Contract No. SPW 02/2023 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1

Monthly EM&A Report (June 2024) Drainage Services Department

2024-07-14



Sringing ideas

aurecon

aurecon



AECOM Asia Co. Ltd. 12/F, Grand Central Plaza, Tower 2 138 Shatin Rural Committee Road Shatin, Hong Kong

Attn: Mr. Simon H.M. YEUNG – CRE(C)

Your Reference Contract No. SPW 03/2023 Independent Environmental Checker for Construction of Yuen Long Effluent **Our Reference** Polishing Plant Stage 1 (2023-2024) AFK/EC/TC/BW/bw/ T601100237/02/02/L061 Environmental Permit No. EP-565/2019 Mott MacDonald

3/F Manulife Place 348 Kwun Tong Road Kwun Tong Kowloon Hong Kong

T +852 2828 5757 F +852 2827 1823 mottmac.hk

EP Condition 3.4 – Monthly EM&A Report for June 2024

15 July 2024 By Hand and By Email

Dear Sir,

I refer to the captioned Monthly EM&A Report for June 2024 (Revision 2) which was received via e-mail and certified by the Environmental Team Leader on 15 July 2024 (ref.: PL-202407025).

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.

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

Brandon WONG Independent Environmental Checker T +852 2828 5875 Brandon.Wong@mottmac.com

c.c. DSD

Aurecon Hong Kong Limited Paul Y – CREC Joint Venture

Mr. Wallace CHENG - E/SP 16 By Email Mr. Vincent LU - ET Leader By Email Mr. Gabriel WONG – Environmental Specialist By Email

Aurecon Hong Kong Limited Unit 1608, 16/F, Tower B, Manulife Financial Centre, 223 – 231 Wai Yip Street, Kwun Tong Hong Kong
 T
 +852 3664 6888

 F
 +852 3664 6999

 E
 hongkong@aurecongroup.com

 w
 aurecongroup.com



Ref: PL-202407025

15 July 2024

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 02/2023 Environmental Team for Construction of Yuen Long Effluent Polishing Plant Stage 1 Environmental Permit No. EP-565/2019 EP Condition 3.4 – Monthly EM&A Report for June 2024

Pursuant to Clause 3.4 of Environmental Permit No. EP-565/2019 for the captioned project, we are pleased to submit the certified Monthly EM&A Report for June 2024 (Rev.2) 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

Vincent M. J. Lu Environmental Team Leader

Encl.

cc. AECOM – Mr. Patrick Leung (<u>patrick.leung@ylepp-aecom.com</u>) Paul Y. - CREC Joint Venture – Mr. Gabriel Wong (<u>gabriel.wong@crec.com.hk</u>) By Email

Document control record

Document prepared by:

Aurecon Hong Kong Limited

Unit 1608, 16/F, Tower B, Manulife Financial Centre,

223 – 231 Wai Yip Street, Kwun Tong, Kowloon

Hong Kong S. A. R.

- **T** +852 3664 6888
- **F** +852 3664 6999
- E hongkong@aurecongroup.com
- W aurecongroup.com

A person using Aurecon documents or data accepts the risk of:

- a) Using the documents or data in electronic form without requesting and checking them for accuracy against the original hard copy version.
- b) Using the documents or data for any purpose not agreed to in writing by Aurecon.

Document control							
Report title Monthly EM&A Report (June 2024)							
Docu	ment ID	MR	Project nu	Project number		P525161	
File p	ath	P525161-0000-PD-MR-001	2[2]				
Client Drainage Services Department							
Client contact			Client refe	Client reference			
Rev	Date	Revision details/status	Author	Reviewer	Verifier (if required)	Approver	
0	9 July 2024	Submitted to IEC	TW	JH		VL	
1	12 July 2024	Respond to IEC Comment	TW	JH		VL	
2	14 July 2024	Respond to IEC Comment	TW	JH		VL	
Curre	Current revision 2						

Approval			
Reviewer's signature	J.	Approver's signature	- CAR
Name	Joe Ho	Name	Vincent Lu
Title	Senior Environmental Consultant	Title	Environmental Team Leader

All rights reserved | The information/data furnished in our document is confidential and competitive information proprietary to Aurecon or its subcontractors, the release of which would harm the competitive position of Aurecon or its sub-contractors/consultants. This information/data shall not be reproduced, stored in a retrieval system, transmitted in any form or by any means, used or disclosed in whole or in part, for any purpose other than to evaluate and adjudicate this document. If Aurecon is shortlisted or a contract is awarded to Aurecon as a result of this solicitation, or in connection with the submission of such information/data, the right (and the extent thereof) to reproduce, store, transmit, use or disclose this information/data must, by agreement, be included in such contract.



Contents

EX	ECUTIVE SUMMARY	1
1	INTRODUCTION	3
2	AIR QUALITY	6
3	NOISE	9
4	WATER QUALITY	12
5	ECOLOGY MONITORING	16
6	LANDSCAPE AND VISUAL	28
7	LAND CONTAMINATION	29
8	SITE INSPECTION AND AUDIT	30
9	NON-COMPLIANCE, COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS	31
10	IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURE	32
11	FUTURE KEY ISSUES	34
12	CONCLUSION AND RECOMMENDATION	35

Tables

Table 1	Contact Information of Key Personnel	4
Table 2	Environmental Licenses, Notification and Permits Summary	
Table 3	Air Quality Monitoring Equipment	
Table 4	Air Quality Monitoring Location	
Table 5	Summary of Air Quality Monitoring Results	
Table 6	Comparison of 1-hr TSP data with EIA predictions	
Table 7	Construction Noise Monitoring Equipment	
Table 8	Monitoring Parameters and Frequencies of Noise Monitoring	
Table 9	Construction Noise Monitoring Location	
Table 10	Summary of Construction Noise Monitoring Results	
Table 11	Comparison of Noise monitoring data with EIA predictions	
Table 12	Water Quality Monitoring and Sampling Equipment	

All rights reserved | The information/data furnished in our document is confidential and competitive information proprietary to Aurecon or its subcontractors, the release of which would harm the competitive position of Aurecon or its sub-contractors/consultants. This information/data shall not be reproduced, stored in a retrieval system, transmitted in any form or by any means, used or disclosed in whole or in part, for any purpose other than to evaluate and adjudicate this document. If Aurecon is shortlisted or a contract is awarded to Aurecon as a result of this solicitation, or in connection with the submission of such information/data, the right (and the extent thereof) to reproduce, store, transmit, use or disclose this information/data must, by agreement, be included in such contract.



Table 13	Monitoring Parameters and Frequency	13
Table 14	Coordinates of Water Quality Monitoring Locations	14
Table 15	Summary of Water Quality Exceedance	15
Table 16	Noise Monitoring Parameters (For Active Ardeid Night Roost Survey)	17
Table 17	Active Ardeid Night Roost Survey Findings	18
Table 18	Noise Monitoring Parameters (For Active Ardeid Night Roost Survey)	19
Table 19	Noise Monitoring Parameters	20
Table 20	Abundance of all Avifauna Species	22
Table 21	Abundance of Species of Conservation Importance	23
Table 22	Shannon Diversity Index Value of all Avifauna Species	24
Table 23	Shannon Diversity Index Value of Species with Conservation Importance	25
Table 24	Wetland habitat utilization of all avifauna species	26
Table 25	Wetland habitat utilization of avifauna species of conservation importance	26
Table 26	Noise Monitoring Results (For Ecological Monitoring of Birds)	27
Table 27	Waste Generated by the Construction and Disposal Ground	
Table 28	Status of submissions required under the EP	32

Figures

Figure 1	Location of Proposed Yuen Long Effluent Polishing Plant
Figure 2	Location of Construction Dust Monitoring Stations
•	Noise Monitoring Locations
Figure 4	Water Quality Monitoring Locations
•	Ecology Monitoring Locations
0	

Appendix

APPENDIX A	CONSTRUCTION PROGRAMME
APPENDIX B	PROJECT ORGANIZATION CHART
APPENDIX C	ACTION AND LIMIT LEVELS
APPENDIX D	CALIBRATION CERTIFICATES/ REPORTS OF MONITORING EQUIPMENT
APPENDIX E	ENVIRONMENTAL MONITORING SCHEDULE
APPENDIX F	ENVIRONMENTAL MONITORING RESULTS
APPENDIX G	WIND DATA
APPENDIX H	EVENT AND ACTION PLAN
APPENDIX I	WASTE FLOW TABLE
APPENDIX J	IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES
APPENDIX K	WEATHER AND METEOROLOGICAL CONDITIONS
APPENDIX L	CUMULATIVE STATISTICS ON ENVIRONMENTAL COMPLAINTS, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS
APPENDIX M	SUMMARY OF THE ET LEADER'S SITE ENVIRONMENTAL AUDIT IN THE REPORTING MONTH
APPENDIX N	OUTSTANDING ISSUES AND DEFICIENCIES
APPENDIX O	ACTIVE NIGHT ROOST MONITORING AREA AND VANTAGE POINTS; AND NOISE MONITORING STATIONS
APPENDIX P	ECOLOGICAL BIRD MONITORING AREA WITH LOCATIONS OF POINT COUNT SITES AND TRANSECT ROUTE

EXECUTIVE SUMMARY

This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. SPW 02/2023 "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 39th Monthly EM&A Report for the construction phase which summaries findings of the EM&A programme during the reporting period from 1 June 2024 to 30 June 2024. As informed by the Contractor, major activities in the reporting month were:

- Demolition at existing PST
- E&M works and fixing GRC panel at CLP Substation
- ABWF and E&M works at PST
- ABWF, E&M work and RC structure at IW
- ELS work at AGS
- ELS work at TTS
- ELS work at STB
- ELS work at Sludge Digester no. 1-3
- E&M work at Biogas Holder no. 1
- · ELS works at emergency bypass chamber
- 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" and "SAS Thickener House-2" were submitted to EPD respectively on 1st November 2021, 23rd November 2021, 29th April 2022, 6th July 2022 and 19th June 2023. No contaminated soil and ground water was found within the Main Storeroom & Workshop, Mechanical Workshop, Waste Storage Area, SAS Thickener House-1 and SAS Thickener House-2, 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 will be anticipated in the next three months are as follow:

- Piling at SDB
- Demolition at existing PST
- E&M works and fixing GRC panel at CLP Substation
- ABWF and E&M works at PST
- ABWF, E&M work and RC structure at IW
- ELS work at AGS
- ELS work at TTS
- RC Structure at TTS
- RC Structure at STB
- ELS work at Sludge Digester no. 1-3
- RC Structure at Sludge Digester no. 1-3
- E&M work at Biogas Holder no. 1
- ELS works and pipeworks at emergency bypass chamber

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 m³ per day. Based on the latest planning data, the volume of sewage generation from the YLSTW catchment is estimated to increase to 150,000 m³ 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 m³ per day. The proposed works, as Stage 1 of the project, will firstly increase the treatment capacity to 100,000 m³ 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.
- 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 39th Monthly EM&A report to document the findings of site inspection activities and EM&A programme for this project from 1 June 2024 to 30 June 2024 (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's Representative	Chief Resident Engineer	Mr. Simon Yeung	9075 7172
(AECOM Asia Co. Ltd.)	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	Environmental Specialist	Mr. Gabriel Wong	5269 5723
(Paul Y CREC Joint Venture)	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:
 - Piling at SDB
 - ABWF work, E&M works and fixing GRC panel at CLP Substation
 - ABWF and E&M works at PST
 - ABWF, E&M works and RC structure at IW
 - Erection temp. loading platform at AGS
 - ELS work at AGS
 - Erection temp. loading platform at TTS
 - ELS work at TTS
 - ELS work at STB
 - ELS work at Sludge Digester no. 1-3
 - E&M work at Biogas Holder no. 1
 - Pipeworks for interim scheme
- 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**.

Permit/ Notification/ License	Reference No	Valid From	Valid Till
Environmental Permit	EP-565/2019	26-Apr-2019	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-RN0491-24	6-May-2024	5-Sep-2024
Construction Noise Permit	GW-RN0355-24	4-Apr-2024	1-Jun-2024
Construction Noise Permit	GW-RN0404-24	17-Apr-2024	16-Jul-2024
Construction Noise Permit	PP-RN012-24	1-Apr-2024	30-Jun-2024
Water Pollution Control Ordinance (WPCO) (CAP. 358) Licence pursuant to Section 20 (Variation of Licence Pursuant to Section 28 of WPCO)	WT00038102- 2021	4-Aug-2021 (Variation approved on 11- Dec-2023 with immediate effect)	31-Aug-2026
Marine Dumping Permit (Type 1 – Open Sea Disposal)	EP/MD/24-075	1-Mar-2024	31-Aug-2024
Marine Dumping Permit (Type 1 – Open Sea Disposal (Dedicated Site) and Type 2 – Confined	EP/MD/24-090	22-Apr-2024	21-Jul-2024
Disposal of Special waste at Landfills Admission Ticket (Pond Sediment)	Admission Ticket Number: 17810	1-Apr-2024	30-Jun-2024
Revised Sediment Quality Report (SQR)	(19) in EP60/G1/12- 583V	4-Apr-2024	3-Apr-2025

 Table 2
 Environmental Licenses, Notification and Permits Summary

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 LD-5R Digital Dust	882106,
2	AM2	Sibata	Model LD-5R	Indicator	882107

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

- a) Pulling up the air sampling inlet cover
- b) Changing the Mode 0 to BG
- c) Pressing Start/Stop switch
- d) Turning the knob to SENSI.ADJ and press it
- e) Pressing Start/Stop switch again
- f) Returning the knob to the position MEASURE slowly
- g) Pressing the timer set switch to set measuring time
- h) 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 02/2023 "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 (μg/m³)	Range (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m³)		
	1-hour TSP					
AM1	52	39-58	291	500		
AM2	45	40-59	296	500		

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**.

Monitoring Station	EIA ID	Predicted Maximum Hourly Average TSP Concentration (μg/ m³)	Maximum 1-hr TSP Monitoring Results in June 2024 (μg/ m³)			
Content						
AM1	ASR A09	205 454	58			
AM2	ASR A11	205-451	59			

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

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 ± 0.1 dB).
- 3.2.2 The details of the noise monitoring equipment used are summarized in **Table 7**.

ltem	Brand	Model	Equipment	Serial No.
1	NTi Audio	XL2	NTi Audio XL2 Digital Sound Level Meter	A2A-09696-E0
2	NTi Audio	XL2	NTi Audio XL2 Digital Sound Level Meter	A2A-13548-E0
3	NTi Audio	XL2	NTi Audio XL2 Digital Sound Level Meter	A2A-13661-E0
4	RION	NC-75	RION NC-75 Acoustic Calibrator	35124528
5	RION	NC-75	RION NC-75 Acoustic Calibrator	35124529
6	RION	NC-75	RION NC-75 Acoustic Calibrator	35124530

 Table 7
 Construction Noise Monitoring Equipment

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
LAeq (30 min) (L10 and L90 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 02/2023 "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**.

Time Period	Noise Monitoring Stations	Leq (30min) dB(A) (Range)	Action Level	Limit Level dB(A)
0700-1900 hrs on normal weekdays	CM1	61.2 - 62.3	When one	75
	CM2	57.5 – 61.5	documented complaint is	75
	СМЗ	61.5 – 63.5	received	75

Table 10 Summary of Construction Noise Monitoring Results

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.

Monitoring Station	EIA ID	Maximum Predicted Mitigated Construction Noise Level L _{eq} (30min) dB(A)	Maximum Construction Noise Level in June 2024 L _{eq} (30min) dB(A)
CM1	NSR1	72	62.3
CM2	NSR2	74	61.5
CM3	NSR3	75	63.5

 Table 11 Comparison of Noise monitoring data with EIA predictions

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 an	d Sampling	Equipment
----------	-------	---------	---------------	------------	-----------

Parameter	Equipment	Model	Range	Equipment Accuracy	Serial No.
Temperature Dissolved Oxygen Salinity pH Turbidity	YSI Water Quality Multipara meter Sonde	Xylem ProDSS	DO%: 0-500% Sal: 0 to 70ppt pH: 0 to 14 pH units	Temp: ±0.2°C; DO: ±0.1mg/L or 1% for 0- 20mg/L; ±8% for 20-50mg/L Sal: ±1% of reading or 0.1 ppt (whichever is greater) pH: ±0.2 units Turb: ±3% or 0.3NTU (FNU) (whichever greater)	22C106561
Current Velocity and Direction	Current Meter	Valeport Model 106	Speed: 0.03 to 5 m/s Direction: 0 to 360	Speed: ± 1.5% of reading above 0.15m/s, ± 0.004 m/s below 0.15m/s Direction: ± 2.5o	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: ±1m	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
In-situ Measurement Turbidity (in NTU), pH, DO (in mg/L and % of saturation), Temperature (in °C), Salinity (in ppt) Laboratory Analysis Suspended Solids	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.)

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
М3	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 Red Rainstorm Warning Signal was hoisted on 14 June 2024. Due to safety concerns, the water quality monitoring for mid-flood tide on 14 June 2024 has been cancelled.
- 4.8.3 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**.
- 4.8.4 The weather and meteorological conditions during the monitoring are provided in **Appendix K**.
- 4.8.5 Number of Action/ Limit exceedance recorded in the reporting month at each impact stations is summarized in **Table 15**.

Sampling Location	Exceedance Level	DO		Turbidity		Suspended Solids		Total	
Location	Levei	Flood	Ebb	Flood	Ebb	Flood	Ebb	Flood	Ebb
	Action	0	0	0	0	0	0	0	0
M1	Limit	0	0	0	0	0	0	0	0
M2	Action	0	0	0	0	0	0	0	0
IVIZ	Limit	0	0	0	0	0	0	0	0
Mo	Action	0	0	0	0	0	0	0	0
M3	Limit	0	0	0	0	0	0	0	0
T ()	Action	0	0	0	0	0	0	()
Total	Limit	0	0	0	0	0	0	()

Table 15 Summary of Water Quality Exceedance

- 4.8.6 During the reporting period, no Action and Limit Level exceedance was recorded for water quality monitoring.
- 4.8.7 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 (June 2017) 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 preconstruction 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 19 June 2024.

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 19:10, 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)	Monthly in concurrence with the construction phase
(L10 and L90 will be recorded for reference)	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 19 June 2024 and started around 18:09 (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* (2), Little Egret *Egretta garzetta* (7) and Great Egret *Ardea alba* (3) were observed in pre-roost aggregate (PRA) around 18:29 at the mudflat east side ANR1 of the Project boundary while individuals of Chinese Pond Heron *Ardeola bacchus* (1), Little Egret *Egretta garzetta* (2) and Great Egret *Ardea alba* (1) were concurrently noted at the mudflat northeast side ANR2 of the Project boundary (Table 17).

For the final night roost at around 18:58, individuals of Chinese Pond Heron Ardeola bacchus (12), Little Egret Egretta garzetta (2) and Great Egret Ardea alba (6) 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 (4), Little Egret Egretta garzetta (2) and Great Egret Ardea alba (1) 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: 19 June 2024			Sunset Time: 19:09 Tidal Condition: Low Tide		
	Pre-roost Period			Final roost Period	
Time of Return:	Chinese Pond Heron Ardeola bacchus, Great Egret Ardea alba and Little Egret Egretta garzetta (18:29)		Time of Return:	Chinese Pond Heron <i>Ardeola bacchus</i> , Great Egret <i>A alba</i> and Little Egret <i>Egretta garzetta</i> (18:58)	
Denemations	Location		Demonstrations	Loca	ation
Parameters	ANR1	ANR2	Parameters	ANR1	ANR2
Pre-roost Aggregation (Y/N):	Y	Y	Substrate Species:	Sonneratia apetala and S. caseolaris	Sonneratia apetala and S caseolaris
Substrate Species:	Sonneratia apetala and S. caseolaris	Sonneratia apetala and S. caseolaris	Substrate Height (m):	Approx. 5 m.	Approx. 3-4 m.
Substrate Height (m):	Approx. 5 m.	Approx. 3-4 m.			
Ardeid Species	Abundance (individuals)		Ardeid Species	Abundance (individuals)	
Composition	ANR1	ANR2	Composition	ANR1	ANR2
Chinese Pond Heron Ardeola bacchus	2	1	Chinese Pond Heron Ardeola bacchus	12	4
Great Egret Ardea alba	3	1	Great Egret Ardea alba	6	1
Little Egret Egretta garzetta	7	2	Little Egret Egretta garzetta	2	2
	·		•	·	
	ANR1		1	N	
Breeding Activity (Y/N):	ANR2		1	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 19 June 2024 in concurrence with the construction phase monthly monitoring of the pre-identified active night roosts. Noise monitoring started at 18:58 and lasted for 30 minutes, until 19:28.

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	18:58	61.2		
	NMS2	18:58	60.3	65.5 dB(A) ¹	72.2 dB(A) ²

Notes:

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

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

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

²= 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 June 2024 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* and Little Egret *Egretta garzetta*.

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 13 June 2024 (daytime) and 19 June 2024 (night-time) which started at around 07:15 and 19:09. 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)	Monthly in concurrence with the monthly ecological
(L10 and L90 will be recorded for reference)	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; *Pi* = proportion of the population of species; *i* = number of species in sample; *In* = 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 13 June 2024 (daytime) and 19 June 2024 (night-time) which started at around 07:55 and 19:40, 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 07:55 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 437 avifauna individuals were recorded in the monitoring area during the June 2024 monitoring period, of which 284 individuals were recorded from the point count method and 153 individuals from the transect walk method. Relative to the June 2017 baseline data (point count method = 121; and transect walk = 69), increases were noted for both the point count and transect walk methods.

Details of these findings are summarized in Table 20.

Abundance of all Avifauna Species							
EIA Report ID	EM&A Manual ID	Jun-17	Jun-24	Remarks			
Point Count Method							
P1	FLW1	4	18	+			
P2	FLW2	3	50	+			
P3	FLW3	7	10	+			
P4	FLW4	17	13	-			
P5	FLW5	25	18	-			
P6	FLW6	6	11	+			
P7	FLW7	9	48	+			
P9	SP/NSW3	14	32	+			
P10	SP/NSW2	11	21	+			
P11	NSW1	17	33	+			
P12	SP/NSW1	8	30	+			
Т	otal	121	284	+			
M	ean	11	25.8	+			
Transect Walk Meth	nod						
Fung Lok Wai	FLW	67	58	-			
Nam Sang Wai	NSW	2	43	+			
YLIE-CW	YLIE-CW	0	52	+			
Т	otal	69	153	+			
М	ean	23	49.33	+			

Table 20 Abundance of all Avifauna Species

Notes:

+ increased abundance;

- decreased 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 437 avifauna individuals recorded in the monitoring area during the June 2024 monitoring period, 138 individuals (point count method = 93 individuals; transect walk method = 45 individuals) were of conservation importance. With reference to June 2017 data, (point count method = 45; and transect walk = 40), an increase was noted for both point count and transect walk method. Details of these findings are summarized in **Table 21**.

Abundance of Species of Conservation Importance					
EIA Report ID	EM&A Manual ID	Jun-17	Jun-24	Remarks	
Point Count Method					
P1	FLW1	2	4	+	
P2	FLW2	0	24	+	
P3	FLW3	0	0	=	
P4	FLW4	3	7	+	
P5	FLW5	5	8	+	
P6	FLW6	5	2	-	
P7	FLW7	1	20	+	
P9	SP/NSW3	12	15	+	
P10	SP/NSW2	10	4	-	
P11	NSW1	1	5	+	
P12	SP/NSW1	6	4	-	
Т	otal	45	93	+	
M	ean	4	8.5	+	
Transect Walk Meth	nod				
Fung Lok Wai	FLW	40	9	-	
Nam Sang Wai	NSW	0	17	+	
YLIE-CW	YLIE-CW	0	19	+	
Т	otal	40	45	+	
M	ean	13	15	+	

Table 21 Abundance of Species of Conservation Importance

Notes:

+ increased abundance;

- decreased 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 Richness¹ and Shannon Diversity Index²)

5.2.3.2.1 All Avifauna Species

A total of 33 avifauna species (species richness) were recorded during the June 2024 monitoring period, of which, 32 species were recorded by the point count method while 30 species were noted by the transect walk method. Relative to the baseline data (point count method = 25 species; transect walk method = 13 species), increases in total species richness for both transect walk count and point count methods were recorded. In terms of Shannon diversity index (H') values, current result in point count method showed an increase (t-value = 0.30; t-crit = 1.97; p-value = 0.76; α = 0.05) relative to the baseline reference value. The current results in the transect walk method also showed a significant increase (t-value = 6.39; t-crit = 1.98; p-value = 2.22E-09; α = 0.05) from baseline reference value. Details of these findings are summarized in **Table 22**, **Appendix F.6.1**, and **Appendix F.6.2**.

¹ actual number of species

² use to account the proportion (in terms of relative abundance) of each species

Shannon Diversity Index Value of all Avifauna Species							
EIA Report ID	EM&A Manual ID	Jun-17	Jun-24	Remarks			
Point Count Method							
P1	FLW1	1.04	1.65	+			
P2	FLW2	0.64	1.52	+			
P3	FLW3	1.28	1.37	+			
P4	FLW4	2.2	0.98	-			
P5	FLW5	2.39	1.75	-			
P6	FLW6	0.87	1.85	+			
P7	FLW7	1.89	1.75	-			
P9	SP/NSW3	1.09	2.17	+			
P10	SP/NSW2	1.17	2.49	+			
P11	NSW1	1.85	2.47	+			
P12	SP/NSW1	1.49	2.56	+			
Over	all H'	2.87	2.90	+			
Species	Richness	25	32	+			
Transect Walk Meth	od						
Fung Lok Wai	FLW	1.99	2.52	+			
Nam Sang Wai	NSW	0.69	2.75	+			
YLIE-CW	YLIE-CW	**	2.57	+			
Over	all H'	2.09	2.94	+			
Species	Richness	13	30	+			

Table 22 Shannon Diversity Index Value of all Avifauna Species

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 33 avifauna species identified during the June 2024 monitoring period, 9 species were of conservation importance (point count method = 9 species; transect walk method = 7 species). Meanwhile, relative to the baseline values in June 2017 (point count method = 5 species; transect walk method = 3 species), an increase in the number of species with conservation importance was recorded with both the point count and transect walk method. In terms of Shannon diversity index (H'), an increase was noted in point count method (t-value = 0.12; t-crit = 1.98; p-value = 0.90; α = 0.05) while a significant increase in transect walk method (t-value = 3.50; t-crit = 2.00; p-value = 8.22E-04; α = 0.05) was observed relative to the baseline reference values. Details of these findings are summarized in **Table 23**, and **Appendix F.6.3**.



Shannon Diversity Index Value of Species with Conservation Importance						
EIA Report ID	EM&A Manual ID	Jun-17	Jun-24	Remarks		
Point Count Method						
P1	FLW1	0.69	0.69	=		
P2	FLW2	**	0.17	+		
P3	FLW3	**	**	=		
P4	FLW4	0.64	0	-		
P5	FLW5	0.95	0.56	-		
P6	FLW6	0.5	0.69	+		
P7	FLW7	0	0.52	+		
P9	SP/NSW3	0.68	1.01	+		
P10	SP/NSW2	0.95	1.39	+		
P11	NSW1	0	0.95	+		
P12	SP/NSW1	1.01	1.39	+		
Over	all H'	1.43	1.45	+		
Species	Richness	5	9	+		
Transect Walk Meth	od					
Fung Lok Wai	FLW	1.04	1.37	+		
Nam Sang Wai	NSW	**	1.32	+		
YLIE-CW	YLIE-CW	**	1.31	+		
Over	all H'	1.04	1.49	+		
Species	Richness	3	7	+		

Table 23 Shannon Diversity Index Value of Species with Conservation Importance

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 Very Low (VL) abundance. In terms of species richness, different wetland habitats were generally observed with Low (L) and Moderate (M) number of species (**Table 24**).

aurecon

Table 24 Wetland habitat utilization of all avifauna species

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

Notes:

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)

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 Very Low (VL) number of species (**Table 25**).

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

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

Notes:

 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)

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 13 June 2024(daytime) and 19 June 2024(night time) from each of the point count locations during the ecological bird monitoring are shown in **Table 26**.

Frequency	Location	Day time (13/06/2024)		Night time (19/06/2024)	
and Period	Location	Start Time	LAeq (30 min) dB(A)	Start Time	LAeq (30 min) dB(A)
	FLW1/P1	09:58	63.2	20:47	50.2
	FLW2/P2	09:54	62.2	20:11	51.3
	FLW3/ P3	09:51	61.5	19:38	50.1
	FLW4/ P4	11:13	61.8	21:22	49.6
Monthly in concurrence	FLW5/ P5	11:22	62.5	20:44	52.3
with the ecological	FLW6/ P6	11:46	63.4	20:08	53.1
monitoring of birds	FLW7/ P7	11:49	61.2	19:34	50.6
UI DIIUS	SP/NSW3/ P9	07:55	59.3	19:40	58.4
	SP/NSW2/ P10	07:59	58.5	20:14	59.1
	NSW1/ P11	08:41	58.9	20:47	57.5
	SP/NSW1/P12	08:46	60	21:20	58.6

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

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 June 2024.

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 (Csat) 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 19th June 2023.



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 June 2024.
- 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)	
Sludge	West New Territories Landfill (WENT)	
	Type 1 – Open Sea Disposal: South Cheung Chau Open Sea Sediment Disposal Area	
Marine Sediment	Type 1 – Open Sea Disposal (Dedicate Site) and Type 2 – Confined Marine Disposal: Contaminated Mud Pit Vb of the Confined Marine Disposal Facilities to the East of Sha Chau	

- 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 on 13 June 2024 (daytime).
- 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.

aurecon

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.

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

Table 28 St	tatus of submissions	required under the EP
-------------	----------------------	-----------------------

EP Condition (EP-565/2019)	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.
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.

EP Condition (EP-565/2019)	Submission Title	Submission Status
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 2.15	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 May 2024)	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 March 2024)	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 May 2024	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

- Piling at SDB
- Demolition at existing PST
- E&M works and fixing GRC panel at CLP Substation
- ABWF and E&M works at PST
- ABWF, E&M work and RC structure at IW
- ELS work at AGS
- ELS work at TTS
- RC Structure at TTS
- RC Structure at STB
- ELS work at Sludge Digester no. 1-3
- RC Structure at Sludge Digester no. 1-3
- E&M work at Biogas Holder no. 1
- ELS works and pipeworks at emergency bypass chamber

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**.

aurecon

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

• The contractor was remaindered to increase watering for the haul road.

Construction Noise Impact

• The silent up at northwest of the site should be enclosed.

Water Quality Impact

• No specific observation was identified in the reporting month.



Chemical Waste and Construction Waste Management

• Domestic waste should be stored inside the enclosed rubbish bin.

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.

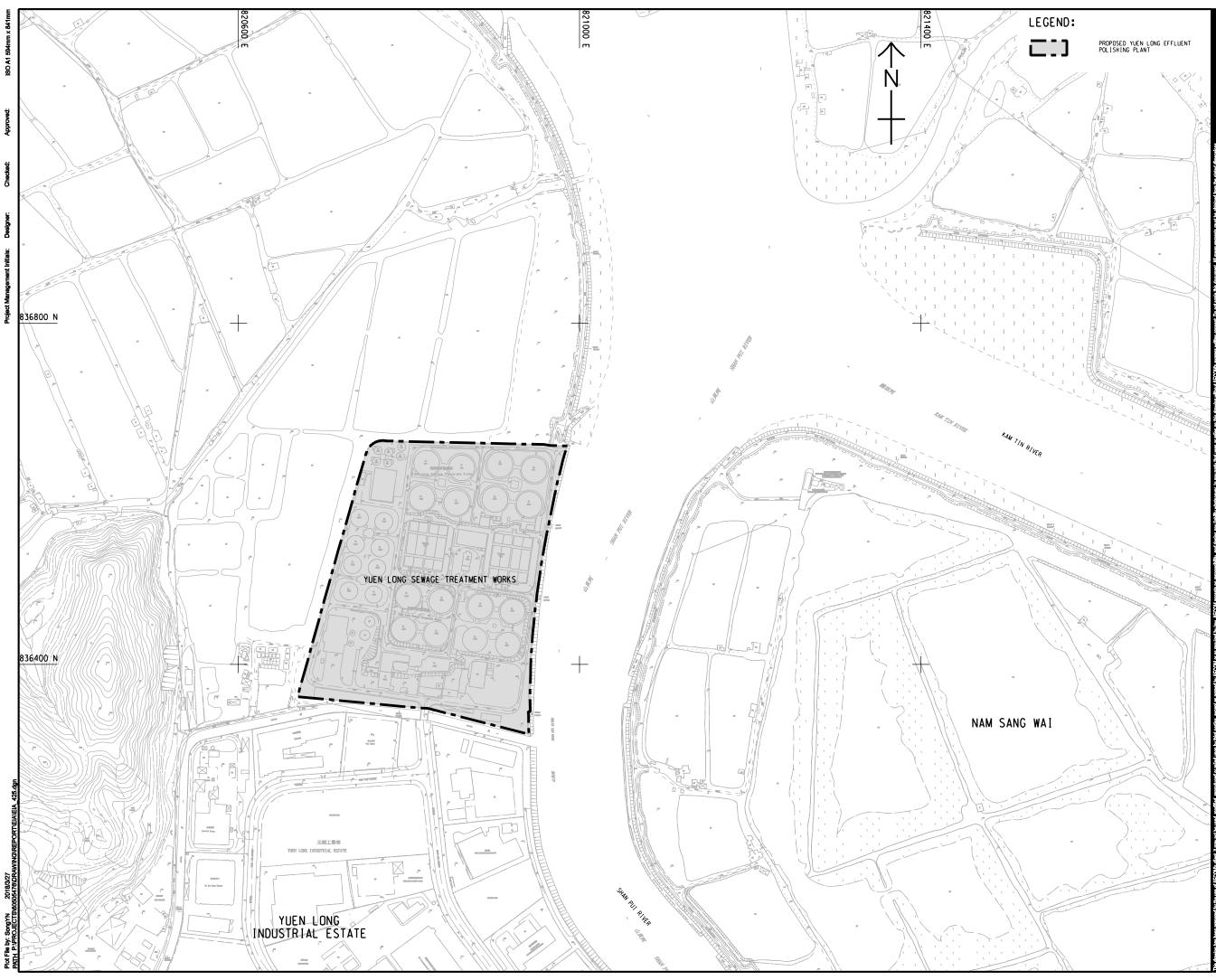
Hazard to Life

• No specific observation was identified in the reporting month.

Permit/ Licenses

- NRMM label for the crane at A tank should be provided.
- The contractor was reminded to provided NRMM label for the crane at A Tank.
- NRMM label for the excavator at SD should be provided.

Figure 1 Location of Proposed Yuen Long Effluent Polishing Plant



AECOM

PROJECT

YUEN LONG EFFLUENT POLISHING PLANT -INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT #±



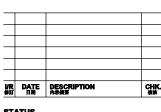
反 渠 務 署 Drainage Services Dep

CONSULTANT 工程期间公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分式型網网公司

ISSUE/REVISION



	THE		
VR 御初	DATE 日期	DESCRIPTION 內容損要	CHK. 被核
_			

SCALE 比例

A1 1 : 2000

KEY PLAN #케페

PROJECT NO.

SHEET NUMBER

LOCATION OF PROPOSED YUEN LONG EFFLUENT POLISHING PLANT

60505476 SHEET TITLE

	ATHE		
VR 御	DATE 日期	DESCRIPTION 內有損害	CHK. 複枝
-			

	DATE 日期	DESCRIPTION 內容描述	CHK. 者後
紧	日期	内容調査	複核

훕등	DATE 日期	DESCRIPTION 內容描述	CHK 者様
ST/	ATUS		

日期	DESCRIPTION 內容損要
TUS	

DATE 日期	DESCRIPTION 內有損要	
ATUS		

日期	DESCRIPTION 內容描至	「日本
TUS		

開設

內容損害	

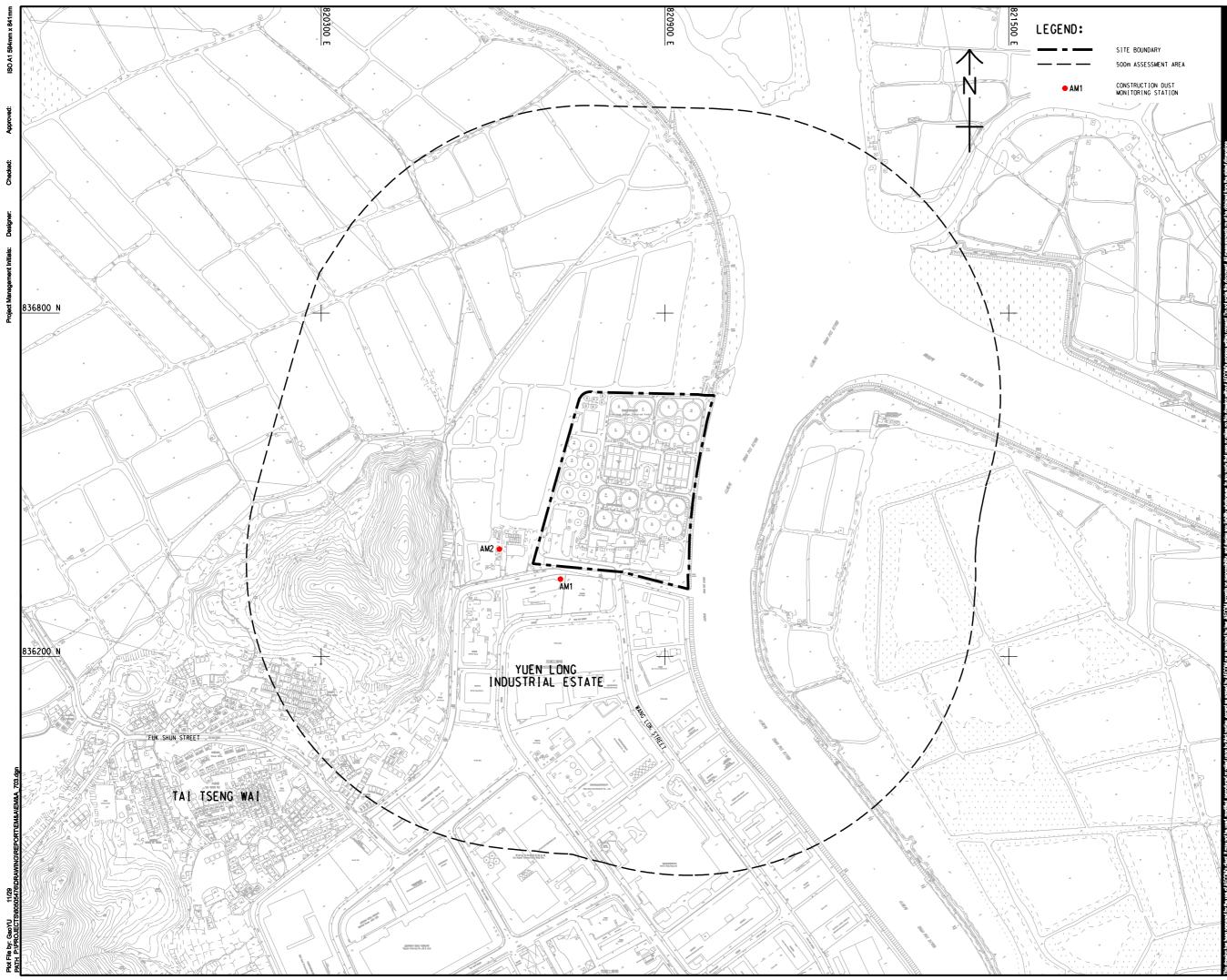
DIMENSION UNIT 尺寸単位

METRES

CONTRACT NO.

CE 3/2015 (DS)

Figure 2 Location of Construction Dust Monitoring Stations





PROJECT

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

CLIENT #±



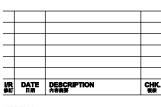
下 集 務 署 Drainage Services Dep

CONSULTANT 工程期间公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分列工程期间公司____

ISSUE/REVISION



紧	DATE 日期	DESCRIPTION 內容損要	CHK. 被核
_			

WR 對	DATE 日期	DESCRIPTION 內容損要	CHK. 複枝
_			

R 参灯	DATE 日期	DESCRIPTION 內容描要	CHK. 複枝
_			

STAT MR

STATUS ^{開我}	
SCALE	DIMENSION U ^{尺寸単位}

DATE 日期	DESCRIPTION 內容損要	CHK 被核
TUS		

METRES

CONTRACT NO. CE 3/2015 (DS)

A1 1 : 3000

KEY PLAN #케페

PROJECT NO.

SHEET NUMBER

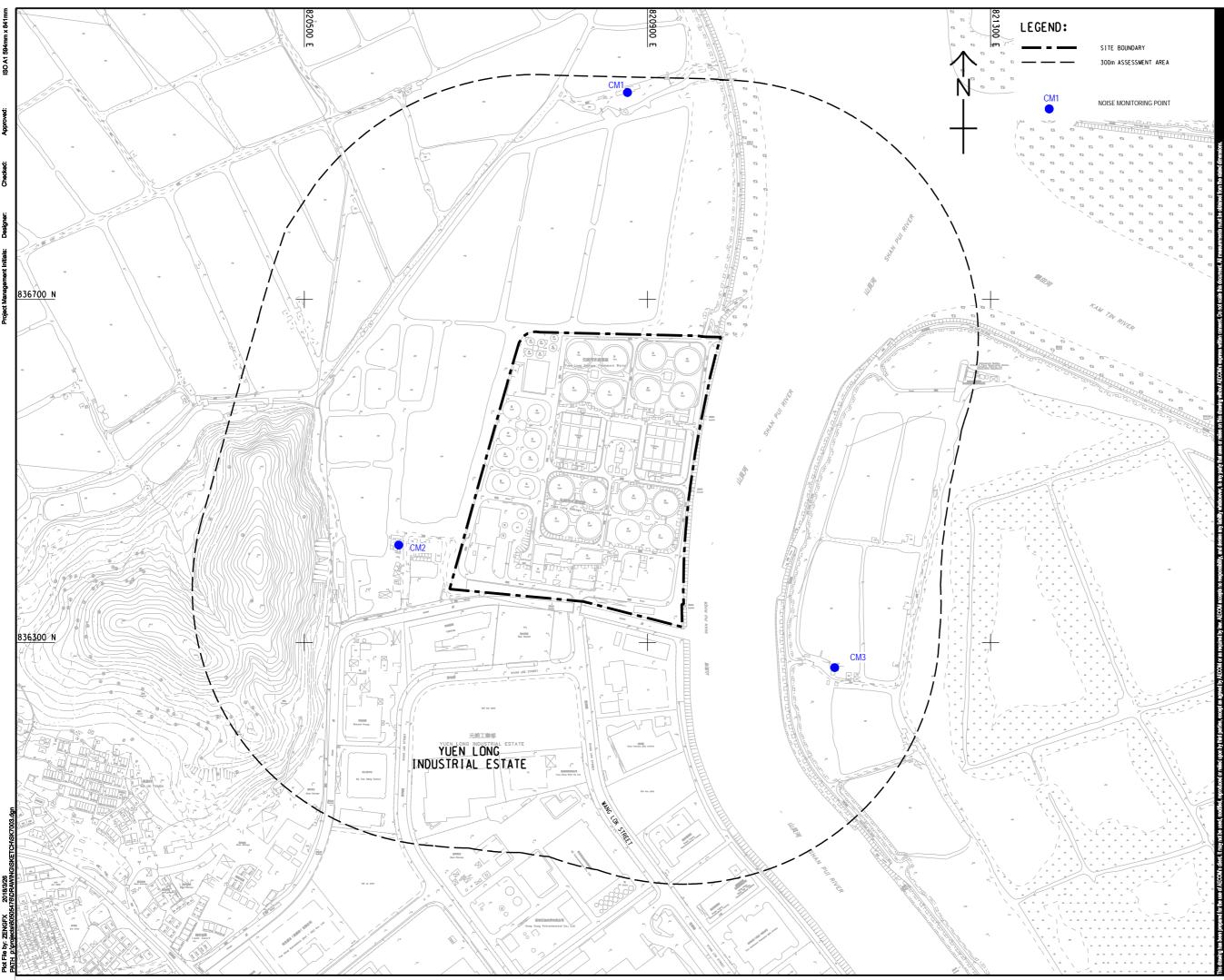
LOCATION OF CONSTRUCTION DUST MONITOING STATIONS

60505476 SHEET TITLE

日期	內容機要	樹
JS		

Figure 3 Noise Monitoring Locations

aurecon





PROJECT

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

CLIENT



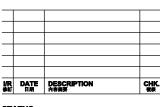
及 渠 務 署 Drainage Services Dep

CONSULTANT 工程期间公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分列工程期间公司____

ISSUE/REVISION



/R 街	DATE 日期	DESCRIPTION 內容損要	CHK.

VR 朝	DATE 日期	DESCRIPTION 內容損要	CHK. 複枝

₩ 例	DATE 日期	DESCRIPTION 內存相至	CHK. 複枝

DATE 日期	DESCRIPTION 內容損要	CHK. 被核
rus		

STAT

DATE 日期	DESCRIPTION 內容機要	CHK 複模
TUS		

KEY PLAN #¶■

PROJECT NO. 项目編號

SHEET NUMBER

LOCATIONS OF NOISE MONITORING POINTS

60505476 SHEET TITLE

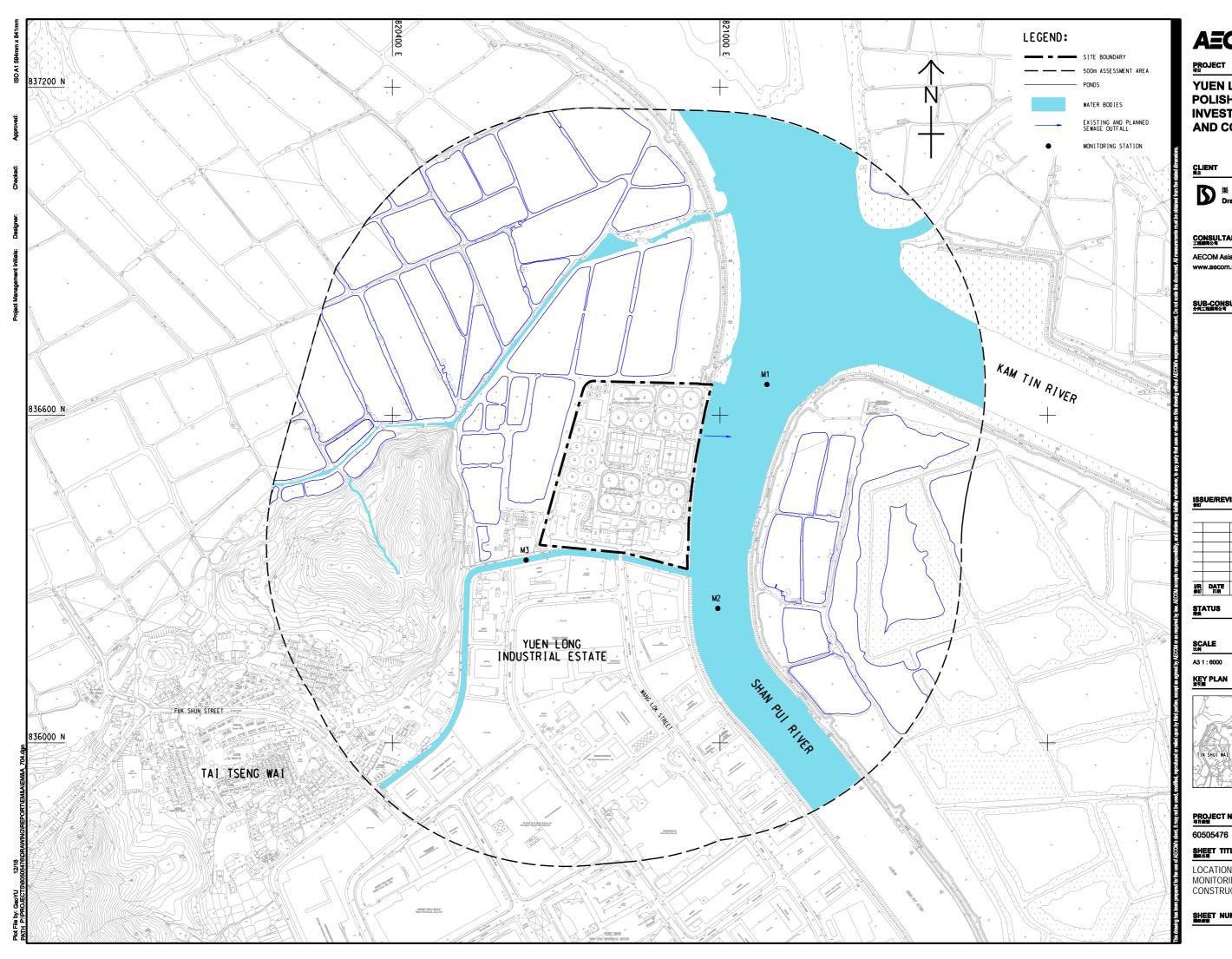
90	NAWA	191,0
8		
3		

用 表	
SCALE	DIMENSION U 天寸単位
A1 1 : 2000	METRES

CONTRACT NO. CE 3/2015 (DS)

Figure 4 Water Quality Monitoring Locations

aurecon





PROJECT

YUEN LONG EFFLUENT POLISHING PLANT -INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT



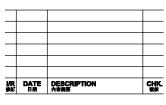
集務署 Drainage Services Dep

CONSULTANT 工程期间公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分式准确间公司

ISSUE/REVISION



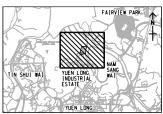
STATUS

SCALE 比例

A3 1 : 6000

METRES

KEY PLAN A31:180000



PROJECT NO.

CONTRACT NO. CE 3/2015 (DS)

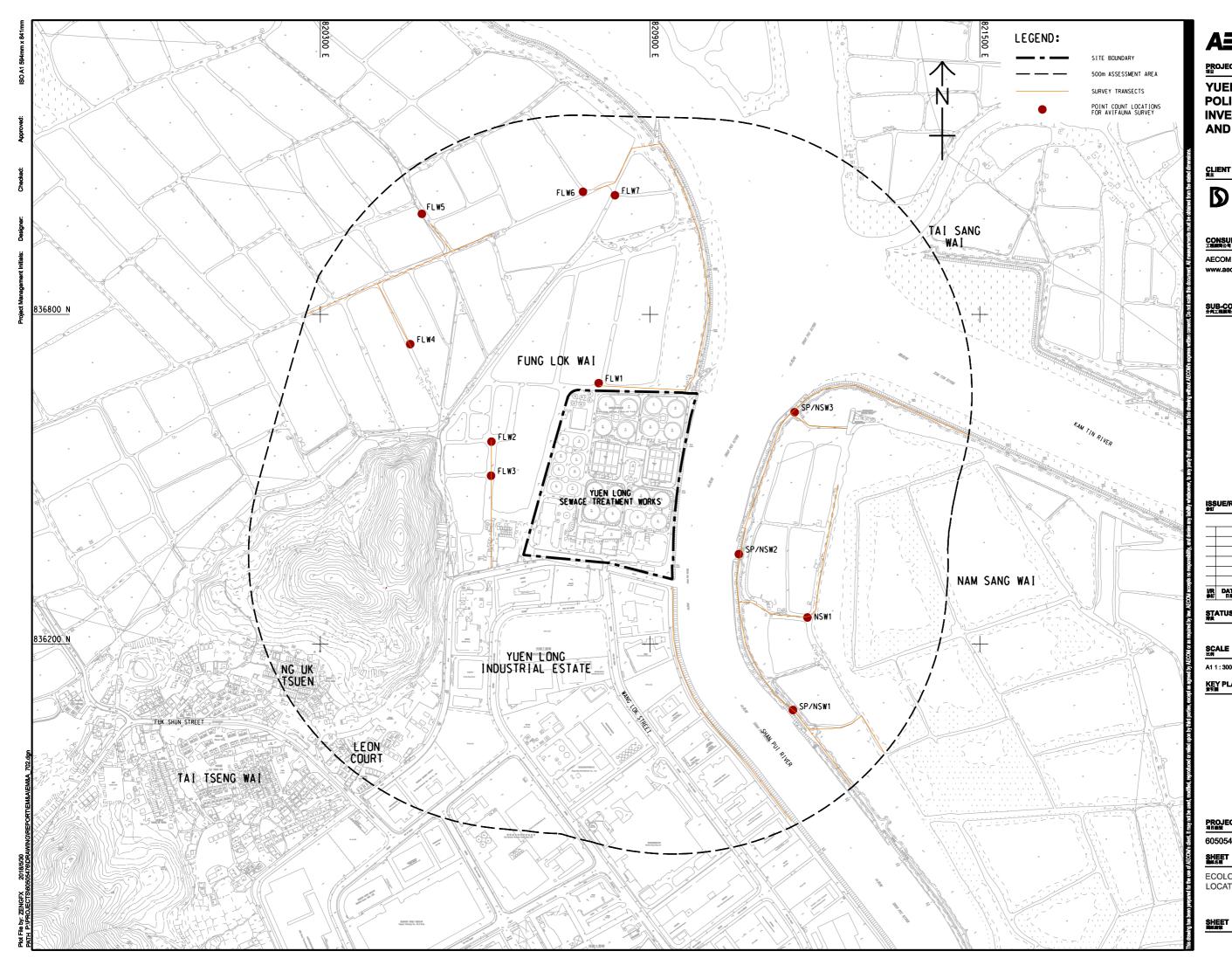
SHEET TITLE

LOCATIONS OF WATER QUALITY MONITORING STATIONS FOR CONSTRUCTION PHASE

SHEET NUMBER

Figure 5 Ecology Monitoring Locations

aurecon



ΑΞϹΟΜ

PROJECT

YUEN LONG EFFLUENT POLISHING PLANT -INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT

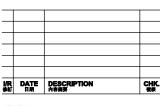


CONSULTANT 工程期间公司

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分式准确间公司

ISSUE/REVISION



R 参灯	DATE 日期	DESCRIPTION 內存損要	CHK. 複枝

+			
	DATE 日期	DESCRIPTION 內容滅夏	CHK.
御町	日期	內容損要	復获

I/R DATE DESCRIPTION	CHK.
参約 日期 內容損要	複枝

	DATE	DECODIDITION	CUIV
/R 町	日期	DESCRIPTION 內容描要	してに、
_	ATUS		

DATE 日期	DESCRIPTION 內容被要	CHP 複模
TUS		

ST/ 服装

1	內容損要	複款
5		

DIMENSION UNIT

A1 1 : 3000

KEY PLAN #헤르

METRE

PROJECT NO. CONTRACT NO. CE 3/2015 (DS)

60505476 SHEET TITLE

ECOLOGICAL MONITORING

SHEET NUMBER

Appendix A Construction Programme

Contract Data Part Access Dates ADVA2 Wo ADP3 Por Contract Key Dates CKD3 KD CKD10 KD Environmental Com EBS-2175 Egr Planned Completi Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-340 Sul Design Submission Temporary Works Det Mainstream Bio-React	VorkArea WA2 (sd) (new site possession) validity for 12 months and subject to renewal ontion 3 (sd+1218d) S D3 - Early Comissioning of Inlet Works 100,000m3d atADWF,PST>54,000m3d atADWF,Civil.struct_E&M&BS RXD3=8May24) D10 - Completion of Civil & Structural works of roof floor of sludge thickening bidg (Rev.KD10=27Feb24) Instraints grets Breeding Season 2024 tion	757 0 0 0	05-Mar-21A 01-Jun-24* 01-Mar-24A	22-Feb-25* 31-May-24* 31-May-24* 31-Aug-24	0 -82 -23 -94	05 12 19 26 02 09 16 23 30 07 14 21 • Portion 3 (sd+1218d) •	28 04 11 18 25
Contract Data Part Access Dates ADVA2 Wo ADP3 Por Contract Key Dates CKD3 KD CKD10 KD Environmental Com EBS-2175 Egr Planned Completi Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-340 Sul Design Submission Temporary Works Det Mainstream Bio-React	rt 1 VorkArea WA2 (sd) (new sile possession) validity for 12 months and subjecto renewal orfon 3 (sd+1218d)	757 0 0 0 184	05-Mar-21A 01-Jun-24*	31-May-24* 31-May-24*	-82		14 BS (RKD3=8May24)
ADWA2 Wo ADP3 Por Contract Key Dates CKD3 KD (RJ CKD10 KD Environmental Com EBS-2175 Eg Planned Key Dates Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-340 Sut Design Submission Temporary Works Der Mainstream Bio-React	ortion 3 (sd+1218d) D3-Early Comissioning of hletWorks100,000m3ki atADWF;PST>54,000m3ki atADWF;Civil,struct;E&M&BS RXD3=8May24) D10-Completion of Civil & Structural works of roof floor of sludge thickening bidg (RevKD10=27Feb24) Instraints grets Breeding Season 2024 tion D10-Completion of Civil & Structural works of roof floor of sludge thickening bidg Preparation Works ubleting for RC works for MBR and TTB	0 0 184	01-Jun-24*	31-May-24* 31-May-24*	-82		14, BS (R.KD3=8May24)
Contract Key Dates CKD3 KD (RJ CKD10 KD Environmental Cont EBS-2175 Egg Planned Completi Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-300 Sul SUB-300 Sul SUB-300 Sul SUB-300 Sul SUB-300 Sul	S D3-Early Comissioning of Inlet Works100,000m3kl atADWF,PST>54,000m3kl atADWF,Civil,struct,E&M&BS RKD3=8May24) D10-Completion of Civil & Structural works of roof floor of sludge thickening bldg (Rev.KD10=27Feb24) nstraints grets Breeding Season 2024 tion D10-Completion of Civil & Structural works of roof floor of sludge thickening bldg Preparation Works ubleting for RC works for MBR and TTB	0 0 184		31-May-24*	-23		1& BS (R.KD3=8May24)
CKD3 KD (RJ CKD10 KD Environmental Com EBS-2175 Egg Planned Completi Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-300 Sul SUB-300 Sul SUB-300 Sul SUB-300 Sul SUB-300 Sul	D3 - Early Comissioning of InletWorks 100,000m3/d atADWF,PST>54,000m3/d atADWF,Civil.struct_E&M&BS XKD3=8May24) D10 - Completen of Civil & Structural works of roof floor of sludge thickening bldg (Rev.KD10=27Feb24) Instraints grets Breeding Season 2024 tion D10 - Completion of Civil & Structural works of roof floor of sludge thickening bldg Preparation Works ubleting for RC works for MBR and TTB	0 184	01-Mar-24 A	31-May-24*		KD3 - Early Comissioning of Inlet Works100,000m3kl atADWF;PST>54,000m3kl atADWF;Civil.struct;E&I	1& BS (R.KD3=8May24)
CKD10 KD Environmental Com EBS-2175 Eg Planned Completi Planned Key Dates PKD10 KD Preliminary and Pl Subletting SUB-300 Sut SUB-300 Sut Design Submission Temporary Works De Mainstream Bio-React	D10 - Completion of Civil & Structural works of roof floor of sludge thickening bldg (RevKD10=27Feb24) Instraints grets Breeding Season 2024 tion D10 - Completion of Civil & Structural works of roof floor of sludge thickening bldg Preparation Works ubleting for RC works for MBR and TTB	184	01-Mar-24 A		-94		
EBS-2175 Egr Planned Completi Planned Key Dates PKD10 KD Preliminary and P Subletting SUB-300 Sul SUB-340 Sul Design Submission Temporary Works Dee Mainstream Bio-React	grets Breeding Season 2024 tion D10 - Completion of Civil & Structural works of roof floor of sludge thickening bidg Preparation Works ubleting for RC works for MBR and TTB		01-Mar-24.A	31-Aug-24		KD 10 - Completion of Civil & Structural works of roof floor of sludge thickening bldg (RevKD 10=27Feb24)	
Subject PkD10 KD Preliminary and Preliminary and Preliminary and Preliminary and Preliminary and Preliminary and Preliminary Sub-300 Subjection SUB-300 Subjection Subjection Design Submission Temporary Works Deel Mainstream Bio-React Mainstream Bio-React	tion D10 - Completion of Civil & Structural works of roof floor of sludge thickening bidg Preparation Works ubleting for RC works for MBR and TTB			5 <u>g</u>	0		
PKD10 KD Preliminary and Pl Subletting SUB-300 Sul SUB-340 Sul Design Submission Temporary Works Der Mainstream Bio-React Mainstream Bio-React	D10 - Completion of Civil & Structural works of roof floor of sludge thickening bidg Preparation Works ubletting for RC works for MBR and TTB	0					
Preliminary and P Subletting SUB-300 Sul SUB-340 Sul Design Submission Temporary Works Des Mainstream Bio-React	Preparation Works ubleting for RC works for MBR and TTB	-		22-Aug-24*	-177		♦ KD10-Com
SUB-300 Sul SUB-340 Sul Design Submission Temporary Works Des Mainstream Bio-React							
SUB-340 Sut Design Submission Temporary Works Der Mainstream Bio-React		90	15-Apr-24A	04-Oct-24	443		
Temporary Works Des Mainstream Bio-React		90	07-Jul-24	04-Oct-24	443		
	ctor System ement Structure - design amendment for S5 below						
	LS - Resubmission for PMs & ICE review (7d prep & resub. + 21d PM & ICE review)	28	16-Apr-24A	26-Jun-24	-271	ELS - Resubmission for PMfs & ICE review (7d prep & resu	p.+21d PM& ICE review)
TWD-1050 ELS	LS - Obtain Approval nd Underpass	7	27-Jun-24	03-Jul-24	-271	ELS - Obtain Approval	
	LS - Prepare & Submission for PMs review LS - Review by PMs & ICE review (28 d + 7d)	45 35	01-Jun-24 16-Jul-24	15-Jul-24 19-Aug-24	-56 -56	ELS - Prepare & Submis	ion for PM's review ELS - Review by P
TWD-280 ELS	LS - Resubmission for PMs & ICE review (7d prep & resub. + 21d PM & ICE review)	28	20-Aug-24	16-Sep-24	-56		
Administration Building TWD-300 Op	ng pen CutDesign - Prepare & Submission for PMs review	45	16-Jul-24	29-Aug-24	55		
TWD-310 Op Wakway Across Tai Ts	pen CutDesign - Review by PMs & ICE review (28 d + 7d) Tseng Wai Nullah	35	30-Aug-24	03-Oct-24	55		
	/akway-Pepare&Submisson forPM 's review /akway-Review byPM s& CEneview (28 d + 7 d)	45 35	16-Jul-24 30-Aug-24	29-Aug-24 03-Oct-24	538 538		
Temporary diversion s	scheme for Early commissioning of SD, BH1, H2S and STB		-				
	emp. pipe. for BH1 Early CommPrep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d) emp. pipe. for SD1-2 Early CommPrep(90d),Sub.&Review(30d) Comment&Resub(14d)&Approval(7d)	141 141	30-Jun-23 A 29-Dec-23 A	30-Jun-24 30-Sep-24	-192 -192	: Temp.pipe.forBH1EarlyComm.Prep(90d)Sub&	keview(30d) Comment&Resub(14d)&Approval(7d)
Contractor 's Perman	inent Works Design (include ATAL)						
Package 3A - Plant		45	20 D 24 A	44 him 04	01	E&MAP Report for Plant Service Water - Resubmission for further review	
	&MAP Reportfor Plant Service Water - Resubmission for further review &MAP Reportfor Plant Service Water - Obtain Approval	45 7	20-Dec-21 A 12-Jun-24	11-Jun-24 18-Jun-24	-94 -94	E&MAP Reportion PlantService Water - Obtain Approval	
DDA Package 2 - Tertiary	ry Treatment System						
DDA-170 Civ	ivil Req. for TTS (Foundation design) - Prepare(27d), Sub. & Review(45d),Comment & Resub.(14d), EO(28d)&Approval (7d)	121	13-Jun-21 A	17-Jun-24	-252	Civil Req. for TTS (Foundation design) - Prepare(27d), Sub. & Review(45d)	
	oundation for TTS - Prepare (90d), Sub. & Review (45d) , Comment & Resub.(14d) & Approval (7d), GEO (28d)	213	08-Oct-21 A	18-Jul-24	-23	Foundation for TTS Civil Reg. for TTS (Superstruct design) - Prepare (147d), Sub. & Review(45	Prepare (90d), Sub. & Review (45d), Comment & Resul
		213	11-Oct-21 A	17-Jun-24	-81		
	lechanical for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d) lectrical& Control for TTS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	213 213	31-Dec-21 A 31-Dec-21 A	24-Jun-24 24-Jun-24	4	Mechanical for TTS - Prepare (60d), Sub. & Review(45d), Con Electrical& Control for TTS - Prepare (60d), Sub. & Review(45d)	
	rchitectural for TTS - Prepare (60d), Sub. & Review(45d) ,Comment& Resub.(14d) & Approval (7d) ivil & Structural for TTS - Prepare (120d), Sub. & Review(45d) ,Comment& Resub.(14d) & Approval (7d)	126 177	17-Nov-22 A 17-Nov-22 A	16-Sep-24 15-Aug-24	479 -92		Civil & Structural for TTS -
DDA-220 Bui	uilding Services (BS) for TTS - Prepare (60d), Sub. & Review (45d) , Comment & Resub. (14d) & Approval (7d)	199	30-Oct-23 A	16-Sep-24	-81		
DDA-260 Civ	stream Bio-Reactor System ivil Req. for MBS-AGS (Foundation design) - Prepare (60d), Sub. & Review(45d), Comment & Resub (14d) & Approval	126	09-Jun-21A	23-Jun-24	-91	Civil Req. for MBS-AGS (Foundation design) - Prepare (60d), Su	& Review (45d), Comment & Resub (14d) & Approval (
(7d DDA-290 Mer	rd) lechanical for MBS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	126	08-Oct-21 A	18-Jul-24	84	Mechanical for MB	Prepare (60d), Sub. & Review (45d) ,Comment & Resu
	lectrical& Control for MBS - Prepare (60d), Sub. & Review (45d) ,Comment & Resub (14d) & Approval (7d) ivil Req. for MBS-AGS (Superstruct design) - Prepare (60d), Sub. & Review (45d) ,Comment & Resub (14d) &	405 126	08-Oct-21 A 01-Mar-22 A	24-Jun-24	108 -91	Electrica)& Control for MBS - Prepare (60d), Sub. & Review(45 Civil Reg. for MBS-AGS (Superstruct design) - Prepare (60d), Su	
App	pproval (7d)			23-Jun-24			
	oundation for MBS - Prepare (97d), Sub. & Review(45d), Comment& Resub.(14d),GEO (28d)& Approval (7d) ivil & Structural for MBS - Prepare (60d), Sub. & Review (45d), Comment& Resub.(14d) & Approval (7d)	230 170	18-Mar-22A 20-Jan-23A	08-Sep-24 27-Sep-24	-223 -82		
	CAB forAGS&TTS - Prepare (30d), Sub. & Review(30d) uilding Services (BS) for MBS - Prepare (60d), Sub. & Review,(45d), Comment & Resub.(14d) & Approval (7d)	204 142	16-Jun-23A 01-Jun-24	21-Sep-24 20-Oct-24	-15 -11		
Package 5A - Maste	ter Water Meter Room						
	&ID for MWWC - MBS (60d), Sub. & Review.(45d), Comment & Resub.(14d) & Approval (7d) lechanical for MWWC - Prepare (60d), Sub. & Review.(45d), Comment & Resub (14d) & Approval (7d)	64 220	26-Jun-23 A 30-Oct-23 A	06-Oct-24 06-Oct-24	4 700		
1 I	lectrical& Control for MWMC - Prepare (60d), Sub. & Review(45d), Comment& Resub (14d)& Approval (7d) at Service Water (PSW)	220	30-Oct-23 A	06-Oct-24	700		
DDA-1050 Civ	ivil Requirement Drawings - Prep(60d), Sub & Review (45d), Comment & Resub (14d) & Approval (7d)	126	12-Jun-21A	16-Aug-24	-93		Civil RequirementDraw
	iping & Instrumentation Diagram (P&D) - Prep(30d), Sub &Review(28d), Comment&Resub (14d) & Approval (7 d) lectrical & Control for PSW - Prep(60d), Sub &Review(45d), Comment&Resub (14d) & App roval (7d)	220 143	26-Jun-23A 01-Jun-24	21-Oct-24 21-Oct-24	-116 -116		
	lechanical for PSW - Prep(60d), Sub & Review(45d), Comment& Resub (14d) & Approval (7d) je Thickening Chemical and Dosing System	143	01-Jun-24	21-Oct-24	-116		
DDA-430 Fou	und for STCS,WasteGasBurn er & Guard Hse-Prep are (60 d),Sub & Review (45d),Comment & Resub (14d),GEO(28d) Approval (7d)	96	09-Nov-21 A	08-Jul-24	-3	Found for STCS,WasteGasBurner &	Guard Hse-Prepare (60 d), Sub & Review. (45d), Comment
DDA-440 Civ	tivil & Struct for STCS, WGB & Guard Hse - Prepare (60d), Sub. & Review (45d), Comment & Resub (14d) & Approval	250	09-Nov-21 A	25-Jul-24	-20	Civil &	Struct for STCS, WGB & Guard Hse - Prepare (60d), Sub
	a) ivil Req. for STCDS - Prepare (60d), Sub. & Review (45d) ,Comment & Resub. (14d) & Approval (7d)	300	15-Nov-21 A	08-Jun-24	67	Civil Req. for STCDS - Prepare (60d), Sub. & Review (45d) Comment & Resub.(14d) & Ap	
	lechanical for STCDS - Prepare (60d), Sub. & Review(45d), Comment & Resub (14d) & Approval (7d) lectrical & Control for STCDS - Prepare (60d), Sub. & Review(45d), Comment & Resub.(14d) & Approval (7d)	340 315	16-Nov-21 A 30-Nov-21 A	15-Aug-24 01-Jul-24	67 67	Electrical & Control for STCDS - Prepare (60d). Su	Mechanical for STCDS - & Review.(45d),Comment & Resub.(14d) & Approval
DDA-1520 Me	lechanical Ven flaton and Air conditional System Design for Sludge Thickening Building (STB)	320	16-Jun-22 A	15-Aug-24	180		Mechanical Ventlaton ar
	lumbing and Drainage System Design for Sludge Thickening Building (STB) ire Services Design for Sludge Thickening Building (STB)	320 320	07-Jul-22A 08-Jul-22A	15-Aug-24 29-Aug-24	180 166		Plumbing and Drainage
	uilding Services for STCDS - Prepare (60d), Sub. & Review(45d) Comment & Resub (14d) & Approval (7d) Substation and 11kV Switchgear House	126	24-Oct-22 A	29-Jul-24	-3		Building Services for STCDS - Prepare (60d), Sub. & Re
DDA-480 UP	Substantion and Triv Switchgear House IPS System for CLPSub &11kV Switchgear Hse - Prepare (102d), Sub & Review,(45d),Comment& esub (14d)&Approval (7d)	168	03-Jun-21 A	15-Jun-24	-185	UPS System for CLPSub &11kV Switchgear Hse - Prepare (102d), Sub & Rev	ew.(45d),Comment& Resub.(14d)&Approval (7d)
Package 9 - Inlet W							



 Remaining Level of Ef... Actual Work Remaining Work Critical Remaining Work Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24)

Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 1 of 8

	September					Octo	ber			November 49
01	47 08 15	22	2	29	06	48		20	27	49
				[
				[
Egrets Breedi	ng Season 2024									
tion of Civil & S	Structural works of ro	of floor of	sludae th	lickening	blda					
					Subletting	for RC w	orks for ME	BR and TT	в	
					Subletting	g for Draina	age, Sewa	ige & wate	rworks	
s & ICE review	(28 d + 7d)									
		-Resubm	nission fo	PM's&	ICE reviev	v (7d prep	& resub. +	21d PM&	ICE re	view)
on Cu+D	Dranom 8 Out	iccion f '	DM/or-							
en cui Desigr	n - Prepare & Subm	III TOFI	IVISTEVIE	≠w	Dpen Cutr	Design - R4	eview by P	Ms&ICF	review	(28 d + 7d)
						9				
akway-Prepa	re&Submissionfo	rPM'srevi	ew	<u> </u>						
				V	Vakway-F	Reviewby	PMs&ICI	E review (2	28 d + 7	d)
				¦						
				Temp.	pipe.forS	D1-2 Early	y CommF	Prep(90d),	Sub.&	Review(30d) Co
14d)& Approv	al (7d), GEO (28d)			[
(400 1) (Arch Sub. & Review.(45d	nitectural fo	or TTS - P	repare (6	60d), Sub.	& Review.((45d),Con	nment& R	esub.(14d)& Approval
epare (1200), s						ai (70) 60d), Sub.	& Review	(45d) Cor	nment	& Resub (14d) 8
					- pare (, cab.		,,		
)										
(14d)& Approv	val (7d)									
)										
	Foundation for MP	C Dropor	o (07d) C	ub P D	niow/AEd	Commo	nt P Doou	h (1 4d) CE	0/20	1)9 Approval/7
	Foundation for MB	S-Prepar								d),Comment&
		VCA							····`	
							E	Building Se	rvices	(BS) for MBS - F
										(15.0.0
										w.(45d) ,Comm b. & Review.(45d
										d), Sub. & Revie
								·····		
is - Prep(60d),	Sub.&Review(45d)), Commer	nt&Resut	o (14d) 8	Approval	(7d)		Direli		ontof D
										entation Diagrai rol for PSW - Pre
										SW - Prep(60d)
Resub.(14d),G	EO(28d) & Approva	al (7d)								
Review(45d)	Comment&Result	o.(14d)& A	Approval	(7d)						
. ,		, 								
nare (604) ©	b.&Review(45d),0	Commont	& Rocub	(144) 8	Approval	(7d)				
i)			a r coub	, i -tu ja	, approval					
	System Design for S	Sludge Thi	ckening E	Building	(STB)					
	r Sludge Thickenin									
	sign for Sludge Thic nent& Resub (14d			в)						
m(400),00mh	nonitor rtesub (140	Ja Appiol	ai (70)							
				-						
	<u> </u>	Mo	onthly	<u>Pro</u>	gress	Repo	ort - 31	MRP		
	Date			Rev	vision		Cheo	cked	Ar	proved
	31-May-24		Rev.						-r	
	0 1-1VIay-24	ť	n vev.	0						

Activity	D	Activity Name	Orig	Early Start	Early Finish	Total Float	May	June	August
ACTIVITY		Piceric Name	Dur	Lany Start	Lany Fillion	Total Tioat		44 02 09 16 23 30 07 14 21 28	46
-	DDA-1200	Electrical & Control for Inlet Work - Prepare (28d), Sub. & Review(28d) ,Comment& Resub.(14d) & Approval (7d)	120	30-Oct-21 A	18-Jun-24	-260		02 09 16 23 30 07 14 21 28 Electrical & Control for Inlet Work - Prepare (28d), Sub & Review(28d), Comme	ent& Resub.(14d)& Approval (7d)
	DDA-1210	Building Services for InletWork - Prepare (28d), Sub. & Review (28d), Comment & Resub. (14d) & Approval (7d)	76	30-Mar-22 A	18-Jun-24	-260		Building Services for Inlet Work - Prepare (28d), Sub. & Review (28d), Commer	nt& Resub.(14d)& Approval (7d)
		rimary Sedimentation Tank (PST)							
	DDA-1250	Electrical & Control for PST - Prepare (28d), Sub. & Review(28d), Comment & Resub (14d) & Approval (7d)	48	31-Aug-21 A	22-Jun-24	395		Electrical & Control for PST - Prepare (28d), Sub & Review (28d), Comm	
	DDA-1260 Package 11 - C	Building Services for PST-Prepare (28d), Sub. & Review (28d), Comment & Resub. (14d) & Approval (7d)	90	01-Oct-21 A	22-Jun-24	395		Building Services for PST - Prepare (28d), Sub. & Review(28d), Comm	ent& Resub.(14d)& Approval(7d)
	DDA-580	ontrol and Monitoring System Power Quality & Energy Management System (PQEMS) - Prep(28d), Sub.&Review(28d), Comment&Resub (14d) &	130	02-Oct-21 A	30-Jul-24	-28			ower Quality & Energy Management System (PQEMS) - I
	DDA-000	Approval (7d)	100	02-002174	00-00-24	-20			
	DDA-550	Supervisory Control&Data Application (SCADA) System - Prep (28d), Sub & Review (28d), Commen & Re sub (14d) &	238	24-Apr-23A	30-Jul-24	-28		Śi	Supervisory Control&Data Application (SCADA) System - F
	DDA 4070	Approval (7d)	04	00 14-11 02 4	20 1-1-04				Gas Detection System - Prep(28d), Sub & Review(28d), Co
	DDA-1270 DDA-560	Gas Detection System - Prep(28d), Sub & Review(28d), Comment& Resub (14d) & Approval (7d) Computerised Mainatenance Mangement System (CMMS) - Prep(28d), Sub & Review(28d), Comment& Resub (14d) &	91 275	08-May-23 A 01-Jun-24	30-Jul-24 02-Mar-25	-28			as Delection System - Frep(280), Sub & Review(280), Co
	DDA-300	Approval (7d)	215	01-0011-24	02-10101-23	-20			
	DDA-570	Information and Document mangement System (IDMS) - Prep(28d), Sub & Review (28d), Comment& Resub (14d) &	275	01-Jun-24	02-Mar-25	-28	•		
		Approval (7d)							
	DDA-1280	Data Collection, Management, Analysis & Model System - Prep (28d), Sub & Review (28d), Comment & Resub (14d) & Approval (7d)	275	01-Jun-24	02-Mar-25	-28			
	Package 12 - C	hemical System for STB							
	DDA-650	Chemical System for Sludge Thickening Building (STB) - Prep(60d), Sub & Review(45d), Comment& Resub (14d) &	150	01-Jun-24	28-Oct-24	67			
		Approval (7d)							
		pework System	400	04 hrs 04	04.0-+04	405			
	DDA-660	Pipeworks System for Sludge Thickening Building (STB)-Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	126	01-Jun-24	04-Oct-24	125	-		
	DDA-1030	Pipeworks System for Sludge Digesters - Prep(60d),Sub & Review(45d),Comment& Resub (14d) & Approval (7d)	126	01-Jun-24	04-Oct-24	-173			
	Package 14 - S	udge Anærobic Digestion System (SDT)							
	DDA-1320	Electrical & Control for SDT & UC/PP - Pre pare (55d), Sub. & Revie w(45d), Comment & Resub.(14d) & Approval (7d)	460	02-Jul-21A	29-Aug-24	-137			Elec
	DDA-1340	Civil Req. Drawing for UC/PP - Prepare (47d), Sub. & Review.(45d), Comment& Resub.(14d) & Approval (7d)	580	10-Jul-21A	24-Jul-24	-137		Civil Req. Dra	rawing for UC/PP - Prepare (47d), Sub. & Review.(45d), C
	DDA-1330	Building Services for SDT & UC/PP- Piep are (56d) Sub. & Review.(45d), Comment & Resub.(14d) & Approval (7d)	181	02-May-23 A	29-Aug-24	-137			Buik
	DDA-1390	ogas H2S Removal, Storage and Delivery System Building Services for Biogas H2S Removal System - Prepare(28d),Sub&	137	31-May-23 A	30-Jul-24	349		A	Building Services for Biogas H2S Removal System - Prepa
	DDA-1350	Review(28d),Comment&Resub(14d)&Approval (7d)	157	31-1viay-23 A	30-30i-24	545			anding octroces of biogas rizo removal cystem - rich
	DDA-1380	Electrical & Control for Biogas H2S Removal System - Prepare (28d), Sub&	105	25-Sep-23 A	30-Jul-24	349		E	lectrical & Control for Biogas H2S Removal System - Pre
		Review(28d),Comment&Resub(14d)&Approval (7d)							
	DDA-1420	eodorization Unit System	78	04-Mar-22 A	24-Jun-24	-190		Mechanical for DOU No. 1 - Prepare(28d),Sub& Review(28d),Com	ment& Resub(11d)& Approval (7d)
	DDA-1420 DDA-1440	Mechanical for DOU No.1 - Prepare(28d),Sub& Review(28d),Comment&Resub(14d)&Approval (7d) Mechanical for DOU No.3 - Prepare(28d),Sub& Review(28d),Comment&Resub(14d)&Approval (7d)	300	17-Jul-22A	01-Jul-24	216		Mechanical for DOU No. 3 - Prepare(28d),Sub& Review	
	DDA-1430	Mechanical for DOU No.2A and 2B-Prepare(28d)Sub& Review(28d)Comment& Resub(14d)&Approval (7d)	122	13-Oct-23 A	31-Jul-24	186			Mechanical for DOU No. 2A and 2B - Pre pare (28d) Sub8
		ludge Dewatering Building (SDB)							
	DDA-910	Roof Rainwater Collection Systemfor (SDB) - Prep(60d), Sub & Review (45d), Comment & Resub (21d) & Approva (7d)	242	19-Jun-24	15-Feb-25	3			
	DDA-920	Fire Services System for SDB - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7 d)	242	19-Jun-24	15-Feb-25	3			
	DDA-930	Mechanical for Sludge Dewatering Building (SDB) - Prep(60d), Sub & Review(45d), Comment& Resub (14d) & Approval	242	19-Jun-24	15-Feb-25	193			
	DDA-940	(7d) Plumbing System for Sludge Dewatering Bldg (SDB) - Prep(60d), Sub & Review(45d), Comment& Resub(14d) &	242	19-Jun-24	15-Feb-25	193			
	DDA-940	Approval (7d)	242	13-3011-24	134 65-23	195			
	DDA-950	BS for Sludge Dewatering Building (SDB) - Prep(118d), Sub.&Review(45d), Comment&Resub (14d) & Approval (7d)	242	19-Jun-24	15-Feb-25	3			
	Package 18 - M	iscellaneous							
	DDA-540	Civil & Structural for Misc, Manholes, DrawPits, FenceWall - Prep (60 d), Sub & Re view (45d), Comment& Resub (14d) & Approval (7d)	235	29-Jun-24	18-Feb-25	4			
	Package 19 - E	levated Walkways							
	DDA-710	Civil & Structural for Elevated Wa kways - Prep(60d), Sub & Review(45d), Comment& Resub (14d) & Approval(7d),	101	15-Apr-23A	17-Sep-24	518	· · · · · · · · · · · · · · · · · · ·		·····
		GEO(28d)							
	Package 20 - T		007	04.1.04					
	DDA-720	Civil & Structural for Trellis - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d) teel Working Platform	207	01-Jun-24	24-Dec-24	441			
	DDA-730	Civil & Structural for Steel Working Platform - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	102	29-Jun-24	08-Oct-24	518			
		ampling System of YLEPP	-						
	DDA-740	Sampling System for IW&PST - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	62	07-Jul-23A	29-Jul-24	-261		San	mpling System for IW&PST - Prep(60d), Sub & Review(45
	DDA-1610	Sampling System for AG S&TTB - Prep(60 d), Sub.&Revie w(45 d), Common tℜ sub (14 d) & Approval(7 d)	127	07-Jul-23A	30-Sep-24	-169			
	DDA-1620	Sampling System for SDT - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	127	07-Jul-23A	30-Sep-24	-169			
	DDA-1630	Sampling System for STB - Prep(60d), Sub & Review(45d), Comment& Resub (14d) & Approva (7d)	128	07-Jul-23A	30-Sep-24	-169			
	Package 23 - S DDA-750	ecurity, Public Address and Communication System SPC sitewide ACS- Prep(60d), Sub.&Review(45d), Commen&Resub (14d) &Approval(7d)	98	21-Jun-23A	06-Aug-24	-269			SPC sitewide ACS-Prep(60d), Sub & Review
		dministration Building (ADB)	50	21-001-2074	007/ug-24	-203			
	DDA-0960	Architectural for Administration Building (ADB) - Prep (60 d), Sub. & Revie w (4 5 d), Comment & Resub (14 d) & Approval (7 d)	126	01-Jun-24	04-Oct-24	332			
	DDA-0990	General Arrangement & Civil Req. Drawings for ADB - Prep(60d), Sub & Review(45d), Comment & Resub (14d) & Approval(7d)	126	01-Jun-24	04-Oct-24	332			
	DDA-1000	Mechanical for Administration Building (ADB) - Prep (60 d), Sub & Revie w(45 d), Commen & Resub (14 d) & Approval (7 d)	126	01-Jun-24	04-Oct-24	332		· · · · · · · · · · · · · · · · · · ·	
							[
	DDA-1010	Electrical & Control for Administration Building (ADB) - Prep(60d), Sub & Review(45d), Comment& Resub (14d) & Approval(7d)	126	01-Jun-24	04-Oct-24	332			
	DDA-1020	BS for Ad ministration Building (ADB) - Prep (60 d), Sub & Revie w(45 d), Commen & Resub (14 d) & Approval(7 d)	126	01-Jun-24	04-Oct-24	332			
	Design out of A		120	01-0011-2-4	04-00/24	002			
	DDA-1540	Drainage systems at base slab / foundation levels - Prep(60d), Sub & Review(45d), Comment& Resub (14d) &	126	24-Aug-22 A	05-Aug-24	201			Drainage systems at base slab / foundation leve
		Approval(7d)							
	DDA-1560	Streetfire hydrantsystem - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Ap pro val(7d)	126	01-Jun-24	04-Oct-24	104	C		
	DDA-1550	Rainwater drainage systems - Prep(60d), Sub.&Review(45d), Comment&Resub (14d) & Approval(7d)	126	06-Aug-24	09-Dec-24	478			
	Technical Submis	ance Test Plans							
		Submittreview/approval Factory Acceptance Test Plans - SCADA system	120	01-Dec-23 A	14-Aug-24	-192			Submit/review/approval Factory
		Maintenance (O&M) Manuals and Installation Manuals (PS 34.20(11)(12)(13))			, J				
	Inlet Works and	Primary Sedimentation Tank							
		Submittreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - 1st draft	60	05-Jan-23A	01-Jul-24	-295		Submit/review/approval Operation and Maintenance(C	J&M) Manuals and Installation Manuals - 1stdraft
		Submittreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - revised draft	60	02-Jul-24	30-Aug-24	-295	l		Su
	AGS and TTS s SUBM-1220	stem Submitreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - 1st draft	60	02-Jul-24	30-Aug-24	-49	-		Su
	Sludge Thicken				3				
	SUBM-1250	Submitreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - 1st draft	60	02-Jul-24	30-Aug-24	394			Su
	Sludge Disgest			02 5424	20 4	00.4			
	SUBM-1310 Biogas H2S Re	Submitreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - 1st draft	60	02-Jul-24	30-Aug-24	-234			Si
T I I		Submitfreview/approval Operation and Maintenance (O&M) Manuals and Installation Manuals - 1st draft	60	02-Jul-24	30-Aug-24	-234	 -		jana ja
		g Plan and Procedures (PS34.20(10))	,		2				

Commissioning Plan and Procedures (PS34.20(1)



Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24) Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 2 of 8

	September 47			October 48			November 49
01	08 15	22	29 06	13	20	27	03
Prep(28d), Su	ib.&Review(28d), Cor	nment&Resub (1	4d) & App roval (7d)			
	ıb.& Review (28 d), Cor						
			,,	,			
omment&Res	ub (14d) & Approval (7d)					
			ļ				
							emical System fo
						Uh	əə əysiem fo
					Sludge Thickeni		
			Pipeworks	System for S	Sludge Digester	s-Prep(60d),Sub.&Rev
ictrical P C	ol for SDT & UC/PP-F	Preno m # m m	h & P ~		Regil /4		(7d)
Comment& Re	esub.(14d) & Approva	l (7d)					
ilding Services	for SDT & UC/PP - Pi	nepare (56d), Sub	.& Review.(45d),C	omment&R	esub.(14d)&Ap	oproval (7d)
					·····		
Jare(28d),Sub	& Review(28d),Com	ient&Resub(14	JocApproval (7d)				
epare(28d),Su	b& Review(28d),Com	iment&Resub(14	d)&Approval (7d)				
o& Review (28d	l),Commen &Resub(1	ı4d)&Approval(≀	(d)				
	Civil	& Structural for F	evated Walkways -	Prep(60d).S	ub&Review(45	d),Com	ment&Resub(1
			Civ	il & Structura	l for Steel Worki	ng Platfo	rm - Prep(60d),
5d) Com	t&Resub (14d) & App	roval/7d\					
Jay, Commen	(14u) & Appi		Sampling System	for AGS&T1	1B -Prep(60 d). S	Sub.ℜ	view (45d), Com
			Sampling System	for SDT - Pr	ep(60d), Sub.&l	Review(4	15d), Comment
			Sampling System	for STB - Pr	ep(60d), Sub.&F	≺eview(4	15d), Comment
v(45d). Comm	en t&Resub (14d) &A	pproval(7d)					
,, = sinini		·····					
			Architectu	al forAdmini	istration Building	(ADB)	Prep (60 d), Sub
			General A	rrangement/	& Civil Req. Dra	wingsfo	ADB - Prep(60
					stration Building		
			Electrical 8	Control for	Administration B	uilding (/	ADB) - Prep(60c
			RS for Ad	ninistration P	uilding (ADB) - F	Pren/An	d), Sub & Review
			JO IOFADT	auUIIB	g(//L/D) -F) UU / ۲۰۰	"eviev
vels - Prep(60d), Sub.&Review(45d),	Comment&Res	ub (14d) & Approva	(7d)			
			Streatfire	nydrantswete	em - Prep(60d), \$	Sub & P	view(45d) Corr
						(B	
y Acceptance"	TestPlans - SCADAs	ystem					
Submit/review/a	pproval Operation an	d Maintenance //	D&M) Manuals and	Installation M	lanuals - revised	Idraft	
submit/review/a	pproval Operation an	d Maintenance (J&M) Manuals and	Installation M	anuals - 1stdra	rt	
Submit/review/a	pproval Operation an	d Maintenance (D&M) Manuals and	Installation M	lanuals - 1stdrat	ft	
oupmit/review/a	pproval Operation an	u waintenance (مرير) Manuals and	Installation M	anuais - 1stdrai		
Submit/review/a	pproval Operation an	d Maintenance (D&M) Manuals and	Installation M	lanuals - 1stdra	ft	
		Monthly	Progress				
	Date		Revision	C	Checked	Ar	proved
	31-May-24	Rev.					

Activity ID	Ac śvity Name	Orig Dur	Early Start	Early Finish	Total Float	May 43	June July August 44 45 46
SUBM-1000	Submittreviewlapproval Commissioning Plan and Procedures - Early commissioning of W&PST (KD3)	120	21-Feb-24 A	28-Sep-24	-233	28 05 12 19 26	02 09 16 23 30 07 14 21 28 04 11 18 25
news.	ssion, Procurement, Manufacturing and Delivery						
PRE-210	Submit/Procure/Manufacture/Deliver New Inlet Works Equip Screening system (fixed bar,coarse, fine)	300	16-Mar-21A	13-Aug-24	-298	;	Submit/Procure/Manufacture/L
PRE-700	Submit/Procure/Manufacture/Deliver New Inlet Works Equip Inlet pumps (HF,LF,Drainage)	330	05-Jan-22 A	15-Aug-24	-275		Submit/Procure/Manufactu
PRE-290	Submit/Procure/Manufacture/Deliver New Inlet Works Equip GritTrap and classifier	270	18-Feb-22 A	15-Aug-24	-275	;	SubmitProcure/Manufactu
PRE-280 PRE-330	SubmitProcure/Manufacture/Deliver New Inlet Works Equip Converyeor and compactor SubmitProcure/Manufacture/Deliver New Inlet Works Equip DOU-01	270 330	12-Apr-22A 26-May-22A	15-Aug-24 29-Jun-24	-240 -213	·	SubmitProcure/Manufacture/Deliver New Inlet Works Equip DOU-01
PRE-300	Submit/Procure/Manufacture/Deliver New Inlet Works Equip LALG	270	28-Jul-22A	29-Jun-24	-246		SubmitProcure/Manufacture/Deliver New Inlet Works EquipLALG
PRE-310	SubmitProcure/Manufacture/Deliver New Inlet Works Equip Penstocks and stoplogs	270	13-Sep-22 A	29-Jun-24	-254		SubmitProcure/Manufacture/Deliver New Inlet Works Equip Penstocks and stoplogs
PRE-320	Submit/Procure/Manufacture/Deliver New Inlet Works Equip MVAC-Ventilation Fan	211	10-Jan-23A	03-Aug-24	-253		SubmitProcureManufacture/Deliver New InletW
Biogas Holder PRE-410	Submit/Procure/Manufacture/Deliver Waster Gas Burner	300	19-Aug-21 A	19-Jan-27	-162		
PRE-420	Submit/Procure/Manufacture/Deliver H2S Removal System	510	25-Feb-22 A	31-Dec-25	-125		
PRE-430	Submit/Procure/Manufacture/Deliver Biogas booster and transfer pumps	522	01-Aug-24*	04-Jan-26	-33		
Sludge Digestor							
PRE-750 PRE-780	SubmitProcure/Manufacture/Deliver Sludge Digester Tank - Flame Arresters SubmitProcure/Manufacture/Deliver Sludge Digester Tank - Mixing System and HeatExchanger for Sludge Anaerobic	100 420	31-Oct-22 A 22-Dec-22 A	18-Dec-24 18-Dec-24	-248 -248	·	
FILE-700	Digester	420	22-060-22 A	10-060-24	-240		
PRE-720	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Inspection Windowsfor Sludge Anaerobic System	365	18-Jan-23 A	18-Dec-24	-248		
PRE-730	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Gas Take Off Dome for Sludge Anaerobic Digestion System	365	18-Jan-23 A	18-Dec-24	-248		
PRE-710	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Pressure and Vacuum Relief Valves	300	01-Mar-23A	18-Dec-24	-248		
PRE-740	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Telescopic Valve for Sludge Anaero bic Digestion System	179	10-Jul-23A	18-Dec-24	-248		
PRE-760	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Ferric Chloride Dosing Pump	148	29-Aug-23 A	18-Dec-24	-248		
PRE-760	Submit/Procure/Manufacture/Deliver Sludge Digester Tank - Ferric Chloride Trasnfer Pump	140	29-Aug-23 A 29-Aug-23 A	18-Dec-24	-248		
	ng Building		5				
PRE-250	Submit/Procure/Manufacture/Deliver Sludge Thickening System - Thickening Centrifuges	360	12-Nov-21 A	29-Aug-24	161		
PRE-500	Submit/Procure/Manufacture/Deliver Sludge Thickening System - Pump and jetmixer	300	07-Jan-22A	08-Sep-24	-13		
PRE-510 PRE-480	SubmitProcure/Manufacture/Deliver Sludge Thickening System - LALG SubmitProcure/Manufacture/Deliver Sludge Thickening System - Polymer preparation system	256 388	28-Mar-23A 12-Apr-23A	28-Oct-24 19-Sep-24	82 106	i	· · · · · · · · · · · · · · · · · · ·
PRE-490	Submit/Procure/Manufacture/Deliver Sludge Thickening System - P Olynei preparation system	264	07-Jul-23A	16-Nov-24	82		
PRE-520	Submit/Procure/Manufacture/Deliver Sludge Thickening System - MVAC	212	27-Apr-24A	19-Nov-24	79		
Mainstream Bio-F							
PRE-230	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip AGS system	480	09-Sep-22 A	03-Jun-25	-237		
PRE-530 PRE-550	SubmitProcure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip Penstocks and stoplogs SubmitProcure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip Sludge pre-thickening system	345 510	31-Oct-22 A 31-Oct-22 A	24-Sep-25 09-May-25	-266 -189		
PRE-540	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&/MEquip Chemical storage and dosing system	270	18-Nov-22 A	09-May-25	-212	1	
PRE-570	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M Equip Instrumentation	481	03-Apr-24A	24-Sep-25	-266	1	
PRE-560	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M EquipLALG	368	01-Jun-24*	03-Jun-25	-237		
PRE-580	Submit/Procure/Manufacture/Deliver Main Stream Bio-Reactor E&M EquipMVAC	241	01-Jun-24	27-Jan-25	-110		
PRE-610	nt System SubmitProcure/Manufacture/Deliver TTS Equip Pumping system	495	19-Jul-22A	09-May-25	-179	<u>.</u>	
PRE-600	Submit/Procure/Manufacture/Deliver TTS Equip UV disinfection system	510	08-Sep-22 A	09-May-25	-179		
PRE-240	SubmitProcure/Manufacture/Deliver TTS Equip Disc Filter	600	27-Sep-22 A	09-May-25	-179		
PRE-590	Submit/Procure/Manufacture/Deliver TTS Equip Chemical cleaning system	480	18-Nov-22 A	09-May-25	-179		
PRE-630 PRE-620	SubmitProcureManufacture/Deliver TTS Equip Penstocks and stoplogs SubmitProcureManufacture/Deliver TTS Equip LALG	435	30-Nov-22 A	09-May-25	-179		
PRE-620 PRE-690	Submit/Procure/Manufacture/Deliver TTS EquipDALG	151 506	27-Mar-23A 07-Sep-23A	09-May-25 09-May-25	-179 -179		
Electrical and Co							
PRE-680	Submit/Procure/Manufacture/Deliver Electrial and Control System - SCADA and instrumentation	420	30-Apr-22A	31-Aug-24	-192		
PRE-650	Submit/Procure/Manufacture/Deliver Electrial and Control System - LVSB	300	21-Dec-22 A	10-Jul-24	-288	1	Submit/Procure/Manufacture/Deliver/Electrial and Control System - LVSB
PRE-660 PRE-670	SubmitProcure/Manufacture/Deliver Electrial and Control System - UPS SubmitProcure/Manufacture/Deliver Electrial and Control System - Arm oured Cable	300 203	21-Dec-22 A 21-Dec-22 A	10-Jul-24 31-Aug-24	-258 -237		SubmitProcure/Manufacture/DeliverElectrial and Control System - UPS
	ission & Approval			tring _ i			
WSD Submission							
WSD-1010	WSD - Form WWO542 PM&WSD review and approval	90	10-Mar-22 A	26-Jun-24	-275		WSD - Form WWO542 PM&WSD review and approval
WSD-1020	WSD - SubmitForm WWO46 Part 1 and 2	0	27 hup 24	26-Jun-24	-275		WSD - Submit Form WWO46 Part 1 and 2
WSD-1030 EMSD Submissio	WSD - Form WWO46 Part 1 and 2 PM&WSD review and approval	90	27-Jun-24	24-Sep-24	-275		
Biogas System (A							
Phase 1							
	Form 105 for Biogas Holder Tank 1(Submission and Approval Period)	184	08-Nov-22 A	04-Aug-24	-108		Form 105 for Biogas Holder Tank 1 (Submissio
EPD Submission EPD-1000	n & Approval for VEP EPD - VEP Review, prepare and submitto PM	60	24-May-23 A	10-Jun-24	-6		EPD - VEP Review, prepare and submitto PM
EPD-1010	EPD - VEP RtC to PMand approval	7	11-Jun-24	17-Jun-24	-6		EPD-VEP RIC to PM and approval
EPD-1050	EPD - VEP consultation with HKBW	28	11-Jun-24	08-Jul-24	8		EPD - VEP consultation with HKBW
EPD-1020	EPD - VEP Submission to DSD and EPD	28	18-Jun-24	15-Jul-24	-6	<u> </u>	EPD - VEP Submission to ØSD and EPD
EPD-1030 EPD-1060	EPD - VEP RtC to DSD and EPD EPD - VEP Gazette	7 28	16-Jul-24 23-Jul-24	22-Jul-24 19-Aug-24	-6 -6		EPD - VEP RtC to DSD and EPD EPD - VEP Gazette
EPD-1060	EPD - VEP Gazette EPD - VEP approval	20	23-Jul-24 20-Aug-24	26-Aug-24	-6		EPD-
Zone 1 Constru							
CLP Substations							
DSD 11 kV Switch							
CLP-1220	DSD11KV Switchgear-Energization	8	08-Jul-24	16-Jul-24	-176		DSD11KV Switchgear - Energization
CLP Substation I CLP-1590	No. 1 & 2 & DSD 11kV Switchgear - GRC Cladding CLP Substation No.1 & 2 & DSD11kV Switchgear - GRC dadding - fabrication	60	21-Feb-24 A	23-Jul-24	668		CLP Substation No.1 & 2 & DSD11KV Switchgear - GRC cladding -
CLP-1590 CLP-1600	CLP Substation No.1 & 2 & DSD 11 KV Switchgear - GRC dadding - fabilication CLP Substation No.1 & 2 & DSD11 KV Switchgear - GRC dadding - installation	75	21-red-24 A 18-Jun-24	23-Jui-24 13-Sep-24	668		
	Existing Emergency Bypass Chamber						
Modification of E	ass Chamber - Foundation and ELS		22-May-24 A	29-Jun-24	-239		W - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and gro
Modification of E	ass Chamber - Foundation and ELS IW - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and grouting	11	,			P	
Modification of E Emergency Bypa		11 18	02-Jul-24	22-Jul-24	-239		W - Modification of Existing Emergency Bypass Chamber - Sheet Pile
Modification of E Emergency Bypa W-3200	W - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and grouting		-	22-Jul-24 22-Jul-24	-239 -239		
Modification of E Emergency Bypa W-3200 W-1260 W-3470 W-3190	W - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and grouting W - Modification of Existing Emergency Bypass Chamber - SheetPiles Installation (1,283m2,60m2/daylig, 1rig) W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber	18 18 5	02-Jul-24 02-Jul-24 23-Jul-24	22-Jul-24 27-Jul-24	-239 -239		W - Modification of Existing Emergency Bypass Chamber - Diagonal W - Modification of Existing Emergency Bypass Chamber - I
Modification of E Emergency Bypa W-3200 W-1260 IW-3470 W-3190 W-1270	W - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and grouting W - Modification of Existing Emergency Bypass Chamber - SheetPiles Installation (1283m2,60m2/daylrig, 1rig) W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting atexisting chamber W - Modification of Existing Emergency Bypass Chamber - Pumping test W - Modification of Existing Emergency Bypass Chamber - Excavation: 1stlayer+4.5 to +3.5mPD (253m3)	18 18 5 3	02-Jul-24 02-Jul-24 23-Jul-24 29-Jul-24	22-Jul-24 27-Jul-24 31-Jul-24	-239 -239 -239		W - Modification of Existing Emergency Bypass Chamber - Diagonal, W - Modification of Existing Emergency Bypass Chamber - F W - Modification of Existing Emergency Bypass Chamber - F
Modification of E Emergency Bypa W-3200 W-1260 W-3470 W-3190	W - Modification of Existing Emergency Bypass Chamber - Site clearance and mobilization of sheetpile and grouting W - Modification of Existing Emergency Bypass Chamber - SheetPiles Installation (1,283m2,60m2/daylig, 1rig) W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber W - Modification of Existing Emergency Bypass Chamber - Diagonal grouting at existing chamber	18 18 5	02-Jul-24 02-Jul-24 23-Jul-24	22-Jul-24 27-Jul-24	-239 -239		W - Modification of Existing Emergency Bypass Chamber - Sheet Pile W - Modification of Existing Emergency Bypass Chamber - Diagonal W - Modification of Existing Emergency Bypass Chamber - P W - Modification of Existing Emergency Bypass Cham W - Modification of



Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24) Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 3 of 8

	September 47			to ber 48	November 49
01	08 15 22	2		13 20	27 03
			ubmit/review/approval Corr		
liver New Inlet	tWorks Equip Screening sys	stern (fixe	bar,coarse,fine)		
	Inlet Works Equip Inlet pump				
/Deliver New I	Inlet Works Equip GritTrap a	nd classif	ier		
/Deliver New I	Inlet Works Equip Converye	or and co	mpactor		
rks Equip M	VAC-Ventilation Fan				
					·····
					·····
					·····
			0 -the 7 11 1 5	×	
orniterrocure/N	/anufacture/DeliverSludgeT Submit/Procure/Manufacture	nickening	System - Thickening Centr	luges	
	Supmit/Procure/Manufacture	/DeliverS	sudge i nickening System	- rump and jet mixer	0.4-20
					Submit/Procure/Ma
	Submit/F	rocure/M	anufacture/Deliver Sludge	Inickening System - P	orymer preparation sys
	<u></u>			<u></u>	
	<u></u>	<u></u>			
Submit/Procu	ire/Manufacture/Deliver Electr	ial and Co	ontrol System - SCADA and	linstrumentation	
Submit/Procu	re/Manufacture/Deliver Electr	ial and Co	ontrol System - Armoured C	able	
		WSD - Fo	rm WWO46 Part 1 and 2 F	M&WSD review and a	approval
and Approval	Penod)				
Don					
EP approval					
brication					
	CLP Substation No	.1&2&E	SD11KV Switchgear - GR	C cladding - installation	1
ing					
	283m2,60m2/day/rig,1rig)				
outing at existin	ng chamber				
mping test					
	n: 1stlayer +4.5 to +3.5mPD (2				
	r - Strut installation @ +4.0mP				
ency Bypass	Chamber-Excavation: 2nd la	iyer +3.5 t	o +1.0mPD (633m3)		
	M	onthly	Progress Rep	ort - 3MRP	
		<u> </u>	Revision	Checked	Approved
,	Date	<u> </u>		Checked	Approved
	31-May-24	Rev.	0		
	31-May-24	Rev.	0		
	31-May-24	Rev.	0		
	31-May-24	Rev.	0		

vity ID	Activity Name	Orig	Early Start	Early Finish	Total Float	May	July August
ity ito	Polarity name	Dur	Laily Start	Lany minsi	TOTALLOA		
IW-3090	W - Modification of Existing Emergency Bypass Chamber - Strutinstallation @ +1.5mPD	6	13-Aug-24	19-Aug-24	-239	28 05 12 19 26 02 09 16 23	30 07 14 21 28 04 11 18 25 W-Modification of W
	W - Modification of Existing Emergency Bypass Chamber - Excavation: 3rd layer +1.0 to -2.0mPD (759m3)	4	20-Aug-24	23-Aug-24	-239		W-Modifica
IW-3350	W - Modification of Existing Emergency Bypass Chamber - Strutinstallation @ -1.5mPD	6	24-Aug-24	30-Aug-24	-239		
Emergency Bypa	ass Chamber - Pipe laying						
IW-3100	W - Modification of Existing Emergency Bypass Chamber - Excavation: FEL+1.0 to -0.9m PD (481 m3)	6	20-Aug-24	26-Aug-24	-207		W-Ma
IW-1280	W - Modification of Existing Emergency Bypass Chamber - 1200mm Pipe Laying, connect to W & Backfilling	40	27-Aug-24	15-Oct-24	-207		
	ass Chamber - Structural Modification						
IW-3140	W - Modification of Existing Emergency Bypass Chamber - Install bulkhead at existing chamber	24	27-Aug-24	24-Sep-24	-191		
	Existing Inspection Chamber & Inlet Effluent Pipes from NSWSPS			10.0 01			
W-1310	Modification of Existing Inspection Chamber - Sheet Piles Installation (1,020m2, 40m2/day/rig, 1 rig)	21	21-Aug-24	13-Sep-24	-260		
Inlet Works (IW)	•						
WBasement							
IW Basement R	RC Works						
W Zone A/D							
Z1-IW-6850	IW(A/D) - Remove formwork, concrete defect works (below S3)	8	08-Apr-24A	16-Apr-24A		work, concrete defect works (below S3)	
Z1-IW-6860	IW(A/D) - Waterproof, concrete backfil (below S3)	4	17-Apr-24A	20-Apr-24 A		roof,concrete backfil (below S3)	
Z1-IW-6870	W(A/D)-Remove S3	2	22-Apr-24 A	23-Apr-24A		emove S3	
Z1-IW-6880	W(A/D) - Wal, column (-1.6 to +3 0mPD) RCWorks *S2 cast-in	8	24-Apr-24 A	04-Jun-24	-260	W(A/D) - Wa I, co lumn (-1.6 to +3 DmPD	RCWorks *S2 cast-in
Z1-IW-6890	W(A/D)-Remove S1	3	05-Jun-24	07-Jun-24	-260	M(AD)-Remove S1	
	W(A/D)-G/F Slab of Falseworks, Formworks and RC Works (+3.95/+4.95 mPD)	9	08-Jun-24	19-Jun-24	-260		Slab of Falseworks, Formworks and RC Works (+3.95/+4.95 mPD)
Z1-IW-6460	W(D)-G/F Slab of Falseworks, Formworks and RC Works (+3.95/+4.95 mPD) after S1 remove	9	08-Jun-24	19-Jun-24	-260		ab of Falseworks, Formworks and RC Works (+3.95/+4.95 mPD) after S1 remove
Z1-IW-6770	W(A/D) - Remove formwork, concrete defect works (below S2)	8	20-Jun-24	28-Jun-24	62		W(AD)-Remove formwork, concrete defect works (below S2)
Z1-IW-6780	W(A/D) - Wate proof, concrete backfil (below S2)	8	29-Jun-24	09-Jul-24	62		W(AD) - Wa Erproof, concrete baddill/(below S2) W(AD) - Remove S2
Z1-IW-6900 Z1-IW-6910	W(A/D) - Remove S2	3	10-Jul-24 13-Jul-24	12-Jul-24 16-Jul-24	62 62		
	W(AD) - Wate proof, concrete backfil (to ground level) ss Test for IW Basement	J	10-Jui-24	10-0ui-24	02		W(AD)- Wale proof, concrete backfil (to ground level)
-	WB - Concrete develop strength (W Zone A +4.95 slab)	7	20-Jun-24	27-Jun-24	-255		WB - Concrete develop strength (W Zone A +4.95 slab)
Z1-IW-6560	WB - Strike formwork and make good for water tightness test	7	28-Jun-24	06-Jul-24	-255		WB - Strike formwork and make good for water tightness test
	WB - Water Tightness Test Phase 1	18	08-Jul-24	27-Jul-24	-255		WB-WaterTightness Test Phase 1
	WB - Water Tightness Test Phase 2	18	29-Jul-24	17-Aug-24	-255		IWB - Water Tightness
Z1-IW-4120	WB - Water Tightness Test Phase 3	18	19-Aug-24	07-Sep-24	-251		
IW Civil and Struc							
W Superstructure	re						
RC Works							
Zone C							
Zone C3	M(S(C), Zono C2, Woll & Column (+2.05 (+4.05 to +7.925)) & Slob of Externative Examination and BC Works	12	07 May 24 A	12 Jun 24	205	WS(C) Zone C3 Wa	& Column (+3.95/+495 b +7835)& Slab of Falseworks, Formworks and RC Works (+7.835mPD)
Z1-W-6740	MS (C) - Zone C3 - Wall & Column (+3.95/+4.95 b +7.835) & Slab of Falseworks, Formworks and RC Works (+7.835mPD)	12	07-May-24 A	13-Jun-24	-205	WV3(C)-2018 C3-Wa	
Z1-W-6840	WS (C)-Zone C3 - Wall & Column (+7.835 to +11.8) & intermidiate Slab of Falseworks, Formworks and RC Works	12	14-Jun-24	27-Jun-24	-205		IW\$ (C)-Zone C3 - Wall & Column (+7.835 to +11.8) & intermidiate Slab of Falseworks, Formworks and RC Works (
	(+11.8mPD)						
Z1-IW-6750	WS (C)-Zone C3 - Wall & Column (+11.8 to +18.2) & Roof Slab of Falseworks, Formworks and RC Works (+18.2mPD)	12	28-Jun-24	12-Jul-24	-205		IWS (C)-Zone C3 - Wall & Column (+11.8 to +18.2) & Roof Slab of Falseworks, Formwor
Zone D							
Z1-W-6520	WS (D) - Wa I, column and intermediate slab RC Works (+3.95 to +7.835/+8.2mPD)*grit trap (+5mPD) late cast	12	22-May-24 A	17-Jun-24	-252	WS(D)-Wal.cc	lumn and intermediate slab RC Works (+3.95 to +7.835/+8.2mPD)*grittrap (+5mPD) late cast
Z1-IW-6500	MS (D)-Wal, column (+7.835/+8.2 b +11.8mPD) and 1/F slab RC Works (+11.8mPD)	12	18-Jun-24	02-Jul-24	-234		WS (D) - Wall, column (+7.835/+8.2 b +11.8mPD) and 1/F slab RC Works (+11.8mPD)
Z1-IW-6540	MS (D)-Wal, column (+11.8 to +18.2mPD) and Roof Slab RC Works (+18.2mPD)	16	03-Jul-24	20-Jul-24	-234		MS (D) - Wall, مع السمين MS (D) - Wall, and WS (D) - Wall, and MS (D) - Wall, and WS (D) - Wall, and MS (D) - Wall, and WS (D) - W
Zone A							
Z1-W-4145	WS (A)-Wall Erection of Formworks and RC Works (+7.84/+8.2mPD)	6	20-Jun-24	26-Jun-24	-260		WS (A) - Wall Erection of Formworks and RC Works (+7.84/+8 2mPD)
Z1-IW-4090	WS (A)-Intermediate Slab of Falseworks, Formworks and RC Works(+7.84/+8.2mPD)	12	27-Jun-24	11-Jul-24	-260		MS (A) - Intermediate Slab of Falseworks, Formworks and RC Works(+7.84/+8.2mPD)
Z1-IW-6490	WS (D)-Intermediate Slab (+7.84/+8.2mPD) and grit trap (+5mPD) RC Works	12	27-Jun-24	11-Jul-24	-260		MS (D) - Intermediate Slab (+7.84/+8.2mPD) and grit trap (+5mPD) RC Works
Z1-W-4160	WS (A) - Wall Erection of Formworks and RC Works (+11.8mPD)	5	12-Jul-24	17-Jul-24	-260		MVS (A) - Wall Erection of Formworks and RC Works (+11.8mPD)
Z1-IW-4195	WS (A)-1/F Slab of Falseworks, Formworks and RC Works (+11.8mPD)	12	18-Jul-24	31-Jul-24	-260		WS (A) - 1/F Slab of Falseworks, Formworks and RC
	WS (A)-Wall Erection of Formworks and RC Works (+18.2mPD)	5	01-Aug-24	06-Aug-24	-260		WS (A) - Wall Erection of Formworks and F
1.1	WS (A)- Roof Slab of Falseworks, Formworks and RC Works (+18.2mPD)	12	07-Aug-24	20-Aug-24	-260		WS (A) - Roof SI
- ·	ss Test for IW Superstructure	-		07.4 04	004		MAD. Committee de altre de la MAZ
	WB - Concrete develop strength (W Zone A +11.8 slab)	7	01-Aug-24	07-Aug-24	-321		IWB - Concrete develop strength (W Zon WB - Strike formwork and m
	MB - Strike formwork and make good for water tightness test MS - Water Tightness TestPhase 1 *calendar day	7 18	08-Aug-24 15-Aug-24	14-Aug-24 01-Sep-24	-321 -321		
IW ABWF Works		10	134Aug-24	01-0ep-24	-021		
	s 1st fix for E&M handover						
IW ABWF Work							
Below +11 8 mPI	20						
WetArea		-	40.4	00.1.51	055		
	InletWork - Lining at inlet channel/chamber/coarse screen channel/wetwell at -4.9/-1.6/-0.5mPD	7	19-Aug-24	26-Aug-24	-255		InletW
Dry Area W-3310	Inlet Work - Concrete gain strength (+11.8mPD) and Remove formwork and falsework (basement to +11.8mPD)	14	01-Aug-24	16-Aug-24	-259		hlet Work - Concrete gai
W-2780	Intervolk - Concete gain stering in (+ 11.6mPD) and Remove formwork and faisework (basement to + 11.6mPD) Intervolk - ABWF Works 1stfix @ Ground Floor (basement to +11.8mPD)	14		30-Aug-24	-259		
Above +11 8mPI					200		
IW-3480	InletWork - Concrete gain strength (Zone D, +18.3mPD) and Remove formwork and falsework (Zone D, +18.3mPD)	12	22-Jul-24	03-Aug-24	-234		InletWork - Concrete gain strength (Zone D, +18
		10	05-Aug-24	15-Aug-24	-234		hletWork -ABWF Works 1
IW-3500	InletWork -ABWF Works 1st fix@ First Floor (Zone D, +11.8 to +18.3mPD)		21 Aug 24	05-Sep-24	-254		
W-3500 W-3320	InletWork - ABWF Works 1stfix@ FirstFloor (Zone D, +11.8 to +18.3mPD) InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD)	14	21-Aug-24			· · · · · · · · · · · · · · · · · · ·	
IW-3320	Inlet Work - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD)	14	2 1-Aug-24				
	Inlet Work - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ks - Zone C	14	27-Jan-24A	03-Jun-24	-178	InletWork-ABWF Works 1stfixfor DOU in	stallation (+6.0/+18.3mPD)
IW-3320	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ks - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD)			03-Jun-24	-178	InletWork-ABWF Works 1st fix for DOU in	stallation (+6.0/+18.3mPD)
W-3320 IW ABWF Work W-3210	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ks - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD)			03-Jun-24 17-Sep-24	-178 136	hietWork-ABWF Works 1st fixfor DOU in	stallgion (+6.0/+18.3mPD)
W-3320 IW ABWF Work W-3210 WABWF Works - I	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) - Roof	7	27-Jan-24A			InletWork-ABWF Works 1st fixfor DOU in	stallqton (+6.0/+18.3mPD)
W-3320 W ABWF Work W-3210 W-3290 W ABWF Works - I W-2990 W BS Works	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) - Roof	7	27-Jan-24A			InletWork-ABWF Works 1stfixfor DOU in	stallation (+6.0/+18.3mPD)
W-3320 IW ABWF Works W-3210 WABWF Works -1 W-2990 IW BS Works ATAL-1520 ATAL-1530	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ks - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang, 2gangs) MAC Works ELV Works	7 24 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24	136 -221 -245	InletWork-ABWF Works 1stfixfor DOU in	stallation (+6.0/+18.3mPD)
W-3320 IW ABWF Works W-3210 WABWF Works -1 W-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1540	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) tcs - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang,2gangs) MAC Works ELV Works P&D Works	7 24 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221	InletWork-ABWF Works 1stfixfor DOU in	stallation (+6.0/+18.3mPD)
W-3320 IW ABWF Works W-3210 WABWF Works -1 Mv-2990 IW BS Works -1 ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang,2gangs) MVAC Works ELV Works P&D Works ELW Works ELW Works	7 24 100 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245	hietWork-ABWF Works 1st fixfor DOU in	stallation (+6.0/+18.3mPD)
W-3320 IW ABWF Works W-3210 WABWF Works - I MV-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550 ATAL-1550	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nosklay/gang,2gangs) MVAC Works ELV Works PAD Works ELWorks FS. Works	7 24 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221	hietWork-ABWF Works 1st fixfor DOU in	staligion (+6.0/+18.3mPD)
W-3320 W ABWF Works W-3210 WABWF Works - I W-2990 W BS Works ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550 ATAL-1560 W Transformer H	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) tks - Zone C InletWork - ABWF Works 1stfix/for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang, 2gangs) MVAC Works ELV Works ELV Works ELWorks FS, Works House No. 1	7 24 100 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245	hietWork-ABWF Works 1st fixfor DOU in	staligion (+6.0/+18.3mPD)
W-3320 IW ABWF Works W-3210 WABWF Works -1 M-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550 ATAL-1560 IW Transformer H WTx1 E&M Works	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) tcs - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang,2gangs) MAC Works ELV Works P&D Works ELWorks P&D Works ELWorks P&B Works ELWorks Pouse No. 1 ks	7 24 100 100 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245 -221	hietWork-ABWF Works 1st fixfor DOU in	
W-3320 IW ABWF Works W-3210 WABWF Works -1 W-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550 ATAL-1560 IW Transformer H W X2840	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11 nosklay/gang, 2gangs) M/AC Works EL/ Works P&D Works EL/ Works FS. Works FS. Works TX House No. 1 - BS & Transformer Installation	7 24 100 100 100 100 100 32	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 25-Mar-24A	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245 -221 -221	hietWork-ABWF Works 1stfixfor DOU in	TX House No. 1-BS & Transformer Installation
W-3320 IW ABWF Works W-3210 WABWF Works -1 Mv-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1550 ATAL-1550 ATAL-1550 IW Transformer H WX 1 E&M Works Mv-2840 Wv-3330	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) tcs - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11nos/day/gang,2gangs) MAC Works ELV Works P&D Works ELWorks P&D Works ELWorks P&B Works ELWorks Pouse No. 1 ks	7 24 100 100 100 100 100	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245 -221	InletWork-ABWF Works 1stfixfor DOU in	
W-3320 IW ABWF Works W-3210 WABWF Works - I W-2990 IW BS Works ATAL-1520 ATAL-1530 ATAL-1540 ATAL-1550 ATAL-1550 MTAL-1550 WTX1 E&M Works W-2840 W-3330 IW E&M Works	InletWork - Concrete gain strength (Zone A, +18.3mPD) and Remove formwork and falsework (Zone A, +18.3mPD) ts - Zone C InletWork - ABWF Works 1stfix for DOU installation (+6.0/+18.3mPD) -Roof InletWork - Construct concrete plinth for PV panel (526nos, 11 nosklay/gang, 2gangs) M/AC Works EL/ Works P&D Works EL/ Works FS. Works FS. Works TX House No. 1 - BS & Transformer Installation	7 24 100 100 100 100 100 32	27-Jan-24A 21-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 26-Aug-24 25-Mar-24A	17-Sep-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24 23-Dec-24	136 -221 -245 -221 -245 -221 -221	hietWork-ABWF Works 1stfxfor DOU ir	TX House No. 1-BS & Transformer Installation



Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24) Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 4 of 8

	September 47		Octo 48 29 06 13	ber	November 49
01 visting Emerge	08 15 22 ncy Bypass Chamber - Strutir	nstallation	י @ +1.5mPD		27 03
on of Existing E	mergency Bypass Chamber of Existing Emergency Bypa	-Excava	tion: 3rd layer +1.0 to -2.0mPL	D (759m3)	
ification of Exis	sting Emergency Bypass Cha	mber-E	kcavation: FEL +1.0 to -0.9m F	1D (481 m3)	
				W - Modification of E	xisting Emergency By
		IW - Modi	fication of Existing Emergenc	y Bypass Chamber -	Install bulkhead at exis
	Modification of Evi-f	na henc	ction Chamber - Sheet Piles	Installation (1 020~2	40m2/day/rig 1 rig)
	wouncadori of EXIST	⊪ıy∎ıspe	outrionamper - SneetPiles		,-onizioaying, Eng)
			[
			[
			· · · · · · · · · · · · · · · · · · ·		
stPhase 2			[
Ň	VB - Water Tightness Test Pha	ise 3			
11.8mPD)					
and RC Work	ks (+ 18.2mPD)		L		
2mPD)					
·····					
orks (+11.8mP	D)				
Works (+18.2)	mPD)				
of Falseworks	s, Formworks and RC Works (+18.2mF	ישי)		
A + 11.8 slab)					
	ter tightness test Tightness Test Phase 1 *caler	Ider d-			
vvater					
k - Lining at inle	etchannel/chamber/coarse	creen ch	nnel/wetwell at-4.9/-1.6/-0.5r	nPD	
	mPD) and Remove formwork VF Works 1st fix@ Ground Flo			טי)	
	move formwork and falsework		, +18.3mPD)		
	r (Zone D, +11.8 to +18.3mPD		+18.3mDD\	mwork or t ' '	k (Zone A itac
Inlet	Work - Concrete gain strength	,∠oneA,) and Remove for	work and falsewor	k (Zone A, +18.3mPD)
	InletWork-C	Construct	concrete plinth for PV panel (526nos, 11nos/day/g	ang,2gangs)
	Ma	onthly	Progress Repo	ort - 3MRP	
,	Date		Revision	Checked	Approved
	31-May-24	Rev.			
	, <u> </u>				

Activity Name	Orig	Early Start	Early Finish	Total Float	May	June 44	July	August
TAL-1780 W-E&M Handover@ below+18.3mPD (Zone D)	Dur 0		15-Aug-24	-234	28 05 12 19 26		30 07 14 21	40 28 04 11 18 25 ♦ W-E&MHandover@bel
TAL-0000 W - E&M Handover @ below +11.8mPD (Zone A/D)	0		30-Aug-24	-259				•
ACU-01 System - 01 * ATAL-1170 LALG Instalation	30	04-Jun-24	10-Jul-24	-178			LALG Instalation	
ATAL-1250 DOU Equipment Installation VSwitch Room (W + PST)*	45	11-Jul-24	31-Aug-24	-178				
TAL-1790 BS works for LV switch room	14	10-May-24 A	15-Jul-24	-234			BS works for LV switch ro	νοή LVSB
TAL-1270 LVSB Installation TAL-1300 PLC Panel Installation	36 36	16-Jul-24 16-Jul-24	26-Aug-24 26-Aug-24	-234 -217				PLCI
TAL-1310 Station Installation TAL-1320 UPS System	36 36	16-Jul-24 16-Jul-24	26-Aug-24 26-Aug-24	-234 -211				Statio UPS
TAL-1280 In conjugation Cable Containment&Cabling Works from TX No.1 b LVSB	24	30-Jul-24	26-Aug-24	-234				
TAL-1290 Termination Works (TX to LVSB) nary Sedimentation Tank (PST)	6	27-Aug-24	02-Sep-24	-217				
T Stage 2b Basement Construction Works								
xcavation Works 11-PST4832 PST Stage 2b - ELS, Sheetpile mobilization and installation	21	21-Aug-24	13-Sep-24	-8				
ST ABWF, E&M & T&C		5						
ST Stage 1 - Early T&C Femp Pumping System T&C *								
ATALPST-6900 PST Stage 1 - Temp T&C for Decommision of Existing PST 3 Reliability&Performance Test(Sewage) ATALPST-6510 PST Stage 1 - Ready for Decommision of Existing PST 1, 2 Reliability&Performance Test(Sewage)(no T&C required)	14 0	02-May-24 A	24-May-24 A 08-Jun-24	-80	PST Stag	· · · · · · · · · · · · · · · · · · ·	ale bility&PerformanceTest(Sewage) ion of Existing PST1,2 Reliability&PerformanceTest(S	aubra (no T&C required)
	U		08-Jun-24	-80				ewage)(no noc required)
ST Stage 1 PST Sta								
PSTI-3, Outlet channel								
Outlet PST-3345 PST Stage 1 - Screeding and Lining atoutlet channel	9	11-Apr-24 A	20-Apr-24A		creeding and Lining atoutletchannel			
Inlet channel* PST3145 PST3145 PSTStage 1 - Lining at inlet channel (surface prep=1d install=1d,testing=1d)*	4	24-Apr-24A	27-Apr-24A		ST Stage 1 - Lining at inlet channel (surface prep=1d inst	ll=1d,testing=1d)*		
ST Stage 1 - E&M Installation Works					(× /		
Phase 1 (GLA-H, PST 1-3, Outlet Channel) PST Stage 1 - E&M Installation Works at Setting Zone (PST 1-3)								
PST1 PST1-Inclined Plate Setting System								
PST 1 - In cline of Pate Secting System PST 3325 PST Stage 1 - PST1 - Installation of removable walkway at +92mPD	7	09-Aug-24	16-Aug-24	-196				PST Stage 1 - PST1 - I
ATALPST-E PST Stage 1 - PST1 - Water Spray Pipe and Nozzle Installation of w pressure test & inspection PST1 - Bottom Scraper System	12	17-Aug-24	30-Aug-24	-198				
ATALPST-{ PST Stage 1 - PST1 - Wet Test (Fresh water) (7d)	4	01-Jun-24	04-Jun-24	-180		PST Stage 1 - PST1 - Wet Test (Fresh water)(7d)	
PST2 PST2-Inclined Plate Settling System								
ATALPST: PST Stage 1 - PST2 - Air Scouring Pipe and Nozzle Installation c/w pressure test& inspection	20	12-Apr-24A		-167	PST2 -Air Scouring Pipe and Nozzle Installation c/wpre	sure test & inspection	PST Stage 1 - PST2 Installation of removable	
PST3355 PST Stage 1 - PST2 Installation of removable walkway at +92mPD ATALPST-{ PST Stage 1 - PST2 - Water Spray Pipe and Nozzle Installation c/w pressure test& inspection	21	25-Jun-24 04-Jul-24	03-Jul-24 27-Jul-24	-167				ST Stage 1 - PST2 - Water Spray Pipe and Nozzle Instal
PST 2 - Bottom Scraper System ATALPST { PST Stage 1 - PST 2 - Installation of bottom scraper frame, link arm and drive unit, leveling and inspection	38	12-Apr-24A	15-Jun-24	-167		PST Stage 1 - PST2 - In	stallation of bottom scraper frame, link arm and drive un	if leveling and inspection
ATALEST PST Stage 1-PST2 WetTest (Fresh water) (7d)	7	17-Jun-24	24-Jun-24	-167			age 1 - PST2 WetTest (Fresh water) (7d)	
PST 2 - Scum Collection System ATALPST-68 PST Stage 1 - PST 2 - Scum Scraper, Scum Collection Pipe & All other process pipework at inspection platform level	25	01-May-24 A	01-Jun-24	-156		PST Stage 1 - PST2 - Scum Scraper,Scum Colle	ction Pipe & All other process pipework at inspection pla	tform level
PST2-Compressors, Ar Bowers c/w associated fittings ATALPST-68 PST Stage 1-PST2-All other process pipes above 11.8mPD including DO Pipes, PlantService Water Pipes, Air Pipe	26	29-Jul-24	27-Aug-24	-170				PS
PST3								
PST3 - Inclined Plate Settling System PST3335 PST Stage 1 - PST3 Installation of removable walkway at +92mPD	7	01 Aug 24*	08 Aug 24	-196				PST Stage 1 - PST3 Installation of rer
ATALPST+C PST stage 1 - PST3 - Water Spray Pipe and Nozzle Installation c/w pressure test & inspection	12	01-Aug-24* 09-Aug-24	08-Aug-24 22-Aug-24	-191				PST Stage
PST 3 - Bottom Scraper System ATALPST ₹ PST Stage 1 - PST3 WetTest (Fresh water) (7d) using temporary power from 1600A transformer room	7	20-Apr-24A	27-Apr-24A		T Stage 1 - PST3 WetTest (Fresh water) (7d) using temp	orary power from 1600Atransformer room		
PST 3 - Compressors , Air blowers c/w associated fittings								
ATALPST-67 PST Stage 1 - PST3 - All other process pipes above 11.8 mPD including DO Pipes, Plant Service Water Pipes, Air Pipe	25	23-Aug-24	21-Sep-24	-191				
Phase 2 (GL H-I, (Inlet Channel, Pump Room) Handover for PST early commissioning * ATALPST-667 PST Stage 1 - E&M Handover +11.75mPD & above (GL H-I, Inletchannel)	0	16-Apr-24A			ndover +11.75mPD & above (GL H-I, Inletchannel)			
PSTStage 1 - Inlet Channel*	Ū							
ATALPST-55/ PST Stage 1 - Inspection & Grouting of Penstocks x5 Nos ATALPST-55: PST Stage 1 - Inspection & Grouting of Stoplogs x9 Nos.	6	13-Apr-24A 13-Apr-24A	20-Apr-24A 20-Apr-24A		hspection & Grouting of Penstocks x5 Nos , hspection & Grouting of Stoplogs x9 Nos.			
ATALPST-55: PST Stage 1 - Leakage test - Combining Stoplogs/Penstocks	4	20-Apr-24A	23-Apr-24A		e 1 - Leakage test - Combining Stoplogs/Penstocks			
PST Stage 1 - Pump Room* ATALPST-560 PST Stage 1 - Scum Pumps & Drainage Pumps for PST1&2	11	29-Apr-24 A	05-Jun-24	-63		PST Stage 1 - Scum Pumps & Drainage	Pumps for PST1&2	
ATALPST-56: PST Stage 1-All other process pipework inside Pump Room c/wpressure testfor PST182	11	29-Apr-24 A	05-Jun-24	-63		PST Stage 1 - All other process pipework i	nside Pump Room c/w pressure testfor PST1&2	
PST Stage 1 - Electrical Works (PST1-3, Inlet/Outlet Channel&Pump Room) ATALPST-561 PST Stage 1 - Electrical Works - Cable Contairment h stal lation - LVSB@W to Equipment	27	16-Aug-24	16-Sep-24	-206				
PSTStage 1 - Instrumentation & SCADAWorks (PST 1-3, Inlet/Outlet Channel & Pump Room) ATALPST-57: PST Stage 1 - SCADA- Cable Containment Installation - LVSB@IW to Equipment	38	16-Aug-24	01-Oct-24	-232				
PST Stage 1 - BS Works (PST 1-3, Inlet/Outlet Channel & Pump Room)		-						
ATALPST-576 PST Stage 1 - ELV Works ATALPST-578 PST Stage 1 - EL Works	86 86	11-Jun-24 11-Jun-24	20-Sep-24 20-Sep-24	401 312				
ATALPST-579 PST Stage 1 - FS. Works	85	17-Jul-24	26-Oct-24	372				
ATALPST-577 PST Stage 1 - P&D Works ST Stage 1 - T&C Works	85	26-Aug-24	05-Dec-24	338				
PST Stage 1 - T&C Works (PST 1-3, Inlet / Outlet Channel & Pump Room)								
Phase 3 - PST 1.3 Sub-System Wet Test (On load Performance, Endurance Test) (Fresh Water) ATALPST-69 PST Stage 1 - InletPump Room/Outlet Wet Test (Fresh water)	3	06-Jun-24	08-Jun-24	-80		PST Stage 1 - Inlet/Pump Room/Ou	let Wet Test (Fresh water)	
ernal Works - Inlet Work and Primary Sedimentation Tank Perimeter	1					· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
PST External Works - Zone A (Transformer House No.1) tage 1 (KD3)								
EW-1710 W/PST Perimeter - Cabling works from DSD11kV to Tx1	6	10-Jul-24	16-Jul-24	-176			W/PSTPerimeter - Ca	Ibling works from DSD11kV to Tx1
dge Dewatering Building (SDB) B Foundation & ELS - Stage 1								
B Preliminaries for Foundation Works								
Demolition of Existing PST1, 2, 3, 4 SDB-1880 SDB - Trial pittrench and UU Diversion for sheetpile and driven h-pile works	96	04-Dec-23 A	18-Jun-24	-61	<u> </u>	SDB - Trial pittren	h and UU Diversion for sheetpile and driven h-pile wor	ks
							· · · ·	i
Paul Y Remaining Level of Ef		Cont	ract	DC/	2019/10 - YLEPP	- Main Works f	or Stage 1	Project ID : DWPr38_240617
Actual Work							•	Layout : DC201910 MPR43-3N
Remaining Work		M	onth	v Pr	ogress Report N	o. 43- 3MRP (M	May 24)	Page 5 of 8
保華-中國中鐵聯營體 Critical Remaining Work		1010			-3.000		···· · ···	
PAUL YCREC JOINT VENTURE								

	September 47					Oct	ober 18			November 49
01	08 15	22		29	06		18 13	20	27	49
v +18.3mPD (Z	Zone D)									
V-E&MHand	over@below+11.8	mPD (Zone	A/D)							
DOU Equipm	entInstallation									
stallation nel Installation										
nel Installation				[
stallation										
stem										
g Cable Conta	inment&Cabling Wo on Works (TX to LVS	orks from TX	No.1	D LVSB						
erminatio	m vvorks (TX to LVS	D)								
	PSTStage	e 2b - ELS, S	heetoi	le mobili	zation an	d installati	on			
lation of remov	vable walkway at +9 PST1 - Water Spray I	.2mPD								
ST Stage 1 - F	PST1 - Water Spray I	Pipe and No	zzle In	stallation	n c/w press	sure test &	inspectio	n		
c/w pressure te	est&inspection									
				¦						
age 1 - PST2 -	All other process pi	pesabove 1	1.8mF	D incluc	ling DO F	ipes, Plar	nt Se rvice	Water Pipe	es,Air Pip	e
able walkway a	at+9.2mPD									
ST3 - Water S	pray Pipe and Nozz	le Installation	n c/w pi	essuret	est& insp	ection				
										D0.5
		PSTSta	ige 1 -	PST3-A	u other pr	ocess pip	es above	11.8mPD	ncludin	g DO Pipes, Plai
	PST	Stage 1 - Ele	ectrical	Works-	Cable Co	ntainmen	thstallation	on -LVSB(@W to E	quipment
	······							`		
				PST	Stage 1 -	SCADA-	Cable Co	ontainment	t Installati	on-LVSB@IW
		PST Stag PST Stag			s					
		r Si Stagi	eı-E	- vvorks					Dete	
									PSTSt	age 1 - F.S. Work
				[
				i						
T		Mor	nthlv	/ Pro	gress	Rep	ort - 🤇	3MRP		
	Data	1	,		vision	- 1-		ecked		nroved
,	Date				VISION			UKED	A	proved
	31-May-24	↓ F	Rev.	0						

Activity ID	Activity Name	Orig	Early Start	Early Finish	Total Float	May	June	July August
ACTIVITY ID	Activity Name	Dur	Lany Start	Lany Fillion	Total Tidat		44 02 09 16 23	45 46 30 07 14 21 28 04 11 18 25
SDB-1000	Site Hoarding, Clearance, Temp Facilities	18	02-Apr-24A	29-May-24 A	<u>،</u>		Site Hoarding, Clearance, Temp Facilities	<u> </u>
SDB-1310	Access Date to Portion 3	0		30-May-24 A	۱		Access Date to Portion 3	
Demolition of Ex SDB-2010	cisting PST4 SDB - Road diversion at AGS Zone C	1	22-Apr-24A	27-Apr-24A		DB-Road diversion at AGS Zone C		
SDB-2010 SDB-1100	SDB - Road diversion arAGS 20 re C SDB - Demolition of Existing PST 4 (portion after road diversion and pipe plug)	4	22-Apr-24A 29-Apr-24A	27-Apr-24 A 11-May-24 A		1	T (portion after road diversion and pipe plug)	
Demolition of Ex								
SDB-1960	SDB - Decommissioning of Existing PST 1	6	25-May-24 A	29-May-24 A			SDB - Decommissioning of Existing PST 1	
SDB-1970	SDB - Demolition of Existing PST 1&3	18	30-May-24 A	18-Jun-24	-70		- •	of Existing PST 1&3
SDB-1980 Demolition of Ex	SDB - Backfilling of Existing PST 1&3	3	19-Jun-24	21-Jun-24	-70		SDB-Back	filling of Existing PST 1&3
SDB-1810	SDB - Decommissioning of Existing PST2 & remaining chamber&pipe	6	25-May-24 A	29-May-24 A	\		SDB - Decommissioning of Existing PST 2 & remaining	j chamber&pipe
SDB-1820	SDB - Demolition of Existing PST 2 & remaining chamber&pipe	20	12-Jun-24	05-Jul-24	-64			SDB - Demolition of Existing PST 2 & remaining chamber&pipe
SDB-1830	SDB - Backfilling of Existing PST2 & remaining chamber&pipe	3	06-Jul-24	09-Jul-24	-64			SDB - Backfilling of Existing PST2 & remaining chamber&pipe
	Works of Existing Detritor						000 01 11 11 17	
SDB-2090	SDB - Strengthing Works of Existing Detritor - Design submission and approval (PM & ICE review 28d (1st)+28d(resub))	56	01-May-24 A	08-Jun-24	-19		SDB - Strengthing works of Existing	Detritor - Design submission and approval (PM & ICE review 28d (1st)+28d(resub))
SDB-2100	SDB - Strengthing Works of Existing Detritor - Method statement submission and approval (PM review	56	01-May-24 A	15-Jun-24	-24		SDB - Strengthing Wo	ks of Existing Detritor - Method statement submission and approval (PM review 28d(1st)+28d(resub))
	28d(1st)+28d(resub))							
SDB-2110	SDB - Strengthing Works of Existing Detritor - Minipile mobilization	6	17-Jun-24	22-Jun-24	-24		SDB-Stre	engthing Works of Existing Detritor - Minipile mobilization
SDB-2120 SDB-2130	SDB - Strengthing Works of Existing Detritor - Constructminipile (2nos.) SDB - Strengthing Works of Existing Detritor - Minipile demobilization	14	24-Jun-24 11-Jul-24	10-Jul-24 13-Jul-24	-24			SDB - Strengthing Works of Existing Detribr - Construct minipile (2nos.) SDB - Strengthing Works of Existing Detritor - Minipile demobilization
SDB-2130	SDB - Strengthing Works of Existing Detrition - Ninipple demotilization SDB - Strengthing Works of Existing Detritor - A&A works of existing diversion chamber	24	15-Jul-24	10-Aug-24	-24			SDB-Strengthing Works of Existing Solid - Winipite demotilization
	PST 1-4 Footprint		10 00121	107.0321				
SDB Foundation	on - Driven H-Pile							
SDB-1940	SDB - Driven H-piles (SDB18nos.,1044m @48m/d/rig, 1rig after PST4 demolish) no trial pile required	22	02-Apr-24A	18-Jun-24	92		SDB - Driven H-p	iles (SDB18nos.,1044m @48m/d/rig, 1rig after PST4 demolish) no trial pile required
SDB-2080	SDB - Driven H-piles 2nd mobilization (after existing PST demolished)	6	22-Jun-24	28-Jun-24	-70			SDB - Driven H-piles 2nd mobilization (after existing PST demolished)
SDB-1170	SDB - Driven H-piles (SDB315nos.,18270m @48m/d/tig, 5rigs after PST1,2,3&remaining chamber&pipe demolish)	90	29-Jun-24	16-Oct-24	-70	H	- -	SDB - Driven H-p
SDB-2060 External Works	SDB - Driven H-piles (SDB6nos.,348m @48m/d/rig, 1rig after existing Detritor modification works)	8	12-Aug-24	20-Aug-24	-24	l.	-	SUB-Univen H-p
	Tai Tseng Wai Nullah						-	
CLP-1570	Wakway-Predril (Inos. MA-PD1)	12	01-Jun-24*	15-Jun-24	554		Wakway-Predril (1nc	s.MA-PD1)
Zone 2 Constr				,			······································	
Demolition Wor					_			
Other Existing P								
Auxilliary Pumping								
	Demolition of AuxiliaryPumping Station (19) below ground silentmethod	60	01-May-24 A	13-Jul-24	-216			Demolition of Auxiliary Pumping Station (19) below ground silent method
	Reactor & Auxillary Facility (MBR and AF)							
MBR and AF Stru								
	vation & Demolftion stage 2 MBR - Pumping Test(Stage 1b) dewater b -9 0mPD	8	02-Jul-24	10-Jul-24	-240			MBR - Pumping Test(Stage 1b) dewater to -9.0mPD
MBR - ELS Zo								
Excavation and	Demolition							
	MBR - Zone A-ELS Excavate (+1.75 to to -1.25mPD)(7800m3) (3-4 excavators, 500m3/d)	16	16-Apr-24A	30-Apr-24A		MBR -Zone A-ELS Excavate (+1.75 to to -1.25mPl		
MBRAF-1660		10	22-Apr-24A	04-Jun-24	-236		MBR - Zone A- Strut Installation S3 (-0.7mf MBR - Zone A- Preloading Strut S3 (5	
MBRAF-3490 MBRAF-3710	MBR - Zone A- Preloading StrutS3 (5 cycles, 5 struts/cycle/day) MBR - Zone A- Toe groutfor 323 pipe pile	2 12	05-Jun-24 05-Jun-24	06-Jun-24 19-Jun-24	-236			Toe groutfor 323 pipe pile
MBRAF-1670		15	03-Jun-24	26-Jun-24	-237			R - Zone A - ELS Excavation (-1.25 to -4.15mPD)(7540m3)(3-4 excavators, 500m3/d) *MD
MBRAF-1680		12	19-Jun-24	03-Jul-24	-227			MBR - Zone A- Strut Installation S4 (-3.6mPD)(1 crane, 8welders, 24ton/d)
MBRAF-3930	MBR - Zone A- Trial pumping pit (4nos., -5 to -7.6mPD) & Stage 1b Pumping Test (to -9.0m PD)	8	27-Jun-24	06-Jul-24	-227			MBR - Zone A- Trial pumping pit (4nos., -5 to -7.6mPD) & Stage 1b Pumping Test (to -9.0m PD)
MBRAF-3500	MBR - Zone A- Preloading StrutS4 (5 cycles, 5 struts/cycle/day)	3	04-Jul-24	06-Jul-24	-227			MBR - Zone A - Preloading Strut S4 (5 cycles, 5 struts/cycle/day)
MBRAF-1690		17	11-Jul-24	30-Jul-24	-230			MBR -Zone A-ELS Excavation (4.15 to -7.65mPD)(91
MBRAF-3650		13	31-Jul-24	14-Aug-24	-230			MBR - Zone A- 323dia pipe
	MBR - Zone A - Trial pumping pit (4nos.,-7.1 to -9.5mPD)	6	31-Jul-24	06-Aug-24	-215			MBR - Zone A- Stial pumping pit (4nos., 7
	MBR - Zone A- Strutinstallation S5 (-7.1mPD)(1 crane, 8weiders, 24tion/d) MBR - Zone A- Preloading Strut S5 (5 cycles, 5 struts/cycle/day)	3	07-Aug-24 21-Aug-24	20-Aug-24 23-Aug-24	-230	1		MBR -Zone
	MBR - Zone A- ELS Excavation (-7.65 to -9.0mPD)(3510m3)(3-4 excavators, 500m3/d)	7	24-Aug-24	31-Aug-24				
MBR - ELS Zo				Ŭ				
Excavation								
	MBR - Zone B - Preloading Strut S2 (5 cycles, 5 struts/cycle/day)	2	04-Apr-24A	05-Apr-24A		lies, 5 struts/cycle/day)		
MBRAF-3060		16	16-Apr-24A	27-May-24 A		Me	3R - Zone B - ELS Excavation (+1.75 to -1.25mPD)(78) MBR - Zone B - Strut Installation S3 (-	
MBRAF-3070 MBRAF-3580		10	24-May-24 A 08-Jun-24	07-Jun-24 12-Jun-24	-242			U./mPU/(1 crane, sweiders, 240h/d) StrutS3 (5 cycles, 5 struts/cycle/day)
MBRAF-3380		18	08-Jun-24	29-Jun-24	-242	<u> </u>		MBR -Zone B - Toe groutfor 323 pipepile
MBRAF-3290		15	13-Jun-24	29-Jun-24	-242			MBR - Zone B - ELS Excavation (-1 25 to -4.15mPD)(7540m3)(3-4 excavators, 500m3/d) *MD
MBRAF-3300		12	25-Jun-24	09-Jul-24	-242			MBR - Zone B - Strut Installation S4 (-3,6mPD)(1 crane, 8welders, 24ton/d)
	MBR - Zone B - Trial pumping pit(4nos., -5 to -7.6mPD)	6	02-Jul-24	08-Jul-24	-238			MBR - Zone B - Trial pumping pit(4nos, -5 to -7.6mPD)
MBRAF-3590		3	10-Jul-24	12-Jul-24	-242			MBR - Zone B - Preloading Strut S4 (5 cycles, 5 struts/cycle/day)
	MBR -Zone B - ELS Excavation (4.15 to -7.65mPD)(9100m3)(3-4 excavators, 500m3/d) *MD	18	13-Jul-24	02-Aug-24	-242			MBR - Zone B - ELS Excavation (-4.15 to -7.65 mPl
MBRAF-3660 MBRAF-3920		22 6	03-Aug-24	28-Aug-24	-242		-	MB MBR - Zone B - Trial pumping pit (4nc
MBRAF-3920 MBRAF-3320	MBR - Zone B - Trial pumping pit(4nos,-7.1 to -9.5mPD) MBR - Zone B - Strut Installation S5 (-7.1mPD)(1 crane,8welders,24ton/d)	12	03-Aug-24 21-Aug-24	09-Aug-24 03-Sep-24	-218		-	
MBR - ELS Zo		12	2.7149°24	55-56p-24	-242	1	-	
Excavation								
MBRAF-3180		12	13-Apr-24 A	15-May-24 A			allation S3 (-0.7mPD)(1 crane, 10welders, 24ton/d)	
MBRAF-3620		3	16-May-24 A	18-May-24 A		MBR -Zone C - Pr	eloading Strut S3 (5 cycles, 5 struts/cycle/day)	
MBRAF-3190		10	20-May-24 A	04-Jun-24	-219			4.15mPD) (6960m3) (3-4 excavators, 500m3/d) *MD Iation S4 (-3.6mPD) (1 crane, 10welders, 24ton/d)
MBRAF-3200 MBRAF-3690	MBR - Zone C - StrutInstallation S4 (-3.6mPD)(1 crane, 10welders, 24ton/d) MBR - Zone C - Toe groutfor 323 pipe pile	12 24	30-May-24 A	13-Jun-24 29-Jun-24	-216	······	WIDK - Zone C - Stutinsta	Iaton A4 (-3.5mi-D)(1 drane, 10Weiders, 24tionid) MBR -Zone C - Toe grout for 323 pipe pile
MBRAF-3690 MBRAF-3890		6	01-Jun-24 05-Jun-24	29-Jun-24 12-Jun-24	-177	<u> </u>	MBR -Zone C - Trial pumpi	
	MBR - Zone C - Preloading Strut S4 (5 cycles, 5 struts/cycle/day)	3	14-Jun-24	12-Jun-24 17-Jun-24	-212			eløading Strut S4 (5 cycles, 5 struts/cycle/day)
	MBR - Zone C - ELS Excavation (-4.15 to -7.65mPD) (8400m3)(3-4 excavators, 500m3/d) *MD	12	11-Jul-24	24-Jul-24	-235			MBR - Zone C - ELS Excavation (4.15 to -7.65mPD) (8400m3)(3-4
	MBR -Zone C (North)-323dia pipe pile (12nos., TL=-28 mPD, 1no/day/rig)	12	25-Jul-24	07-Aug-24	-224			MBR - Zone C (North) - 323dia pipe pile (
MBRAF-3680		23	25-Jul-24	20-Aug-24	-235			MBR - Zone C (S
MBRAF-3900		6	25-Jul-24	31-Jul-24	-210			MBR - Zone C - Trial pumping pit (3nos., -7.1 to -9.5ml
	MBR - Zone C - Strut Installation S5 (-7.1mPD)(1 crane, 10welders, 24ton/d)	12	13-Aug-24	26-Aug-24	-235		-	MBR -
	MBR - Zone C - Preloading Strut S5 (5 cycles, 5 struts/cycle/day) MBR - Zone C - ELS Excavation (-7.65 to -9.0mPD) (3240m3)(3-4 excavators, 500m3/d)	3	27-Aug-24 30-Aug-24	29-Aug-24 06-Sep-24	-235 -235		-	M
	ent System (TTS)	/	30-Mug-24	00-3ep-24	-230			
TTS Foundation								
Kingpost and Wor						1	•	
178								
Deve	Remaining Level of Ef		A 1	4				Project ID : DWPr38 240617



Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24) Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 6 of 8

	September 47				Octob 48 13	er		November 49
01	08 15	2	2	29 06	13	20	27	03
etritor -A&A w	orks of existing dive	rsion char	mber					
				•		SDB - Driven H-	piles (SDI	B315nos.,1827
s (SDB6nos.,	348m @48m/d/rig,	1 rig after e	xisting De	tritor modification v	vorks)			
				ļ				
				· · · · · · · · · · · · · · · · · · ·				
0m3)(3-4 exca	avalors, 500m3/d) *1 =-28 mPD, 1no./day 55 (-7.1mPD)(1 cran Strut S5 (5 cycles, 5	MD						
ile (13nos., TL:	=-28 mPD, 1no <i>l</i> day	y/rig)						
to -9.5mPD) ut Installation S	5 (-7 1mPD)/1 cran	a Swelde	rs 24ton/r	0				
A- Preloading	Strut S5 (5 cycles, 5	struts/cycl	e/day)	,				
MBR - Zone	A-ELS Excavation	(-7.65 to -9	.0mPD)(3	510m3)(3-4 excav	vators, 500r	n3/d)		
)(9100m3)(3-4	4 excavators, 500m	3/d)*MD						
-Zone B - 32	3dia pipe pile (22no PD)	os., TL=-28	3 mPD, 1r	o./day/rig)				
MBR - Z	Zone B - Strut Install	ation S5 (-	7.1mPDX	1 crane, 8welders.	24ton/d)			
			- ^					
excavators, 50	0m3/d)*MD							
2nos., TL=-28	mPD, 1no/day/rig)							
	ipe pile (23nos., TL:	=-28 mPD	,1no <i>l</i> day	/rig)				
D)	nstallation S5 (-7.1m	PDV4	ine 10	dars 24ton/2)				
R -Zone C -	nstallation S5 (-7.1n Preloading Strut S5	i (5 cycles) (1 cra	5 struts/cv	(cle/day)				
ME	BR - Zone C - ELS I	Excavation	n (-7.65 to	9.0mPD)(3240m	3)(3-4 exca	vators, 500m3/d)		
	1			Dragrage	Repo	rt - 3MRP)	
		M	onthiy	Progress				
)	Date		onthiy		<u>'</u>			proved
	Date	;		Revision		Checked		proved
)	Date 31-May-24	;	ontniy Rev.	Revision				proved
)		;		Revision				proved
)		;		Revision				proved

Activity Name	Dur	Early Start	Early Finish			46 28 04 11 18 25
S-2180 TTS - Installation of steel deck (Centerportion)	12	08-Apr-24A	16-May-24 A		TTS - Installation of steel eck (Center portion)	
S Foundation and ELS Stage 2						
TS-1060 TTS - ELS Excavation (+1.15 to -1.35mPD) (14,158m3)(3-4 excavators/WF, 2 WFs, 600m3/d/WF) *MD/PD	12	05-Apr-24A	24-May-24 A		TTS - ELS Excavation (+1.15 to -1.35mPD) (14,158m3)(3-4 excavators/WF, 2 WFs, 600m3/d/WF) *MD/PD	
TS-1270 TTS - Strut Installation S3 (-0.85mPD)/(2 cranes, 8welders per WF, 2 WFs, 30ton/d)	15	11-Apr-24 A	-	-244	TTS - Strut Installation S3 (-0.85mPD)(2 cranes, 8 welders per WF, 2 WFs, 30 bn/d)	
TS-2060 TTS - Preloading Strut S3 (-0.85mPD)(4 cycles, 4 struts/cycle/day, 16 struts)	3	12-Jun-24	14-Jun-24	-244	TTS - Preloading StrutS3 (40.85mPD)(4 cycles, 4 struts/cycle/day, 16 struts)	
TS-1280 TTS - ELS Excavation (-1.35 to -3.37mPD) (11,439m3) (3-4 excavators/WF, 2 WFs, 600m3/d/WF) * MD/PD	18	15-Jun-24	06-Jul-24	-244	1	0) (11,439m3)(3-4 excavators/WF, 2 WFs, 600m3/d/W
TTS-1290 TTS - Strut Installation S4 (-2.87mPD)(2 cranes, 8welders per WF, 2 WFs, 30ton/d)	20	20-Jun-24	13-Jul-24	-244	·	.87mPD)(2 cranes, 8welders per WF, 2 WFs, 30ton/d)
TS-2070 TTS - Preloading Strut S4 (-2.87mPD)(4 cycles, 4 struts/cycle/day, 16 struts)	4	15-Jul-24	18-Jul-24	-244		strut S4 (-2.87mPD)(4 cycles, 4 struts/cycle/day, 16 strut
TS-1300 TTS-ELS Excavation (-3.37 to -5mPD) (9,231m3) (3-4 excavators/WF, 2 WFs, 600m3/d/WF) *MD	8	19-Jul-24	27-Jul-24	-244		S - ELS Excavation (-3.37 to -5mPD) (9,231m3)(3-4 e
'S Formation Level TS-1260 TTS - Plate load test (2nos.)(assume 2nos.non-MD area)	8	29-Jul-24	06-Aug-24	-244		TTS - Plate load test (2nos.)(assume 2
TS-1810 TTS - Local excavation of marine sediment (-5 to -6.3mPD, 920m3) *MD	6	29-Jul-24	03-Aug-24	-226		TTS-Local excavation of marine sediment
TS-2080 TTS - Backfill rockfill (-6.3 to -5mPD)	12	05-Aug-24	17-Aug-24	-226		TTS - Backfill rock
TS-2090 TTS - Plate load test (1no.)(after backfill rockfill)	8	19-Aug-24	27-Aug-24	-226		
Structure						
Substructure						
S-1380 TTS - Box Raft Foundation (-5mPD to -3.42mPD) (incl. earth matinstallation)	36	07-Aug-24	17-Sep-24	-244		
a 3 Construction						
e 3 North Portion (Z3N)						
/ Sudge Thickening Building (STB)						
3 : Foundation and ELS						
TB : Excavation and Lateral Support						
TB : ELS Zone A and B Z3S3-5230 STB - ELS (A&B), Strut Installation S2 preload	2	12-Apr-24 A	13-Apr-24A		ation S2 preload	
Z3S3-2450 STB - ELS (A&B), Excavation (-0.5 to -3.75mPD, 2,001m3 @ 350m3/d) *MD	6	15-Apr-24A	04-May-24 A		STB - ELS (A&B), Excavation (-0.5 to -3.75mPU, 2,001m3 @ 350m3/d) *MD	
Z3S3-5800 STB - ELS (A&B), Demolish remaining existing AFT (8) silent method	6	29-Apr-24 A			STB - ELS (A&B), Demolish remaining existing AFT (8) silent method	
TB : ELS Zone C						
3S3-5960 STB - ELS (C), Strut Installation S2 preload	2	26-Apr-24 A	29-Apr-24A		STB - ELS (C), Strut Installation S2 preload	
3S3-5970 STB - ELS (C), Excavation (-0.5 to -3.75mPD, 500m3 @ 200m3/d) *MD	3	30-Apr-24 A	09-May-24 A		STB - ELS (C), Excavation (-0.5 to -3.7 mPD, 500m3 @ 200m3/d) *MD	
: Civil and Structural Works						
B : Structure						
TB : Structure Stage 1 (KD10) STB : Subrstructure						
Z3S3-6140 STB - Stage 1 - Install capping plate and blinding	10	25-Apr-24A	18-May-24 A		STB - Stage 1 - Install capping plate and blinding	
Z3S3-2500 STB - Stage 1 - Pile Cap Construction (-3.55 to -0.5mPD, 2.055m) Base Slab and Wal	12	20-May-24 A	-	-144	STB - Stage 1 - Pile Cap Construction (-3.55 to -0.5mPD, 2.055m)Ba	e \$lab and Wal
Z3S3-3670 STB - Stage 1 - Waterproof, backfill and Remove part of S2	6	21-Jun-24	27-Jun-24	-144	STB-Stage 1 - Waterproof, backfill and Remove part of	
23S3-2600 STB - Stage 1 - Structural Wall/Column (-0.5 to +3 5mPD) with S2 castin	6	28-Jun-24	05-Jul-24	-144	STB - Stage 1 - Structural WallColumn (-0	5to+35mPD) with S2 cast in
Z3S3-3660 STB - Stage 1 - Waterproof, backfil and Remove S1	6	06-Jul-24	12-Jul-24	-144	STB-Stage 1 - Waterproof, b	ack fill and Remove S1
Z3S3-2630 STB - Stage 1 - Structural Wall/Column (+3.5 b +6mPD)& Ground Floor Slab@+6.0mPD	10	13-Jul-24	24-Jul-24	-144	STB-S	tagle 1 - Structural Wall/Column (+3.5 to +6 mPD)& G
TB : Superstructure						
Z3S3-2710 STB - Stage 1 - Structure (+6.0 to +12.5/13.5mPD) First Floor @ +13.5mPD	10	25-Jul-24	05-Aug-24	-144		STB - Stage 1 - Structure (+6.0 to +12.5
Z3S3-2740 STB - Stage 1 - Structure (+12.5/13.5 to +18.3mPD) Roof Floor @ +18.3mPD	10	06-Aug-24	16-Aug-24	-144		STB-Stage 1-Str
Z3S3-3000 STB - Stage 1 - Structure (+18.3 to +21.1mPD) and remaining structure	12	17-Aug-24	30-Aug-24	319		
Z3S3-2720 STB - Stage 1 - Construct concrete plinth for PV panel installation (48nos, 10nos/day/gang, 1gang) Z3C2 2780 STB - Stage 1 - Civil & Structure Works of Roof Elect & bandworks DV/is contractor	5	17-Aug-24	22-Aug-24	-144		STB-St STB-S
Z3S3-2780 STB - Stage 1 - Civil & Structural Works of Roof Floor & handover to PV's contractor TB : Structure Stage 2 (Remaining)	0		22-Aug-24	-144		♦ 318-3
IB : Structure Stage 2 (Remaining) ITB : Subrstructure						
23S3-6170 STB - Stage 2 - Install capping plate, earth mat and blinding	12	10-May-24 A	25-May-24 A		STB - Stage 2 - Install capping plate, earth mat and blinding	
Z3S3-6040 STB - Stage 2 - Pile Cap Construction (-3.55 to -0.5mPD, 2.055m) Base Slab and Wal	12	27-May-24 A	20-Jun-24	-24	STB - Stage 2 - Pile Cap Construction (-3.55 to -0.5mPD, 2.055m)Ba	
Z3S3-6110 STB - Stage 2 - Waterproof, back fill and Remove part of S2	6	21-Jun-24	27-Jun-24	-24	STB - Stage 2 - Wate proof, backfil and Remove part of	
Z3S3-6050 STB - Stage 2 - Structure (-0.5 to +3.5mPD)	7	28-Jun-24	06-Jul-24	-24	STB-Stage 2 - Structure (-0.5 to +3.5mF	<u></u>
23S3-6100 STB - Stage 2 - Waterproof, backfill and Remove S1	6	08-Jul-24	13-Jul-24	-24	STB - Stage 2 - Waterproof	
23S3-6060 STB - Stage 2 - Structure (+3.5 to +6mPD) Ground Floor @ +6.0mPD	12	15-Jul-24	27-Jul-24	-24	S	B+Stage 2 - Structure (+3.5 to +6mPD) Ground Flo
Z3S3-6150 STB - Stage 2 - Waterproof, backfill and Remove remaining S2	5	29-Jul-24	02-Aug-24	-24		STB - Stage 2 - Waterproof, backfill and Re
TB: Superstructure	- 10	02 411 01	10 411 01	0.1		STB-Stage 2-S
23S3-6090 STB - Stage 2 - Structure (+6.0 to +12.5/13.5mPD) First Floor @ +13.5mPD	12	03-Aug-24	16-Aug-24	-24		51B-58ge2-5
3 : Water Tightness Test S3-5990 STB - Concrete gain strength (slab +6mpd)	7	25-Jul-24	01-Aug-24	-31		STB - Concrete gain strength (slab +6mpd)
S3-5990 STB - Concrete gain strength (slab +6mpd) S3-6000 STB - Remove formwork and concrete defect works for water test	7	25-Jul-24 02-Aug-24	01-Aug-24 09-Aug-24	-31		STB-Concrete gain strength (stab +ompo)
3-5000 STB - Remove formwork and concrete delect works for water lest 3-5200 STB - Water Tight Test (2tanks)(water height=6.15m,plug=1d,fill=4d,absoption=7d,test=7d,remove=1d)	20	10-Aug-24	02-Sep-24	-31		
330-200 310 - Waler Hight rest (ztainks)(waler height=0.15in.plug=10,iiii=40,absoption=70,iest=70,ieinove=10)	20		02-00p=24	-01		
3-6020 STB - Conαrete gain strength (slab +13.5/+18.3mPD)	7	17-Aug-24	24-Aug-24	-24		ST
3-6010 STB - Remove backprop and falsework for ABWF works (+6.0/+18.3mPD)	7	26-Aug-24	02-Sep-24	-24		
3 South Portion (Z3S)						
e Digestor No. 1-3 (SD1-3)						
3 : Foundation and ELS						
I-3 : Excavation and Strut Installation						
1-3 : ELS						
3S3-2150 Sludge Digester No. 1-3 - ELS Excavation (+4.3 to +1.8mPD, 6130m3 @ 1000m3/d)	6	16-Apr-24A		a · ·	ge Digester No. 1-3 - ELS Excavation (+4.3 to +1.8mPD 6130m3 @ 1000m3/d)	
3S3-2190 Sludge Digester No. 1-3 - Strut Installation S2 (+2.3mPD)	7	24-Apr-24 A	07-Jun-24	-243	Sludge Digester No. 1-3 - Strutt Installation S2 (+2.3mPD)	
SS3-5730 Sludge Digester No. 1-3 - Preloading StrutS2 (+2.3mPD)(4 cycle, 5 struts/cycle/day, 16 struts)	4	31-May-24 A		-243	Sludge Digester No. 1-3 - Preloading StrutS2 (+2.3mPD)(4 cycle, 5 struts/cycle/day, 16 strut Sludge Digester No. 1-3 - ELS Excavation (+1.8 to-0.7mPD), 6130m3 @ 1000m	
SI33-2200 Sludge Digester No. 1-3 - ELS Excavation (+1.8 to -0.7mPD, 6130m3 @ 1000m3/d) *MD 3S3-2210 Sludge Digester No. 1-3 - Strut Installation S3 (-0.2mPD)	6	07-Jun-24 12-Jun-24	14-Jun-24 19-Jun-24	-243 -243	Sludge Digester No. 1-3 - ELS Extavation (+1.3 to -0.7 mPD, 613 um3 @ 1000m Sludge Digester No. 1-3 - Strut Installation S3 (-0.2 mPD)	
Isudge Digester No. 1-3 - Strut Installation S3 (-0.2mPD) S3-5740 Sludge Digester No. 1-3 - Preloading Strut S3 (-0.2mPD)(4 cycle, 5 struts/cycle/day, 16 struts)	4	12-Jun-24 20-Jun-24	19-Jun-24 24-Jun-24	-243	Sludge Digester No. 1-3 - Sulu Instalation SS (-0.2mPD) Sludge Digester No. 1-3 - Preloading StrutS3 (-0.2mPD)(4 cy	le,5 struts/cvcle/dav 16 struts)
S3-2740 Sludge Digester No. 1-3 - Freidading Situ(53 (-0.211FD))4 Cycle; 5 Situ(SC)Cleickay, 16 Situ(S) S3-2220 Sludge Digester No. 1-3 - ELS Excavation (-0.7 to -3.2mPD, 6130m3 @ 1000m3/d) *MD	6	20-Jun-24 25-Jun-24	02-Jul-24	-243	Sludge Digester No. 1-3 - ELS Excavation (-0.7	
S3-2220 Sludge Digester No. 1-3 - Strut Installation S4 (-2.7mPD)	7	23-Jun-24 28-Jun-24	02-Jul-24 06-Jul-24	-243	Sludge Digester No. 1-3 - Struthstallatio	· · · · · · · · · · · · · · · · · · ·
S3-5750 Sludge Digester No. 1-3 - Preloading Strut S4 (-2.7mPD)(4 cycle, 5 struts/cycle/day, 16 struts)	4	08-Jul-24	11-Jul-24	-243	1	ading Strut S4 (-2.7mPD)(4 cycle, 5 struts/cycle/day
SS3-2240 Sludge Digester No.1-3 - ELS Excavation (-3.2 to -5.5mPD, 5640m3 @ 1000m3/d)	6	12-Jul-24	18-Jul-24	-243		o. 1-3 - ELS Excavation (-3.2 to -5.5mPD, 5640m3
3S3-3600 Sludge Digester No.1-3 - Strut Installation S5 (-5.0mPD)	7	16-Jul-24	23-Jul-24	-243	Sludge D	igester No. 1-3 - Strut Installation S5 (-5.0mPD)
SS3-5760 Sludge Digester No. 1-3 - Preloading Strut S5 (-5.0mPD)(4 cycle, 5 struts/cycle/day, 16 struts)	4	24-Jul-24	27-Jul-24	-243		udge Digester No. 1-3 - Preloading Strut S5 (-5.0ml
3S3-3610 Sludge Digester No. 1-3 - ELS Excavation (-5.5 to -7.5mPD, 4904m3 @ 1000m3/d)	5	29-Jul-24	02-Aug-24	-243		Sludge Digester No. 1-3 - ELS Excavation
3S3-3620 Sludge Digester No. 1-3 - Strut Installation S6 (-7mPD)	7	01-Aug-24	08-Aug-24	-243		Sludge Digester No. 1-3 - Strut I
3S3-5770 Sludge Digester No. 1-3 - Preloading Strut S6 (-7mPD)(4 cycle, 5 struts/cycle/day, 16 struts)	4	09-Aug-24	13-Aug-24	-243		Sludge Digester No. 1
	6	14-Aug-24	20-Aug-24	-243		Sludge Di
3S3-3630 Sludge Digester No. 1-3 - ELS Excavation (-7.5 to -9.0mPD, 3678m3 @ 1000m3/d)						
01-3 : Formation Level		1	1			
Storgan Sludge Digester No. 1-3 - Plate Load Test	6	21-Aug-24	27-Aug-24	-243		
01-3 : Formation Level	6 2 4	21-Aug-24 28-Aug-24 30-Aug-24	27-Aug-24 29-Aug-24 03-Sep-24	-243 -243 -243		



Remaining Level of Ef...
Actual Work
Remaining Work
Critical Remaining Work
Milestone

٠

Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24) Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 7 of 8

01	47 08 15	22		29 06	48	20	27	49 03
/PD								
ors/WF.2W/Fe	600m3/d/WF)*MD							
on-MD area) 3.3mPD,920m	i3)*MD							
to-5mPD)	1no.)(after backfill ro	-1.695						
Plate load test (1no.)(after backfill ro	ckfill)						
	ΠS	S-BoxRa	ftFound	ation (-5mPD to -3.42	mPD)(ir	nd earth matinsta	llation)	
borSlab@+6	.0mPD							
PD)FirstFloor (
12.5/13.5 to +1	18.3mPD)Roof Floo	or@+18.3	imPD					
TB - Stage 1 - S	Structure (+18.3 to +2 crete plinth for PV par	21.1mPD) nel installa) and ren ition (48r	haining structure nos, 10nos/day/gang	,1gang)			
Civil & Structur	al Works of Roof Flo	or&hand	lover to F	V's contractor				
)mPD								
naining S2								
6.0 to +12.5/13	3.5mPD)FirstFloor (@ +13.5m	PD					
defectworksfo STB-Wate		(water hei	ght=6.15	im,plug=1d,fill=4d,ab	soption=	=7d,test=7d,remov	/e=1d)	
				, , , ,			·····	
	oth (slab +13.5/+18.3 nove backprop and t		forABW	Fworks (+6.0/+18.3m	nPD)			
3/d)								
	e/day, 16 struts) n3 @ 1000m3/d)							
S6 (-7mPD)								
iding Strut S6 (-7mPD)(4 cycle, 5 st cavation (-7.5 to -9.0r	nuts/cycle/	day, 16 s 8m3 @ 1	truts) 1000m3/d)				
	1-3 - Plate Load Test No. 1-3 - 300mm thk		olinding	back-prop)				
				ack-prop)gain streng	th			
Ţ		Mo	onthly	Progress F	Repo		1	
• [Date			Revision		Checked	Ap	proved
	31-May-24	-	Rev.	0				
I								

y ID	Activity Name	Orig	Early Start	Early Finish	Total Float		May				June			July				August				Septembe	er			Oc	tober		Nove
		Dur					43	40		00 00	44	00	20 0	45	1 04			46	0 05		00	47	4.5 0.0		20 0		48	0 0 0	4
BH1:E&M	Installation					28 [0	12	19	26	02 09	16	23	30 0	14	21	28	04 [1	1 [1	8 25	01	80		15 22	<u> </u>	29 0	16	13 2	0 2/	ĻĻ
	-2475 BH No. 1 - Tank wall (4th to 5th Ring) construction and welding	32	25-Apr-24 A	14-Jun-24	-104	÷					BH No. 1 - Ta	ank wall (4th to	5th Ring) constru	ction and welding															
	-1010 BH No. 1 - Installation of pipework and instrumentation in Biogas Holder Valve Chamber No.4	52		15-Aug-24	-99	+						·····	5,			ii		BH No.	I - Installation of	fpipework	and instrument	lation in B	liogas Holder	Valve Cha	mberNo.4				
	In 1020 BH No.1 - Instrumentation	30	15-Jun-24	20-Jul-24	-76										BH No. 1	-Instrumentation				<u>.</u>									
	-1030 BH No.1 - Installation of Biogas Booster Pump No.1 & 2	30	15-Jun-24	20-Jul-24	-76	+									BH No. 1	-Installation of B	ogas Booster Pi	Imp No.1 & 2											
	-1040 BH No. 1 - Electrical works (Cable wiring, termination, lightning arrestor)(To alt power source until LVSB@STB ener		15-Jun-24	06-Jul-24	-64								BHI	No. 1 - Electrical wo	orks (Cable v	viring, terminatio	, lightning arrest	or)(To alt pov	ver source until l	LVSB@ST	Benergiz)								
ATALZ3BH	-2485 BH No. 1 - Disk assembly inside tank, raise disk, painting on both side	18	15-Jun-24	06-Jul-24	-104								BH	No. 1 - Disk assem	bly inside ta	nk, raise disk, pa	nting on both sid	e											
ATALZ3BH	-2495 BH No. 1 - Membrane fixing and wooden planks Installation	21	08-Jul-24	31-Jul-24	-104											BHN	o.1 - Membrane	fixing and wo	oden planks ins	stallation									
ATALZ3BH	-2505 BH No. 1 - Installation of tank accessories (telescopic guide, staricase, safety valve, sensors) and touch-up paint	15	01-Aug-24	17-Aug-24	-104													BHN	lo.1 - Installatio	n of tank a	ccessories (tele	escopic g	uide, staricase	, safety val	ve, sensors) a	and touch-up	paint		
ATALZ3BH	-2515 BH No. 1 - Specialistinspection on structure and membrane	4	19-Aug-24	22-Aug-24	-104														BH No. 1 - 9	Specialisti	nspection on st	ructure a	nd membrane						
BH1 : Testir	ng & Commissioning																			1									1
ATALZ3BH	-2070 BH No. 1 - T&C - E&M SAT of Biogas Holder No.1 (using Air to test membrane only)	15	23-Aug-24	09-Sep-24	-104																BH I	No.1-T	&C-E&MSAT	of Biogas	Holder No.1 (using Air to te	estmembrane	only)	
ATALZ3BH	-2090 BH No. 1 - T&C - E&M SAT of whole Biogas Holder No.1 and associated valve and pipework (N2 Purging)	20	23-Aug-24	14-Sep-24	-104																	BH	No. 1 - T&C - E					ated valve an	ıd pipewo
ATALZ3BH	-2100 BH No. 1 - T&C - E&M SAT of Biogas Booster Pump No.1 & 2	20	23-Aug-24	14-Sep-24	-104															-		BH	No. 1 - T&C - E	&MSATo	f Biogas Boos	ster Pump N	0.1&2		
BH1: Diver	sion Works																												
Z3S7-2060	BH No. 1 - Temporary system and associated pipeworks for switchover to new BH1 for decomission of GH2	45	16-Aug-24	09-Oct-24	-99																					BH No.1	- Temporarys	systemandas	ssociated
Utility Corri	dor and Pipe Portal (UC/PP)																												
Utility Corrie	dor No. 1 (UC1)																												
UC1 : Pre	drilling Works																												
Z3S5UC1	-2180 UC/PP - Predrill UC&PP-PD2	6	01-Jun-24	07-Jun-24	-135						- Predrill UC&PP-I																		
Z3S5UC1	-2200 UC/PP - Predrill UC&PP-PD6	6	08-Jun-24	15-Jun-24	-135						UC/PP-Pr	redrill UC&PP-	PD6																



 Remaining Level of Ef... Actual Work Remaining Work Critical Remaining Work Milestone

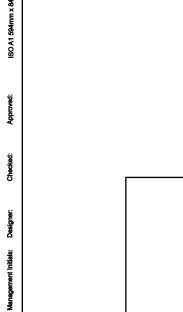
٠

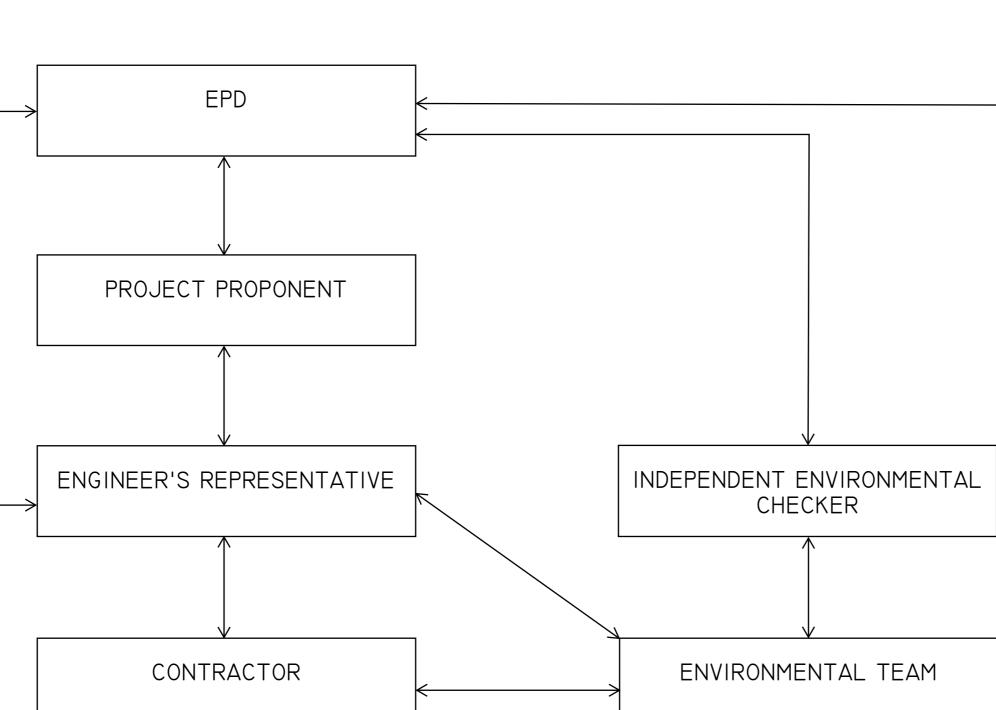
Contract DC/2019/10 - YLEPP - Main Works for Stage 1 Monthly Progress Report No. 43- 3MRP (May 24)

Project ID : DWPr38_240617 Layout : DC201910 MPR43-3MRP Page 8 of 8

	Monthly Progress Report - 3MRP				
)	Date	Revision	Checked	Approved	
	31-May-24	Rev. 0			

Appendix B Project Organization Chart





LINE OF COMMUNICATION

LEGEND:



PROJECT ^{東目}

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

CLIENT

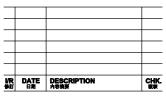


築務署 Drainage Services Departm

AECOM Asia Company Ltd. www.aecom.com

SUB-CONSULTANTS 分判工程期間公司

ISSUE/REVISION



S1

Ţ	ATUS			

SCALE	DIMENS 尺寸單位

SCALE 此例	DIMENSION UNIT 尺寸平位
A3 1 : 40000	METRES

KEY PLAN ★헤르

PROJECT NO.		

ACT NO.

60505476

CE 3/2015 (DS)

SHEET TITLE 副紙名第

PROJECT ORGANISATION

SHEET NUMBER

Appendix C Action and Limit Levels

Action and Limit Levels for Air Quality

Parameters	Action Level	
1-hour TSP Level in μg/m³	¹ For baseline level \leq 384 µg/m ³ , Action level = (baseline level * 1.3 + Limit level)/2; For baseline level > 384 µg/m ³ , Action level = Limit level	500 µg/m ³

Notes:

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

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

b) AM2 = (70*1.3 + 500) / 2 = 296 µg/m³.

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:

1. 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.

2. 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			
Construction Phase Water Quality Monitoring					
DO in mg/L (Surface, Middle & Bottom) ²	Surface & Middle 5%-ile of baseline data for surface and middle layer. Bottom 5%-ile of baseline data for bottom layer.	Surface & Middle 4 mg/L or 1%-ile of baseline data for surface and middle layer. Bottom 2 mg/L or 1%-ile of baseline data for bottom layer.			
SS in mg/L (depth-averaged ¹) ³	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 ¹) ³	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:	uay	-			

1. "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths;

2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits;

3. 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) ¹	72.2 dB(A) ²	
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 ³	Limit Level ³	
Transect 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	Significant decline ^{1,2} in any of these parameters during the current monitoring	Significant decline in any of these parameters for	
	Species diversity of species with conservation importance only			
	Abundance of all avifauna species (including but not only limited to overwintering waterbirds) in the community	month relative to the corresponding month during the baseline survey.	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			

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

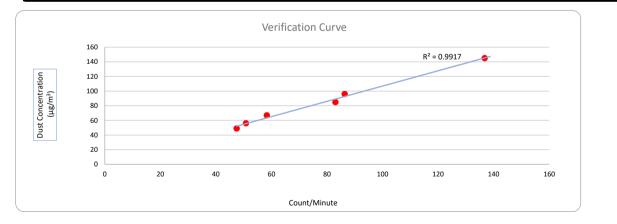
Information of Calibrated Equipement							
28-Nov-23	to	30-Nov-24	Next Verification Test Date:	28-Nov-24			
	Sibata LD-5R	1					
882106							
RPT-23-HVS-0068		068					
AM2, location near the Leachate Treatment Works within the NENTX Landfill							
	RF	28-Nov-23 to Sibata LD-5R Sibata LD-5R 882106 RPT-23-HVS-00	28-Nov-23 to 30-Nov-24 Sibata LD-5R 882106 882106 RPT-23-HVS-0068	28-Nov-23 to 30-Nov-24 Next Verification Test Date: Sibata LD-5R 882106 1000000000000000000000000000000000000			

	Standard Equipment Informat	tion
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	4166
Last Calibration Date:	4-Nov-23	19-Jun-23
Next Calibration Date:	3-Jan-24	19-Jun-24

	Equipement Vertification Result									
Verification		Duration			Results from	Results from Standard Equipment				
Test No.	Date	Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration (μg/m³) y-axis			
1	28/11/2023	8789.68	8792.68	180.00	15546	86	96			
2	28/11/2023	8792.68 8795.68	180.00	14944	83	85				
3	28/11/2023	8795.68	8798.68	180.00	8543	47	49			
4	30/11/2023	8798.68	8801.68	180.00	10499	58	67			
5	30/11/2023	8801.68	8804.68	180.00	24622	137	145			
6	30/11/2023	8804.68	8807.68	180.00	9145	51	56			

Linear Regression of y on x

ſ	Slope, K factor:	<u>1.0437</u>	Intercept:	<u>2.4993</u>	*Correlation Coefficient,R:	<u>0.9958</u>
	Verification Test Result:	Strong Correlation,	Results were accepted.		* If the Correlation Coefficient, R is <0.5. Chec	king and Re-verification are required.



Operated By:

Checked By:

Andy Li Project Technician, Environmental

Date: 30-11-2023

Tandy Tse

Senior Consultant, Environmental

Date:

30-11-2023



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

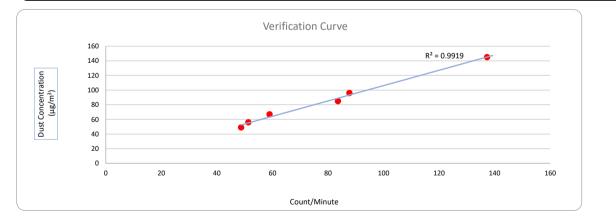
Information of Calibrated Equipement							
28-Nov-23	to	30-Nov-23	Next Verification Test Date:	28-Nov-24			
	Sibata LD-5R						
882107							
RPT-23-HVS-0069		69					
AM2, location near the Leachate Treatment Works within the NENTX Landfill							
	RF	28-Nov-23 to Sibata LD-5R 882107 RPT-23-HVS-00 882107	28-Nov-23 to 30-Nov-23 Sibata LD-5R 882107 882107 RPT-23-HVS-0069	28-Nov-23 to 30-Nov-23 Sibata LD-5R 882107 RPT-23-HVS-0069			

	Standard Equipment Informat	tion
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	4166
Last Calibration Date:	4-Nov-23	19-Jun-23
Next Calibration Date:	3-Jan-24	19-Jun-24

	Equipement Vertification Result									
Verification		Duration			Results from	a Calibrated Equipement	Results from Standard Equipment			
Test No.	Date	Start-time	End-time Elapsed Time (in min)		Total Counts	Counts/ Minute x-axis	Dust Concentration (µg/m³) y-axis			
1	28/11/2023	8789.68	8792.68	180.00	15789	88	96			
2	28/11/2023	8792.68 8795.68 8795.68 8798.68	180.00	15045	84	85				
3	28/11/2023		8798.68	180.00	8765	49	49			
4	30/11/2023	8798.68	8801.68	180.00	10612	59	67			
5	30/11/2023	8801.68	8804.68	180.00	24711	137	145			
6	30/11/2023	8804.68	8807.68	180.00	9235	51	56			

Linear Regression of y on x

Γ	Slope, K factor:	<u>1.0468</u>	Intercept:	<u>1.4320</u>	*Correlation Coefficient,R:	<u>0.9959</u>
	Verification Test Result:	Strong Correlation,	Results were accepted.		* If the Correlation Coefficient, R is <0.5. Chec	king and Re-verification are required.



Operated By:

Checked By:

Andy Li Project Technician, Environmental

Date: 30-11-2023

Tandy Tse

Senior Consultant, Environmental

Date:

30-11-2023

Noise Quality Monitoring Equipment

Certificate of Calibration

for

Description:	Sound Level Calibrator
Manufacturer:	RION
Type No.:	NC-75
Serial No.:	35124530

Submitted by:

Customer: Acuity Sustainability Consulting Limited Address: Unit E, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

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

\checkmark	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 November 2023

Date of calibration: 17 November 2023

Date of NEXT calibration: 16 November 2024

Calibrated by: Calibration Technician

Certified by: Mr. Ng Yan Wa Laboratory Manager

Date of issue: 17 November 2023

Certificate No.: APJ23-090-CC004

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com 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:	23.4 °C
Air Pressure:	1004 hPa
Relative Humidity:	24.4 %

4. Calibration Equipment:

Test Equipment	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV230128	HOKLAS

5. Calibration Results

5.1 Sound Pressure Level

Nominal value	Accept lower level	Accept upper level	Measured value
dB	dB	dB	dB
94.0	93.6	94.4	94.1

Note:

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



Certificate No.: APJ23-090-CC004



Certificate of Calibration

for

Sound Level Calibrator
RION
NC-75
35124528

Submitted by:

Customer: Acuity Sustainability Consulting Limited Address: Unit E, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

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

\checkmark	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: 21 December 2023

Date of calibration: 22 December 2023

Date of NEXT calibration: 21 December 2024

Calibrated by: Calibration Technician

Date of issue: 22 December 2023

Certified by:

Mr. Ng Yan Wa Laboratory Manager

age 1 of 2

Certificate No.: APJ23-091-CC002

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

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:	21.5 °C
Air Pressure:	1006 hPa
Relative Humidity:	24.6 %

4. Calibration Equipment:

Test Equipment	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV230128	HOKLAS

5. Calibration Results

5.1 Sound Pressure Level

Nominal value	Accept lower level	Accept upper level	Measured value
dB	dB	dB	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.: APJ23-091-CC002

Page 2 of 2

Certificate of Calibration

for

Description:	Sound Level Calibrator
Manufacturer:	RION
Type No.:	NC-75
Serial No.:	35124529

Submitted by:

Customer: Acuity Sustainability Consulting Limited Address: Unit E, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

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

\checkmark	Within
	Outside

(A+A)

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: 19 October 2023

Date of calibration: 27 October 2023

Date of NEXT calibration: 26 October 2024

Calibrated by: Calibration Technician

Date of issue: 27 October 2023

Certified by:

Mr. Ng Yan Wa Kaboratory Manager



Certificate No.: APJ23-090-CC003

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com Page 1 of 2

(A+A)*L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

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:	24.4 °C
Air Pressure:	1013 hPa
Relative Humidity:	64.5 %

4. Calibration Equipment:

Test Equipment	Туре	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV220120	HOKLAS

5. Calibration Results

5.1 Sound Pressure Level

Nominal value	Accept lower level	Accept upper level	Measured value
dB	dB	dB	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.



Page 2 of 2

Certificate No.: APJ23-090-CC003



Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio
Type No.:	XL2 (Serial No.: A2A-09696-E0)
Microphone:	ACO 7052 (Serial No.:73780)
Preamplifier:	NTi Audio MA220 (Serial No.:6282)

Submitted by:

Customer: Address:

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

Aurecon Hong Kong Limited

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

✓ Within (31.5Hz – 8kHz)
 □ 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: 28 February 2024

Date of calibration: 02 March 2024

Date of NEXT calibration: 01 March 2025

Calibrated by: Calibration Technician

Date of issue: 02 March 2024

Certificate No.: APJ23-146-CC003

Certified by:

Mr. Ng Yan Wa Laboratory Manager

age 1 of 4

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

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:	22.9 °C
Air Pressure:	1005 hPa
Relative Humidity:	61.2 %

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to	
Multifunction Calibrator	B&K 4226	2288467	AV220061	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. V	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. V	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.1	Ref
30-130	dBA	SPL	Fast	104	1000	104.1	±0.3
				114		114.1	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1		
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB	
20.120	30-130 dBA SPL	CDI	Fast	0.4	04	1000	94.1	Ref
30-130		Slow	94	1000	94.1	±0.3		

Page 2 of 4

Certificate No.: APJ23-146-CC003

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423Tel: (852) 2668 3423Fax:(852) 2668 6946Homepage: http://www.aa-lab.comE-mail : inquiry@aa-lab.com

(A+A)*L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)		Applied value		UUT Reading,	IEC 61672 Class 1												
Range, dB	Freq. V	Veighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB										
				31.5	94.0	±2.0											
				63	94.1	±1.5											
		dB SPL	Fast				125	94.1	±1.5								
						250	94.1	±1.4									
30-130	30-130 dB			94	500	94.1	±1.4										
																1000	94.1
					2000	94.4	±1.6										
					4000	95.2	±1.6										
					8000	94.5	+2.1; -3.1										

A-weighting

Setti	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											
				31.5	54.6	-39.4 ±2.0												
				63	67.9	-26.2±1.5												
				125	78.0	-16.1±1.5												
		dBA SPL	Fast	94	250	85.4	-8.6±1.4											
30-130	dBA				500	90.9	-3.2 ± 1.4											
																	1000	94.1
					2000	95.6	+1.2±1.6											
					4000	96.2	$+1.0 \pm 1.6$											
				8000	93.4	-1.1+2.1; -3.1												

C-weighting

Sett	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														
				31.5	91.0	-3.0 ±2.0															
				63	93.3	-0.8±1.5															
		dBC SPL	Fast	Fast 94	125	93.9	-0.2 ±1.5														
					250	94.1	-0.0 ± 1.4														
30-130	dBC				500	94.2	-0.0 ± 1.4														
																				1000	94.1
					2000	94.2	-0.2 ±1.6														
					4000	94.4	-0.8 ±1.6														
					8000	91.5	-3.0 +2.1: -3.1														

Certificate No.: APJ23-146-CC003



Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com



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	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	\pm 0.05
	2000 Hz	\pm 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	\pm 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.: APJ23-146-CC003



Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio
Type No.:	XL2 (Serial No.: A2A-13548-E0)
Microphone:	ACO 7052 (Serial No.:84474)
Preamplifier:	NTi Audio MA220 (Serial No.:7989)

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 – 8kHz)
 □ 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: 28 February 2024

Date of calibration: 02 March 2024

Date of NEXT calibration: 01 March 2025

Calibrated by: Calibration Technician

Date of issue: 02 March 2024

Certificate No.: APJ23-146-CC004

Certified by:

Mr. Ng Yan Wa aboratory Manager Page 1 of 4

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

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:	22.4 °C
Air Pressure:	1005 hPa
Relative Humidity:	59.6 %

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to	
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS	

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Appl	Applied value		IEC 61672 Class 1
Range, dB	Range, dB Freq. Weighting		Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	1000	94.1	±0.4

Linearity

Sett	Setting of Unit-under-test (UUT)				Applied value		IEC 61672 Class 1
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.1	Ref
30-130	dBA	SPL	Fast	104	1000	104.2	±0.3
				114		114.2	±0.3

Time Weighting

Setti	Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. V	Veighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	Fast	94	04 1000	94.1	Ref
30-130	uDA	SPL	Slow	94	1000	94.2	±0.3

Certificate No.: APJ23-146-CC004



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. V	Veighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	94.1	±2.0
					63	94.2	±1.5
					125	94.2	±1.5
					250	94.1	±1.4
30-130	dB	SPL	Fast	94	500	94.2	±1.4
					1000	94.1	Ref
					2000	94.3	±1.6
					4000	94.8	±1.6
					8000	93.8	+2.1; -3.1

A-weighting

Setti	Setting of Unit-under-test (UUT)				Applied value		IEC 61672 Class 1
Range, dB	Freq.	Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	54.7	-39.4 ±2.0
					63	68.0	-26.2±1.5
					125	78.1	-16.1±1.5
					250	85.5	-8.6±1.4
30-130	dBA	SPL	Fast	94	500	91.0	-3.2 ± 1.4
					1000	94.1	Ref
					2000	95.5	$+1.2\pm1.6$
					4000	95.8	$+1.0 \pm 1.6$
					8000	92.7	-1.1+2.1; -3.1

C-weighting

Sett	ing of Unit-under-t	est (UUT)	Appl	ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				31.5	91.1	-3.0 ±2.0
				63	93.3	-0.8 ±1.5
				125	94.0	-0.2 ±1.5
				250	94.1	-0.0 ± 1.4
30-130	dBC SPL	Fast	94	500	94.2	-0.0 ± 1.4
				1000	94.1	Ref
				2000	94.2	-0.2 ±1.6
				4000	94.0	-0.8 ±1.6
				8000	90.8	-3.0 +2.1: -3.1

Certificate No.: APJ23-146-CC004

(A+A) Page 3 of 4

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com



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	\pm 0.05
	63 Hz	\pm 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	\pm 0.05
	8000 Hz	± 0.10
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.: APJ23-146-CC004



Certificate of Calibration

for

Description:	Sound Level Meter
Manufacturer:	NTi Audio
Type No.:	XL2 (Serial No.: A2A-13661-E0)
Microphone:	ACO 7052 (Serial No.:84464)
Preamplifier:	NTi Audio MA220 (M2211) (Serial No.:5287)

Submitted by:

Customer: Acuity Sustainability Consulting Limited Address: Unit E, 12/F, Ford Glory Plaza, Nos. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

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

✓ Within (31.5Hz − 8kHz)□ 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: 31 August 2023

Date of calibration: 04 September 2023

Date of NEXT calibration: 03 September 2024

Calibrated by:_ Calibration Technician

Date of issue: 04 September 2023

Certified by:

Mr. Ng Yan Wa Laboratory Manager

Page 1 of 4

Certificate No.: APJ23-053-CC002

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

(A+A)*L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

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:	23.6 °C
Air Pressure:	1006 hPa
Relative Humidity:	62.6 %

3. Calibration Equipment:

	Туре	Serial No.	Calibration Report Number	Traceable to	
Multifunction Calibrator	B&K 4226	2288467	AV220061	HOKLAS	

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)				Appl	ied 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

Sett	Setting of Unit-under-test (UUT)				ied value	UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
				94		94.0	Ref
30-130	dBA	SPL	Fast	104	1000	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. V	Veighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SDI	Fast	94	1000	94.0	Ref
30-130	dBA SPL		Slow	94	1000	94.0	±0.3

Certificate No.: APJ23-053-CC002

(A+A

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. We	eighting	Time Weighting	Level, dB	Level, dB Frequency, Hz		Specification, dB
					31.5	94.1	±2.0
					63	94.1	±1.5
30-130		dB SPL	Fast	94	125	94.1	±1.5
					250	94.1	±1.4
	dB SPL Fast				500	94.1	±1.4
				1000	94.0	Ref	
				2000	93.9	±1.6	
					4000	93.9	±1.6
					8000	94.7	+2.1; -3.1

A-weighting

Sett	Setting of Unit-under-test (UUT)		Applied value		UUT Reading,	IEC 61672 Class 1	
Range, dB	Freq. W	eighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
					31.5	54.7	-39.4 ±2.0
			63	68.2	-26.2±1.5		
			Fast	94	125	78.0 ·	-16.1±1.5
					250	85.5	-8.6±1.4
30-130	dBA SPL	SPL			94	500	90.8
					1000	94.0	Ref
				2000	95.1	+1.2±1.6	
				4000	94.9	$+1.0\pm1.6$	
					8000	93.5	-1.1+2.1; -3.1

C-weighting

Sett	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
					31.5	91.2	-3.0±2.0
					63	93.5	-0.8±1.5
					125	94.0	-0.2±1.5
					250	94.1	-0.0 ± 1.4
30-130	dBC	SPL	Fast	94	500	94.1	-0.0 ± 1.4
					1000	94.0	Ref
					2000	93.7	-0.2±1.6
					4000	93.2	-0.8±1.6
					8000	91.6	-3.0 +2.1: -3.1



Certificate No.: APJ23-053-CC002

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong Tel: (852) 2668 3423 Fax:(852) 2668 6946 Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com Page 3 of 4

(A+A)*L Acoustics and Air Testing Laboratory Co. Ltd. 聲學及空氣測試實驗室有限公司

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	\pm 0.10
	250 Hz	\pm 0.10
	500 Hz	\pm 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.10
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	\pm 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.: APJ23-053-CC002

Page 4 of 4

Water Quality Monitoring Equipment



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.	:R-I
Date of Issue	: 05
Page No.	: 1 o

: R-BD030022 : 05 March 2024 : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited

Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS Multi Parameters
Manufacturer :	YSI
Serial Number :	22D100436
Date of Received :	28 February 2024
Date of Calibration :	28 February 2024
Date of Next Calibration :	28 May 2024
Request No. :	D-BD030022

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Test Parameter</u>	Reference Method
pH value	APHA 21e 4500-H ⁺ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21e 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.18	0.18	Satisfactory
7.42	7.35	-0.07	Satisfactory
10.01	9.95	-0.06	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
18.0	17.1	-0.9	Satisfactory
27.5	26.7	-0.8	Satisfactory
35.5	35.6	0.1	Satisfactory

Tolerance of Temperature should be less than \pm 2.0 (°C)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.34	-6.60	Satisfactory
20	18.93	-5.35	Satisfactory
30	29.35	-2.17	Satisfactory

Tolerance of Salinity should be less than \pm 10.0 (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-hing Assistant Manager



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.	: R-
Date of Issue	: 05
Page No.	:20

: R-BD030022 : 05 March 2024 : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.51	7.78	0.27	Satisfactory
3.81	3.42	-0.39	Satisfactory
2.28	1.80	-0.48	Satisfactory
0.61	0.18	-0.43	Satisfactory

Tolerance of Dissolved oxygen should be less than $\pm\,0.5$ (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result Satisfactory	
0	1.33			
10	10.04	0.4	Satisfactory	
20	19.25	-3.8	Satisfactory	
100	105.75	5.8	Satisfactory	
800	787.30	-1.6	Satisfactory	

Tolerance of Turbidity should be less than \pm 10.0 (%)

Remark(s)

The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.

The results relate only to the calibrated equipment as received

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

"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

•The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

---- END OF REPORT ----



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. Date of Issue Page No. : R-BD040041 : 16 April 2024 : 1 of 2

PART A - CUSTOMER INFORMATION

Acuity Sustainability Consulting Limited Unit E, 12/F, Ford Glory Plaza 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS (Multi-Parameters)	
Manufacturer :	YSI (a xylem brand)	
Serial Number :	22C106561	
Date of Received :	10 April 2024	
Date of Calibration :	16 April 2024	
Date of Next Calibration :	15 July 2024	
Request No. :	D-BD040041	

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Test Parameter</u>	Reference Method
pH value	APHA 21e 4500-H ⁺ B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March
	2008: Working Thermometer Calibration Procedure
Salinity	APHA 21e 2520 B
Dissolved oxygen	APHA 23e 4500-O G (Membrane Electrode Method)
Turbidity	APHA 21e 2130 B (Nephelometric Method)

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result	
4.00	4.14	0.14	Satisfactory	
7.42	7.56	0.14	Satisfactory	
10.01	10.09	0.08	Satisfactory	

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result	
11.0	11.1	0.1	Satisfactory	
26.0	25.1	-0.9	Satisfactory	
40.0	38.7	-1.3	Satisfactory	

Tolerance of Temperature should be less than $\pm\,2.0$ ($^{\circ}C$)

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.68	-3.20	Satisfactory
20	19.27	-3.65	Satisfactory
30	28.85	-3.83	Satisfactory

Tolerance of Salinity should be less than ± 10.0 (%)

--- CONTINUED ON NEXT PAGE ---

LEE Chun-ning Assistant Manager

AUTHORIZED SIGNATORY:



專業化驗有限公司 QUALITY PRO TEST-CONSULT LIMITED

Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong Email: info@qualityprotest.com; Website: www.qualityprotest.com Tel: (852) 3956 8717; Fax: (852) 3956 3928

REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No.
Date of Issue
Page No.

: R-BD040041 : 16 April 2024 : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
8.14	8.59	0.45	Satisfactory
5.35	5.12	-0.23	Satisfactory
2.92	2.72	-0.20	Satisfactory
0.32	0.26	-0.06	Satisfactory

Tolerance of Dissolved oxygen should be less than \pm 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result	
0	0.88		Satisfactory	
10	9.62	-3.8	Satisfactory	
20	18.76	-6.2	Satisfactory	
100	98.45	-1.6	Satisfactory	
800	770.86	-3.6	Satisfactory	

Tolerance of Turbidity should be less than \pm 10.0 (%)

Remark(s)

•The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted form relevant international standards.

The results relate only to the calibrated equipment as received

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

"Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.

•The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted form relevant international standards.

--- END OF REPORT ---

Appendix E Environmental Monitoring Schedule

Environmental Monitoring Schedule (June 2024)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1
2	3 WQM Mid Flood (09:15) Mid Ebb (17:00)	4 AQM, NM	5 WQM Mid Flood (09:50)	6	7 WQM Mid Flood (17:15) Mid Ebb (12:30)	8 AQM
9	10 WQM Mid Flood (09:00) Mid Ebb (13:15)	11	12 WQM Mid Flood (09:30) Mid Ebb (15:30)	13 AQM, NM, EMB (Day)	14 * WQM Mid Flood (Cancelled) Mid Ebb (16:50)	15
16	17 WQM Mid Flood (12:40) Mid Ebb (17:55)	18	19 WQM, AQM, NM, ANRM, EMB (Night) Mid Flood (09:20)	20	21 WQM Mid Flood (17:30) Mid Ebb (12:00)	22
23	24 WQM Mid Flood (08:10) Mid Ebb (13:00)	25 AQM, NM	26 WQM Mid Flood (09:00) Mid Ebb (14:10)	27	28 WQM Mid Flood (08:50) Mid Ebb (15:20)	29 AQM
30						

Remarks:

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

- 2. Air Quality Monitoring (AQM): 3 x 1-hour TSP Monitoring per 6 days.
- 3. Noise Monitoring (NM): Leq (30 min) during between 0700 1900.
- 4. Water Quality Monitoring (WQM): Once per day for 3 days per week.
- 5. Ecological Monitoring of Birds (EMB): Once per month.
- 6. Ardeid Night Roost Monitoring (ANRM): Once per month.

- 7. Air Quality Location: AM1 and AM2.
- 8. Noise Monitoring Location: CM1, CM2 and CM3.
- 9. Water Quality Monitoring Location: M1, M2, M3.

10.*Red Rainstorm Warning Signal was hoisted on 14 June 2024. Due to safety concerns, the water quality monitoring for mid-flood tide on 14 June 2024 has been cancelled.

Environmental Monitoring Schedule (July 2024)

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

Remarks:

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

- 2. Air Quality Monitoring (**AQM**): 3 x 1-hour TSP Monitoring per 6 days.
- 3. Noise Monitoring (NM): Leq (30 min) during between 0700 1900.
- 4. Water Quality Monitoring (WQM): Once per day for 3 days per week.

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

Environmental Monitoring Schedule (August 2024)

Sun	Mon	Tue	Wed	Thur	Fri	Sat
				1	2 WQM Mid Flood (15:25) Mid Ebb (10:35)	3
4	5 AQM, NM, WQM Mid Flood (18:30) Mid Ebb (12:31)	6	7 WQM Mid Flood (09:55) Mid Ebb (013:30)	8	9 WQM Mid Flood (08:22) Mid Ebb (14:56)	10 AQM
11	12 WQM, EMB (Day) Mid Flood (17:10) Mid Ebb (09:22)	13	14 WQM Mid Flood (13:01) Mid Ebb (15:12)	15	16 WQM, AQM, NM Mid Flood (15:13) Mid Ebb (10:09)	17
18	19 WQM Mid Flood (18:11) Mid Ebb (11:53)	20	21 WQM Mid Flood (17:45) Mid Ebb (12:57)	22 ANRM, AQM, NM	23 WQM Mid Flood (09:05) Mid Ebb (14:13)	24
25	26 WQM Mid Flood (08:46) Mid Ebb (16:18)	27	28 WQM, AQM, NM Mid Flood (10:25) Mid Ebb (17:56)	29	30 WQM Mid Flood (13:26) Mid Ebb (08:44)	31

Remarks:

1. Actual monitoring may be subjected to change due to any safety concern or adverse weather condition.

2. Air Quality Monitoring (AQM): 3 x 1-hour TSP Monitoring per 6 days.

3. Noise Monitoring (NM): Leq (30 min) during between 0700 - 1900.

4. Water Quality Monitoring (WQM): Once per day for 3 days per week.

5. Ecological Monitoring of Birds (EMB): Once per month.

6. Ardeid Night Roost Monitoring (**ANRM**): Once per month.

7. Air Quality Location: AM1 and AM2

8. Noise Monitoring Location: CM1, CM2 and CM3

9. Water Quality Monitoring Location: M1, M2, M3

Appendix F Environmental Monitoring Results

Air Quality Monitoring Results

1-hour TSP Monitoring Result for

Contract No. SPW 02/2023

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

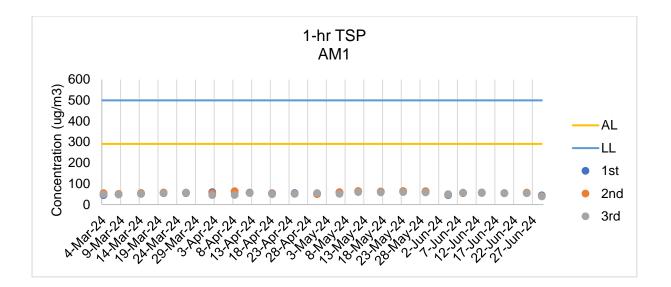
			1				
Date	Weather	Start	1st	2nd	3rd	Action Level	Limit Level
	Condition	Time	Measurement	Measurement	Measurement	(ug/m ³)	(ug/m ³)
4/6/2024	sunny	8:11	45	50	48		
8/6/2024	sunny	8:22	55	56	57		
13/6/2024	sunny	8:14	56	58	57	291	500
19/6/2024	sunny	8:22	54	55	55	291	500
25/6/2024	sunny	8:15	55	57	54		
29/6/2024	sunny	8:33	44	41	39		
		Min		39			
Ma			58				
		Average		52			

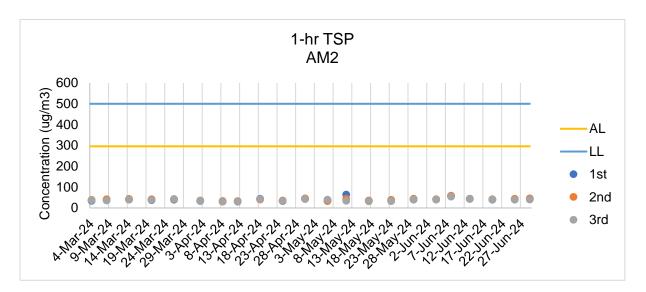
AM1 - Topfine Machinery (China) Co. Ltd.

AM2 - Squatter house at the west of Yuen Long STW

_			1.	1-hour TSP (μg/m³)				
Date	Weather	Start	1st	2nd	3rd	Action Level	Limit Level	
	Condition	Time	Measurement	Measurement	Measurement	(ug/m ³)	(ug/m ³)	
4/6/2024	sunny	13:22	41	42	41			
8/6/2024	sunny	13:01	58	59	55			
13/6/2024	sunny	13:34	44	45	45	296	500	
19/6/2024	sunny	13:21	40	42	41	290	500	
25/6/2024	sunny	13:25	42	45	40			
29/6/2024	sunny	13:11	45	46	41			
		Min		40				
	Max	59						
	Average		45					

Note: <u>Underline</u>: Exceedance of Action Level <u>Underline and Bold</u>: Exceedance of Limit Level





Air Quality Monitoring Results

Noise Monitoring Results

Noise Impact Monitoring Result for Contract No. SPW 02/2023

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

Date	Start Time	L _{eq} 30min dB(A)	L ₁₀ dB(A)	L ₉₀ dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
4/06/2024	10:55	62.3	63.5	59.5	0.4	sunny	75
13/06/2024	10:37	61.2	63.1	58.5	0.2	sunny	75
19/06/2024	10:21	62.2	64.5	60.2	0.5	sunny	75
25/06/2024	10:44	61.6	63.6	57.5	0.2	sunny	75
	Max	62.3					
	Min	61.2					

CM1 - Squatter house to the north of YLSTW

CM2 - Squatter house to the west of YLSTW

			L ₁₀	L ₉₀	Wind Speed		Limit Level
Date	Start Time	L _{eq} 30min dB(A)	dB(A)	dB(A)	(m/s)	Weather	dB(A)
4/06/2024	9:38	57.5	62.5	55.2	0.3	sunny	75
13/06/2024	9:23	59.6	63.4	57.5	0.1	sunny	75
19/06/2024	9:04	60.5	63.8	58.8	0.4	sunny	75
25/06/2024	9:31	61.5	63.5	59.2	0.1	sunny	75
	Max	61.5					
	Min	57.5					

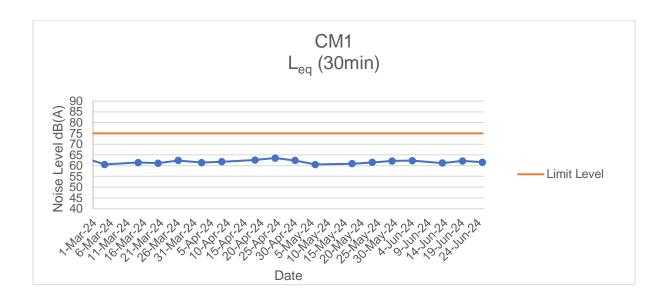
CM3 - Squatter house to the east of YLSTW

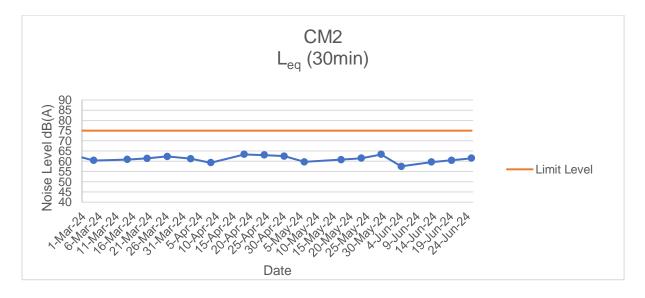
Date	Start Time	L _{eg} 30min dB(A)	L ₁₀ dB(A)	L ₉₀ dB(A)	Wind Speed (m/s)	Weather	Limit Level dB(A)
4/06/2024	8:33	62.2	64.5	59.5	0.3	sunny	75
13/06/2024	8:19	61.5	63.5	58.4	0.5	sunny	75
19/06/2024	8:00	63.5	65.2	60.8	0.2	sunny	75
25/06/2024	8:24	62.1	64.4	58.8	0.3	sunny	75
	Max	63.5					
	Min	61.5					

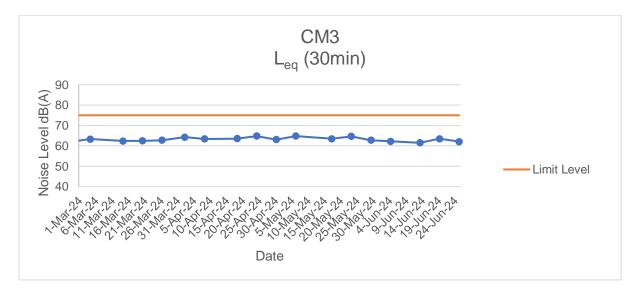
Note:

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

No raining or wind with speed over 5 m/s was observed during noise monitoring according to the onsite observation.







Noise Monitoring Results

									Ð						In-s	situ Measu	rement							Labor Anal	ratory lysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	р	Η	Salinit	y (ppt)	Tempe (degr		DO Sat (%	turation %)	DO (r	ng/L)	Turbidity	y (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	3/06/2024	Mid-Flood	Cloudy	Low	10:47	2.6	М	1.30	1	0.073	186.146	7.21	7.21	2.68	2.70	26.1	26.10	39.6	38.90	2.98	2.97	21.64	21.815	31	31
M1	3/06/2024	Mid-Flood	Cloudy	Low	10:47	2.6	М	1.30	2	0.070	100.110	7.21	7.21	2.71	2.70	26.1	20.10	38.2	00.00	2.96	2.01	21.99	21.010	30	01
M2	3/06/2024	Mid-Flood	Cloudy	Low	11:18	2.2	М	1.10	1	0.073	180.577	7.22	7.22	2.99	2.96	26.1	26.15	40.7	41.15	3.06	3.02	22.85	22.825	36	32
M2	3/06/2024	Mid-Flood	Cloudy	Low	11:18	2.2	М	1.10	2	0.075	100.077	7.22	1.22	2.92	2.30	26.2	20.15	41.6	41.15	2.97	0.02	22.8	22.025	27	52
M3	3/06/2024	Mid-Flood	Cloudy	Low	11:26	1.9	М	0.95	1	0.083	164.764	7.21	7.20	3.38	3.36	26.1	26.10	51.1	51.50	3.84	3.85	36.57	36.71	23	22
M3	3/06/2024	Mid-Flood	Cloudy	Low	11:26	1.9	М	0.95	2	0.005	104.704	7.19	7.20	3.33	5.50	26.1	20.10	51.9	51.50	3.85	5.05	36.85	50.71	21	22
M1	3/06/2024	Mid-Ebb	Cloudy	Low	17:25	2.5	М	1.25	1	0.063	306.827	7.18	7.19	2.96	2.95	26.0	26.05	36.4	35.70	2.74	2.70	24.12	24.215	26	27
M1	3/06/2024	Mid-Ebb	Cloudy	Low	17:25	2.5	М	1.25	2	0.003	300.027	7.19	7.19	2.94	2.95	26.1	20.05	35.0	35.70	2.66	2.70	24.31	24.215	27	21
M2	3/06/2024	Mid-Ebb	Cloudy	Low	16:58	2.1	М	1.05	1	0.077	302.794	7.19	7.19	3.15	3.17	26.0	26.00	39.2	39.80	2.95	2.94	23.57	23.585	18	27
M2	3/06/2024	Mid-Ebb	Cloudy	Low	16:59	2.1	М	1.05	2	0.077	302.794	7.19	7.19	3.18	5.17	26.0	20.00	40.4	39.00	2.92	2.94	23.6	23.565	35	21
M3	3/06/2024	Mid-Ebb	Cloudy	Low	17:39	1.8	М	0.90	1	0.066	308.691	7.21	7.20	3.47	3.51	26.0	26.05	50.4	50.35	3.79	3.73	33.54	33.585	23	26
M3	3/06/2024	Mid-Ebb	Cloudy	Low	17:39	1.8	М	0.90	2	0.000	300.091	7.19	1.20	3.54	3.51	26.1	20.03	50.3	50.55	3.66	3.13	33.63	33.000	29	20
Remark												For Flo	od Tide									_			

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0
Location	AI	11

DO

Monitoring	DO							
Location	AL	LL						
M1(Impact Station)	2.25	1.91						

N	ΓU	SS						
AL	LL	AL	LL					
43.0	52.4	81	112					
74	78	104	167					

N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	59	68

					Menitoring Water Menitoring Menitoring 9								Laboratory Analysis												
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicat	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%	turation %)	DO (r	ng/L)	Turbidity	/ (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	5/06/2024	Mid-Flood	Cloudy	Low	12:10	2.6	М	1.30	1	0.081	161.645	7.15	7.16	3.48	3.52	27.5	27.50	38.3	38.97	2.88	2.93	17.66	17.485	46	47
M1	5/06/2024	Mid-Flood	Cloudy	Low	12:10	2.6	М	1.30	2	0.001	101.040	7.17	7.10	3.55	0.02	27.5	21.00	39.6	00.07	2.98	2.00	17.31	17.400	48	
M2	5/06/2024	Mid-Flood	Cloudy	Low	12:48	2.2	M	1.10	1	0.086	183.004	7.2	7.21	3.38	3.37	27.5	27.55	35.8	36.44	2.69	2.74	20.45	20.335	52	53
M2	5/06/2024	Mid-Flood	Cloudy	Low	12:48	2.2	М	1.10	2	0.000	100.004	7.21	1.21	3.35	0.07	27.6	21.00	37.1	00.44	2.79	2.14	20.22	20.000	53	
M3	5/06/2024	Mid-Flood	Cloudy	Low	13:01	2	М	1.00	1	0.088	184.794	7.16	7.16	3.58	3.54	27.5	27.55	48.0	48.55	3.61	3.65	28.44	28.555	39	46
M3	5/06/2024	Mid-Flood	Cloudy	Low	13:01	2	М	1.00	2	0.000	104.734	7.16	7.10	3.49	5.54	27.6	27.55	49.1	40.00	3.69	5.05	28.67	20.000	52	40
M1	5/06/2024	Mid-Ebb	Cloudy	Low	19:33	2.4	М	1.20	1	0.062	340.356	7.16	7.15	3.41	3.41	27.6	27.65	35.1	34.25	2.64	2.58	18.70	18.595	53	56
M1	5/06/2024	Mid-Ebb	Cloudy	Low	19:33	2.4	М	1.20	2	0.062	340.350	7.14	7.15	3.4	3.41	27.7	27.05	33.4	34.20	2.51	2.50	18.49	10.090	58	50
M2	5/06/2024	Mid-Ebb	Cloudy	Low	19:13	2.1	Μ	1.05	1	0.062	344.837	7.12	7.11	3.24	3.23	27.6	27.65	37.2	37.11	2.8	2.79	19.87	20.015	55	53
M2	5/06/2024	Mid-Ebb	Cloudy	Low	19:13	2.1	М	1.05	2	0.002	344.037	7.1	1.11	3.22	5.25	27.7	27.05	37.0	57.11	2.78	2.19	20.16	20.015	50	55
M3	5/06/2024	Mid-Ebb	Cloudy	Low	19:48	1.8	М	0.90	1	0.058	334.261	7.14	7.13	4.08	4.08	27.6	27.60	50.3	49.74	3.78	3.74	30.11	20.055	54	52
M3	5/06/2024	Mid-Ebb	Cloudy	Low	19:48	1.8	М	0.90	2	0.056	334.201	7.12	1.13	4.07	4.00	27.6	27.60	49.2	49.74	3.7	3.74	29.8	29.955	50	52
Remark										-		For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0
Location		

DO

World	U	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

N	ГU	SS						
AL	LL	AL	LL					
43.0	52.4	81	112					
74	78	104	167					

N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	62.7	68

									e						In-situ Measurement									Labor Anal	ratory Iysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)		turation %)	DO (r	ng/L)	Turbidity	y (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	7/06/2024	Mid-Flood	Cloudy	Low	13:41	2.4	M	1.20	1	0.075	191.017	7.11	7.12	3.48	3.50	27.5	27.50	38.3	38.97	2.88	2.93	17.66	17.84	111	106
M1	7/06/2024	Mid-Flood	Cloudy	Low	13:41	2.4	М	1.20	2	0.070	101.017	7.12	1.12	3.52	0.00	27.5	21.00	39.6	00.07	2.98	2.00	18.02	17.04	100	100
M2	7/06/2024	Mid-Flood	Cloudy	Low	14:08	2.1	М	1.05	1	0.089	167.585	7.2	7.19	3.38	3.42	27.5	27.55	35.8	36.44	2.69	2.74	20.45	20.62	115	117
M2	7/06/2024	Mid-Flood	Cloudy	Low	14:08	2.1	М	1.05	2	0.003	107.505	7.18	7.13	3.45	0.72	27.6	21.55	37.1	50.77	2.79	2.14	20.79	20.02	119	
M3	7/06/2024	Mid-Flood	Cloudy	Low	14:23	1.8	М	0.90	1	0.093	184.403	7.12	7.13	3.58	3.63	27.5	27.55	48.0	48.55	3.61	3.65	28.44	28.58	101	97
M3	7/06/2024	Mid-Flood	Cloudy	Low	14:23	1.8	М	0.90	2	0.095	104.403	7.13	7.15	3.67	5.05	27.6	27.55	49.1	40.00	3.69	5.05	28.72	20.50	92	31
M1	7/06/2024	Mid-Ebb	Cloudy	Low	8:58	2.5	М	1.25	1	0.067	343.628	7.18	7.18	3.41	3.42	27.6	27.65	35.1	34.25	2.64	2.58	18.70	18.57	93	121
M1	7/06/2024	Mid-Ebb	Cloudy	Low	8:58	2.5	М	1.25	2	0.007	343.020	7.17	1.10	3.42	3.42	27.7	27.05	33.4	34.25	2.51	2.00	18.44	10.57	148	121
M2	7/06/2024	Mid-Ebb	Cloudy	Low	8:21	2.2	М	1.10	1	0.072	307.452	7.13	7.13	3.24	3.21	27.6	27.65	37.2	37.11	2.8	2.79	19.87	19.735	165	164
M2	7/06/2024	Mid-Ebb	Cloudy	Low	8:22	2.2	М	1.10	2	0.072	307.432	7.13	1.13	3.18	5.21	27.7	27.05	37.0	57.11	2.78	2.19	19.6	19.755	163	104
M3	7/06/2024	Mid-Ebb	Cloudy	Low	9:11	1.8	М	0.90	1	0.073	307.474	7.15	7.16	4.08	1 1 2	27.6	27.60	50.3	49.74	3.78	3.74	30.11	20.14	79	70
M3	7/06/2024	Mid-Ebb	Cloudy	Low	9:12	1.8	Μ	0.90	2	0.073	307.474	7.17	1.10	4.17	4.13	27.6	27.60	49.2	49.74	3.7	3.74	30.17	30.14	77	78
Remark			-							-		For Flo	od Tide					_							,

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL					
M2(Impact Station)	1.88	1.79					
M3(Impact Station)	3.28	3.14					
For Ebb Tide							
Monitoring	DO						
I a settera							

DO

Wollicolling	Во						
Location	AL	LL					
M1(Impact Station)	2.25	1.91					

N	ΓU	SS					
AL	LL	AL	LL				
43.0	52.4	127	137				
74	78	127	167				

N	ſU	SS						
AL	LL	LL						
48.4	50.4	145.2	157.3					

									Φ		In-situ Measurement								Labor Anal	ratory lysis					
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%	turation %)	DO (r	ng/L)	Turbidity	' (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	10/06/2024	Mid-Flood	Cloudy	Low	15:45	2.4	М	1.20	1	0.086	188.768	7.08	7.08	3.69	3.67	27.4	27.40	38.0	37.70	2.86	2.84	21.70	21.68	29	31
M1	10/06/2024	Mid-Flood	Cloudy	Low	15:45	2.4	М	1.20	2	0.000	100.700	7.08	7.00	3.65	5.07	27.4	27.40	37.4	57.70	2.82	2.04	21.66	21.00	33	51
M2	10/06/2024	Mid-Flood	Cloudy	Low	16:12	2	М	1.00	1	0.087	180.458	7.09	7.09	4.03	4.06	27.4	27.45	39.6	40.20	2.98	3.01	22.74	22.84	23	22
M2	10/06/2024	Mid-Flood	Cloudy	Low	16:12	2	М	1.00	2	0.007	100.430	7.09	7.03	4.09	4.00	27.5	27.45	40.8	40.20	3.04	5.01	22.94	22.04	21	22
M3	10/06/2024	Mid-Flood	Cloudy	Low	16:33	1.7	М	0.85	1	0.089	169.355	7.1	7.11	4.88	4.86	27.4	27.40	50.0	50.65	3.76	3.75	36.83	36.735	33	34
M3	10/06/2024	Mid-Flood	Cloudy	Low	16:33	1.7	М	0.85	2	0.089	109.555	7.12	7.11	4.84	4.00	27.4	27.40	51.3	50.05	3.74	5.75	36.64	30.735	35	54
M1	10/06/2024	Mid-Ebb	Cloudy	Low	8:36	2.3	М	1.15	1	0.074	320.573	7.06	7.06	3.79	3.84	27.1	27.10	39.2	39.00	2.95	2.90	22.58	22.475	35	32
M1	10/06/2024	Mid-Ebb	Cloudy	Low	8:37	2.3	М	1.15	2	0.074	320.573	7.05	7.00	3.88	3.04	27.1	27.10	38.8	39.00	2.84	2.90	22.37	22.475	29	52
M2	10/06/2024	Mid-Ebb	Cloudy	Low	8:00	1.9	М	0.95	1	0.059	303.39	7.07	7.08	3.77	3.76	27.1	27.15	41.1	40.25	3.09	3.08	23.66	23.63	37	33
M2	10/06/2024	Mid-Ebb	Cloudy	Low	8:01	1.9	М	0.95	2	0.059	303.39	7.08	1.00	3.74	3.70	27.2	27.15	39.4	40.20	3.07	3.00	23.6	23.03	29	55
M3	10/06/2024	Mid-Ebb	Cloudy	Low	8:48	1.7	М	0.85	1	0.062	313.784	7.11	7 1 2	4.36	1 22	27.1	27.15	51.6	50.80	3.88	3.88	35.55	25 475	30	20
M3	10/06/2024	Mid-Ebb	Cloudy	Low	8:49	1.7	М	0.85	2	0.062	313.764	7.12	7.12	4.27	4.32	27.2	27.15	50.0	50.60	3.88	3.00	35.4	35.475	29	30
Remark			-							-		For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0

DO

Wonitoring	D	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

N	ΓU	SS					
AL	LL	AL	LL				
43.0	52.4	81	112				
74	78	104	167				

N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	68	

									e	In-situ Measurement								Labor Anal	ratory Iysis						
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degre			turation %)	DO (r	ng/L)	Turbidity	y (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	12/06/2024	Mid-Flood	Cloudy	Low	17:07	2.8	М	1.40	1	0.082	167.365	7.14	7.14	3.84	3.80	26.7	26.75	37.2	37.00	2.8	2.79	14.58	14.55	61	55
M1	12/06/2024	Mid-Flood	Cloudy	Low	17:07	2.8	М	1.40	2	0.002	107.000	7.14	7.1.1	3.76	0.00	26.8	20.10	36.8	07.00	2.77	2.70	14.52	11.00	48	00
M2	12/06/2024	Mid-Flood	Cloudy	Low	17:38	2.4	М	1.20	1	0.085	168.324	7.12	7.12	4.32	4.33	26.7	26.75	36.7	36.05	2.76	2.71	15.77	15.735	51	55
M2	12/06/2024	Mid-Flood	Cloudy	Low	17:38	2.4	М	1.20	2	0.005	100.024	7.11	7.12	4.33	4.00	26.8	20.75	35.4	30.03	2.66	2.71	15.7	15.755	59	55
M3	12/06/2024	Mid-Flood	Cloudy	Low	17:55	2.2	М	1.10	1	0.078	191.073	7.15	7.15	5.21	5.21	26.7	26.70	49.1	49.30	3.69	3.71	24.88	24.725	49	47
M3	12/06/2024	Mid-Flood	Cloudy	Low	17:55	2.2	М	1.10	2	0.078	0.076 191.073	7.14	7.15	5.2	5.21	26.7	20.70	49.5	49.30	3.72	5.71	24.57	24.725	44	47
M1	12/06/2024	Mid-Ebb	Cloudy	Low	10:06	2.6	М	1.30	1	0.065	337.488	7.09	7.09	3.95	3.99	26.5	26.50	36.3	36.25	2.73	2.73	15.63	15.77	58	54
M1	12/06/2024	Mid-Ebb	Cloudy	Low	10:07	2.6	М	1.30	2	0.065	337.400	7.08	7.09	4.02	3.99	26.5	20.50	36.2	30.25	2.72	2.75	15.91	15.77	49	54
M2	12/06/2024	Mid-Ebb	Cloudy	Low	9:34	2.1	М	1.05	1	0.07	322.626	7.12	7.11	4.08	1 1 1	26.5	26.55	37.1	37.75	2.79	2.84	16.78	16.58	51	47
M2	12/06/2024	Mid-Ebb	Cloudy	Low	9:34	2.1	М	1.05	2	0.07	322.020	7.1	1.11	4.14	4.11	26.6	20.00	38.4	51.15	2.89	2.04	16.38	10.00	42	47
M3	12/06/2024	Mid-Ebb	Cloudy	Low	10:18	1.9	М	0.95	1	0.079	302.932	7.13	7.13	5.45	5.46	26.5	26.55	46.6	17 15	3.5	3.55	25.57	25.62	40	44
M3	12/06/2024	Mid-Ebb	Cloudy	Low	10:18	1.9	М	0.95	2	0.079	302.932	7.13	1.13	5.46	5.40	26.6	20.55	47.7	47.15	3.59	3.55	25.67	20.02	47	44
Remark			-							-		For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0

DO

Wollicolling	D	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

N	ΓU	SS					
AL	LL	AL	LL				
43.0	52.4	81	112				
74	78	104	167				

N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	59	68

									e						In-s	situ Measu	rement								ratory Ilysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	р	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%		DO (I	mg/L)	Turbidit	y (NTU)	Total Su Solids	ispended (mg/L)
										. ,		Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	14/06/2024	Mid-Flood	Cloudy	Low			М		1																0
M1	14/06/2024	Mid-Flood	Cloudy	Low			М		2																Ŭ
M2	14/06/2024	Mid-Flood	Cloudy	Low			М		1																0
M2	14/06/2024	Mid-Flood	Cloudy	Low			М		2																Ŭ
M3	14/06/2024	Mid-Flood	Cloudy	Low			М		1																0
M3	14/06/2024	Mid-Flood	Cloudy	Low			М		2																U
M1	14/06/2024	Mid-Ebb	Cloudy	Low	12:28	2.4	М	1.20	1	0.076	305.663	7.17	7.18	2.88	2.90	27.2	27.25	37.4	37.60	2.81	2.83	22.65	22.57	43	42
M1	14/06/2024	Mid-Ebb	Cloudy	Low	12:29	2.4	М	1.20	2	0.070	303.003	7.19	7.10	2.92	2.90	27.3	21.25	37.8	57.00	2.84	2.03	22.49	22.57	41	42
M2	14/06/2024	Mid-Ebb	Cloudy	Low	11:53	2.1	М	1.05	1	0.075	338.049	7.15	7.15	3.12	3.17	27.2	27.20	39.8	39.10	2.99	2.94	22.98	22.885	50	62
M2	14/06/2024	Mid-Ebb	Cloudy	Low	11:53	2.1	М	1.05	2	0.075	550.049	7.14	7.15	3.21	5.17	27.2	21.20	38.4	53.10	2.89	2.94	22.79	22.000	73	02
M3	14/06/2024	Mid-Ebb	Cloudy	Low	12:36	2	М	1.00	1	0.059	328.396	7.18	7.19	3.35	3.38	27.2	27.20	48.5	48.90	3.65	3.68	30.68	30.52	62	61
M3	14/06/2024	Mid-Ebb	Cloudy	Low	12:36	2	М	1.00	2	0.059	520.390	7.19	7.19	3.4	5.30	27.2	21.20	49.3	40.90	3.71	3.00	30.36	30.52	60	01
Remark												For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

Monitoring	D	0			
Location	AL	LL			
M2(Impact Station)	1.88	1.79			
M3(Impact Station)	3.28 3.14				
For Ebb Tide					
Monitoring	D	0			

ivionitoring	D	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

N	ſU	S	S
AL	LL	AL	LL
48.4	50.4	73.5	79.625

									Φ						In-s	itu Measu	rement							Labor Anal	ratory lysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%		DO (r	ng/L)	Turbidity	(NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	17/06/2024	Mid-Flood	Cloudy	Low	9:59	2.5	М	1.25	1	0.074	163.934	7.2	7.20	2.94	2.92	27.5	27.50	36.7	35.85	2.76	2.70	15.24	15.18	23	21
M1	17/06/2024	Mid-Flood	Cloudy	Low	10:00	2.5	М	1.25	2	0.074	100.004	7.2	1.20	2.9	2.52	27.5	21.00	35.0	00.00	2.63	2.70	15.12	10.10	19	21
M2	17/06/2024	Mid-Flood	Cloudy	Low	10:33	2.1	М	1.05	1	0.091	189.087	7.21	7.20	3.29	3.32	27.5	27.50	39.4	38.45	2.96	2.89	15.88	15.675	23	24
M2	17/06/2024	Mid-Flood	Cloudy	Low	10:33	2.1	М	1.05	2	0.031	103.007	7.19	1.20	3.34	0.02	27.5	27.50	37.5	50.45	2.82	2.03	15.47	10.075	24	27
M3	17/06/2024	Mid-Flood	Cloudy	Low	10:51	1.8	М	0.90	1	0.091	162.297	7.23	7.23	4.02	4.00	27.5	27.55	48.9	49.10	3.68	3.70	21.84	21.655	17	18
M3	17/06/2024	Mid-Flood	Cloudy	Low	10:51	1.8	М	0.90	2	0.091	102.297	7.23	1.25	3.97	4.00	27.6	21.55	49.3	49.10	3.71	5.70	21.47	21.000	18	10
M1	17/06/2024	Mid-Ebb	Cloudy	Low	17:04	2.4	М	1.20	1	0.078	334.988	7.26	7.25	3.09	3.09	27.8	27.80	35.5	36.10	2.67	2.72	14.72	14.72	23	24
M1	17/06/2024	Mid-Ebb	Cloudy	Low	17:04	2.4	М	1.20	2	0.078	554.900	7.24	1.25	3.08	5.05	27.8	27.00	36.7	50.10	2.76	2.12	14.72	14.72	24	24
M2	17/06/2024	Mid-Ebb	Cloudy	Low	16:27	2	М	1.00	1	0.07	311.02	7.24	7.24	3.32	3.32	27.8	27.80	36.2	35.45	2.72	2.67	13.71	13.84	26	27
M2	17/06/2024	Mid-Ebb	Cloudy	Low	16:28	2	М	1.00	2	0.07	311.02	7.23	1.24	3.31	5.52	27.8	27.00	34.7	55.45	2.61	2.07	13.97	15.04	27	21
M3	17/06/2024	Mid-Ebb	Cloudy	Low	17:16	1.7	М	0.85	1	0.076	313.964	7.21	7.22	4.15	1 1 1	27.8	27.80	50.3	50.50	3.78	3.80	22.65	22.465	22	22
M3	17/06/2024	Mid-Ebb	Cloudy	Low	17:16	1.7	М	0.85	2	0.076	515.904	7.22	1.22	4.07	4.11	27.8	21.00	50.7	50.50	3.81	3.60	22.28	22.400	22	22
Remark												For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

Monitoring	D	0			
Location	AL	LL			
M2(Impact Station)	1.88	1.79			
M3(Impact Station)	3.28 3.14				
For Ebb Tide					
Monitoring	DO				

Monitoring	D	0	N	ΓU	SS			
Location	AL	LL	AL	LL	AL	LL		
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68		

N	ΓU	SS						
AL	LL	AL	LL					
43.0	52.4	81	112					
74	78	104	167					

									Θ						ln-s	itu Measu	rement							Labor Anal	ratory lysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr			turation %)	DO (n	ng/L)	Turbidity	/ (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	19/06/2024	Mid-Flood	Cloudy	Low	11:21	2.3	М	1.15	1	0.087	166.212	7.08	7.09	2.88	2.87	26.5	26.55	39.6	39.75	2.98	2.96	17.72	17.515	13	14
M1	19/06/2024	Mid-Flood	Cloudy	Low	11:21	2.3	М	1.15	2	0.007	100.212	7.1	1.00	2.86	2.07	26.6	20.00	39.9	00.70	2.94	2.00	17.31	17.010	14	14
M2	19/06/2024	Mid-Flood	Cloudy	Low	11:55	1.9	М	0.95	1	0.079	183.953	7.09	7.09	2.92	2.94	26.5	26.50	41.5	41.45	3.12	3.15	18.11	18.135	15	17
M2	19/06/2024	Mid-Flood	Cloudy	Low	11:56	1.9	М	0.95	2	0.075	100.900	7.08	1.03	2.95	2.34	26.5	20.00	41.4	+1.+5	3.17	5.15	18.16	10.155	18	
M3	19/06/2024	Mid-Flood	Cloudy	Low	12:04	1.7	М	0.85	1	0.077	178.261	7.12	7.13	3.30	3.27	26.5	26.55	51.6	50.95	3.88	3.83	31.58	31.66	15	15
M3	19/06/2024	Mid-Flood	Cloudy	Low	12:04	1.7	М	0.85	2	0.077	170.201	7.13	7.15	3.24	5.27	26.6	20.00	50.3	50.95	3.78	3.03	31.74	31.00	15	10
M1	19/06/2024	Mid-Ebb	Cloudy	Low	16:51	2.4	М	1.20	1	0.079	341.397	7.11	7.11	2.98	2.97	26.8	26.85	37.1	36.10	2.79	2.72	18.05	18.06	15	15
M1	19/06/2024	Mid-Ebb	Cloudy	Low	16:51	2.4	М	1.20	2	0.079	341.397	7.11	7.11	2.96	2.97	26.9	20.00	35.1	30.10	2.64	2.12	18.07	10.00	15	15
M2	19/06/2024	Mid-Ebb	Cloudy	Low	16:18	2.2	М	1.10	1	0.081	323.888	7.13	7.13	3.14	3.14	26.8	26.85	38.3	37.65	2.88	2.90	18.49	18.32	18	15
M2	19/06/2024	Mid-Ebb	Cloudy	Low	16:19	2.2	М	1.10	2	0.001	323.000	7.12	1.13	3.13	5.14	26.9	20.00	37.0	57.05	2.92	2.90	18.15	10.32	12	10
M3	19/06/2024	Mid-Ebb	Cloudy	Low	17:03	1.9	М	0.95	1	0.071	315.926	7.16	7.16	3.55	3.54	26.8	26.85	48.8	48.40	3.67	3.64	30.55	30.51	16	17
M3	19/06/2024	Mid-Ebb	Cloudy	Low	17:03	1.9	М	0.95	2	0.071	315.920	7.15	1.10	3.53	3.54	26.9	20.60	48.0	40.40	3.6	3.04	30.47	30.51	18	17
Remark												For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0
Location	A 1	

DO

Worntoring	U	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	59	68

									Ø						In-s	itu Measu	irement							Labor Anal	ratory lysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	p	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%	turation %)	DO (n	ng/L)	Turbidity	/ (NTU)	Total Sus Solids	spended (mg/L)
										. ,		Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	21/06/2024	Mid-Flood	Cloudy	Low	12:50	2.6	М	1.30	1	0.082	177.073	7.16	7.16	3.55	3.54	27.6	27.65	35.8	35.90	2.69	2.75	20.55	20.395	54	51
M1	21/06/2024	Mid-Flood	Cloudy	Low	12:51	2.6	М	1.30	2	0.002	111.013	7.16	7.10	3.53	0.04	27.7	21.00	36.0	55.50	2.8	2.75	20.24	20.000	48	51
M2	21/06/2024	Mid-Flood	Cloudy	Low	13:25	2.1	М	1.05	1	0.089	188.546	7.18	7.18	3.68	3.69	27.6	27.60	37.0	36.50	2.78	2.72	19.78	19.78	53	57
M2	21/06/2024	Mid-Flood	Cloudy	Low	13:25	2.1	М	1.05	2	0.003	100.040	7.18	7.10	3.69	5.05	27.6	27.00	36.0	50.50	2.65	2.12	19.78	13.70	60	57
M3	21/06/2024	Mid-Flood	Cloudy	Low	13:36	1.8	М	0.90	1	0.088	188.487	7.2	7.19	4.47	4.43	27.6	27.60	47.7	47.00	3.59	3.52	31.73	31.58	59	58
M3	21/06/2024	Mid-Flood	Cloudy	Low	13:36	1.8	М	0.90	2	0.000	100.407	7.18	7.13	4.38	4.45	27.6	27.00	46.3	47.00	3.45	5.52	31.43	51.50	56	50
M1	21/06/2024	Mid-Ebb	Cloudy	Low	8:36	2.4	М	1.20	1	0.075	326.851	7.14	7.14	3.47	3.45	27.2	27.25	36.2	36.45	2.72	2.71	19.73	19.64	48	53
M1	21/06/2024	Mid-Ebb	Cloudy	Low	8:36	2.4	М	1.20	2	0.075	320.051	7.13	7.14	3.42	5.45	27.3	21.25	36.7	30.45	2.7	2.71	19.55	19.04	58	55
M2	21/06/2024	Mid-Ebb	Cloudy	Low	8:03	2.2	М	1.10	1	0.058	308.923	7.19	7.20	3.43	3.46	27.2	27.20	37.1	36.15	2.79	2.81	18.80	18.77	41	47
M2	21/06/2024	Mid-Ebb	Cloudy	Low	8:03	2.2	М	1.10	2	0.058	300.923	7.21	1.20	3.49	3.40	27.2	21.20	35.2	30.15	2.82	2.01	18.74	10.77	52	47
M3	21/06/2024	Mid-Ebb	Cloudy	Low	8:55	2	М	1.00	1	0.074	301.909	7.21	7.22	4.21	4.21	27.2	27.20	48.9	48.40	3.68	3.65	30.79	30.96	65	73
M3	21/06/2024	Mid-Ebb	Cloudy	Low	8:55	2	М	1.00	2	0.074	301.909	7.23	1.22	4.2	4.21	27.2	21.20	47.9	40.40	3.61	3.00	31.13	30.90	80	13
Remark												For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

Monitoring	D	0
Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0

Monitoring	D	0	N	ΓU	SS				
Location	AL	LL	AL	LL	AL	LL			
M1(Impact Station)	2.25	1.91	48.4	50.4	71.4	77.35			

N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

	Water Manifering Department														In-s	situ Measu	rement							Labora Anal <u>y</u>	5																				
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicat	Current Speed (m/s)	ed Direction		рН		рН		рН		рН		рН		рН		рН		рН		рН		рН		рН		y (ppt)	Tempe (degr	erature ee C)	DO Sat (%		DO (r	ng/L)	Turbidity	(NTU)	Total Sus Solids (
										. ,		Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.																				
M1	24/06/2024	Mid-Flood	Cloudy	Low	15:01	2.6	М	1.30	1	0.094	167.687	7.16	7.17	3.66	3.66	26.7	26.75	39.6	40.00	2.98	3.01	21.74	21.905	79	60																				
M1	24/06/2024	Mid-Flood	Cloudy	Low	15:01	2.6	М	1.30	2	0.094	107.007	7.17	7.17	3.66	5.00	26.8	20.75	40.4	40.00	3.04	5.01	22.07	21.905	41	00																				
M2	24/06/2024	Mid-Flood	Cloudy	Low	15:36	2.3	М	1.15	1	0.08	164.743	7.17	7.18	3.78	3.78	26.7	26.70	40.3	39.25	3.03	2.99	22.92	23.005	13	13																				
M2	24/06/2024	Mid-Flood	Cloudy	Low	15:36	2.3	М	1.15	2	0.00	104.743	7.19	7.10	3.78	5.70	26.7	20.70	38.2	59.25	2.95	2.33	23.09	23.005	12	15																				
M3	24/06/2024	Mid-Flood	Cloudy	Low	15:53	2	М	1.00	1	0.073	181.894	7.2	7.21	4.40	4.40	26.7	26.70	50.3	50.00	3.78	3.76	32.71	32.79	17	18																				
M3	24/06/2024	Mid-Flood	Cloudy	Low	15:53	2	М	1.00	2	0.073	101.094	7.22	1.21	4.4	4.40	26.7	20.70	49.7	50.00	3.74	5.70	32.87	52.19	18	10																				
M1	24/06/2024	Mid-Ebb	Cloudy	Low	10:11	2.5	М	1.25	1	0.08	329.168	7.12	7.11	3.40	3.40	27.1	27.10	38.4	39.15	2.89	2.95	21.67	21.615	50	52																				
M1	24/06/2024	Mid-Ebb	Cloudy	Low	10:11	2.5	М	1.25	2	0.08	529.100	7.1	7.11	3.4	3.40	27.1	27.10	39.9	39.15	3	2.95	21.56	21.015	53	52																				
M2	24/06/2024	Mid-Ebb	Cloudy	Low	9:38	2.1	М	1.05	1	0.074	308.822	7.15	7.16	3.39	3.39	27.1	27.10	41.4	41.00	3.11	3.08	22.62	22.4	36	37																				
M2	24/06/2024	Mid-Ebb	Cloudy	Low	9:39	2.1	М	1.05	2	0.074	300.022	7.17	7.10	3.39	5.59	27.1	27.10	40.6	41.00	3.05	3.00	22.18	22.4	37	57																				
M3	24/06/2024	Mid-Ebb	Cloudy	Low	10:25	1.9	М	0.95	1	0.068	302.135	7.18	7.18	4.14	1 1 1	27.1	27.15	48.9	49.65	3.68	3.74	31.55	31.34	36	37																				
M3	24/06/2024	Mid-Ebb	Cloudy	Low	10:25	1.9	M	0.95	2	0.000	302.135	7.18	1.10	4.14	4.14	27.2	27.15	50.4	49.00	3.79	5.74	31.13	51.34	38	31																				
Remark												For Flo	od Tide																																

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

Monitoring	D	0
Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0

Monitoring	D	0	N	ſU	SS				
Location	AL	LL	AL	LL	AL	LL			
M1(Impact Station)	2.25	1.91	48.4	50.4	59	68			

N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

									e						ln-s	itu Measu	rement							Labor Anal	ratory Iysis
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicate	Current Speed (m/s)	Current Direction (°)	pl	Η	Salinit	y (ppt)	Tempe (degre		DO Sat (%	turation %)	DO (r	ng/L)	Turbidity	y (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	26/06/2024	Mid-Flood	Cloudy	Low	16:28	2.8	М	1.40	1	0.089	170.316	7.16	7.17	3.16	3.14	27.1	27.15	37.9	37.65	2.85	2.83	21.50	21.35	58	59
M1	26/06/2024	Mid-Flood	Cloudy	Low	16:28	2.8	М	1.40	2	0.000	170.010	7.17	7.17	3.11	0.14	27.2	27.10	37.4	07.00	2.81	2.00	21.2	21.00	59	00
M2	26/06/2024	Mid-Flood	Cloudy	Low	16:57	2.4	М	1.20	1	0.092	165.775	7.18	7.18	3.25	3.23	27.1	27.10	38.8	39.40	2.92	2.97	22.54	22.505	74	75
M2	26/06/2024	Mid-Flood	Cloudy	Low	16:58	2.4	М	1.20	2	0.032	100.770	7.17	7.10	3.2	0.20	27.1	27.10	40.0	55.40	3.01	2.51	22.47	22.505	75	75
M3	26/06/2024	Mid-Flood	Cloudy	Low	17:11	2.1	М	1.05	1	0.077	167.51	7.15	7.14	3.48	3.47	27.1	27.15	49.9	50.50	3.75	3.80	32.46	32.425	67	65
M3	26/06/2024	Mid-Flood	Cloudy	Low	17:11	2.1	М	1.05	2	0.077	107.51	7.13	7.14	3.45	5.47	27.2	27.15	51.1	50.50	3.84	3.80	32.39	32.425	62	05
M1	26/06/2024	Mid-Ebb	Cloudy	Low	9:38	2.6	М	1.30	1	0.078	325.213	7.14	7.15	3.36	3.33	26.8	26.85	39.8	40.50	2.99	3.05	22.45	22.53	61	62
M1	26/06/2024	Mid-Ebb	Cloudy	Low	9:38	2.6	М	1.30	2	0.078	325.215	7.15	7.15	3.29	5.55	26.9	20.05	41.2	40.50	3.1	3.05	22.61	22.00	63	02
M2	26/06/2024	Mid-Ebb	Cloudy	Low	9:10	2.3	М	1.15	1	0.075	309.421	7.13	7.12	3.48	3.53	26.8	26.80	40.4	40.70	3.04	3.06	22.89	22.745	78	90
M2	26/06/2024	Mid-Ebb	Cloudy	Low	9:11	2.3	М	1.15	2	0.075	309.421	7.11	1.12	3.57	5.55	26.8	20.00	41.0	40.70	3.08	3.00	22.6	22.745	102	90
M3	26/06/2024	Mid-Ebb	Cloudy	Low	9:55	2	М	1.00	1	0.081	334.48	7.12	7.12	3.88	3.85	26.8	26.80	48.4	48.40	3.64	3.64	33.11	33.115	71	75
M3	26/06/2024	Mid-Ebb	Cloudy	Low	9:55	2	М	1.00	2	0.001	334.40	7.12	1.12	3.81	3.00	26.8	20.00	48.4	40.40	3.64	3.04	33.12	33.115	78	75
Remark												For Flood Tide													

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

Monitoring	DO					
Location	AL	LL				
M2(Impact Station)	1.88	1.79				
M3(Impact Station)	3.28	3.14				
For Ebb Tide						
Monitoring	D	0				

Monitoring	D	0	N	ΓU	S	S
Location	AL	LL	AL	LL	AL	LL
M1(Impact Station)	2.25	1.91	48.4	50.4	98.7	106.925

N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

								In-situ Measurement										Laboratory Analysis							
Monitoring Location	Date	Tide Mode	Weather	Sea Condition	Time	Water Depth (m)	Monitoring Level	Monitoring Level (m)	Replicat	Current Speed (m/s)	Current Direction (°)	pl	Н	Salinit	y (ppt)	Tempe (degr	erature ee C)	DO Sat (%	turation %)	DO (r	ng/L)	Turbidity	/ (NTU)	Total Sus Solids	spended (mg/L)
												Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.	Value	Ave.
M1	28/06/2024	Mid-Flood	Sunny	Low	8:16	2.4	М	1.20	1	0.091	184.74	7.2	7.19	3.14	3.15	27.5	27.50	35.8	35.25	2.69	2.65	20.45	20.53	28	30
M1	28/06/2024	Mid-Flood	Sunny	Low	8:16	2.4	M	1.20	2	0.001	104.74	7.18	7.10	3.16	0.10	27.5	21.00	34.7	00.20	2.61	2.00	20.61	20.00	32	00
M2	28/06/2024	Mid-Flood	Sunny	Low	8:44	2.1	M	1.05	1	0.094	177.989	7.21	7.21	3.22	3.24	27.5	27.55	34.7	34.65	2.61	2.61	20.79	20.935	34	35
M2	28/06/2024	Mid-Flood	Sunny	Low	8:44	2.1	М	1.05	2	0.034	177.505	7.21	1.21	3.25	5.24	27.6	21.55	34.6	54.05	2.6	2.01	21.08	20.335	35	- 55
M3	28/06/2024	Mid-Flood	Sunny	Low	8:53	1.8	М	0.90	1	0.076	176.156	7.23	7.23	3.99	4.03	27.5	27.55	51.5	51.30	3.87	3.86	31.12	31.03	23	27
M3	28/06/2024	Mid-Flood	Sunny	Low	8:53	1.8	М	0.90	2	0.070	170.150	7.22	1.25	4.06	4.05	27.6	27.55	51.1	51.50	3.84	5.00	30.94	51.05	31	21
M1	28/06/2024	Mid-Ebb	Sunny	Low	11:49	2.3	М	1.15	1	0.079	333.218	7.19	7.19	3.36	3.36	27.8	27.85	37.0	36.30	2.78	2.73	21.45	21.505	29	29
M1	28/06/2024	Mid-Ebb	Sunny	Low	11:50	2.3	М	1.15	2	0.079	333.210	7.19	7.19	3.36	3.30	27.9	27.00	35.6	30.30	2.68	2.75	21.56	21.505	28	29
M2	28/06/2024	Mid-Ebb	Sunny	Low	11:24	2	Μ	1.00	1	0.069	342.807	7.22	7.21	3.37	3.42	27.8	27.80	38.4	38.40	2.89	2.89	21.88	21.75	32	20
M2	28/06/2024	Mid-Ebb	Sunny	Low	11:25	2	М	1.00	2	0.009	342.007	7.2	1.21	3.46	5.42	27.8	21.00	38.4	30.40	2.89	2.09	21.62	21.75	27	30
M3	28/06/2024	Mid-Ebb	Sunny	Low	12:04	1.9	М	0.95	1	0.079	325.455	7.24	7.24	4.08	1 0 1	27.8	27.00	53.1	52.20	3.99	3.93	30.89	20 OF	28	21
M3	28/06/2024	Mid-Ebb	Sunny	Low	12:04	1.9	М	0.95	2	0.079	320.400	7.23	7.24	4	4.04	27.8	27.80	51.3	52.20	3.86	3.93	31.01	30.95	34	31
Remark												For Flo	od Tide												

1. Orange and Bold: Action Level Exceedance (For Impact Station Only)

2. Red and Bold: Limit Level Exceedance (For Impact Station Only)

3. Action Level for Turbidity: 95%-ile of baseline data or 120% of upstream control station's turbidity recorded on the same day.

4. Limit Level for Turbidity: 99%-ile of baseline data or 130% of upstream control station's turbidity recorded on the same day.

5. Action Level for SS: 95%-ile of baseline data or 120% of upstream control station's SS recorded on the same day.

6. Limit Level for SS: 99%-ile of baseline data or 130% of upstream control station's SS recorded on the same day.

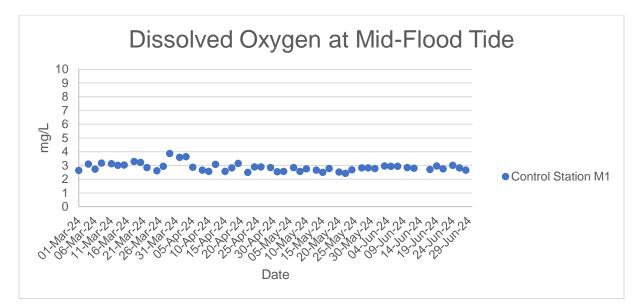
Location	AL	LL
M2(Impact Station)	1.88	1.79
M3(Impact Station)	3.28	3.14
For Ebb Tide		
Monitoring	D	0
Location	A I	11

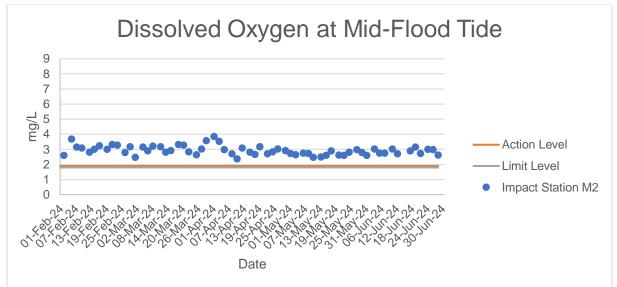
DO

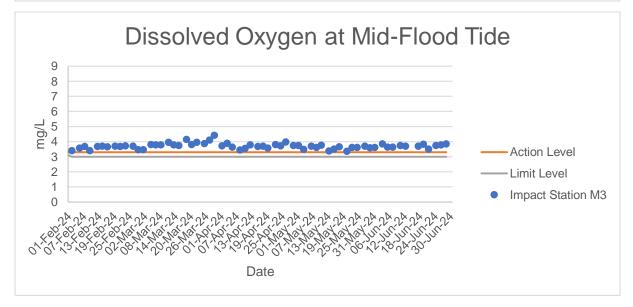
wontoning	U	0
Location	AL	LL
M1(Impact Station)	2.25	1.91

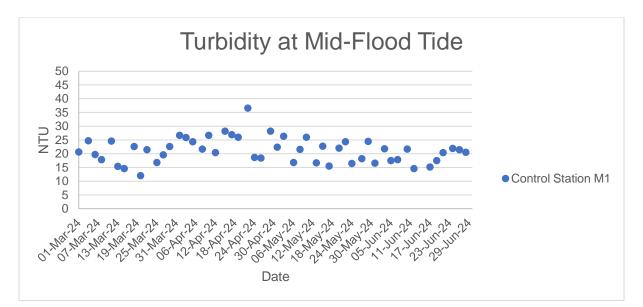
N	ΓU	S	S
AL	LL	AL	LL
43.0	52.4	81	112
74	78	104	167

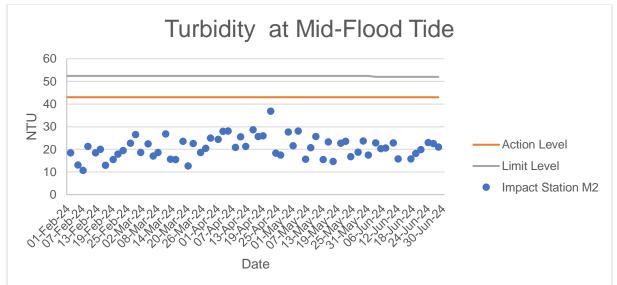
N	ΓU	S	S
AL	LL	AL	LL
48.4	50.4	59	68

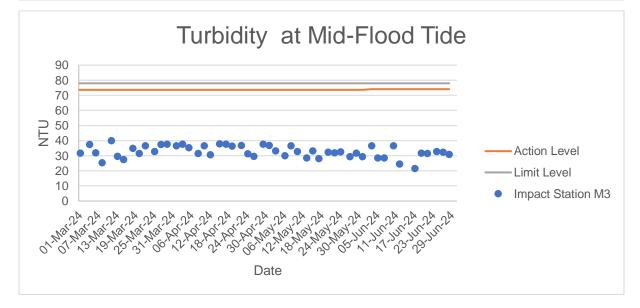


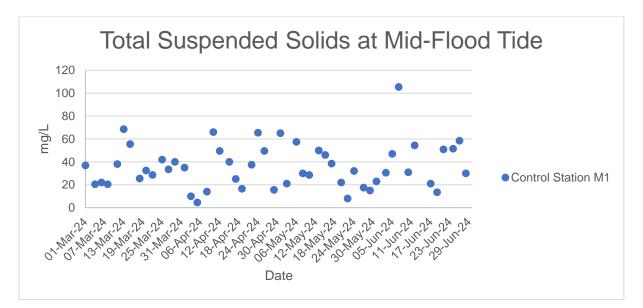


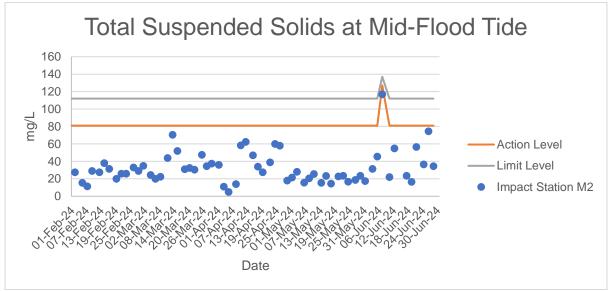


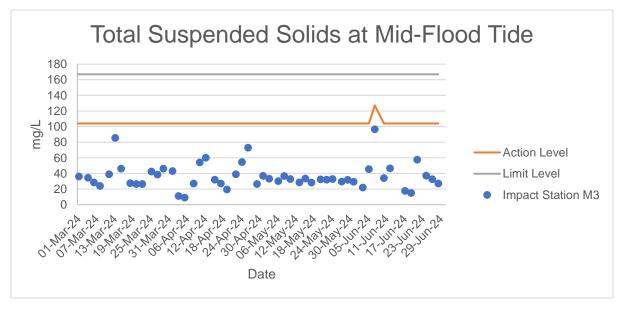


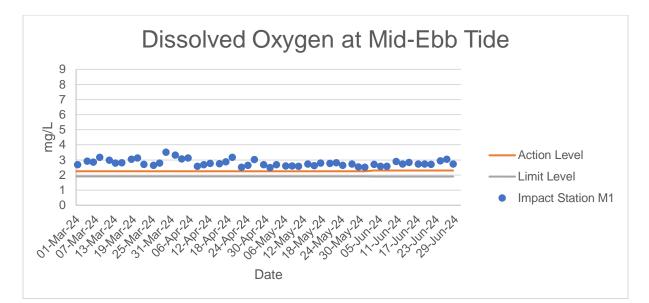


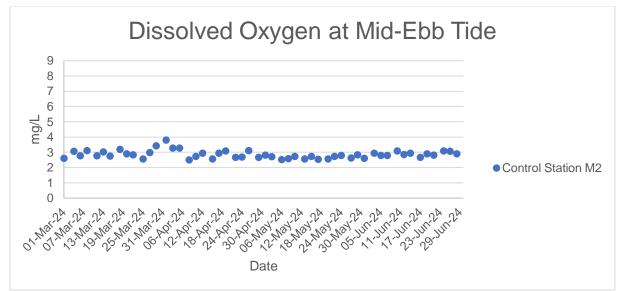


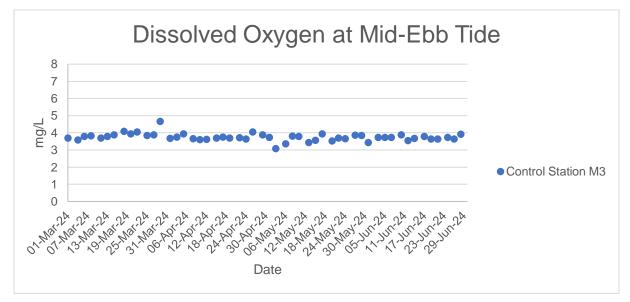


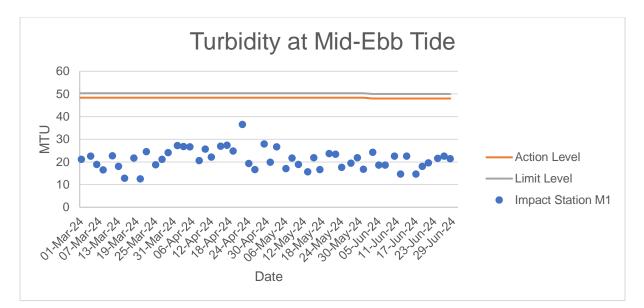


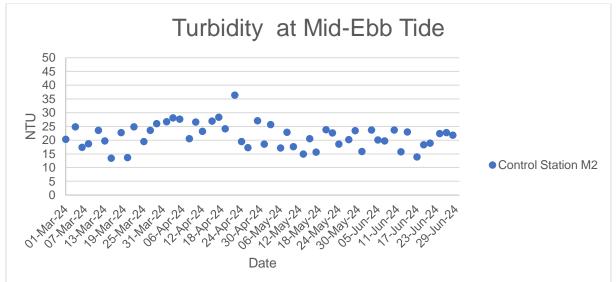


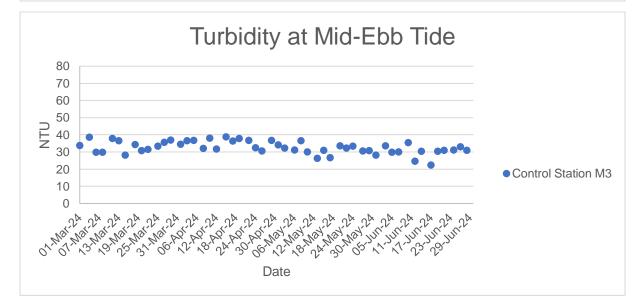






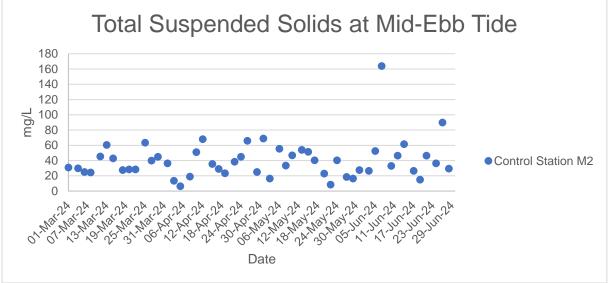


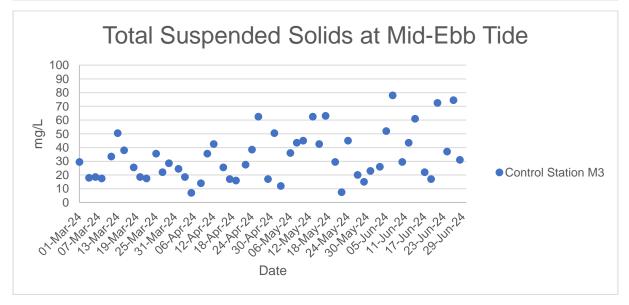




Water Quality Monitoring Results







Ecology Monitoring Results for Contract No. SPW 02/2023 Environmental Team for Construction of Yuen long Effluent Polishing Plant Stage 1

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	FLW	Point Count	FLW1	Great Egret	Ardea alba	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW1	Barn Swallow	Hirundo rustica	3	Abundant	PM,SV	-	-	-	LC	LC	Ν	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW1	Plain Prinia	Prinia inornata	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW1	Crested Myna	Acridotheres cristatellus	6	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW1	Common Myna	Acridotheres tristis	4	Uncommon	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Chinese Pond Heron	Ardeola bacchus	23	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Little Egret	Egretta garzetta	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Spotted Dove	Spilopelia chinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Azure-winged Magpie	Cyanopica cyanus	3	Introduced	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Chinese Bulbul	Pycnonotus sinensis	11	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Crested Myna	Acridotheres cristatellus	6	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW2	Black-collared Starling	Gracupica nigricollis	4	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW3	Spotted Dove	Spilopelia chinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW3	Chinese Bulbul	Pycnonotus sinensis	3	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW3	Barn Swallow	Hirundo rustica	3	Abundant	PM,SV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW3	Plain Prinia	Prinia inornata	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW4	Common Myna	Acridotheres tristis	2	Uncommon	R	-	-	-	LC	LC	Ν	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW4	Red-billed Starling	Spodiopsar sericeus	7	Common	WV	GC	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW4	Black-collared Starling	Gracupica nigricollis	4	Common	R	-	-	-	LC	LC	Ν	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	Chinese Pond Heron	Ardeola bacchus	2	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	White-breasted Waterhen	Amaurornis phoenicurus	2	Common	R	-	_	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	Red-billed Blue Magpie	Urocissa erythroryncha	2	Common	R	-	-	-	-	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	Plain Prinia	Prinia inornata	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	Red-billed Starling	Spodiopsar sericeus	6	Common	WV	GC	-	-	LC	LC	Y	Y

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	Black-collared Starling	Gracupica nigricollis	4	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW5	White Wagtail	Motacilla alba	1	Common	PM,WV	-	-	-	LC	LC	Ν	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Chinese Pond Heron	Ardeola bacchus	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Great Egret	Ardea alba	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	White-breasted Waterhen	Amaurornis phoenicurus	1	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Chinese Bulbul	Pycnonotus sinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Plain Prinia	Prinia inornata	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Crested Myna	Acridotheres cristatellus	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW6	Black-collared Starling	Gracupica nigricollis	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Chinese Pond Heron	Ardeola bacchus	17	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Black Kite	Milvus migrans	1	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Eurasian Collared Dove	Streptopelia decaocto	4	Common	-	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Spotted Dove	Spilopelia chinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Greater Coucal	Centropus sinensis	2	Common	R	-	Class II	VU	LC	LC	Y	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Azure-winged Magpie	Cyanopica cyanus	11	Introduced	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Chinese Bulbul	Pycnonotus sinensis	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Point Count	FLW7	Crested Myna	Acridotheres cristatellus	7	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Chinese Pond Heron	Ardeola bacchus	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Great Egret	Ardea alba	2	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	FLW	Transect	FLW	White-breasted Waterhen	Amaurornis phoenicurus	4	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Eurasian Collared Dove	Streptopelia decaocto	2	Common	-	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Spotted Dove	Spilopelia chinensis	8	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Greater Coucal	Centropus sinensis	2	Common	R	-	Class II	VU	LC	LC	Y	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	White-throated Kingfisher	Halcyon smyrnensis	2	Common	R	-	-	-	LC	LC	Y	Y

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Azure-winged Magpie	Cyanopica cyanus	8	Introduced	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Chinese Bulbul	Pycnonotus sinensis	8	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Barn Swallow	Hirundo rustica	8	Abundant	PM,SV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Crested Myna	Acridotheres cristatellus	4	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Common Myna	Acridotheres tristis	2	Uncommon	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Black-collared Starling	Gracupica nigricollis	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	Oriental Magpie Robin	Copsychus saularis	1	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	FLW	Transect	FLW	White Wagtail	Motacilla alba	1	Common	PM,WV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Great Egret	Ardea alba	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Little Egret	Egretta garzetta	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	White-breasted Waterhen	Amaurornis phoenicurus	1	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Eurasian Collared Dove	Streptopelia decaocto	2	Common	-	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Spotted Dove	Spilopelia chinensis	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Red-whiskered Bulbul	Pycnonotus jocosus	3	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Chinese Bulbul	Pycnonotus sinensis	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Swinhoe's White-eye	Zosterops simplex	3	Abundant	R	-	-	-	LC	LC	N	Ν
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Crested Myna	Acridotheres cristatellus	2	Common	R	-	-	-	LC	LC	N	Ν
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Black-collared Starling	Gracupica nigricollis	3	Common	R	-	-	-	LC	LC	Ν	Ν
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	White-shouldered Starling	Sturnia sinensis	3	Common	M,W,Su	(LC)	-	-	-	LC	Y	Ν
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Oriental Magpie Robin	Copsychus saularis	1	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	NSW1	Eurasian Tree Sparrow	Passer montanus	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Chinese Pond Heron	Ardeola bacchus	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Great Egret	Ardea alba	1	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Little Egret	Egretta garzetta	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	White-breasted Waterhen	Amaurornis phoenicurus	1	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Spotted Dove	Spilopelia chinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Asian Koel	Eudynamys scolopaceus	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Chinese Bulbul	Pycnonotus sinensis	6	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Plain Prinia	Prinia inornata	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Common Tailorbird	Orthotomus sutorius	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Swinhoe's White-eye	Zosterops simplex	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Crested Myna	Acridotheres cristatellus	4	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	Black-collared Starling	Gracupica nigricollis	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW1	White Wagtail	Motacilla alba	2	Common	PM,WV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Chinese Pond Heron	Ardeola bacchus	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Little Egret	Egretta garzetta	1	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Common Moorhen	Gallinula chloropus	1	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Spotted Dove	Spilopelia chinensis	1	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Greater Coucal	Centropus sinensis	1	Common	R	-	Class II	VU	LC	LC	Y	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Asian Koel	Eudynamys scolopaceus	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	White-throated Kingfisher	Halcyon smyrnensis	1	Common	R	-	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Red-whiskered Bulbul	Pycnonotus jocosus	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Chinese Bulbul	Pycnonotus sinensis	3	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Barn Swallow	Hirundo rustica	2	Abundant	PM,SV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Yellow-bellied Prinia	Prinia flaviventris	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Plain Prinia	Prinia inornata	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Crested Myna	Acridotheres cristatellus	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW2	Black-collared Starling	Gracupica nigricollis	1	Common	R	-	-	-	LC	LC	N	N

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 ²	Principal Status ³	Level of Concern⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Chinese Pond Heron	Ardeola bacchus	8	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Great Egret	Ardea alba	4	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Little Egret	Egretta garzetta	3	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	White-breasted Waterhen	Amaurornis phoenicurus	2	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Common Moorhen	Gallinula chloropus	1	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Japanese Tit	Parus minor	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Red-whiskered Bulbul	Pycnonotus jocosus	3	Abundant	R	-	_	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Plain Prinia	Prinia inornata	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Crested Myna	Acridotheres cristatellus	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Point Count	SP/NSW3	Oriental Magpie Robin	Copsychus saularis	3	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Chinese Pond Heron	Ardeola bacchus	6	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Great Egret	Ardea alba	5	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Little Egret	Egretta garzetta	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Black Kite	Milvus migrans	2	Common	R,WV	(RC)	Class II	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	NSW	Transect	NSW	White-breasted Waterhen	Amaurornis phoenicurus	2	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Spotted Dove	Spilopelia chinensis	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Asian Koel	Eudynamys scolopaceus	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Red-billed Blue Magpie	Urocissa erythroryncha	2	Common	R	-	-	-	-	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Japanese Tit	Parus minor	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Barn Swallow	Hirundo rustica	2	Abundant	PM,SV	-	_	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Plain Prinia	Prinia inornata	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Common Tailorbird	Orthotomus sutorius	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Masked Laughingthrush	Pterorhinus perspicillatus	2	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Swinhoe's White-eye	Zosterops simplex	2	Abundant	R	-	-	-	LC	LC	N	N

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	China Red Data Book ⁶	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Crested Myna	Acridotheres cristatellus	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Black-collared Starling	Gracupica nigricollis	3	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	Oriental Magpie Robin	Copsychus saularis	1	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	NSW	Transect	NSW	White Wagtail	Motacilla alba	1	Common	PM,WV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Chinese Pond Heron	Ardeola bacchus	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Great Egret	Ardea alba	8	Common	R,WV	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Little Egret	Egretta garzetta	4	Common	R	PRC (RC)	-	-	LC	LC	Y	Y
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	White-breasted Waterhen	Amaurornis phoenicurus	2	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Common Moorhen	Gallinula chloropus	2	Common	R	-	-	-	LC	LC	N	Y
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Asian Koel	Eudynamys scolopaceus	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Large Hawk-Cuckoo	Hierococcyx sparverioides	1	Common	PM,SV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Red-whiskered Bulbul	Pycnonotus jocosus	4	Abundant	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Barn Swallow	Hirundo rustica	6	Abundant	PM,SV	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Yellow-bellied Prinia	Prinia flaviventris	1	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Plain Prinia	Prinia inornata	2	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Crested Myna	Acridotheres cristatellus	5	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	Black-collared Starling	Gracupica nigricollis	6	Common	R	-	-	-	LC	LC	N	N
13/06/2024	Daytime	Wet	YLIE-CW	Transect	YLIE-CW	White Wagtail	Motacilla alba	1	Common	PM,WV	-	-	-	LC	LC	N	N
19/06/2024	Night-time	Wet	FLW	Point Count	FLW1	Black-crowned Night Heron	Nycticorax nycticorax	2	Common	R,WV	-	-	-	LC	LC	N	Y
19/06/2024	Night-time	Wet	FLW	Transect	FLW	Savanna Nightjar	Caprimulgus affinis	1	Uncommon	R.PM	-	-	-	DD	-	N	N
19/06/2024	Night-time	Wet	NSW	Point Count	NSW1	White-breasted Waterhen	Amaurornis phoenicurus	1	Common	R	-	-	-	LC	LC	N	Y
19/06/2024	Night-time	Wet	NSW	Point Count	SP/NSW1	Black-crowned Night Heron	Nycticorax nycticorax	1	Common	R,WV	-	-	-	LC	LC	N	Y
19/06/2024	Night-time	Wet	NSW	Point Count	SP/NSW1	Large Hawk-Cuckoo	Hierococcyx sparverioides	1	Common	PM,SV	-	-	-	LC	LC	N	N
19/06/2024	Night-time	Wet	NSW	Point Count	SP/NSW1	Savanna Nightjar	Caprimulgus affinis	1	Uncommon	R.PM	-	-	-	DD	-	N	N

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 ²	Principal Status ³	Level of Concern ⁴	Protection Status in China ⁵	Data Back	Red List of China's Vertebrates ⁹	IUCN Red List ⁷ (v.2020-3)	Species of Conservation Importance	Wetland Dependent ⁸
19/06/2024	Night-time	Wet	YLIE-CW	Transect	YLIE-CW	Black-crowned Night Heron	Nycticorax nycticorax	3	Common	R,WV	-	-	-	LC	LC	Ν	Y
19/06/2024	Night-time	Wet	YLIE-CW	Transect	YLIE-CW	Savanna Nightjar	Caprimulgus affinis	2	Uncommon	R.PM	-	-	-	DD	-	Ν	Ν

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

Zheng, G. M. and Wang, G. C. (1999). China read Data Dook
 IUCN 2021. The IUCN Red List of Threatened Species. Version 2020-3.
 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 (13 and 19 June 2024)

Scientific Name	Count	Р	Ln(P)	P*Ln(P)	P*Ln(P) ²
Nycticorax nycticorax	3	0.0106	-4.5504	-0.0481	0.2187
Ardeola bacchus	53	0.1866	-1.6787	-0.3133	0.5259
Ardea alba	9	0.0317	-3.4517	-0.1094	0.3776
Egretta garzetta	7	0.0246	-3.7031	-0.0913	0.3380
Milvus migrans	1	0.0035	-5.6490	-0.0199	0.1124
Amaurornis phoenicurus	8	0.0282	-3.5695	-0.1006	0.3589
Gallinula chloropus	2	0.0070	-4.9558	-0.0349	0.1730
Streptopelia decaocto	6	0.0211	-3.8572	-0.0815	0.3143
Spilopelia chinensis	13	0.0458	-3.0840	-0.1412	0.4354
Centropus sinensis	3	0.0106	-4.5504	-0.0481	0.2187
Eudynamys scolopaceus	2	0.0070	-4.9558	-0.0349	0.1730
Hierococcyx sparverioides	1	0.0035	-5.6490	-0.0199	0.1124
Caprimulgus affinis	1	0.0035	-5.6490	-0.0199	0.1124
Halcyon smyrnensis	1	0.0035	-5.6490	-0.0199	0.1124
Cyanopica cyanus	14	0.0493	-3.0099	-0.1484	0.4466
Urocissa erythroryncha	2	0.0070	-4.9558	-0.0349	0.1730
Parus minor	3	0.0106	-4.5504	-0.0481	0.2187
	10	0.0352	-3.3464	-0.1178	0.3943
Pycnonotus jocosus	33	0.1162	-2.1525	-0.2501	0.5384
Pycnonotus sinensis Hirundo rustica	8	0.0282	-3.5695	-0.1006	0.3589
	1	0.0035	-5.6490	-0.0199	0.1124
Prinia flaviventris	11	0.0387	-3.2511	-0.1259	0.4094
Prinia inornata	1	0.0035	-5.6490	-0.0199	0.1124
Orthotomus sutorius	5	0.0176	-4.0395	-0.0711	0.2873
Zosterops simplex Acridotheres cristatellus	32	0.1127	-2.1832	-0.2460	0.5371
Acridotheres tristis	6	0.0211	-3.8572	-0.0815	0.3143
	13	0.0458	-3.0840	-0.1412	0.4354
Spodiopsar sericeus		0.0739	-2.6045	-0.1926	0.5016
Gracupica nigricollis	21	0.0106	-4.5504	-0.0481	0.2187
Sturnia sinensis	3	0.0141	-4.2627	-0.0600	0.2559
Copsychus saularis	4	0.0141	-4.2627	-0.0600	0.2559
Passer montanus	4	0.0106	-4.5504	-0.0481	0.2187
Motacilla alba	3				
Total	284	1	-130.4806	-2.8968	9.3718
Richness	32				
SS	9.3718				
SS SQ	8.3912				
	2.8968				
H	0.0036				
S ² H	0.0030				

Appendix F.2.2 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Point Count Method) in All Habitats (13 and 19 June 2024)

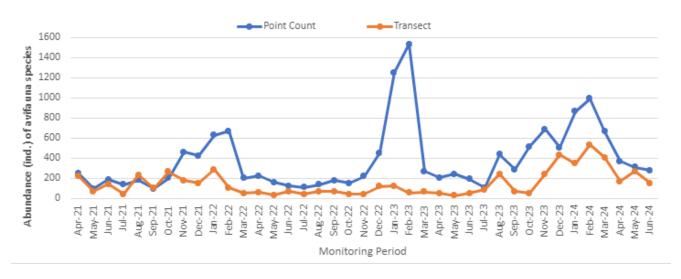
Scientific Name	Count	Р	Ln(P)	P*Ln(P)	P*Ln(P) ²
Nycticorax nycticorax	3	0.0323	-3.4340	-0.1108	0.3804
Ardeola bacchus	53	0.5699	-0.5623	-0.3205	0.1802
Ardea alba	9	0.0968	-2.3354	-0.2260	0.5278
Egretta garzetta	7	0.0753	-2.5867	-0.1947	0.5036
Milvus migrans	1	0.0108	-4.5326	-0.0487	0.2209
Centropus sinensis	3	0.0323	-3.4340	-0.1108	0.3804
Halcyon smyrnensis	1	0.0108	-4.5326	-0.0487	0.2209
Spodiopsar sericeus	13	0.1398	-1.9677	-0.2750	0.5412
Sturnia sinensis	3	0.0323	-3.4340	-0.1108	0.3804
Total	93	1	-26.8192	-1.4460	3.3358
Richness	9				
SS	3.3358				
SQ	2.0909				
Н	1.4460				
S ² H	0.0138				

Appendix F.2.3 Ecological Bird Monitoring Diversity (All avifauna species in Transect Walk Method) in All Habitats (13 and 19 June 2024)

Scientific Name	Count	Р	Ln(P)	P*Ln(P)	P*Ln(P) ²
Nycticorax nycticorax	3	0.0196	-3.9318	-0.0771	0.3031
Ardeola bacchus	13	0.0850	-2.4655	-0.2095	0.5165
Ardea alba	15	0.0980	-2.3224	-0.2277	0.5288
Egretta garzetta	8	0.0523	-2.9510	-0.1543	0.4553
Milvus migrans	2	0.0131	-4.3373	-0.0567	0.2459
Amaurornis phoenicurus	8	0.0523	-2.9510	-0.1543	0.4553
Gallinula chloropus	2	0.0131	-4.3373	-0.0567	0.2459
Streptopelia decaocto	2	0.0131	-4.3373	-0.0567	0.2459
Spilopelia chinensis	10	0.0654	-2.7279	-0.1783	0.4864
Centropus sinensis	2	0.0131	-4.3373	-0.0567	0.2459
Eudynamys scolopaceus	2	0.0131	-4.3373	-0.0567	0.2459
Hierococcyx sparverioides	1	0.0065	-5.0304	-0.0329	0.1654
Caprimulgus affinis	3	0.0196	-3.9318	-0.0771	0.3031
Halcyon smyrnensis	2	0.0131	-4.3373	-0.0567	0.2459
Cyanopica cyanus	8	0.0523	-2.9510	-0.1543	0.4553
Urocissa erythroryncha	2	0.0131	-4.3373	-0.0567	0.2459
Parus minor	3	0.0196	-3.9318	-0.0771	0.3031
Pycnonotus jocosus	4	0.0261	-3.6441	-0.0953	0.3472
Pycnonotus sinensis	8	0.0523	-2.9510	-0.1543	0.4553
Hirundo rustica	16	0.1046	-2.2578	-0.2361	0.5331
Prinia flaviventris	1	0.0065	-5.0304	-0.0329	0.1654
Prinia inornata	3	0.0196	-3.9318	-0.0771	0.3031
Orthotomus sutorius	2	0.0131	-4.3373	-0.0567	0.2459
Pterorhinus perspicillatus	2	0.0131	-4.3373	-0.0567	0.2459
Zosterops simplex	2	0.0131	-4.3373	-0.0567	0.2459
Acridotheres cristatellus	11	0.0719	-2.6325	-0.1893	0.4983
Acridotheres tristis	2	0.0131	-4.3373	-0.0567	0.2459
Gracupica nigricollis	11	0.0719	-2.6325	-0.1893	0.4983
Copsychus saularis	2	0.0131	-4.3373	-0.0567	0.2459
Motacilla alba	3	0.0196	-108.3225	-2.9971	9.7240
Total	153	1	-108.3225	-2.9404	9.4781
Richness	30				
SS	9.4781				
SQ	8.6459				
Н	2.9404				
S ² H	0.006059	Ī			

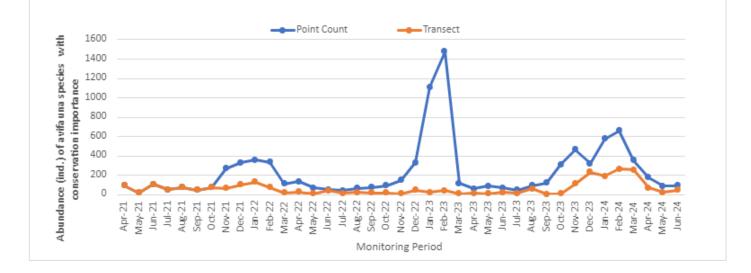
Appendix F.2.4 Ecological Bird Monitoring Diversity (Avifauna species of conservation importance in Transect Walk Method) in All Habitats (13 and 19 June 2024)

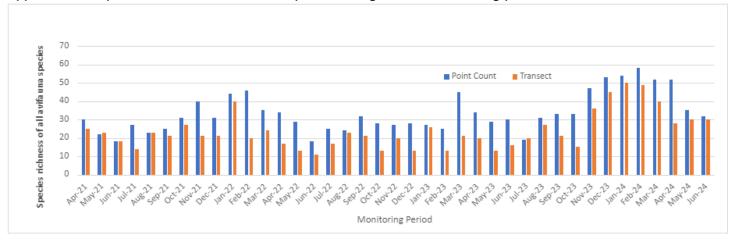
Scientific Name	Count	Р	Ln(P)	P*Ln(P)	P*Ln(P) ²
Nycticorax nycticorax	3	0.0667	-2.7081	-0.1805	0.4889
Ardeola bacchus	13	0.2889	-1.2417	-0.3587	0.4454
Ardea alba	15	0.3333	-1.0986	-0.3662	0.4023
Egretta garzetta	8	0.1778	-1.7272	-0.3071	0.5304
Milvus migrans	2	0.0444	-3.1135	-0.1384	0.4308
Centropus sinensis	2	0.0444	-3.1135	-0.1384	0.4308
Halcyon smyrnensis	2	0.0444	-13.0026	-1.4893	2.7287
Total	45	1	-13.0026	-1.4893	2.7287
Richness	7				
SS	2.7287				
SQ	2.2179				
Н	1.4893				
S ² H	0.01283				



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

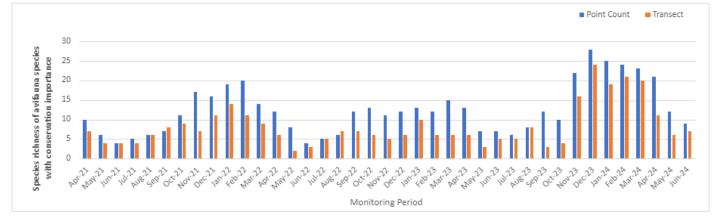
Appendix F.3.2 Abundance of avifauna species with conservation importance throughout the monitoring period

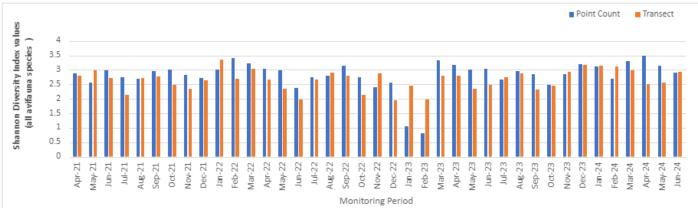




Appendix F.4.1 Species richness of all avifauna species throughout the monitoring period

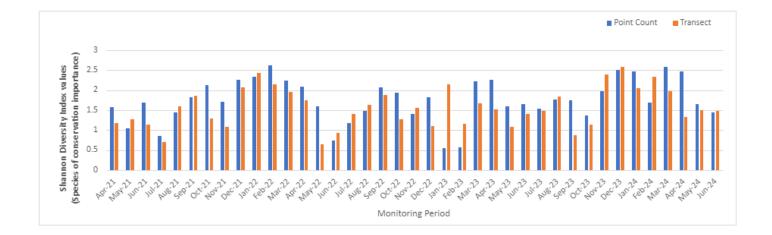
Appendix F.4.2 Species richness of avifauna species with conservation importance throughout the monitoring period





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	June 2017	June 2024				
Total	121	284				
Richness	25	32				
Н	2.8670	2.8968				
S ² H	0.006152	0.003645				
t	0.3010					
df	266.9337					
Crit	1.9689					
р	0.7636					
CI	0.1569	0.1207				

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

Months	June 2017	June 2024				
Total	69	153				
Richness	13	30				
н	2	2.9404				
S ² H	0	0.006059				
t	6.3939					
df	141.8089					
Crit	1.9769					
р	2.22E-09					
CI	0.2163	0.1557				

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

Months	June 2017	June 2024
Total	45	93
Richness	5	9
Н	1.4282	1.4460
S ² H	0.007418	0.013849
t	0.1223	
df	137.6767	
Crit	1.9774	
р	0.9028	
CI	0.1723	0.2354

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

Months	June 2017	June 2024
Total	40	45
Richness	3	7
Н	1.03972	1.4893
S²H	0.003628	0.01283
t	3.5041	
df	67.9337	
Crit	1.9960	
р	8.22E-04	
CI	0.1205	0.2266

Appendix G Wind Data

Date	Wind Speed (m/s)	Wind Direction
01 Jun 2024 00:00	0.1	SE
01 Jun 2024 01:00	0.6	S
01 Jun 2024 02:00	0.6	SWS
01 Jun 2024 03:00	0.1	S
01 Jun 2024 04:00	0.2	SW
01 Jun 2024 05:00	0.4	S
01 Jun 2024 06:00	0.5	S
01 Jun 2024 07:00	0.7	S
01 Jun 2024 08:00	0.5	S
01 Jun 2024 09:00	0.4	SWS
01 Jun 2024 10:00	0.9	SWS
01 Jun 2024 11:00	1.9	S
01 Jun 2024 12:00	1.6	SES
01 Jun 2024 13:00	1.1	S
01 Jun 2024 14:00	1.2	SWW
01 Jun 2024 15:00	0.6	SWS
01 Jun 2024 16:00	1.9	SW
01 Jun 2024 17:00	2.2	SWS
01 Jun 2024 18:00	1.4	SWW
01 Jun 2024 19:00	1.3	SWS
01 Jun 2024 20:00	0.8	W
01 Jun 2024 21:00	0.9	SWW
01 Jun 2024 22:00	0.7	SW
01 Jun 2024 23:00	0.6	SWS
02 Jun 2024 00:00	0.4	SES
02 Jun 2024 01:00	0.3	SWS
02 Jun 2024 02:00	0.3	SWS

Date	Wind Speed (m/s)	Wind Direction
02 Jun 2024 03:00	0.1	SWS
02 Jun 2024 04:00	0.1	S
02 Jun 2024 05:00	0.1	SW
02 Jun 2024 06:00	0.1	SW
02 Jun 2024 07:00	0.1	S
02 Jun 2024 08:00	0.2	W
02 Jun 2024 09:00	0.3	SW
02 Jun 2024 10:00	0.3	SWW
02 Jun 2024 11:00	0.9	SWS
02 Jun 2024 12:00	1.0	W
02 Jun 2024 13:00	1.0	NW
02 Jun 2024 14:00	0.8	S
02 Jun 2024 15:00	0.1	W
02 Jun 2024 16:00	0.1	NWW
02 Jun 2024 17:00	0.1	S
02 Jun 2024 18:00	0.2	W
02 Jun 2024 19:00	0.2	SWS
02 Jun 2024 20:00	0.1	SWS
02 Jun 2024 21:00	0.1	SE
02 Jun 2024 22:00	0.1	SW
02 Jun 2024 23:00	0.1	SE
03 Jun 2024 00:00	0.1	SES
03 Jun 2024 01:00	0.1	SES
03 Jun 2024 02:00	0.1	SES
03 Jun 2024 03:00	0.1	SES
03 Jun 2024 04:00	0.2	NEE
03 Jun 2024 05:00	0.4	NEE

Date	Wind Speed (m/s)	Wind Direction
03 Jun 2024 06:00	0.4	E
03 Jun 2024 07:00	0.2	E
03 Jun 2024 08:00	0.1	NE
03 Jun 2024 09:00	0.1	E
03 Jun 2024 10:00	0.1	NE
03 Jun 2024 11:00	0.1	NEE
03 Jun 2024 12:00	0.1	SEE
03 Jun 2024 13:00	0.1	NE
03 Jun 2024 14:00	0.3	SES
03 Jun 2024 15:00	0.4	E
03 Jun 2024 16:00	0.1	E
03 Jun 2024 17:00	0.1	E
03 Jun 2024 18:00	0.1	E
03 Jun 2024 19:00	0.3	E
03 Jun 2024 20:00	0.3	NEE
03 Jun 2024 21:00	0.3	NEE
03 Jun 2024 22:00	0.4	E
03 Jun 2024 23:00	0.8	E
04 Jun 2024 00:00	1.0	NE
04 Jun 2024 01:00	0.4	E
04 Jun 2024 02:00	1.0	E
04 Jun 2024 03:00	0.9	E
04 Jun 2024 04:00	0.2	E
04 Jun 2024 05:00	0.3	E
04 Jun 2024 06:00	0.2	E
04 Jun 2024 07:00	0.1	NEE
04 Jun 2024 08:00	0.3	SEE

Date	Wind Speed (m/s)	Wind Direction
04 Jun 2024 09:00	0.8	E
04 Jun 2024 10:00	1.2	SEE
04 Jun 2024 11:00	1.0	NEE
04 Jun 2024 12:00	0.7	E
04 Jun 2024 13:00	0.8	E
04 Jun 2024 14:00	1.2	E
04 Jun 2024 15:00	0.7	NEE
04 Jun 2024 16:00	0.7	SEE
04 Jun 2024 17:00	0.9	NEE
04 Jun 2024 18:00	0.3	NEE
04 Jun 2024 19:00	0.1	E
04 Jun 2024 20:00	0.1	SEE
04 Jun 2024 21:00	0.2	E
04 Jun 2024 22:00	0.2	NEE
04 Jun 2024 23:00	0.2	NEE
05 Jun 2024 00:00	0.4	NEE
05 Jun 2024 01:00	0.1	N
05 Jun 2024 02:00	0.1	Ν
05 Jun 2024 03:00	0.1	N
05 Jun 2024 04:00	0.1	N
05 Jun 2024 05:00	0.1	N
05 Jun 2024 06:00	0.1	N
05 Jun 2024 07:00	0.1	N
05 Jun 2024 08:00	0.1	N
05 Jun 2024 09:00	0.1	N
05 Jun 2024 10:00	0.1	N
05 Jun 2024 11:00	0.1	Ν

Date	Wind Speed (m/s)	Wind Direction
05 Jun 2024 12:00	0.1	N
05 Jun 2024 13:00	0.1	N
05 Jun 2024 14:00	0.1	N
05 Jun 2024 15:00	0.1	N
05 Jun 2024 16:00	0.1	N
05 Jun 2024 17:00	0.1	N
05 Jun 2024 18:00	0.1	N
05 Jun 2024 19:00	0.1	N
05 Jun 2024 20:00	0.1	N
05 Jun 2024 21:00	0.1	N
05 Jun 2024 22:00	0.1	N
05 Jun 2024 23:00	0.1	N
06 Jun 2024 00:00	0.1	N
06 Jun 2024 01:00	0.1	N
06 Jun 2024 02:00	0.1	N
06 Jun 2024 03:00	0.1	N
06 Jun 2024 04:00	0.1	N
06 Jun 2024 05:00	0.1	N
06 Jun 2024 06:00	0.1	N
06 Jun 2024 07:00	0.1	N
06 Jun 2024 08:00	0.1	N
06 Jun 2024 09:00	0.1	N
06 Jun 2024 10:00	0.1	N
06 Jun 2024 11:00	0.1	N
06 Jun 2024 12:00	0.1	N
06 Jun 2024 13:00	0.1	N
06 Jun 2024 14:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
06 Jun 2024 15:00	0.1	N
06 Jun 2024 16:00	0.1	N
06 Jun 2024 17:00	0.1	N
06 Jun 2024 18:00	0.1	N
06 Jun 2024 19:00	0.1	N
06 Jun 2024 20:00	0.1	N
06 Jun 2024 21:00	0.1	N
06 Jun 2024 22:00	0.1	N
06 Jun 2024 23:00	0.1	N
07 Jun 2024 00:00	0.1	N
07 Jun 2024 01:00	0.1	N
07 Jun 2024 02:00	0.1	N
07 Jun 2024 03:00	0.1	N
07 Jun 2024 04:00	0.1	N
07 Jun 2024 05:00	0.1	N
07 Jun 2024 06:00	0.1	N
07 Jun 2024 07:00	0.1	N
07 Jun 2024 08:00	0.1	N
07 Jun 2024 09:00	0.1	N
07 Jun 2024 10:00	0.1	N
07 Jun 2024 11:00	0.1	N
07 Jun 2024 12:00	0.1	N
07 Jun 2024 13:00	0.1	N
07 Jun 2024 14:00	0.1	N
07 Jun 2024 15:00	0.1	N
07 Jun 2024 16:00	0.1	Ν
07 Jun 2024 17:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
07 Jun 2024 18:00	0.1	N
07 Jun 2024 19:00	0.1	N
07 Jun 2024 20:00	0.1	N
07 Jun 2024 21:00	0.1	N
07 Jun 2024 22:00	0.1	N
07 Jun 2024 23:00	0.1	N
08 Jun 2024 00:00	0.1	N
08 Jun 2024 01:00	0.1	N
08 Jun 2024 02:00	0.1	N
08 Jun 2024 03:00	0.1	N
08 Jun 2024 04:00	0.1	N
08 Jun 2024 05:00	0.1	N
08 Jun 2024 06:00	0.1	N
08 Jun 2024 07:00	0.1	N
08 Jun 2024 08:00	0.1	N
08 Jun 2024 09:00	0.1	N
08 Jun 2024 10:00	0.1	N
08 Jun 2024 11:00	0.1	N
08 Jun 2024 12:00	0.1	N
08 Jun 2024 13:00	0.1	N
08 Jun 2024 14:00	0.1	N
08 Jun 2024 15:00	0.1	N
08 Jun 2024 16:00	0.1	N
08 Jun 2024 17:00	0.1	N
08 Jun 2024 18:00	0.1	N
08 Jun 2024 19:00	0.1	N
08 Jun 2024 20:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
08 Jun 2024 21:00	0.1	N
08 Jun 2024 22:00	0.1	Ν
08 Jun 2024 23:00	0.1	Ν
09 Jun 2024 00:00	0.1	Ν
09 Jun 2024 01:00	0.1	SE
09 Jun 2024 02:00	0.1	E
09 Jun 2024 03:00	0.1	NEE
09 Jun 2024 04:00	0.1	SWS
09 Jun 2024 05:00	0.1	E
09 Jun 2024 06:00	0.2	E
09 Jun 2024 07:00	0.2	SEE
09 Jun 2024 08:00	0.1	E
09 Jun 2024 09:00	0.1	NEE
09 Jun 2024 10:00	0.1	E
09 Jun 2024 11:00	0.1	NEE
09 Jun 2024 12:00	0.2	NE
09 Jun 2024 13:00	0.2	NEE
09 Jun 2024 14:00	0.1	NE
09 Jun 2024 15:00	0.1	NE
09 Jun 2024 16:00	0.1	NEE
09 Jun 2024 17:00	0.1	NEN
09 Jun 2024 18:00	0.1	NEE
09 Jun 2024 19:00	0.1	NE
09 Jun 2024 20:00	0.1	NEE
09 Jun 2024 21:00	0.1	E
09 Jun 2024 22:00	0.1	E
09 Jun 2024 23:00	0.1	E

Date	Wind Speed (m/s)	Wind Direction
10 Jun 2024 00:00	0.1	SEE
10 Jun 2024 01:00	0.1	E
10 Jun 2024 02:00	0.1	NE
10 Jun 2024 03:00	0.1	SEE
10 Jun 2024 04:00	0.1	NW
10 Jun 2024 05:00	0.1	NE
10 Jun 2024 06:00	0.1	NEN
10 Jun 2024 07:00	0.2	SWW
10 Jun 2024 08:00	0.2	S
10 Jun 2024 09:00	1.0	SE
10 Jun 2024 10:00	1.2	S
10 Jun 2024 11:00	0.8	SWS
10 Jun 2024 12:00	0.7	S
10 Jun 2024 13:00	0.2	S
10 Jun 2024 14:00	0.2	SWS
10 Jun 2024 15:00	0.3	S
10 Jun 2024 16:00	0.5	SES
10 Jun 2024 17:00	0.3	S
10 Jun 2024 18:00	0.1	SES
10 Jun 2024 19:00	0.1	SES
10 Jun 2024 20:00	0.1	SE
10 Jun 2024 21:00	0.1	SES
10 Jun 2024 22:00	0.1	S
10 Jun 2024 23:00	0.1	S
11 Jun 2024 00:00	0.1	SWS
11 Jun 2024 01:00	0.2	SES
11 Jun 2024 02:00	0.3	S

Date	Wind Speed (m/s)	Wind Direction
11 Jun 2024 03:00	0.2	S
11 Jun 2024 04:00	0.1	S
11 Jun 2024 05:00	0.1	SE
11 Jun 2024 06:00	0.1	E
11 Jun 2024 07:00	0.1	SES
11 Jun 2024 08:00	0.3	S
11 Jun 2024 09:00	0.4	SWS
11 Jun 2024 10:00	0.3	SWS
11 Jun 2024 11:00	0.2	S
11 Jun 2024 12:00	0.4	SW
11 Jun 2024 13:00	0.5	SW
11 Jun 2024 14:00	0.8	SW
11 Jun 2024 15:00	0.9	SWW
11 Jun 2024 16:00	0.5	SWS
11 Jun 2024 17:00	0.3	SW
11 Jun 2024 18:00	0.1	SWW
11 Jun 2024 19:00	0.1	E
11 Jun 2024 20:00	0.1	SE
11 Jun 2024 21:00	0.1	SES
11 Jun 2024 22:00	0.1	SES
11 Jun 2024 23:00	0.1	S
12 Jun 2024 00:00	0.1	SES
12 Jun 2024 01:00	0.1	SE
12 Jun 2024 02:00	0.1	SES
12 Jun 2024 03:00	0.1	S
12 Jun 2024 04:00	0.1	SWS
12 Jun 2024 05:00	0.1	SE

Date	Wind Speed (m/s)	Wind Direction
12 Jun 2024 06:00	0.1	SE
12 Jun 2024 07:00	0.3	SWS
12 Jun 2024 08:00	0.3	S
12 Jun 2024 09:00	0.4	SWS
12 Jun 2024 10:00	0.9	SWS
12 Jun 2024 11:00	2.0	SWS
12 Jun 2024 12:00	1.5	SWW
12 Jun 2024 13:00	0.7	S
12 Jun 2024 14:00	0.7	SW
12 Jun 2024 15:00	0.3	W
12 Jun 2024 16:00	0.2	SES
12 Jun 2024 17:00	0.1	SWS
12 Jun 2024 18:00	0.1	SES
12 Jun 2024 19:00	0.1	SWS
12 Jun 2024 20:00	0.1	S
12 Jun 2024 21:00	0.1	SW
12 Jun 2024 22:00	0.1	S
12 Jun 2024 23:00	0.1	SW
13 Jun 2024 00:00	0.1	SE
13 Jun 2024 01:00	0.1	SES
13 Jun 2024 02:00	0.1	N
13 Jun 2024 03:00	0.1	N
13 Jun 2024 04:00	0.1	N
13 Jun 2024 05:00	0.1	N
13 Jun 2024 06:00	0.1	N
13 Jun 2024 07:00	0.1	N
13 Jun 2024 08:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
13 Jun 2024 09:00	0.1	N
13 Jun 2024 10:00	0.1	N
13 Jun 2024 11:00	0.1	N
13 Jun 2024 12:00	0.1	N
13 Jun 2024 13:00	0.1	N
13 Jun 2024 14:00	0.1	N
13 Jun 2024 15:00	0.1	N
13 Jun 2024 16:00	0.1	N
13 Jun 2024 17:00	0.1	N
13 Jun 2024 18:00	0.1	N
13 Jun 2024 19:00	0.1	N
13 Jun 2024 20:00	0.1	N
13 Jun 2024 21:00	0.1	N
13 Jun 2024 22:00	0.1	N
13 Jun 2024 23:00	0.1	N
14 Jun 2024 00:00	0.1	N
14 Jun 2024 01:00	0.1	N
14 Jun 2024 02:00	0.1	N
14 Jun 2024 03:00	0.1	N
14 Jun 2024 04:00	0.1	N
14 Jun 2024 05:00	0.1	N
14 Jun 2024 06:00	0.1	N
14 Jun 2024 07:00	0.1	N
14 Jun 2024 08:00	0.1	N
14 Jun 2024 09:00	0.1	N
14 Jun 2024 10:00	0.1	N
14 Jun 2024 11:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
14 Jun 2024 12:00	0.1	N
14 Jun 2024 13:00	0.1	N
14 Jun 2024 14:00	0.1	N
14 Jun 2024 15:00	0.1	N
14 Jun 2024 16:00	0.1	N
14 Jun 2024 17:00	0.1	N
14 Jun 2024 18:00	0.1	N
14 Jun 2024 19:00	0.1	N
14 Jun 2024 20:00	0.1	N
14 Jun 2024 21:00	0.1	N
14 Jun 2024 22:00	0.1	N
14 Jun 2024 23:00	0.1	N
15 Jun 2024 00:00	0.1	N
15 Jun 2024 01:00	0.1	N
15 Jun 2024 02:00	0.1	N
15 Jun 2024 03:00	0.1	N
15 Jun 2024 04:00	0.1	N
15 Jun 2024 05:00	0.1	N
15 Jun 2024 06:00	0.1	N
15 Jun 2024 07:00	0.1	N
15 Jun 2024 08:00	0.1	N
15 Jun 2024 09:00	0.1	N
15 Jun 2024 10:00	0.1	N
15 Jun 2024 11:00	0.1	N
15 Jun 2024 12:00	0.1	N
15 Jun 2024 13:00	0.1	N
15 Jun 2024 14:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
15 Jun 2024 15:00	0.1	N
15 Jun 2024 16:00	0.1	N
15 Jun 2024 17:00	0.1	N
15 Jun 2024 18:00	0.1	N
15 Jun 2024 19:00	0.1	N
15 Jun 2024 20:00	0.1	N
15 Jun 2024 21:00	0.1	N
15 Jun 2024 22:00	0.1	N
15 Jun 2024 23:00	0.1	N
16 Jun 2024 00:00	0.1	N
16 Jun 2024 01:00	0.1	N
16 Jun 2024 02:00	0.1	N
16 Jun 2024 03:00	0.1	N
16 Jun 2024 04:00	0.1	N
16 Jun 2024 05:00	0.1	N
16 Jun 2024 06:00	0.1	N
16 Jun 2024 07:00	0.1	N
16 Jun 2024 08:00	0.1	N
16 Jun 2024 09:00	0.1	N
16 Jun 2024 10:00	0.1	N
16 Jun 2024 11:00	0.1	N
16 Jun 2024 12:00	0.1	N
16 Jun 2024 13:00	0.1	N
16 Jun 2024 14:00	0.1	N
16 Jun 2024 15:00	0.1	N
16 Jun 2024 16:00	0.1	N
16 Jun 2024 17:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
16 Jun 2024 18:00	0.1	N
16 Jun 2024 19:00	0.1	N
16 Jun 2024 20:00	0.1	N
16 Jun 2024 21:00	0.1	N
16 Jun 2024 22:00	0.1	N
16 Jun 2024 23:00	0.1	N
17 Jun 2024 00:00	0.1	N
17 Jun 2024 01:00	0.1	N
17 Jun 2024 02:00	0.1	S
17 Jun 2024 03:00	0.1	S
17 Jun 2024 04:00	0.1	S
17 Jun 2024 05:00	0.1	S
17 Jun 2024 06:00	0.1	SES
17 Jun 2024 07:00	0.2	SES
17 Jun 2024 08:00	0.3	SES
17 Jun 2024 09:00	0.4	SWS
17 Jun 2024 10:00	0.2	S
17 Jun 2024 11:00	0.9	S
17 Jun 2024 12:00	1.2	S
17 Jun 2024 13:00	0.8	S
17 Jun 2024 14:00	1.0	SWS
17 Jun 2024 15:00	0.8	SWS
17 Jun 2024 16:00	0.4	SW
17 Jun 2024 17:00	0.5	S
17 Jun 2024 18:00	0.6	S
17 Jun 2024 19:00	0.7	S
17 Jun 2024 20:00	0.7	SWS

Date	Wind Speed (m/s)	Wind Direction
17 Jun 2024 21:00	0.4	SES
17 Jun 2024 22:00	0.2	SES
17 Jun 2024 23:00	0.3	SES
18 Jun 2024 00:00	0.4	S
18 Jun 2024 01:00	0.2	S
18 Jun 2024 02:00	0.1	S
18 Jun 2024 03:00	0.1	S
18 Jun 2024 04:00	0.1	S
18 Jun 2024 05:00	0.1	S
18 Jun 2024 06:00	0.5	SES
18 Jun 2024 07:00	0.6	S
18 Jun 2024 08:00	0.7	SES
18 Jun 2024 09:00	0.7	S
18 Jun 2024 10:00	0.8	SWS
18 Jun 2024 11:00	0.9	S
18 Jun 2024 12:00	0.8	S
18 Jun 2024 13:00	1.0	S
18 Jun 2024 14:00	1.1	S
18 Jun 2024 15:00	0.9	SWS
18 Jun 2024 16:00	0.5	S
18 Jun 2024 17:00	0.4	SW
18 Jun 2024 18:00	0.2	S
18 Jun 2024 19:00	0.2	SWS
18 Jun 2024 20:00	0.2	SES
18 Jun 2024 21:00	0.2	S
18 Jun 2024 22:00	0.3	SE
18 Jun 2024 23:00	0.2	S

Date	Wind Speed (m/s)	Wind Direction
19 Jun 2024 00:00	0.1	SES
19 Jun 2024 01:00	0.1	SES
19 Jun 2024 02:00	0.1	S
19 Jun 2024 03:00	0.1	S
19 Jun 2024 04:00	0.1	SES
19 Jun 2024 05:00	0.1	SES
19 Jun 2024 06:00	0.2	S
19 Jun 2024 07:00	0.3	S
19 Jun 2024 08:00	0.8	S
19 Jun 2024 09:00	0.7	S
19 Jun 2024 10:00	0.6	SE
19 Jun 2024 11:00	0.7	S
19 Jun 2024 12:00	0.2	SWW
19 Jun 2024 13:00	0.5	S
19 Jun 2024 14:00	0.7	SWS
19 Jun 2024 15:00	0.5	S
19 Jun 2024 16:00	0.9	S
19 Jun 2024 17:00	1.0	SES
19 Jun 2024 18:00	0.4	S
19 Jun 2024 19:00	0.3	SES
19 Jun 2024 20:00	0.4	SES
19 Jun 2024 21:00	0.2	SES
19 Jun 2024 22:00	0.1	SES
19 Jun 2024 23:00	0.2	SES
20 Jun 2024 00:00	0.5	SE
20 Jun 2024 01:00	0.4	S
20 Jun 2024 02:00	0.2	S

Date	Wind Speed (m/s)	Wind Direction
20 Jun 2024 03:00	0.2	SES
20 Jun 2024 04:00	0.1	S
20 Jun 2024 05:00	0.1	SES
20 Jun 2024 06:00	0.1	SEE
20 Jun 2024 07:00	0.1	S
20 Jun 2024 08:00	0.3	S
20 Jun 2024 09:00	0.7	S
20 Jun 2024 10:00	0.8	SES
20 Jun 2024 11:00	0.6	SWS
20 Jun 2024 12:00	0.5	SES
20 Jun 2024 13:00	0.8	SWS
20 Jun 2024 14:00	0.6	SE
20 Jun 2024 15:00	0.4	S
20 Jun 2024 16:00	0.5	S
20 Jun 2024 17:00	0.4	S
20 Jun 2024 18:00	0.4	SES
20 Jun 2024 19:00	0.4	S
20 Jun 2024 20:00	0.1	SES
20 Jun 2024 21:00	0.1	SES
20 Jun 2024 22:00	0.1	S
20 Jun 2024 23:00	0.2	SES
21 Jun 2024 00:00	0.2	S
21 Jun 2024 01:00	0.1	SWS
21 Jun 2024 02:00	0.1	SE
21 Jun 2024 03:00	0.1	SEE
21 Jun 2024 04:00	0.1	S
21 Jun 2024 05:00	0.1	SES

Date	Wind Speed (m/s)	Wind Direction
21 Jun 2024 06:00	0.1	S
21 Jun 2024 07:00	0.2	SES
21 Jun 2024 08:00	0.3	SES
21 Jun 2024 09:00	0.3	SES
21 Jun 2024 10:00	0.5	S
21 Jun 2024 11:00	0.4	S
21 Jun 2024 12:00	0.6	SWS
21 Jun 2024 13:00	1.8	S
21 Jun 2024 14:00	1.8	SWS
21 Jun 2024 15:00	0.6	SES
21 Jun 2024 16:00	0.5	S
21 Jun 2024 17:00	0.4	SWS
21 Jun 2024 18:00	0.2	SWS
21 Jun 2024 19:00	0.1	S
21 Jun 2024 20:00	0.2	SEE
21 Jun 2024 21:00	0.5	SES
21 Jun 2024 22:00	0.3	SWS
21 Jun 2024 23:00	0.2	E
22 Jun 2024 00:00	0.2	SES
22 Jun 2024 01:00	0.1	SWS
22 Jun 2024 02:00	0.1	SES
22 Jun 2024 03:00	0.1	SE
22 Jun 2024 04:00	0.1	SWS
22 Jun 2024 05:00	0.1	S
22 Jun 2024 06:00	0.1	NEE
22 Jun 2024 07:00	0.1	SEE
22 Jun 2024 08:00	0.5	S

Date	Wind Speed (m/s)	Wind Direction
22 Jun 2024 09:00	0.6	SWS
22 Jun 2024 10:00	0.5	S
22 Jun 2024 11:00	0.5	SE
22 Jun 2024 12:00	0.6	S
22 Jun 2024 13:00	0.9	S
22 Jun 2024 14:00	1.0	S
22 Jun 2024 15:00	0.8	S
22 Jun 2024 16:00	0.4	SES
22 Jun 2024 17:00	0.4	S
22 Jun 2024 18:00	0.1	SWS
22 Jun 2024 19:00	0.1	E
22 Jun 2024 20:00	0.1	SEE
22 Jun 2024 21:00	0.1	SEE
22 Jun 2024 22:00	0.1	E
22 Jun 2024 23:00	0.1	SEE
23 Jun 2024 00:00	0.1	NEE
23 Jun 2024 01:00	0.2	S
23 Jun 2024 02:00	0.2	S
23 Jun 2024 03:00	0.2	SE
23 Jun 2024 04:00	0.2	SWS
23 Jun 2024 05:00	0.1	SEE
23 Jun 2024 06:00	0.2	NEE
23 Jun 2024 07:00	0.2	S
23 Jun 2024 08:00	0.5	SWS
23 Jun 2024 09:00	1.1	SES
23 Jun 2024 10:00	1.2	SWS
23 Jun 2024 11:00	0.8	SWS

Date	Wind Speed (m/s)	Wind Direction
23 Jun 2024 12:00	0.4	W
23 Jun 2024 13:00	0.2	S
23 Jun 2024 14:00	0.9	SEE
23 Jun 2024 15:00	1.4	S
23 Jun 2024 16:00	0.9	S
23 Jun 2024 17:00	0.4	SES
23 Jun 2024 18:00	0.2	S
23 Jun 2024 19:00	0.1	S
23 Jun 2024 20:00	0.1	SES
23 Jun 2024 21:00	0.1	SEE
23 Jun 2024 22:00	0.1	E
23 Jun 2024 23:00	0.1	SEE
24 Jun 2024 00:00	0.1	NEE
24 Jun 2024 01:00	0.1	SE
24 Jun 2024 02:00	0.1	SEE
24 Jun 2024 03:00	0.2	SES
24 Jun 2024 04:00	0.2	S
24 Jun 2024 05:00	0.1	SES
24 Jun 2024 06:00	0.1	SE
24 Jun 2024 07:00	0.4	SE
24 Jun 2024 08:00	0.6	SES
24 Jun 2024 09:00	0.7	S
24 Jun 2024 10:00	0.6	SES
24 Jun 2024 11:00	0.5	SW
24 Jun 2024 12:00	0.6	SWS
24 Jun 2024 13:00	0.5	S
24 Jun 2024 14:00	0.3	S

Date	Wind Speed (m/s)	Wind Direction
24 Jun 2024 15:00	0.7	SWS
24 Jun 2024 16:00	1.0	S
24 Jun 2024 17:00	0.5	S
24 Jun 2024 18:00	0.2	S
24 Jun 2024 19:00	0.1	S
24 Jun 2024 20:00	0.1	SES
24 Jun 2024 21:00	0.1	S
24 Jun 2024 22:00	0.1	SE
24 Jun 2024 23:00	0.1	SE
25 Jun 2024 00:00	0.1	SEE
25 Jun 2024 01:00	0.1	SEE
25 Jun 2024 02:00	0.2	S
25 Jun 2024 03:00	0.2	S
25 Jun 2024 04:00	0.1	Ν
25 Jun 2024 05:00	0.1	Ν
25 Jun 2024 06:00	0.1	N
25 Jun 2024 07:00	0.1	N
25 Jun 2024 08:00	0.1	N
25 Jun 2024 09:00	0.1	N
25 Jun 2024 10:00	0.1	N
25 Jun 2024 11:00	0.1	N
25 Jun 2024 12:00	0.1	N
25 Jun 2024 13:00	0.1	N
25 Jun 2024 14:00	0.1	N
25 Jun 2024 15:00	0.1	N
25 Jun 2024 16:00	0.1	N
25 Jun 2024 17:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
25 Jun 2024 18:00	0.1	N
25 Jun 2024 19:00	0.1	N
25 Jun 2024 20:00	0.1	N
25 Jun 2024 21:00	0.1	N
25 Jun 2024 22:00	0.1	N
25 Jun 2024 23:00	0.1	N
26 Jun 2024 00:00	0.1	N
26 Jun 2024 01:00	0.1	N
26 Jun 2024 02:00	0.1	N
26 Jun 2024 03:00	0.1	N
26 Jun 2024 04:00	0.1	N
26 Jun 2024 05:00	0.1	N
26 Jun 2024 06:00	0.1	N
26 Jun 2024 07:00	0.1	N
26 Jun 2024 08:00	0.1	N
26 Jun 2024 09:00	0.1	N
26 Jun 2024 10:00	0.1	N
26 Jun 2024 11:00	0.1	N
26 Jun 2024 12:00	0.1	N
26 Jun 2024 13:00	0.1	N
26 Jun 2024 14:00	0.1	N
26 Jun 2024 15:00	0.1	N
26 Jun 2024 16:00	0.1	N
26 Jun 2024 17:00	0.1	N
26 Jun 2024 18:00	0.1	N
26 Jun 2024 19:00	0.1	N
26 Jun 2024 20:00	0.1	Ν

Date	Wind Speed (m/s)	Wind Direction
26 Jun 2024 21:00	0.1	N
26 Jun 2024 22:00	0.1	N
26 Jun 2024 23:00	0.1	N
27 Jun 2024 00:00	0.1	N
27 Jun 2024 01:00	0.1	N
27 Jun 2024 02:00	0.1	N
27 Jun 2024 03:00	0.1	N
27 Jun 2024 04:00	0.1	N
27 Jun 2024 05:00	0.1	N
27 Jun 2024 06:00	0.1	N
27 Jun 2024 07:00	0.1	N
27 Jun 2024 08:00	0.1	N
27 Jun 2024 09:00	0.1	N
27 Jun 2024 10:00	0.1	N
27 Jun 2024 11:00	0.1	N
27 Jun 2024 12:00	0.1	N
27 Jun 2024 13:00	0.1	N
27 Jun 2024 14:00	0.1	N
27 Jun 2024 15:00	0.1	N
27 Jun 2024 16:00	0.1	N
27 Jun 2024 17:00	0.1	N
27 Jun 2024 18:00	0.1	N
27 Jun 2024 19:00	0.1	N
27 Jun 2024 20:00	0.1	N
27 Jun 2024 21:00	0.1	N
27 Jun 2024 22:00	0.1	N
27 Jun 2024 23:00	0.1	N

Date	Wind Speed (m/s)	Wind Direction
28 Jun 2024 00:00	0.1	N
28 Jun 2024 01:00	0.1	N
28 Jun 2024 02:00	0.1	N
28 Jun 2024 03:00	0.1	N
28 Jun 2024 04:00	0.1	N
28 Jun 2024 05:00	0.1	N
28 Jun 2024 06:00	0.1	N
28 Jun 2024 07:00	0.1	N
28 Jun 2024 08:00	0.1	N
28 Jun 2024 09:00	0.1	N
28 Jun 2024 10:00	0.1	N
28 Jun 2024 11:00	0.1	N
28 Jun 2024 12:00	0.1	N
28 Jun 2024 13:00	0.1	N
28 Jun 2024 14:00	0.1	N
28 Jun 2024 15:00	0.1	N
28 Jun 2024 16:00	0.1	N
28 Jun 2024 17:00	0.1	N
28 Jun 2024 18:00	0.1	N
28 Jun 2024 19:00	0.1	N
28 Jun 2024 20:00	0.1	N
28 Jun 2024 21:00	0.1	N
28 Jun 2024 22:00	0.1	N
28 Jun 2024 23:00	0.1	N
29 Jun 2024 00:00	0.1	N
29 Jun 2024 01:00	0.1	N
29 Jun 2024 02:00	0.1	Ν

Date	Wind Speed (m/s)	Wind Direction
29 Jun 2024 03:00	0.1	N
29 Jun 2024 04:00	0.1	S
29 Jun 2024 05:00	0.1	S
29 Jun 2024 06:00	0.1	SEE
29 Jun 2024 07:00	0.1	SES
29 Jun 2024 08:00	0.2	SE
29 Jun 2024 09:00	0.8	SW
29 Jun 2024 10:00	1.0	SW
29 Jun 2024 11:00	1.4	S
29 Jun 2024 12:00	1.9	S
29 Jun 2024 13:00	1.1	SWW
29 Jun 2024 14:00	0.1	SW
29 Jun 2024 15:00	0.1	SW
29 Jun 2024 16:00	0.2	SW
29 Jun 2024 17:00	0.3	S
29 Jun 2024 18:00	0.3	SWS
29 Jun 2024 19:00	0.3	S
29 Jun 2024 20:00	0.2	S
29 Jun 2024 21:00	0.2	S
29 Jun 2024 22:00	0.3	S
29 Jun 2024 23:00	0.2	SWS
30 Jun 2024 00:00	0.1	S
30 Jun 2024 01:00	0.2	SWS
30 Jun 2024 02:00	0.1	SES
30 Jun 2024 03:00	1.3	SES
30 Jun 2024 04:00	1.3	SES
30 Jun 2024 05:00	0.1	SE

Date	Wind Speed (m/s)	Wind Direction
30 Jun 2024 06:00	0.1	SW
30 Jun 2024 07:00	0.3	SWS
30 Jun 2024 08:00	0.6	SWW
30 Jun 2024 09:00	1.0	SW
30 Jun 2024 10:00	1.4	SW
30 Jun 2024 11:00	1.9	SWW
30 Jun 2024 12:00	1.5	SWS
30 Jun 2024 13:00	1.1	SWS
30 Jun 2024 14:00	1.0	SWW
30 Jun 2024 15:00	0.9	SW
30 Jun 2024 16:00	1.1	SWS
30 Jun 2024 17:00	0.7	S
30 Jun 2024 18:00	0.5	S
30 Jun 2024 19:00	0.8	S
30 Jun 2024 20:00	0.7	S
30 Jun 2024 21:00	0.6	S
30 Jun 2024 22:00	0.5	S
30 Jun 2024 23:00	0.2	S

Appendix H Event and Action Plan

Event and Action Plan for Air Quality (Construction Dust)

Event		Action		
Event	ET	IEC	ER	Contractor
Action level being exceeded by	 Identify source, investigate the causes of complaint and propose remedial measures; Inform Contractor, IEC and ER; Repeat measurement to confirm finding; and Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method; and Review and advise the ET and ER on the effectiveness of the proposed remedial measures. 	1. Notify Contractor.	 Identify source(s), investigate the causes of exceedance and propose remedial measures; Implement remedial measures; and Amend working methods agreed with the ER as appropriate.
Action level being exceeded by two or more consecutive sampling	 Identify source; Inform Contractor, IEC and ER; Advise the Contractor and ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with Contractor, IEC and ER; and If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET, ER and Contractor on possible remedial measures; Advise the ET and ER on the effectiveness of the proposed remedial measures; and Supervise Implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Identify source and investigate the causes of exceedance; Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification; Implement the agreed proposals; and Amend proposal as appropriate.
Limit level being exceeded by one sampling	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform Contractor, IEC, ER, and EPD; Repeat measurement to confirm finding; Increase monitoring frequency to daily; and Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; and Supervise implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Identify source(s) and investigate the causes of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; Implement the agreed proposals; and Amend proposal if appropriate.
Limit level being exceeded by two or more consecutive sampling	 Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by the ET; Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and Supervise the implementation of remedial measures. 	 Confirm receipt of notification of exceedance in writing; In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; Supervise the implementation of remedial measures; and 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. 	 Identify source(s) and investigate the causes of exceedance; Take immediate action to avoid further exceedance; Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; Implement the agreed proposals; Revise and resubmit proposals if problem still not under control; and Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Noise (Construction)

Front		Action			
Event	ET	IEC	ER	Contractor	
Action Level	 Notify IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, ER and Contractor; Discuss with the Contractor and formulate remedial measures; and Increase monitoring frequency to check mitigation effectiveness. 	 Review the analyzed results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the ER accordingly; and Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analyzed noise problem; and Ensure remedial measures are properly implemented. 	 Submit noise mitigation proposals to IEC; and Implement noise mitigation proposals. 	
Limit Level	 Identify source; Inform IEC, ER, EPD and Contractor; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, ER and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analyzed noise problem; Ensure remedial measures properly implemented; and 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. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; and Stop the relevant portion of works as determined by the ER until the exceedance is abated. 	

Event and Action Plan for Water Quality Monitoring

Front		4	Action	
Event	ET	IEC	ER	Contractor
Action level being exceeded by one sampling	 Repeat in situ measurement on the next day of exceedance to confirm findings; Check monitoring data, plant, equipment and Contractor(s)'s working methods; Identify source(s) of impact and record in notification of exceedance; Inform IEC, Contractor(s) and ER 	 Check monitoring data submitted by ET and Contractor(s)'s working methods; Inform EPD and AFCD. 	1. Confirm receipt of notification of exceedance in writing	 Confirm receipt of notification of exceedance in writing; Check plant and equipment and rectify unacceptable practice
Action level being exceeded by two or more consecutive sampling	 Repeat in situ measurement on the next day of exceedance to confirm findings; Check monitoring data, plant, equipment and Contractor(s)'s working methods; Identify source(s) of impact and record in notification of exceedance; Inform IEC, Contractor(s) and ER; Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented. 	 Check monitoring data submitted by ET and Contractor(s)'s working methods; Inform EPD and AFCD; Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Confirm receipt of notification of exceedance in writing; Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. Ensure additional mitigation measures are properly implemented. 	 Confirm receipt of notification of exceedance in writing; Check plant and equipment and rectify unacceptable practice; Consider changes of working methods; Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; Implement the agreed mitigation measures.
Limit level being exceeded by one sampling	 Repeat in situ measurement on the next day of exceedance to confirm findings; Check monitoring data, plant, equipment and Contractor(s)'s working methods; Identify source(s) of impact and record in notification of exceedance; Inform IEC, Contractor(s) and ER; Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented. 	 Check monitoring data submitted by ET and Contractor(s)'s working methods; Inform EPD and AFCD; Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Confirm receipt of notification of exceedance in writing; Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. Ensure additional mitigation measures are properly implemented. Request Contractor(s) to critically review the working methods. 	 Confirm receipt of notification of exceedance in writing; Check plant and equipment and rectify unacceptable practice; Critically review the need to change working methods; Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling	 Repeat in situ measurement on the next day of exceedance to confirm findings; Check monitoring data, plant, equipment and Contractor(s)'s working methods; Identify source(s) of impact and record in notification of exceedance; Inform IEC, Contractor(s) and ER; Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented. 	 Check monitoring data submitted by ET and Contractor(s)'s working methods; Inform EPD and AFCD; Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Confirm receipt of notification of exceedance in writing; Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented. Ensure additional mitigation measures are properly implemented. Request Contractor(s) to critically review the working methods. 	 Confirm receipt of notification of exceedance in writing; Check plant and equipment and rectify unacceptable practice; Critically review the need to change working methods; Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days; Implement the agreed mitigation measures.

Event and Action Plan for Ecology Monitoring

Event		Action			
Event	ET	IEC	ER	Contractor	
Action Level	 Notify IEC and Contractor; Carry out investigation; Report the results of investigation to the IEC, ER and Contractor; Discuss with the Contractor and formulate remedial measures; and Increase monitoring frequency to check mitigation effectiveness. 	 Review the analyzed results submitted by the ET; Review the proposed remedial measures by the Contractor and advise the ER accordingly; and Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analyzed noise problem; and Ensure remedial measures are properly implemented. 	 Submit noise mitigation proposals to IEC; and Implement noise mitigation proposals. 	
Limit Level	 Identify source; Inform IEC, ER, EPD and Contractor; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, ER and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; Ensure remedial measures are properly implemented; and 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. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; and Stop the relevant portion of works as determined by the ER until the exceedance is abated. 	

Appendix I Waste Flow Table

Waste Flow	w Table for Year	2024									
		Actual Quantities of Inert C&D Materials Generated Monthly				Actu	ual Quantities of	Non-inert C&D V	/astes Generate	d Monthly	
Monthly Ending	Total Quantity Generated	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)
2024 Jan	11180.54	Nil	Nil	Nil	11103.51	Nil	Nil	0.17	Nil	Nil	76.86
2024 Feb	39622.50	Nil	Nil	Nil	39511.96	Nil	10.78	0.01	Nil	Nil	99.74
2024 Mar	28642.82	Nil	Nil	Nil	28422.00	Nil	94.04	0.01	Nil	Nil	126.76
2024 Apr	36811.58	Nil	Nil	Nil	36608.65	Nil	75.49	0.10	Nil	Nil	127.33
2024 May	3275.68*	Nil	Nil	Nil	3161.67*	Nil	Nil	0.15*	Nil	Nil	113.86*
2024 June	2326.25*	Nil	Nil	Nil	2241.60*	Nil	Nil	0.11*	Nil	Nil	84.54*
Total	121859.37	Nil	Nil	Nil	121049.39	Nil	180.31	0.55	Nil	Nil	629.09

Note:

The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials.
 Updated figures are presented during the reporting month.
 * Disposal Records to Government facilities is updated till 22th June 2024.

Appendix J Implementation Status of Environmental Mitigation Measures

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	Air Quality Impact (Construction Phase)		
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
	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices listed below shall be	e carried out to further minimize cons	struction dust impact:
	• Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.		Implemented
	Use of frequent watering for particularly dusty construction areas and areas close to ASRs.	Construction Sites	Implemented
	• 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.		Implemented
	• Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.		Implemented
	• Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.		Implemented
3.8.1.1	• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.		Implemented
	• 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.		N/A
	• 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.		Implemented
	Imposition of speed controls for vehicles on site haul roads.		Implemented
	• Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.		Implemented
	 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. 		Implemented

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	Noise Impact (Construction Phase)		
	Movable noise barriers are recommended for hydraulic breakers mounted on excavators to be adopted during construction.		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
	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.		Implemented
	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.		Implemented
4.8.1	Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.	Construction Sites	Implemented
	Mobile plant, if any, should be sited as far away from noise sensitive receivers (NSRs) as possible.		N/A
	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.		Implemented
	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		N/A
	Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities.		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)							
	Good Site Practices							
	Recommendations for good site practices during the construction phase include:							
	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;		Implemented					
	Training of site personnel in proper waste management and chemical waste handling procedures;		Implemented					
	• Provision of sufficient waste reception/ disposal points, of a suitable vermin-proof design that minimises windblown litter;		N/A					
6.6.1.3	Arrangement for regular collection of waste for transport off-site and final disposal;		Implemented					
	Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;	Construction Sites	Implemented					
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;		Implemented					
	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be proposed; and		Implemented					
	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.		Implemented					
	Waste Reduction Measures							
	Recommendations to achieve waste reduction include:							
	 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; 		Implemented					
	• 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;		Implemented					
	Any unused chemicals or those with remaining functional capacity shall be recycled;		N/A					
6.6.1.5	Maximising the use of reusable steel formwork to reduce the amount of C&D material;		Implemented					
	Prior to disposal of C&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;	Construction Sites	Implemented					
	Adopt proper storage and site practices to minimise the potential for damage to, or contamination of, construction materials;		Implemented					
	Plan the delivery and stock of construction materials carefully to minimise the amount of surplus waste generated;		N/A					
	Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as much as possible; and		N/A					
	Minimise over ordering of concrete, mortars and cement grout by doing careful check before ordering.		N/A					

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status			
	Storage of Waste Recommendations to minimise the impacts include:					
	• Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;		Implemented			
6.6.1.7	Maintain and clean storage areas routinely;		Implemented			
	• Stockpiling area should be provided with covers and water spraying system to prevent materials from wind-blown or being washed away; and	Construction Sites	Implemented			
	Different locations should be designated to stockpile each material to enhance reuse.		Implemented			
	Collection of Waste Licensed waste haulers should be employed for the collection and transportation of waste generated. The following measures should be employed for the collection and transportation of waste generated.	nforced to minimise the potential ac	lverse impacts:			
	Remove waste in timely manner;		Implemented			
	Waste collectors should only collect wastes prescribed by their permits;	-	Implemented			
6.6.1.8	• Impacts during transportation, such as dust and odour, should be mitigated by the use of covered trucks or in enclosed containers;		Implemented			
	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);	Construction Sites	Implemented			
	Waste should be disposed of at licensed waste disposal facilities; and		Implemented			
	Maintain records of quantities of waste generated, recycled and disposed.		Implemented			
6.6.1.10	Transportation of Waste 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	Construction and Demolition Material 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			
	The excavated material arising from site formation and foundation works should be reused on-site as backfilling material and for lands requirements are listed below:	caping works as far as practicable	. Other mitigation			
	A WMP, which becomes part of the EMP, should be prepared in accordance with ETWB TCW No.19/2005;		Implemented			
6.6.1.13	A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) should be adopted for easy tracking; and	Construction Sites	Implemented			
	In order to monitor the disposal of C&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).		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:					
	Surface of stockpiled soil should be regularly wetted with water especially during dry season;		Implemented			
6.6.1.14	Disturbance of stockpile soil should be minimised;	Construction Sites	Implemented			
	Stockpiled soil should be properly covered with tarpaulin especially when heavy storms are predicted; and	Construction Sites	Implemented			
	Stockpiling areas should be enclosed where space is available.		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	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. Requirements of the Air Pollution Control (Construction Dust) Regulation, where relevant, shall be adhered to during excavation, transportation and disposal of the sediment.	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			
	Land Contamination					
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			
	The mitigation measures will be recommended in the RAP and would typically include the following:					
	• Excavation profiles must be properly designed and executed with attention to the relevant requirements for environment, health and safety;		Implemented			
	• 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;		N/A			
7.8.3.1	• 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.		Implemented			
7.8.3.1	• 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;	Project Site / Construction Phase	Implemented			
	Speed control for the trucks carrying contaminated materials shall be enforced;		Implemented			
	Vehicle wheel and body washing facilities at the site's exist points shall be established and used; and		Implemented			
	• 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.		Implemented			

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status	
	Ecological Impact (Terrestrial and Aquatic) (Construction Phase)			
	Avoidance of Recognised Site of Conservation Importance	Drois et eite / Construction		
8.10.2.1	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	
0.40.0.0	Avoidance of Demolition Works Using Breakers Mounted on Excavators and Percussive Piling during Dry Season			
8.10.2.3 – 8.10.2.4	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	
	Restriction of Construction Hours			
8.10.2.5	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	
	Minimising Construction Noise Disturbance Impacts through Consideration of Alternative Construction Methods			
8.10.3.2 – 8.10.3.3	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	
	Minimising Construction Noise Disturbance Impacts through Use of Noise Barriers		Implemented	
8.10.3.6 – 8.10.3.8	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	Construction sites / Construction Phase		
	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.			
	Use of Quality Powered Mechanical Equipment			
8.10.3.9	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	
	Ecology & Fisheries Impact			
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
	Fisheries Impact		
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
	Landscape and Visual Impact		
	Preservation of Existing Vegetation (CM1) 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
	Transplanting of Affected Trees (CM2) 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
Table 10.11	Compensatory Tree Planting (CM3) 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
	Control of Night-time Lighting Glare (CM4) 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
	Erection of Decorative Screen Hoarding (CM5) Site hoardings, if any, shall be painted in dull green colour	Project site / Construction Phase	Implemented
	Management of Construction Activities and Facilities (CM6) 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
	Hazard to Life (Construction Phase)		
	• 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;		N/A
11.5.6.9- 11.5.6.12	• 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;	Project site / Construction Phase	N/A
	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	i nast	N/A
	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.	-	N/A

EIA Ref.	Environmental Protection Measures	Location / Duration of Measures / Timing of Completion of Measures	Implementation Status
	Method statements and risk assessments shall be prepared and safety control measures shall be in place before commencement of work		Implemented
	• All work procedures shall be complied with the operating plant procedures or guidelines and regulatory requirements;		Implemented
11.5.8	Work permit system, on-site pre-work risk assessment and emergency response procedure shall be in place before commencement of work;	Project site / Construction Phase	Implemented
	• All construction workers shall equip with appropriate personal protective equipment (PPE) when working at the Project Site;		Implemented
	Safety training and briefings shall be provided to all construction workers;		Implemented
	Regular site safety inspections shall be conducted during the construction phase of the Project;		Implemented
	• Ensure speed limit enforcement is specified in the contractor's method statement to limit the speed of construction vehicles onsite;		Implemented
	Conduct speed checks to ensure enforcement of speed limits and to ensure adequate site access control;		N/A
	• A lifting plan, with detailed risk assessment, should be prepared and endorsed for heavy lifting of large equipment;		Implemented
	Vehicle crash barriers should be provided between the construction site and the operating biogas facilities;		N/A
	• Ensure that a hazardous are 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;	_	Implemented
	• 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;		Implemented
11.9.1.2	• Ensure effective communication system / protocol is in place between the contractors and the operation staff;	Project site / Construction Phase	Implemented
	• 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;		Implemented
	• 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;		Implemented
	• 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.		Implemented
	Potential risks of the construction activities shall be assessed, and risk precautionary measures shall be implemented in Contractor's works procedures.		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

May 2024 Weather

Station: Wetland Park

Dete	Mean	J 4	Air Temperatur	e	Mean	Total
	Pressure	Maximum	Mean	Minimum	Relative	Rainfall
Date	(hPa)	(deg. C)	(deg. C)	(deg. C)	Humidity (%)	(mm)
			May 2024			
1	1008.3	22.8	21.9	20.4	97	29
2	1011.5	24.1#	22.4	20.6#	92	0
3	1011.7	25.5#	23.2	21.9#	87	0
4	1008.9	23.3	21.7	20.1	97	113
5	1009.6	27.9	23.7	20.2	91	2.5
6	1011.7	31.9	25.9	21.5	84	0
7	1013.1	30.4	25.7	22.9	82	0
8	1013.8	29.6	24.7	22.2	82	0.5
9	1014.9	28	24.7	22.7	64	0
10	1014.8	26.9	24	22.1	74	0
11	1013.3	30.1#	25.6	22.5#	82	0
12	1011.6	31.5#	25.1	22.9#	91	4.5
13	1011.4	29.9#	24.3	21.4#	89	5.5
14	1013.3	29.4	23.7	20.6	73	0
15	1014.4	29.9#	24.1	19.9#	74	0
16	1014.5	28.8	24.3	20.3	62	0
17	1012.2	27.9#	24.3	20.4#	76	0
18	1009.3	28.8	24.9	22.3	75	0
19	1006.9	25.3	23.8	22.1	81	3.5
20	1006.4	25.1	23.3	22.2	94	5.5
21	1008	25.2#	23.9	22.7#	99	43
22	1008.7	29.1	25.1	23.1	93	0
23	1009	28.6	24.4	22.1	95	37.5
24	1009.5	25.7	23.5	22.5	99	16.5
25	1009.7	27.7	24.5	23	97	8.5
26	1007.9	28.8	25.6	23.4	93	3
27	1003.3	30.7	27	25.1	90	19
28	1002.6	30.7	26.7	23.2	88	8
29	1005.5#	27.4#	24.5#	23.0#	69	0
30	1005.6#	26.7#	26.1#	25.2#	88#	0
31	1006.1	30	26.9	25.8	95	21.5

Note (From Hong Kong Observatory):

1. # Data incomplete

2. Rainfall measured in increment of 0.5 mm. Amount of < 0.5 mm cannot be detected

Source: Hong Kong Observatory

June 2024 Weather

Station: Hong Kong Observatory

		Air Temperature			Mean Relative	Tatal Dati f. H
Date	Mean Pressure (hPa)	Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)	Humidity (%)	Total Rainfall (mm)
			June 2024			
1	1007.8	29.8	27.1	25.6	88	54.2
2	1007.3	30.3	28.0	25.8	84	3.2
3	1008.4	28.2	25.3	23.8	91	8.6
4	1009.9	24.9	24.1	22.9	86	2.9
5	1010.2	25.4	24.4	23.4	90	8.5
6	1009.4	28.7	26.5	24.7	88	Trace
7	1007.9	26.6	25.6	25.1	92	1.6
8	1006.9	28.9	26.3	24.8	90	6.8
9	1008.3	27.5	26.6	25.3	93	33.5
10	1008.9	30.7	28.5	26.5	85	0.2
11	1008.1	30.8	29.1	28.2	84	0.6
12	1006.9	31.8	29.5	28.1	83	8.3
13	1004.7	32.0	29.9	28.7	83	4.9
14	1004.1	30.4	29.7	27.7	82	32
15	1004.6	30.0	28.2	25.0	86	28.3
16	1006.2	30.9	28.8	26.1	86	17.5
17	1006.6	32.7	30.1	28.6	80	Trace
18	1005.9	32.1	29.9	27.6	81	4.6
19	1005.7	32.2	30.0	28.0	80	9.4
20	1005.6	33.0	30.0	27.3	82	5
21	1006.0	34.0	30.8	28.7	76	0
22	1006.4	33.8	31.2	29.5	75	0
23	1006.7	33.9	30.5	27.9	78	4.7
24	1007.3	33.4	30.8	28.8	77	0.3
25	1009.2	33.2	30.1	26.5	79	19
26	1011.3	34.0	30.4	27.9	79	0
27	1010.9	34.4	30.7	28.4	79	1.4
28	1008.9	34.2	31.0	28.9	75	1.6
29	1007.6	31.5	29.2	26.8	82	15.5
30	1006.6	32.0	30.3	27.7	79	8.7

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

Parameters	Date Observations and Recommendations		Follow-up		
Air Quality	NA				
Noise	19 June 2024	Observation 1: The silent up at northwest of the site should be enclosed.	The silent up are well enclosed.		
Water Quality					
Waste 5 June 2024		Observation 2: Domestic waste should be stored inside the enclosed rubbish bin.	The skip was cleaned.		
Land Contamination		NA			
Ecological Impact	NA				
Landscape and Visual Impact	NA				
	5 June 2024	Observation 1: NRMM label for the crane at A Tank should be provided.	NRMM label was displayed.		
Permit / Licenses	11 June 2024	Reminder 1: The Contractor was remaindered to provide NRMM label for the crane at A Tank.	NA		
	26 June 2024	Reminder 1: NRMM label for the excavator at SD should be provided.	NA		
Others	NA				

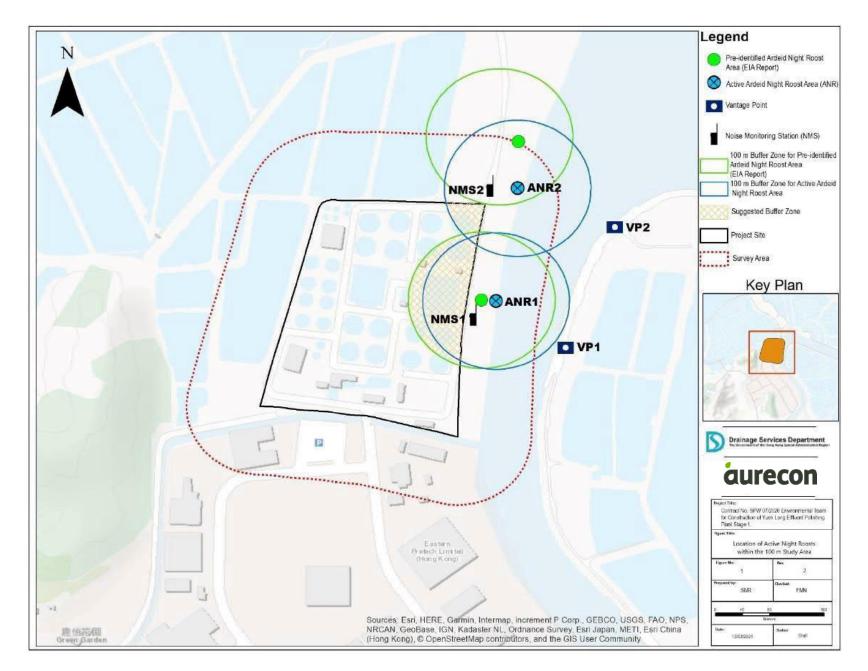
Summary of ET Leader's Site Environmental Audit in the Reporting Month

Appendix N Outstanding Issues and Deficiencies

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

Summary of Outstanding Issues and Deficiencies in the Reporting Month

Appendix O Active Night Roost Monitoring Area and Vantage Points; and Noise Monitoring Stations



- 0.1 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



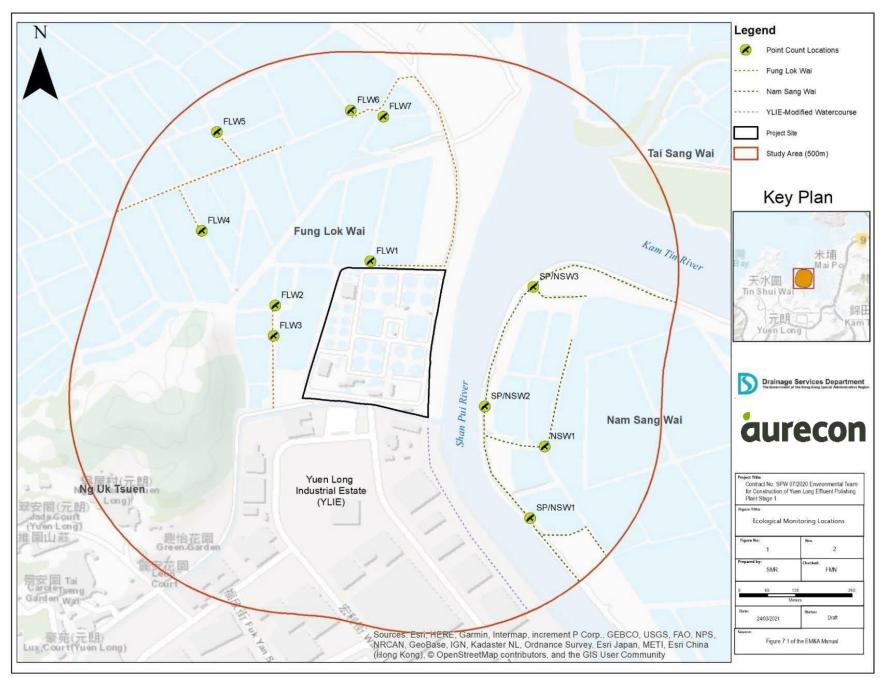
Appendix O.2.1a: Pre-roost aggregate of ardeids in the mudflat east side of the Project boundary observed on 19 June 2024 at around 18:09.

O.2.2 Active Night Roosting Site and Roosting Substrates



Appendix O.2.2a: Active night roost in the mudflat east side of the Project boundary observed on 19 June 2024 at around 18:58.

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

Prepared by:

Aurecon Hong Kong Limited Unit 1608, 16/F, Tower B, Manulife Financial Centre, 223 – 231 Wai Yip Street, Kwun Tong, Kowloon Hong Kong S. A. R. T: +852 3664 6888 F: +852 3664 6999

E: <u>hongkong@aurecongroup.com</u>



Bringing ideas to life