

Intended for
Architectural Services Department

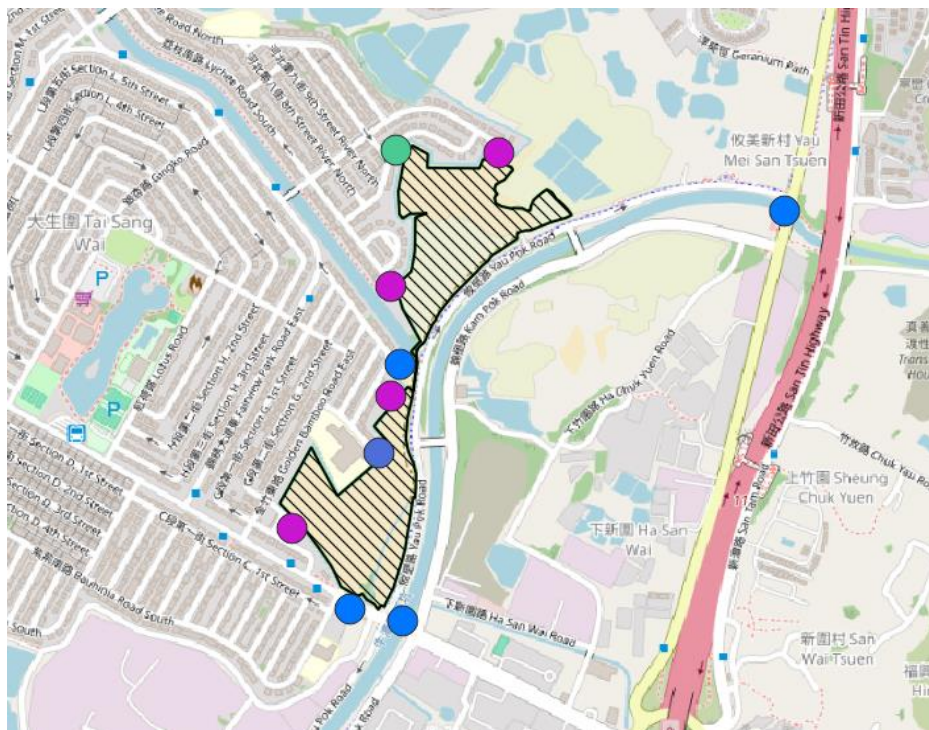
Document type
Report

Date
July 2024

LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG

MONTHLY EM&A REPORT

FOR JUNE 2024



LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG

MONTHLY EM&A REPORT FOR JUNE 2024

Revision **1**
Date **12/07/2024**

Prepared by **Theo Chan (Environmental Consultant)**



Certified by **Y H Hui (Environmental Team Leader)**



Disclaimer No part of this document may be reproduced or transmitted, in any form or by any means electronic, mechanical, photographic, recording or otherwise, or stored in a retrieval system of any nature without the written permission of Ramboll Hong Kong Ltd, application for which shall be made to Ramboll Hong Kong Ltd.

This report is made on behalf of Ramboll Hong Kong Ltd. No individual is personally liable in connection with the preparation of this report. By receiving this report and acting on it, the client or any third party relying on it accepts that no individual is personally liable in contract, tort or breach of statutory duty (including negligence).

Ref R9508_v1.0b.doc

Ramboll Hong Kong Limited
21/F
BEA Harbour View Centre
56 Gloucester Road
Wan Chai
Hong Kong
T +852 3465 2888
F +852 3465 2899
www.ramboll.com

Q:\Projects\CHEM518-ED00\10 EMnA\20 EMnA_Reports\02_Monthly_Reports\202406\R9508_v1.0b.doc

CONTENTS

	Page
EXECUTIVE SUMMARY	VII
1.0 INTRODUCTION.....	1
1.1 Background	1
1.2 Project Organisation	1
1.3 Construction Programme and Works Undertaken	3
1.4 Status of Environmental Licences, Notification and Permits	3
2.0 AIR QUALITY.....	5
2.1 Monitoring Requirement	5
2.2 Monitoring Equipment	5
2.3 Monitoring Location	5
2.4 Monitoring Methodology	6
2.5 Monitoring Results	7
3.0 NOISE	8
3.1 Monitoring Requirement	8
3.2 Monitoring Equipment	8
3.3 Monitoring Parameters, Frequency and Location	8
3.4 Monitoring Methodology	9
3.5 Monitoring Results	10
4.0 WATER QUALITY	11
4.1 Monitoring Requirement	11
4.2 Monitoring Equipment	11
4.3 Monitoring Parameters, Frequency and Locations.....	11
4.4 Monitoring Methodology	12
4.5 Monitoring Results	13
5.0 ECOLOGY.....	14
5.1 Monitoring Requirements.....	14
5.2 Monitoring Methodology	14
5.3 Monitoring Results	14
6.0 WASTE MANAGEMENT	19
6.1 Monitoring Requirements.....	19
6.2 Waste Management Status	19
7.0 LANDSCAPE AND VISUAL	20
7.1 Audit Requirements	20
7.2 Results and Observations	20

8.0 ENVIRONMENTAL AUDIT	21
8.1 Site Audits	21
8.2 Implementation Status of Environmental Mitigation Measures	21
9.0 ENVIRONMENTAL COMPLAINT AND NON-CONFORMANCE	22
9.1 Environmental Exceedance	22
9.2 Complaints, Notification of Summons and Prosecution.....	22
10.0 FUTURE KEY ISSUES.....	23
10.1 Construction Programme	23
10.2 Key Issues for the Coming Month	23
10.3 Monitoring Schedules	23
11.0 CONCLUSION AND RECOMMENDATIONS	24
11.1 Conclusion	24
11.2 Recommendations	24

LIST OF TABLES

Table 1	Contact Information of Key Personnel	2
Table 2	Mitigation Measures for the Related Construction Work	3
Table 3	Environmental Licenses, Notification and Permits	3
Table 4	Air Quality Monitoring Equipment	5
Table 5	Air Quality Monitoring Station	6
Table 6	Summary of Air Quality Monitoring Results	7
Table 7	Noise Monitoring Equipment	8
Table 8	Noise Monitoring Station	9
Table 9	Noise Monitoring Parameters, Frequency, and Duration.....	9
Table 10	Summary of Noise Monitoring Results	10
Table 11	Water Quality Monitoring Equipment.....	11
Table 12	Water Quality Monitoring Stations	11
Table 13	Water Quality Parameters and Monitoring Frequency	12
Table 14	Laboratory Analysis for Suspended Solids (SS)	13
Table 15	Summary of Water Quality Exceedances	13
Table 16	Comparison of Bird Abundance	15
Table 17	Comparison of Bird Species Richness	15
Table 18	Comparison of Bird Abundance in NTMDC.....	16
Table 19	Comparison of Bird Abundance in Temporary Pond of YMST.....	17
Table 20	Cumulative Statistics on Complaints and Successful Prosecutions	22

LIST OF FIGURES

- Figure 1 Location of the Project Site
- Figure 2 Typical Construction Phase Environmental Monitoring and Audit Procedure
- Figure 3 Locations of Air Quality, Noise and Water Quality Monitoring Stations

LIST OF APPENDICES

- Appendix A Construction Programme
- Appendix B Action and Limit Levels
- Appendix C Calibration Certificates of Air, Noise and Water Quality Monitoring Equipment
- Appendix D Environmental Monitoring Schedules
- Appendix E Monitoring Results
- Appendix F Weather and Meteorological Conditions
- Appendix G Event and Action Plan
- Appendix H Waste Flow Table
- Appendix I Summaries of Environmental Complaint Warning Summon and Notification of Successful Prosecution
- Appendix J Summary of Observations and Findings made in Site Audit and Inspection in the Reporting Period
- Appendix K Notification of Exceedance
- Appendix L Implementation Status of Environment Mitigation Measures

EXECUTIVE SUMMARY

- i. This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for the project "Light Public Housing at Yau Pok Road, Yuen Long". Ramboll Hong Kong Limited has been appointed by the Contractor to undertake the Environmental Team (ET) services for the project and implement the EM&A programmes.
- ii. This Monthly EM&A Report summarises 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 period were:
 - Scaffolding
 - Formwork
 - Re-bar Fixing
 - Concreting
 - Backfilling
 - Installation of MiC Modules

Breaches of Action and Limit Levels

- iii. No works related air quality exceedances were recorded in the reporting period.
- iv. No works related noise exceedances were recorded in the reporting period.
- v. No works related water quality exceedances were recorded in the reporting period.

Complaint Log

- vi. No works related environmental complaints were received in the reporting period.

Notifications of any Summons and Successful Prosecutions

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

Reporting Change

- viii. There were no reporting changes during the reporting period.

Future Key Issues

- ix. The main works anticipated in the next three months are as follow:
 - Scaffolding
 - Formwork
 - Re-bar Fixing
 - Concreting
 - Backfilling
 - Installation of MiC Modules

1.0 INTRODUCTION

1.1 Background

- 1.1.1 The project site is bounded by Yau Pok Road to the east, Fairview Park to the west and north, farmland to the north-east, and Fairview Park Boulevard to the south, and is currently zoned Recreation under the Approved Mai Po and Fairview Park Outline Zoning Plan (OZP) No. S/YL-MP/6. The location of the project site is shown in **Figure 1**.
- 1.1.2 The Project is a Designated Project (DP) under Item P1, Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO), Cap. 499, "A residential or recreational development, other than New Territories exempted houses, within Deep Bay Buffer Zone 1 or 2". The Architectural Services Department as the Project Proponent has submitted a Project Profile (PP-652/2023) for direct application of environmental permit on 28 April 2023. Subsequently, the Director of Environmental Protection (DEP) has granted the Environmental Permit No. EP-629/2023 on 16 June 2023.
- 1.1.3 Ramboll Hong Kong Limited has been appointed as the Environmental Team (ET) to undertake the ET services for implementing the EM&A programmes for the project.
- 1.1.4 The main construction works commenced on 27 March 2024. This Monthly EM&A report summarises the key findings of the EM&A programme from 1 June 2024 to 30 June 2024 (reporting period) and is submitted to fulfil Condition 3.5 of the EP and Section 10.3 of the EM&A Manual submitted under Condition 3.1 of EP-629/2023.

1.2 Project Organisation

- 1.2.1 The project organisation structure with respect to the EM&A Programme is shown in **Figure 2**. The key personnel's contact name and phone numbers are listed in **Table 1**.

Table 1 Contact Information of Key Personnel

Party	Role	Post	Name	Telephone
Architectural Services Department (ASD)	Permit Holder	Project Manager	Ms. Mandy Lam	2154 3145
Ronald Lu & Partners (Hong Kong) Limited	Engineer's Representative	Project Engineer	Mr. Alfred Woo	3189 9337
Egis Engineering & Consulting Hong Kong Limited	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Mr. C K Chan	2186 7995
Ramboll Hong Kong Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Y H Hui	3465 2850
Chevalier - China Railway Joint Venture (CCRJV)	Contractor	Site Agent	Mr. Gary Hui	9659 4427
		Environmental Officer (EO)	Mr. Marcus Lai	4446 1882

1.3 Construction Programme and Works Undertaken

1.3.1 The construction programme is shown in **Appendix A**. Major activities and the corresponding mitigation measures in the reporting period are presented in **Table 2**.

Table 2 Mitigation Measures for the Related Construction Work

Major Activities	Mitigation Measures
Site Clearance	<ul style="list-style-type: none"> - Frequent watering of exposed earth - Use of mist cannon - Covering stockpiles - Installation of rigid partitions with bottom edges sealed with cement along site boundary

1.3.2 The main works will be anticipated in the next three months are as follows:

- Scaffolding
- Formwork
- Re-bar Fixing
- Concreting
- Backfilling
- Installation of MiC Modules

1.4 Status of Environmental Licences, Notification and Permits

1.4.1 A summary of the relevant permits, licenses and/or notifications on environmental protection for this Contract is presented in **Table 3**.

Table 3 Environmental Licenses, Notification and Permits

Permit/ Notification/ License No.	Valid Period		Status
	From	To	
Environmental Permit (EP)			
EP-629/2023	16 Jun 2023	N/A	Valid
Notification of Carrying out Notifiable Works under Air Pollution Control (Construction Dust) Regulation			
500374	29 Nov 2023	N/A	Valid
Billing Account for Disposal of Construction Waste			

Permit/ Notification/ License No.	Valid Period		Status
	From	To	
7049452	13 Dec 2023	N/A	Valid
Construction Noise Permit			
GW-RN0415-24	16 Apr 2024	15 Jul 2024	Valid
Chemical Waste Producer Registration			
5213-541-C4921-01	21 Dec 2023	N/A	Valid
Wastewater Discharge License			
WT10002483-2023	15 Apr 2024	14 Apr 2029	Valid

2.0 AIR QUALITY

2.1 Monitoring Requirement

2.1.1 In accordance with the EM&A manual, 1-hour (1-hr) Total Suspended Particulates (TSP) levels were measured at the designated air quality monitoring stations to monitor the potential impacts of construction dust on air quality. For construction phase impact monitoring of 1-hr TSP, a sampling frequency of at least three times every 6 days shall be undertaken when the highest dust impacts are anticipated to occur based on the nature of the construction works.

2.2 Monitoring Equipment

2.2.1 Portable direct reading dust meters were used to carry out the 1-hr TSP monitoring at the designated monitoring stations. The 1-hr TSP sampling was determined by High Volume Sampler to check the validity and accuracy of the result measured by direct reading method.

2.2.2 The details of the air quality monitoring equipment used are listed in **Table 4** below.

Table 4 Air Quality Monitoring Equipment

Item	Brand	Model	Equipment	Serial No.
1	TSI	SidePak AM520	Portable direct reading dust meter	5201932016
2	TSI	SidePak AM520	Portable direct reading dust meter	5201643007
3	TSI	SidePak AM520	Portable direct reading dust meter	5201750006
4*	TISCH	TE-5170	High Volume Sampler	1260
5*	TISCH	TE-5025A	Calibration Kit	4064

* For comparison with the portable dust meter.

2.3 Monitoring Location

2.3.1 In accordance with the EM&A Manual, five air quality monitoring locations, namely AM1 to AM5 were designated (**Table 5**) and the location of the air monitoring stations are shown in **Figure 3**.

Table 5 Air Quality Monitoring Station

Station ID	ASR ID#	Location	Location of Measurement
AM1	A04	Fairview Park	Ground Level
AM2	A01	Fairview Park	Ground Level
AM3	A05A, A05B	Fairview Park	Ground Level
AM4	A06, A28	Fairview Park	Ground Level
AM5	A16A	Fairview Park	Ground Level

#The ASR IDs are referring to Table 4.3 of the Project Profile (PP-652/2023)

2.4 Monitoring Methodology

2.4.1 The monitoring procedure for air quality monitoring using portable meter method, in accordance with the manufacturer's instruction, shall be as below:

1. Press the "PAGE" key to switch on the equipment.
2. Press "UP" or "DOWN" key to select "Data Log" mode.
3. Press "UP" or "DOWN" key to select "Run Manual" mode.
4. Press the "Start/Stop" to start sampling. Light beep sound indicates the sampling in operation.
5. Place the zero cap to allow zero check sampling for 60 seconds. Proceed to next step if reading drops to zero, otherwise conduct zero calibration as per the equipment operation manual and repeat this step.
6. Press "Start/Stop" key to stop the zero-check sampling. Remove the zero cap.
7. Press the "Start/Stop" to start sampling. Record the start time of sampling and allow for sampling for 1 hour.
8. Press "Start/Stop" key to stop the sampling event after 1 hour.
9. Repeat steps 7-8 for the next sampling event.

Maintenance and Calibration

2.4.2 The portable direct reading dust meters would be checked before every monitoring event and calibrated annually. Calibration certificates of the portable meter direct dust meters are presented in **Appendix C**.

Weather condition

2.4.3 The weather conditions, including wind data and direction during the monitoring period were collected from the nearest weather station established by the Hong

Kong Observatory, the Hong Kong Wetland Park Station, and are provided in **Appendix F**.

Monitoring Schedule

2.4.4 The impact air quality monitoring was conducted at the designated monitoring station as scheduled. The schedule of air quality monitoring in reporting period is provided in **Appendix D**.

2.5 Monitoring Results

2.5.1 No works related Action / Limit Level exceedances were recorded for 1-hr TSP at AM1 to AM5.

2.5.2 No adverse effects arose from the project related factors were noted during the reporting period.

2.5.3 The monitoring data of 1-hr TSP are summarized in **Table 6**. Detailed monitoring data are presented in **Appendix E**.

Table 6 Summary of Air Quality Monitoring Results

Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
AM1	23	12 - 37	277	500
AM2	22	12 - 32	280	500
AM3	24	11 - 38	280	500
AM4	27	16 - 33	280	500
AM5	25	10 - 36	296	500

2.5.4 The Action and Limit Levels for air quality monitoring have been set and are presented in **Appendix B**.

2.5.5 The Event and Action Plan for air quality is given in **Appendix G**.

3.0 NOISE

3.1 Monitoring Requirement

3.1.1 In accordance with the EM&A Manual, construction noise monitoring was conducted to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station shall be on a weekly basis and conducted between 0700 and 1900 on normal weekdays at the designated monitoring locations. As supplementary information for data auditing, statistical results such as L_{10} and L_{90} shall also be obtained for reference.

3.2 Monitoring Equipment

3.2.1 Sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications were used for carrying out the noise monitoring. Immediately prior to and following each noise measurement, the accuracy of the sound level meter would be checked using an acoustic calibrator generating a known sound pressure level at a known frequency. The details of the noise monitoring equipment used are listed in **Table 7** below.

Table 7 Noise Monitoring Equipment

Item	Brand	Model	Equipment	Serial No.
1	SVANTEK	SVAN 971	Sound Level Meter	87094
2	SCANTEK	SV35A	Sound Level Calibrator	64263

3.3 Monitoring Parameters, Frequency and Location

3.3.1 In accordance with the EM&A Manual, five noise quality monitoring stations, namely NM1 to NM5 was designated (**Table 8**) and the locations of the noise monitoring stations are shown in **Figure 3**. The details of the monitoring parameters described in **Table 9**.

Table 8 Noise Monitoring Station

Station ID	NSR ID#	Location	Location of Measurement
NM1	N1	Fairview Park	Ground Level*
NM2	N10	Bethel High School	Ground Level*
NM3	N4	Fairview Park	Ground Level*
NM4	N5	Fairview Park	Ground Level*
NM5	N20	Fairview Park	Ground Level*

*For Free Field measurement, +3dB(A) should be added to the measured results.

#The NSR IDs are referring to Table 4.4 of the Project Profile (PP-652/2023).

Table 9 Noise Monitoring Parameters, Frequency, and Duration

Station	Parameter	Frequency and Duration
NM1 to NM5	Leq (30 min), (L ₁₀ and L ₉₀ will be recorded for reference)	At each station at 0700-1900 hours on normal weekdays at a frequency of once a week

3.4 Monitoring Methodology

3.4.1 The monitoring procedures are as follow:

- For free field measurement, the meter was positioned away from any nearby reflective surfaces and be at a position 1.2m above the ground. All records for free field noise levels were adjusted with a correction of +3 dB(A).
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting: A
 - Time weighting: Fast
 - Measurement time: 5 minutes (Leq (30-min) would be determined for daytime noise by calculating the logarithmic average of six Leq (5min) data.)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration 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.

- At the end of the monitoring period, the L_{eq} , L_{10} and L_{90} shall be recorded. In addition, site conditions and noise sources should be recorded on a standard record sheet.
- Noise monitoring would be cancelled in the presence of fog, rain, and wind with a steady speed exceeding 5 m/s, or wind with gusts exceeding 10 m/s. Supplementary monitoring would be conducted to ensure sufficient data is obtained.

Maintenance and Calibration

3.4.2 The sound level meter and calibrator should be calibrated annually by a HOKLAS laboratory. The calibration certificates are presented in **Appendix C**.

Monitoring Schedule

3.4.3 The noise monitoring was conducted at the designated monitoring stations as scheduled. The schedule of noise monitoring in the reporting period is provided in **Appendix D**.

3.5 Monitoring Results

3.5.1 No works related Action / Limit Level exceedances were recorded at NM1 to NM5.

3.5.2 No adverse effects that arose from the project related factors were noted during the reporting period.

3.5.3 The noise monitoring data are summarized in **Table 10**. Detailed monitoring data are presented in **Appendix E**.

Table 10 Summary of Noise Monitoring Results

Time Period	Station	Range* L_{eq} (30 min) dB(A)	Action Level	Limit Level dB(A)
0700-1900 hrs on normal weekdays	NM1	59.8 - 66.4	When one documented complaint is received	75
	NM2	61.2 - 69.4		70 / 65*
	NM3	56.5 - 67.1		75
	NM4	58.2 - 66.0		75
	NM5	60.3 - 69.1		75

* Free-field measurement for all stations (+3 dB(A) correction has been applied).

** Reduced to 65 dB(A) during school examination periods.

3.5.4 The Action and Limit Levels for noise impact monitoring have been set and are presented in **Appendix B**.

3.5.5 The Event and Action Plan for noise is given in **Appendix G**.

4.0 WATER QUALITY

4.1 Monitoring Requirement

4.1.1 In accordance with the EM&A Manual, water quality monitoring at designated locations at the nearby inland water bodies are proposed to be carried out during the construction phase to monitor any sub-standard water discharge into the nearby water bodies from the site. Water quality monitoring is conducted for three days per week with sampling and measurement at the designated stations.

4.2 Monitoring Equipment

4.2.1 The details of the water quality monitoring equipment used is listed in **Table 11** below.

Table 11 Water Quality Monitoring Equipment

Model	Equipment	Serial Number
YSI ProDSS	Multi-Parameters (Dissolved Oxygen, Temperature, pH and Turbidity)	15M10005

4.2.2 Calibration certificates of the monitoring equipment are presented in **Appendix C**.

4.3 Monitoring Parameters, Frequency and Locations

4.3.1 Four designated water monitoring stations were proposed for monitoring during construction phase and the locations of the monitoring locations are shown in **Figure 3**. The details of the station are described in **Table 12** and **Table 13**.

Table 12 Water Quality Monitoring Stations

Station	Nature	Location	Coordinates	
			Easting	Northing
C1	Control	Fairview Park	837093	823201
W1	Impact	Nullah	837506	823280
C3	Control	Ngau Tam Mei	837779	823965
W3	Impact	Drainage Channel	837072	823299

Table 13 Water Quality Parameters and Monitoring Frequency

Station	Monitoring Parameters	Monitoring Frequency
C1 W1 C3 W3	- Temperature (°C); - pH; - Turbidity (NTU); - Water Depth (m); - Dissolved Oxygen (DO) (mg/L & % Saturation); and - Suspended Solids (SS) (mg/L).	3 days per week (36 hours interval was allowed between subsequent sets of measurement)

4.3.2 Water quality monitoring is conducted for three days per week. The schedule of water quality monitoring in reporting period is provided in **Appendix D**.

4.4 Monitoring Methodology

Sampling Procedure

4.4.1 All in-situ monitoring instrument were checked and calibrated before use. DO meter and turbidimeter shall be calibrated by a HOKLAS accredited laboratory, and subsequently re-calibrated at 3 monthly intervals throughout all stages of the water quality monitoring.

Turbidity, DO, Temperature and pH

4.4.2 Wet bulb calibration for a DO meter shall be carried out before measurement at each monitoring location.

4.4.3 Place the entire probe into the water bodies and make sure all the probes are fully immersed during measurement.

Suspended Solids (SS)

4.4.4 The SS determination shall be carried in a HOKLAS accredited laboratory, and the testing method shall meet the technical specification listed in the table below, or the equivalent endorsed under the HOKLAS. The HOKLAS accredited laboratory shall have comprehensive quality assurance and quality control programmes, including conducting one duplicated sample analysis for every batch of 20 samples analysed.

4.4.5 Water samples were collected for the laboratory analysis of SS. The water samples for SS determination should be stored in high density polythene bottles with no preservative added, packed in ice (cooled to 4°C without being frozen) and kept in dark during both on-site temporary storage and shipment to the testing laboratory. The samples shall be delivered to the laboratory within 24 hours of collection and be analysed as soon as possible after collection.

4.4.6 The test method for SS determination is summarized in **Table 14** below.

Table 14 Laboratory Analysis for Suspended Solids (SS)

Parameter	Analytical Method	Limit of Reporting
Suspended Solids (SS)	In house method based on APHA 2540D; ALS Method Code: EA-025EA025	2 mg/L

4.5 Monitoring Results

4.5.1 Water quality monitoring was conducted at all designated monitoring stations in the reporting period. The detailed monitoring results and graphical presentations are provided in **Appendix E**.

4.5.2 A total of zero Action Level and zero Limit Level exceedances were recorded at the two impact stations. The number of exceedances recorded in the reporting period is summarized in **Table 15**.

Table 15 Summary of Water Quality Exceedances

Station	Exceedance	DO	Turbidity	SS	Total
W1	Action	0	0	0	0
	Limit	0	0	0	0
W3	Action	0	0	0	0
	Limit	0	0	0/2	0/2

Notes: if exceedance is recorded, (x / y) denote the number of works related exceedances vs total number of exceedances recorded.

4.5.3 For the exceedances recorded on 15 and 28 March 2024, installation of MiC modules was carried out during the monitoring period, according to the information provided by the Contractor. Mitigation measures were implemented to control water quality impact from above mentioned works such as installed rigid partitions with bottom edges sealed with cement along the site boundary abutting the water channels, to prevent surface runoff and direct wastewater to AquaSet before discharge. The AquaSed with chemical agent to enhance sedimentation has been checked by contractor, which was functional and well maintained. No direct discharge of surface runoff or effluent were observed from construction activities into the concerned waterbody on the monitoring days and during the regular site audits. Hence, two exceedances were not considered related to the project works.

4.5.4 The details of Notification of Exceedance are shown in **Appendix K**.

4.5.5 The Event and Action Plan for water quality is given in **Appendix G**.

5.0 ECOLOGY

5.1 Monitoring Requirements

5.1.1 A number of mitigation measures will be implemented to minimize the potential impact to birds during construction phase. There will be no piling work and the Modular-In-Construction (MiC) method will be adopted. Ecological monitoring activities during the construction phase is a requirement under Condition 3.1 of the EP No. EP-629/2023. The ecological monitoring programme has been detailed in the EM&A Manual for the project prepared under the same EP condition. Ecology monitoring is a precautionary measure to verify the accuracy of impact assessment and detect any unpredictable impact arising from the proposed development, monthly monitoring of birds during the construction period is recommended.

5.2 Monitoring Methodology

5.2.1 Monitoring survey was conducted on 4 June 2024. Transect count method was used. The survey covered the sensitive habitats within 500m of the Project Site, with focus at the Ngau Tam Mei Drainage Channel (NTMDC) and the temporary ponds of Yau Mei Sun Tsuen (YMST) abutting the north-eastern boundary of the Project Site. Bird species and their abundance were recorded by habitat during the survey.

5.3 Monitoring Results

5.3.1 A total of 25 bird species were recorded in habitats along the survey transects in June 2024. Most of the recorded species are common and widely distributed in Hong Kong.

5.3.2 Bird abundance and species richness of each habitat type were compared to those of pre-construction condition (**Table 16** and **Table 17**). Apart from species richness of Pond habitat, both bird abundance and species richness in all surveyed habitat types increased or remained unchanged in June 2024. Species richness of Pond habitat type in June 2024 were lower than that of pre-construction condition.

5.3.3 Some of the bird species recorded in Pond habitat during pre-construction condition are winter visitors (e.g., Eurasian Teal *Anas crecca*, Common Greenshank *Tringa nebularia*, Black-winged Stilt *Himantopus himantopus*, Olive-backed Pipit *Anthus godiewskii*). These species are normally absent in Hong Kong in June. Hence, the decrease of species richness in pond habitat observed in June 2024 was only seasonal change, rather than due to construction disturbance.

5.3.4 Increase of bird abundance and species richness was observed in NTMDC and temporary ponds of YMST in June 2024. New bird species were recorded in these two habitat types in June 2024 (**Table 18** and **Table 19**). If the construction activities had caused adverse disturbance on birds utilizing the habitats near the Project Site, no new species would be recorded in these habitats during construction phase.

5.3.5 The recommended mitigation measures were considered effective in minimizing the

construction disturbance to birds utilizing the habitats near the Project Site.

Table 16 Comparison of Bird Abundance

Habitats	June 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Drainage Channel	49	29	+
Temporary Pond of YMST	18	8.5	+
Agricultural Land	5	1.5	+
Developed Area	15	13	+
Grassland	4	3.5	+
Shrubland/grassland	20	18.5	+
Pond	17	15.5	+
Plantation	16	5	+
Reed	4	4	no change
Waste Ground	7	6	+

* mean of two pre-construction surveys.

Table 17 Comparison of Bird Species Richness

Habitats	June 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Drainage Channel	16	15	+
Temporary Pond of YMST	9	7.5	+
Agricultural Land	4	1	+
Developed Area	8	5.5	+
Grassland	4	2	+
Shrubland/grassland	8	6	+

Habitats	June 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Pond	9	12	-
Plantation	6	4.5	+
Reed	4	1.5	+
Waste Ground	4	3.5	+

* mean of two pre-construction surveys.

Table 18 Comparison of Bird Abundance in NTMDC

Species	June 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Chinese Pond Heron	1	0.5	+
Grey Heron	0	2.5	-
Great Egret	1	0.5	+
Little Egret	3	2	+
Great Cormorant	0	0.5	-
White-breasted Waterhen	1	0.5	+
Common Greenshank	0	0.5	-
Common Sandpiper	0	1	-
Domestic Pigeon	0	0.5	-
White-throated Kingfisher	0	0.5	-
Greater Coucal	1	0	+
Cinereous Tit	2	0.5	+
Red-whiskered Bulbul	1	0.5	+
Chinese Bulbul	13	4	+

Species	June 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Dusky Warbler	0	1	-
Yellow-browed Warbler	0	1.5	-
Yellow-bellied Prinia	1	1	no change
Plain Prinia	4	0	+
Common Tailorbird	4	1	+
Masked Laughingthrush	3	1.5	+
Japanese White-eye	4	4	no change
Crested Myna	5	1	+
Chinese Blackbird	0	0.5	-
Black-collared Starling	3	0	+
Oriental Magpie-Robin	2	0.5	+
White Wagtail	0	1.5	-
Olive-backed Pipit	0	1.5	-

* mean of two pre-construction surveys.

Table 19 Comparison of Bird Abundance in Temporary Pond of YMST

Species	June 2024	Pre-construction Condition*	Change (increase: +; Decrease: -)
Chinese Pond Heron	1	0	+
Eastern Cattle Egret	2	0	+
Grey Heron	1	1.5	-
White-breasted Waterhen	0	0.5	-
Black-winged Stilt	0	1	-

Species	June 2024	Pre-construction Condition*	Change (increase: +; Decrease: -)
Common Greenshank	0	0.5	-
Spotted Dove	0	0.5	-
Common Kingfisher	1	0	+
Chinese Bulbul	1	0	+
Oriental Magpie	0	0.5	-
Collared Crow	0	0.5	-
Dusky Warbler	0	0.5	-
Yellow-bellied Prinia	3	1	+
Masked Laughingthrush	2	0	+
Crested Myna	2	0.5	+
Scaly-breasted Munia	5	0	+
Black-collared Starling	0	1	-
White Wagtail	0	0.5	-

* mean of two pre-construction surveys.

6.0 WASTE MANAGEMENT

6.1 Monitoring Requirements

6.1.1 According to the EM&A Manual, it is the Contractor's responsibility to ensure that all wastes produced during the construction works for the project are handled, stored and disposed of in accordance with good waste management practices, EPD's regulations and requirements. An environmental management plan (EMP) should be prepared and submitted to the Supervisor for approval. The monitoring and auditing requirements of the EMP should be followed with regard to the management of C&D material. Site inspections would be undertaken by the ET at least once every week during the construction period.

6.2 Waste Management Status

6.2.1 Site audits were carried out on a weekly basis to monitor and audit to ensure that proper storage, transportation and disposal practices of waste materials generated during construction activities, such as C&D materials and general refuse are being implemented. The monthly summary of waste flow table is presented in **Appendix H**.

6.2.2 No outstanding issues were reported during the reporting period.

7.0 LANDSCAPE AND VISUAL

7.1 Audit Requirements

7.1.1 All measures undertaken by both the Contractor and the specialist Landscape Sub-Contractor during the construction phase and first year of the operational phase shall be audited by a Registered Landscape Architect or certified Arborist, as a member of the ET, on a regular basis to ensure compliance with the intended aims of the mitigation measures. The qualification of proposed Registered Landscape Architect or certified Arborist shall be submitted to the ER for approval and agreed with the IEC. Site inspections should be undertaken at least once every two weeks throughout the construction period and once every two months during the operational phase.

7.2 Results and Observations

7.2.1 Landscape and Visual Audit was undertaken bi-weekly and no outstanding issues were reported during the reporting period.

8.0 ENVIRONMENTAL AUDIT

8.1 Site Audits

8.1.1 Site audits should be carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.

8.1.2 In the reporting period, four site inspections with the Contractor were carried out on 7, 14, 21 and 28 June 2024, while joint site inspection with the representative of IEC was conducted on 28 June 2024 in the reporting period.

8.1.3 Dust issues were identified, and recommendations were given in the reporting period. Issues were rectified in subsequent inspections. Details of observations recorded during the site inspections are summarized in **Appendix J**.

8.2 Implementation Status of Environmental Mitigation Measures

8.2.1 The Contractor had implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and EM&A Manual. The implementation status of the environmental mitigation measures during the reporting period is summarized in **Appendix L**.

9.0 ENVIRONMENTAL COMPLAINT AND NON-CONFORMANCE

9.1 Environmental Exceedance

9.1.1 No works related air quality exceedances were recorded in the reporting period.

9.1.2 No works related noise exceedances were recorded in the reporting period.

9.1.3 No works related water quality exceedances were recorded in the reporting period.

9.2 Complaints, Notification of Summons and Prosecution

9.2.1 No environmental complaint, notification of summons and successful prosecution were received in the reporting period.

9.2.2 Cumulative complaint log, summaries of complaints, notification of summons and successful prosecutions are presented in **Appendix I**.

9.2.3 Cumulative statistic on complaints and successful prosecutions are summarized in **Table 20**.

Table 20 Cumulative Statistics on Complaints and Successful Prosecutions

Period	Complaints	Successful Prosecutions
June 2024	0	0
Total	0	0

10.0 FUTURE KEY ISSUES

10.1 Construction Programme

10.1.1 The construction programme is provided in **Appendix A**.

10.2 Key Issues for the Coming Month

10.2.1 There were no reporting changes during the reporting period.

10.2.2 Potential environmental impacts arising from the above construction activities are mainly associated with construction dust, noise, wastewater, water quality, ecology, landscape and visual impact issues.

10.3 Monitoring Schedules

10.3.1 The tentative environmental monitoring schedule for the next month is provided in **Appendix D**.

11.0 CONCLUSION AND RECOMMENDATIONS

11.1 Conclusion

- 11.1.1 The main construction works commenced on 27 March 2024. Accordingly, the construction phase EM&A programme for the Project also commenced on 27 March 2024.
- 11.1.2 No works related Action/Limit Level exceedances were recorded at the designate station for construction phase air quality monitoring carried out in the reporting period.
- 11.1.3 No works related Action/Limit Level exceedances were recorded at the designated station for construction noise monitoring carried out in the reporting period.
- 11.1.4 No works related Action/Limit Level exceedances were recorded at the designated stations for construction phase water quality monitoring carried out in the reporting period.
- 11.1.5 In the reporting period, four environmental site audit and inspections were carried out. Recommendations on remedial actions were given to the Contractor for remediating the deficiencies identified during the site audit and inspections.
- 11.1.6 Ecological monitoring was conducted in the reporting period. No evidence of construction impact on bird communities was observed. The mitigation measures were considered effective in minimisation of construction disturbance on birds.
- 11.1.7 Audit and monitoring of the implementation of landscape and visual mitigation measures were conducted bi-weekly and no specific observations was identified.
- 11.1.8 Referring to the Contractor's information, no environmental complaint, notification of summons and successful prosecution was received in the reporting period.

11.2 Recommendations

- 11.2.1 The recommended environmental mitigation measures, as proposed in the Project Profile 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.
- 11.2.2 According to the environmental site audit and inspections performed in the reporting period, the following recommendations were provided:

Air Quality Impact

- No specific observation was identified in the reporting period.

Construction Noise Impact

- No specific observation was identified in the reporting period.

Water Quality Impact

- No specific observation was identified in the reporting period.

Chemical and Waste Management

- No specific observation was identified in the reporting period.

Ecology

- No specific observation was identified in the reporting period.

Landscape and Visual Impact

- No specific observation was identified in the reporting period.

Permit / License

- No specific observation was identified in the reporting period.