count method and transect walk method were presented separately to account for the difference in the survey effort of the two methods. For each method, abundance and species composition of the avifauna communities during the monitoring month were summarized.

To check the presence of variation in bird abundance between baseline and impact monitoring, t-test was applied ( $\alpha = 0.05$ ). Moreover, to check the presence of variation in bird species diversity, the two-sided Hutcheson t-test was also used. The two-sided Hutcheson t-test was developed as a method to compare the diversity of two community samples using the Shannon diversity index (Hutcheson 1970). Shannon diversity index will be computed using the formula,  $H' = \sum_{i=1}^s p_i \ln p_i$  where,  $H'$  = Shannon Diversity Index;  $P_i$  = proportion of the population of species;  $i$  = number of species in sample;  $\ln$  = natural logarithm. Shannon diversity index is used as it accounts the proportion (relative abundance) of each species; thus, it gives a better description of diversity than a plain number of species (species richness).

The Action and Limit Levels for ecological monitoring of birds have been set and are presented in **Appendix C**.

Wetland habitat utilization during the construction phase monitoring shall only be compared seasonally, hence the comparison shall only be done after all the data (dry season and wet season) were collected with reference to **Appendix 8.5** of the approved **EIA Report**.

### 5.2.3 Monitoring Results

Results of the avifauna survey on the different habitats within the monitoring area using the transect count and point count methods as conducted last 11 November 2025 (daytime) which started at around 07:15. They are presented in **Sections 5.2.3.1** and **5.2.3.2**. Meanwhile, results for the surveys overlooking the mudflats and mangroves in the Shan Pui River, with monitoring activities conducted on similar date with the daytime survey during the low tide (generally 1.5m or below) period around 07:15 had results presented in **Section 5.2.3.3**.

#### 5.2.3.1 Abundance

##### 5.2.3.1.1 All Avifauna Species

An overall total of 845 avifauna individuals were recorded in the monitoring area during the November 2025 monitoring period, of which 601 individuals were recorded from the point count method and 244 individuals from the transect walk method. Relative to the November 2016 baseline data (point count method = 608; and transect walk = 125), a slight decrease was noted for point count method, and an increase was noted for transect walk method.

Details of these findings are summarized in **Table 20**.

**Table 20 Abundance of all Avifauna Species**

Abundance of all Avifauna Species				
EIA Report ID	EM&A Manual ID	Nov-16	Nov-25	Remarks
<b>Point Count Method</b>				
P1	FLW1	8	37	+
P2	FLW2	13	18	+
P3	FLW3	9	12	+
P4	FLW4	66	44	-
P5	FLW5	21	112	+
P6	FLW6	64	41	-
P7	FLW7	48	64	+
P9	SP/NSW3	214	144	-
P10	SP/NSW2	52	33	-
P11	NSW1	48	74	+
P12	SP/NSW1	65	22	-
<b>Total</b>		<b>608</b>	<b>601</b>	-
<b>Mean</b>		<b>55</b>	<b>54.6</b>	-
<b>Transect Walk Method</b>				
Fung Lok Wai	FLW	107	87	-
Nam Sang Wai	NSW	18	20	+
YLIE-CW	YLIE-CW	0	137	+
<b>Total</b>		<b>125</b>	<b>244</b>	+
<b>Mean</b>		<b>42</b>	<b>81</b>	+

Notes:

+ increased abundance;

- decreased abundance;

= no change in abundance.

No Action / Limit exceedance was recorded for the abundance of all avifauna species (including but not limited to overwintering waterbirds) for both the point-count and transect walk method.

#### 5.2.3.1.2 Avifauna Species of Conservation Importance

Of the 845 avifauna individuals recorded in the monitoring area during the November 2025 monitoring period, 461 individuals (point count method = 337 individuals; transect walk method = 124 individuals) were of conservation importance. With reference to November 2016 data, (point count method = 394; and transect walk = 59), a decrease was noted for point count method and an increase for transect walk method. Details of these findings are summarized in **Table 21**.

Table 21 Abundance of Species of Conservation Importance

Abundance of Species of Conservation Importance				
EIA Report ID	EM&A Manual ID	Nov-16	Nov-25	Remarks
<b>Point Count Method</b>				
P1	FLW1	4	19	+
P2	FLW2	3	11	+
P3	FLW3	2	3	+
P4	FLW4	65	17	-
P5	FLW5	6	60	+
P6	FLW6	50	15	-
P7	FLW7	30	16	-
P9	SP/NSW3	163	123	-
P10	SP/NSW2	11	25	+
P11	NSW1	31	43	+
P12	SP/NSW1	29	5	-
<b>Total</b>		<b>394</b>	<b>337</b>	-
<b>Mean</b>		<b>36</b>	<b>31</b>	-
<b>Transect Walk Method</b>				
Fung Lok Wai	FLW	58	18	-
Nam Sang Wai	NSW	1	8	+
YLIE-CW	YLIE-CW	0	98	+
<b>Total</b>		<b>59</b>	<b>124</b>	+
<b>Mean</b>		<b>20</b>	<b>41</b>	+

Notes:

+ increased abundance;

- decreased abundance;

= no change in abundance.

No Action / Limit exceedance was recorded for the abundance of Species of Conservation Importance in both point-count and transect walk method.

### 5.2.3.2 Diversity (Species Richness<sup>1</sup> and Shannon Diversity Index<sup>2</sup>)

#### 5.2.3.2.1 All Avifauna Species

A total of 61 avifauna species (species richness) were recorded during the November 2025 monitoring period, of which, 53 species were recorded by the point count method while 40 species were noted by the transect walk method. Relative to the baseline data (point count method = 48 species; transect walk method = 20 species), an increase in total species richness for both point count method and transect walk method were recorded. In terms of Shannon diversity index ( $H'$ ) values, current result in point count method showed a significant increase (t-value = 4.30; t-crit = 1.96; p-value = 1.79E-05;  $\alpha$  = 0.05) relative to the baseline reference value. The current results in the transect walk method also showed a significant increase (t-value = 6.65; t-crit = 1.97; p-value = 2.11E-10;  $\alpha$  = 0.05) from baseline reference value. Details of these findings are summarized in **Table 22**, **Appendix F.6.1**, and **Appendix F.6.2**.

<sup>1</sup> actual number of species

<sup>2</sup> use to account the proportion (in terms of relative abundance) of each species

Table 22 Shannon Diversity Index Value of all Avifauna Species

Shannon Diversity Index Value of all Avifauna Species				
EIA Report ID	EM&A Manual ID	Nov-16	Nov-25	Remarks
<b>Point Count Method</b>				
P1	FLW1	1.32	2.05	+
P2	FLW2	1.59	1.16	-
P3	FLW3	1.68	1.45	-
P4	FLW4	0.78	1.76	+
P5	FLW5	1.34	2.41	+
P6	FLW6	1.49	1.65	+
P7	FLW7	1.95	1.85	-
P9	SP/NSW3	2.43	2.59	+
P10	SP/NSW2	2.22	2.21	-
P11	NSW1	1.91	1.86	-
P12	SP/NSW1	2.62	2.05	-
<b>Overall H'</b>		<b>2.81</b>	<b>3.15</b>	<b>+</b>
<b>Species Richness</b>		<b>48</b>	<b>53</b>	<b>+</b>
<b>Transect Walk Method</b>				
Fung Lok Wai	FLW	2.12	2.88	+
Nam Sang Wai	NSW	1.77	2.04	+
YLIE-CW	YLIE-CW	**	2.60	+
<b>Overall H'</b>		<b>2.39</b>	<b>3.18</b>	<b>+</b>
<b>Species Richness</b>		<b>20</b>	<b>40</b>	<b>+</b>

Notes:

\*\* result when no species recorded; + increased Shannon diversity index (H'); - decreased Shannon diversity index (H'); = no change in Shannon diversity index (H')

No Action / Limit exceedance was recorded for the species diversity of all avifauna species in both point count and transect walk method.

#### 5.2.3.2.2 Avifauna Species of Conservation Importance

Of the 61 avifauna species identified during the November 2025 monitoring period, 13 species were of conservation importance (point count method = 21 species; transect walk method = 16 species). Meanwhile, relative to the baseline values in November 2016 (point count method = 20 species; transect walk method = 7 species), a slight increase in number of species with conservation importance was recorded in the point count method and a significant increase was recorded for the transect walk method. In terms of Shannon diversity index (H'), there is a significant increase in both point count method (t-value = 3.34; t-crit = 1.96; p-value = 8.86E-04;  $\alpha$  = 0.05) and in transect walk method (t-value = 7.02; t-crit = 1.98; p-value = 2.98E-10;  $\alpha$  = 0.05) relative to the baseline reference values. Details of these findings are summarized in **Table 23**, and **Appendix F.6.3**.

**Table 23** Shannon Diversity Index Value of Species with Conservation Importance

Shannon Diversity Index Value of Species with Conservation Importance				
EIA Report ID	EM&A Manual ID	Nov-16	Nov-25	Remarks
<b>Point Count Method</b>				
P1	FLW1	0.69	1.37	+
P2	FLW2	0	0	=
P3	FLW3	0.35	0.64	+
P4	FLW4	0.72	0.22	-
P5	FLW5	1.01	1.82	+
P6	FLW6	0.92	0.24	-
P7	FLW7	1.33	0.98	-
P9	SP/NSW3	1.97	2.26	+
P10	SP/NSW2	1.26	1.66	+
P11	NSW1	1.19	0.51	-
P12	SP/NSW1	2.35	0.67	-
<b>Overall H'</b>		<b>1.91</b>	<b>2.24</b>	<b>+</b>
<b>Species Richness</b>		<b>20</b>	<b>21</b>	<b>+</b>
<b>Transect Walk Method</b>				
Fung Lok Wai	FLW	1.10	1.97	+
Nam Sang Wai	NSW	0	1.56	+
YLIE-CW	YLIE-CW	**	1.95	+
<b>Overall H'</b>		<b>1.12</b>	<b>2.32</b>	<b>+</b>
<b>Species Richness</b>		<b>7</b>	<b>16</b>	<b>+</b>

Notes:

\*\* result when no species recorded; 0 computation result from only one recorded species;

+ increased Shannon diversity index (H'); - decreased Shannon diversity index (H'); = similar Shannon diversity index (H')

No Action / Limit exceedance was recorded for the species diversity of avifauna species with conservation importance in both point count and transect walk method.

#### 5.2.3.3 Wetland Habitat Utilization

Avifauna communities were observed during the current monitoring period in the different wetland habitats, i.e. mangrove, modified watercourse, ponds, and reed bed.

With reference to **Section 7.3.1** of the **EM&A Manual**, the utilization of the wetland habitats by birds within the monitoring area was recorded and monitored.

#### 5.2.3.3.1 All Avifauna Species

During the current monitoring period, majority of the different wetland habitats were observed with Low (L) abundance. In terms of species richness, different wetland habitats were generally observed with Very High (VH) number of species (**Table 24**).

**Table 24** Wetland habitat utilization of all avifauna species



Wetland Habitats	Area Description	Abundance <sup>1</sup>	Species Richness <sup>2</sup>
Modified Watercourse	Confluence of Shan Pui River and Kam Tin River	L	H
	Shan Pui River adjacent to Project site	VL – L	VH
	Upper course of Shan Pui River along YLIE	L	H
Ponds	Active Ponds adjacent to Project site in Fung Lok Wai	VL	L
	Active Ponds North to Nullah 2 in Fung Lok Wai	L	VH
	Inactive Ponds in Fung Lok Wai	L – M	VH
	Active and Inactive Ponds in Nam Sang Wai	VL – L	M
Mangrove	Mangrove within Assessment Area	-	-
Reedbed	Reedbed in Nam Sang Wai	-	-

Notes:

1. Abundance of all avifauna species amongst wetland habitats within the assessment area: VL = Very Low (~<50 individuals); L = Low (~100 individuals); M = Moderate (~300 individuals); H = High (~500 individuals), VH = Very High (>700 individuals)
2. Species richness (total number of species) amongst wetland habitats within the assessment area: VL = Very Low (≤5 species); L = Low (~10 species); M = Moderate (~15 species); H = High (~20 species), VH = Very High (>25 species)

:- no recorded individuals

Source: approved EIA Report (AEIAR-220/2019)

### 5.2.3.3.2 Avifauna Species of Conservation Importance

Majority of the different wetland habitats had Very Low (VL) abundance of avifauna species of conservation importance; and were generally utilized by Low (L) number of species (**Table 25**).

**Table 25 Wetland habitat utilization of avifauna species of conservation importance**

Wetland Habitats	Area Description	Abundance <sup>1</sup>	Species Richness <sup>2</sup>
Modified Watercourse	Confluence of Shan Pui River and Kam Tin River	L	L
	Shan Pui River adjacent to Project site	VL	L
	Upper course of Shan Pui River along YLIE	L	L
Ponds	Active Ponds adjacent to Project site in Fung Lok Wai	VL	VL
	Active Ponds North to Nullah 2 in Fung Lok Wai	VL	L
	Inactive Ponds in Fung Lok Wai	VL – L	L
	Active and Inactive Ponds in Nam Sang Wai	VL	VL
Mangrove	Mangrove within Assessment Area	-	-
Reedbed	Reedbed in Nam Sang Wai	-	-

Notes:

1. Abundance of avifauna species of conservation importance amongst wetland habitats within the assessment area: VL = Very Low (~<50 individuals); L = Low (~100 individuals); M = Moderate (~300 individuals); H = High (~500 individuals), VH = Very High (>700 individuals)
2. Species richness (total number of species) amongst wetland habitats within the assessment area: VL = Very Low (≤5 species); L = Low (~10 species); M = Moderate (~15 species); H = High (~20 species), VH = Very High (>25 species)

:- no recorded individuals

Source: approved EIA Report (AEIAR-220/2019)

### 5.2.3.4 Noise Levels

Noise levels LAeq (30 min) recorded on 11 November 2025 (daytime) from each of the point count locations during the ecological bird monitoring are shown in **Table 26**.

**Table 26 Noise Monitoring Results (For Ecological Monitoring of Birds)**

Frequency and Period	Location	Daytime (11/11/2025)	
		Start Time	LAeq (30 min) dB(A)
Monthly in concurrence with the ecological monitoring of birds	FLW1/ P1	09:34	52.2
	FLW2/ P2	10:10	53.6
	FLW3/ P3	10:46	52.8
	FLW4/ P4	10:25	53.1
	FLW5/ P5	09:46	53.9
	FLW6/ P6	08:59	52.1
	FLW7/ P7	08:26	54.5
	SP/NSW3/ P9	07:19	52.8
	SP/NSW2/ P10	07:52	54.5
	NSW1/ P11	08:25	53.6
	SP/NSW1/ P12	08:59	54.7

No Action / Limit exceedance was recorded for noise levels at all stations for the ecological monitoring of birds in the reporting month.

## 6 LANDSCAPE AND VISUAL

### 6.1 Audit Requirements

According to the EM&A Manual, a Landscape Architect or related professional shall be employed to audit the implementation of landscape construction works particularly during site clearance operations when the proposed tree felling and transplanting will take place and subsequent maintenance operations. Site audits should be undertaken every week during the construction phase to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. The mitigation measure recommended in the EIA Report as the audit requirements for landscape and visual, including: preservation of existing vegetation, transplanting of affected trees, compensatory tree planting, control of night-time lighting glare, erection of decorative screen hoarding and management of construction activities and facilities are summarized in **Appendix J**.

### 6.2 Results and Observations

To monitor and audit the implementation of landscape and visual mitigation measures, four weekly landscape and visual site audits were carried out on 5, 11, 19 and 26 November 2025.

No outstanding issues were reported during the reporting month. The ET Leader's Site Environmental Audit are summarized in **Appendix M**.

## 7 LAND CONTAMINATION

### 7.1 Contamination Assessment Report

- 7.1.1 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Main Storeroom & Workshops” and the laboratory results for the sampling works (conducted between 30 June 2021 to 16 July 2021) show that there are no exceedances of the adopted RBRGs for the “Main Storeroom & Workshops”. As no contaminated soil and groundwater was found within the “Main Storeroom & Workshops”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Main Storeroom & Workshops”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 1 November 2021.
- 7.1.2 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Mechanical Workshop” and the laboratory results for the sampling works (conducted between 23 July 2021 to 4 August 2021) show that there are no exceedances of the adopted RBRGs for the “Mechanical Workshop”. As no contaminated soil and groundwater was found within the “Mechanical Workshop”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Mechanical Workshop”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 23 November 2021.
- 7.1.3 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Waste Storage Area” and the laboratory results for the sampling works (conducted between 24 November 2021 to 6 January 2022) show that there are no exceedances of the adopted RBRGs for the “Waste Storage Area”. As no contaminated soil and groundwater was found within the “Waste Storage Area”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Waste Storage Area”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 29 April 2022.
- 7.1.4 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “SAS Thickener House-1” and the laboratory results for the sampling works (conducted between 13 April 2022 to 16 May 2022) show that there are no exceedances of the adopted RBRGs for the “SAS Thickener House-1”. As no contaminated soil and groundwater was found within the “SAS Thickener House-1”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “SAS Thickener House-1”. Their findings are summarized in Contamination Assessment Report (CAR) and submitted to EPD on 6 July 2022.
- 7.1.5 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “SAS Thickener House-2” and the laboratory results for the sampling works (conducted between 15 February 2023 to 23 February 2023) show that there are no exceedances of the adopted RBRGs for the “SAS Thickener House-2”. The laboratory results are compared against the adopted RBRGs and soil saturation limit (C<sub>sat</sub>) for soil samples and the adopted RBRGs and the solubility limits for groundwater samples. No exceedance of RBRG are recorded for both soil samples and groundwater samples. Furthermore, no exceedance of the soil saturation limit are recorded for soil samples. However, the exceedances of solubility limits for PCRs (C9-C16) are recorded for groundwater samples collected at BH-18, BH-19, BH-20 and BH-21; and also PCRs (C17-C35) for BH-21. As no non-aqueous phase liquid (NAPL) was observed during sampling, no further sampling and remediation are required. As no contaminated soil and groundwater is found within the

“SAS Thickener House-2”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “SAS Thickener House-2”. Their findings are summarized in Contamination Assessment Report (CAR) which was certified by ET Leader and verified by IEC on 31 May 2023 and submitted to EPD on 19 June 2023.

- 7.1.6 Risk-Based Remediation Goals (RBRGs) for Industrial have been adopted for the “Screening Press House” and the laboratory results for the sampling works (conducted between 19 August 2024 to 20 August 2024) show that there are no exceedances of the adopted RBRGs for the “Screening Press House”. As no contaminated soil and groundwater was found within the “Screening Press House”, no remediation actions are required for contaminated soil and groundwater for the scheduled land use of the “Screening Press House”. Their findings are summarized in Contamination Assessment Report (CAR) which was certified by ET Leader and verified by IEC on 14 October 2024 and submitted to EPD on 20 May 2025.

## 8 SITE INSPECTION AND AUDIT

### 8.1 Site Inspection

- 8.1.1 Site audits were carried out by ET on weekly basis at least once per week to monitor the implementation of proper environmental management practices and mitigation measures in the Project site.
- 8.1.2 In the reporting month, four site inspections were carried out on 5, 11, 19 and 26 November 2025.
- 8.1.3 No outstanding issues were reported during the reporting month. The ET Leader's Site Environmental Audit are summarized in **Appendix M**.

### 8.2 Advice on the Solid and Liquid Waste Management Status

- 8.2.1 The Contractor registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 8.2.2 The management of waste generated by the construction is presented in **Table 27**.

**Table 27 Waste Generated by the Construction and Disposal Ground**

Types of Waste	Disposal Ground
Inert C&D Waste (Excluding slurry and bentonite)	Tuen Mun Area 38
Inert C&D Waste (For slurry and bentonite)	Tseung Kwan O Area 137
Non-inert C&D Materials	North East New Territories Landfill (NENT) (Before 6 November 2025) South East New Territories Landfill Extension (SENTX) (From 6 November 2025) <sup>1</sup>
Sludge	West New Territories Landfill (WENT)
Marine Sediment	Type 1 – Open Sea Disposal: South Cheung Chau Open Sea Sediment Disposal Area Type 1 – Open Sea Disposal (Dedicate Site) and Type 2 – Confined Marine Disposal: Contaminated Mud Pit of the Confined Marine Disposal Facilities to the East of Sha Chau

Note:

1: EPD issued a memo on 6 November 2025, indicating that for works projects with WENT or NENT Landfills as the designated disposal ground for non-inert construction and demolition materials, these designated disposal grounds will be temporarily replaced by South East New Territories Landfill Extension (SENTX) in Tseung Kwan O, with immediate effect until further notice.

- 8.2.3 The monthly summary of waste flow table is detailed in **Appendix I**.
- 8.2.4 If off-site disposal is required, the excavated marine mud from the land-based works shall be disposed of at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee or other locations as agreed by the Director. The Contractor shall ensure no spilling and overflowing of materials during loading / unloading / transportation is allowed.
- 8.2.5 The Contractor was reminded that chemical waste should be properly handled temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packing, Labelling and Storage of Chemical Waste.

## 9 NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

### 9.1 Non-compliance (Exceedances of AL levels)

- 9.1.1 No Action / Limit Level exceedance was recorded for 1-hr TSP level at AM1 and AM2 in the reporting month.
- 9.1.2 No Action / Limit Level exceedance was recorded for construction noise at CM1, CM2 and CM3 in the reporting month.
- 9.1.3 No Action and Limit Level exceedance were recorded for water quality at M1, M2 and M3 in the reporting month.
- 9.1.4 No Action / Limit exceedance was recorded for noise levels at stations (NMS1 and NMS2) in close proximity to the active ardeid night roosts in the reporting month.
- 9.1.5 No Action / Limit exceedance was recorded for the ecological monitoring of birds in the reporting month.
- 9.1.6 No corrective actions were required according to the Event and Action Plans for the Monitoring Parameters.

### 9.2 Complaints, Notification of Summons and Successful Prosecutions

- 9.2.1 No environmental complaints, notification of summons and successful prosecutions was recorded in the reporting month.
- 9.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix L**.
- 9.2.3 No corrective actions were required.

# 10 IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURE

## 10.1 Implementation Status of Environmental Protection and Pollution Control / Mitigation Measures

The Contractor had implemented environmental protection and pollution control / mitigation measures as stated in the EIA Report, the EP and EM&A Manual. **Appendix J** summarized the Implementation Status of Environmental Mitigation Measures.

Further to the variation of the Environmental Permit (EP) (EP No. EP-565/2019/A) issued by EPD on 26 November 2024, the tides predicted by the Hong Kong Observatory for the tidal station at Tsim Bei Tsui for the upcoming month is presented in **Appendix Q**.

The status of required submissions under the EP as of the reporting period are summarized in **Table 28**.

**Table 28 Status of submissions required under the EP**

EP Condition (EP-565/2019/A)	Submission Title	Submission Status
Condition 2.9	Construction Phase Emergency Response Plan	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.11	Pre-construction Ardeid Night Roost Survey Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
EM&A Manual Sec. 7.3.3 & 7.3.4	Baseline Bird Survey Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.12	Noise Mitigation Measures Plan	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.13	Proposal for Minimization of Overspill Light to Ecological Sensitive Areas	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Supplementary Contamination Assessment Plan	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Main Storeroom & Workshops	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Mechanical Workshop	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Waste Storage Area	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.



EP Condition (EP-565/2019/A)	Submission Title	Submission Status
Condition 2.14	Contamination Assessment Report for SAS Thickener House-1	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for SAS Thickener House-2	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.14	Contamination Assessment Report for Screening Press House	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 2.15	Landscape and Visual Mitigation Plan	Submitted to EPD with ET certification and IEC verification, to be finalised and made available for public inspection via the dedicated website.
Condition 3.3	Baseline Monitoring Report	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 3.4	Monthly EM&A Report (from April 2021 to October 2025)	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 3.5	Quarterly EM&A Report (from April 2021 to September 2025)	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.
Condition 4.2	Environmental Monitoring Data from April 2021 to October 2025	Submitted to EPD with ET certification and IEC verification, finalised and available for public inspection via the dedicated website.

# 11 FUTURE KEY ISSUES

## 11.1 Construction Programme for the Next Three Months

The main works anticipated in the next three months are as follow:

- Fixing GRC panel at CLP Substation
- ELS Works and Pipe works for Modification of Existing Inspection Chamber and Inlet Effluent Pipes from NSWSPS
- T&C Works at IW
- RC, ABWF and E&M works at IW (Remaining area)
- RC, ABWF and E&M works at PST Stage 2
- ELS work and RC work at SDB
- Predrill works and ELS work at ADB
- External works at site-wide include water meter cabinet
- RC structure at AGS
- RC structure at TTS
- ABWF and E&M work at STB
- RC and E&M work at H2S
- ELS work at UC3
- RC structure at Sludge Digester no. 1-3 with PP1
- ELS work at Sludge Digester no. 4-6
- RC work at Biogas Holder no. 2-3 foundation

## 11.2 Key Issues for the Coming Month

Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, construction noise, waste management, ecology, land contamination and landscape and visual impact issues.

## 11.3 Monitoring Schedules for the next three months

The tentative schedule for environmental monitoring in the next three months is provided in **Appendix E**.

## 12 CONCLUSION AND RECOMMENDATION

### 12.1 Conclusions

- 12.1.1 1-hour TSP impact monitoring was carried out in the reporting month. No Action / Limit Level exceedance at AM1 and AM2 was recorded during the period.
- 12.1.2 Construction noise monitoring was carried out in the reporting month. No Action / Limit Level exceedance at CM1, CM2 and CM3 was recorded during the period.
- 12.1.3 No Action and Limit Level exceedance was recorded for water quality at M1, M2 and M3 in the reporting month.
- 12.1.4 Ardeid night roost monitoring was carried out in the reporting month. Two active ardeid night roost areas (ANR1 and ANR2) were observed within the Survey Area. These roosts were located at the mangrove strips in the east and northeast portions of the Project boundary. No Action / Limit Level exceedance at NMS1 and NMS2 was recorded during the period.
- 12.1.5 Ecological bird monitoring was carried out in the reporting month. No Action / Limit exceedance for the ecological monitoring of birds in the reporting month.
- 12.1.6 Four environmental site inspections were carried out in the reporting month. Recommendations on mitigation measures for air quality impact, chemical waste and construction waste management and permit/ licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 12.1.7 Four landscape and visual site audits were carried out in the reporting month. No recommendations on mitigation measures were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 12.1.8 No environmental complaint, notification of summons and successful prosecution was recorded in the reporting month.

### 12.2 Comment and Recommendations

- 12.2.1 The recommended environmental mitigation measures, as proposed in the EIA report and EM&A Manual shall be effectively implemented to minimize the potential environmental impacts from the Project. The EM&A programme would effectively monitor the environmental impacts generated from the construction activities and ensure the proper implementation of mitigation measures.
- 12.2.2 According to the environmental site inspections performed in the reporting month, the following recommendations were provided:

#### Air Quality Impact

- No specific observation was identified in the reporting month.

#### Construction Noise Impact

- No specific observation was identified in the reporting month

#### Water Quality Impact

- No specific observation was identified in the reporting month.

#### Chemical Waste and Construction Waste Management

- No specific observation was identified in the reporting month.

#### Land Contamination

- No specific observation was identified in the reporting month.

#### Ecological Impact

- No specific observation was identified in the reporting month.

#### Landscape and Visual Impact

- No specific observation was identified in the reporting month.

#### Hazard to Life

- No specific observation was identified in the reporting month.

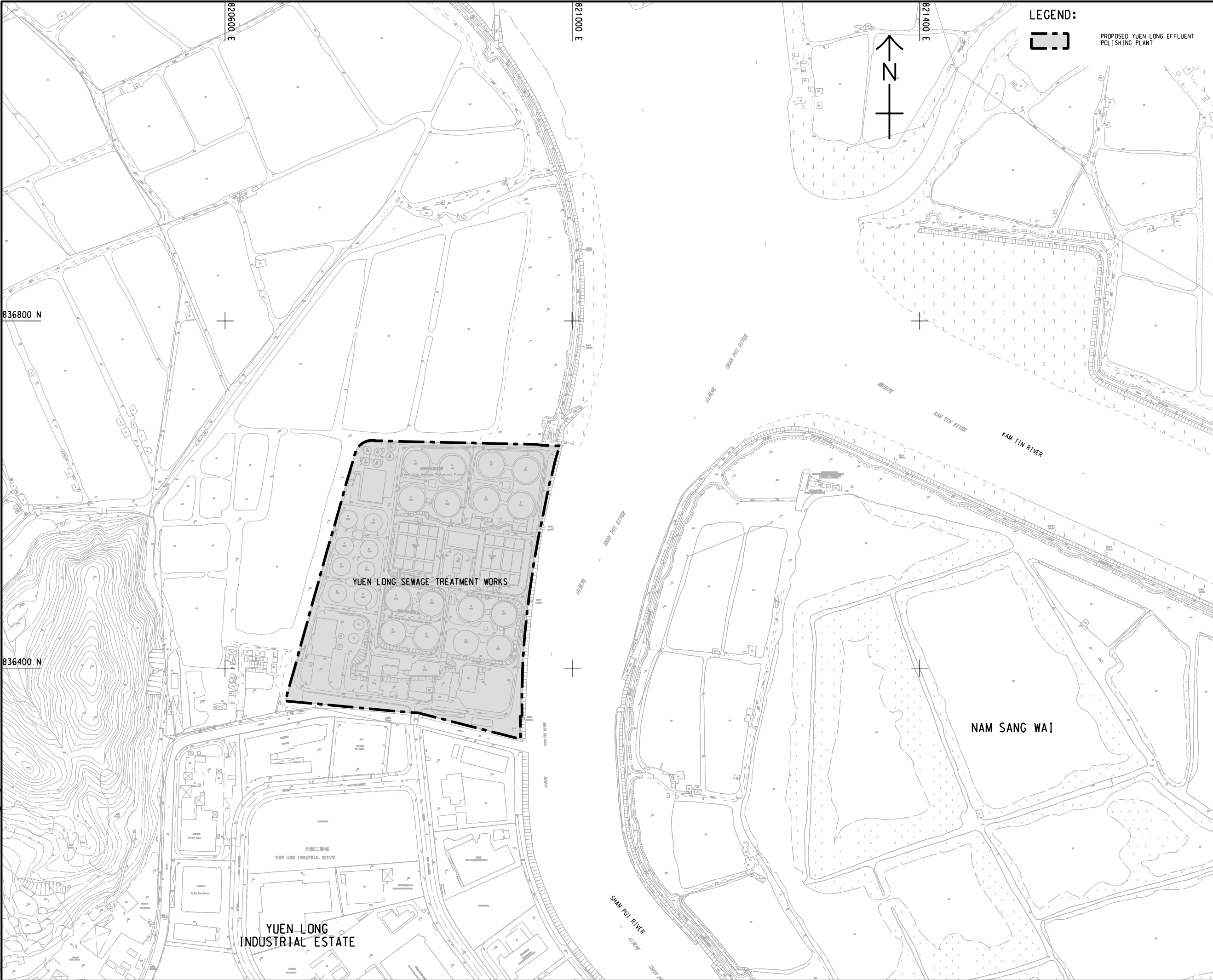
#### Permit/ Licenses

- The color of NRMM label for the generator at SDB should be green.

#### Other

- No specific observation was identified in the reporting month.

## Figure 1 Location of Proposed Yuen Long Effluent Polishing Plant



LEGEND:



PROPOSED YUEN LONG EFFLUENT  
POLISHING PLANT

**AECOM**

PROJECT  
項目

**YUEN LONG EFFLUENT  
POLISHING PLANT -  
INVESTIGATION, DESIGN  
AND CONSTRUCTION**

CLIENT  
業主

**渠務署**  
Drainage Services Department

CONSULTANT  
工程顧問公司

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ISSUE/REVISION  
發行

U/R 發行	DATE 日期	DESCRIPTION 內容摘要	CHK. 核對

STATUS  
階段

SCALE  
比例

A1 1: 2000

DIMENSION UNIT  
尺寸單位

METRES

KEY PLAN  
索引圖

PROJECT NO.  
項目編號

60505476

CONTRACT NO.  
合約編號

CE 3/2015 (DS)

SHEET TITLE  
圖紙名稱

LOCATION OF PROPOSED  
YUEN LONG EFFLUENT  
POLISHING PLANT

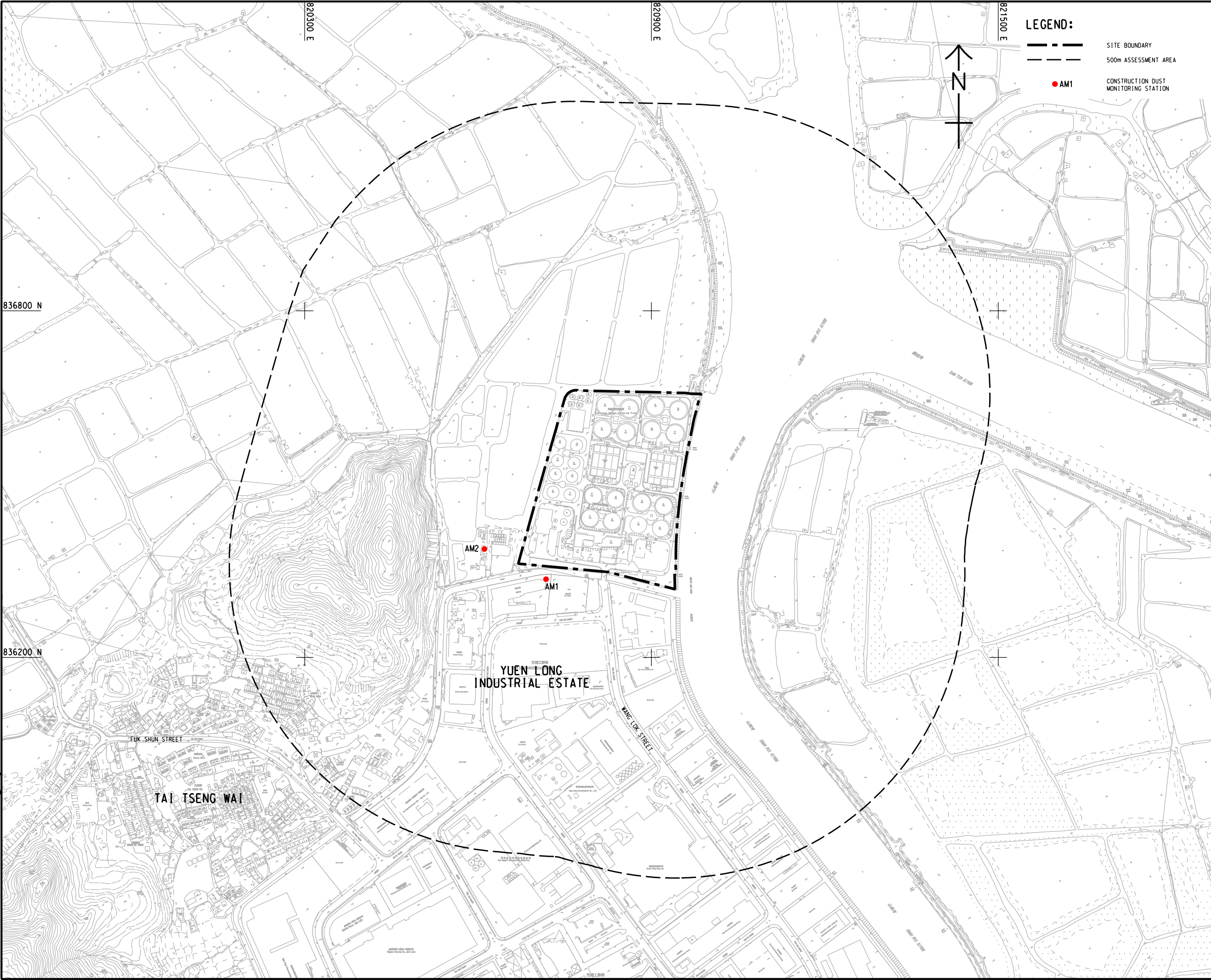
SHEET NUMBER  
圖紙編號

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## Figure 2 Location of Construction Dust Monitoring Stations



ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
Pld File by: GaoYU 11/29  
PATH P:\PROJECTS\60505476\DRAWING\REPORT\EM&A\A1\EM&A\_703.dgn



LEGEND:

--- SITE BOUNDARY

--- 500m ASSESSMENT AREA

● AM1 CONSTRUCTION DUST MONITORING STATION



PROJECT  
项目  
**YUEN LONG EFFLUENT  
POLISHING PLANT -  
INVESTIGATION, DESIGN  
AND CONSTRUCTION**

CLIENT  
業主  
**渠務署**  
Drainage Services Department

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ISSUE/REVISION 修訂			
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 校核

STATUS  
階段

SCALE  
比例  
A1 1 : 3000

DIMENSION UNIT  
尺寸單位  
METRES

KEY PLAN  
索引圖

PROJECT NO.  
項目編號  
60505476

CONTRACT NO.  
合約編號  
CE 3/2015 (DS)

SHEET TITLE  
圖紙名稱

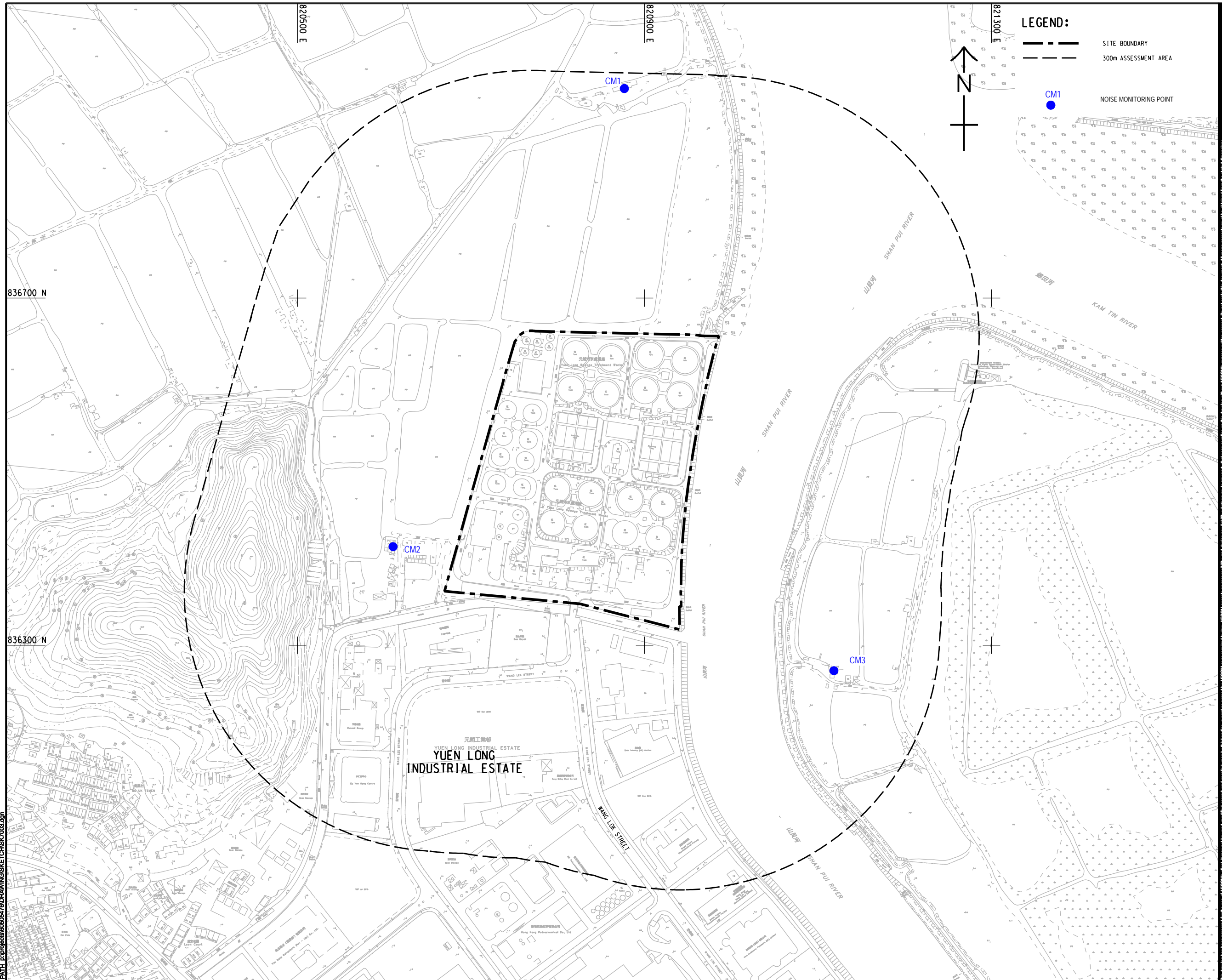
LOCATION OF CONSTRUCTION  
DUST MONITOING STATIONS

SHEET NUMBER  
圖紙編號

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## Figure 3 Noise Monitoring Locations

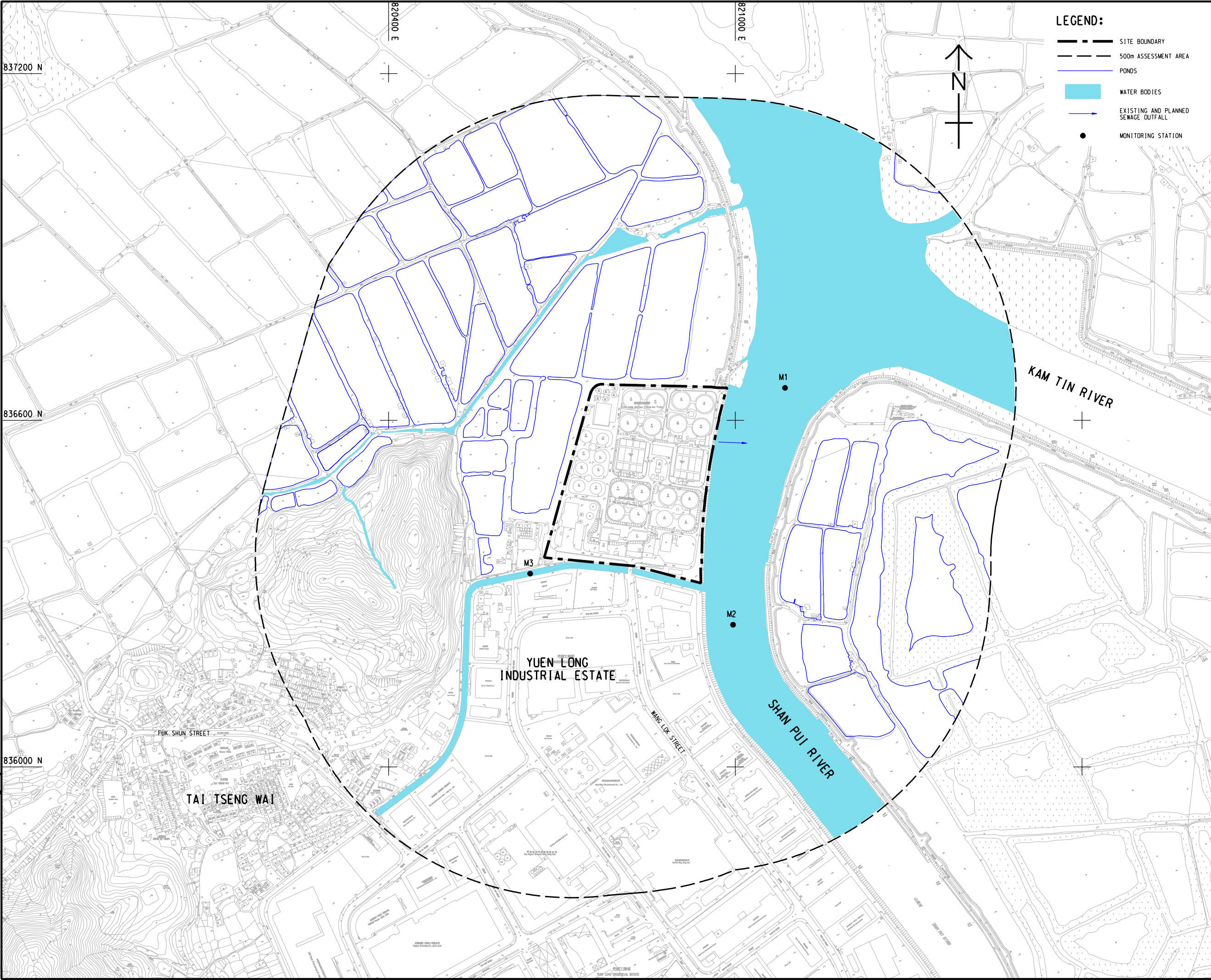


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## Figure 4 Water Quality Monitoring Locations



ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
Pld File by: GaoYU 12/18  
PATH: P:\PROJECTS\60505476\DRAWING\REPORT\TEMP\ENR6A\_704.dgn



**LEGEND:**

- SITE BOUNDARY
- 500m ASSESSMENT AREA
- PONDS
- WATER BODIES
- EXISTING AND PLANNED SEWAGE OUTFALL
- MONITORING STATION

**AECOM**

**PROJECT**  
項目

**YUEN LONG EFFLUENT POLISHING PLANT - INVESTIGATION, DESIGN AND CONSTRUCTION**

**CLIENT**  
業主

**渠務署**  
Drainage Services Department

**CONSULTANT**  
工程顧問公司

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**ISSUE/REVISION**  
修訂


I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 校核
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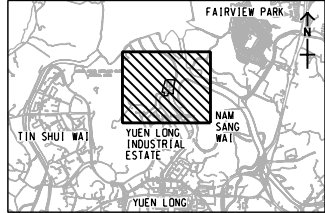
**STATUS**  
階段

**SCALE**  
比例

**DIMENSION UNIT**  
尺寸單位

A3 1: 6000 METRES

**KEY PLAN** A3 1: 180000



**PROJECT NO.**  
項目編號

60505476

**CONTRACT NO.**  
合約編號

CE 3/2015 (DS)

**SHEET TITLE**  
圖紙名稱

LOCATIONS OF WATER QUALITY MONITORING STATIONS FOR CONSTRUCTION PHASE

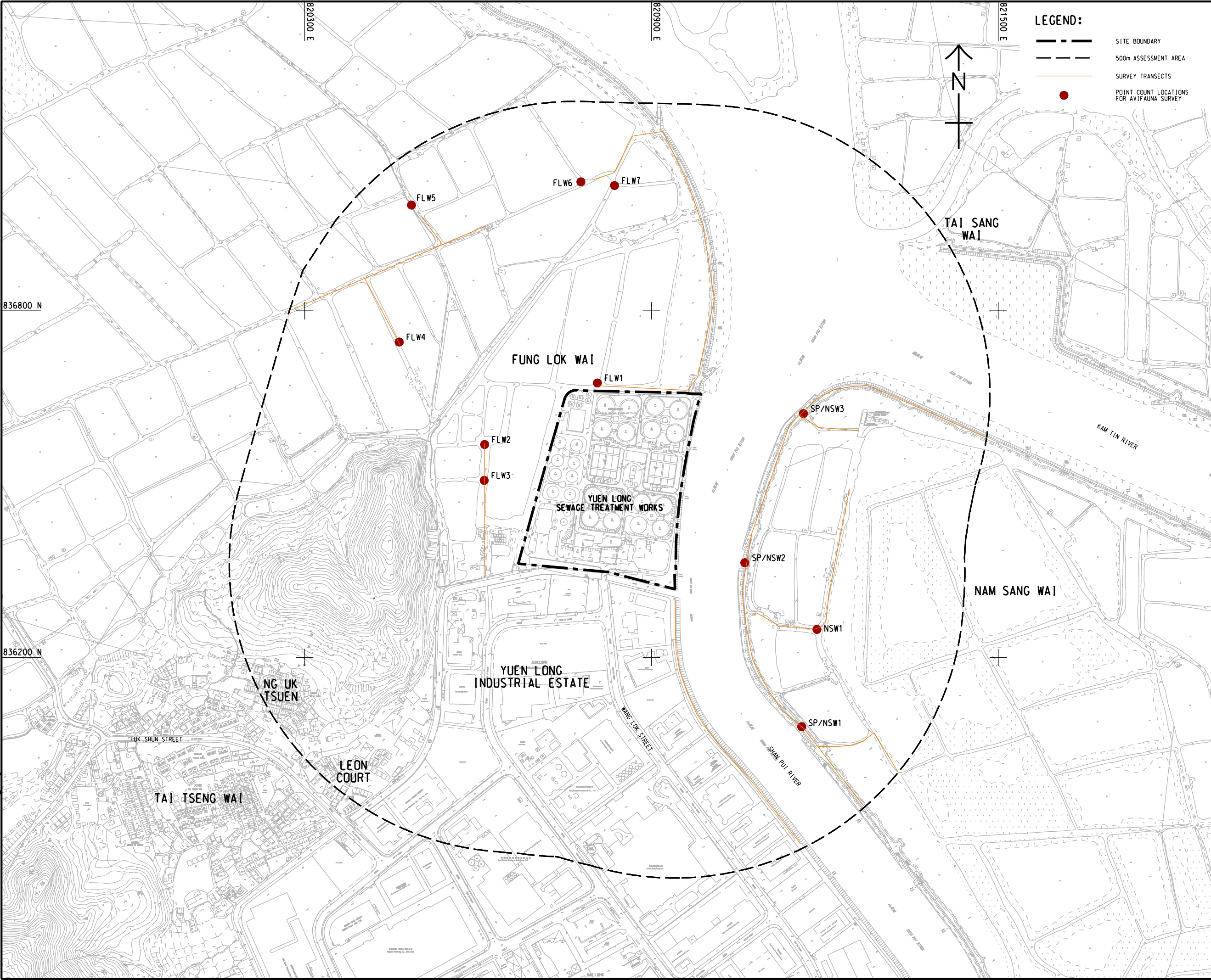
**SHEET NUMBER**  
圖紙編號

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## Figure 5 Ecology Monitoring Locations



ISO A1 594mm x 841mm  
Approved:  
Checked:  
Designer:  
Project Management Initials:  
Pld File by: ZENGFX 2018/05/30  
PATH P:\PROJECTS\60505476\DRAWING\REPORT\EM&A\A1\_702.dgn



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**PROJECT**  
项目  
**YUEN LONG EFFLUENT  
POLISHING PLANT -  
INVESTIGATION, DESIGN  
AND CONSTRUCTION**

**CLIENT**  
業主  
**渠務署**  
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**ISSUE/REVISION**  
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 校核

**STATUS**  
階段

**SCALE**  
比例  
A1 1 : 3000

**DIMENSION UNIT**  
尺寸單位  
METRES

**KEY PLAN**  
索引圖

**PROJECT NO.**  
項目編號  
60505476

**CONTRACT NO.**  
合約編號  
CE 3/2015 (DS)

**SHEET TITLE**  
圖紙名稱  
ECOLOGICAL MONITORING  
LOCATIONS

**SHEET NUMBER**  
圖紙編號

# Appendix A

## Construction Programme



Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	October					November					December					January					February					March					April	
						60					61					62					63					64					65						
						28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	01	08	15	22	29	05				
YLEPP Stage 1 - Detailed Works Programme DPv55																																					
Contract Data Part 1																																					
Access Dates																																					
ADP4	Portion 4 (sd+1599d)	0	31-Oct-25*		-218	◆ Portion 4 (sd+1599d)																															
Contract Key Dates																																					
CKD3	KD3 - Early Comissioning of Inlet Works100,000m3/d at ADWF,PST>54,000m3/d at ADWF,Civil,sti	0		31-Oct-25*	-159	◆ KD3 - Early Comissioning of Inlet Works100,000m3/d at ADWF,PST>54,000m3/d at ADWF,Civil,struct.,E&M & BS (R.KD3=25May24)																															
Environmental Constraints																																					
NMM-2185	PS 1.105ANoise Mitigation Measures 2025-2026	151	01-Nov-25*	31-Mar-26	0	PS 1.105ANoise Mitigation Measures 2025-2026																															
Planned Completion																																					
Compensation Events																																					
CE605	Implementation of Compensation Event (CE) No.605 - Amber Rainstorm Warning and Inclement V	0		31-Oct-25 A		◆ Implementation of Compensation Event (CE) No.605 - Amber Rainstorm Warning and Inclement Weather in May 2025																															
CE615	Implementation of Compensation Event (CE) No.613 - Amber Rainstorm Warning and Inclement V	0		31-Oct-25 A		◆ Implementation of Compensation Event (CE) No.613 - Amber Rainstorm Warning and Inclement Weather in June 2025																															
Preliminary and Preparation Works																																					
Subletting																																					
SUB-340	Subletting for Drainage, Sewage & Waterworks	90	31-May-25 A	31-Oct-25	-253	Subletting for Drainage, Sewage & Waterworks																															
SUB-320	Subletting for Steel Working Platform	90	01-Jan-26	31-Mar-26	516	Subletting for Steel Working Platform																															
Design Submission																																					
Temporary Works Design																																					
Sludge Digester 4-6																																					
TWD-490	ELS - SD4-6 - Obtain Approval	7	21-Jun-25 A	31-Oct-25	-354	ELS - SD4-6 - Obtain Approval																															
Administration Building																																					
TWD-300	Open Cut Design - Prepare & Submission for PM's review	30	15-Sep-25 A	31-Oct-25	-3	Open Cut Design - Prepare & Submission for PM's review																															
TWD-310	Open Cut Design - Review by PM's & ICE review (28 d + 7d)	21	01-Nov-25	21-Nov-25	-3	Open Cut Design - Review by PM's & ICE review (28 d + 7d)																															
TWD-320	Open Cut Design - Resubmission for PM's & ICE review (7d prep & resub. + 21d PM & ICE review)	14	22-Nov-25	05-Dec-25	-3	Open Cut Design - Resubmission for PM's & ICE review (7d prep & resub. + 21d PM & ICE review)																															
TWD-330	Open Cut Design - Obtain Approval	7	06-Dec-25	12-Dec-25	-3	Open Cut Design - Obtain Approval																															
Walkway Across Tai Tseng Wai Nullah																																					
TWD-600	Walkway - Prepare & Submission for PM's review	30	31-Oct-25	29-Nov-25	534	Walkway - Prepare & Submission for PM's review																															
TWD-610	Walkway - Review by PM's & ICE review (28 d + 7d)	35	30-Nov-25	03-Jan-26	534	Walkway - Review by PM's & ICE review (28 d + 7d)																															
TWD-620	Walkway - Resubmission for PM's & ICE review (7d prep & resub. + 21d PM & ICE review)	28	04-Jan-26	31-Jan-26	534	Walkway - Resubmission for PM's & ICE review (7d prep & resub. + 21d PM & ICE review)																															
Temporary diversion scheme for Early commissioning of SD, BH1, H2S and STB																																					
TWD-1010	Temp. pipe. for SD1-2 Early Comm.-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Appro	120	29-Dec-23 A	31-Oct-25	73	Temp. pipe. for SD1-2 Early Comm.-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)																															
TWD-990	Temp. pipe. SD1&2 and BH1 to H2S for T&C-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)	120	30-Jun-25 A	31-Oct-25	262	Temp. pipe. SD1&2 and BH1 to H2S for T&C-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)																															
TWD-1000	Temp. pipe. SD1&2 for T&C of STB -Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Apprc	120	30-Jun-25 A	31-Oct-25	68	Temp. pipe. SD1&2 for T&C of STB -Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)																															
TWD-980	Temp. pipe. for T&C of SD3-4-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)	120	01-Nov-25	28-Feb-26	323	Temp. pipe. for T&C of SD3-4-Prep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)																															
Contractor 's Permanent Works Design (include ATAL)																																					
DDA																																					
Package 2 - Tertiary Treatment System																																					
DDA-210	Electrical& Control for TTS - 2E	213	31-Dec-21 A	01-Dec-25	-277	Electrical& Control for TTS - 2E																															
DDA-140	SCADS System Deodourisation Unit No.2 and Plant Services Water System for TTS - 2G	126	12-Sep-23 A	01-Dec-25	1059	SCADS System Deodourisation Unit No.2 and Plant Services Water System for TTS - 2G																															
DDA-220	Building Services (BS) for TTS - 2F	199	30-Oct-23 A	01-Dec-25	-277	Building Services (BS) for TTS - 2F																															
Package 3 - Mainstream Bio-Reactor System																																					
DDA-300	Electrical& Control for MBS - 3E	405	08-Oct-21 A	31-Dec-25	-189	Electrical& Control for MBS - 3E																															
DDA-255	SCADA System - 3G	204	16-Jun-23 A	31-Dec-25	-133	SCADA System - 3G																															
DDA-310	Building Services (BS) for MBS - 3F	151	23-Oct-24 A	31-Dec-25	-178	Building Services (BS) for MBS - 3F																															
Package 5 - Master Water Meter Room & PSW																																					
DDA-390	P&ID for Plant Service Water System - 5D1	64	26-Jun-23 A	31-Oct-25	1090	P&ID for Plant Service Water System - 5D1																															
DDA-385	Mechanical Design for Plant Service Water System - 5D2	64	17-May-25 A	31-Oct-25	1090	Mechanical Design for Plant Service Water System - 5D2																															
Package 6 - Sludge Thickening Chemical and Dosing System																																					
DDA-1140	Electrical & Control for STCDS - 6E2	315	30-Nov-21 A	31-Oct-25	1090	Electrical & Control for STCDS - 6E2																															
DDA-1150	Building Services for STCDS - 6F4	126	24-Oct-22 A	31-Oct-25	1090	Building Services for STCDS - 6F4																															
DDA-440	SCADA System - 6G	250	15-Oct-24 A	31-Dec-25	531	SCADA System - 6G																															
DDA-430	Civil & Struct for Ferric Chloride Storage & Dosing System for Sludge Digestion - 6C	96	27-May-25 A	30-Nov-25	533	Civil & Struct for Ferric Chloride Storage & Dosing System for Sludge Digestion - 6C																															
Package 11 - Control and Monitoring System																																					
DDA-580	Power Quality & Energy Management System (PQEMS) - 11G4	130	02-Oct-21 A	30-Nov-25	1060	Power Quality & Energy Management System (PQEMS) - 11G4																															
DDA-550	Supervisory Control & Data Application (SCADA) System - 11G1	238	24-Apr-23 A	31-Dec-25	1029	Supervisory Control & Data Application (SCADA) System - 11G1																															
DDA-1270	Gas Detection System - 11G5	91	08-May-23 A	31-Dec-25	-178	Gas Detection System - 11G5																															
DDA-560	Computerised Mainatenance Mangement System (CMMS) - 11G2	275	30-Jun-25 A	31-May-26	191																																
DDA-570	Information and Document mangement System (IDMS) - 11G3	275	30-Jun-25 A	31-May-26	878																																
Package 14 - Sludge Anaerobic Digestion System (SDT)																																					
DDA-1330	Building Services for SDT & UC/PP - 14F4	180	02-May-23 A	20-Nov-25	-352	Building Services for SDT & UC/PP - 14F4																															
DDA-1640	Fire Services Design - 14F1	180	28-Jan-25 A	30-Nov-25	-4	Fire Services Design - 14F1																															
DDA-1650	Mechanical Ventilation and Air Conditional System Design - 14F2	180	13-Feb-25 A	30-Nov-25	-4	Mechanical Ventilation and Air Conditional System Design - 14F2																															
Package 15 - Biogas H2S Removal, Storage and Delivery System																																					
DDA-1390	Fire Services for Biogas H2S Removal System - 15F1	137	31-May-23 A	30-Nov-25	-13	Fire Services for Biogas H2S Removal System - 15F1																															
DDA-1380	Electrical & Control for Biogas H2S Removal System - 15F4	105	25-Sep-23 A	30-Nov-25	-13	Electrical & Control for Biogas H2S Removal System - 15F4																															
Package 16 - Deodorization Unit System																																					
DDA-1440	Mechanical for DOU No. 3 - 16D4	300	17-Jul-22 A	31-Oct-25	16	Mechanical for DOU No. 3 - 16D4																															
DDA-1430	Mechanical for DOU No. 2A and 2B - 16D3	122	13-Oct-23 A	30-Nov-25	-76	Mechanical for DOU No. 2A and 2B - 16D3																															
Package 17 - Sludge Dewatering Building (SDB)																																					
DDA-950	Civil Req. Drawing for SDB (Transformer Room Only) - 17C2	120	27-Apr-23 A	30-Nov-25	-16	Civil Req. Drawing for SDB (Transformer Room Only) - 17C2																															
DDA-910	Civil Req. Drawing for SDB (Utilities Corridor Zone) - 17C1	120	27-Mar-24 A	30-Nov-25	-16	Civil Req. Drawing for SDB (Utilities Corridor Zone) - 17C1																															
Package 22 - Sampling System of YLEPP																																					
DDA-740	Sampling System for IW&PST, AGS&TTB, SDT, STB	120	07-Jul-23 A	30-Nov-25	-279	Sampling System for IW&PST, AGS&TTB, SDT, STB																															
Package 23 - Security, Public Address and Communication System																																					
DDA-750	Security, Public Address and Communication System	120	28-Jun-23 A	31-Dec-25	-230	Security, Public Address and Communication System																															
Design out of ATAL's Scope																																					












Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	October					November					December					January					February				March				April
						60					61					62					63					64				65				66
						28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	01	08	15	22	29	05	
IW-1320	Modification of Existing Inspection Chamber - ELS works + demolition of existing inspection chambe	18	24-Nov-25	13-Dec-25	-266																													
IW-2980	Modification of Existing Inspection Chamber - Construct new chamber & associated pipes from IW	18	15-Dec-25	07-Jan-26	-266																													
IW-1340	Modification of Existing Inspection Chamber - Backfilling Works	12	08-Jan-26	21-Jan-26	-266																													
Inlet Works (IW)																																		
IW Civil and Structural Works																																		
IW Civil and Structure Works (Remaining Area)																																		
Z1-IW-7130	IW - Walling/Strut2nd Layer and Excavation to Formation - 1.2mPD (1295m3)	7	29-Sep-25 A	06-Nov-25	-258																													
Z1-IW-7140	IW - Pile Cap @-0.05mpD	10	07-Nov-25	18-Nov-25	-258																													
Z1-IW-7150	IW - Wall, Column and Slab to +7.835mPD) RC Works	14	19-Nov-25	04-Dec-25	-258																													
Z1-IW-7160	IW - Wall, Column and Slab to +11.75mPD) RC Works	14	05-Dec-25	20-Dec-25	-258																													
Z1-IW-7170	IW - Wall, Column and Slab to +18.15mPD) RC Works	14	22-Dec-25	09-Jan-26	-258																													
Z1-IW-7180	IW - Strike formwork and make good for water tightness test (Inlet channel) + Water Tightness Tes	21	10-Jan-26	03-Feb-26	-258																													
IW ABWF Works																																		
IW ABWF Works 1st fix for E&M handover																																		
IW ABWF Works - Zone A/D																																		
Below +11.8mPD																																		
Wet Area																																		
IW-3230	Inlet Work - Lining at inlet well/wet well no.1 at -4.9/-1.6/-0.5mPD	6	11-Sep-25 A	22-Sep-25																														
IW-3510	Inlet Work - Lining at inlet channel/wet well no.2 at -4.9/-1.6/-0.5mPD	6	11-Sep-25 A	22-Sep-25																														
IW-3520	Inlet Work - Lining at coarse screen at -4.9/-1.6/-0.5mPD	6	15-Sep-25 A	21-Sep-25																														
IW ABWF Works final fix																																		
IW-3250	Inlet Work - ABWF Works final fix above +11.8mPD	90	26-Aug-25 A	15-Dec-25	-207																													
IW-3260	Inlet Work - ABWF Works final fix below +11.8mPD	90	26-Aug-25 A	15-Dec-25	-207																													
IW ABWF Works - Roof																																		
IW-3030	Inlet Work - ABWF Works @ External Wall	120	02-Dec-24 A	01-Dec-25	-158																													
IW BS Works																																		
ATAL-1540	IW - P&D Works	80	18-Jun-25 A	29-Nov-25	-205																													
ATAL-1520	IW - MVAC Works	80	10-Jul-25 A	29-Nov-25	-194																													
ATAL-1530	IW - ELV Works	80	14-Jul-25 A	29-Nov-25	-194																													
ATAL-1550	IW - EL Works	80	14-Jul-25 A	29-Nov-25	-245																													
ATAL-1560	IW - F.S. Works	80	14-Jul-25 A	29-Nov-25	-205																													
IW E&M Works																																		
DOU-01 System - 01																																		
ATAL-2120	IW - DOU Seeding and Process Start Up of Bio Tricking Filter	7	31-Oct-25	07-Nov-25	-209																													
LV Switch Room (IW + PST)																																		
ATAL-1270	IW - LVSB and PLC Panel, Station, UPS System Installation *	36	09-Sep-24 A	23-Dec-25	-248																													
Electrical Works																																		
ATAL-1390	IW - Electrical - Megger Test and Termination Works *	2	09-Sep-25 A	09-Sep-25																														
Instrumentation & SCADA Works																																		
ATAL-1400	IW - Instrument & SCADA - Instrument Installation & Inspection	56	02-Oct-25 A	30-Dec-25	-252																													
ATAL-1440	IW - Instrument & SCADA - Termination Works	56	02-Oct-25 A	30-Dec-25	-252																													
ATAL-1450	IW - Instrument & SCADA - Installation of GUI, PQEMS, IDEMS, CMOS, System Integration&Mapp	56	02-Oct-25 A	30-Dec-25	-252																													
IW E&M T&C Works																																		
Phase 1- IW Sub-System Physical Dry Check																																		
ATAL-1590	IW - SCADA- I/O Point Test	50	30-Oct-25 A	30-Dec-25	-252																													
Phase 3 - IW Sub-System Wet Test (On load Performance, Endurance Test)																																		
ATAL-1670	IW - T&C (ph3) - IPS Pumping System *	13	06-Sep-25 A	22-Sep-25																														
ATAL-1810	IW - T&C for temporary sewage diversion at IW for demolition of existing inlet facilities & detritors	7	26-Sep-25 A	03-Oct-25 A																														
ATAL-1720	IW - System Operational Demonstation & Site Clearance Inspection and Recording (Before Introduct	4	04-Oct-25 A	07-Oct-25 A																														
ATAL-1680	IW - T&C (ph3) - Coarse Screening System *	24	08-Oct-25 A	08-Nov-25	-210																													
ATAL-1700	IW - T&C (ph3) - Grit Removal System *	27	08-Oct-25 A	08-Nov-25	-210																													
ATAL-1690	IW - T&C (ph3) - Fine Screening System *	19	08-Oct-25 A	08-Nov-25	-210																													
Phase 4 - IW System Reliability & Performance Test (Sewage)																																		
ATAL-1740	IW System Reliability & Performance Test (Sewage) *Calendar Day	59	01-Jan-26	28-Feb-26	-310																													
Primary Sedimentation Tank (PST)																																		
PST Stage 2a Basement Construction Works																																		
Excavation Works																																		
Z1-PST-4882	PST Stage 2a - Diversion of 1200dia. outfall pipe (ELS=12d,pipe laying&test=14d,backfill=2d)	28	31-Oct-25	02-Dec-25	-251																													
Z1-PST-4300	PST Stage 2a - Sheetpile Installation	24	17-Nov-25	13-Dec-25	-251																													
Z1-PST-4892	PST Stage 2a - Plug and Demolish existing temp. outfall pipe	10	03-Dec-25	13-Dec-25	-251																													
Z1-PST-4302	PST Stage 2a - Excavation Level (+5 to +1.875 mPD) (3,233m3, 600m3/day)	10	15-Dec-25	27-Dec-25	-251																													
Z1-PST-4305	PST Stage 2a - Capping plate, blinding and waterproofing	10	29-Dec-25	09-Jan-26	-251																													
Basement RC Works																																		
Z1-PST-4372	PST Stage 2a - Base Slab & Wall Erection of Formworks and RC Works (+2.95 mPD)	18	10-Jan-26	30-Jan-26	-251																													
PST Stage 2b - Trench Construction Works (Zone E)																																		
Excavation Works																																		
Z1-PST-3900	PST Stage 2b - ELS Excavation Level (+4.5 to +0.5 mPD) + S1 Strut Installation	18	04-Sep-25 A	08-Oct-25 A																														
Z1-PST-3910	PST Stage 2b - Excavation FEL Level (+0.5 to -1.125 mPD (Zone E1) & -1.625mPD (Zone B)) *PD	6	09-Oct-25 A	05-Nov-25	880																													
Z1-PST-4712	PST Stage 2b - 300mm Rockfill + Capping plate, blinding and waterproofing	18	17-Oct-25 A	12-Nov-25	-241																													
Z1-PST-4722	PST Stage 2b - Vertical blinding for Zone E1 & B Base Slab and Wall	7	13-Nov-25	20-Nov-25	-241																													
Z1-PST-4000	PST Stage 2b - Base Slab & Wall Erection of Formworks and RC Works (+0.15 mPD)	18	21-Nov-25	11-Dec-25	-241																													
Z1-PST-4020	PST Stage 2b - Wall Erection of Formworks and RC Works (+1.875 mPD)	12	12-Dec-25	27-Dec-25	-241																													
PST ABWF, E&M & T&C																																		
PST Stage 1																																		
PST Stage 1 - ABWF Works																																		
GL A-H above +11.8mPD																																		
PST-3135	PST Stage 1 - ABWF Works and Floor Access Cover (render:spray, screeding, plastering) at Tank	18	09-Jul-25 A	20-Nov-25	-221																													
PST-3165	PST Stage 1 - ABWF Works and Floor Access Cover (render:spray, screeding, plastering) at Tank	18	09-Jul-25 A	20-Nov-25	867																													



 Remaining Level of Effort  
 Actual Work  
 Remaining Work  
 Critical Remaining Work  
 Milestone

**Contract DC/2019/10 - YLEPP - Main Works for Stage 1**  
**Monthly Progress Report No. 60- 3MRP (Oct 25)**

Project ID : DWPr55\_251109  
Layout : DC201910 MPR60-3MRP  
Page 3 of 9

Monthly Progress Report - 3MRP			
Date	Revision	Checked	Approved
31-Oct-25			











Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	October					November					December					January					February					March					April	
						60					61					62					63					64					65					66	
						28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	01	08	15	22	29	05				
	MBRAF-4000	MBR - Erection of tower crane AGS-TC1	6	31-Oct-25	06-Nov-25	-210																															
	MBRAF-3810	MBR - Zone A - Remove S5 (-7.8mPD), Waterproofing, Mass Fill S4	7	19-Nov-25	26-Nov-25	-235																															
	MBRAF-4480	MBR - Zone A - Construct Mass Concrete Zone A1+A2 (-6.975 to -5.6mPD)	7	21-Nov-25	28-Nov-25	-297																															
	MBR Substructure Zone B																																				
	MBRAF-4420	MBR - Zone B - Construct Mass Concrete Zone B4 (-6.975 to -5.6mPD)	7	12-Sep-25 A	10-Nov-25	-317																															
	MBRAF-4310	MBR - Zone B - Construct Base Slab Zone B1+B3 (-8.295 to -6.975mPD)	14	17-Sep-25 A	29-Sep-25																																
	MBRAF-3870	MBR - Zone B - Remove S5 (-7.8mPD), Waterproofing, Mass Fill S4	7	04-Nov-25	11-Nov-25	-311																															
	MBRAF-4430	MBR - Zone B - Construct Mass Concrete Zone B2 (-6.975 to -5.6mPD)	7	11-Nov-25	18-Nov-25	-317																															
	MBRAF-4440	MBR - Zone B - Construct Mass Concrete Zone B1+B3 (-6.975 to -5.6mPD)	8	19-Nov-25	27-Nov-25	-317																															
	MBR Substructure Zone D																																				
	MBRAF-4210	MBR - Zone D - Construct Transfer Plate Zone SD2 (Zone 7)@-5.6mPD	14	19-Nov-25	04-Dec-25	-328																															
	MBRAF-4330	MBR - Zone D - Construct Transfer Plate Zone SD1 (Zone 8)@-5.6mPD	14	26-Nov-25	11-Dec-25	-328																															
	MBRAF-5520	MBR - Zone D - S4 ELS removal@-3.6mPD (Zone 7 > Zone 8)	12	12-Dec-25	27-Dec-25	-328																															
	Central Corridor (Zone 7 & 8)																																				
	MBRAF-5400	MBR - Zone D - Construct Wal/ Slab Zone SD2@+0.5mPD	18	29-Dec-25	19-Jan-26	-328																															
	MBRAF-5410	MBR - Zone D - Construct Wal/ Slab Zone SD1@+0.5mPD	18	17-Jan-26	06-Feb-26	-328																															
	MBR Structure Zone C (Tank 2, Tank 4 and Air Blower Rm)																																				
	Tank 2 (Zone 2)																																				
	MBRAF-4500	MBR - Remove S4 + Steel Platform C Bottom Bracing	8	27-Nov-25	05-Dec-25	-299																															
	MBRAF-4530	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	06-Dec-25	06-Jan-26	-299																															
	Tank 4 (Zone 4) + Air Blower Rm																																				
	MBRAF-4600	MBR - Remove S4 + Steel Platform C Bottom Bracing	8	27-Nov-25	05-Dec-25	-275																															
	MBRAF-4630	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	07-Jan-26	03-Feb-26	-299																															
	MBR Structure Zone A (Tank 5 and Tank 6)																																				
	Tank 5 (Zone 5)																																				
	MBRAF-2520	MBR - Remove S4 + Steel Platform A Bottom Bracing	8	27-Nov-25	05-Dec-25	-211																															
	MBRAF-2550	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	13-Jan-26	09-Feb-26	-240																															
	Tank 6 (Zone 6)																																				
	MBRAF-4700	MBR - Remove S4 + Steel Platform A Bottom Bracing	8	27-Nov-25	05-Dec-25	-235																															
	MBRAF-4730	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	12-Dec-25	12-Jan-26	-240																															
	MBR Structure Zone B (Tank 1 and Tank 3)																																				
	Tank 1 (Zone 1)																																				
	MBRAF-2660	MBR - Remove S4 + Steel Platform B Bottom Bracing	8	12-Nov-25	20-Nov-25	-311																															
	MBRAF-2690	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	05-Dec-25	05-Jan-26	-323																															
	MBRAF-2710	MBR - Construct Beam / Wal (+0.5 to +5.15mPD)	20	30-Jan-26	25-Feb-26	-323																															
	Tank 3 (Zone 3)																																				
	MBRAF-4800	MBR - Remove S4, + Steel Platform B Bottom Bracing	8	12-Nov-25	20-Nov-25	-290																															
	MBRAF-4830	MBR - Construct Beam / Wal (-5.6 to +0.5mPD)	24	02-Jan-26	29-Jan-26	-323																															
Tertiary Treatment System (TTS)																																					
TTS Structure																																					
TTS Substructure																																					
Substructure																																					
	TTS-2320-1	TTS - Removal of West																																			







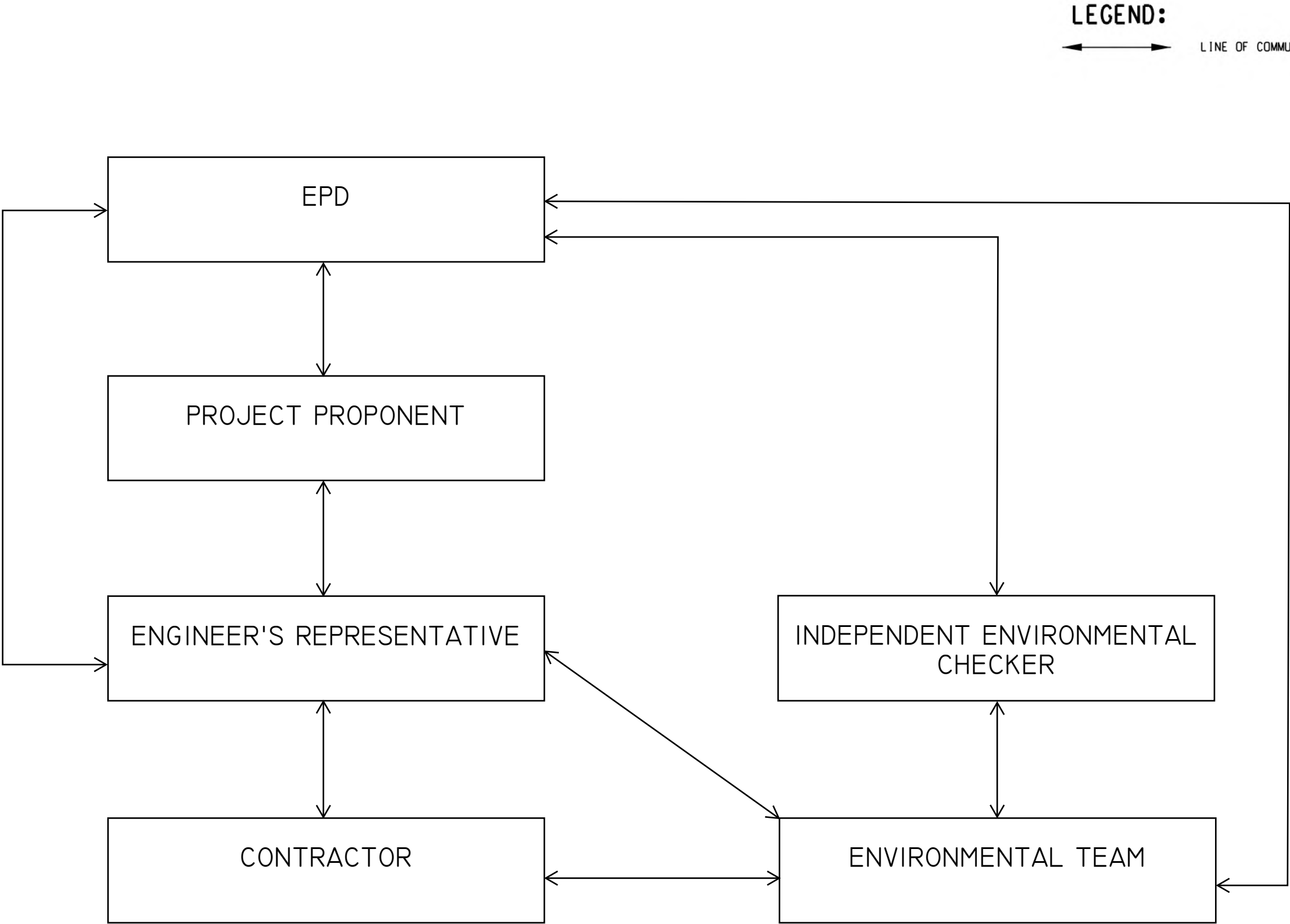
[illegible]

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total Float	October					November					December					January					February					March					April				
						60					61					62					63					64					65									
						28	05	12	19	26	02	09	16	23	30	07	14	21	28	04	11	18	25	01	08	15	22	01	08	15	22	29	05							
SD1-3 : E&M Installation																																								
SD1 : E&M Installation																																								
Z3S3-2669	SDT No.1 - E&M 1st Handover	0	25-Nov-25		-288						◆ SDT No.1 - E&M 1st Handover																													
Z3S3-2675	SDT No.1 - External Draft Tube - Lower	18	25-Nov-25	15-Dec-25	-288						■■■■■ SDT No.1 - External Draft Tube - Lower																													
Z3S3-2680	SDT No.1 - External Draft Tube and Heat Exchanger Installation - Upper	19	16-Dec-25	09-Jan-26	-287						■■■■■ SDT No.1 - External Draft Tube and Heat Exchanger Installation - Upper																													
SD2 : E&M Installation																																								
Z3S3-6540	SDT No.2 - E&M 1st Handover	0	11-Dec-25		-257						◆ SDT No.2 - E&M 1st Handover																													
Z3S3-6550	SDT No.2 - External Draft Tube - Lower	16	11-Dec-25	31-Dec-25	-257						■■■■■ SDT No.2 - External Draft Tube - Lower																													
Z3S3-6560	SDT No.2 - External Draft Tube and Heat Exchanger Installation - Upper	23	02-Jan-26	28-Jan-26	-257						■■■■■ SDT No.2 - External Draft Tube and Heat Exchanger Installation - Upper																													
SD3 : E&M Installation																																								
Z3S3-5550	SDT No.3 - E&M 1st Handover	0	07-Dec-25		-337						◆ SDT No.3 - E&M 1st Handover																													
Z3S3-4590	SDT No.3 - External Draft Tube - Lower	16	08-Dec-25	27-Dec-25	-273						■■■■■ SDT No.3 - External Draft Tube - Lower																													
Z3S3-4595	SDT No.3 - External Draft Tube and Heat Exchanger Installation - Upper	22	29-Dec-25	23-Jan-26	-275						■■■■■ SDT No.3 - External Draft Tube and Heat Exchanger Installation - Upper																													
Biogas Holder No. 1 (BH1)																																								
BH1 : E&M Installation																																								
ATALZ3BH-2505	BH No. 1 - Installation of tank accessories (telescopic guide, staricase, safety valve, sensors) and tc	15	04-Sep-25 A	10-Nov-25	97	■■■■■					■■■■■ BH No. 1 - Installation of tank accessories (telescopic guide, staricase, safety valve, sensors) and touch-up paint																													
ATALZ3BH-2515	BH No. 1 - Specialist inspection on structure and membrane	4	11-Nov-25	14-Nov-25	97	■■■■■					■■■■■ BH No. 1 - Specialist inspection on structure and membrane																													
BH1 : Testing & Commissioning																																								
ATALZ3BH-2070	BH No. 1 - T&C - E&M SAT of Biogas Holder No.1 (using Air to test membrane only)	16	15-Nov-25	03-Dec-25	97						■■■■■ BH No. 1 - T&C - E&M SAT of Biogas Holder No.1 (using Air to test membrane only)																													
ATALZ3BH-2090	BH No. 1 - T&C - E&M SAT of whole Biogas Holder No.1 and associated valve and pipework (N2 F	21	15-Nov-25	09-Dec-25	96						■■■■■ BH No. 1 - T&C - E&M SAT of whole Biogas Holder No.1 and associated valve and pipework (N2 Purging)																													
ATALZ3BH-2100	BH No. 1 - T&C - E&M SAT of Biogas Booster Pump No.1	21	15-Nov-25	09-Dec-25	96						■■■■■ BH No. 1 - T&C - E&M SAT of Biogas Booster Pump No.1																													
ATALZ3BH-1050	BH No. 1 - Early System Commissioning without H2S Removal System	30	10-Dec-25	08-Jan-26	124						■■■■■ BH No. 1 - Early System Commissioning without H2S Removal System																													
BH1 : Diversion Works																																								
Z3S7-2070	BH No. 1 - Temporary system and associated pipeworks for early commissioning of BH1	30	05-Nov-25	09-Dec-25	96						■■■■■ BH No. 1 - Temporary system and associated pipeworks for early commissioning of BH1																													



## Appendix B

### Project Organization Chart



PROJECT  
項目

**YUEN LONG EFFLUENT  
POLISHING PLANT -  
INVESTIGATION, DESIGN  
AND CONSTRUCTION**

CLIENT  
業主

**渠務署**  
Drainage Services Department

CONSULTANT  
工程顧問公司

AECOM Asia Company Ltd.  
www.aecom.com

SUB-CONSULTANTS  
分判工程顧問公司

ISSUE/REVISION 修訂			
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS  
階段

SCALE 比例	DIMENSION UNIT 尺寸單位
A3 1 : 40000	METRES

KEY PLAN  
索引圖

PROJECT NO.  
項目編號

60505476

CONTRACT NO.  
合約編號

CE 3/2015 (DS)

SHEET TITLE  
圖紙名稱

PROJECT ORGANISATION

SHEET NUMBER  
圖紙編號

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## Appendix C

### Action and Limit Levels

### Action and Limit Levels for Air Quality

Parameters	Action Level	Limit Level
1-hour TSP Level in $\mu\text{g}/\text{m}^3$	<sup>1</sup> For baseline level $\leq 384 \mu\text{g}/\text{m}^3$ , Action level = (baseline level * 1.3 + Limit level)/2; For baseline level $> 384 \mu\text{g}/\text{m}^3$ , Action level = Limit level	500 $\mu\text{g}/\text{m}^3$

Notes:

1. The Action Level for 1-hour TSP Level:

a) AM1 =  $(63 \times 1.3 + 500) / 2 = 291 \mu\text{g}/\text{m}^3$ ;

b) AM2 =  $(70 \times 1.3 + 500) / 2 = 296 \mu\text{g}/\text{m}^3$ .

### Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
0700 - 1900 hours on normal weekdays	When one documented complaint is received	75 dB(A) *

Notes:

- If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.
- Correction of +3 dB(A) shall be made to the free field measurements.

### Action and Limit Levels for Water Quality

Parameters	Action Levels	Limit Levels
<b>Construction Phase Water Quality Monitoring</b>		
DO in mg/L (Surface, Middle & Bottom) <sup>2</sup>	<u>Surface &amp; Middle</u> 5%-ile of baseline data for surface and middle layer.  <u>Bottom</u> 5%-ile of baseline data for bottom layer.	<u>Surface &amp; Middle</u> 4 mg/L or 1%-ile of baseline data for surface and middle layer.  <u>Bottom</u> 2 mg/L or 1%-ile of baseline data for bottom layer.
SS in mg/L (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day	99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day
Turbidity in NTU (depth-averaged <sup>1</sup> ) <sup>3</sup>	95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day	99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day

Notes:

- "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths;
- For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits;
- For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits

## Action and Limit Levels for Ecology

### Active Ardeid Night Roost Survey

As there are no specific guidelines on noise thresholds for roosting ardeids, the Action and Limit levels specified in below table were based on study conducted on exploring behavioural responses of shorebirds to impulsive noise (Wright et al. 2010).

Time Period	Action Level	Limit Level
after 17:30 during dry season after 18:00 during wet season	65.5 dB(A) <sup>1</sup>	72.2 dB(A) <sup>2</sup>

Notes:

1. Behavioural response of some kind more likely to occur
2. Flight with abandonment of the site becomes the most likely outcome of the disturbance

### Ecological Monitoring of Birds

Method	Parameters	Action Level <sup>3</sup>	Limit Level <sup>3</sup>
Transect	Abundance of all avifauna species (including but not only limited to overwintering waterbirds) in the community	Significant decline <sup>1,2</sup> in any of these parameters during the current monitoring month relative to the corresponding month during the baseline survey.	Significant decline in any of these parameters for three consecutive months.
	Species diversity of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Abundance of species with conservation importance only		
	Species diversity of species with conservation importance only		
Point Count	Abundance of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Species diversity of all avifauna species (including but not only limited to overwintering waterbirds) in the community		
	Abundance of species with conservation importance only		
	Species diversity of species with conservation importance only		

Notes:

1. Significant decline in abundance will be determined using two-tailed t-test,  $\alpha = 0.05$ .
2. Significant decline in species diversity will be determined using the Hutcheson t-test, two tailed.
3. Response will be triggered if any of the above level is reached for each parameter

Appendix D  
Calibration Certificates/ Reports of Monitoring  
Equipment

# Air Quality Monitoring Equipment



Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	851816				
Our Report Reference No.:	RPT-25-HVS-0103				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

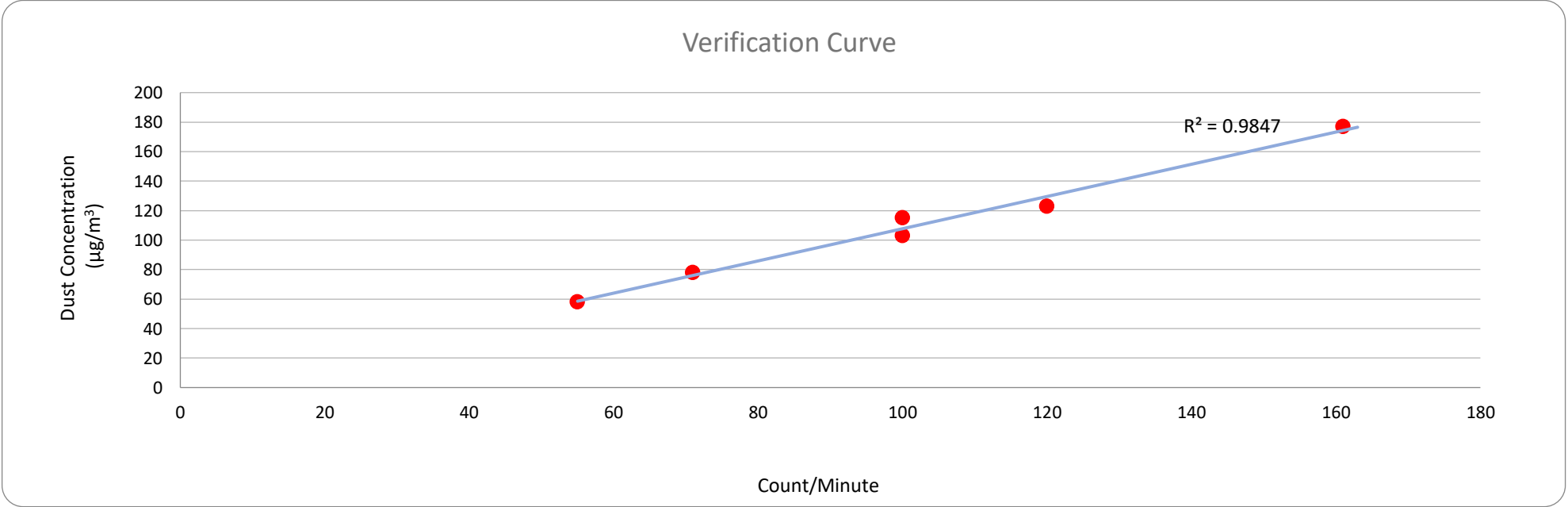
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration (µg/m³) y-axis
1	23/02/2025	5385.00	5388.00	180.00	12780	71	78
2	23/02/2025	5388.00	5391.00	180.00	28980	161	177
3	23/02/2025	5394.00	5397.00	180.00	18000	100	115
4	2/03/2025	5397.00	5400.00	180.00	9900	55	58
5	2/03/2025	5400.00	5403.00	180.00	18000	100	103
6	2/03/2025	5403.00	5406.00	180.00	21600	120	123

Linear Regression of y on x

Slope, K factor:	1.0922	Intercept:	-1.4901	*Correlation Coefficient, R:	0.9923
Verification Test Result:	Strong Correlation, Results were accepted.			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



Operated By: Andy Li  
Project Technician, Environmental

Date: 04-03-2025

Checked By: Vega Wong  
Senior Consultant, Environmental

Date: 04-03-2025



## Certification of Calibration

### Information of Unit-under-test (UUT)

Date of Calibration:	15-Aug-2025 and 21-Aug-2025	Next Calibration Date:	15-Aug-26
UUT Manufacturer:	Sibata	UUT Model No.:	LD-5R
UUT Serial No.:	882106	Report Reference No.:	RPT-25-HVS-0163
Calibration Location:	Tung Chung East		

### Information of Reference Equipment

Reference Equipment Manufacturer:	Tisch Environmental	Tisch Environmental
Reference Equipment Model No.:	TE-5170X	TE-5025A
Reference Equipment Serial No.:	1086	3465
Last Calibration Date:	15-Aug-25	2-Dec-24
Next Calibration Date:	15-Oct-25	2-Dec-25

### Calibration of 1-Hour TSP Result

Calibration Point	Results from UUT	Results from Standard Equipment
	Mass Concentration ( $\mu\text{g}/\text{m}^3$ ) X-axis	Reference Concentration ( $\mu\text{g}/\text{m}^3$ ) Y-axis
1	105	106
2	131	128
3	120	117
4	154	150
5	143	139
6	119	115
Average	129	126

### Linear Regression of Y on X

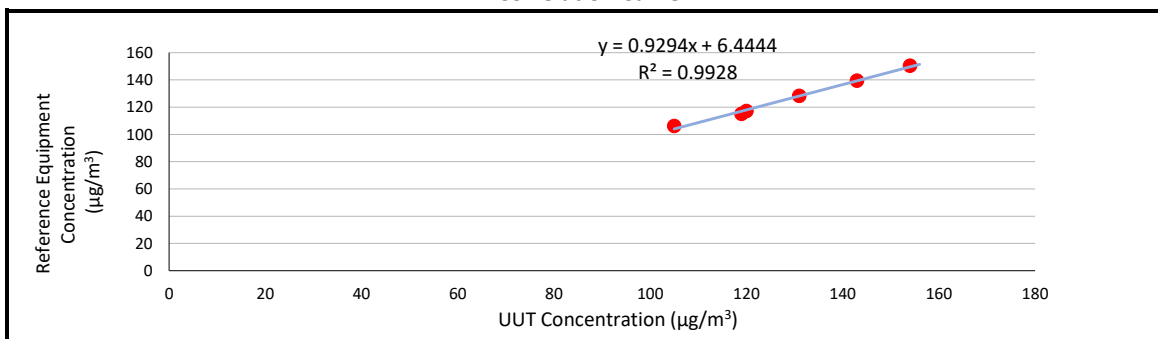
Slope, mv: <b>0.9294</b>	Intercept: <b>6.4444</b>	*Correlation Coefficient: <b>0.9964</b>
Verification Test Result: Strong Correlation, Results were accepted.		

\* If the Correlation Coefficient < 0.90, check and recalibrate.


### Set Calibration Factor

Particulate Concentration by Reference Equipment ( $\mu\text{g}/\text{m}^3$ ):	126
Particulate Concentration by UUT ( $\mu\text{g}/\text{m}^3$ ):	129
Measuring Time, (min):	60
K Factor = High Volume Sampler / UUT, ( $\mu\text{g}/\text{m}^3$ ):	0.98

### Correlation Curve




Operated By: Andy Li  
Project Technician,  
Environmental

Signature: 

Date: 28-08-2025

Checked By: Joe Ho  
Lead Consultant,  
Environmental

Signature: 

Date: 28-08-2025

# Noise Quality Monitoring Equipment

# *Certificate of Calibration*

*for*

*Description:* *Sound Level Meter*  
*Manufacturer:* *RION*  
*Type No.:* *NL-53 (Serial No.: 01130783)*  
*Microphone:* *UC-59 (Serial No.: 25498)*  
*Preamplifier:* *NH-25 (Serial No.:33674)*

***Submitted by:***

*Customer:* *Aurecon Hong Kong Limited*  
*Address:* *Unit 1608, 16/F, Tower B, Manulife Financial Centre,*  
*223-231 Wai Yip Street, Kwun Tong,*  
*Kowloon, Hong Kong*

**Upon receipt for calibration, the instrument was found to be:**

- ☒ **Within (31.5Hz – 4kHz)**  
☐ **Outside**

**the allowable tolerance.**

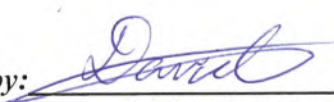
The test equipment used for calibration are traceable to National Standards via:

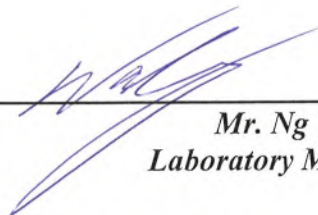
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 26 February 2025**

**Date of calibration: 27 February 2025**

**Date of NEXT calibration: 26 February 2026**

**Calibrated by:**   
**Calibration Technician**

**Certified by:**   
**Mr. Ng Yan Wa**  
**Laboratory Manager**

**Date of issue: 27 February 2025**

**Certificate No.: APJ24-154-CC002**



*Page 1 of 4*

**1. Calibration Precaution:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Conditions:**

Air Temperature: 25.8 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 54.9 %

**3. Calibration Equipment:**

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

**4. Calibration Results**

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
				104		104.0	±0.3
				114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)				Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting		Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast		94	1000	94.0	Ref
		Slow				94.0	±0.3

Certificate No.: APJ24-154-CC002



Page 2 of 4



Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB	SPL	94	31.5	94.2	$\pm 2.0$
				63	94.1	$\pm 1.5$
				125	94.1	$\pm 1.5$
				250	94.0	$\pm 1.4$
				500	94.0	$\pm 1.4$
				1000	94.0	Ref
				2000	93.6	$\pm 1.6$
				4000	92.5	$\pm 1.6$

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	94	31.5	54.7	$-39.4 \pm 2.0$
				63	67.9	$-26.2 \pm 1.5$
				125	78.0	$-16.1 \pm 1.5$
				250	85.4	$-8.6 \pm 1.4$
				500	90.8	$-3.2 \pm 1.4$
				1000	94.0	Ref
				2000	94.8	$+1.2 \pm 1.6$
				4000	93.5	$+1.0 \pm 1.6$

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC	SPL	94	31.5	91.2	$-3.0 \pm 2.0$
				63	93.3	$-0.8 \pm 1.5$
				125	93.9	$-0.2 \pm 1.5$
				250	94.1	$-0.0 \pm 1.4$
				500	94.0	$-0.0 \pm 1.4$
				1000	94.0	Ref
				2000	93.4	$-0.2 \pm 1.6$
				4000	91.7	$-0.8 \pm 1.6$

Certificate No.: APJ24-154-CC002



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## 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

### Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

# Certificate of Calibration

for

Description: Sound Level Meter  
Manufacturer: RION  
Type No.: NL-53 (Serial No.: 01130784)  
Microphone: UC-59 (Serial No.: 24908)  
Preamplifier: NH-25 (Serial No.: 33675)

## Submitted by:

Customer: Aurecon Hong Kong Limited  
Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong

Upon receipt for calibration, the instrument was found to be:

- ☒ Within (31.5Hz – 4kHz)  
☐ Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 26 February 2025

Date of calibration: 27 February 2025

Date of NEXT calibration: 26 February 2026

Calibrated by: David  
Calibration Technician

Certified by: Mr. Ng Yan Wa  
Laboratory Manager

Date of issue: 27 February 2025

Certificate No.: APJ24-154-CC003



Page 1 of 4



**1. Calibration Precaution:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Conditions:**

Air Temperature: 25.8 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 54.9 %

**3. Calibration Equipment:**

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

**4. Calibration Results**

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ24-154-CC003



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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dB	SPL	94	31.5	94.2	±2.0
				63	94.2	±1.5
				125	94.2	±1.5
				250	94.1	±1.4
				500	94.1	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	92.5	±1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA	SPL	94	31.5	54.9	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.5	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.9	+1.2 ±1.6
				4000	93.5	+1.0 ±1.6

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBC	SPL	94	31.5	91.2	-3.0 ±2.0
				63	93.4	-0.8 ±1.5
				125	94.0	-0.2 ±1.5
				250	94.1	-0.0 ±1.4
				500	94.1	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.5	-0.2 ±1.6
				4000	91.7	-0.8 ±1.6

Certificate No.: APJ24-154-CC003



Page 3 of 4

## 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.05
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ24-154-CC003



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# *Certificate of Calibration*

*for*

*Description:* **Sound Level Meter**  
*Manufacturer:* **RION**  
*Type No.:* **NL-53 (Serial No.: 01130785)**  
*Microphone:* **UC-59 (Serial No.: 25374)**  
*Preamplifier:* **NH-25 (Serial No.:33676)**

## *Submitted by:*

*Customer:* **Aurecon Hong Kong Limited**  
*Address:* **Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong**

**Upon receipt for calibration, the instrument was found to be:**

- ☒ **Within (31.5Hz – 4kHz)**  
☐ **Outside**

**the allowable tolerance.**

The test equipment used for calibration are traceable to National Standards via:

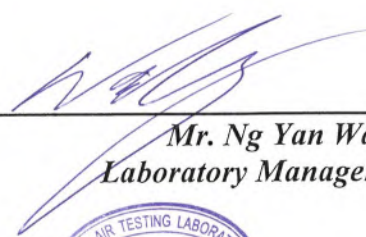
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 26 February 2025**

**Date of calibration: 27 February 2025**

**Date of NEXT calibration: 26 February 2026**

*Calibrated by:*   
**Calibration Technician**

*Certified by:*   
**Mr. Ng Yan Wa  
Laboratory Manager**

**Date of issue: 27 February 2025**

**Certificate No.: APJ24-154-CC001**



*Page 1 of 4*



### 1. Calibration Precaution:

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

### 2. Calibration Conditions:

Air Temperature: 25.8 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 54.9 %

### 3. Calibration Equipment:

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

### 4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

Certificate No.: APJ24-154-CC001



Page 2 of 4

## Frequency Response

## Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dB	SPL	94	31.5	94.3	±2.0
				63	94.1	±1.5
				125	94.1	±1.5
				250	94.1	±1.4
				500	94.0	±1.4
				1000	94.0	Ref
				2000	93.7	±1.6
				4000	92.6	±1.6

## A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA	SPL	94	31.5	54.8	-39.4 ±2.0
				63	68.0	-26.2 ±1.5
				125	78.0	-16.1 ±1.5
				250	85.4	-8.6 ±1.4
				500	90.8	-3.2 ±1.4
				1000	94.0	Ref
				2000	94.9	+1.2 ±1.6
				4000	93.6	+1.0 ±1.6

## C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBC	SPL	94	31.5	91.2	-3.0 ±2.0
				63	93.3	-0.8 ±1.5
				125	93.9	-0.2 ±1.5
				250	94.1	-0.0 ±1.4
				500	94.1	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.5	-0.2 ±1.6
				4000	91.8	-0.8 ±1.6

Certificate No.: APJ24-154-CC001



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## 5. Calibration Results Applied

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

### Note:

The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)\*L shall not be liable for any loss or damage resulting from the use of the equipment.

Certificate No.: APJ24-154-CC001



Page 4 of 4

# *Certificate of Calibration*

*for*

*Description:*                      *Sound Level Calibrator*  
*Manufacturer:*                *RION*  
*Type No.:*                        *NC-75*  
*Serial No.:*                      *34724245*

***Submitted by:***

*Customer:*                      *Aurecon Hong Kong Limited*  
*Address:*                        *Unit 1608, 16/F, Tower B,*  
   *Manulife Financial Centre,*  
   *223-231 Wai Yip Street, Kwun Tong,*  
   *Kowloon, Hong Kong*

**Upon receipt for calibration, the instrument was found to be:**

☒ **Within**

☐ **Outside**

**the allowable tolerance.**

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt: 10 July 2025**

**Date of calibration: 11 July 2025**

**Date of NEXT calibration: 10 July 2026**

*Calibrated by:* \_\_\_\_\_  
   *Calibration Technician*

*Certified by:* \_\_\_\_\_  
   *Mr. Ng Yan Wa*  
   *Laboratory Manager*

**Date of issue: 11 July 2025**

*Certificate No.: APJ25-045-CC003*



Page 1 of 2



**1. Calibration Precautions:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 24.6 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 57.5 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

**5. Calibration Results****5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.0

Note:

The values given in this certification only related to the values measured at the time of the calibration.

Certificate No.: APJ25-045-CC003



Page 2 of 2



# *Certificate of Calibration*

*for*

*Description:* *Sound Level Calibrator*

*Manufacturer:* *RION*

*Type No.:* *NC-75*

*Serial No.:* *34724244*

***Submitted by:***

*Customer:* *Aurecon Hong Kong Limited*

*Address:* *Unit 1608, 16/F, Tower B,  
Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong*

**Upon receipt for calibration, the instrument was found to be:**

☒ **Within**

☐ **Outside**

**the allowable tolerance.**

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt:** 10 July 2025

**Date of calibration:** 11 July 2025

**Date of NEXT calibration:** 10 July 2026

*Calibrated by:* \_\_\_\_\_  
*Calibration Technician*

*Certified by:* \_\_\_\_\_  
*Mr. Ng Yan Wa*  
*Laboratory Manager*

**Date of issue:** 11 July 2025

*Certificate No.:* APJ25-045-CC001



Page 1 of 2

**1. Calibration Precautions:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 24.6 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 57.5 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

**5. Calibration Results****5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.0

Note:

The values given in this certification only related to the values measured at the time of the calibration.





# *Certificate of Calibration*

*for*

*Description:* *Sound Level Calibrator*

*Manufacturer:* *RION*

*Type No.:* *NC-75*

*Serial No.:* *35124530*

***Submitted by:***

*Customer:* *Aurecon Hong Kong Limited*

*Address:* *Unit 1608, 16/F, Tower B,  
Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong*

**Upon receipt for calibration, the instrument was found to be:**

☒ **Within**

☐ **Outside**

**the allowable tolerance.**

The test equipments used for calibration are traceable to National Standards via:

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

**Date of receipt:** 10 July 2025

**Date of calibration:** 11 July 2025

**Date of NEXT calibration:** 10 July 2026

*Calibrated by:* \_\_\_\_\_  
*Calibration Technician*

*Certified by:* \_\_\_\_\_  
*Mr. Ng Yan Wa*  
*Laboratory Manager*

**Date of issue:** 11 July 2025

*Certificate No.:* APJ25-045-CC002



Page 1 of 2

**1. Calibration Precautions:**

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 24.6 °C  
Air Pressure: 1006 hPa  
Relative Humidity: 57.5 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

**5. Calibration Results****5.1 Sound Pressure Level**

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	94.0

Note:

The values given in this certification only related to the values measured at the time of the calibration.



Certificate No.: APJ25-045-CC002

Page 2 of 2

# Water Quality Monitoring Equipment



## **REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION**

**CONTACT:** JOE HO  
**CLIENT:** AURECON HONG KONG LIMITED  
**ADDRESS:** UNIT 1608, 16/F, TOWER B,  
MANULIFE FINANCIAL CENTRE,  
223-231 WAI YIP STREET,  
KWUN TONG, HONG KONG

**WORK ORDER:** HK2543901  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 11-Oct-2025  
**DATE OF ISSUE:** 21-Oct-2025

### GENERAL COMMENTS

The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

This report superseded any previous report(s) with same work order number.

### EQUIPMENT INFORMATION

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client.

Equipment Type: Multifunctional Meter

Service Nature: Performance Check

Scope: Conductivity, Dissolved Oxygen, pH Value, Turbidity, Salinity and Temperature

Brand Name/ Model No.: [YSI]/ [ProDSS]

Serial No./ Equipment No.: [24G101660]/ [N/A]

Date of Calibration: 17-October-2025

Ms. Cheng Sin Ying, May  
Senior Chemist - Inorganics

*This report shall not be reproduced except in full without the written approval of the laboratory.*

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2543901  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 21-Oct-2025  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/Model No.: [YSI]/ [ProDSS]  
Serial No.: [24G101660]/ [N/A]  
Equipment No.:  
Date of Calibration: 17-October-2025

Date of Next Calibration: 17-January-2026

## PARAMETERS:

### Conductivity

Method Ref: APHA (23rd edition), 2510B

Expected Reading ( $\mu\text{S}/\text{cm}$ )	Displayed Reading ( $\mu\text{S}/\text{cm}$ )	Tolerance (%)
146.9	147.7	+0.5
6667	6826	+2.4
12890	12959	+0.5
58670	57401	-2.2
	Tolerance Limit (%)	$\pm 10.0$

### Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
1.58	1.73	+0.15
5.00	4.89	-0.11
6.98	7.07	+0.09
	Tolerance Limit (mg/L)	$\pm 0.20$

### pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.88	-0.12
7.0	7.09	+0.09
10.0	9.96	-0.04
	Tolerance Limit (pH unit)	$\pm 0.20$

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Cheng Sin Ying, May  
Senior Chemist - Inorganics



# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2543901  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 21-Oct-2025  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/Model No.: [YSI]/ [ProDSS]  
Serial No.: [24G101660]/ [N/A]  
Equipment No.:  
Date of Calibration: 17-October-2025

Date of Next Calibration: 17-January-2026

## PARAMETERS:

### Turbidity

Method Ref: APHA (23rd edition), 2130B

Expected Reading (NTU)	Displayed Reading (NTU)	Tolerance (%)
0	0.44	--
4	4.26	+6.5
40	37.62	-6.0
80	76.36	-4.6
400	362.64	-9.3
800	733.83	-8.3
Tolerance Limit (%)		±10.0

### Salinity

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.00	--
10	10.15	+1.5
20	20.56	+2.8
30	29.38	-2.1
Tolerance Limit (%)		±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Cheng Sin Ying, May  
Senior Chemist - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2543901  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 21-Oct-2025  
**CLIENT:** AURECON HONG KONG LIMITED

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [ProDSS]  
Serial No./ Equipment No.: [24G101660]/ [N/A]  
Date of Calibration: 17-October-2025

Date of Next Calibration: 17-January-2026

## PARAMETERS:

### Temperature

**Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
9.0	9.6	+0.6
19.5	18.3	-1.2
39.5	38.3	-1.2
Tolerance Limit (°C)		±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Cheng Sin Ying, May  
Senior Chemist - Inorganics

# Appendix E

## Environmental Monitoring Schedule

Environmental Monitoring Schedule (November 2025)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1 <b>WQM</b> Mid Flood (16:00) Mid Ebb (11:30)
2	3 <b>AQM, NM</b>	4 <b>WQM</b> Mid Flood (10:30) Mid Ebb (17:00)	5	6 <b>WQM</b> Mid Flood (12:30) Mid Ebb (17:00)	7	8 <b>WQM, AQM</b> Mid Flood (16:00) Mid Ebb (11:30)
9	10	11 <b>WQM, EMB (Day)</b> Mid Flood (08:30) Mid Ebb (13:30)	12	13 <b>WQM</b> Mid Flood (09:30) Mid Ebb (14:30)	14 <b>AQM, NM,</b>	15 <b>WQM</b> Mid Flood (09:00) Mid Ebb (15:30)
16	17	18 <b>WQM</b> Mid Flood (10:40) Mid Ebb (17:00)	19	20 <b>WQM, AQM, NM, ANRM</b> Mid Flood (12:30) Mid Ebb (18:03)	21	22 <b>WQM</b> Mid Flood (16:00) Mid Ebb (12:30)
23	24	25 <b>WQM</b> Mid Flood (18:00) Mid Ebb (12:50)	26 <b>AQM, NM</b>	27 <b>WQM</b> Mid Flood (08:30) Mid Ebb (14:03)	28	29 <b>WQM</b> Mid Flood (09:00) Mid Ebb (15:00)
30						

Remarks:

- Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
- Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring per 6 days.
- Noise Monitoring (**NM**): Leq (30 min) during between 0700 - 1900.
- Water Quality Monitoring (**WQM**): Once per day for 3 days per week.

- Ecological Monitoring of Birds (**EMB**): Once per month.
- Ardeid Night Roost Monitoring (**ANRM**): Once per month.
- Air Quality Location: AM1 and AM2.
- Noise Monitoring Location: CM1, CM2 and CM3.
- Water Quality Monitoring Location: M1, M2, M3.

Environmental Monitoring Schedule (December 2025)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
	1	2 <b>AQM, NM, QM</b> Mid Flood (12:45) Mid Ebb (09:20)	3	4 <b>WQM</b> Mid Flood (12:45) Mid Ebb (09:20)	5	6 <b>WQM</b> Mid Flood (12:45) Mid Ebb (09:20)
7	8 <b>AQM, NM</b>	9 <b>WQM</b> Mid Flood (18:00) Mid Ebb (12:39)	10	11 <b>WQM</b> Mid Flood (18:00) Mid Ebb (12:39)	12	13 <b>AQM, WQM</b> Mid Flood (08:30) Mid Ebb (14:03)
14	15	16 <b>WQM</b> Mid Flood (09:18) Mid Ebb (15:51)	17	18 <b>WQM</b> Mid Flood (18:00) Mid Ebb (12:39)	19 <b>AQM, NM, EMB (Day)</b>	20 <b>WQM</b> Mid Flood (12:45) Mid Ebb (09:20)
21	22	23 <b>WQM, EMB (Night), ANRM</b> Mid Flood (18:25) Mid Ebb (10:15)	24 <b>AQM, NM</b>	25 <b>WQM</b> Mid Flood (17:36) Mid Ebb (12:27)	26	27 <b>WQM</b> Mid Flood (08:59) Mid Ebb (13:57)
28	29	30 <b>WQM, AQM, NM</b> Mid Flood (09:04) Mid Ebb (15:31)	31			

Remarks:

- Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
- Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring per 6 days.
- Noise Monitoring (**NM**): Leq (30 min) during between 0700 - 1900.
- Water Quality Monitoring (**WQM**): Once per day for 3 days per week.
- Ecological Monitoring of Birds (**EMB**): Once per month.
- Ardeid Night Roost Monitoring (**ANRM**): Once per month.
- Air Quality Location: AM1 and AM2.
- Noise Monitoring Location: CM1, CM2 and CM3.
- Water Quality Monitoring Location: M1, M2, M3.

Environmental Monitoring Schedule (January 2026)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
				1 <b>WQM</b> Mid Flood (12:30) Mid Ebb (17:00)	2	3 <b>WQM</b> Mid Flood (16:00) Mid Ebb (11:30)
4	5 <b>AQM, NM</b>	6 <b>WQM</b> Mid Flood (08:30) Mid Ebb (13:30)	7	8 <b>WQM</b> Mid Flood (09:30) Mid Ebb (14:30)	9 <b>EMB (Day)</b>	10 <b>AQM, WQM</b> Mid Flood (09:00) Mid Ebb (15:30)
11	12	13 <b>WQM</b> Mid Flood (10:40) Mid Ebb (17:00)	14	15 <b>WQM</b> Mid Flood (12:30) Mid Ebb (18:03)	16 <b>AQM, NM</b>	17 <b>WQM</b> Mid Flood (16:00) Mid Ebb (12:30)
18	19	20 <b>WQM</b> Mid Flood (10:40) Mid Ebb (17:00)	21	22 <b>AQM, NM, WQM</b> Mid Flood (08:30) Mid Ebb (14:03)	23	24 <b>WQM</b> Mid Flood (09:00) Mid Ebb (15:00)
25	26 <b>ANRM, EMB (Night)</b>	27 <b>WQM</b> Mid Flood (09:50) Mid Ebb (16:03)	28 <b>AQM, NM</b>	29 <b>WQM</b> Mid Flood (10:40) Mid Ebb (17:00)	30	31 <b>WQM</b> Mid Flood (10:40) Mid Ebb (17:00)

Remarks:

- Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
- Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring per 6 days.
- Noise Monitoring (**NM**): Leq (30 min) during between 0700 - 1900.
- Water Quality Monitoring (**WQM**): Once per day for 3 days per week.
- Ecological Monitoring of Birds (**EMB**): Once per month.
- Ardeid Night Roost Monitoring (**ANRM**): Once per month.
- Air Quality Location: AM1 and AM2.
- Noise Monitoring Location: CM1, CM2 and CM3.
- Water Quality Monitoring Location: M1, M2, M3.

Environmental Monitoring Schedule (February 2026)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
1	2	3 <b>AQM, NM, WQM, ANRM</b> Mid Flood (17:01) Mid Ebb (09:30)	4	5 <b>WQM</b> Mid Flood (08:33) Mid Ebb (14:27)	6	7 <b>WQM</b> Mid Flood (09:09) Mid Ebb (13:29)
8	9 <b>AQM, NM</b>	10 <b>WQM</b> Mid Flood (11:07) Mid Ebb (16:21)	11 <b>EMB (Day)</b>	12 <b>WQM</b> Mid Flood (16:40) Mid Ebb (08:54)	13 <b>EMB (Day)</b>	14 <b>AQM, WQM</b> Mid Flood (16:27) Mid Ebb (11:25)
15	16	17 <b>WQM</b> Mid Flood (18:04) Mid Ebb (11:24)	18	19 <b>WQM</b> Mid Flood (08:34) Mid Ebb (12:53)	20 <b>AQM, NM</b>	21 <b>WQM</b> Mid Flood (08:29) Mid Ebb (14:14)
22	23	24 <b>WQM</b> Mid Flood (11:29) Mid Ebb (16:17)	25	26 <b>AQM, NM, WQM</b> Mid Flood (17:01) Mid Ebb (09:30)	27	28 <b>WQM</b> Mid Flood (08:29) Mid Ebb (14:14)

Remarks:

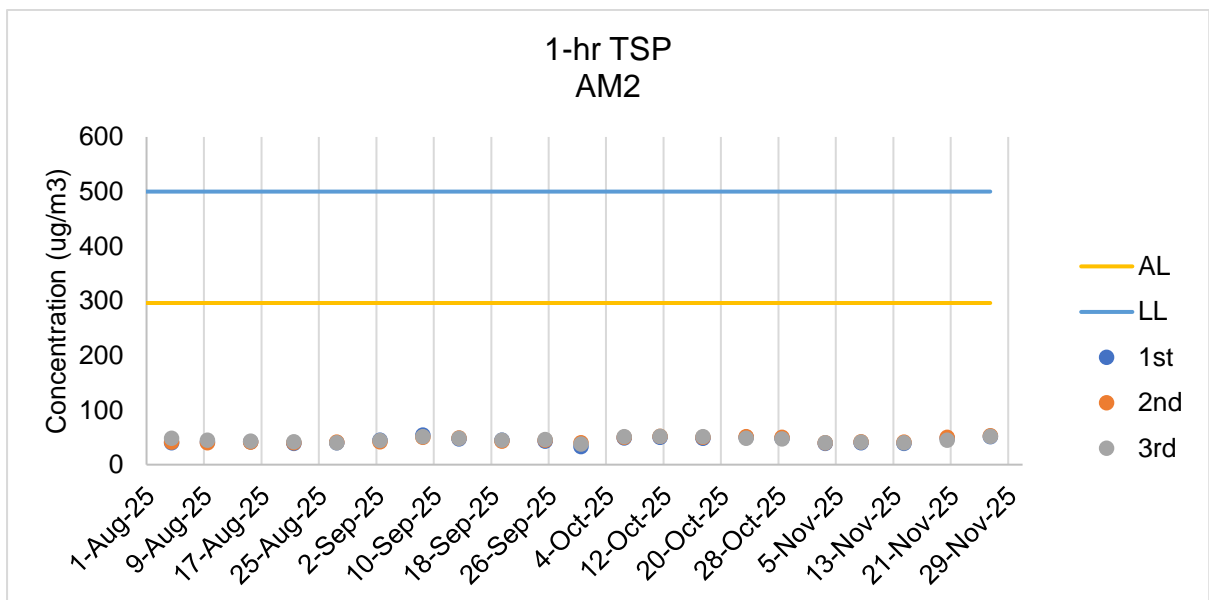
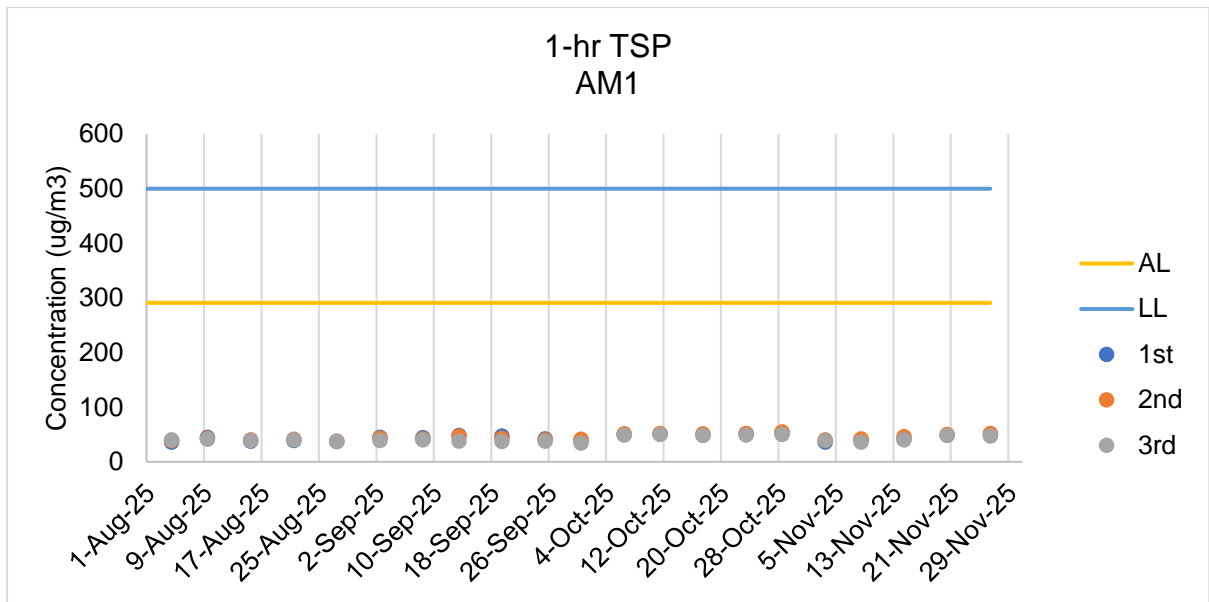
- Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.
- Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring per 6 days.
- Noise Monitoring (**NM**): Leq (30 min) during between 0700 - 1900.
- Water Quality Monitoring (**WQM**): Once per day for 3 days per week.
- Ecological Monitoring of Birds (**EMB**): Once per month.
- Ardeid Night Roost Monitoring (**ANRM**): Once per month.
- Air Quality Location: AM1 and AM2.
- Noise Monitoring Location: CM1, CM2 and CM3.
- Water Quality Monitoring Location: M1, M2, M3.



## Appendix F

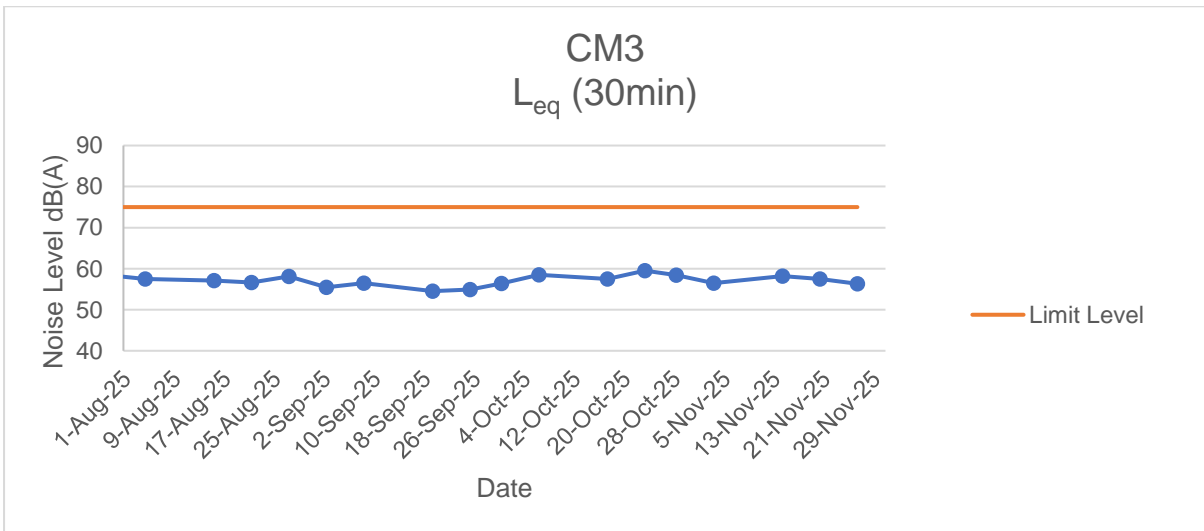
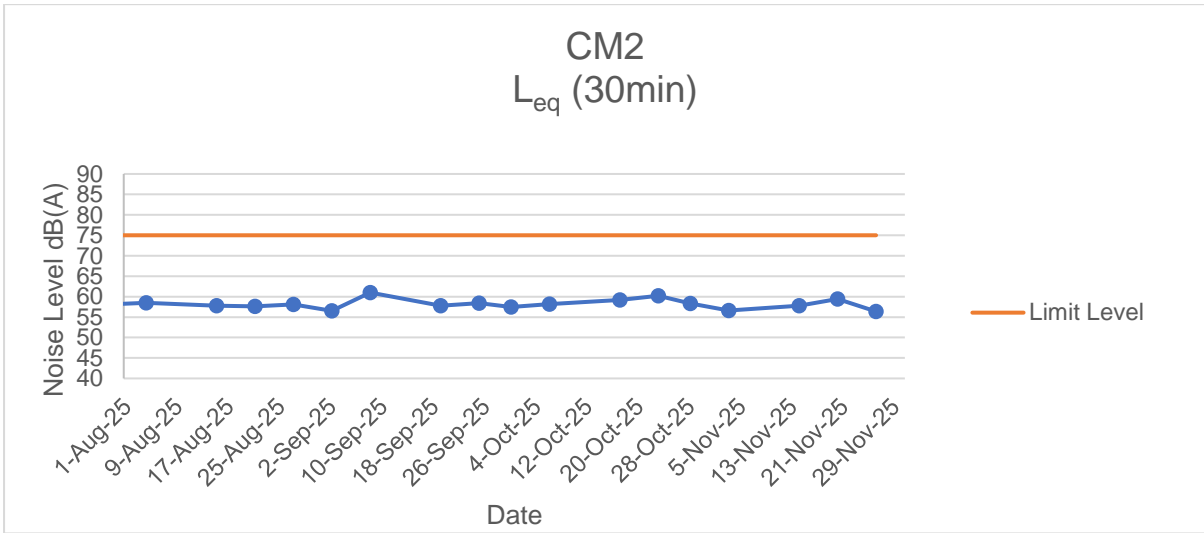
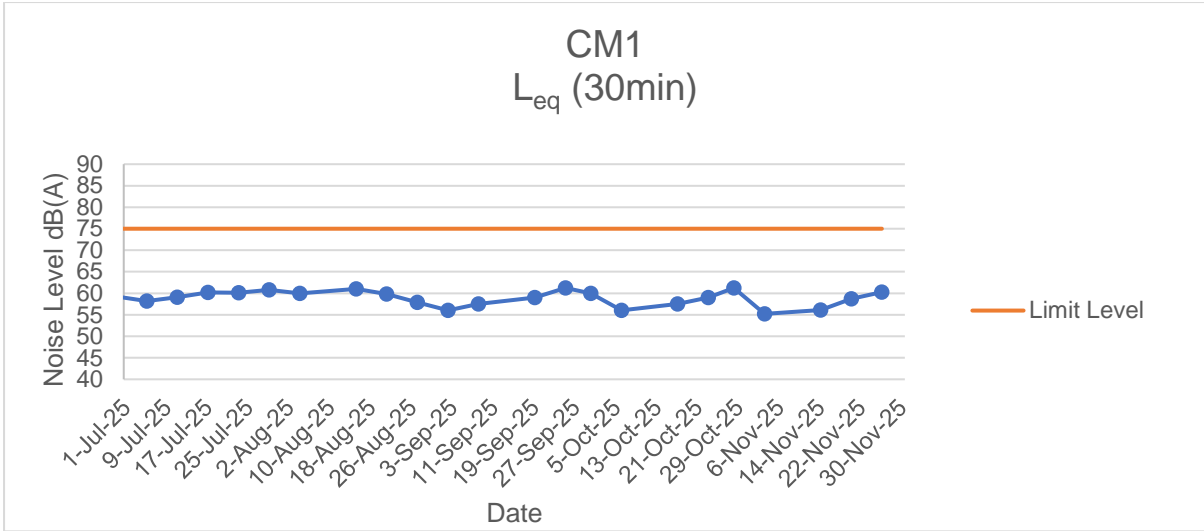
### Environmental Monitoring Results

# Air Quality Monitoring Results



**Air Quality Monitoring Results**

# Noise Monitoring Results

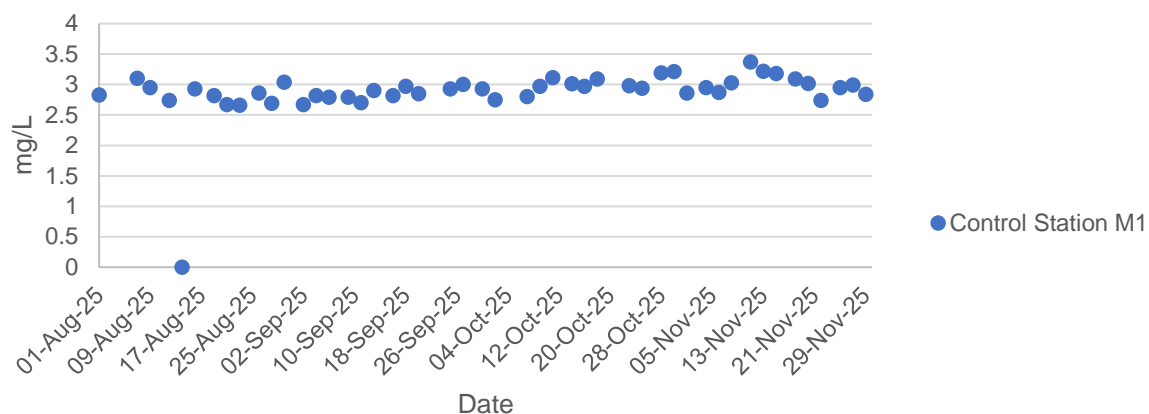


**Noise Monitoring Results**

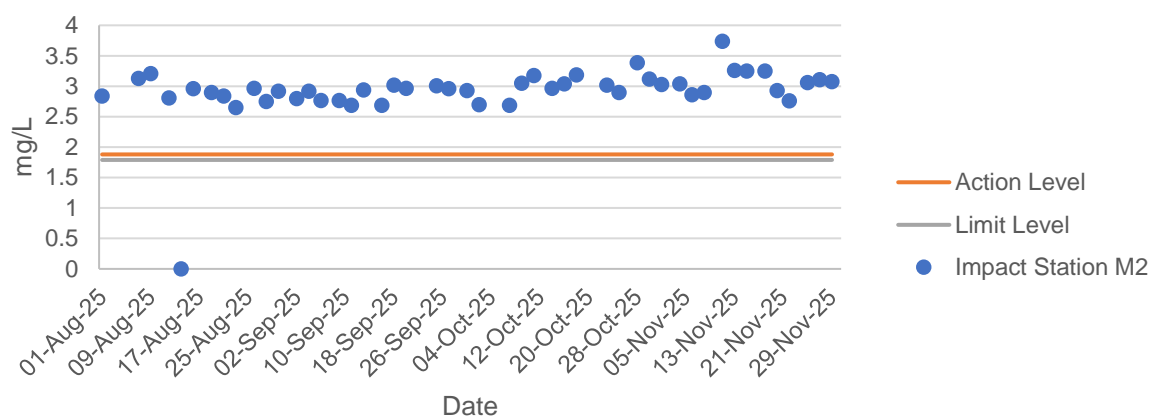


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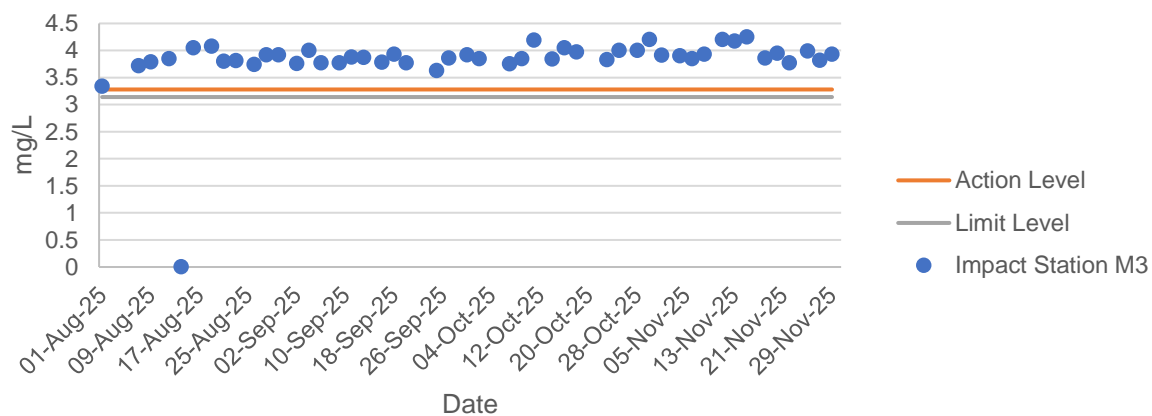
## Dissolved Oxygen at Mid-Flood Tide



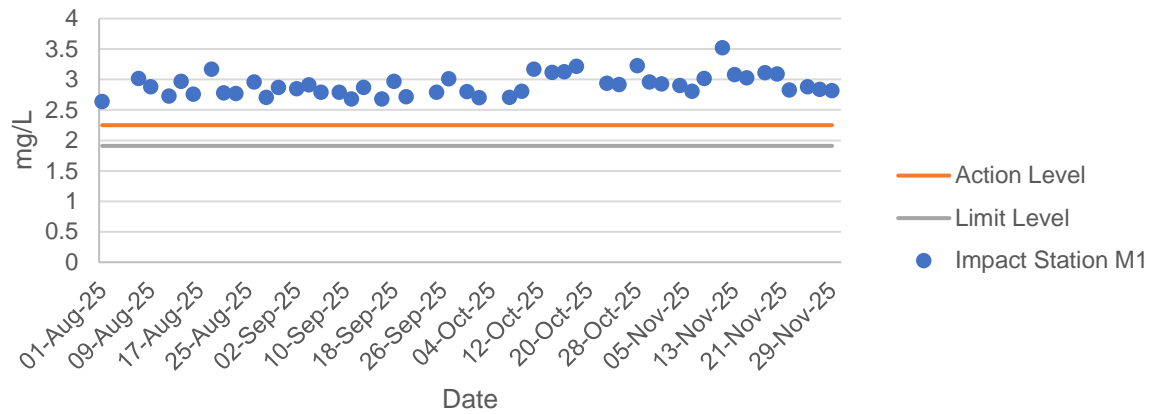
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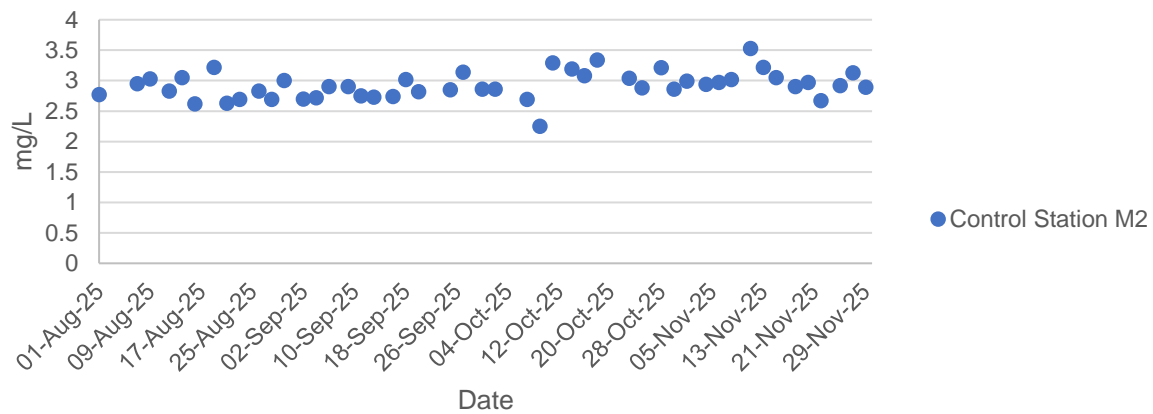
## Dissolved Oxygen at Mid-Flood Tide



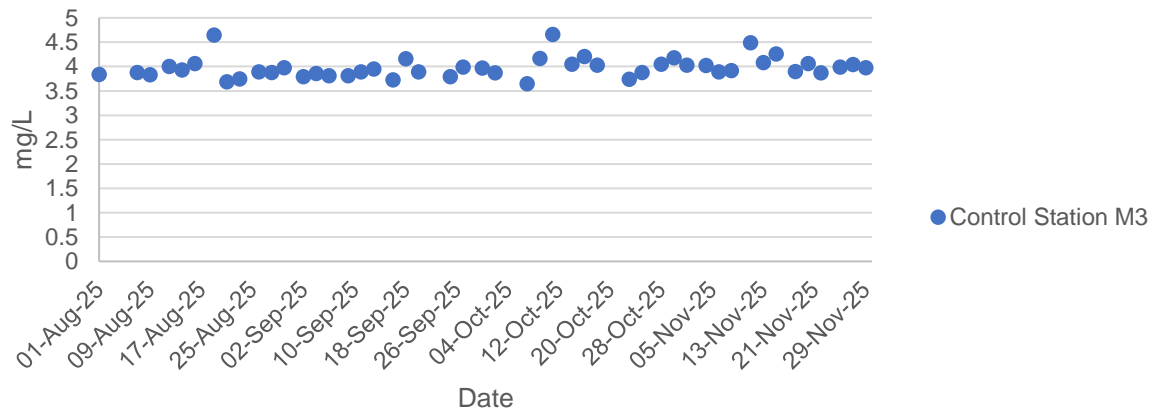
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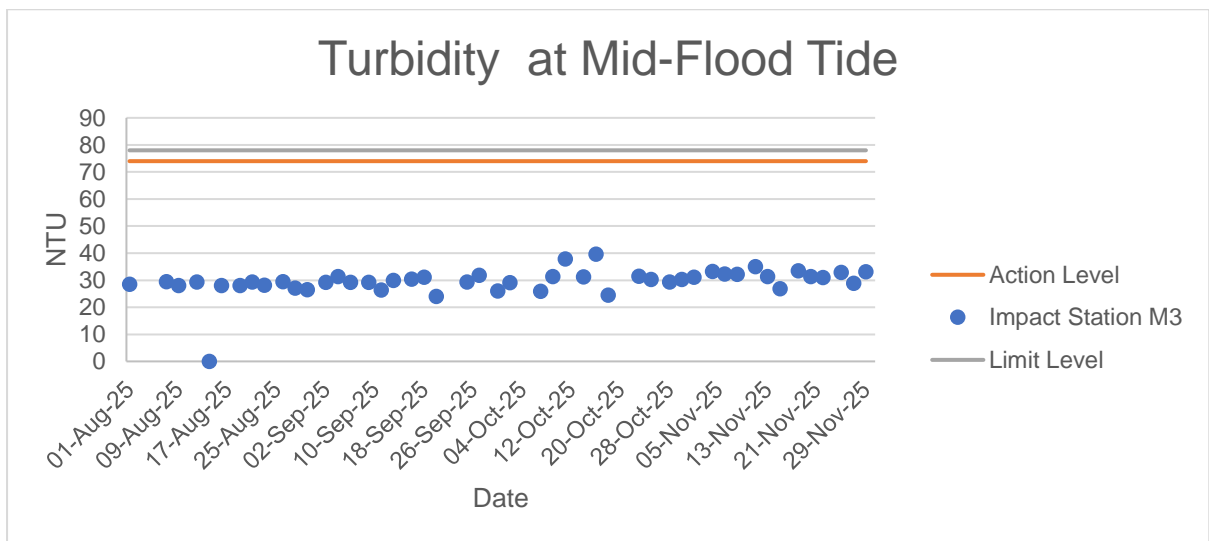
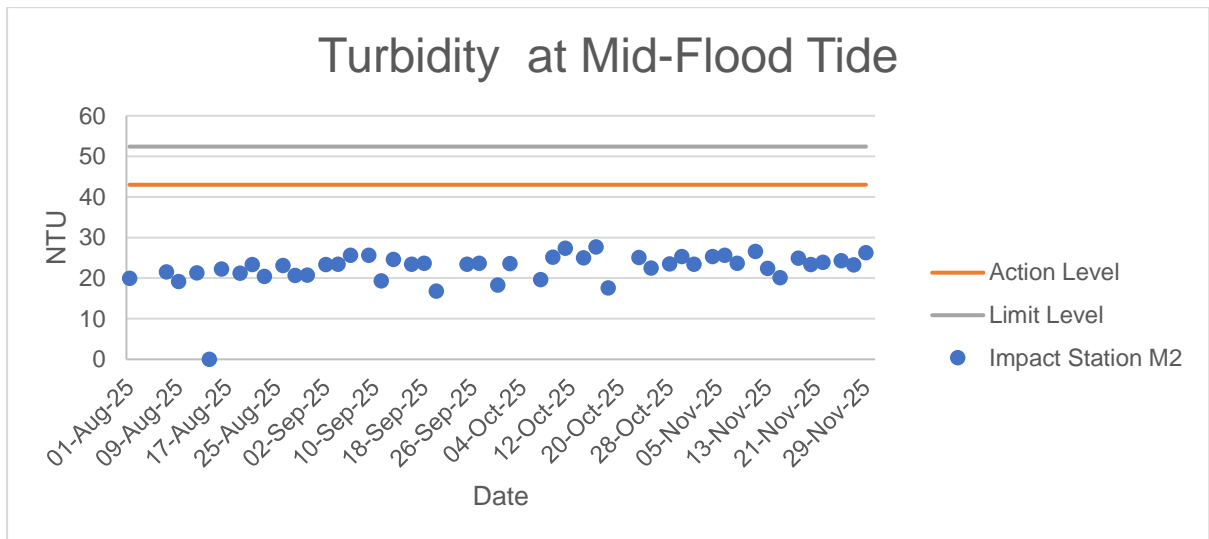
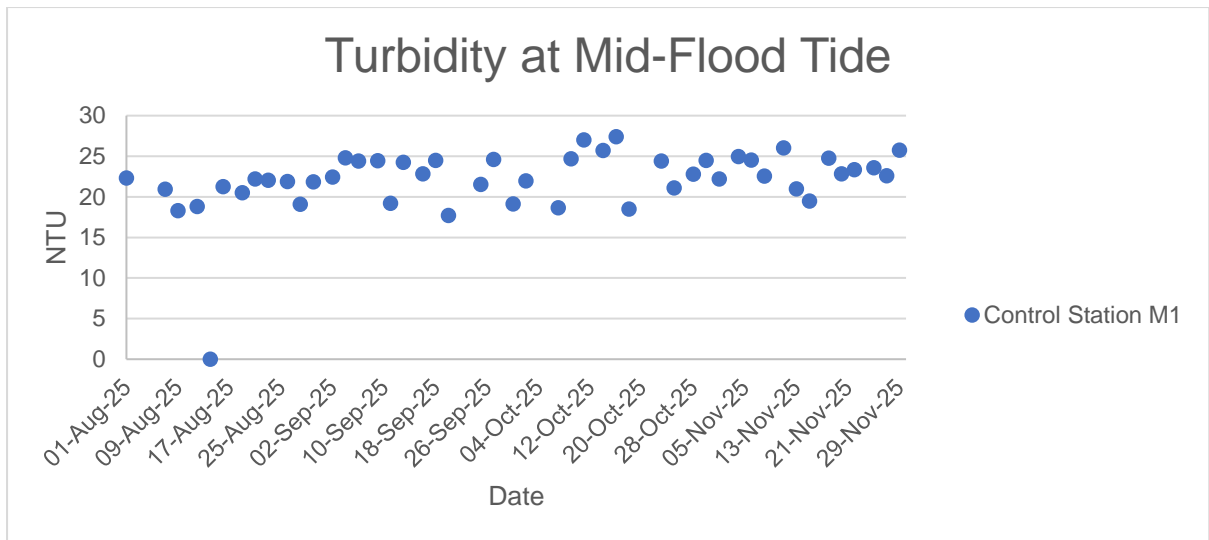


## Dissolved Oxygen at Mid-Ebb Tide

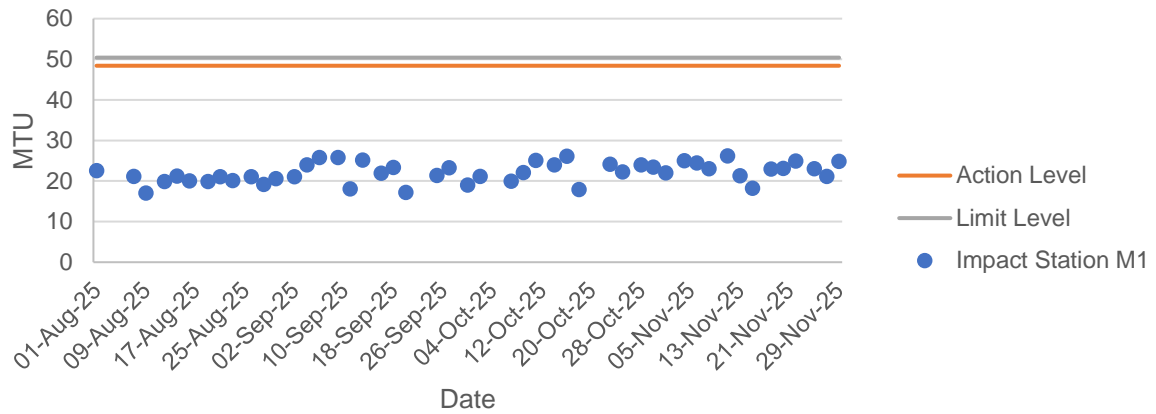


## Dissolved Oxygen at Mid-Ebb Tide

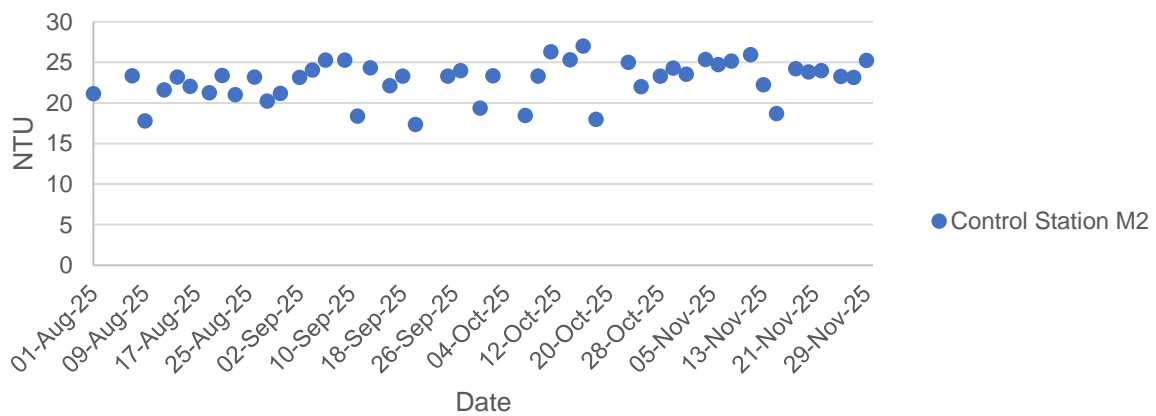




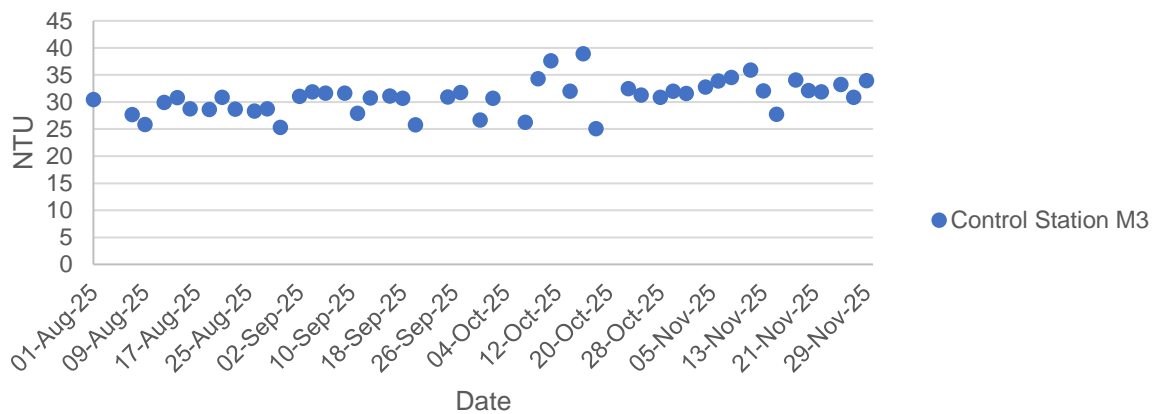
## Turbidity at Mid-Ebb Tide



## Turbidity at Mid-Ebb Tide

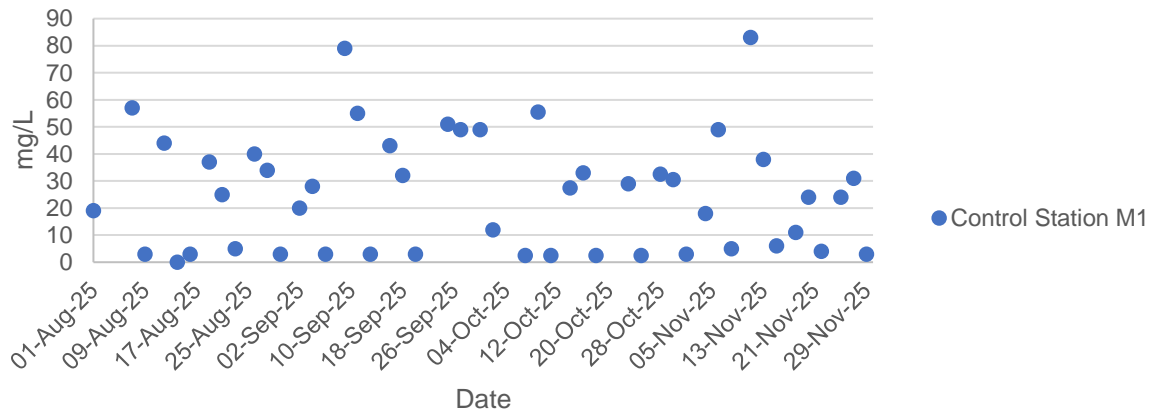


## Turbidity at Mid-Ebb Tide

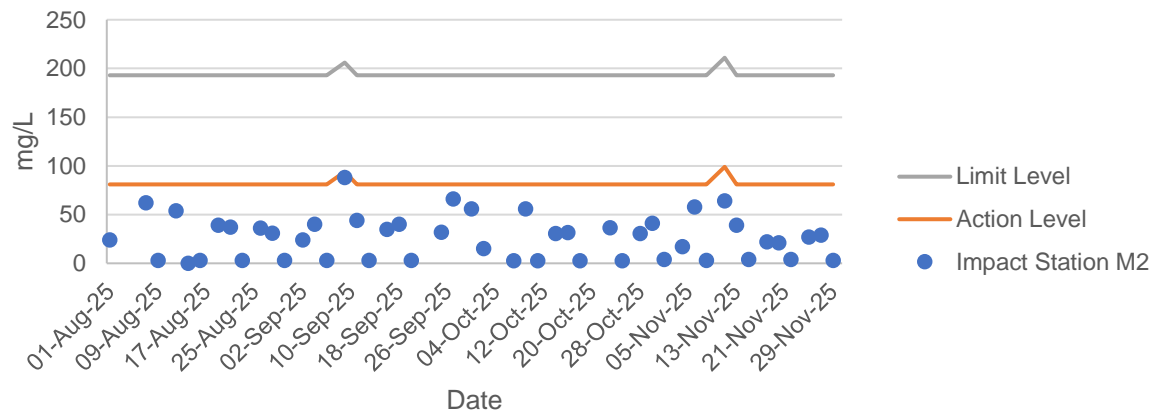




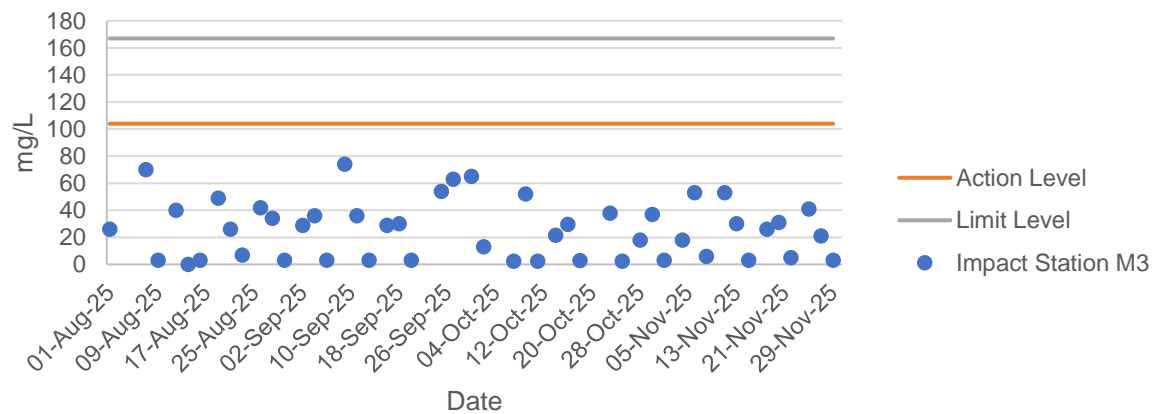
### Total Suspended Solids at Mid-Flood Tide



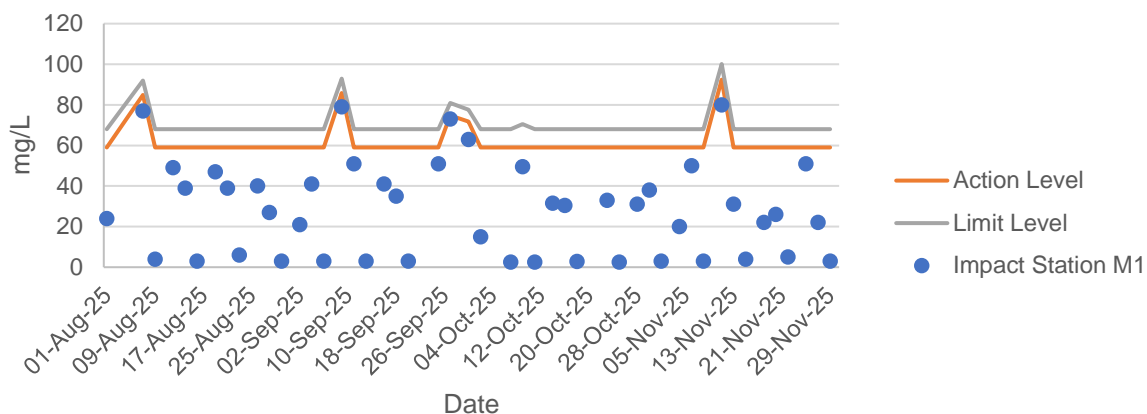
### Total Suspended Solids at Mid-Flood Tide



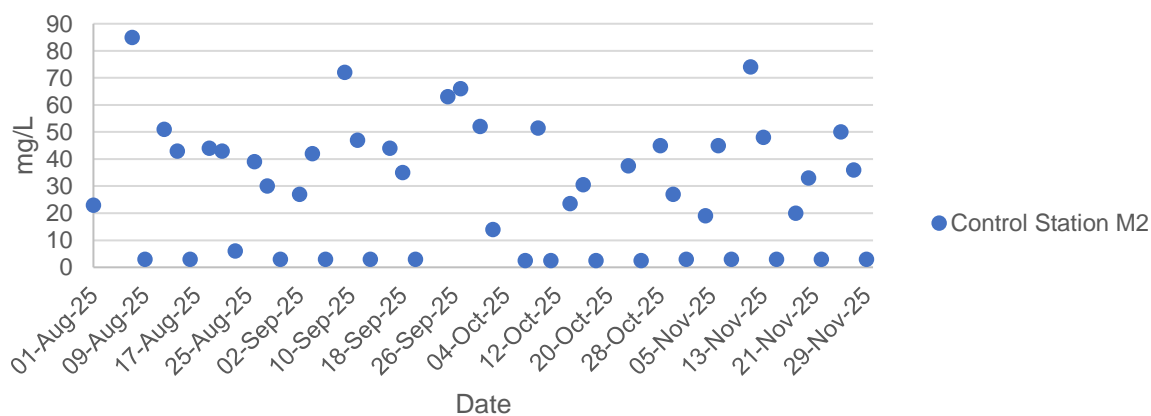
### Total Suspended Solids at Mid-Flood Tide



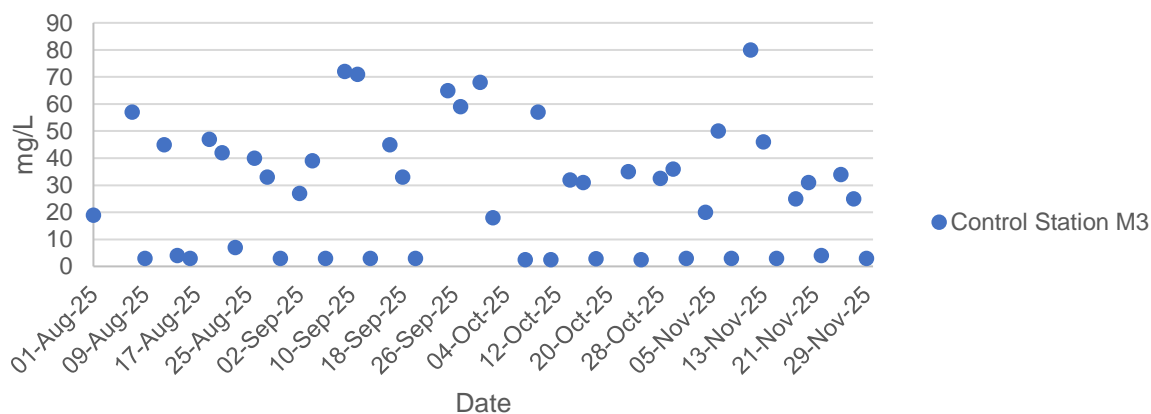
## Total Suspended Solids at Mid-Ebb Tide



## Total Suspended Solids at Mid-Ebb Tide



## Total Suspended Solids at Mid-Ebb Tide



Ecology Monitoring Results for  
Contract No. SPW 01/2025

Environmental Team for Construction of Yuen long  
Effluent Polishing Plant Stage 1

Appendix F.1 Ecological Bird Monitoring Result (11 November 2025)

Date (dd/mm/yyyy)	Daytime/ Night- time	Season	Area	Transect / Point Count	Point Count (Location) / Transect	Common Name	Scientific Name	Abundance	Distribution in Hong Kong <sup>2</sup>	Principal Status <sup>3</sup>	Level of Concern <sup>4</sup>	Protection Status in China <sup>5</sup>	China Red Data Book <sup>6</sup>	Red List of China's Vertebrates <sup>9</sup>	IUCN Red List <sup>7</sup> (v.2020-3)	Species of Conservation Importance	Wetland Dependent <sup>8</sup>
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Chinese Pond Heron	<i>Ardeola bacchus</i>	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Little Egret	<i>Egretta garzetta</i>	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Great Cormorant	<i>Phalacrocorax carbo</i>	9	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Black-winged stilt	<i>Himantopus himantopus</i>	4	Common	PM	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Common Sandpiper	<i>Actitis hypoleucos</i>	1	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Spotted Dove	<i>Spilopelia chinensis</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Collared Crow	<i>Corvus torquatus</i>	1	Uncommon	R	LC	-	-	NT	VU	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Barn Swallow	<i>Hirundo rustica</i>	3	Abundant	PM,SV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Black-collared Starling	<i>Gracupica nigricollis</i>	10	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW1	White Wagtail	<i>Motacilla alba</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW2	Great Cormorant	<i>Phalacrocorax carbo</i>	11	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW2	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW2	Plain Prinia	<i>Prinia inornata</i>	2	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW2	Scaly-breasted Munia	<i>Lonchura punctulata</i>	3	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW2	Black-faced Bunting	<i>Emberiza spodocephala</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW3	Little Egret	<i>Egretta garzetta</i>	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW3	Black Kite	<i>Milvus migrans</i>	2	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW3	Spotted Dove	<i>Spilopelia chinensis</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW3	Barn Swallow	<i>Hirundo rustica</i>	2	Abundant	PM,SV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW3	Crested Myna	<i>Acridotheres cristatellus</i>	5	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Great Cormorant	<i>Phalacrocorax carbo</i>	16	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	1	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Common Moorhen	<i>Gallinula chloropus</i>	1	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Pied Kingfisher	<i>Ceryle rudis</i>	1	Uncommon	R	-	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	3	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Chinese Bulbul	<i>Pycnonotus sinensis</i>	6	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Dusky Warbler	<i>Phylloscopus fuscatus</i>	2	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Black-collared Starling	<i>Gracupica nigricollis</i>	11	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW4	Scaly-breasted Munia	<i>Lonchura punctulata</i>	3	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Chinese Pond Heron	<i>Ardeola bacchus</i>	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Eastern Cattle Egret	<i>Bubulcus coromandus</i>	8	Common	R.PM	(LC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Grey Heron	<i>Ardea cinerea</i>	6	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Great Egret	<i>Ardea alba</i>	3	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Little Egret	<i>Egretta garzetta</i>	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Great Cormorant	<i>Phalacrocorax carbo</i>	22	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	2	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Little Ringed	<i>Charadrius dubius</i>	3	Common	WV,PM		-	-	LC	LC	Y	Y

Appendix F.1 Ecological Bird Monitoring Result (11 November 2025)

Date (dd/mm/yyyy)	Daytime/ Night- time	Season	Area	Transect / Point Count	Point Count (Location) / Transect	Common Name	Scientific Name	Abundance	Distribution in Hong Kong <sup>2</sup>	Principal Status <sup>3</sup>	Level of Concern <sup>4</sup>	Protection Status in China <sup>5</sup>	China Red Data Book <sup>6</sup>	Red List of China's Vertebrates <sup>9</sup>	IUCN Red List <sup>7</sup> (v.2020-3)	Species of Conservation Importance	Wetland Dependent <sup>8</sup>
						Plover					(LC)						
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Pied Kingfisher	<i>Ceryle rudis</i>	2	Uncommon	R	-	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	1	Common	WV,Sp	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Dusky Warbler	<i>Phylloscopus fuscatus</i>	2	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Common Myna	<i>Acridotheres tristis</i>	8	Uncommon	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	White-cheeked Starling	<i>Spodiopsar cineraceus</i>	12	Common	WV	PRC	-	-	-	-	Y	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Black-collared Starling	<i>Gracupica nigricollis</i>	11	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Eurasian Tree Sparrow	<i>Passer montanus</i>	22	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	Eastern Yellow Wagtail	<i>Motacilla tschutschensis</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW5	White Wagtail	<i>Motacilla alba</i>	5	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Black-faced Spoonbill	<i>Platalea minor</i>	1	Common	WV	PGC	Class II	EN	EN	EN	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Great Cormorant	<i>Phalacrocorax carbo</i>	14	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Spotted Dove	<i>Spilopelia chinensis</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Long-tailed Shrike	<i>Lanius schach</i>	1	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Crested Myna	<i>Acridotheres cristatellus</i>	12	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Black-collared Starling	<i>Gracupica nigricollis</i>	6	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	2	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW6	Richard's Pipit	<i>Anthus richardi</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	4	Common	R,WV	(LC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Chinese Pond Heron	<i>Ardeola bacchus</i>	9	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Great Egret	<i>Ardea alba</i>	3	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Spotted Dove	<i>Spilopelia chinensis</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Azure-winged Magpie	<i>Cyanopica cyanus</i>	6	Introduced	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Large-billed Crow	<i>Corvus macrorhynchos</i>	1	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Japanese Tit	<i>Parus minor</i>	3	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Crested Myna	<i>Acridotheres cristatellus</i>	10	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Point Count	FLW7	Black-collared Starling	<i>Gracupica nigricollis</i>	25	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Chinese Pond Heron	<i>Ardeola bacchus</i>	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Grey Heron	<i>Ardea cinerea</i>	1	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Little Egret	<i>Egretta garzetta</i>	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Great Cormorant	<i>Phalacrocorax carbo</i>	38	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	1	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	6	Common	-	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Spotted Dove	<i>Spilopelia chinensis</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Common Kingfisher	<i>Alcedo atthis</i>	2	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Collared Crow	<i>Corvus torquatus</i>	1	Uncommon	R	LC	-	-	NT	VU	Y	Y



Appendix F.1 Ecological Bird Monitoring Result (11 November 2025)

Date (dd/mm/yyyy)	Daytime/ Night- time	Season	Area	Transect / Point Count	Point Count (Location) / Transect	Common Name	Scientific Name	Abundance	Distribution in Hong Kong <sup>2</sup>	Principal Status <sup>3</sup>	Level of Concern <sup>4</sup>	Protection Status in China <sup>5</sup>	China Red Data Book <sup>6</sup>	Red List of China's Vertebrates <sup>9</sup>	IUCN Red List <sup>7</sup> (v.2020-3)	Species of Conservation Importance	Wetland Dependent <sup>8</sup>
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Chinese Bulbul	<i>Pycnonotus sinensis</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Plain Prinia	<i>Prinia inornata</i>	2	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Daurian Redstart	<i>Phoenicurus aureus</i>	1	Common	WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	NSW1	Eurasian Tree Sparrow	<i>Passer montanus</i>	6	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	1	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Common Greenshank	<i>Tringa nebularia</i>	3	Abundant	PM,WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Spotted Dove	<i>Spilopelia chinensis</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	2	Common	R	(LC)	Class II	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Chinese Bulbul	<i>Pycnonotus sinensis</i>	5	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Swinhoe's White-eye	<i>Zosterops simplex</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	Crested Myna	<i>Acridotheres cristatellus</i>	3	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW1	White Wagtail	<i>Motacilla alba</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Chinese Pond Heron	<i>Ardeola bacchus</i>	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Grey Heron	<i>Ardea cinerea</i>	3	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Great Egret	<i>Ardea alba</i>	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Little Egret	<i>Egretta garzetta</i>	6	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Great Cormorant	<i>Phalacrocorax carbo</i>	8	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Black-winged stilt	<i>Himantopus himantopus</i>	4	Common	PM	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	1	Common	-	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Common Kingfisher	<i>Alcedo atthis</i>	1	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	1	Common	WV,Sp	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	3	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Oriental Magpie Robin	<i>Copsychus saularis</i>	1	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW2	Red-throated Flycatcher	<i>Ficedula albicilla</i>	1	Uncommon	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Northern Shoveler	<i>Spatula clypeata</i>	14	Abundant	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Eurasian Wigeon	<i>Mareca penelope</i>	19	Common	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Eurasian Teal	<i>Anas crecca</i>	12	Common	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Tufted Duck	<i>Aythya fuligula</i>	6	Uncommon	WV	LC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Black-faced Spoonbill	<i>Platalea minor</i>	1	Common	WV	PGC	Class II	EN	EN	EN	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Chinese Pond Heron	<i>Ardeola bacchus</i>	11	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Grey Heron	<i>Ardea cinerea</i>	5	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Great Egret	<i>Ardea alba</i>	4	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Great Cormorant	<i>Phalacrocorax carbo</i>	26	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Black-winged stilt	<i>Himantopus himantopus</i>	14	Common	PM	RC	-	-	LC	LC	Y	Y

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Date (dd/mm/yyyy)	Daytime/ Night- time	Season	Area	Transect / Point Count	Point Count (Location) / Transect	Common Name	Scientific Name	Abundance	Distribution in Hong Kong <sup>2</sup>	Principal Status <sup>3</sup>	Level of Concern <sup>4</sup>	Protection Status in China <sup>5</sup>	China Red Data Book <sup>6</sup>	Red List of China's Vertebrates <sup>9</sup>	IUCN Red List <sup>7</sup> (v.2020-3)	Species of Conservation Importance	Wetland Dependent <sup>8</sup>
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Common Sandpiper	<i>Actitis hypoleucos</i>	2	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Common Redshank	<i>Tringa totanus</i>	7	Common	PM	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	House Swift	<i>Apus nipalensis</i>	4	Abundant, Common	SpM,R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Collared Crow	<i>Corvus torquatus</i>	4	Uncommon	R	LC	-	-	NT	VU	Y	Y
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Chinese Bulbul	<i>Pycnonotus sinensis</i>	1	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Barn Swallow	<i>Hirundo rustica</i>	6	Abundant	PM,SV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	1	Common	WV,Sp	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	Crested Myna	<i>Acridotheres cristatellus</i>	6	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Point Count	SP/NSW3	White Wagtail	<i>Motacilla alba</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Chinese Pond Heron	<i>Ardeola bacchus</i>	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Grey Heron	<i>Ardea cinerea</i>	2	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Great Egret	<i>Ardea alba</i>	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Little Egret	<i>Egretta garzetta</i>	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Great Cormorant	<i>Phalacrocorax carbo</i>	4	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Black-winged Kite	<i>Elanus caeruleus</i>	1	Uncommon	O	LC	Class II	VU	NT	LC	Y	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Black Kite	<i>Milvus migrans</i>	2	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	2	Common	-	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Spotted Dove	<i>Spilopelia chinensis</i>	3	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Greater Coucal	<i>Centropus sinensis</i>	2	Common	R	-	Class II	VU	LC	LC	Y	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Azure-winged Magpie	<i>Cyanopica cyanus</i>	8	Introduced	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Japanese Tit	<i>Parus minor</i>	2	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	6	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Chinese Bulbul	<i>Pycnonotus sinensis</i>	11	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Dusky Warbler	<i>Phylloscopus fuscatus</i>	4	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Yellow-bellied Prinia	<i>Prinia flaviventris</i>	1	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Plain Prinia	<i>Prinia inornata</i>	3	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Masked Laughingthrush	<i>Pterorhinus perspicillatus</i>	3	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Swinhoe's White-eye	<i>Zosterops simplex</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Crested Myna	<i>Acridotheres cristatellus</i>	4	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Black-collared Starling	<i>Gracupica nigricollis</i>	14	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Stejneger's Stonechat	<i>Saxicola stejnegeri</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Scaly-breasted Munia	<i>Lonchura punctulata</i>	4	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	FLW	Transect	FLW	Black-browed Reed Warbler	<i>Acrocephalus bistrigiceps</i>	1	Common	PM	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Chinese Pond Heron	<i>Ardeola bacchus</i>	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Little Egret	<i>Egretta garzetta</i>	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Great Cormorant	<i>Phalacrocorax carbo</i>	2	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Common Redshank	<i>Tringa totanus</i>	2	Common	PM	RC	-	-	LC	LC	Y	Y

Appendix F.1 Ecological Bird Monitoring Result (11 November 2025)

Date (dd/mm/yyyy)	Daytime/ Night- time	Season	Area	Transect / Point Count	Point Count (Location) / Transect	Common Name	Scientific Name	Abundance	Distribution in Hong Kong <sup>2</sup>	Principal Status <sup>3</sup>	Level of Concern <sup>4</sup>	Protection Status in China <sup>5</sup>	China Red Data Book <sup>6</sup>	Red List of China's Vertebrates <sup>9</sup>	IUCN Red List <sup>7</sup> (v.2020-3)	Species of Conservation Importance	Wetland Dependent <sup>8</sup>
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Marsh Sandpiper	<i>Tringa stagnatilis</i>	1	Common	PM,WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	4	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Dusky Warbler	<i>Phylloscopus fuscatus</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Transect	NSW	Black-collared Starling	<i>Gracupica nigricollis</i>	5	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	NSW	Transect	NSW	White Wagtail	<i>Motacilla alba</i>	2	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Garganey	<i>Spatula querquedula</i>	2	Common	M,W	-	-	-	-	LC	N	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Northern Shoveler	<i>Spatula clypeata</i>	34	Abundant	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Eurasian Teal	<i>Anas crecca</i>	8	Common	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Black-faced Spoonbill	<i>Platalea minor</i>	2	Common	WV	PGC	Class II	EN	EN	EN	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Chinese Pond Heron	<i>Ardeola bacchus</i>	8	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Grey Heron	<i>Ardea cinerea</i>	3	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Great Cormorant	<i>Phalacrocorax carbo</i>	2	Common	WV	PRC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	3	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Moorhen	<i>Gallinula chloropus</i>	6	Common	R	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Black-winged stilt	<i>Himantopus himantopus</i>	22	Common	PM	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Pied Avocet	<i>Recurvirostra avosetta</i>	6	Abundant	WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Sandpiper	<i>Actitis hypoleucos</i>	1	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Redshank	<i>Tringa totanus</i>	6	Common	PM	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Marsh Sandpiper	<i>Tringa stagnatilis</i>	2	Common	PM,WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Greenshank	<i>Tringa nebularia</i>	5	Abundant	PM,WV	RC	-	-	LC	LC	Y	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Spotted Dove	<i>Spilopelia chinensis</i>	2	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Kingfisher	<i>Alcedo atthis</i>	2	Common	PM,WV	-	-	-	LC	LC	N	Y
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	12	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Dusky Warbler	<i>Phylloscopus fuscatus</i>	2	Common	PM,WV	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Common Tailorbird	<i>Orthotomus sutorius</i>	1	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Black-collared Starling	<i>Gracupica nigricollis</i>	6	Common	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	Oriental Magpie Robin	<i>Copsychus saularis</i>	1	Abundant	R	-	-	-	LC	LC	N	N
11/11/2025	Daytime	Wet	YLIE- CW	Transect	YLIE-CW	White Wagtail	<i>Motacilla alba</i>	1	Common	PM,WV	-	-	-	LC	LC	N	N

Notes:

1. All wild birds are protected under Wild Animals Protection Ordinance (Cap. 170).

2. AFCD (2021). Hong Kong Biodiversity Database.

3. Carey et al. (2001): R=resident; WV=winter visitor; SV=summer visitor; PM=passage migrant; Sp=spring; A=autumn;

4. Fellowes et al. (2002): LC=Local Concern; RC=Regional Concern; PRC=Potential Regional Concern; PGC: Potential Global Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

5. List of Wild Animals under State Protection (promulgated by State Forestry Administration and Ministry of Agriculture on 14 January, 1989).

6. Zheng, G. M. and Wang, Q. S. (1998). China Red Data Book

7. IUCN 2021. The IUCN Red List of Threatened Species. Version 2020-3.

8. Wetland-dependent species (including wetland-dependent species and waterbirds).

9. Jiang et al. (2016). Red List of China's Vertebrates

Appendix F.2.1 Ecological Bird Monitoring Diversity (All avifauna species in Point Count Method)  
in All Habitats (11 November 2025)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
<i>Spatula clypeata</i>	14	0.0233	-3.7595	-0.0876	0.3292
<i>Mareca penelope</i>	19	0.0316	-3.4542	-0.1092	0.3772
<i>Anas crecca</i>	12	0.0200	-3.9137	-0.0781	0.3058
<i>Aythya fuligula</i>	6	0.0100	-4.6068	-0.0460	0.2119
<i>Platalea minor</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Nycticorax nycticorax</i>	4	0.0067	-5.0123	-0.0334	0.1672
<i>Ardeola bacchus</i>	29	0.0483	-3.0313	-0.1463	0.4434
<i>Bubulcus coromandus</i>	8	0.0133	-4.3192	-0.0575	0.2483
<i>Ardea cinerea</i>	15	0.0250	-3.6905	-0.0921	0.3399
<i>Ardea alba</i>	12	0.0200	-3.9137	-0.0781	0.3058
<i>Egretta garzetta</i>	12	0.0200	-3.9137	-0.0781	0.3058
<i>Phalacrocorax carbo</i>	144	0.2396	-1.4288	-0.3423	0.4891
<i>Milvus migrans</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Amauromis phoenicurus</i>	5	0.0083	-4.7892	-0.0398	0.1908
<i>Gallinula chloropus</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Himantopus himantopus</i>	22	0.0366	-3.3076	-0.1211	0.4005
<i>Charadrius dubius</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Actitis hypoleucos</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Tringa totanus</i>	7	0.0116	-4.4527	-0.0519	0.2309
<i>Tringa nebularia</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Streptopelia decaocto</i>	7	0.0116	-4.4527	-0.0519	0.2309
<i>Spilopelia chinensis</i>	18	0.0300	-3.5082	-0.1051	0.3686
<i>Apus nipalensis</i>	4	0.0067	-5.0123	-0.0334	0.1672
<i>Halcyon smyrnensis</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Alcedo atthis</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Ceryle rudis</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Lanius schach</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Cyanopica cyanus</i>	6	0.0100	-4.6068	-0.0460	0.2119
<i>Corvus torquatus</i>	6	0.0100	-4.6068	-0.0460	0.2119
<i>Corvus macrorhynchos</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Parus minor</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Pycnonotus jocosus</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Pycnonotus sinensis</i>	16	0.0266	-3.6260	-0.0965	0.3500
<i>Hirundo rustica</i>	11	0.0183	-4.0007	-0.0732	0.2929
<i>Phylloscopus inornatus</i>	3	0.0050	-5.3000	-0.0265	0.1402
<i>Phylloscopus fuscatus</i>	8	0.0133	-4.3192	-0.0575	0.2483
<i>Prinia inornata</i>	4	0.0067	-5.0123	-0.0334	0.1672
<i>Pterorhinus perspicillatus</i>	7	0.0116	-4.4527	-0.0519	0.2309
<i>Zosterops simplex</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Acridotheres cristatellus</i>	36	0.0599	-2.8151	-0.1686	0.4747
<i>Acridotheres tristis</i>	8	0.0133	-4.3192	-0.0575	0.2483
<i>Spodiopsar cineraceus</i>	12	0.0200	-3.9137	-0.0781	0.3058
<i>Gracupica nigricollis</i>	63	0.1048	-2.2555	-0.2364	0.5333
<i>Copsychus saularis</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Ficedula albicilla</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Phoenicurus aureus</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Saxicola stejnegeri</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Passer montanus</i>	28	0.0466	-3.0664	-0.1429	0.4381
<i>Lonchura punctulata</i>	6	0.0100	-4.6068	-0.0460	0.2119

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
<i>Motacilla tschutschensis</i>	2	0.0033	-5.7054	-0.0190	0.1083
<i>Motacilla alba</i>	8	0.0133	-4.3192	-0.0575	0.2483
<i>Anthus richardi</i>	1	0.0017	-6.3986	-0.0106	0.0681
<i>Emberiza spodocephala</i>	1	0.0017	-6.3986	-0.0106	0.0681
Total	601	1	-250.3079	-3.1541	11.6029
Richness	53				
SS	11.6029				
SQ	9.9481				
H	3.1541				
S <sup>2</sup> H	0.0028				



Appendix F.2.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (11 November 2025)

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
<i>Spatula clypeata</i>	14	0.0415	-3.1810	-0.1321	0.4204
<i>Mareca penelope</i>	19	0.0564	-2.8756	-0.1621	0.4662
<i>Anas crecca</i>	12	0.0356	-3.3352	-0.1188	0.3961
<i>Aythya fuligula</i>	6	0.0178	-4.0283	-0.0717	0.2889
<i>Platalea minor</i>	2	0.0059	-5.1269	-0.0304	0.1560
<i>Nycticorax nycticorax</i>	4	0.0119	-4.4338	-0.0526	0.2333
<i>Ardeola bacchus</i>	29	0.0861	-2.4528	-0.2111	0.5177
<i>Bubulcus coromandus</i>	8	0.0237	-3.7406	-0.0888	0.3322
<i>Ardea cinerea</i>	15	0.0445	-3.1120	-0.1385	0.4311
<i>Ardea alba</i>	12	0.0356	-3.3352	-0.1188	0.3961
<i>Egretta garzetta</i>	12	0.0356	-3.3352	-0.1188	0.3961
<i>Phalacrocorax carbo</i>	144	0.4273	-0.8503	-0.3633	0.3089
<i>Milvus migrans</i>	2	0.0059	-5.1269	-0.0304	0.1560
<i>Himantopus himantopus</i>	22	0.0653	-2.7290	-0.1782	0.4862
<i>Charadrius dubius</i>	3	0.0089	-4.7215	-0.0420	0.1984
<i>Tringa totanus</i>	7	0.0208	-3.8742	-0.0805	0.3118
<i>Tringa nebularia</i>	3	0.0089	-4.7215	-0.0420	0.1984
<i>Halcyon smyrnensis</i>	2	0.0059	-5.1269	-0.0304	0.1560
<i>Ceryle rudis</i>	3	0.0089	-4.7215	-0.0420	0.1984
<i>Corvus torquatus</i>	6	0.0178	-4.0283	-0.0717	0.2889
<i>Spodiopsar cineraceus</i>	12	0.0356	-3.3352	-0.1188	0.3961
Total	337	1	-78.1920	-2.2431	6.7333
Richness	21				
SS	6.7333				
SQ	5.0315				
H	2.2431				
S <sup>2</sup> H	0.00514				

Appendix F.2.3 Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method)  
in All Habitats (11 November 2025)

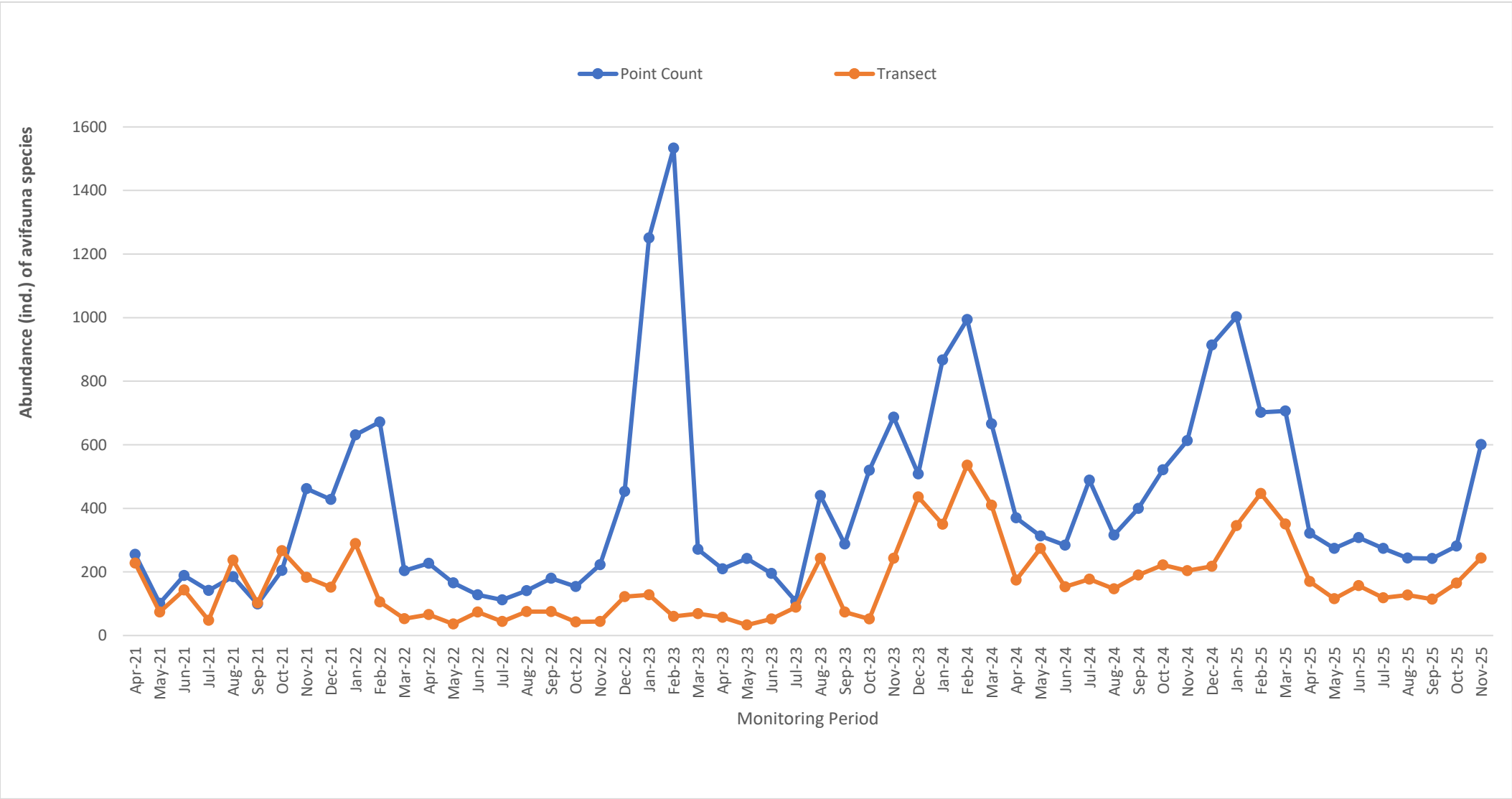
Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
<i>Spatula querquedula</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Spatula clypeata</i>	34	0.1393	-1.9708	-0.2746	0.5412
<i>Anas crecca</i>	8	0.0328	-3.4177	-0.1121	0.3830
<i>Platalea minor</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Ardeola bacchus</i>	12	0.0492	-3.0123	-0.1481	0.4462
<i>Ardea cinerea</i>	5	0.0205	-3.8877	-0.0797	0.3097
<i>Ardea alba</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Egretta garzetta</i>	5	0.0205	-3.8877	-0.0797	0.3097
<i>Phalacrocorax carbo</i>	8	0.0328	-3.4177	-0.1121	0.3830
<i>Elanus caeruleus</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Milvus migrans</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Amauornis phoenicurus</i>	3	0.0123	-4.3986	-0.0541	0.2379
<i>Gallinula chloropus</i>	6	0.0246	-3.7054	-0.0911	0.3376
<i>Himantopus himantopus</i>	22	0.0902	-2.4061	-0.2169	0.5220
<i>Recurvirostra avosetta</i>	6	0.0246	-3.7054	-0.0911	0.3376
<i>Actitis hypoleucos</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Tringa totanus</i>	8	0.0328	-3.4177	-0.1121	0.3830
<i>Tringa stagnatilis</i>	3	0.0123	-4.3986	-0.0541	0.2379
<i>Tringa nebularia</i>	5	0.0205	-3.8877	-0.0797	0.3097
<i>Streptopelia decaocto</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Spilopelia chinensis</i>	5	0.0205	-3.8877	-0.0797	0.3097
<i>Centropus sinensis</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Alcedo atthis</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Cyanopica cyanus</i>	8	0.0328	-3.4177	-0.1121	0.3830
<i>Parus minor</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Pycnonotus jocosus</i>	22	0.0902	-2.4061	-0.2169	0.5220
<i>Pycnonotus sinensis</i>	11	0.0451	-3.0993	-0.1397	0.4330
<i>Phylloscopus fuscatus</i>	7	0.0287	-3.5513	-0.1019	0.3618
<i>Acrocephalus bistrigiceps</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Prinia flaviventris</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Prinia inornata</i>	3	0.0123	-4.3986	-0.0541	0.2379
<i>Orthotomus sutorius</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Pterorhinus perspicillatus</i>	3	0.0123	-4.3986	-0.0541	0.2379
<i>Zosterops simplex</i>	2	0.0082	-4.8040	-0.0394	0.1892
<i>Acridotheres cristatellus</i>	4	0.0164	-4.1109	-0.0674	0.2770
<i>Gracupica nigricollis</i>	25	0.1025	-2.2783	-0.2334	0.5318
<i>Copsychus saularis</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Saxicola stejnegeri</i>	1	0.0041	-5.4972	-0.0225	0.1238
<i>Lonchura punctulata</i>	4	0.0164	-4.1109	-0.0674	0.2770
<i>Motacilla alba</i>	3	0.0123	-4.3986	-0.0541	0.2379
Total	244	1	-167.9808	-3.1813	11.0518
Richness	40				
SS	11.0518				

Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
SQ	10.1204				
H	3.1813				
S <sup>2</sup> H	0.004145				

Appendix F.2.4 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (11 November 2025)

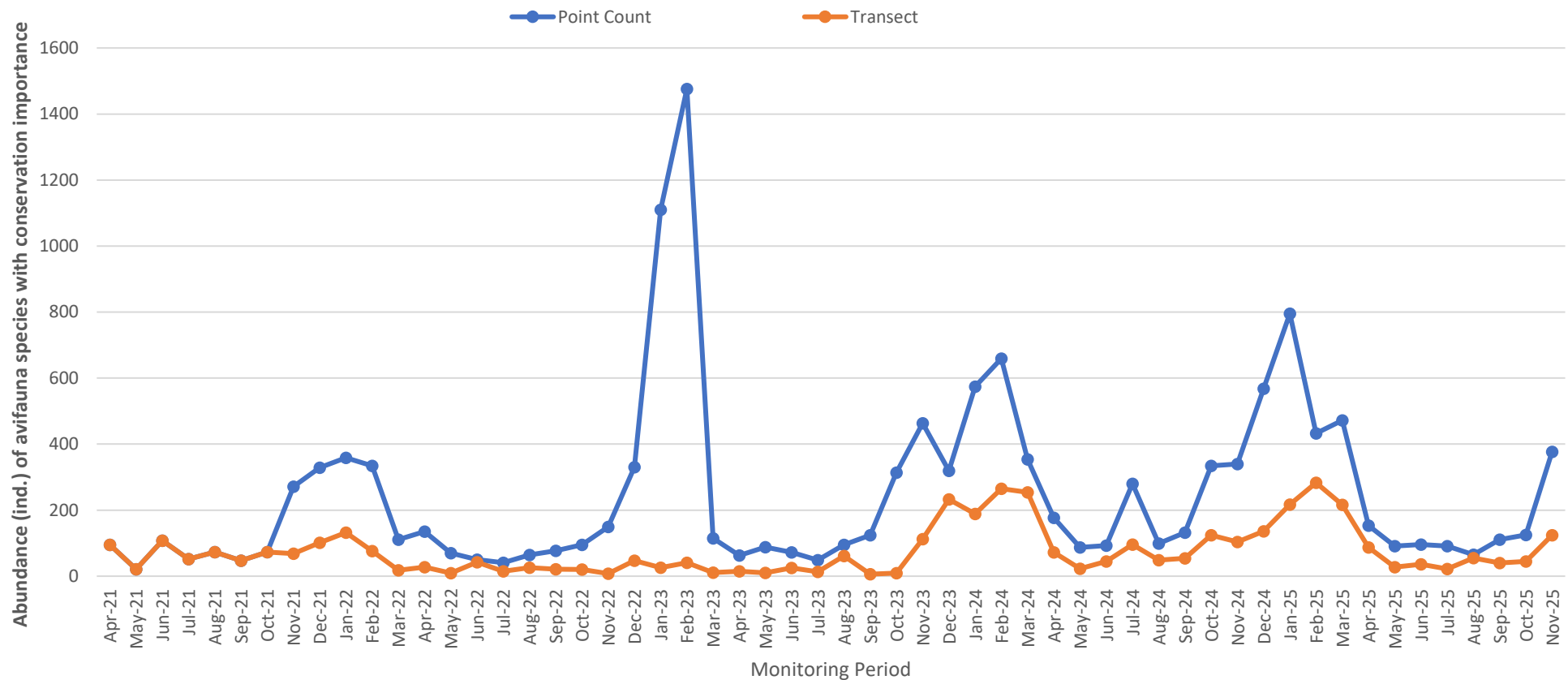
Scientific Name	Count	P	Ln(P)	P*Ln(P)	P*Ln(P) <sup>2</sup>
<i>Spatula clypeata</i>	34	0.2742	-1.2939	-0.3548	0.4591
<i>Anas crecca</i>	8	0.0645	-2.7408	-0.1768	0.4847
<i>Platalea minor</i>	2	0.0161	-4.1271	-0.0666	0.2747
<i>Ardeola bacchus</i>	12	0.0968	-2.3354	-0.2260	0.5278
<i>Ardea cinerea</i>	5	0.0403	-3.2108	-0.1295	0.4157
<i>Ardea alba</i>	1	0.0081	-4.8203	-0.0389	0.1874
<i>Egretta garzetta</i>	5	0.0403	-3.2108	-0.1295	0.4157
<i>Phalacrocorax carbo</i>	8	0.0645	-2.7408	-0.1768	0.4847
<i>Elanus caeruleus</i>	1	0.0081	-4.8203	-0.0389	0.1874
<i>Milvus migrans</i>	2	0.0161	-4.1271	-0.0666	0.2747
<i>Himantopus himantopus</i>	22	0.1774	-1.7292	-0.3068	0.5305
<i>Recurvirostra avosetta</i>	6	0.0484	-3.0285	-0.1465	0.4438
<i>Tringa totanus</i>	8	0.0645	-2.7408	-0.1768	0.4847
<i>Tringa stagnatilis</i>	3	0.0242	-3.7217	-0.0900	0.3351
<i>Tringa nebularia</i>	5	0.0403	-3.2108	-0.1295	0.4157
<i>Centropus sinensis</i>	2	0.0161	-4.1271	-0.0666	0.2747
Total	124	1	-51.9857	-2.3205	6.1963
Richness	16				
SS	6.1963				
SQ	5.3848				
H	2.3205				
S <sup>2</sup> H	0.00703				

Appendix F.3.1 Abundance of all avifauna species throughout the monitoring period

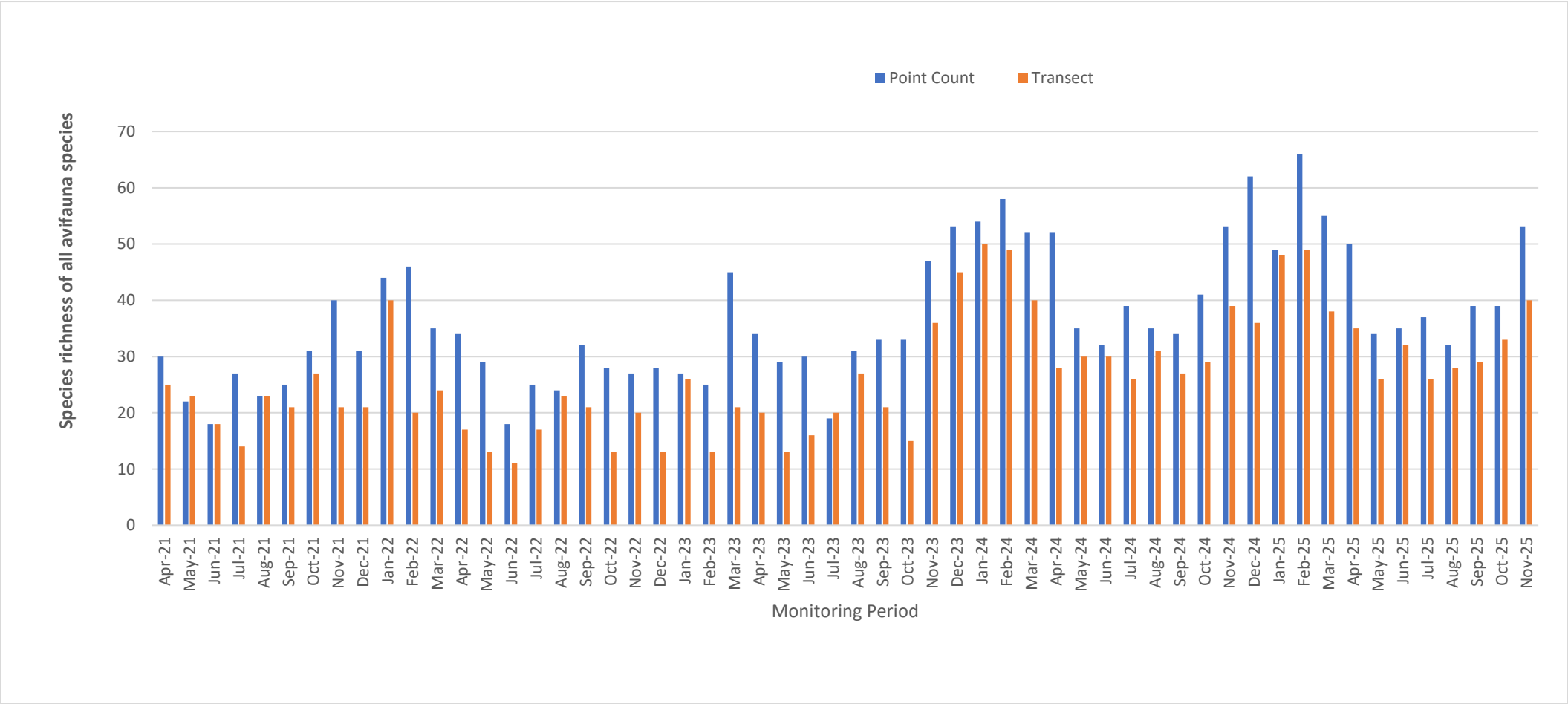




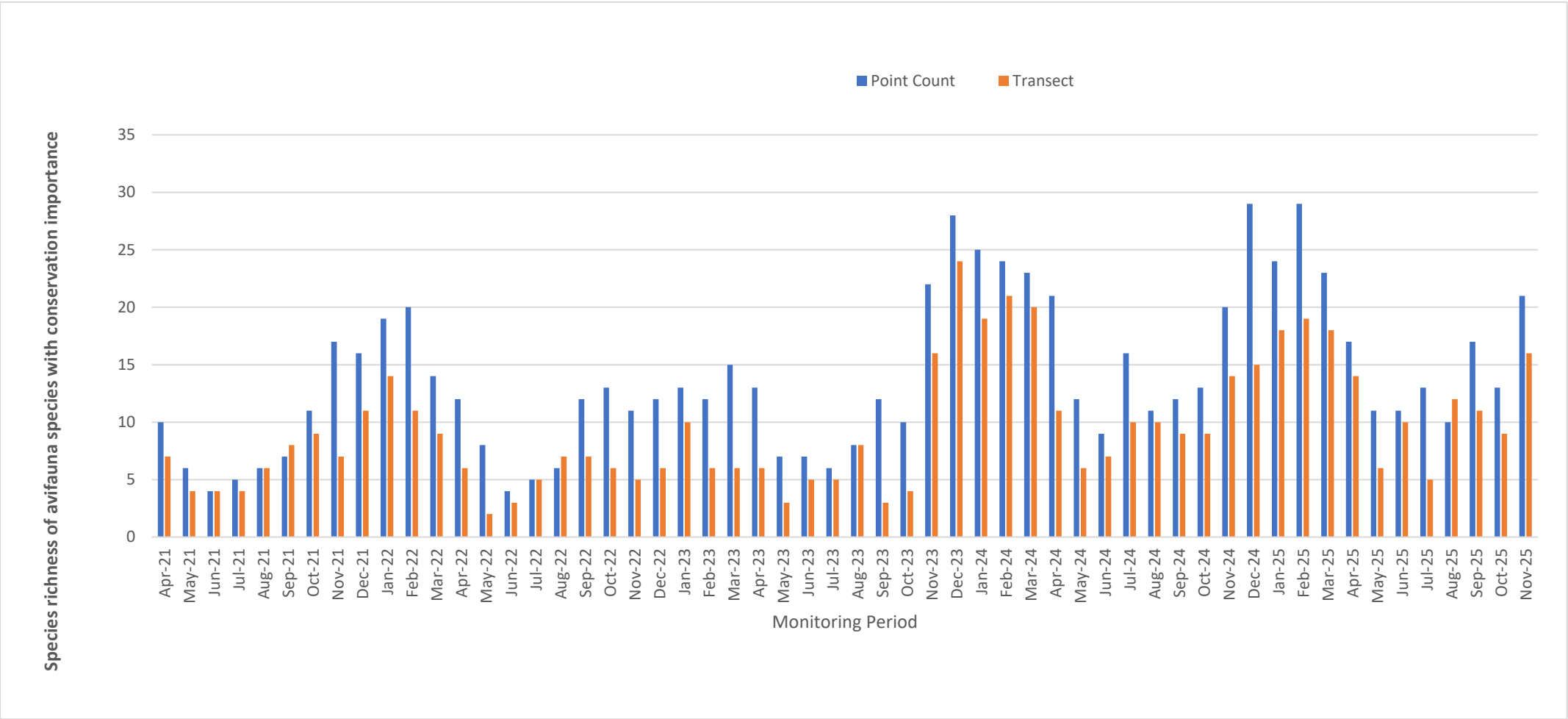
Appendix F.3.2 Abundance of avifauna species with conservation importance throughout the monitoring period



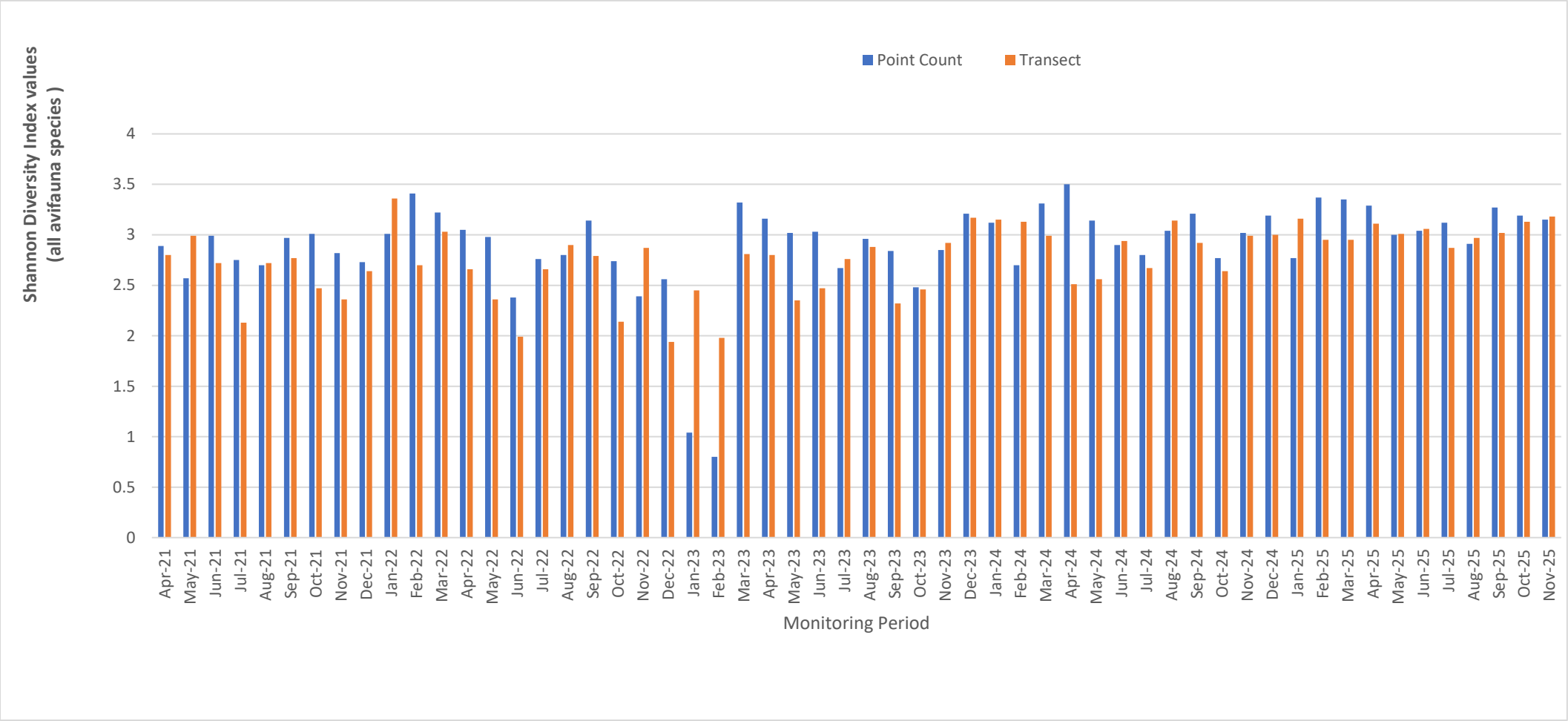
Appendix F.4.1 Species richness of all avifauna species throughout the monitoring period



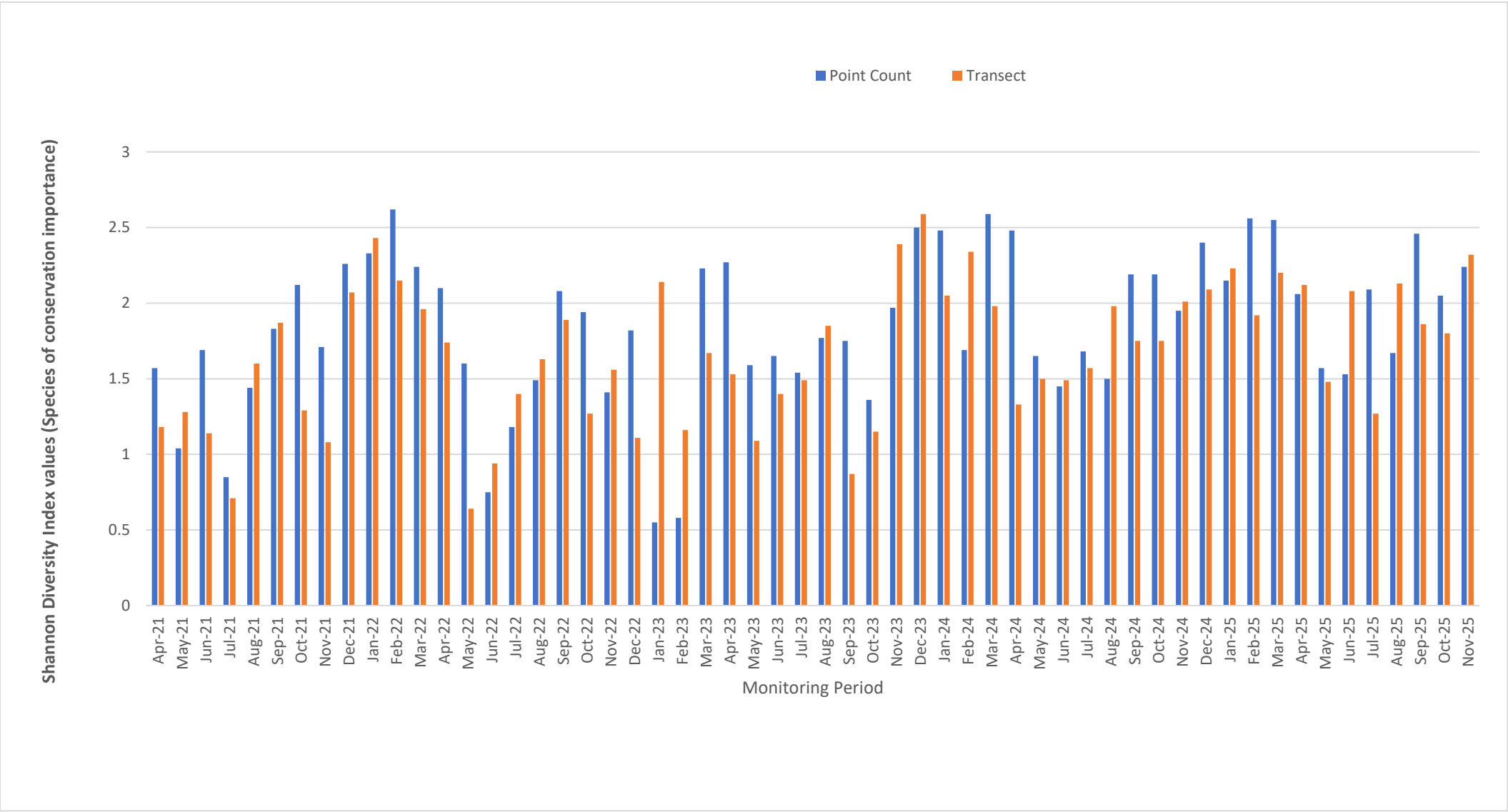
Appendix F.4.2 Species richness of avifauna species with conservation importance throughout the monitoring period



Appendix F.5.1 Shannon Diversity Index values of all avifauna species throughout the monitoring period



Appendix F.5.2 Shannon Diversity Index values of avifauna species with conservation importance throughout the monitoring period





## Appendix F.6. Hutcheson t-test testing method and output

Formula:

$$t = \frac{H_a - H_b}{\sqrt{s_{H_a}^2 + s_{H_b}^2}}$$

### Appendix F.6.1 Species diversity of all avifauna species – Point Count Method

Months	November 2016	Noevmber 2025
Total	608	601
Richness	48	53
H	2.8142	3.1541
S <sup>2</sup> H	0.003400	0.002825
t	4.3070	
df	1200.0185	
Crit	1.9619	
p	1.79E-05	
CI	0.1166	0.1063

### Appendix F.6.2 Species diversity of all avifauna species – Transect Walk Method

Months	November 2016	November 2025
Total	125	244
Richness	20	40
H	2.3855	3.1813
S <sup>2</sup> H	0.01016	0.004145
t	6.6531	
df	228.3235	
Crit	1.9704	
p	2.11E-10	
CI	0.2016	0.1288

**Appendix F.6.3 Species diversity of avifauna species with conservation importance – Point Count Method**

Months	November 2016	November 2025
Total	394	337
Richness	20	21
H	1.9103	2.2431
S <sup>2</sup> H	0.004800	0.005138
t	3.3383	
df	721.8937	
Crit	1.9633	
p	8.861E-04	
CI	0.1386	0.1434

**Appendix F.6.4 Species diversity of avifauna species with conservation importance – Transect Walk Method**

Months	November 2016	November 2025
Total	59	124
Richness	7	16
H	1.1216	2.3205
S <sup>2</sup> H	0.02210	0.00703
t	7.0242	
df	97.8121	
Crit	1.9847	
p	2.98E-10	
CI	0.2973	0.1677

## Appendix G

### Wind Data

Date	Wind Speed (m/s)	Wind Direction
1/11/2025 0:00	0.85	N
1/11/2025 1:00	0.70	NE
1/11/2025 2:00	0.59	N
1/11/2025 3:00	1.24	N
1/11/2025 4:00	0.13	N
1/11/2025 5:00	0.34	NE
1/11/2025 6:00	0.08	N
1/11/2025 7:00	0.06	NE
1/11/2025 8:00	0.24	N
1/11/2025 9:00	0.04	NW
1/11/2025 10:00	0.00	W
1/11/2025 11:00	0.03	NE
1/11/2025 12:00	0.00	SE
1/11/2025 13:00	0.01	N
1/11/2025 14:00	0.18	SE
1/11/2025 15:00	0.03	NE
1/11/2025 16:00	0.03	N
1/11/2025 17:00	0.17	SE
1/11/2025 18:00	0.03	E
1/11/2025 19:00	0.48	E
1/11/2025 20:00	0.43	E
1/11/2025 21:00	0.03	E
1/11/2025 22:00	1.84	E
1/11/2025 23:00	1.46	E
2/11/2025 0:00	2.25	NE
2/11/2025 1:00	1.40	N
2/11/2025 2:00	0.84	N

Date	Wind Speed (m/s)	Wind Direction
2/11/2025 3:00	2.21	NE
2/11/2025 4:00	0.40	N
2/11/2025 5:00	1.30	NE
2/11/2025 6:00	2.16	NE
2/11/2025 7:00	0.85	E
2/11/2025 8:00	3.17	NW
2/11/2025 9:00	0.04	N
2/11/2025 10:00	0.22	NE
2/11/2025 11:00	0.59	NE
2/11/2025 12:00	0.04	NE
2/11/2025 13:00	0.03	NE
2/11/2025 14:00	0.03	N
2/11/2025 15:00	0.09	SE
2/11/2025 16:00	1.03	SE
2/11/2025 17:00	1.34	E
2/11/2025 18:00	1.27	E
2/11/2025 19:00	2.09	E
2/11/2025 20:00	0.93	NE
2/11/2025 21:00	0.13	NE
2/11/2025 22:00	0.21	NE
2/11/2025 23:00	0.78	SE
3/11/2025 0:00	0.01	NE
3/11/2025 1:00	1.81	E
3/11/2025 2:00	1.03	NE
3/11/2025 3:00	0.04	E
3/11/2025 4:00	0.18	E
3/11/2025 5:00	1.28	NE

Date	Wind Speed (m/s)	Wind Direction
3/11/2025 6:00	0.06	NE
3/11/2025 7:00	0.85	NE
3/11/2025 8:00	0.04	NW
3/11/2025 9:00	0.13	NE
3/11/2025 10:00	0.03	NE
3/11/2025 11:00	0.04	E
3/11/2025 12:00	0.06	NE
3/11/2025 13:00	0.01	N
3/11/2025 14:00	0.01	N
3/11/2025 15:00	0.27	N
3/11/2025 16:00	0.03	NE
3/11/2025 17:00	0.46	NE
3/11/2025 18:00	0.04	NW
3/11/2025 19:00	0.15	NE
3/11/2025 20:00	0.10	NE
3/11/2025 21:00	0.46	NE
3/11/2025 22:00	1.30	NW
3/11/2025 23:00	0.87	NW
4/11/2025 0:00	0.46	N
4/11/2025 1:00	0.73	NE
4/11/2025 2:00	0.87	NE
4/11/2025 3:00	1.16	NE
4/11/2025 4:00	0.09	NE
4/11/2025 5:00	0.73	N
4/11/2025 6:00	0.09	NE
4/11/2025 7:00	0.88	N
4/11/2025 8:00	0.03	N

Date	Wind Speed (m/s)	Wind Direction
4/11/2025 9:00	0.03	SW
4/11/2025 10:00	0.04	NE
4/11/2025 11:00	0.03	N
4/11/2025 12:00	0.01	NE
4/11/2025 13:00	0.01	N
4/11/2025 14:00	0.04	NW
4/11/2025 15:00	0.04	NE
4/11/2025 16:00	0.03	N
4/11/2025 17:00	0.01	N
4/11/2025 18:00	0.03	NE
4/11/2025 19:00	0.03	NE
4/11/2025 20:00	0.03	N
4/11/2025 21:00	0.03	E
4/11/2025 22:00	0.18	NE
4/11/2025 23:00	0.66	NE
5/11/2025 0:00	2.31	NE
5/11/2025 1:00	0.03	N
5/11/2025 2:00	0.69	N
5/11/2025 3:00	0.15	N
5/11/2025 4:00	0.08	SW
5/11/2025 5:00	0.98	N
5/11/2025 6:00	0.21	NE
5/11/2025 7:00	0.01	E
5/11/2025 8:00	0.04	NW
5/11/2025 9:00	0.01	NE
5/11/2025 10:00	0.03	NE
5/11/2025 11:00	0.01	W



Date	Wind Speed (m/s)	Wind Direction
5/11/2025 12:00	0.10	W
5/11/2025 13:00	0.04	NE
5/11/2025 14:00	0.27	NE
5/11/2025 15:00	0.06	SE
5/11/2025 16:00	0.87	SE
5/11/2025 17:00	0.17	NE
5/11/2025 18:00	0.09	N
5/11/2025 19:00	0.76	NE
5/11/2025 20:00	0.15	NE
5/11/2025 21:00	0.01	NE
5/11/2025 22:00	0.01	E
5/11/2025 23:00	0.04	N
6/11/2025 0:00	0.04	SE
6/11/2025 1:00	0.03	SE
6/11/2025 2:00	0.00	NE
6/11/2025 3:00	0.01	E
6/11/2025 4:00	0.03	NE
6/11/2025 5:00	0.01	N
6/11/2025 6:00	0.03	NE
6/11/2025 7:00	0.03	E
6/11/2025 8:00	0.03	W
6/11/2025 9:00	0.04	NE
6/11/2025 10:00	0.06	NE
6/11/2025 11:00	0.22	E
6/11/2025 12:00	0.70	E
6/11/2025 13:00	0.09	N
6/11/2025 14:00	0.09	NE

Date	Wind Speed (m/s)	Wind Direction
6/11/2025 15:00	0.04	SE
6/11/2025 16:00	0.10	E
6/11/2025 17:00	0.09	NE
6/11/2025 18:00	0.18	E
6/11/2025 19:00	0.01	NE
6/11/2025 20:00	0.03	N
6/11/2025 21:00	0.18	N
6/11/2025 22:00	0.03	E
6/11/2025 23:00	0.03	E
7/11/2025 0:00	0.04	NW
7/11/2025 1:00	0.01	NE
7/11/2025 2:00	0.04	N
7/11/2025 3:00	0.01	N
7/11/2025 4:00	0.06	E
7/11/2025 5:00	0.03	E
7/11/2025 6:00	0.06	N
7/11/2025 7:00	0.04	NE
7/11/2025 8:00	0.06	N
7/11/2025 9:00	0.01	NE
7/11/2025 10:00	0.01	N
7/11/2025 11:00	0.13	NE
7/11/2025 12:00	0.88	E
7/11/2025 13:00	0.49	NW
7/11/2025 14:00	0.88	S
7/11/2025 15:00	0.06	NE
7/11/2025 16:00	0.79	NE
7/11/2025 17:00	0.58	NE

Date	Wind Speed (m/s)	Wind Direction
7/11/2025 18:00	0.54	E
7/11/2025 19:00	0.33	E
7/11/2025 20:00	0.39	NE
7/11/2025 21:00	0.13	E
7/11/2025 22:00	0.01	N
7/11/2025 23:00	0.04	E
8/11/2025 0:00	0.00	N
8/11/2025 1:00	0.01	E
8/11/2025 2:00	0.06	NE
8/11/2025 3:00	0.01	NE
8/11/2025 4:00	0.01	NE
8/11/2025 5:00	0.06	NE
8/11/2025 6:00	0.06	NE
8/11/2025 7:00	0.04	NE
8/11/2025 8:00	0.03	NE
8/11/2025 9:00	0.03	NE
8/11/2025 10:00	0.01	NE
8/11/2025 11:00	0.01	E
8/11/2025 12:00	0.12	NE
8/11/2025 13:00	0.01	NE
8/11/2025 14:00	0.36	N
8/11/2025 15:00	0.15	E
8/11/2025 16:00	0.00	E
8/11/2025 17:00	1.77	NE
8/11/2025 18:00	0.19	SE
8/11/2025 19:00	0.06	NW
8/11/2025 20:00	0.57	NE

Date	Wind Speed (m/s)	Wind Direction
8/11/2025 21:00	0.03	E
8/11/2025 22:00	0.04	NW
8/11/2025 23:00	0.04	NE
9/11/2025 0:00	0.27	N
9/11/2025 1:00	0.10	E
9/11/2025 2:00	0.49	E
9/11/2025 3:00	0.13	SE
9/11/2025 4:00	0.10	SE
9/11/2025 5:00	0.45	SE
9/11/2025 6:00	1.61	SE
9/11/2025 7:00	1.18	E
9/11/2025 8:00	1.01	NW
9/11/2025 9:00	0.88	SE
9/11/2025 10:00	0.31	N
9/11/2025 11:00	1.16	N
9/11/2025 12:00	2.18	NE
9/11/2025 13:00	0.87	N
9/11/2025 14:00	1.18	N
9/11/2025 15:00	0.13	NW
9/11/2025 16:00	0.19	N
9/11/2025 17:00	0.10	NW
9/11/2025 18:00	0.12	NW
9/11/2025 19:00	0.06	NW
9/11/2025 20:00	0.31	NW
9/11/2025 21:00	0.01	N
9/11/2025 22:00	0.10	N
9/11/2025 23:00	1.14	NE

Date	Wind Speed (m/s)	Wind Direction
10/11/2025 0:00	0.08	NW
10/11/2025 1:00	0.08	NE
10/11/2025 2:00	0.27	N
10/11/2025 3:00	0.03	NE
10/11/2025 4:00	2.70	NE
10/11/2025 5:00	2.30	NE
10/11/2025 6:00	0.24	NW
10/11/2025 7:00	0.37	NW
10/11/2025 8:00	0.24	NW
10/11/2025 9:00	0.10	N
10/11/2025 10:00	0.04	N
10/11/2025 11:00	0.09	W
10/11/2025 12:00	3.31	NW
10/11/2025 13:00	0.27	N
10/11/2025 14:00	0.03	N
10/11/2025 15:00	0.09	NE
10/11/2025 16:00	0.13	NW
10/11/2025 17:00	0.03	NW
10/11/2025 18:00	0.03	N
10/11/2025 19:00	0.08	N
10/11/2025 20:00	0.04	W
10/11/2025 21:00	0.10	W
10/11/2025 22:00	0.01	N
10/11/2025 23:00	0.12	W
11/11/2025 0:00	0.03	NW
11/11/2025 1:00	0.06	N
11/11/2025 2:00	0.03	N

Date	Wind Speed (m/s)	Wind Direction
11/11/2025 3:00	0.04	N
11/11/2025 4:00	0.04	NW
11/11/2025 5:00	0.27	W
11/11/2025 6:00	0.10	N
11/11/2025 7:00	0.49	NW
11/11/2025 8:00	0.13	W
11/11/2025 9:00	1.84	N
11/11/2025 10:00	1.46	NW
11/11/2025 11:00	2.25	W
11/11/2025 12:00	1.40	NW
11/11/2025 13:00	0.84	W
11/11/2025 14:00	2.21	W
11/11/2025 15:00	0.40	NW
11/11/2025 16:00	1.30	W
11/11/2025 17:00	2.16	N
11/11/2025 18:00	0.85	NW
11/11/2025 19:00	3.17	N
11/11/2025 20:00	0.04	N
11/11/2025 21:00	0.22	W
11/11/2025 22:00	0.59	NW
11/11/2025 23:00	0.04	W
12/11/2025 0:00	0.03	W
12/11/2025 1:00	0.03	NW
12/11/2025 2:00	0.09	W
12/11/2025 3:00	1.03	N
12/11/2025 4:00	1.34	N
12/11/2025 5:00	1.27	NE

Date	Wind Speed (m/s)	Wind Direction
12/11/2025 6:00	2.09	NW
12/11/2025 7:00	0.93	NW
12/11/2025 8:00	0.13	NW
12/11/2025 9:00	0.21	NW
12/11/2025 10:00	0.78	W
12/11/2025 11:00	0.01	W
12/11/2025 12:00	1.81	N
12/11/2025 13:00	1.03	N
12/11/2025 14:00	0.04	W
12/11/2025 15:00	0.18	NW
12/11/2025 16:00	1.28	NW
12/11/2025 17:00	0.06	N
12/11/2025 18:00	0.85	N
12/11/2025 19:00	0.04	N
12/11/2025 20:00	0.13	N
12/11/2025 21:00	0.03	N
12/11/2025 22:00	0.04	NW
12/11/2025 23:00	0.06	W
13/11/2025 0:00	0.01	N
13/11/2025 1:00	0.01	N
13/11/2025 2:00	0.27	N
13/11/2025 3:00	0.03	N
13/11/2025 4:00	0.46	NE
13/11/2025 5:00	0.04	NW
13/11/2025 6:00	0.15	NE
13/11/2025 7:00	0.10	NE
13/11/2025 8:00	0.46	N

Date	Wind Speed (m/s)	Wind Direction
13/11/2025 9:00	1.30	N
13/11/2025 10:00	0.87	N
13/11/2025 11:00	0.46	W
13/11/2025 12:00	0.73	N
13/11/2025 13:00	0.87	W
13/11/2025 14:00	1.16	N
13/11/2025 15:00	0.09	N
13/11/2025 16:00	0.73	NE
13/11/2025 17:00	0.09	NE
13/11/2025 18:00	0.88	N
13/11/2025 19:00	1.84	E
13/11/2025 20:00	1.46	NE
13/11/2025 21:00	2.25	N
13/11/2025 22:00	1.40	NE
13/11/2025 23:00	0.84	NE
14/11/2025 0:00	2.21	NW
14/11/2025 1:00	0.40	NE
14/11/2025 2:00	1.30	NE
14/11/2025 3:00	2.16	N
14/11/2025 4:00	0.85	N
14/11/2025 5:00	3.17	NW
14/11/2025 6:00	0.04	W
14/11/2025 7:00	0.22	NE
14/11/2025 8:00	0.59	N
14/11/2025 9:00	0.04	N
14/11/2025 10:00	0.03	N
14/11/2025 11:00	0.03	NE

Date	Wind Speed (m/s)	Wind Direction
14/11/2025 12:00	1.77	N
14/11/2025 13:00	0.19	N
14/11/2025 14:00	0.06	W
14/11/2025 15:00	0.57	NE
14/11/2025 16:00	0.04	NE
14/11/2025 17:00	0.04	E
14/11/2025 18:00	0.61	E
14/11/2025 19:00	0.08	E
14/11/2025 20:00	0.06	E
14/11/2025 21:00	0.30	SE
14/11/2025 22:00	0.45	SE
14/11/2025 23:00	0.49	E
15/11/2025 0:00	0.37	E
15/11/2025 1:00	0.21	N
15/11/2025 2:00	0.33	NE
15/11/2025 3:00	0.27	N
15/11/2025 4:00	0.40	N
15/11/2025 5:00	0.33	NE
15/11/2025 6:00	0.21	NE
15/11/2025 7:00	1.19	NE
15/11/2025 8:00	1.28	NE
15/11/2025 9:00	0.97	N
15/11/2025 10:00	0.06	E
15/11/2025 11:00	1.24	W
15/11/2025 12:00	1.06	NW
15/11/2025 13:00	1.03	E
15/11/2025 14:00	0.48	NE

Date	Wind Speed (m/s)	Wind Direction
15/11/2025 15:00	1.12	SE
15/11/2025 16:00	0.34	E
15/11/2025 17:00	0.54	NW
15/11/2025 18:00	0.17	N
15/11/2025 19:00	0.19	NE
15/11/2025 20:00	0.25	NE
15/11/2025 21:00	0.04	NE
15/11/2025 22:00	0.03	N
15/11/2025 23:00	1.37	E
16/11/2025 0:00	0.00	E
16/11/2025 1:00	0.00	NW
16/11/2025 2:00	0.00	NE
16/11/2025 3:00	0.10	SE
16/11/2025 4:00	0.43	NE
16/11/2025 5:00	0.21	NE
16/11/2025 6:00	0.17	N
16/11/2025 7:00	0.12	NE
16/11/2025 8:00	0.15	N
16/11/2025 9:00	0.21	NE
16/11/2025 10:00	0.36	NE
16/11/2025 11:00	0.64	NE
16/11/2025 12:00	0.34	S
16/11/2025 13:00	0.18	SE
16/11/2025 14:00	0.21	W
16/11/2025 15:00	0.09	NW
16/11/2025 16:00	0.06	W
16/11/2025 17:00	0.06	W

Date	Wind Speed (m/s)	Wind Direction
16/11/2025 18:00	0.04	N
16/11/2025 19:00	0.04	E
16/11/2025 20:00	0.00	E
16/11/2025 21:00	0.04	E
16/11/2025 22:00	0.10	E
16/11/2025 23:00	0.13	NE
17/11/2025 0:00	0.17	E
17/11/2025 1:00	0.13	E
17/11/2025 2:00	0.18	E
17/11/2025 3:00	0.19	N
17/11/2025 4:00	0.18	E
17/11/2025 5:00	0.17	E
17/11/2025 6:00	0.03	NE
17/11/2025 7:00	0.00	NW
17/11/2025 8:00	0.00	NE
17/11/2025 9:00	0.04	NE
17/11/2025 10:00	0.00	NW
17/11/2025 11:00	0.03	E
17/11/2025 12:00	0.70	N
17/11/2025 13:00	0.42	W
17/11/2025 14:00	0.04	W
17/11/2025 15:00	0.01	W
17/11/2025 16:00	0.04	NE
17/11/2025 17:00	0.01	NE
17/11/2025 18:00	0.04	N
17/11/2025 19:00	0.04	NE
17/11/2025 20:00	0.04	NE

Date	Wind Speed (m/s)	Wind Direction
17/11/2025 21:00	0.00	NE
17/11/2025 22:00	0.01	NE
17/11/2025 23:00	0.03	N
18/11/2025 0:00	0.06	NE
18/11/2025 1:00	0.01	N
18/11/2025 2:00	0.08	E
18/11/2025 3:00	0.12	N
18/11/2025 4:00	0.67	NW
18/11/2025 5:00	0.63	N
18/11/2025 6:00	0.93	NE
18/11/2025 7:00	0.79	N
18/11/2025 8:00	1.70	NE
18/11/2025 9:00	1.19	N
18/11/2025 10:00	0.06	N
18/11/2025 11:00	0.08	W
18/11/2025 12:00	0.85	N
18/11/2025 13:00	0.08	NW
18/11/2025 14:00	0.04	NW
18/11/2025 15:00	0.04	NW
18/11/2025 16:00	0.61	N
18/11/2025 17:00	0.59	W
18/11/2025 18:00	0.61	N
18/11/2025 19:00	0.58	N
18/11/2025 20:00	0.58	NE
18/11/2025 21:00	0.57	N
18/11/2025 22:00	0.55	N
18/11/2025 23:00	0.51	NW



Date	Wind Speed (m/s)	Wind Direction
19/11/2025 0:00	1.31	N
19/11/2025 1:00	1.16	NE
19/11/2025 2:00	1.09	NW
19/11/2025 3:00	0.88	N
19/11/2025 4:00	0.66	N
19/11/2025 5:00	0.94	W
19/11/2025 6:00	0.76	SW
19/11/2025 7:00	0.76	N
19/11/2025 8:00	0.76	N
19/11/2025 9:00	0.76	N
19/11/2025 10:00	1.37	N
19/11/2025 11:00	0.43	N
19/11/2025 12:00	0.15	NE
19/11/2025 13:00	0.21	NW
19/11/2025 14:00	0.19	NW
19/11/2025 15:00	0.30	NW
19/11/2025 16:00	1.30	NE
19/11/2025 17:00	1.70	NW
19/11/2025 18:00	1.51	NW
19/11/2025 19:00	0.33	NW
19/11/2025 20:00	0.19	N
19/11/2025 21:00	0.87	N
19/11/2025 22:00	0.49	N
19/11/2025 23:00	0.06	NE
20/11/2025 0:00	0.84	N
20/11/2025 1:00	0.66	N
20/11/2025 2:00	0.75	N

Date	Wind Speed (m/s)	Wind Direction
20/11/2025 3:00	0.64	NW
20/11/2025 4:00	0.72	NE
20/11/2025 5:00	0.37	NW
20/11/2025 6:00	1.10	N
20/11/2025 7:00	0.06	NW
20/11/2025 8:00	0.01	E
20/11/2025 9:00	0.08	NE
20/11/2025 10:00	0.55	N
20/11/2025 11:00	0.04	NW
20/11/2025 12:00	1.01	NE
20/11/2025 13:00	0.97	NE
20/11/2025 14:00	0.36	NE
20/11/2025 15:00	0.42	NE
20/11/2025 16:00	0.04	NE
20/11/2025 17:00	1.40	NW
20/11/2025 18:00	0.75	N
20/11/2025 19:00	0.73	E
20/11/2025 20:00	0.58	E
20/11/2025 21:00	0.04	NW
20/11/2025 22:00	0.22	W
20/11/2025 23:00	0.10	N
21/11/2025 0:00	0.43	NE
21/11/2025 1:00	0.06	N
21/11/2025 2:00	0.10	N
21/11/2025 3:00	0.06	NE
21/11/2025 4:00	0.27	NE
21/11/2025 5:00	0.34	NE

Date	Wind Speed (m/s)	Wind Direction
21/11/2025 6:00	0.59	NW
21/11/2025 7:00	0.10	N
21/11/2025 8:00	0.04	E
21/11/2025 9:00	0.21	NW
21/11/2025 10:00	0.03	NE
21/11/2025 11:00	0.01	N
21/11/2025 12:00	0.04	SE
21/11/2025 13:00	0.04	NW
21/11/2025 14:00	0.03	W
21/11/2025 15:00	0.01	NW
21/11/2025 16:00	0.04	N
21/11/2025 17:00	0.03	W
21/11/2025 18:00	0.03	N
21/11/2025 19:00	0.01	N
21/11/2025 20:00	0.03	N
21/11/2025 21:00	0.03	E
21/11/2025 22:00	0.06	E
21/11/2025 23:00	0.01	NE
22/11/2025 0:00	0.04	NE
22/11/2025 1:00	0.04	N
22/11/2025 2:00	0.19	E
22/11/2025 3:00	0.39	NE
22/11/2025 4:00	0.01	E
22/11/2025 5:00	0.04	SE
22/11/2025 6:00	0.08	E
22/11/2025 7:00	0.15	S
22/11/2025 8:00	0.28	NE

Date	Wind Speed (m/s)	Wind Direction
22/11/2025 9:00	0.09	N
22/11/2025 10:00	0.70	N
22/11/2025 11:00	0.13	NW
22/11/2025 12:00	0.22	NW
22/11/2025 13:00	0.04	N
22/11/2025 14:00	0.00	N
22/11/2025 15:00	0.04	E
22/11/2025 16:00	0.01	NW
22/11/2025 17:00	0.00	NE
22/11/2025 18:00	0.04	NE
22/11/2025 19:00	0.03	E
22/11/2025 20:00	0.21	E
22/11/2025 21:00	0.09	SE
22/11/2025 22:00	0.40	SE
22/11/2025 23:00	0.00	SE
23/11/2025 0:00	0.00	SE
23/11/2025 1:00	0.04	SE
23/11/2025 2:00	0.08	SE
23/11/2025 3:00	0.55	E
23/11/2025 4:00	1.31	E
23/11/2025 5:00	0.13	E
23/11/2025 6:00	0.34	SE
23/11/2025 7:00	0.04	NE
23/11/2025 8:00	0.21	NE
23/11/2025 9:00	0.12	N
23/11/2025 10:00	0.06	N
23/11/2025 11:00	0.06	NW

Date	Wind Speed (m/s)	Wind Direction
23/11/2025 12:00	v	NE
23/11/2025 13:00	0.1	NW
23/11/2025 14:00	4.9	W
23/11/2025 15:00	5.4	NW
23/11/2025 16:00	4.7	W
23/11/2025 17:00	5.0	W
23/11/2025 18:00	5.3	E
23/11/2025 19:00	7.8	SE
23/11/2025 20:00	0.7	E
23/11/2025 21:00	0.7	NW
23/11/2025 22:00	0.3	SE
23/11/2025 23:00	0.3	SE
24/11/2025 0:00	0.2	E
24/11/2025 1:00	0.3	SE
24/11/2025 2:00	0.7	N
24/11/2025 3:00	0.2	N
24/11/2025 4:00	0.9	N
24/11/2025 5:00	5.2	NW
24/11/2025 6:00	0.3	E
24/11/2025 7:00	5.2	N
24/11/2025 8:00	0.4	N
24/11/2025 9:00	0.2	N
24/11/2025 10:00	5.1	E
24/11/2025 11:00	0.2	NW
24/11/2025 12:00	0.9	NW
24/11/2025 13:00	0.8	W
24/11/2025 14:00	5.5	NW

Date	Wind Speed (m/s)	Wind Direction
24/11/2025 15:00	0.1	NW
24/11/2025 16:00	2.2	W
24/11/2025 17:00	0.2	W
24/11/2025 18:00	0.4	N
24/11/2025 19:00	0.7	W
24/11/2025 20:00	0.1	W
24/11/2025 21:00	0.3	NE
24/11/2025 22:00	0.3	NW
24/11/2025 23:00	4.9	NE
25/11/2025 0:00	1.0	N
25/11/2025 1:00	0.7	NW
25/11/2025 2:00	0.6	NE
25/11/2025 3:00	5.5	NW
25/11/2025 4:00	0.4	NW
25/11/2025 5:00	5.5	NE
25/11/2025 6:00	2.2	NW
25/11/2025 7:00	5.2	NW
25/11/2025 8:00	0.2	NW
25/11/2025 9:00	2.4	NE
25/11/2025 10:00	1.0	NE
25/11/2025 11:00	0.3	N
25/11/2025 12:00	5.1	N
25/11/2025 13:00	1.0	NE
25/11/2025 14:00	5.4	NE
25/11/2025 15:00	0.8	N
25/11/2025 16:00	0.4	N
25/11/2025 17:00	4.6	N

Date	Wind Speed (m/s)	Wind Direction
25/11/2025 18:00	4.9	N
25/11/2025 19:00	0.2	N
25/11/2025 20:00	0.1	SE
25/11/2025 21:00	0.3	E
25/11/2025 22:00	0.7	NE
25/11/2025 23:00	1.2	N
26/11/2025 0:00	0.5	N
26/11/2025 1:00	0.1	N
26/11/2025 2:00	0.3	N
26/11/2025 3:00	0.1	NE
26/11/2025 4:00	0.2	E
26/11/2025 5:00	0.2	NE
26/11/2025 6:00	0.8	E
26/11/2025 7:00	0.4	E
26/11/2025 8:00	0.5	NE
26/11/2025 9:00	0.2	N
26/11/2025 10:00	3.9	N
26/11/2025 11:00	0.8	W
26/11/2025 12:00	0.5	NW
26/11/2025 13:00	0.1	NE
26/11/2025 14:00	0.3	N
26/11/2025 15:00	0.5	NE
26/11/2025 16:00	0.4	NE
26/11/2025 17:00	5.6	E
26/11/2025 18:00	1.9	W
26/11/2025 19:00	0.5	NE
26/11/2025 20:00	0.3	SE

Date	Wind Speed (m/s)	Wind Direction
26/11/2025 21:00	5.1	E
26/11/2025 22:00	4.5	E
26/11/2025 23:00	0.2	SE
27/11/2025 0:00	0.9	E
27/11/2025 1:00	0.1	NE
27/11/2025 2:00	0.3	NE
27/11/2025 3:00	0.1	NE
27/11/2025 4:00	0.3	N
27/11/2025 5:00	0.2	NE
27/11/2025 6:00	0.2	NW
27/11/2025 7:00	5.6	N
27/11/2025 8:00	0.5	NE
27/11/2025 9:00	2.2	NE
27/11/2025 10:00	0.5	NE
27/11/2025 11:00	4.7	E
27/11/2025 12:00	0.3	NE
27/11/2025 13:00	0.1	N
27/11/2025 14:00	0.4	N
27/11/2025 15:00	1.0	N
27/11/2025 16:00	0.3	N
27/11/2025 17:00	7.0	W
27/11/2025 18:00	0.4	NE
27/11/2025 19:00	1.1	N
27/11/2025 20:00	1.6	NE
27/11/2025 21:00	1.1	NE
27/11/2025 22:00	7.4	N
27/11/2025 23:00	2.0	N

Date	Wind Speed (m/s)	Wind Direction
28/11/2025 0:00	0.9	NE
28/11/2025 1:00	0.4	N
28/11/2025 2:00	0.5	NE
28/11/2025 3:00	0.2	NE
28/11/2025 4:00	0.2	N
28/11/2025 5:00	0.3	N
28/11/2025 6:00	1.1	N
28/11/2025 7:00	0.3	NE
28/11/2025 8:00	0.4	NE
28/11/2025 9:00	0.4	NE
28/11/2025 10:00	2.1	N
28/11/2025 11:00	0.9	NE
28/11/2025 12:00	1.3	N
28/11/2025 13:00	0.6	NW
28/11/2025 14:00	0.4	NE
28/11/2025 15:00	1.1	N
28/11/2025 16:00	0.7	NE
28/11/2025 17:00	1.3	NE
28/11/2025 18:00	1.4	N
28/11/2025 19:00	1.3	SE
28/11/2025 20:00	0.9	SE
28/11/2025 21:00	0.4	E
28/11/2025 22:00	0.7	SE
28/11/2025 23:00	5.0	SE
29/11/2025 0:00	0.9	E
29/11/2025 1:00	0.4	SE
29/11/2025 2:00	0.6	S

Date	Wind Speed (m/s)	Wind Direction
29/11/2025 3:00	5.4	SE
29/11/2025 4:00	0.4	SE
29/11/2025 5:00	0.9	SE
29/11/2025 6:00	0.2	E
29/11/2025 7:00	1.0	SE
29/11/2025 8:00	0.7	E
29/11/2025 9:00	1.0	NE
29/11/2025 10:00	0.5	NW
29/11/2025 11:00	0.2	W
29/11/2025 12:00	1.5	NW
29/11/2025 13:00	1.6	NE
29/11/2025 14:00	2.0	W
29/11/2025 15:00	0.5	SW
29/11/2025 16:00	1.8	SW
29/11/2025 17:00	0.3	W
29/11/2025 18:00	0.6	S
29/11/2025 19:00	2.1	NE
29/11/2025 20:00	0.7	N
29/11/2025 21:00	0.4	NE
29/11/2025 22:00	0.4	NW
29/11/2025 23:00	0.5	SE
30/11/2025 0:00	5.5	E
30/11/2025 1:00	0.8	N
30/11/2025 2:00	0.7	NE
30/11/2025 3:00	0.7	N
30/11/2025 4:00	1.3	N
30/11/2025 5:00	5.1	NE

Date	Wind Speed (m/s)	Wind Direction
30/11/2025 6:00	0.8	N
30/11/2025 7:00	0.5	N
30/11/2025 8:00	0.6	SE
30/11/2025 9:00	0.2	NW
30/11/2025 10:00	0.1	NE
30/11/2025 11:00	1.5	NW
30/11/2025 12:00	0.7	NE
30/11/2025 13:00	2.1	N
30/11/2025 14:00	0.8	N
30/11/2025 15:00	0.3	N
30/11/2025 16:00	4.8	NE
30/11/2025 17:00	4.3	E
30/11/2025 18:00	4.3	NW
30/11/2025 19:00	0.4	NE
30/11/2025 20:00	0.1	E
30/11/2025 21:00	0.2	NE
30/11/2025 22:00	5.6	E
30/11/2025 23:00	0.7	NE
1/12/2025 0:00	0.4	E



## Appendix H

### Event and Action Plan

## Event and Action Plan for Air Quality (Construction Dust)

Event	Action			
	ET	IEC	ER	Contractor
Action level being exceeded by	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s), investigate the causes of exceedance and propose remedial measures;</li> <li>2. Implement remedial measures; and</li> <li>3. Amend working methods agreed with the ER as appropriate.</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Advise the Contractor and ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with Contractor, IEC and ER; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal as appropriate.</li> </ol>
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily; and</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification;</li> <li>4. Implement the agreed proposals; and</li> <li>5. Amend proposal if appropriate.</li> </ol>
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET;</li> <li>2. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>4. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>3. Supervise the implementation of remedial measures; and</li> <li>4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification;</li> <li>4. Implement the agreed proposals;</li> <li>5. Revise and resubmit proposals if problem still not under control; and</li> <li>6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Noise (Construction)

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem;</li> <li>4. Ensure remedial measures properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Event and Action Plan for Water Quality Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Consider changes of working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>2. Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>3. Identify source(s) of impact and record in notification of exceedance;</li> <li>4. Inform IEC, Contractor(s) and ER;</li> <li>5. Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>2. Inform EPD and AFCD;</li> <li>3. Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>3. Ensure additional mitigation measures are properly implemented.</li> <li>4. Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Check plant and equipment and rectify unacceptable practice;</li> <li>3. Critically review the need to change working methods;</li> <li>4. Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>5. Implement the agreed mitigation measures.</li> </ol>

## Event and Action Plan for Ecology Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analyzed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analyzed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

## Appendix I

### Waste Flow Table



Waste Flow Table for Year 2025											
Monthly Ending	Total Quantity Generated	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-inert C&D Wastes Generated Monthly				
		Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2025 Jan	3,435.58	Nil	Nil	Nil	3,305.22	777.24	78.92	0.03	0.0011	Nil	130.33
2025 Feb	9,006.73	Nil	Nil	Nil	8,882.31	318.15	90.00	Nil	Nil	Nil	124.42
2025 Mar	8,791.06	Nil	Nil	Nil	8,665.14	325.29	130.60	0.28	0.0029	Nil	125.63
2025 Apr	2,095.41	Nil	Nil	Nil	1,906.16	258.74	110.43	Nil	Nil	Nil	189.25
2025 May	169.85	Nil	Nil	Nil	Nil	Nil	128.48	0.19	0.0040	Nil	169.65
2025 Jun	1,454.46	Nil	Nil	Nil	1,281.10	359.74	55.68	Nil	Nil	Nil	173.36
2025 Jul	6,653.89	Nil	Nil	Nil	6,431.20	259.70	26.35	0.19	0.0044	Nil	222.69
2025 Aug	11,880.70	Nil	Nil	Nil	11,656.02	Nil	62.71	Nil	Nil	Nil	224.68
2025 Sep	13,474.19	Nil	Nil	Nil	13,123.91	Nil	59.96	0.13	0.0028	Nil	290.19
2025 Oct	18,202.44	Nil	Nil	Nil	17,868.72	Nil	Nil	Nil	Nil	Nil	333.72
2025 Nov	24,677.72	Nil	Nil	Nil	24,356.41	Nil	Nil	Nil	0.009	Nil	321.31
Total	100,525.39	Nil	Nil	Nil	97,476.19	2,298.86	742.13	0.82	0.0242	Nil	2,305.23

Note:

1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.

3) Updated figures are presented during the reporting month.

Sources/ reference of the waste flow data; From the Contractor

# Appendix J

## Implementation Status of Environmental Mitigation Measures

## Construction of Yuen Long Effluent Polishing Plant Stage 1

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
<b>Air Quality Impact (Construction Phase)</b>			
3.6.1.6	Watering once per every two hours on active works areas to reduce dust emission.	All active works areas during construction phase	Implemented
3.8.1.1	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be carried out to further minimize construction dust impact:		
	<ul style="list-style-type: none"> <li>Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> </ul>	Construction Sites	Implemented
	<ul style="list-style-type: none"> <li>Use of frequent watering for particularly dusty construction areas and areas close to ASRs.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Imposition of speed controls for vehicles on site haul roads.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.</li> </ul>		Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
Noise Impact (Construction Phase)			
4.8.1	Movable noise barriers are recommended for hydraulic breakers mounted on excavators to be adopted during construction.	Construction Sites	N/A
	Good site practices listed below and the noise control requirements stated in EPD’s “Recommended Pollution Control Clauses for Construction Contracts” should be included in the Contract Specification for the Contractors to follow and should be implemented to further minimize the potential noise impacts during the construction phase of the Project.		Implemented
	<ul style="list-style-type: none"><li>Quiet PME, such that those listed in EPD’s Quality Powered Mechanical Equipment, should be considered for construction works to further minimize the potential construction noise impact.</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Mobile plant, if any, should be sited as far away from noise sensitive receivers (NSRs) as possible.</li></ul>		N/A
	<ul style="list-style-type: none"><li>Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs</li></ul>		N/A
	<ul style="list-style-type: none"><li>Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.</li></ul>		N/A
Water Quality Impact (Construction Phase)			
5.8.1.2	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into storm drains via silt removal facilities	Construction Sites / Construction Phase	Implemented
5.8.1.3	All vehicles and plant should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into storm drains. The section of construction road between the wheel washing bay and the public road should be paved with backfill to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	Construction Sites / Construction Phase	Implemented
5.8.1.4	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.	Construction Sites / Construction Phase	Implemented
5.8.1.5 - 5.8.1.6	The site practices outlined in ProPECC PN 1/94 “Construction Site Drainage” should be followed where applicable to minimise surface run-off and the chance of erosion. Surface run-off from construction sites should be discharged into storm drains via adequately designed sand / silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels at site boundaries should be provided as necessary to intercept storm run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	Construction Sites / Construction Phase	Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
5.8.1.7	Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly (as well as at the onset of and after each rainstorm) to prevent overflows and localised flooding.	Construction Sites / Construction Phase	Implemented
5.8.1.8	Construction works should be programmed to minimise soil excavation in the wet season (i.e. April to September). If soil excavation cannot be avoided in these months or at any time of year when rainstorms are likely, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g. along the crest / edge of excavation) to prevent storm run-off from washing across exposed soil surfaces.	Construction Sites / Construction Phase	Implemented
5.8.1.9	Earthworks final surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary	Construction Sites / Construction Phase	Implemented
5.8.1.10	Measures should be taken to minimise the ingress of rainwater into trenches. If excavation of trenches in the wet season is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Construction Sites / Construction Phase	Implemented
5.8.1.11	Construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms	Construction Sites / Construction Phase	Implemented
5.8.1.12	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Construction Sites / Construction Phase	Implemented
5.8.1.13	The practices outlined in Environment, Transport and Works Bureau (ETWB) TC (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works" should also be adopted where applicable to minimise the water quality impacts upon any natural streams or surface water systems.	Construction Sites / Construction Phase	Implemented
5.8.1.14	Sufficient chemical toilets should be provided in the works areas. A licensed waste collector should be deployed to clean the chemical toilets on a regular basis.	Construction Sites / Construction Phase	Implemented
5.8.1.15	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment.	Construction Sites / Construction Phase	Implemented
5.8.1.16	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The WDO (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.	Construction Sites / Construction Phase	Implemented
5.8.1.17	Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	Construction Sites / Construction Phase	N/A
5.8.1.18	Disposal of chemical wastes should be carried out in compliance with the WDO. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the WDO should be followed to avoid leakage or spillage of chemicals.	Construction Sites / Construction Phase	Implemented
5.8.1.19	All the runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS).	Construction Sites / Construction Phase	Implemented
5.8.2.11	Chemical should be stored on site at bunded area and separate drainage system as appropriate should be provided to avoid any spilled chemicals from entering the storm drain in case of accidental spillage. Also, adequate tools for cleanup of spilled chemicals should be stored on site and appropriate training shall be provided to staffs to further prevent potential adverse water quality impacts from happening.	Project site / Design and Operation Phase	Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
Waste Management Implication (Construction Phase)			
6.6.1.3	<u>Good Site Practices</u> Recommendations for good site practices during the construction phase include:		
	<ul style="list-style-type: none"><li>Nomination of approved personnel, such as a site manager, to be responsible for good site practices, and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility;</li></ul>	Construction Sites	Implemented
	<ul style="list-style-type: none"><li>Training of site personnel in proper waste management and chemical waste handling procedures;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter;</li></ul>		N/A
	<ul style="list-style-type: none"><li>Arrangement for regular collection of waste for transport off-site and final disposal;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; and</li></ul>		Implemented
	<ul style="list-style-type: none"><li>A WMP should be prepared and should be submitted to the Engineer for approval. One may make reference to ETWB TCW No. 19/2005 for details.</li></ul>		Implemented
6.6.1.5	<u>Waste Reduction Measures</u> Recommendations to achieve waste reduction include:		
	<ul style="list-style-type: none"><li>Segregate and store different types of construction related waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li></ul>	Construction Sites	Implemented
	<ul style="list-style-type: none"><li>Provide separate labelled bins to segregate recyclable waste such as aluminium cans from other general refuse generated by the work force, and to encourage collection by individual collectors;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Any unused chemicals or those with remaining functional capacity shall be recycled;</li></ul>		N/A
	<ul style="list-style-type: none"><li>Maximising the use of reusable steel formwork to reduce the amount of C&amp;D material;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Prior to disposal of C&amp;D waste, it is recommended that wood, steel and other metals shall be separated for re-use and / or recycling to minimise the quantity of waste to be disposed of to landfill;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials;</li></ul>		Implemented
	<ul style="list-style-type: none"><li>Plan the delivery and stock of construction materials carefully to minimise the amount of surplus waste generated;</li></ul>		N/A
	<ul style="list-style-type: none"><li>Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; and</li></ul>		N/A
<ul style="list-style-type: none"><li>Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering.</li></ul>	N/A		



EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.7	<u>Storage of Waste</u> Recommendations to minimise the impacts include:	Construction Sites	
	<ul style="list-style-type: none"> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Maintain and clean storage areas routinely;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>		Implemented
6.6.1.8	<u>Collection of Waste</u> Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be enforced to minimise the potential adverse impacts:	Construction Sites	
	<ul style="list-style-type: none"> <li>Remove waste in timely manner;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Waste collectors should only collect wastes prescribed by their permits;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Obtain relevant waste disposal permits from the appropriate authorities, in accordance with the WDO (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28);</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Waste should be disposed of at licensed waste disposal facilities; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Maintain records of quantities of waste generated, recycled and disposed.</li> </ul>		Implemented
6.6.1.10	<u>Transportation of Waste</u> In order to monitor the disposal of C&D materials at PFRFs and landfills and to control fly-tipping, a trip-ticket system should be established in accordance with DEVB TCW No. 6/2010. A recording system for the amount of waste generated, recycled and disposed, including the disposal sites, should also be set up. Warning signs should be put up to remind the designated disposal sites. CCTV should be installed at the vehicular entrance and exit of the site as additional measures to prevent fly-tipping.	Transportation Route of Waste / Construction Phase	Implemented
6.6.1.12	<u>Construction and Demolition Material</u> Careful design, planning together with good site management can reduce over-ordering and generation of C&D materials such as concrete, mortar and cement grouts. Formwork should be designed to maximize the use of standard wooden panels, so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse	Construction Sites	N/A
6.6.1.13	The excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for landscaping works as far as practicable. Other mitigation requirements are listed below:	Construction Sites	
	<ul style="list-style-type: none"> <li>A WMP, which becomes part of the EMP, should be prepared in accordance with ETWB TCW No.19/2005;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>In order to monitor the disposal of C&amp;D materials at public filling facilities and landfills and to control fly-tipping, a trip-ticket system should be adopted (refer to DEVB TCW 06/2010).</li> </ul>		Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	It is recommended that specific areas should be provided by the Contractors for sorting and to provide temporary storage areas (if required) for the sorted materials. Control measures for temporary stockpiles on-site should be taken in order to minimise the noise, generation of dust and pollution of water. These measures include:		
6.6.1.14	<ul style="list-style-type: none"> <li>Surface of stockpiled soil should be regularly wetted with water especially during dry season;</li> </ul>	Construction Sites	Implemented
	<ul style="list-style-type: none"> <li>Disturbance of stockpile soil should be minimised;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Stockpiled soil should be properly covered with tarpaulin especially when heavy storms are predicted; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Stockpiling areas should be enclosed where space is available.</li> </ul>		Implemented
6.6.1.15	The Contactor should prepare and implement an EMP in accordance with ETWB TCW No.19/2005, which describes the arrangements for avoidance, reuse, recovery, recycling, storage, collection, treatment and disposal of different categories of waste to be generated from construction activities. Such a management plan should incorporate site-specific factors, such as the designation of areas for segregation and temporary storage of reusable and recyclable materials. The EMP should be submitted to the Engineer for approval. The Contractor should implement waste management practices in the EMP throughout the construction stage of the Project. The EMP should be reviewed regularly and updated by the Contractor, preferably on a monthly basis.	Construction Sites	Implemented
6.6.1.16	The Contractor would be responsible for devising a system to work for on-site sorting of C&D materials and promptly removing all sorted and process materials arising from the construction activities to minimise temporary stockpiling on-site. The system should be included in the EMP identifying the source of generation, estimated quantity, arrangement for on-site sorting, collection, temporary storage areas and frequency of collection by recycling Contractors or frequency of removal off-site.	Construction Sites	Implemented
6.6.1.17 – 6.6.1.18	<p>The sediment should be excavated, handled, transported and disposed of in a manner that would minimise adverse environmental impacts. To minimise sediment disposal, it is proposed to reuse the Type 1 sediment generated (e.g. as backfilling materials) as far as possible.</p> <p>Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, transportation and disposal of the sediment.</p>	Construction Sites	N/A
6.6.1.19	Workers shall, if necessary, wear appropriate personal protective equipments (PPE) when handling contaminated sediments. Adequate washing and cleaning facilities shall also be provided on site.	Construction Sites	Implemented
6.6.1.20	For off-site disposal, the basic requirements and procedures specified under ETWB TC(W) No. 34/2002 shall be followed.	Transportation Route of Waste / Construction Phase	Implemented
6.6.1.24	Stockpiling of contaminated sediments should be avoided as far as possible. If temporary stockpiling of contaminated sediments is necessary, the excavated sediment should be covered by tarpaulin and the area should be placed within earth bunds or sand bags to prevent leachate from entering the ground, nearby drains and surrounding water bodies. The stockpiles should be completely paved or covered by linings in order to avoid contamination to underlying soil or groundwater. Separate and clearly defined areas should be provided for stockpiling of contaminated and uncontaminated materials. Leachate, if any, should be collected and discharged according to the Water Pollution Control Ordinance (WPCO).	Construction Sites	Implemented
6.6.1.25	In order to minimise the potential odour / dust emissions during excavation and transportation of the sediment, the excavated sediments shall be wetted during excavation / material handling and shall be properly covered when placed on trucks or barges. Loading of the excavated sediment to the barge shall be controlled to avoid splashing and overflowing of the sediment slurry to the surrounding water.	Construction sites & transportation route of waste / Construction phase	N/A
6.6.1.26	The barge transporting the sediments to the designated disposal sites shall be equipped with tight fitting seals to prevent leakage and shall not be filled to a level that would cause overflow of materials or laden water during loading or transportation. In addition, monitoring of the barge loading shall be conducted to ensure that loss of material does not take place during transportation. Transport barges or vessels shall be equipped with automatic self-monitoring devices as specified by the DEP.	Transportation route of waste / Construction phase	N/A

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
6.6.1.27	Suitable containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall employ a licensed collector to transport and dispose of the chemical wastes, to the licensed CWTC, or other licensed facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Construction and Operation Phases	Implemented
6.6.1.28	It is recommended to place clearly labelled recycling bins at designated locations with convenient access. Other general refuse should be separated from chemical and industrial waste by providing separated bins or skips for storage to maximise the recyclable volume. A reputable licensed waste collector should be employed to remove general refuse on a daily basis to minimise odour, pest and litter impacts.	Construction and Operation Phases	Implemented
6.6.1.29	Should buildings be found with potential ACM, sufficient and reasonable lead time shall be allowed for preparation, vetting and implementation of Asbestos Investigation Report and Asbestos Abatement Plan in accordance with Air Pollution Control Ordinance before commencement of any demolition or site clearance work.	Demolition	N/A
<b>Land Contamination</b>			
7.8.1.2 - 7.8.1.3; 7.8.2.1	Prior to the commencement of the SI works, a review of the Contamination Assessment Plan (CAP) should be conducted to confirm whether the proposed SI works (e.g. sampling locations, testing parameters etc.) are still valid. Supplementary CAP(s), presenting findings of the review, the latest site conditions and updated sampling strategy and testing protocol, should be submitted to EPD for endorsement. The SI works should be carried out according to EPD's agreed supplementary CAP(s). SI works should be carried out according to the supplementary CAP endorsed by EPD. Following completion of SI works and receipt of laboratory test results, Contamination Assessment Report(s) ((CAR)(s)) should be prepared to present the findings of the SI works and to discuss the presence, nature and extent of contamination. If contamination is identified, Remedial Action Plan(s) ((RAP)(s)) which provides details of the remedial actions for the identified contaminated soil and / or groundwater should be endorsed by EPD. The possible remediation methods are detailed in Section 5.2 of the CAP provided in Appendix 7.1 of the EIA Report, Remediation action, if necessary, will be carried out according to EPD endorsed RAP(s) and Remediation Report(s) (RR(s)) will be submitted after completion of the remediation action. The RR(s) should be endorsed by EPD prior to the commencement of construction works at the respective identified contaminated areas (if any).	Existing YLSTW /Construction Phase (after decommissioning of the concerned facilities / areas but prior to the construction works at the concerned facilities / areas)	Implemented
7.8.3.1	The mitigation measures will be recommended in the RAP and would typically include the following:		
	<ul style="list-style-type: none"> <li>Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> </ul>	Project Site / Construction Phase	Implemented
	<ul style="list-style-type: none"> <li>Excavation shall be carried out during dry season as far as possible to minimise contaminated runoff from contaminated soils; Supply of suitable clean backfill material (or treated soil) after excavation;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Stockpiling site(s) shall be lined with impermeable sheeting and bunded. Stockpiles shall be fully covered by impermeable sheeting to reduce dust emission. If this is not practicable due to frequent usage, regular watering shall be applied. However, watering shall be avoided on stockpiles of contaminated soil to minimise contaminated runoff.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Vehicles containing any excavated materials shall be suitably covered to limit potential dust emissions or contaminated wastewater run-off, and truck bodies and tailgates shall be sealed to prevent any discharge during transport or during wet conditions;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Speed control for the trucks carrying contaminated materials shall be enforced;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Pollution control measures for air emissions (e.g. from biopile blower and handling of cement), noise emissions (e.g. from blower or earthmoving equipment), and water discharges (e.g. runoff control from treatment facility) shall be implemented and complied with relevant regulations and guidelines.</li> </ul>		Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
<b>Ecological Impact (Terrestrial and Aquatic) (Construction Phase)</b>			
8.10.2.1	<u>Avoidance of Recognised Site of Conservation Importance</u> Construction works are designed to be confined to the boundary of the existing YLSTW that direct impacts on all other sites of conservation importance within the assessment area, including the Ramsar Site, Priority Site, WCA, WBA, SSSI and CA would be avoided.	Project site / Construction Phase	Implemented
8.10.2.3 – 8.10.2.4	<u>Avoidance of Demolition Works Using Breakers Mounted on Excavators and Percussive Piling during Dry Season</u> In order to minimise the construction noise disturbance on overwintering waterbirds, the noisy construction works, i.e. all percussive piling works and demolition using breakers mounted on excavators, would therefore be scheduled outside the dry season (i.e. November to March, which is the peak overwintering period of waterbirds).	Construction sites / Construction Phase	Implemented
8.10.2.5	<u>Restriction of Construction Hours</u> No construction activities with the use of PME should be conducted within 100m from any night roost confirmed by the pre-construction survey after 18:00 during wet season and 17:30 during dry season to avoid disturbance to the nearby ardeids night roosts.	Construction sites / Construction Phase	Implemented
8.10.3.2 – 8.10.3.3	<u>Minimising Construction Noise Disturbance Impacts through Consideration of Alternative Construction Methods</u> Demolition using concrete crusher is quieter than demolition using breaker that its construction noise level is comparable to other general construction activities and concrete crusher would be used for demolition works to be undertaken during dry season months. The quieter foundation methods, including bored piling, raft foundation and shallow foundation, would be adopted as far as possible.	Construction sites / Construction Phase	Implemented
8.10.3.4 – 8.10.3.5	<u>Minimising Construction Noise Disturbance Impacts Through Careful Phasing of Construction Activities</u> Percussive piling works and demolition using breakers mounted on excavators would typically be completed over two wet seasons and not be undertaken in the same construction zone at the same time to localise the construction disturbance and to reduce the duration of high level of disturbances on sensitive wetland habitats and associated waterbirds nearby each construction zone. Facilities in the eastern side of the Project site (i.e. Phase 1A and Phase 1B) are scheduled to be developed first that the new structures could screen the works in the middle and western parts of the site in later stage of the construction phase after the structures in Phase 1A and Phase 1B are completed, hence minimising the construction noise and human disturbance on sensitive wetland habitats adjacent to the Project site in Shan Pui River, including the confluence of Shan Pui River and Kam Tin River and ardeid night roost to the immediate east of the Project site.	Project site / Construction Phase	Implemented
8.10.3.6 – 8.10.3.8	<u>Minimising Construction Noise Disturbance Impacts through Use of Noise Barriers</u> Noise barriers with absorptive materials of about 4m high will be erected along the northern, eastern and western sides of the site, throughout the construction phase to screen the construction noise and human disturbance to the waterbirds foraging in ponds in Fung Lok Wai and Shan Pui River during construction phase. Adequate noise barriers should also be provided for demolition works using breakers mounted on excavators and percussive piling works, to further minimise the construction noise disturbance from these construction activities. Movable noise barriers should be provided to breaker mounted on excavator used for demolition works as discussed in Section 4.8 and acoustic mat should be provided to the piling plants around the rig. The contractor should provide enclosure for construction equipment, especially static plants, as appropriate to minimise the noise disturbance as far as practicable.	Construction sites / Construction Phase	Implemented
8.10.3.9	<u>Use of Quality Powered Mechanical Equipment</u> The contractor should source QPMEs for construction as far as practicable to further minimise the overall construction noise and other disturbance to the nearby wetland habitats and associated waterbirds to the maximum practical extent.	Construction sites / Construction Phase	Implemented
<b>Ecology &amp; Fisheries Impact</b>			
8.12.1.4, 9.7	Groundwater observation wells and recharge wells will be provided at the northern and western side of the site. Groundwater table will be closely monitored at the observation well. In case of any unlikely events of abnormal drawdown of groundwater table near the excavation area, groundwater dewatering will stop and water will be pumped into the recharge wells to recover the normal groundwater table as necessary.	Construction Phase	N/A

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
<b>Fisheries Impact</b>			
9.7	The implementation of good site practices during construction could minimise the potential water quality impacts from the land-based construction works. Mitigation measures recommended in the Water Quality Impact Assessment (Section 5) for controlling water quality impact would also serve to protect fisheries resources and activities from indirect impacts.	Construction and Operation Phase	N/A
<b>Landscape and Visual Impact</b>			
Table 10.11	<u>Preservation of Existing Vegetation (CM1)</u> All the existing Trees to be retained and not to be affected by the Project shall be carefully protected during construction accordance with DEVB TCW No. 7/2015 - Tree Preservation and the latest Guidelines on Tree Preservation during Development issued by GLTM Section of DevB. Any existing vegetation in landscaped areas and natural terrain not to be affected by the Project shall be carefully preserved.	Project site / Construction Phase	Implemented
	<u>Transplanting of Affected Trees (CM2)</u> Trees unavoidably affected by the works shall be transplanted as far as possible in accordance with DEVB TCW No. 7/2015 - Tree Preservation and the latest Guidelines on Tree Transplanting issued by GLTM Section of DevB.	Project site / Construction Phase	Implemented
	<u>Compensatory Tree Planting (CM3)</u> Any trees to be felled under the Project shall be compensated in accordance with DEVB TCW No. 7/2015 - Tree Preservation. For trees to be compensated on slopes, the guidelines for tree planting stipulated in GEO Publication No. 1/2011 will be followed.	Project site / Construction Phase	N/A
	<u>Control of Night-time Lighting Glare (CM4)</u> All the night time lighting shall be avoided except for safety purpose. No light glare shall illuminate directly outside the site.	Project site / Construction Phase	Implemented
	<u>Erection of Decorative Screen Hoarding (CM5)</u> Site hoardings, if any, shall be painted in dull green colour	Project site / Construction Phase	Implemented
	<u>Management of Construction Activities and Facilities (CM6)</u> Construction activities shall be well scheduled and avoid powered mechanical equipment's operating simultaneously. All stockpiling areas and idled area shall be covered by tarpaulin sheet or hydroseeded as far as possible.	Project site / Construction Phase	Implemented
<b>Hazard to Life (Construction Phase)</b>			
11.5.6.9- 11.5.6.12	<ul style="list-style-type: none"> <li>Implementation of those major construction works and movement of plants and vehicles would be stringently controlled to have a setback of at least 15m clear distance, or physical barrier with an empty digester / gas holder from the digesters / gas holders in operation;</li> </ul>	Project site / Construction Phase	N/A
	<ul style="list-style-type: none"> <li>For those construction works to be carried out in close proximity to the 15m zone from digesters / gas holders in operation, the height of plants for those major construction shall be limited to 15m such that the plants would not damage digesters /gas holders in such incident as plant collapse or overturning;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Whenever practicable, the construction sequence shall be arranged with empty unit(s) for separating the major construction works from these digesters / gas holders in use; and</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Physical barriers such as concrete blocks shall be set up at the 15m zone in order to avoid those construction plants or vehicles from colliding to the digester / gas holder units in use.</li> </ul>		N/A

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
11.5.8	<ul style="list-style-type: none"> <li>Method statements and risk assessments shall be prepared and safety control measures shall be in place before commencement of work</li> </ul>	Project site / Construction Phase	Implemented
	<ul style="list-style-type: none"> <li>All work procedures shall be complied with the operating plant procedures or guidelines and regulatory requirements;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Work permit system, on-site pre-work risk assessment and emergency response procedure shall be in place before commencement of work;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>All construction workers shall equip with appropriate personal protective equipment (PPE) when working at the Project Site;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Safety training and briefings shall be provided to all construction workers;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Regular site safety inspections shall be conducted during the construction phase of the Project;</li> </ul>		Implemented
11.9.1.2	<ul style="list-style-type: none"> <li>Ensure speed limit enforcement is specified in the contractor's method statement to limit the speed of construction vehicles onsite;</li> </ul>	Project site / Construction Phase	Implemented
	<ul style="list-style-type: none"> <li>Conduct speed checks to ensure enforcement of speed limits and to ensure adequate site access control;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>A lifting plan, with detailed risk assessment, should be prepared and endorsed for heavy lifting of large equipment;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Vehicle crash barriers should be provided between the construction site and the operating biogas facilities;</li> </ul>		N/A
	<ul style="list-style-type: none"> <li>Ensure that a hazardous area classification study is conducted and hazardous area maps are updated before the start of the construction activities to ensure ignition sources are controlled during both construction and operation phases;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure work permit system for hot work activities within the Project Site is specified in the contractor's method statement to minimize and control the ignition sources during the construction phase;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure effective communication system / protocol is in place between the contractors and the operation staff;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure the Project Construction Emergency Response Plan is integrated with the Emergency Response Plan for the YLEPP during construction phase. The plan should address stop work instructions to be promptly communicated to all construction workers performing hot works in case a confirmed biogas detection at the Project Site;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure that the construction activities do not impede the functions of fire and gas detection system, fire protection system, muster areas, fire-fighting vehicle access and escape routes;</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Ensure a Job Safety Analysis is conducted for construction activities of the Project during the construction phase, to identify and analyze hazards associated with the construction activities (e.g. lifting operations by cranes) onto the operating biogas facilities.</li> </ul>		Implemented
	<ul style="list-style-type: none"> <li>Potential risks of the construction activities shall be assessed, and risk precautionary measures shall be implemented in Contractor's works procedures.</li> </ul>		Implemented

Note:

Implementation status: Implemented / Partially Implemented / Not Implemented / Not Applicable (N/A)

Sources / reference of the Implementation Status: Appendix B of EIA Report, AEIAR-220/2019



## Appendix K

### Weather and Meteorological Conditions

# October 2025 Weather

Station: Wetland Park

Date	Mean Pressure (hPa)	Air Temperature			Mean Relative Humidity (%)	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)		
October 2025						
1	1011.8	33	28.8	25.5	80	0
2	1012.4#	31.5#	27.2#	24.6#	86#	0
3	1012.2	32.5	27.8	24.6	84	0
4	1010.6	33.6	28.2	23.9	77	0
5	1010.4	30.7	28.6	25	75	4.5
6	1012.7	31.6	27.7	24.8	83	0
7	1013.3	33.4	28.2	23.8	78	0
8	1012.6	32.9	28.7	25.5	76	0
9	1012.2	33	28.7	25.9	77	0
10	1011.7	33.6	28.2	25.2	80	0
11	1011.1	33.4	28.8	25.4	76	0
12	1011.5	29.7	27.3	26.1	90	4.5
13	1012.4	31.4	27.6	25.8	89	2
14	1012.9	32.5	28.2	25.4	83	0
15	1013.2	32.8#	28.1	25.0#	81	0
16	1013.6	32.7	28.6	26	77	0
17	1013.7	33.4	28.6	25.2	77	0
18	1012.3	34.7	28.8	25.1	80	0
19	1011.4	33.4	28.8	25.5	74	0
20	1012.3	29.8	25.9	23.1	68	0
21	1015.2	23.1	21.4	19.8	71	0
22	1017.4	19.8	17.9	16.5	83	3
23	1018	22.3	19.8	17.4	72	0.5
24	1016.9	26.8	22.4	19.9	63	0
25	1015.8	30.5	24.9	21.2	62	0
26	1015.7	30.4	25.6	22.6	60	0
27	1017.1	25.9	23.1	20.1	69	0
28	1017.3	22.8	21.8	19.9	79	0
29	1016.7	26.7	23.6	20.8	77	0
30	1016	31.3	25.8	23.3	74	0
31	1015.7	29.5	25.7	22.5	74	0

Note (From Hong Kong Observatory):

1. Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected
2. # data incomplete

Source: Hong Kong Observatory

# November 2025 Weather

Station: Hong Kong Observatory

Date	Mean Pressure (hPa)	Air Temperature			Mean Relative	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)	Humidity (%)	
November 2025						
1	1017.2	25.2	24.5	23.1	64	0
2	1017.4	27.7	25.3	23.5	66	0
3	1017.9	24.8	23.7	22.9	64	0
4	1016.6	23.2	22.3	21.6	70	Trace
5	1013.6	26.4	23.5	20.9	71	0
6	1013.6	27.3	24.8	23	75	0.3
7	1014.8	25.6	24.6	23.2	82	5.7
8	1015.4	28.1	25.9	24.6	76	0
9	1012	28.9	26.4	24.2	73	0
10	1008.8	27.2	25	23.3	65	0
11	1008.1	23.6	23	22.4	65	Trace
12	1011.6	25.3	22.5	20.8	63	0
13	1015.4	24	21.1	19.1	69	0.2
14	1017.1	26	22.2	18.4	73	0.7
15	1019.4	26.6	24	22.7	64	0
16	1020.3	26.4	23.8	22.4	72	0
17	1019.9	27.4	24.5	22.7	73	0
18	1022.8	23.9	20.3	14.7	57	Trace
19	1024.5	16.8	15.4	13.2	41	0.1
20	1023.7	18.2	16.5	14.6	39	Trace
21	1022.7	22.5	19.7	17.3	41	0
22	1021.4	23.7	20.5	17.5	53	0
23	1019.5	25.2	22.3	20.3	67	0
24	1018.3	25.8	23.4	21.5	65	Trace
25	1018.9	23.7	21.9	20	34	0
26	1019.5	22.8	20	17.6	46	0
27	1020.3	22.2	19.8	18.2	28	0
28	1017.9	22.6	19.3	16.7	38	0
29	1016	23.9	20.5	18.4	55	0
30	1015.1	24.5	22.3	20.7	64	0

Note (From Hong Kong Observatory):  
Trace means rainfall less than 0.05 mm

Source: Hong Kong Observatory

Remark: The corresponding weather station at Wetland Park were unavailable at the time of preparation of this report. The corresponding month's weather will be provided in the next reporting month.

## Appendix L

### Cumulative statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

### Environmental Complaints Log

Reference	Date of Complaint	Received From	Received By	Nature of Complaint	Date of Investigation	Outcome	Date of Reply

### Cumulative Statistics on Complaints

Environmental Parameters	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

### Cumulative Statistics on Notification of Summons and Successful Prosecutions

Environmental Parameters	Cumulative No. Brought Forward	No. of Notification of Summons and Prosecutions This Month	Cumulative Project-to-Date
Air	0	0	0
Noise	0	0	0
Water	0	0	0
Waste	0	0	0
Total	0	0	0

## Appendix M

### Summary of the ET Leader's Site Environmental Audit in the Reporting Month



### Summary of ET Leader's Site Environmental Audit in the Reporting Month

Parameters	Date	Observations and Recommendations	Follow-up
Air Quality	NA		
Noise	NA		
Water Quality	NA		
Chemical and Construction Waste Management	NA		
Land Contamination	NA		
Ecological Impact	NA		
Landscape and Visual Impact	NA		
Permit / Licenses	5 November 2025	Reminder 1: The color of NRMM label for the generator at SDB should be green.	A new NRMM label was provided.
Others	NA		

## Appendix N

### Outstanding Issues and Deficiencies

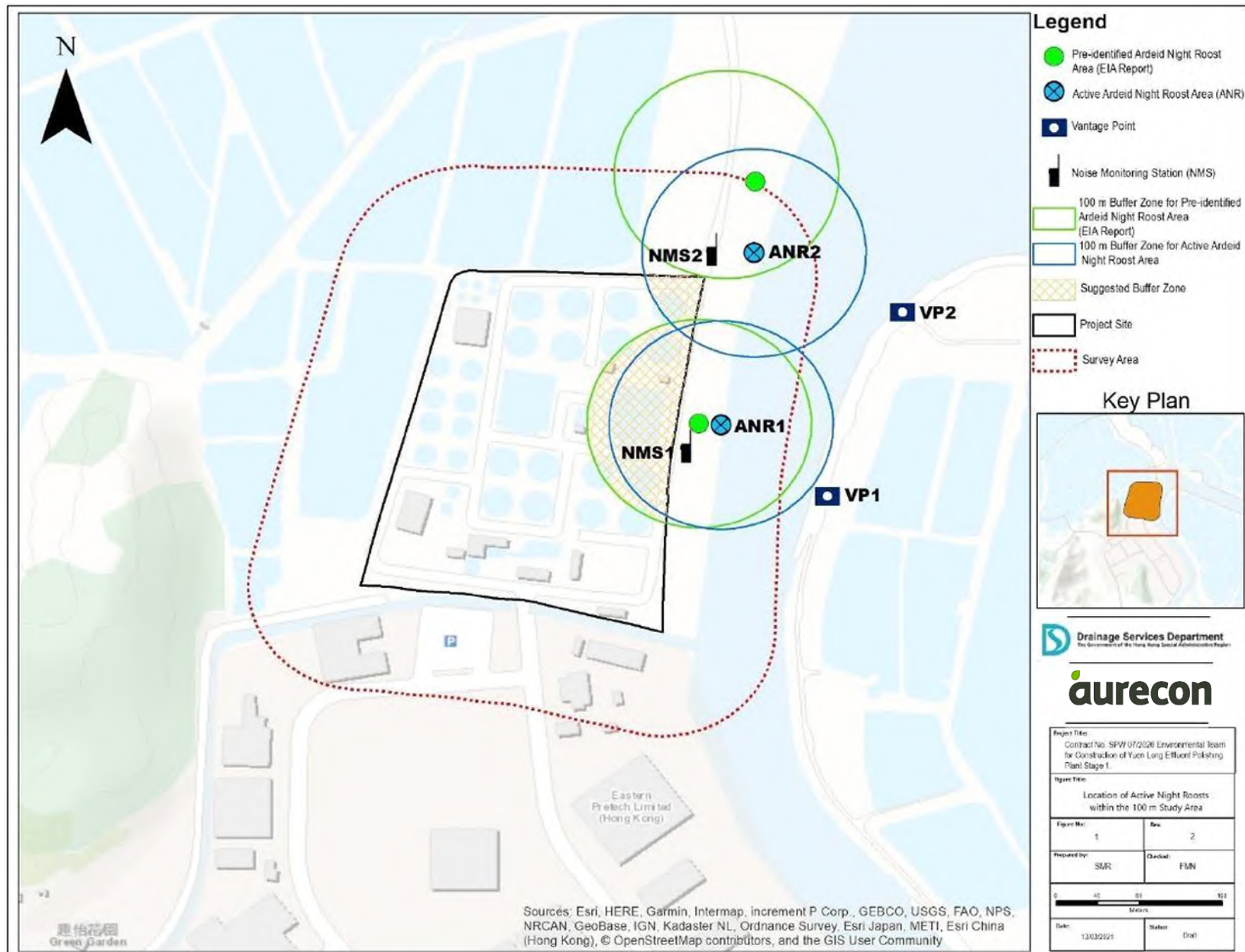
**Summary of Outstanding Issues and Deficiencies in the Reporting Month**

Parameters	Outstanding Issues	Deficiencies
Air Quality	NA	Any items of deficiencies can be referred to <b>Appendix M.</b>
Noise	NA	
Water Quality	NA	
Chemical and Waste Management	NA	
Land Contamination	NA	
Landscape and Visual Impact	NA	
Permit / Licenses	NA	
Others	NA	

## Appendix O

### Active Night Roost Monitoring Area and Vantage Points; and Noise Monitoring Stations

## O.1 Map of the Monitoring Area, Vantage Points for Observation of Active Night Roosts and Noise Monitoring Stations



## O.2 Survey Photos

### O.2.1 Pre-roosting Aggregate



Appendix O.2.1a: Pre-roost aggregate of ardeids in the mudflat northeast side of the Project boundary (ANR2) observed on 21 November 2025 at around 17:15.



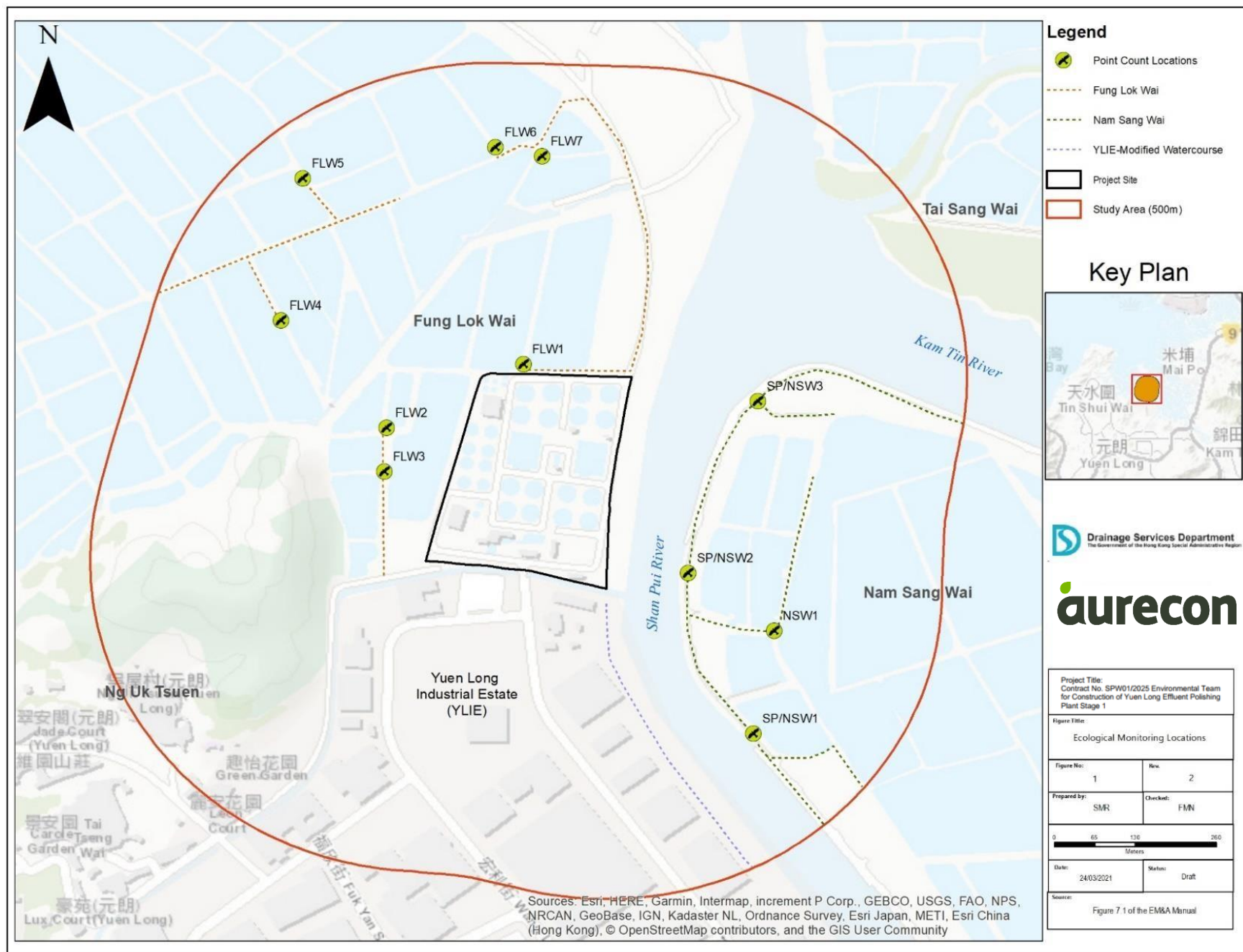
## O.2.2 Active Night Roosting Site and Roosting Substrates



Appendix O.2.2a: Active night roost in the mudflat northeast side of the Project boundary (ANR2) observed on 21 November 2025 at around 17:29.

## Appendix P

### Ecological Bird Monitoring Area with Locations of Point Count Sites and Transect Route

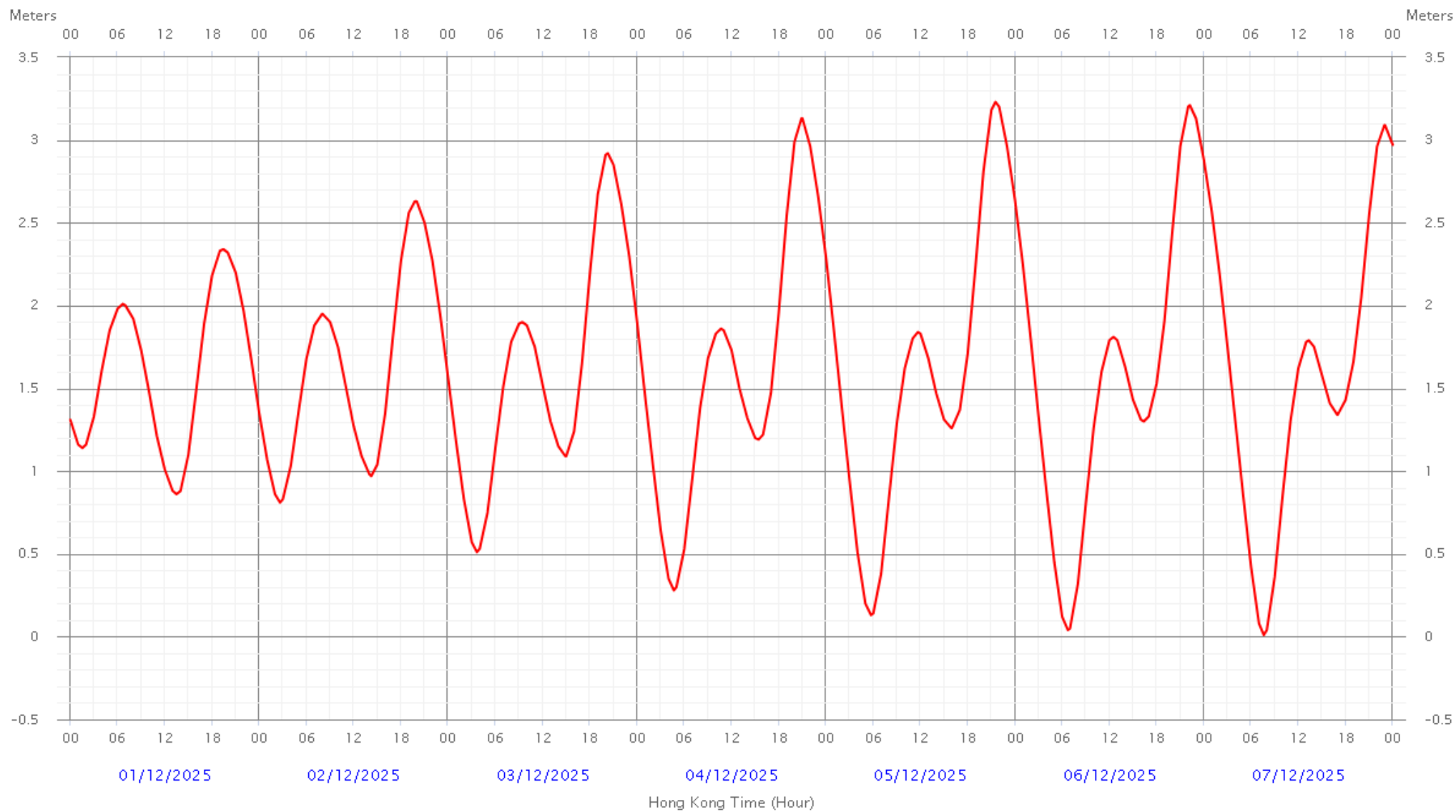


Appendix P: Ecological bird monitoring area with the locations of point count sites and transect routes

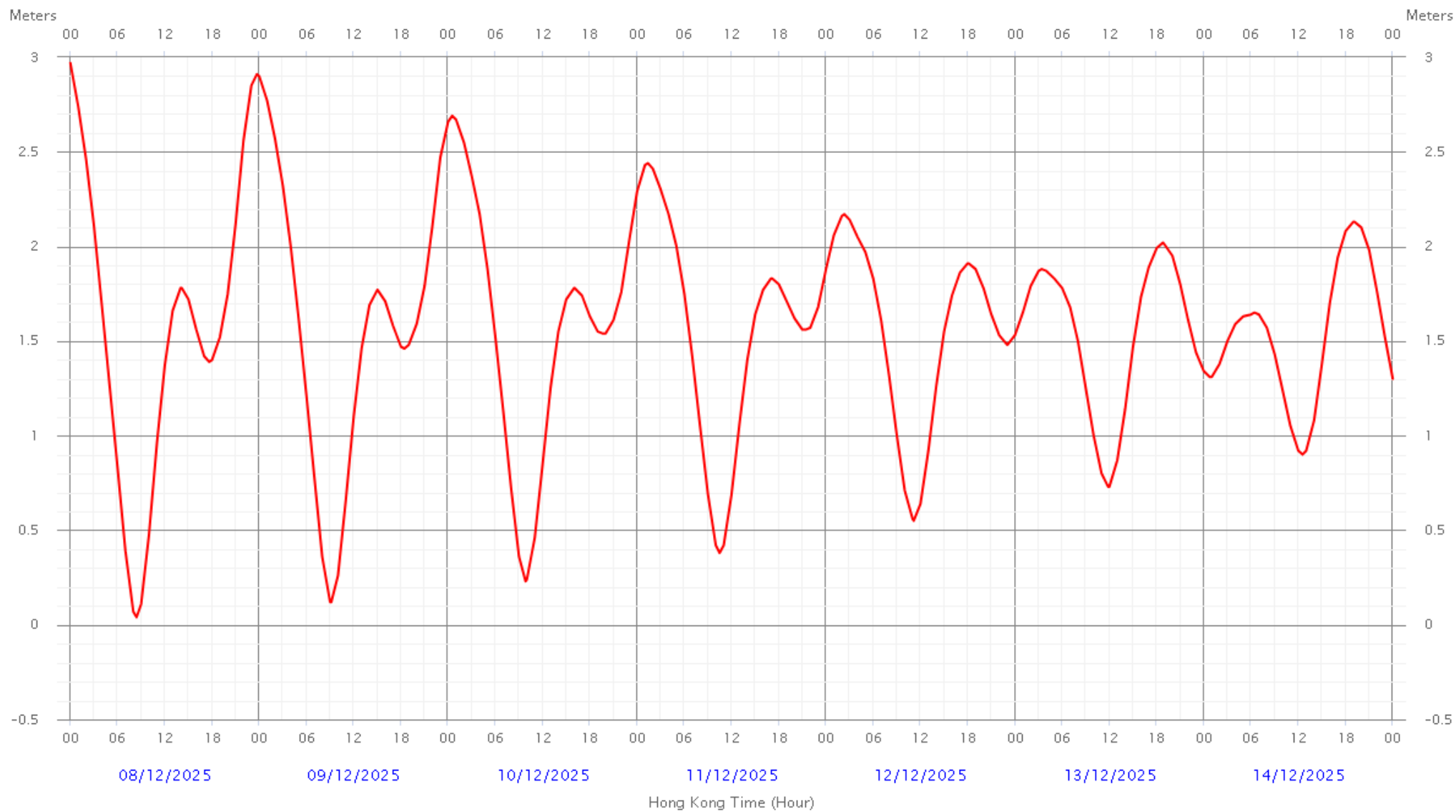
## Appendix Q

Tides Predicted by the Hong Kong Observatory for the tidal station at Tsim Bei Tsui

# Tsim Bei Tsui

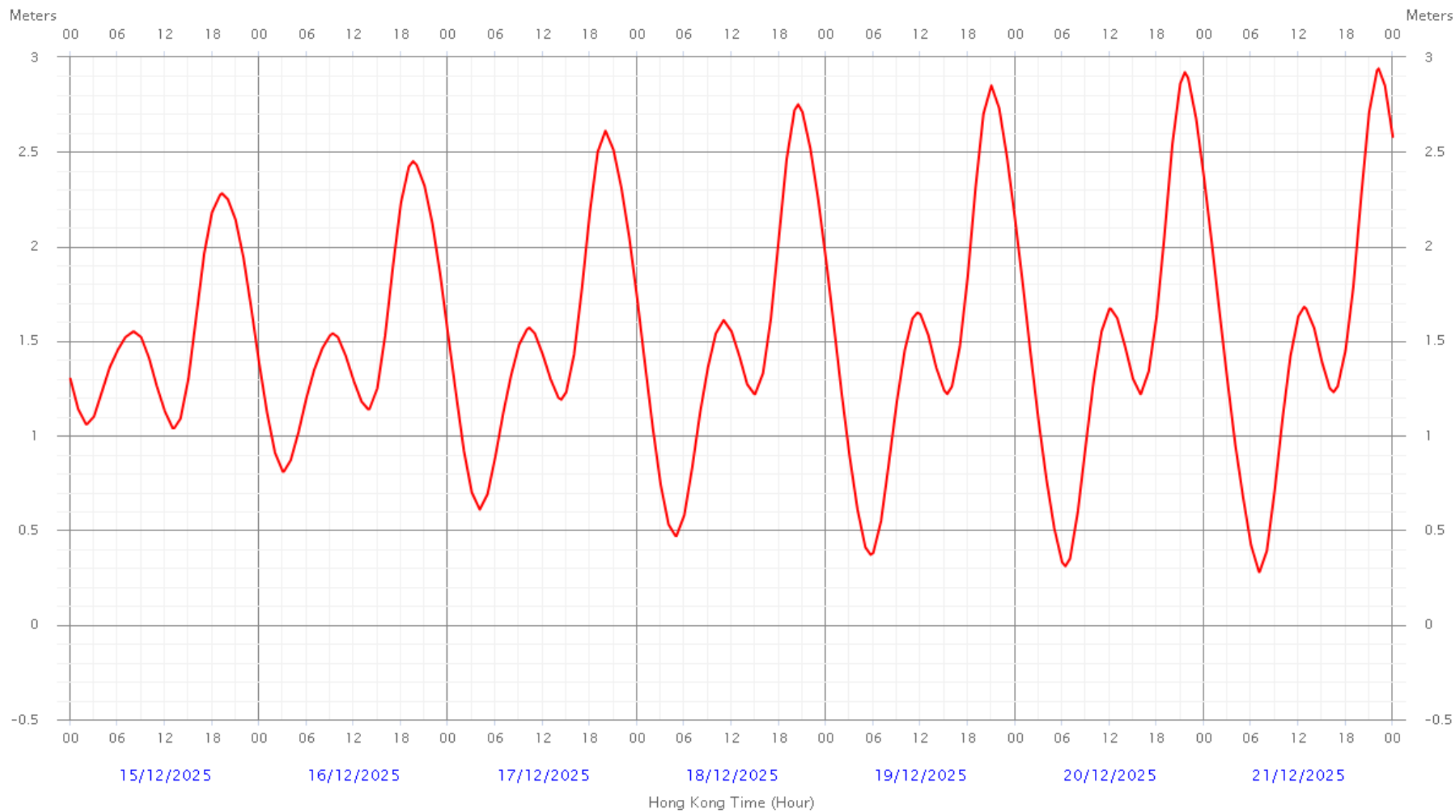


# Tsim Bei Tsui

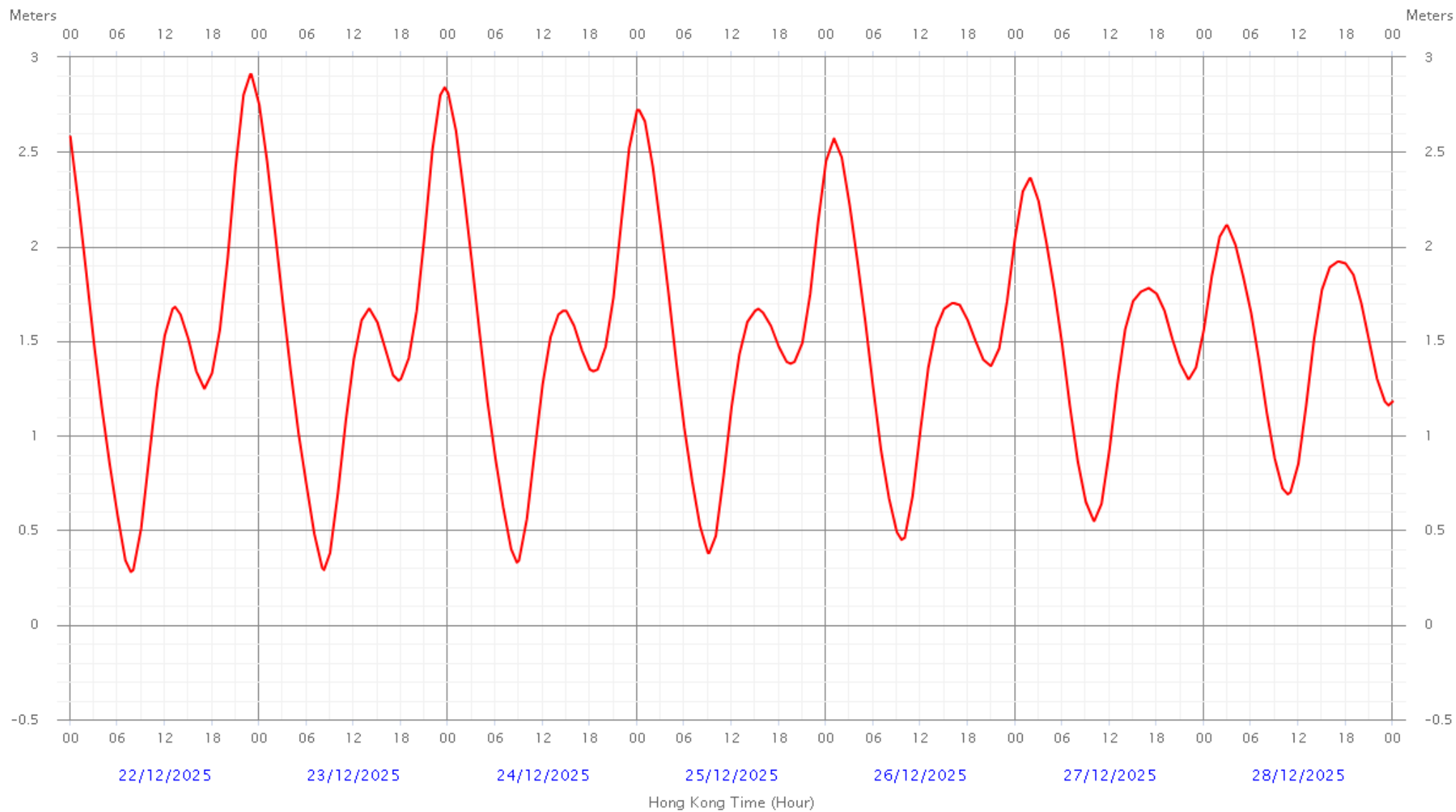




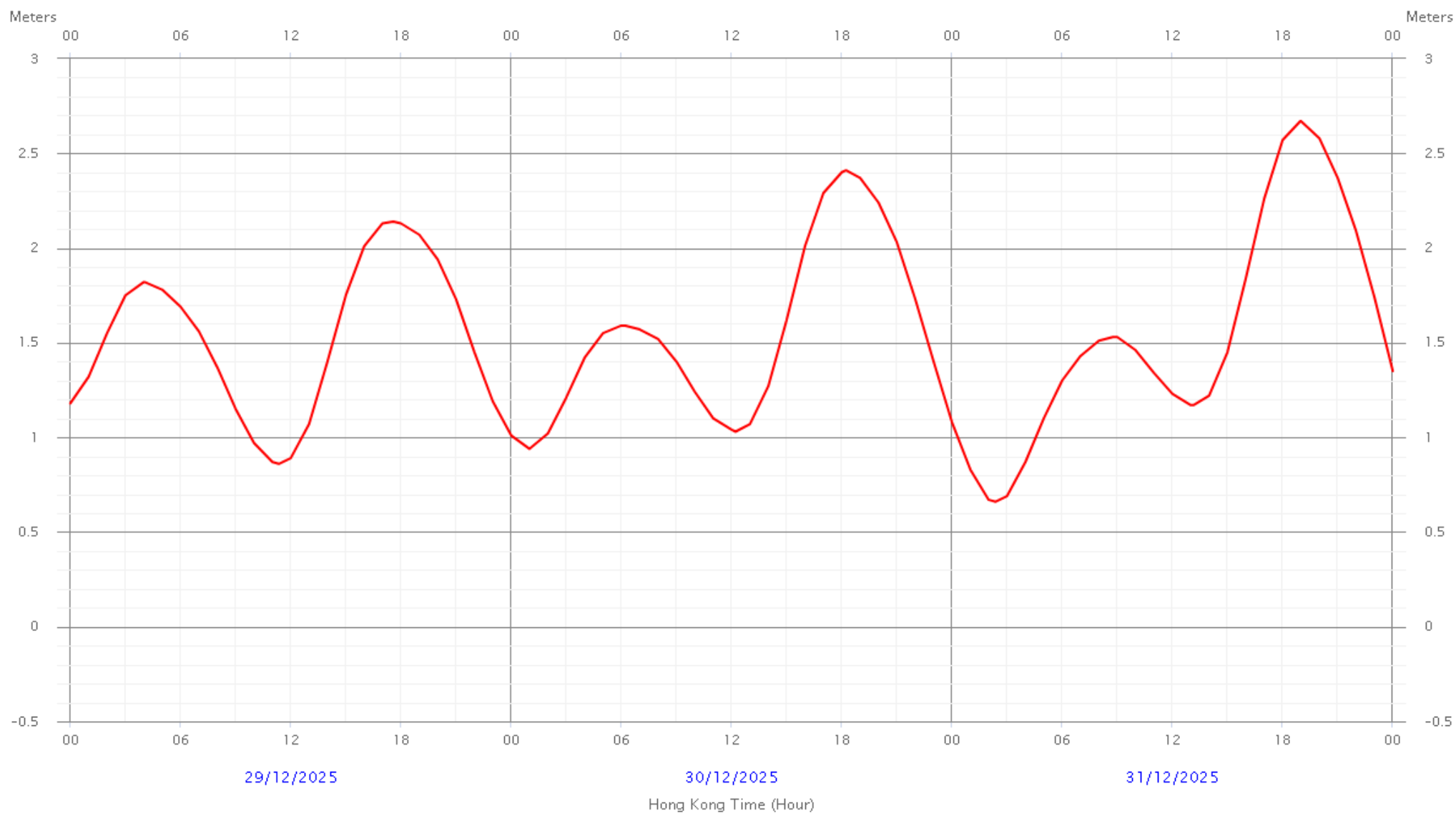
# Tsim Bei Tsui



# Tsim Bei Tsui



# Tsim Bei Tsui



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