其士－中鐵建設聯營
Chevalier - China Railway Joint Venture
九龍灣宏開道八號其士商業中心二十二字樓　電話:(852) 2318 1818　傳真: (852) 2796 0987　網址: www.chevalier.com
22/F., CHEVALIER COMMERCIAL CENTRE, 8 WANG HOI ROAD, KOWLOON BAY, HONG KONG.
TEL: (852) 2318 1818 FAX: (852) 2796 0987 WEBSITE: www.chevalier.com

SSM518-A1-OUT-1396 May 16, 2024

The EIA Ordinance Register Office
Environmental Protection Department
27th floor, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

By Post & E-mail

Dear Sir / Madam,

Contract No. SS M518
Design & Construction of Light Public Housing at Yau Pok Road, Yuen Long, at Tuen Mun Area 3A, and Choi Hing Road, Ngau Tau Kok
Re: Submission of Monthly EM&A Report for April 2024 under EP Condition 3.5 (Environmental Permit No.: EP-629/2023)

According to EP Condition 3.5, we would like to submit herewith the Monthly EM&A Report for April 2024 for your information and record.

Thank you for your kind attention.

Yours faithfully
Chevalier – China Railway Joint Venture

Marcus Chow
Project Manager
MC/CC/ML/ml

Encl.

c.c.	RLP	Director	Mr. Alfred Woo	}w/e
	CMW	Director	Mr. Ben Leung	}w/e
	AECOM	Project Director	Mr. Wilson Chan	}w/e
	SCENIC	Director	Mr. Chris Foot	}w/e
	Egis	Managing Director	Mr. James Xiong	}w/e
	Arcadis	Director	Ms. Cynthia Szeto	}w/e
	ASD	SA/34	Ms. LAM Yue-wai, Mandy	}w/e
	Site Office			}email only

Intended for
Architectural Services Department

Document type
Report

Date
May 2024

LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG

MONTHLY EM&A REPORT

FOR APRIL 2024

RAMBOLL

LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG

MONTHLY EM&A REPORT FOR APRIL 2024

Revision **1**
Date **16/05/2024**

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

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

Ref R9437_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\202404\R9437_v1.0b.doc

BY EMAIL

Our Ref: BATF55902_2024_11

16/05/2024

Ms. LAM Yue Wai, Mandy
Architectural Services Department
Architectural Branch
Division 3

Unit 1204, 12/F,
14 Taikoo Wan Road, Taikoo Shing,
Hong Kong

Dear Madam,

Light Public Housing at Yau Pok Road, Yuen Long
Independent Environmental Checker Consultancy Services
Verification of Environmental Monitoring and Audit (EM&A) Report (April 2024)

We refer to the captioned EM&A Report for April 2024, which was certified by Environmental Team Leader on 16 May 2024 *(Ref.: R9437_v1.0b.doc)*.

Please note that we have no adverse comments on the captioned EM&A Report for April 2024. Therefore, the captioned EM&A Report for April 2024 is hereby verified in accordance with the requirement stipulated in Condition 3.5 of EP-629/2023.

Should you have any query, please feel free to contract the undersigned at 2186 7995 (chun-kwok.chan@egis-group.com).

Yours faithfully,

CHAN Chun Kwok
Independent Environmental Checker

cc.
ET Leader – Ramboll (Attn: Mr. Y H Hui) [By email: yhhui@ramboll.com]
Project Management Consultant – RLP (Attn: Mr. Alfred Woo) [By email: alfredwoo@rlp.asia]

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

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 27 March 2024 to 30 April 2024. As informed by the Contractor, major activities in the reporting period were:

- Site formation
- Mock up of MiC Modules
- 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. While a total of 1 Action Level and 7 Limit Level exceedances were recorded, they were investigated and found not project works related.

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:

- Installation of MiC Modules
- Fitting Out Works
- Building Services Installation
- External Works

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 made 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 27 March 2024 to 30 April 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 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 Manager	Ms. Rain Cheung	6690 9623
		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 Formation	- Frequent watering of exposed earth - Use of mist cannon - Covering stockpiles

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

- Installation of MiC Modules
- Fitting Out Works
- Building Services Installation
- External Works

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			
7049452	13 Dec 2023	N/A	Valid
Construction Noise Permit			

Permit/ Notification/ License No.	Valid Period		Status
	From	To	
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 determinate 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 ID 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 (μg/ m^3)	Range (μg/ m^3)	Action Level (μg/ m^3)	Limit Level (μg/ m^3)
AM1	29	21 – 36	277	500
AM2	31	22 – 37	280	500
AM3	30	21 - 34	280	500
AM4	30	21 - 36	280	500
AM5	30	21 - 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 ID 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 ($L_{eq\ (30\text{-}min)}$ would be determined for daytime noise by calculating the logarithmic average of six $L_{eq\ (5min)}$ 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 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.**

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	55.4 – 63.9	When one documented complaint is received	75
	NM2	62.4 – 65.2		
	NM3	55.8 – 61.3		
	NM4	58.3 – 64.9		
	NM5	57.1 – 61.0		

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

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 Nullah	837093	823201
W1	Impact		837506	823280
C3	Control	Ngau Tam Mei Drainage Channel	837779	823965
W3	Impact		837072	823299

Table 13 Water Quality Parameters and Monitoring Frequency

Station	Monitoring Parameters	Monitoring Frequency
C1 W1 C3 W3	- Temperature (oC); - 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 has 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 keep 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 1 Action Level and 7 Limit Level exceedances were recorded at the two impact stations. After investigation, none of the exceedances were related to the construction works of the project. The 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 / 1	0 / 1
	Limit	0	0	0 / 3	0 / 3
W3	Action	0	0	0	0
	Limit	0	0	0 / 4	0 / 4

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 27 March 2024, mock up of MIC modules was carried out, while on 3, 8, 10, 12, 24, and 26 April 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, and 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 audit. Hence, the 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 9 April 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 40 bird species were recorded in habitats along the survey transects in April 2024 (**Appendix F**). 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 type, both bird abundance and species richness in all surveyed habitat types increased in April 2024. Species richness of Pond habitat type was the same as that of pre-construction condition. No decline of bird abundance or species richness was observed in any habitat type in April 2024. New bird species were recorded in NTMDC and temporary ponds of YMST in April 2024 (**Table 18**and **Table 19**).

5.3.3 The increase in birds abundance, species richness, and the record of new species in habitats around the Project Site indicate the construction activities has not cause adverse disturbance to the avifauna.

5.3.4 Hence, 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	April 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Drainage Channel	79	29	+
Temporary Pond of YMST	24	8.5	+
Agricultural Land	5	1.5	+
Developed Area	19	13	+
Grassland	5	3.5	+
Shrubland/grassland	31	18.5	+
Pond	22	15.5	+
Plantation	13	5	+
Reed	5	4	+
Waste Ground	8	6	+

* mean of two pre-construction surveys.

Table 17 Comparison of Bird Species Richness

Habitats	April 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Drainage Channel	25	15	+
Temporary Pond of YMST	10	7.5	+
Agricultural Land	3	1	+
Developed Area	9	5.5	+
Grassland	5	2	+
Shrubland/grassland	13	6	+
Pond	12	12	No change

Habitats	April 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Plantation	7	4.5	+
Reed	4	1.5	+
Waste Ground	6	3.5	+

* mean of two pre-construction surveys.

Table 18 Comparison of Bird Abundance in NTMDC

Species	April 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Chinese Pond Heron	7	0.5	+
Grey Heron	0	2.5	-
Great Egret	3	0.5	+
Little Egret	6	2	+
Great Cormorant	0	0.5	-
White-breasted Waterhen	1	0.5	+
Common Redshank	5	0	+
Common Greenshank	5	0.5	+
Common Sandpiper	0	1	-
Spotted Dove	3	0	+
Domestic Pigeon	0	0.5	-
Greater Coucal	1	0	+
Asian Koel	1	0	+
White-throated Kingfisher	0	0.5	-
Common Kingfisher	1	0	+

Species	April 2024	Pre-construction Condition*	Difference (increase: +; Decrease: -)
Large-billed Crow	1	0	+
Cinereous Tit	2	0.5	+
Red-whiskered Bulbul	0	0.5	-
Chinese Bulbul	7	4	+
Dusky Warbler	0	1	-
Yellow-browed Warbler	0	1.5	-
Oriental Reed Warbler	1	0	+
Yellow-bellied Prinia	6	1	+
Plain Prinia	1	0	+
Common Tailorbird	1	1	No change
Masked Laughingthrush	4	1.5	+
Japanese White-eye	5	4	+
Crested Myna	6	1	+
Black-collared Starling	2	0	+
Chinese Blackbird	0	0.5	-
Oriental Magpie-Robin	1	0.5	+
Grey Wagtail	1	0	+
White Wagtail	7	1.5	+
Olive-backed Pipit	1	1.5	-

* mean of two pre-construction surveys.

Table 19 Comparison of Brid Abundance in Temporary Pond of YMST

Species	April 2024	Pre-construction Condition*	Change (increase: +; Decrease: -)
Northern Shoveler	2	0	+
Great Egret	1	0	+
Intermediate Egret	1	0	+
Grey Heron	0	1.5	-
White-breasted Waterhen	0	0.5	-
Black-winged Stilt	9	1	+
Black-tailed Godwit	3	0	+
Common Greenshank	1	0.5	+
Wood Sandpiper	2	0	+
Spotted Dove	0	0.5	-
Long-tailed Shrike	1	0	+
Oriental Magpie	0	0.5	-
Collared Crow	0	0.5	-
Dusky Warbler	0	0.5	-
Yellow-bellied Prinia	2	1	+
Crested Myna	0	0.5	-
Black-collared Starling	0	1	-
White Wagtail	2	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, five site inspections with the Contractor were carried out on 28 March, 3, 12, 19 and 25 April 2024, while joint site inspection with the representative of IEC was conducted on 12 April 2024 in the reporting period.

8.1.3 No outstanding issues were reported during the reporting period. Details of observations recorded during the site inspections are summarized in **Appendix J**.

8.2 Implementation Status of Environmental Mitigation Measure

8.2.1 The Contractor had implemented environmental mitigation measures and requirements as stated in the EIA Reports, the EP and EM&A Manuals. 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. While 1 Action Level and 7 Limit Level exceedances for water quality monitoring were recorded in the reporting period, they were investigated and found not works related.

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
April 2024	0	0
Total	0	0

10.0 FUTURE KEY ISSUES

10.1 Construction Programme

10.1.1 Tentative construction programmes for the next three months are 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 months 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. While a total of 1 Action Level and 7 Limit Level exceedances were recorded, they were investigated and found not project works related.

11.1.5 In the reporting period, five 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

- The Contractor was reminded to water the haul road regularly.

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

- The Contractor was reminded that the drip tray should be provided to chemical containers.
- The Contractor was reminded to store waste properly at the designated area.

Ecology

- No specific observation was identified in the reporting period.

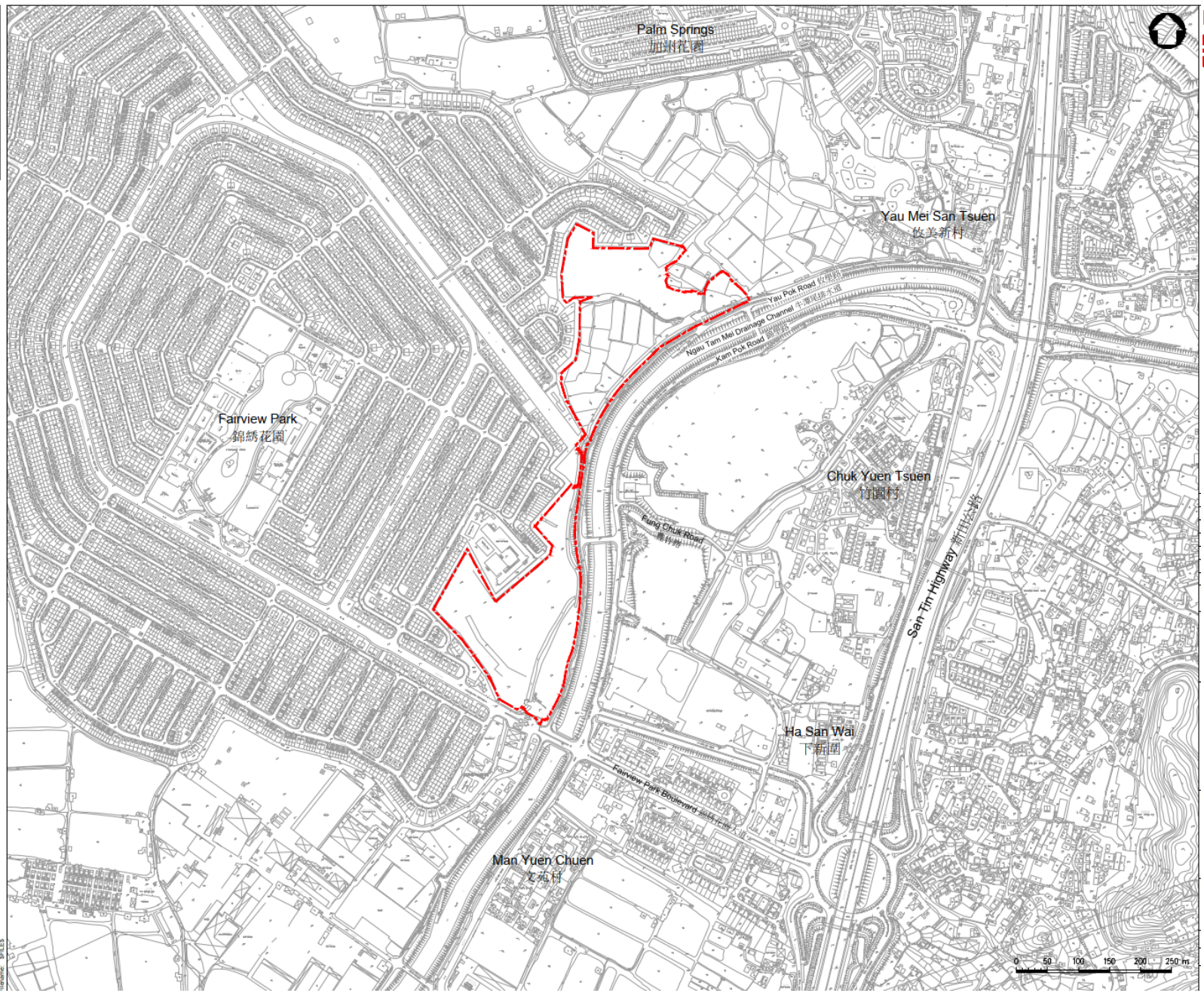
Landscape and Visual Impact

- No specific observation was identified in the reporting period.

Permit / License

- No specific observation was identified in the reporting period.

Figure 1 Location of the Project Site



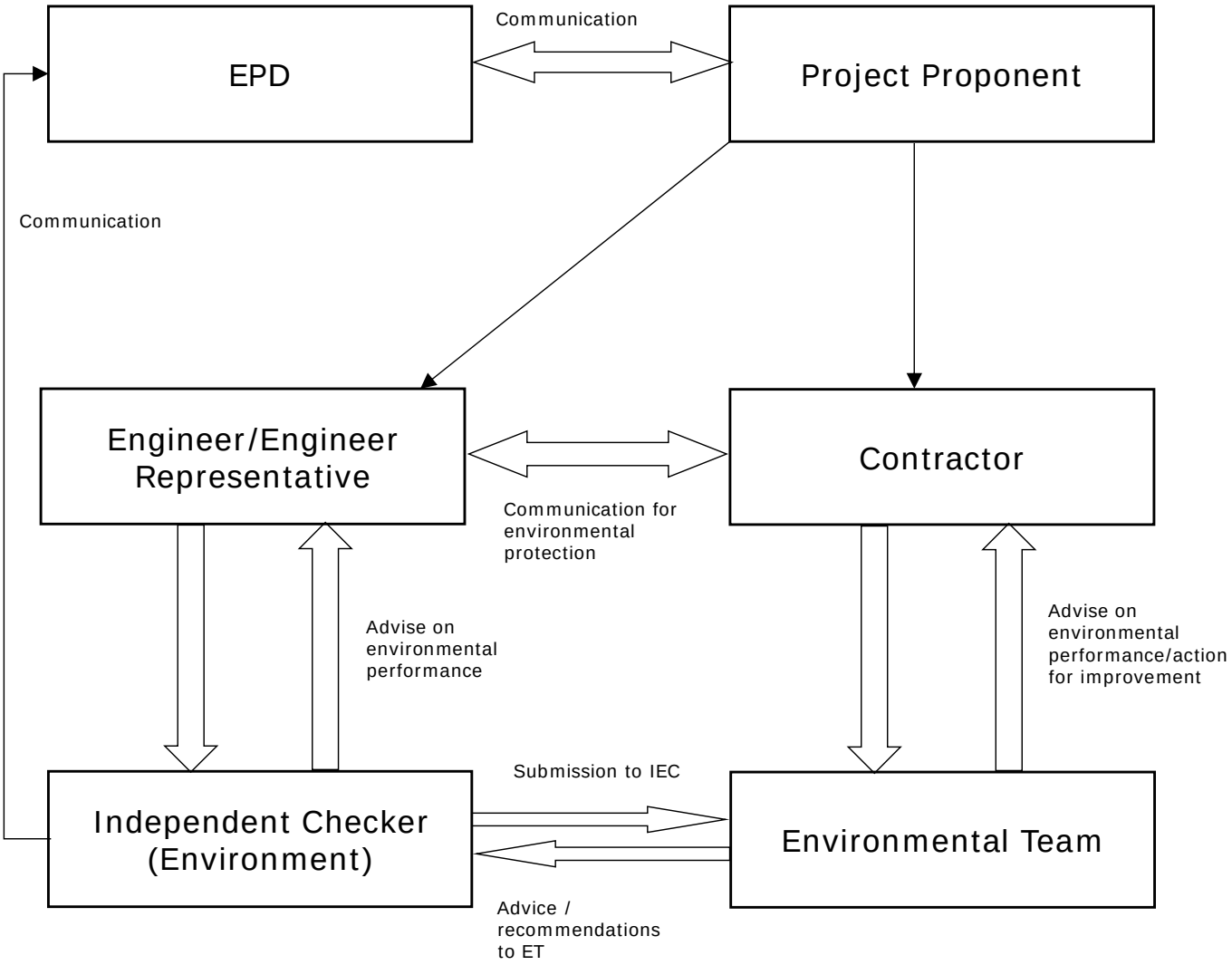
LEGEND 圖例:

PROJECT SITE 項目地點

RAMBOLL	Light Public Housing At Yau Pok Road, Yuen Long	Location of Project Site	Figure No.: 1
			Date: 5 Dec 2023 / Scale: As shown
			Drawn: MW / Check: YH

Q:\Projects\CHEM518-ED00\10 EMnA\20 EMnA_Reports\02_Monthly_Reports\202404\01_Figures\Figure_1.pdf

Figure 2 Typical Construction Phase Environmental Monitoring and Audit Procedure



Notes:
Please refer to the EM&A Manual for duties and responsibilities of each party.

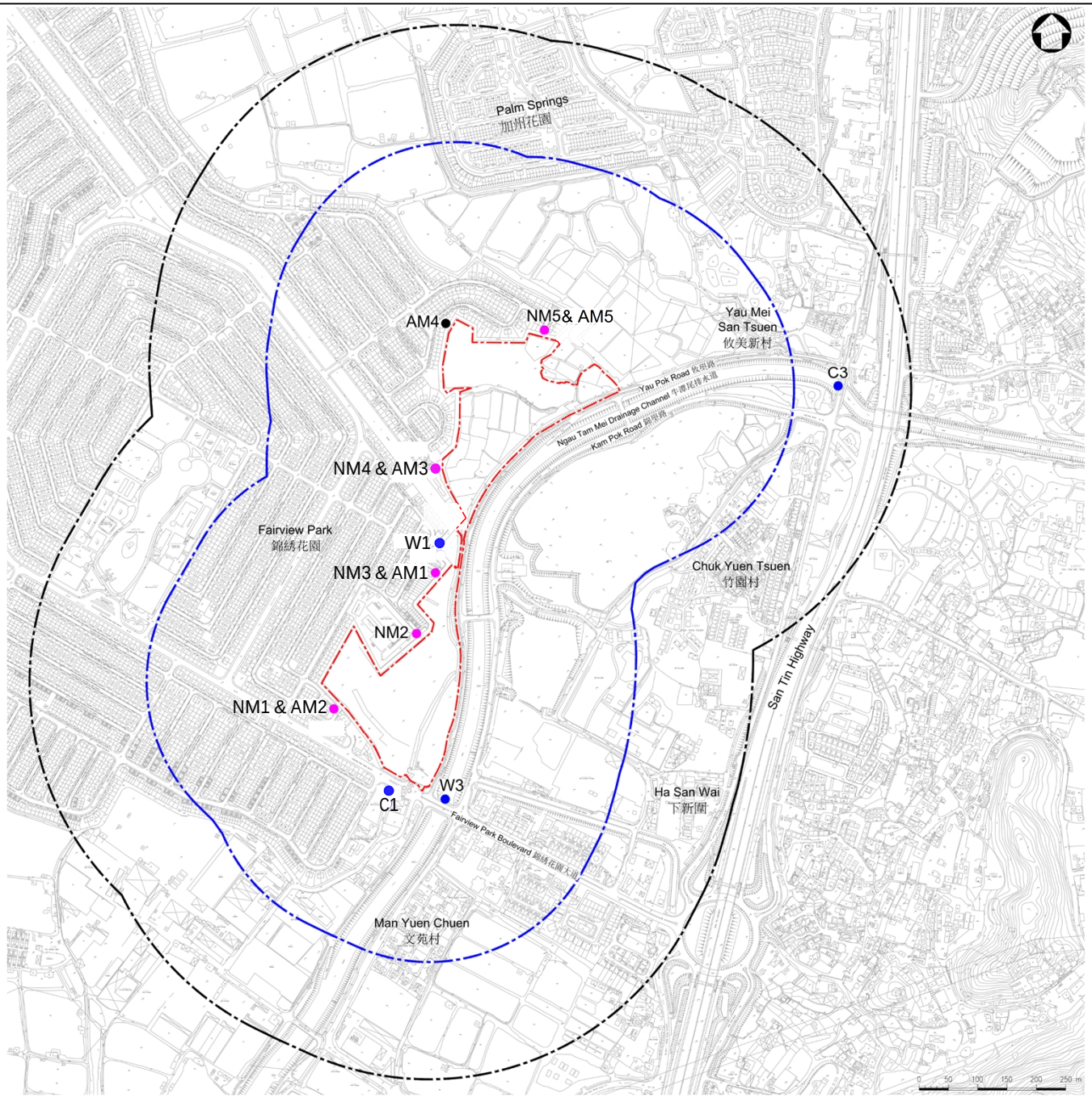
Submission from ET to IEC:
•Implementation status proforma on mitigation action;
•Proactive environmental protection proforma for construction method alternative;
•Regulatory compliance proforma listing licenses/permit compliance;
•Site inspection proforma;
•Complaint report;
•EM&A report for endorsement;
•Effectiveness of EIA recommendations.

Advice / Recommendations from IEC to ET:
•Advise on environmental performance
•Return/sign off audit proformas
•Environmental concerns recommendations on construction methods

	RAMBOLL	Light Public Housing At Yau Pok Road, Yuen Long	Typical Construction Phase Environmental Monitoring and Audit Procedures	Figure No.: 2
				Date: 5/12/2023 / Scale: N/A
				Drawn : MW / Check: YH

Q:\Projects\CHEM518-ED00\10 EMnA\20 EMnA_Reports\02_Monthly_Reports\202404\01_Figures

Figure 3 Locations of Air Quality, Noise and Water Quality Monitoring Stations



LEGEND 圖例:

- PROJECT SITE 項目地點
- 500m ASSESSMENT AREA FOR AIR QUALITY AND WATER QUALITY 500米空氣質素及水質評估範圍
- 300m ASSESSMENT AREA FOR NOISE 300米噪音評估範圍
- AIR QUALITY MONITORING STATIONS 空氣質素監察站
- NOISE MONITORING STATIONS 噪音監察站
- WATER QUALITY MONITORING STATIONS 水質監察站

RAMBOLL

Light Public Housing At Yau Pok Road, Yuen Long

Locations of Construction Phase Air Quality, Noise and Water Quality Monitoring Stations

Figure No.: 3

Date: 13 /12 / 2023

Scale: As shown

Drawn : MW

Check: YH

Q:\Projects\CHEM518-ED00\10 EMnA\20 EMnA_Reports\02_Monthly_Reports\202404\01_Figures\Figure_3.pdf

Appendix A Construction Programme

Contract No. SS M518
Design & Construction of Light Public Housing at Yau Pok Road, Yuen Long, at Tuen Mun Area 3A, and Choi Hing Road, Ngau Tau Kok

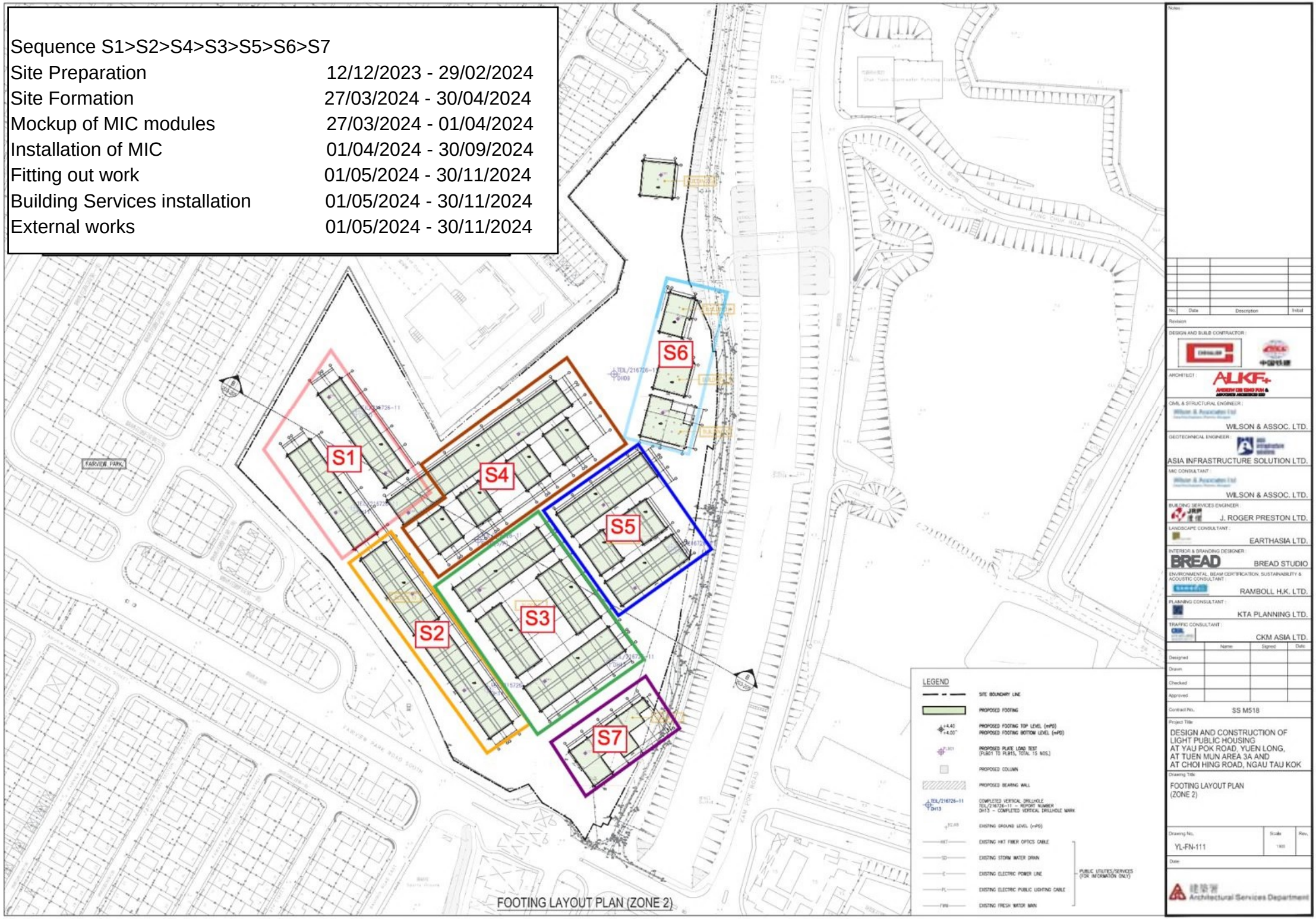
Yau Pok Road, Yuen Long Construction Works Schedule

Construction Works	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024
Site Preparation work												
Site Formation												
Mock up of Mic modules												
Installation of Mic modules												
Fitting out work												
Building Services installation												
External works												

Note: The major nosiy / disturbing activities are site formation, mock up of MIC modules and installation of MIC modules, which would be completed before October 2024, therefore the peak wintering season (between October and March) for migratory birds would not be affected. Fitting out work, building services installation and external works are not nosiy / disturbing activities and would not adversely affect the migratory birds.

Sequence S1>S2>S4>S3>S5>S6>S7

Site Preparation	12/12/2023 - 29/02/2024
Site Formation	27/03/2024 - 30/04/2024
Mockup of MIC modules	27/03/2024 - 01/04/2024
Installation of MIC	01/04/2024 - 30/09/2024
Fitting out work	01/05/2024 - 30/11/2024
Building Services installation	01/05/2024 - 30/11/2024
External works	01/05/2024 - 30/11/2024



FOOTING LAYOUT PLAN (ZONE 2)

Notes :

No.	Date	Description	Initial
Revision			

DESIGN AND BUILD CONTRACTOR :

ARCHITECT : ALKF+

C/M& STRUCTURAL ENGINEER : WILSON & ASSOC. LTD.

GEOTECHNICAL ENGINEER : ASIA INFRASTRUCTURE SOLUTION LTD.

M/C CONSULTANT : WILSON & ASSOC. LTD.

BUILDING SERVICES ENGINEER : J. ROGER PRESTON LTD.

LANDSCAPE CONSULTANT : EARTHASIA LTD.

INTERIOR & BRANDING DESIGNER : BREAD STUDIO

ENVIRONMENTAL, BEAM CERTIFICATION, SUSTAINABILITY & ACOUSTIC CONSULTANT : RAMBOLL H.K. LTD.

PLANNING CONSULTANT : KTA PLANNING LTD.

TRAFFIC CONSULTANT : CKM ASIA LTD.

	Name	Signed	Date
Designed			
Drawn			
Checked			
Approved			

Contract No. SS M518

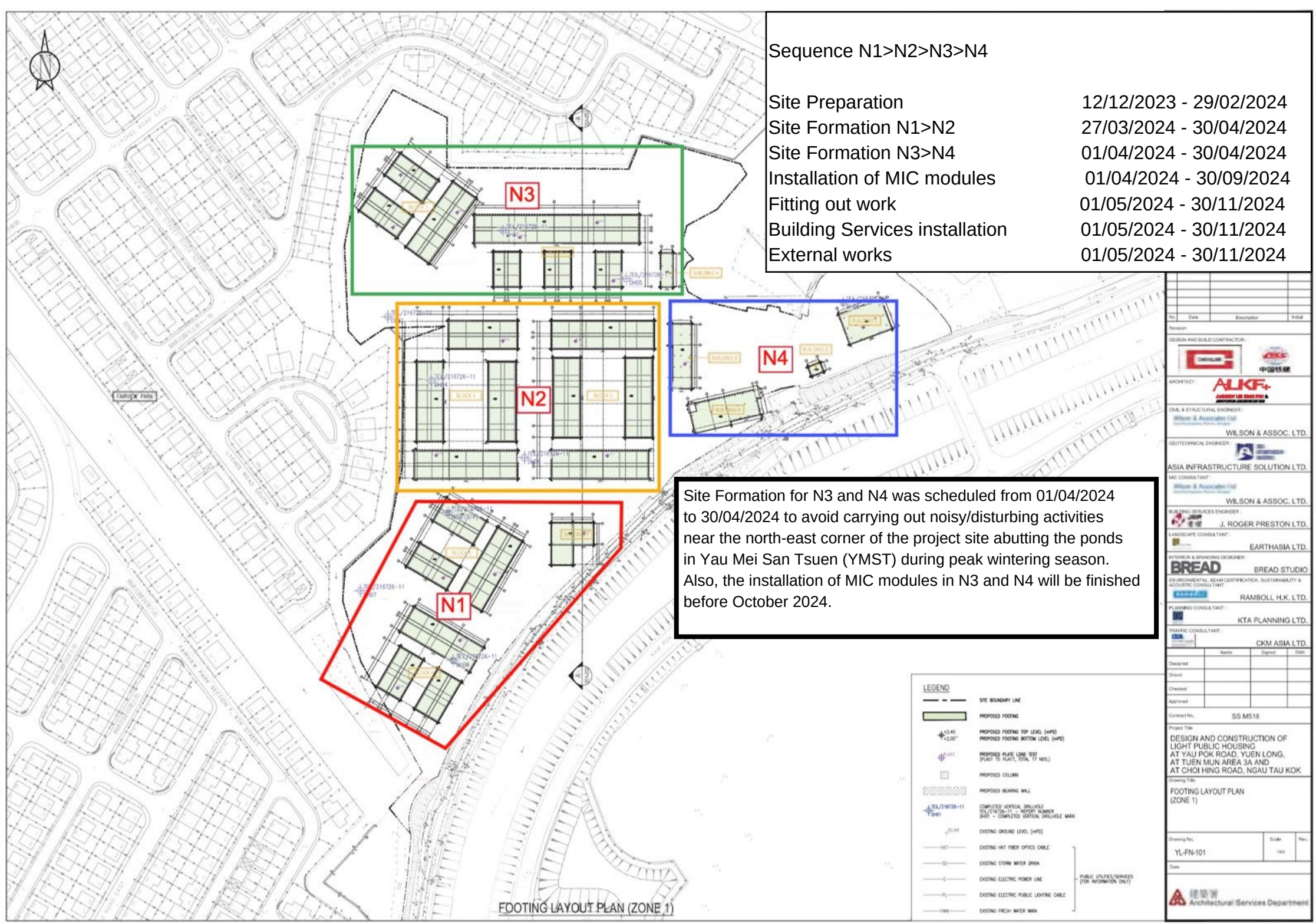
Project Title
DESIGN AND CONSTRUCTION OF LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG, AT TUEN MUN AREA 3A AND AT CHOI HING ROAD, NGAU TAU KOK

Drawing Title
FOOTING LAYOUT PLAN (ZONE 2)

Drawing No. YL-FN-111 | Scale 1:800 | Rev.

Date

Architectural Services Department



Sequence N1>N2>N3>N4

Site Preparation	12/12/2023 - 29/02/2024
Site Formation N1>N2	27/03/2024 - 30/04/2024
Site Formation N3>N4	01/04/2024 - 30/04/2024
Installation of MIC modules	01/04/2024 - 30/09/2024
Fitting out work	01/05/2024 - 30/11/2024
Building Services installation	01/05/2024 - 30/11/2024
External works	01/05/2024 - 30/11/2024

Site Formation for N3 and N4 was scheduled from 01/04/2024 to 30/04/2024 to avoid carrying out noisy/disturbing activities near the north-east corner of the project site abutting the ponds in Yau Mei San Tsuen (YMST) during peak wintering season. Also, the installation of MIC modules in N3 and N4 will be finished before October 2024.

LEGEND

- SITE BOUNDARY LINE
- PROPOSED FOOTING
- PROPOSED FOOTING TOP LEVEL (mPD) / PROPOSED FOOTING BOTTOM LEVEL (mPD)
- PROPOSED PLATE LOAD TEST (PLAT 15 PLAT7, TOTAL 17 NOS.)
- PROPOSED COLUMN
- PROPOSED BEARING WALL
- COMPLETED VERTICAL DRILLHOLE TCL/216726-11 – REPORT NUMBER DH01 – COMPLETED VERTICAL DRILLHOLE MARK
- EXISTING GROUND LEVEL (mPD)
- EXISTING HKT FIBER OPTICS CABLE
- EXISTING STORM WATER DRAIN
- EXISTING ELECTRIC POWER LINE
- EXISTING ELECTRIC PUBLIC LIGHTING CABLE
- EXISTING FRESH WATER MAIN

PUBLIC UTILITIES/SERVICES (FOR INFORMATION ONLY)

DESIGN AND BUILD CONTRACTOR:
ARCHITECT: AUKF
CIVIL & STRUCTURAL ENGINEER: WILSON & ASSOC. LTD.
GEOTECHNICAL ENGINEER: ASIA INFRASTRUCTURE SOLUTION LTD.
MIC CONSULTANT: WILSON & ASSOC. LTD.
BUILDING SERVICES ENGINEER: J. ROGER PRESTON LTD.
LANDSCAPE CONSULTANT: EARTHASIA LTD.
INTERIOR & BRANDING DESIGNER: BREAD STUDIO
ENVIRONMENTAL, BEAM CERTIFICATION, SUSTAINABILITY & ACOUSTIC CONSULTANT: RAMBOLL H.K. LTD.
PLANNING CONSULTANT: KTA PLANNING LTD.
TRAFFIC CONSULTANT: CKM ASIA LTD.

Contract No. SS M518

Project Title: DESIGN AND CONSTRUCTION OF LIGHT PUBLIC HOUSING AT YAU POK ROAD, YUEN LONG, AT TUEN MUN AREA 3A AND AT CHOI HING ROAD, NGAU TAU KOK

Drawing Title: FOOTING LAYOUT PLAN (ZONE 1)

Drawing No. YL-FN-101

Architectural Services Department

Appendix B Action and Limit Levels

Appendix B - Action and Limit Levels

Action / Limit Levels for Air Quality

Monitoring Statiton	Action Level	Limit Level
AM1	277 μg/m^3	500 μg/m^3
AM2	280 μg/m^3	500 μg/m^3
AM3	280 μg/m^3	500 μg/m^3
AM4	280 μg/m^3	500 μg/m^3
AM5	296 μg/m^3	500 μg/m^3

Note:

1. Action level = (baseline level * 1.3 + Limit level)/2; For baseline level > 384 μg/m3 , Action level = Limit level

Action and Limit Levels for Construction Noise

Monitoring Statiton	Time Period	Action Level	Limit Level
NM1 to NM5	0700 to 1900 on normal weekdays	When one documented complaint is received	Leq(30min) 75 dB(A) [3]
	Restricted hours		Same as CNP

Note:

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.

3. Reduce to 10 dB(A) for schools and 65 dB(A) during school examination periods.

Action and Limit Levels for Water Quality

Monitoring Statiton	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.22	3.14	42.7	45.3	63.1	74.3
W3	3.36	3.34	51.7	51.8	66.5	67.7

Appendix C Calibration Certificates of Air, Noise and Water Quality Monitoring Equipment

Calibration Certificate of TSI AM520

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR ALLEN CHAN	WORK ORDER	: **HK2330930**
CLIENT	: **ENVIRONMENTAL PIONEERS & SOLUTION LTD**		
ADDRESS	: FLAT A, 8/F, CHAI WAN INDUSTRIAL CENTRE, 20 LEE CHUNG STREET, CHAI WAN, HONG KONG HONG KONG	SUB-BATCH DATE RECEIVED DATE OF ISSUE	: 1 : 3-AUG-2023 : 24-AUG-2023
PROJECT	: ----	NO. OF SAMPLES CLIENT ORDER	: 1 :---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.**
- **Calibration was subcontracted to and analysed by Action United Enviro Services (AUES).**

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

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

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 **www.alsglobal.com**

Calibration Certificate of TSI AM520

WORK ORDER : HK2330930
SUB-BATCH : 1
CLIENT : ENVIRONMENTAL PIONEERS & SOLUTION LTD
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2330930-001	S/N:5201932016	Equipments	03-Aug-2023	S/N:5201932016

Calibration Certificate of TSI AM520

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	TSI AM520
Serial No.	5201932016
Equipment Ref:	NA
Job Order	HK2330930

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	12 June 2023

Equipment Verification Results:

Verification Date: 21 August 2023

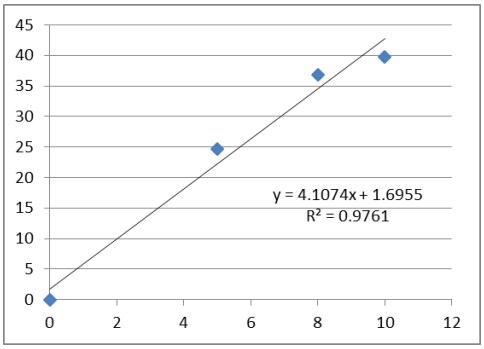
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Concentration in ug/m^3 (Calibrated Equipment)	Tolerance (ug/m^3)
2hr01mins	09:20 ~ 11:21	29.6	1007.8	36.8	8.0	-28.8
2hr01mins	11:26 ~ 13:27	29.6	1007.8	24.7	5.0	-19.7
2hr01mins	13:42 ~ 15:43	29.6	1007.8	39.7	10.0	-29.7

Linear Regression of Y or X

Slope (K-factor): 4.1074 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9880

Date of Issue 23 August 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 4.1074 (µg/m^3)/CPM should be applied for TSP monitoring

*If R<0.5, repair or re-verification is required for the equipment

Operator : Fai So Signature : Date : 23 August 2023

QC Reviewer : Ben Tam Signature : Date : 23 August 2023

Calibration Certificate of Higher Volume Sampler (TSP)

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	12-Jun-23
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260	Next Calibration Date:	11-Sep-23

CONDITIONS

Sea Level Pressure (hPa)	1001.9	Corrected Pressure (mm Hg)	751.425
Temperature (°C)	30.2	Temperature (K)	303

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.1	6.1	12.2	1.650	55	54.22	Slope = 32.8409
13	4.8	4.8	9.6	1.466	48	47.32	Intercept = 0.1238
10	3.6	3.6	7.2	1.272	44	43.37	Corr. coeff. = 0.9959
8	2.7	2.7	5.4	1.104	37	36.47	
5	1.6	1.6	3.2	0.854	28	27.60	

Calculations :

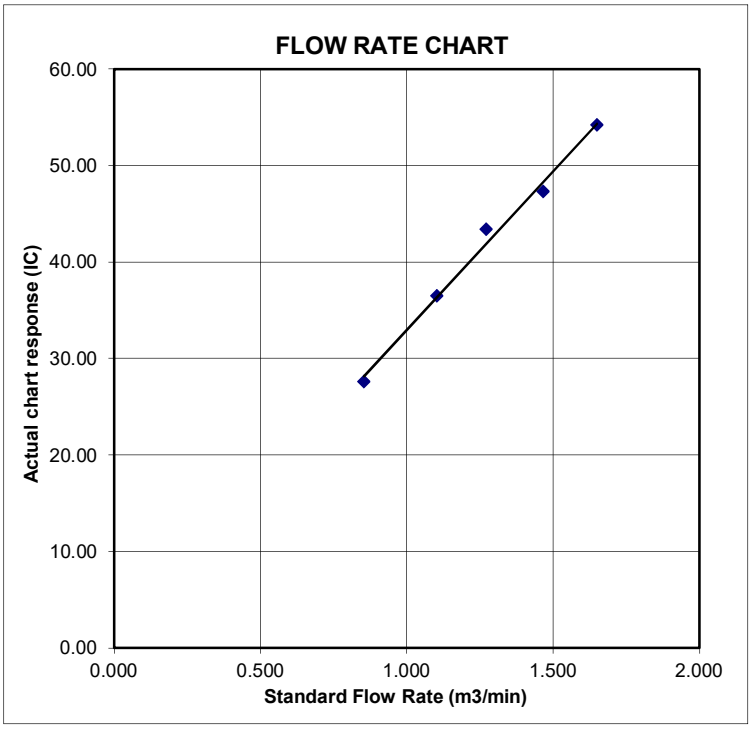
Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart respones
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure



Calibration Certificate of Orifice

TISCH Environmental

RECALIBRATION DUE DATE:
December 15, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	December 15, 2022	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 748.0	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **4064**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4430	3.2	2.00
2	3	4	1	1.0210	6.4	4.00
3	5	6	1	0.9170	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7210	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9900	0.6861	1.4101	0.9957	0.6900	0.8881
0.9858	0.9655	1.9943	0.9914	0.9711	1.2560
0.9838	1.0728	2.2296	0.9894	1.0790	1.4042
0.9826	1.1255	2.3385	0.9882	1.1320	1.4728
0.9772	1.3554	2.8203	0.9829	1.3632	1.7762
QSTD	**m=**	**2.10977**	**QA**	**m=**	**1.32110**
	b=	**-0.03782**		**b=**	**-0.02382**
	r=	**0.99998**		**r=**	**0.99998**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

Calibration Certificate of TSI AM520

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR ALLEN CHAN	WORK ORDER	:	HK2345323
CLIENT	: ENVIRONMENTAL PIONEERS & SOLUTION LTD			
ADDRESS	: FLAT A, 8/F, CHAI WAN INDUSTRIAL CENTRE, 20 LEE CHUNG STREET, CHAI WAN, HONG KONG HONG KONG	SUB-BATCH	:	1
		DATE RECEIVED	:	10-NOV-2023
		DATE OF ISSUE	:	24-NOV-2023
PROJECT	: ----	NO. OF SAMPLES	:	1
		CLIENT ORDER	:	----

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting (AUES).**

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

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

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the **ALS Laboratory Group**

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 **www.alsglobal.com**

Calibration Certificate of TSI AM520

WORK ORDER : HK2345323
SUB-BATCH : 1
CLIENT : ENVIRONMENTAL PIONEERS & SOLUTION LTD
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2345323-001	S/N:5201643007	Equipments	10-Nov-2023	S/N:5201643007

Calibration Certificate of TSI AM520

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	TSI AM520
Serial No.	5201643007
Equipment Ref:	NA
Job Order	HK2345323

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	11 September 2023

Equipment Verification Results:

Verification Date: 15 November 2023

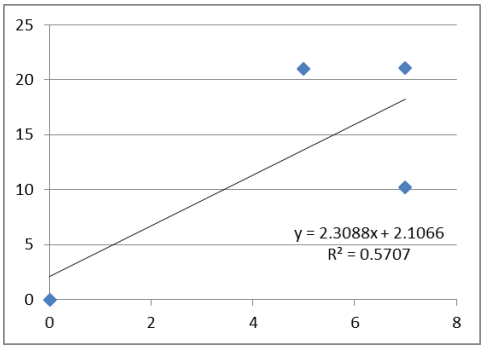
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Concentration in ug/m^3 (Calibrated Equipment)	Tolerance (ug/m^3)
2hr01mins	09:31 ~ 11:32	22.8	1021.7	21.0	5.0	-16.0
2hr14mins	11:45 ~ 13:59	22.8	1021.7	10.2	7.0	-3.2
2hr06mins	14:08 ~ 16:14	22.8	1021.7	21.1	7.0	-14.1

Linear Regression of Y or X

Slope (K-factor): 2.3088 (µg/m^3)/CPM

Correlation Coefficient (R) 0.7587

Date of Issue 21 November 2023



Remarks:

1. **Poor** Correlation (R<0.8)
2. Factor 2.3088 (µg/m^3)/CPM should be applied for TSP monitoring
3. Manufacturer check for the equipment is advised

*If R<0.5, repair or re-verification is required for the equipment

Operator : Martin Li Signature : Date : 21 November 2023

QC Reviewer : Ben Tam Signature : Date : 21 November 2023

Calibration Certificate of Higher Volume Sampler (TSP)

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	11-Sep-23
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260	Next Calibration Date:	10-Dec-23

CONDITIONS

Sea Level Pressure (hPa)	1007.3	Corrected Pressure (mm Hg)	755.475
Temperature (°C)	26.5	Temperature (K)	300

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.9	5.9	11.8	1.637	53	52.71	Slope = 32.7794
13	4.6	4.6	9.2	1.448	46	45.75	Intercept = -0.7928
10	3.5	3.5	7.0	1.265	42	41.77	Corr. coeff. = 0.9963
8	2.6	2.6	5.2	1.093	36	35.80	
5	1.4	1.4	2.8	0.807	25	24.86	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart respones

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

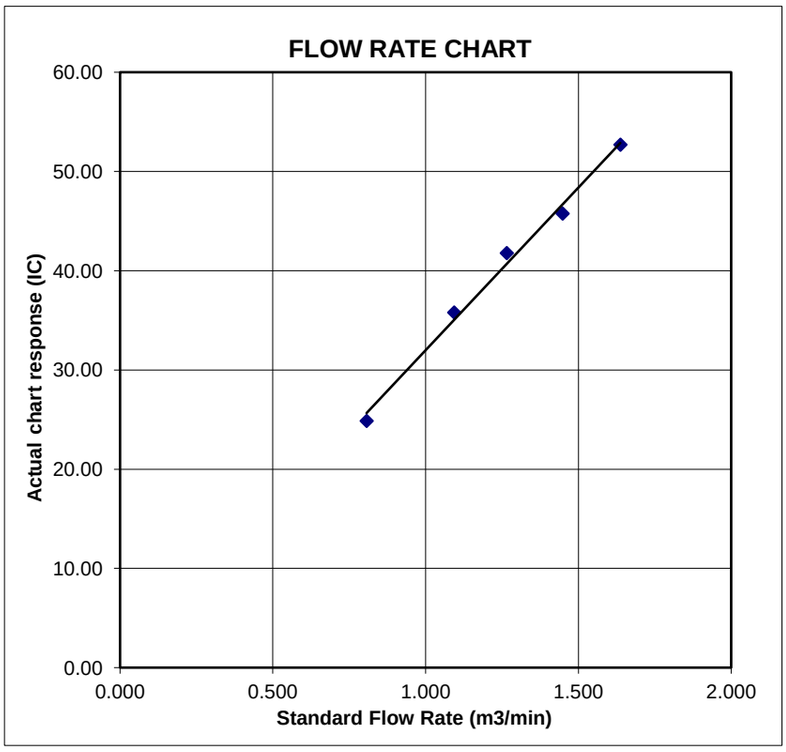
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



Calibration Certificate of Orifice

TISCH Environmental

RECALIBRATION DUE DATE:
December 15, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	December 15, 2022	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 748.0	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **4064**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4430	3.2	2.00
2	3	4	1	1.0210	6.4	4.00
3	5	6	1	0.9170	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7210	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9900	0.6861	1.4101	0.9957	0.6900	0.8881
0.9858	0.9655	1.9943	0.9914	0.9711	1.2560
0.9838	1.0728	2.2296	0.9894	1.0790	1.4042
0.9826	1.1255	2.3385	0.9882	1.1320	1.4728
0.9772	1.3554	2.8203	0.9829	1.3632	1.7762
QSTD	**m=**	**2.10977**	**QA**	**m=**	**1.32110**
	b=	**-0.03782**		**b=**	**-0.02382**
	r=	**0.99998**		**r=**	**0.99998**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

Calibration Certificate of TSI AM520

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR ALLEN CHAN	WORK ORDER	:	HK2345336
CLIENT	: ENVIRONMENTAL PIONEERS & SOLUTION LTD			
ADDRESS	: FLAT A, 8/F, CHAI WAN INDUSTRIAL CENTRE, 20 LEE CHUNG STREET, CHAI WAN, HONG KONG HONG KONG	SUB-BATCH	:	1
		DATE RECEIVED	:	10-NOV-2023
		DATE OF ISSUE	:	24-NOV-2023
PROJECT	: ----	NO. OF SAMPLES	:	1
		CLIENT ORDER	:	----

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting (AUES).**

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

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

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

Calibration Certificate of TSI AM520

WORK ORDER : HK2345336
SUB-BATCH : 1
CLIENT : ENVIRONMENTAL PIONEERS & SOLUTION LTD
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2345336-001	S/N:5201750006	Equipments	10-Nov-2023	S/N:5201750006

Calibration Certificate of TSI AM520

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	TSI AM520
Serial No.	5201750006
Equipment Ref:	NA
Job Order	HK2345336

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	11 September 2023

Equipment Verification Results:

Verification Date: 15 November 2023

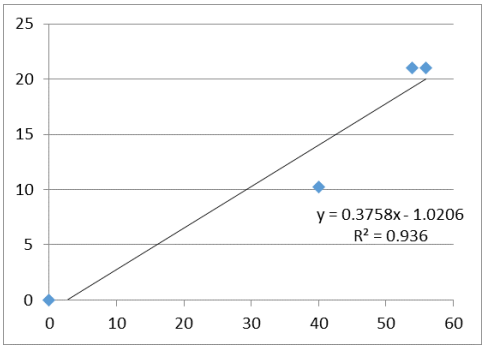
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Concentration in ug/m^3 (Calibrated Equipment)	Tolerance (ug/m^3)
2hr01mins	09:31 ~ 11:32	22.8	1021.7	21.0	56.0	+35.0
2hr14mins	11:45 ~ 13:59	22.8	1021.7	10.2	40.0	+29.8
2hr06mins	14:08 ~ 16:14	22.8	1021.7	21.1	54.0	+32.9

Linear Regression of Y or X

Slope (K-factor): 0.3758 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9674

Date of Issue 21 November 2023



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.3758 (µg/m^3)/CPM should be applied for TSP monitoring

*If R<0.5, repair or re-verification is required for the equipment

Operator : Martin Li Signature : Date : 21 November 2023

QC Reviewer : Ben Tam Signature : Date : 21 November 2023

Calibration Certificate of Higher Volume Sampler (TSP)

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location :	Gold King Industrial Building, Kwai Chung	Date of Calibration:	11-Sep-23
Location ID :	Calibration Room - TISCH Higher Volume Sampler (Model TE-5170) S/N:1260	Next Calibration Date:	10-Dec-23

CONDITIONS

Sea Level Pressure (hPa)	1007.3	Corrected Pressure (mm Hg)	755.475
Temperature (°C)	26.5	Temperature (K)	300

CALIBRATION ORIFICE

Make->	TISCH	Qstd Slope ->	2.10977
Model->	5025A	Qstd Intercept ->	-0.03782
Calibration Date->	15-Dec-22	Expiry Date->	15-Dec-23

CALIBRATION

Plate No.	H20 (L) (in)	H2O (R) (in)	H20 (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	5.9	5.9	11.8	1.637	53	52.71	Slope = 32.7794
13	4.6	4.6	9.2	1.448	46	45.75	Intercept = -0.7928
10	3.5	3.5	7.0	1.265	42	41.77	Corr. coeff. = 0.9963
8	2.6	2.6	5.2	1.093	36	35.80	
5	1.4	1.4	2.8	0.807	25	24.86	

Calculations :

Qstd = 1/m[Sqrt(H20(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart respones

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

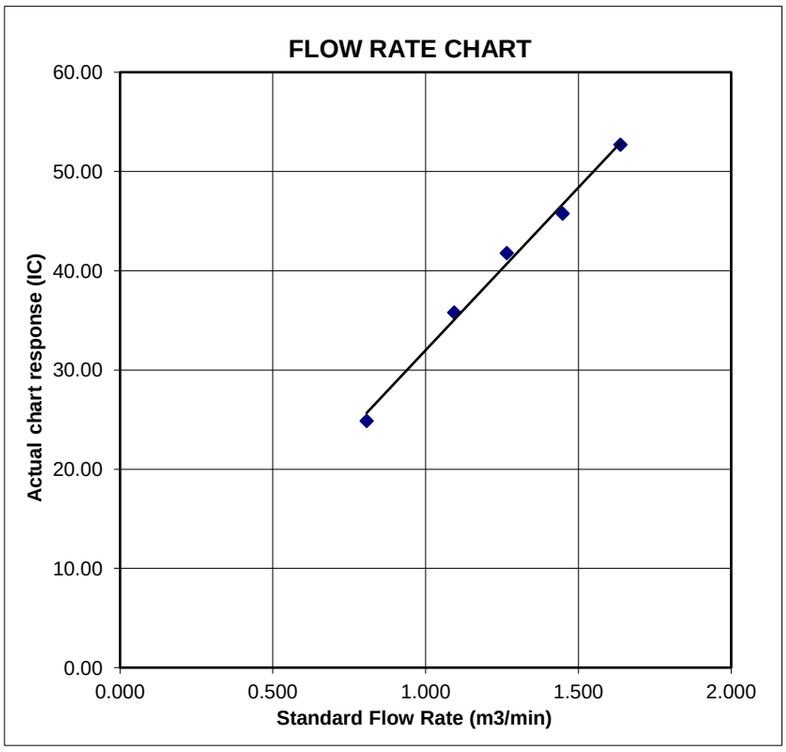
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



Calibration Certificate of Higher Volume Sampler (TSP)

TISCH Environmental

RECALIBRATION DUE DATE:
December 15, 2023

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	December 15, 2022	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 748.0	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **4064**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4430	3.2	2.00
2	3	4	1	1.0210	6.4	4.00
3	5	6	1	0.9170	7.9	5.00
4	7	8	1	0.8730	8.8	5.50
5	9	10	1	0.7210	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9900	0.6861	1.4101	0.9957	0.6900	0.8881
0.9858	0.9655	1.9943	0.9914	0.9711	1.2560
0.9838	1.0728	2.2296	0.9894	1.0790	1.4042
0.9826	1.1255	2.3385	0.9882	1.1320	1.4728
0.9772	1.3554	2.8203	0.9829	1.3632	1.7762
QSTD	**m=**	**2.10977**	**QA**	**m=**	**1.32110**
	b=	**-0.03782**		**b=**	**-0.02382**
	r=	**0.99998**		**r=**	**0.99998**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key
ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C234969
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-1632) Date of Receipt / 收件日期 : 8 August 2023

Description / 儀器名稱 : Acoustic Calibrator
Manufacturer / 製造商 : Svantek
Model No. / 型號 : SV35A
Serial No. / 編號 : 64263
Supplied By / 委託者 : Environmental Pioneers & Solutions Limited
Flat A, 8/F., Chai Wan Industrial Centre,
20 Lee Chung Street, Chai Wan, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 26 August 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : K C Lee, Engineer

Certified By 核證 : H C Chan, Engineer

Date of Issue 簽發日期 : 28 August 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C234969
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C233799
CL281	Multifunction Acoustic Calibrator	CDK2302738
TST150A	Measuring Amplifier	C221750

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Limit (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.80	± 0.3	± 0.20
114 dB, 1 kHz	113.80		

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Limit	Uncertainty of Measured Value (Hz)
1	1.000 0	1 kHz ± 0.2 %	± 0.1

Remark : - The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C234971
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC23-1632) Date of Receipt / 收件日期 : 8 August 2023

Description / 儀器名稱 : Sound Level Meter
Manufacturer / 製造商 : Svantek
Model No. / 型號 : SVAN 971
Serial No. / 編號 : 87094
Supplied By / 委託者 : Environmental Pioneers & Solutions Limited
Flat A, 8/F., Chai Wan Industrial Centre,
20 Lee Chung Street, Chai Wan, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 26 August 2023

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed specified limits.
These limits refer to manufacturer's published tolerances as requested by the customer.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Hottinger Brüel & Kjær Calibration Laboratory, Denmark
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : K C Lee
Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 28 August 2023

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C234971
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration using the laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C230306
CL281	Multifunction Acoustic Calibrator	CDK2302738

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
HIGH	SPL	A	Fast	114.00	1	114.3

6.1.1.2 After Self-calibration

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
HIGH	SPL	A	Fast	114.00	1	114.1	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
HIGH	SPL	A	Fast	114.00	1	114.1 (Ref.)
				104.00		104.1
				94.00		94.0

IEC 61672 Class 1 Limit : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C234971
證書編號

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
HIGH	SPL	A	Fast	114.00	1	114.1	Ref.
			Slow			114.1	± 0.3

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
HIGH	SPL	A	Fast	114.00	63 Hz	88.0	-26.2 ± 1.5
					125 Hz	97.9	-16.1 ± 1.5
					250 Hz	105.4	-8.6 ± 1.4
					500 Hz	110.8	-3.2 ± 1.4
					1 kHz	114.1	Ref.
					2 kHz	115.3	+1.2 ± 1.6
					4 kHz	115.1	+1.0 ± 1.6
					8 kHz	113.1	-1.1 (+2.1 ; -3.1)
					16 kHz	107.2	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Limit (dB)
Range	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
HIGH	SPL	C	Fast	114.00	63 Hz	113.3	-0.8 ± 1.5
					125 Hz	113.9	-0.2 ± 1.5
					250 Hz	114.1	0.0 ± 1.4
					500 Hz	114.1	0.0 ± 1.4
					1 kHz	114.1	Ref.
					2 kHz	113.9	-0.2 ± 1.6
					4 kHz	113.3	-0.8 ± 1.6
					8 kHz	111.2	-3.0 (+2.1 ; -3.1)
					16 kHz	105.3	-8.5 (+3.5 ; -17.0)

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C234971
證書編號

Remarks : - UUT Microphone Model No. : ACO 7052E & S/N : 73398

- Mfr's Limit : IEC 61672 Class 1

- Uncertainties of Applied Value :

114 dB	63 Hz - 125 Hz	: ± 0.45 dB
	250 Hz - 500 Hz	: ± 0.40 dB
	1 kHz	: ± 0.30 dB
	2 kHz - 4 kHz	: ± 0.45 dB
	8 kHz	: ± 0.55 dB
	16 kHz	: ± 0.80 dB
104 dB	1 kHz	: ± 0.10 dB (Ref. 114 dB)
94 dB	1 kHz	: ± 0.10 dB (Ref. 114 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 - 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

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. : R-BD020035
Date of Issue : 26 February 2024

PART A - CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Flat 2207, Yu Fun House Yu Chui Court, Shatin
New Territories (HK) Hong Kong

PART B - SAMPLE INFORMATION

Name of Equipment :	YSI ProDSS Multi Parameters
Manufacturer :	YSI
Serial Number :	15M100005
Date of Received :	22 February 2024
Date of Calibration :	22 February 2024
Date of Next Calibration :	22 May 2024
Request No. :	D-BD020035

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	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)
Conductivity	APHA 21e 2510 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.06	0.06	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	10.06	0.05	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
15	15.1	0.1	Satisfactory
25	25.1	0.1	Satisfactory
39	38.7	-0.3	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.02	0.20	Satisfactory
20	20.66	3.30	Satisfactory
30	31.24	4.13	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning
Assistant Manager

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. : R-BD020035
Date of Issue : 26 February 2024

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
8.60	8.62	0.02	Satisfactory
3.88	3.83	-0.05	Satisfactory
1.40	1.43	0.03	Satisfactory
0.90	0.73	-0.17	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.10	--	Satisfactory
10	9.43	-5.7	Satisfactory
20	19.24	-3.8	Satisfactory
100	102.24	2.2	Satisfactory
800	823.26	2.9	Satisfactory

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

(6) Conductivity

Expected Reading (µS/cm at 25°C)	Display Reading	Tolerance (%)	Result
146.9	139.2	-5.2	Satisfactory
1412	1492	5.7	Satisfactory
12890	12350	-4.2	Satisfactory
58670	57420	-2.1	Satisfactory
111900	111092	-0.7	Satisfactory

Tolerance of Conductivity should be less than ± 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 D Environmental Monitoring Schedules

Impact Monitoring for Light Public Housing at Yau Pok Road, Yuen Long

Impact Monitoring Schedule for March & April 2024

Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
Mar 24	**Mar 25**	**Mar 26**	**Mar 27**	**Mar 28**	**Mar 29**	**Mar 30**
			*Noise **1hr-TSP *** Water			
Mar 31	**Apr 01**	**Apr 02**	**Apr 03**	**Apr 04**	**Apr 05**	**Apr 06**
		*Noise **1hr-TSP	*** Water		*** Water	
Apr 07	**Apr 08**	**Apr 09**	**Apr 10**	**Apr 11**	**Apr 12**	**Apr 13**
	*Noise **1hr-TSP *** Water	Ecology	*** Water		*** Water	*Noise **1hr-TSP
Apr 14	**Apr 15**	**Apr 16**	**Apr 17**	**Apr 18**	**Apr 19**	**Apr 20**
	*** Water		*** Water		*Noise **1hr-TSP *** Water	
Apr 21	**Apr 22**	**Apr 23**	**Apr 24**	**Apr 25**	**Apr 26**	**Apr 27**
	*** Water		*** Water	*Noise **1hr-TSP	*** Water	
Apr 28	**Apr 29**	**Apr 30**	**May 01**	**May 02**	**May 03**	**May 04**
	*** Water	*Noise **1hr-TSP				

* Noise Monitoring at NM1, NM2, NM3, NM4 & NM5

** 1hr-TSP Monitoring at AM1, AM2, AM3, AM4 & AM5

*** Water Quality Monitoring at W1, W3, C1, C3

Appendix E Monitoring Results

Appendix E - Monitoring Result (Air Quality)

Monitoring Station: AM1

Date	Weather	Time	1-hr TSP
27/03/2024	Cloudy	09:02	28
27/03/2024	Cloudy	10:02	33
27/03/2024	Cloudy	11:02	28
02/04/2024	Cloudy	09:10	34
02/04/2024	Cloudy	10:10	32
02/04/2024	Cloudy	11:10	35
08/04/2024	Cloudy	09:05	25
08/04/2024	Cloudy	10:05	21
08/04/2024	Cloudy	11:05	24
13/04/2024	Cloudy	09:07	24
13/04/2024	Cloudy	10:07	25
13/04/2024	Cloudy	11:07	32
19/04/2024	Cloudy	09:08	33
19/04/2024	Cloudy	10:08	36
19/04/2024	Cloudy	11:08	28
25/04/2024	Cloudy	09:10	34
25/04/2024	Cloudy	10:10	31
25/04/2024	Cloudy	11:10	27
30/04/2024	Cloudy	09:03	22
30/04/2024	Cloudy	10:03	28
30/04/2024	Cloudy	11:03	31
		Average	29
		Maximum	36
		Minimum	21
		Action Level	277
		Limit Level	500

Monitoring Station: AM2

Weather	Time	1-hr TSP
Cloudy	09:02	28
Cloudy	10:02	33
Cloudy	11:02	28
Cloudy	09:10	34
Cloudy	10:10	32
Cloudy	11:10	35
Cloudy	09:05	25
Cloudy	10:05	21
Cloudy	11:05	24
Cloudy	09:07	24
Cloudy	10:07	25
Cloudy	11:07	32
Cloudy	09:08	33
Cloudy	10:08	36
Cloudy	11:08	28
Cloudy	09:10	34
Cloudy	10:10	31
Cloudy	11:10	27
Cloudy	09:18	26
Cloudy	10:18	23
Cloudy	11:18	22
	Average	29
	Maximum	36
	Minimum	21
	Action Level	280
	Limit Level	500

Monitoring Station: AM3

Weather	Time	1-hr TSP
Cloudy	09:29	31
Cloudy	10:29	34
Cloudy	11:29	30
Cloudy	09:37	32
Cloudy	10:37	27
Cloudy	11:37	29
Cloudy	09:32	33
Cloudy	10:32	34
Cloudy	11:32	31
Cloudy	09:34	26
Cloudy	10:34	21
Cloudy	11:34	24
Cloudy	09:35	23
Cloudy	10:35	21
Cloudy	11:35	24
Cloudy	09:37	31
Cloudy	10:37	34
Cloudy	11:37	24
Cloudy	09:30	24
Cloudy	10:30	32
Cloudy	11:30	21
	Average	28
	Maximum	34
	Minimum	21
	Action Level	280
	Limit Level	500

Monitoring Station: AM4

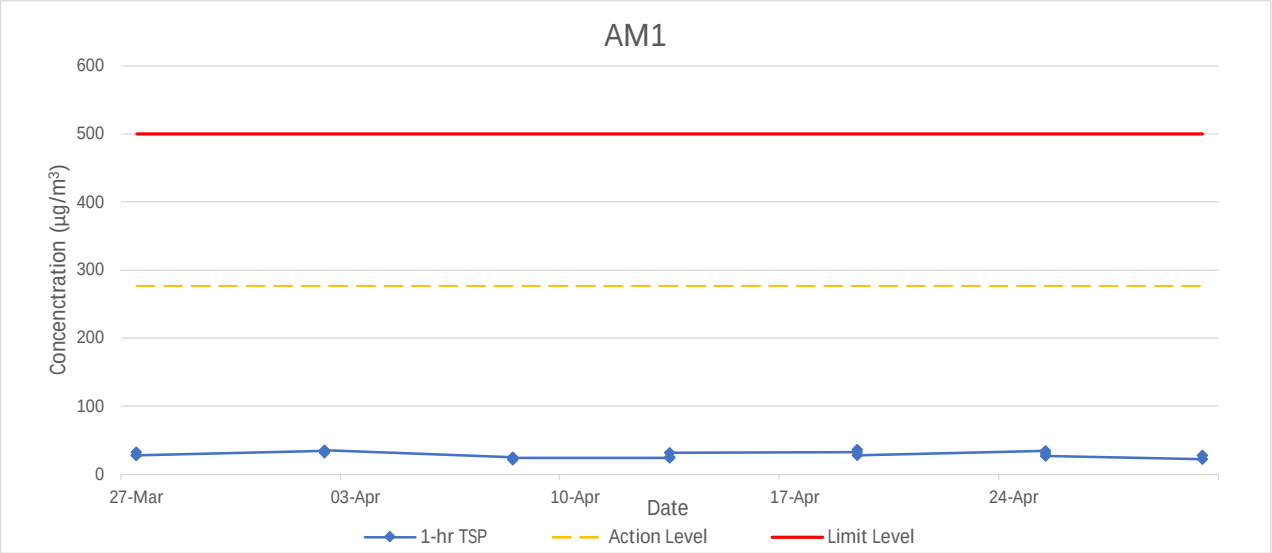
Date	Weather	Time	1-hr TSP
27/03/2024	Cloudy	13:44	33
27/03/2024	Cloudy	14:44	31
27/03/2024	Cloudy	15:44	26
02/04/2024	Cloudy	13:52	30
02/04/2024	Cloudy	14:52	33
02/04/2024	Cloudy	15:52	31
08/04/2024	Cloudy	13:47	36
08/04/2024	Cloudy	14:47	32
08/04/2024	Cloudy	15:47	33
13/04/2024	Cloudy	13:49	26
13/04/2024	Cloudy	14:49	26
13/04/2024	Cloudy	15:49	21
19/04/2024	Cloudy	13:50	30
19/04/2024	Cloudy	14:50	31
19/04/2024	Cloudy	15:50	35
25/04/2024	Cloudy	13:52	32
25/04/2024	Cloudy	14:52	32
25/04/2024	Cloudy	15:52	25
30/04/2024	Cloudy	13:45	26
30/04/2024	Cloudy	14:45	23
30/04/2024	Cloudy	15:45	22
		Average	29
		Maximum	36
		Minimum	21
		Action Level	280
		Limit Level	500

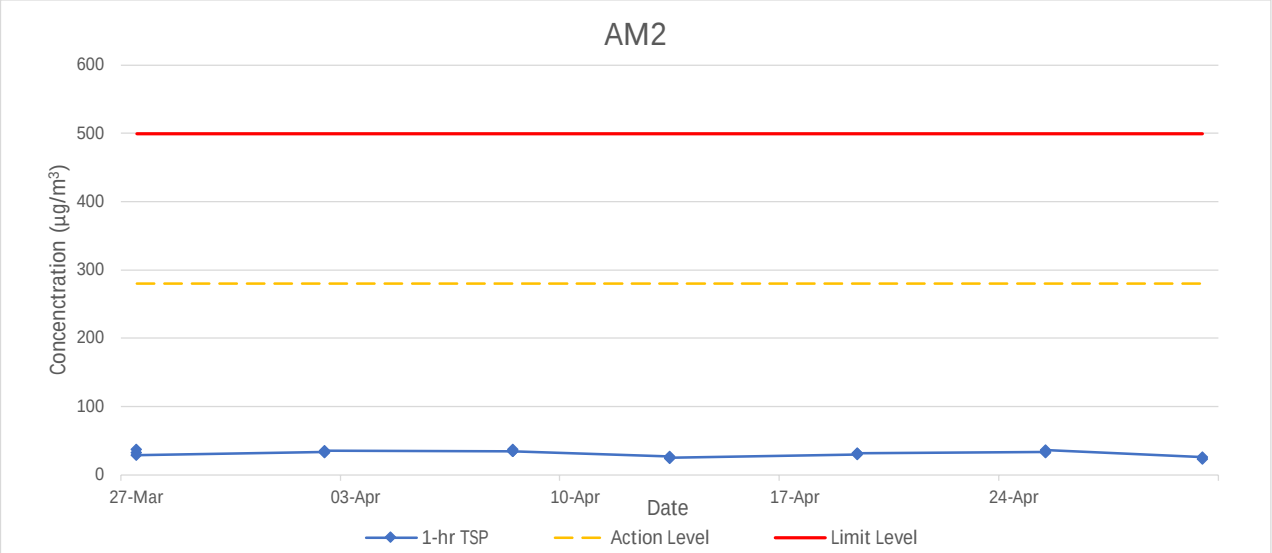
Monitoring Station: AM5

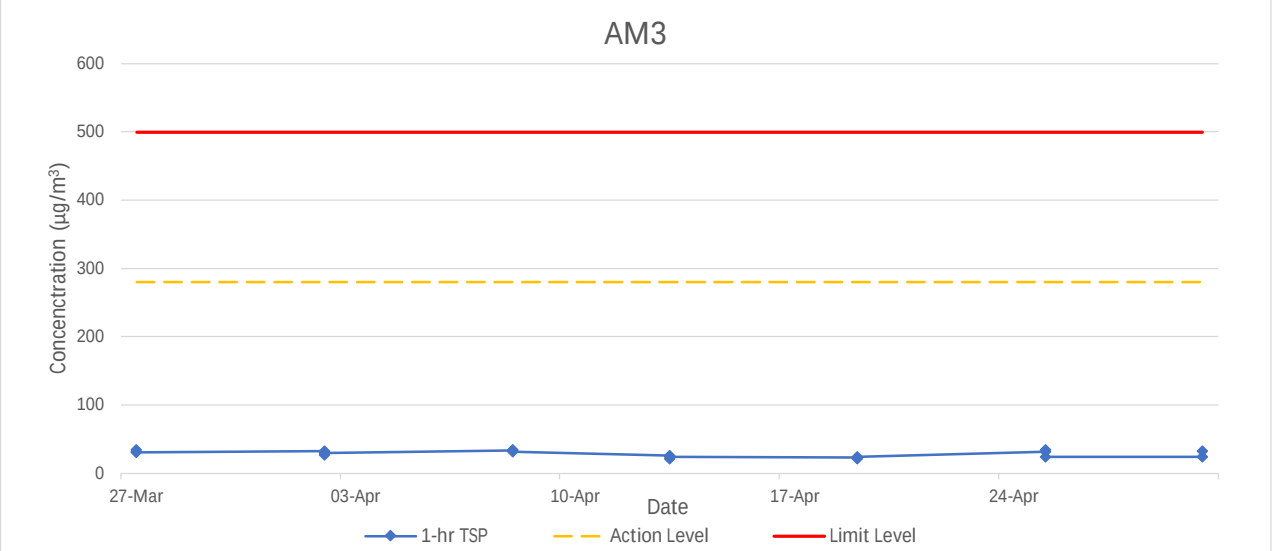
Weather	Time	1-hr TSP
Cloudy	13:44	33
Cloudy	14:44	31
Cloudy	15:44	26
Cloudy	13:52	30
Cloudy	14:52	33
Cloudy	15:52	31
Cloudy	13:47	36
Cloudy	14:47	32
Cloudy	15:47	33
Cloudy	13:49	26
Cloudy	14:49	26
Cloudy	15:49	21
Cloudy	13:50	30
Cloudy	14:50	31
Cloudy	15:50	35
Cloudy	13:52	32
Cloudy	14:52	32
Cloudy	15:52	25
Cloudy	14:07	25
Cloudy	15:07	31
Cloudy	16:07	29
	Average	30
	Maximum	36
	Minimum	21
	Action Level	296
	Limit Level	500

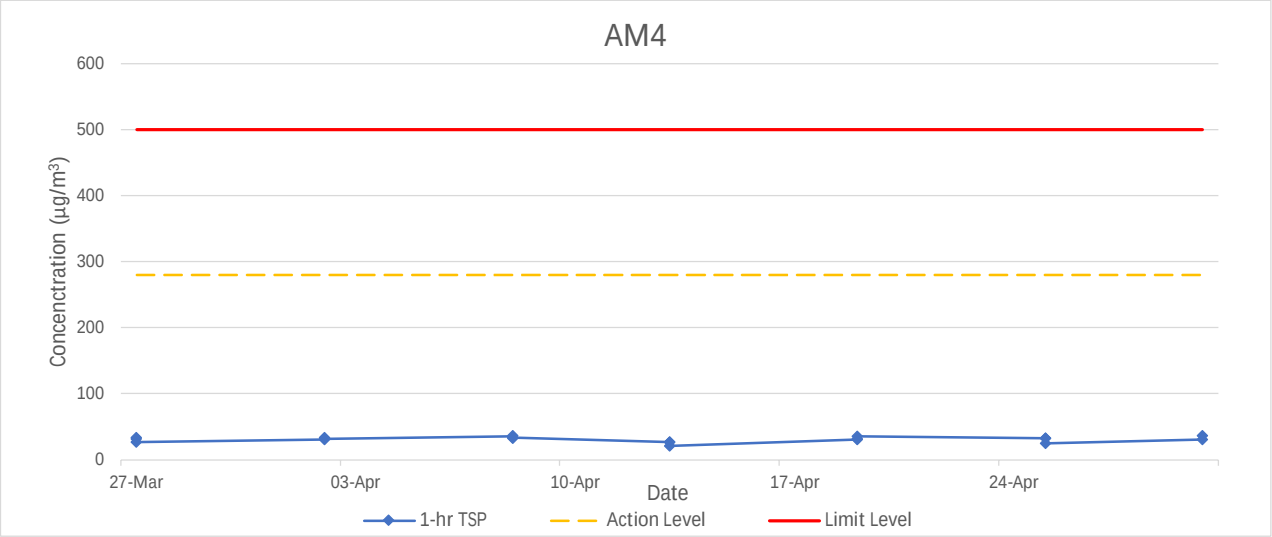
Unit: μg/m3

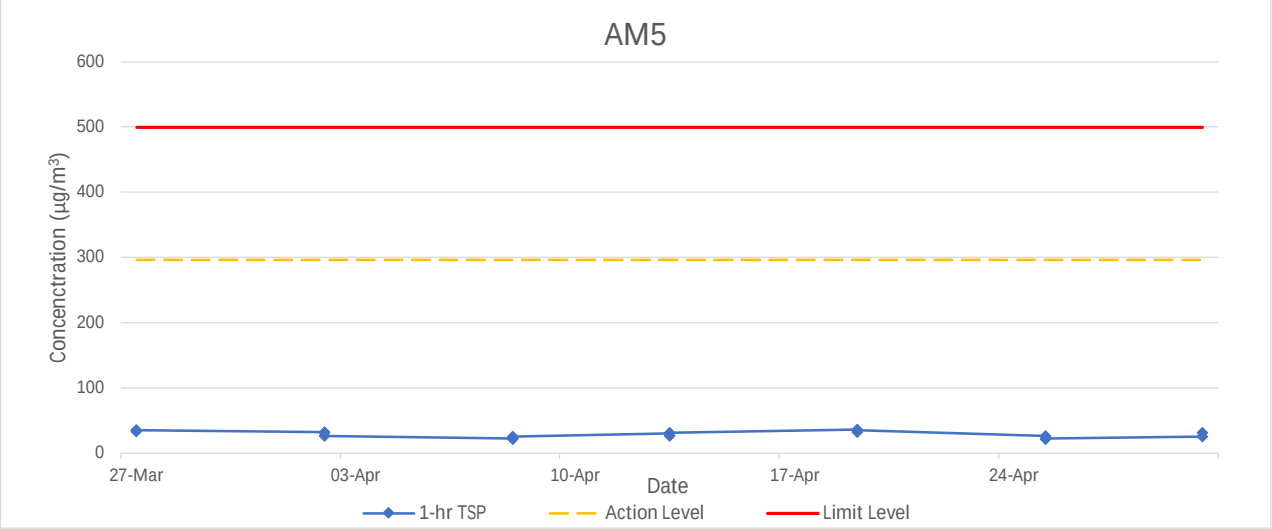
Appendix E - Monitoring Result (Air Quality)








AM4
600
500
400
300
200
100
0
Concenctration (µg/m³)
27-Mar
03-Apr
10-Apr
17-Apr
24-Apr
Date
1-hr TSP
Action Level
Limit Level


AM5
600
500
400
300
200
100
0
Concenctration (µg/m³)
27-Mar
03-Apr
10-Apr
17-Apr
24-Apr
Date
1-hr TSP
Action Level
Limit Level

Appendix E - Monitoring Result (Noise)

Monitoring Station: NM1

Date	Time	Leq (30 min)(dB(A))	L10(dB(A))	L90(dB(A))
27/03/2024	09:10	55.4	56.3	52.3
02/04/2024	09:18	58.8	61.7	53.8
08/04/2024	09:12	61.3	62.8	53.6
13/04/2024	09:15	56.8	57.6	53
19/04/2024	09:17	63.2	64.9	54.2
25/04/2024	09:16	60.4	62.2	52.9
30/04/2024	09:12	63.9	65.6	54.6

Note: +3dB for Free Field is added.

Monitoring Station: NM2

Date	Time	Leq (30 min)(dB(A))	L10(dB(A))	L90(dB(A))
27/03/2024	09:45	62.4	62.8	60.3
02/04/2024	09:53	65.2	66.6	62.5
08/04/2024	09:47	62.7	64.1	61.8
13/04/2024	09:50	64.2	66.2	60.3
19/04/2024	09:52	63.7	65.7	60.7
25/04/2024	09:51	63.4	65.9	61.1
30/04/2024	09:47	65.2	66.7	63.2

Note: +3dB for Free Field is added.

Monitoring Station: NM3

Date	Time	Leq (30 min)(dB(A))	L10(dB(A))	L90(dB(A))
27/03/2024	10:20	55.8	56.3	52.8
02/04/2024	10:28	59.5	61.6	56
08/04/2024	10:22	58.3	60.2	54.3
13/04/2024	10:25	61.3	63.7	55.1
19/04/2024	10:27	59.3	61.9	55.6
25/04/2024	10:26	60.7	62.6	54.9
30/04/2024	10:22	59.4	61.5	56

Note: +3dB for Free Field is added.

Monitoring Station: NM4

Date	Time	Leq (30 min)(dB(A))	L10(dB(A))	L90(dB(A))
27/03/2024	10:55	64.9	67.6	58.2
02/04/2024	11:03	63.8	66.3	55.9
08/04/2024	10:57	61.8	64.9	57.6
13/04/2024	11:00	62.3	65.2	56.3
19/04/2024	11:02	59.3	61.7	55.8
25/04/2024	11:01	60.2	62.9	54.6
30/04/2024	10:57	58.3	60.2	54.3

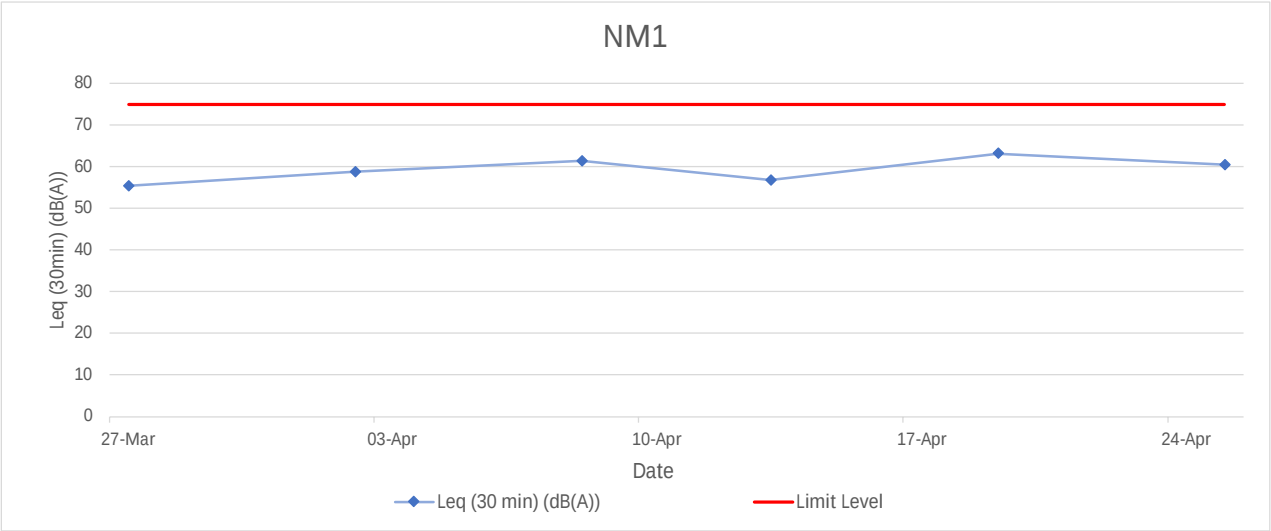
Note: +3dB for Free Field is added.

Monitoring Station: NM5

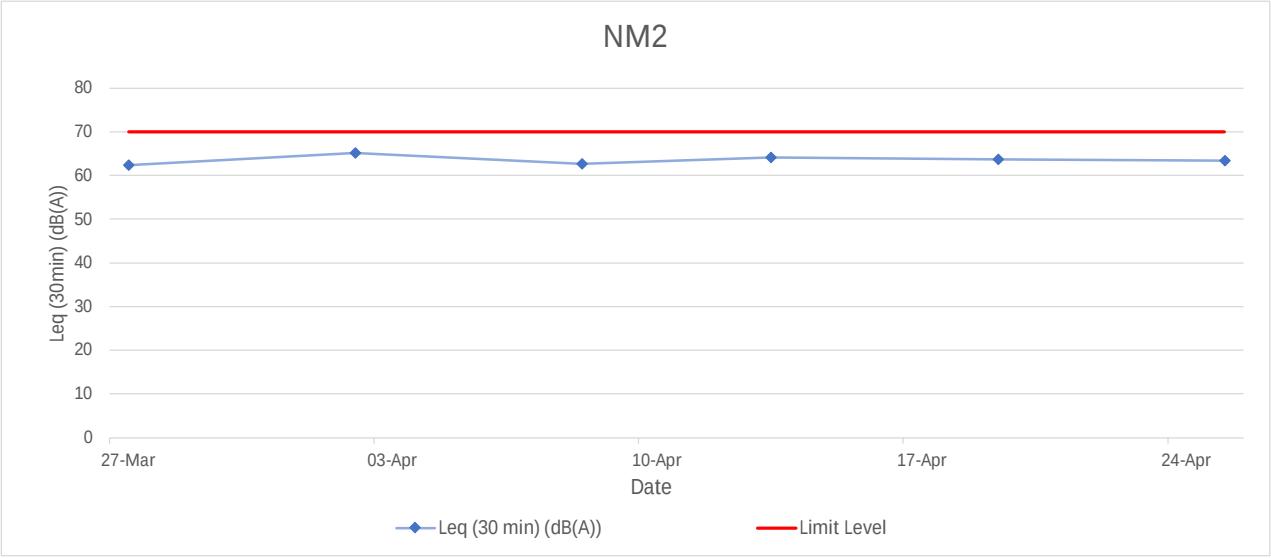
Date	Time	Leq (30 min)(dB(A))	L10(dB(A))	L90(dB(A))
27/03/2024	10:55	64.9	67.6	58.2
02/04/2024	11:03	63.8	66.3	55.9
08/04/2024	10:57	61.8	64.9	57.6
13/04/2024	11:00	62.3	65.2	56.3
19/04/2024	11:02	59.3	61.7	55.8
25/04/2024	11:01	60.2	62.9	54.6
30/04/2024	10:57	58.3	60.2	54.3

Note: +3dB for Free Field is added.

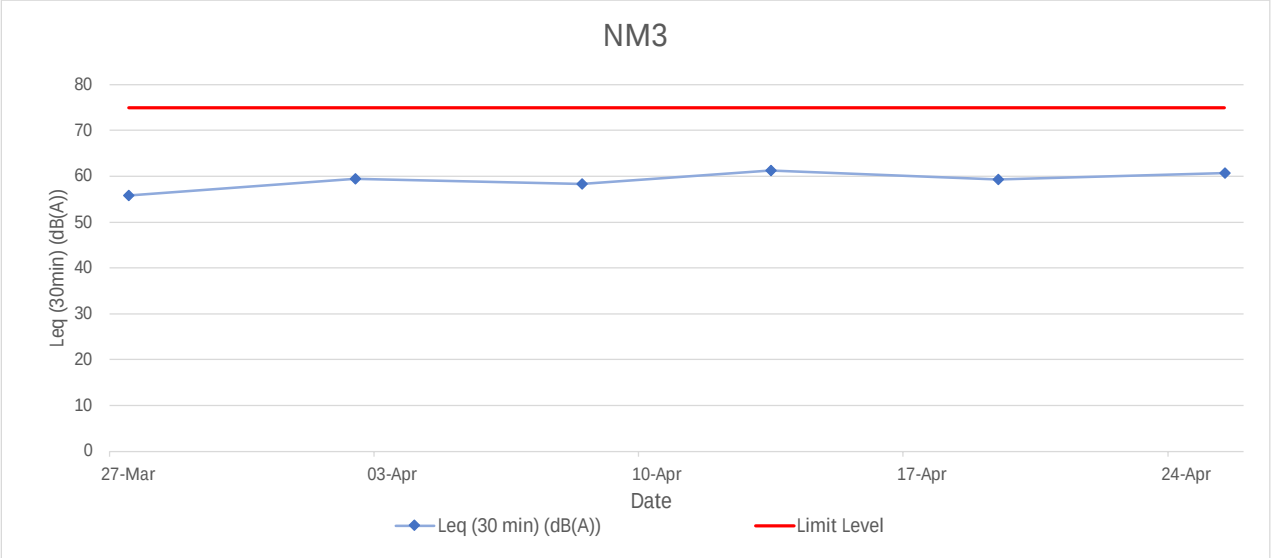
Appendix E - Monitoring Result (Noise)



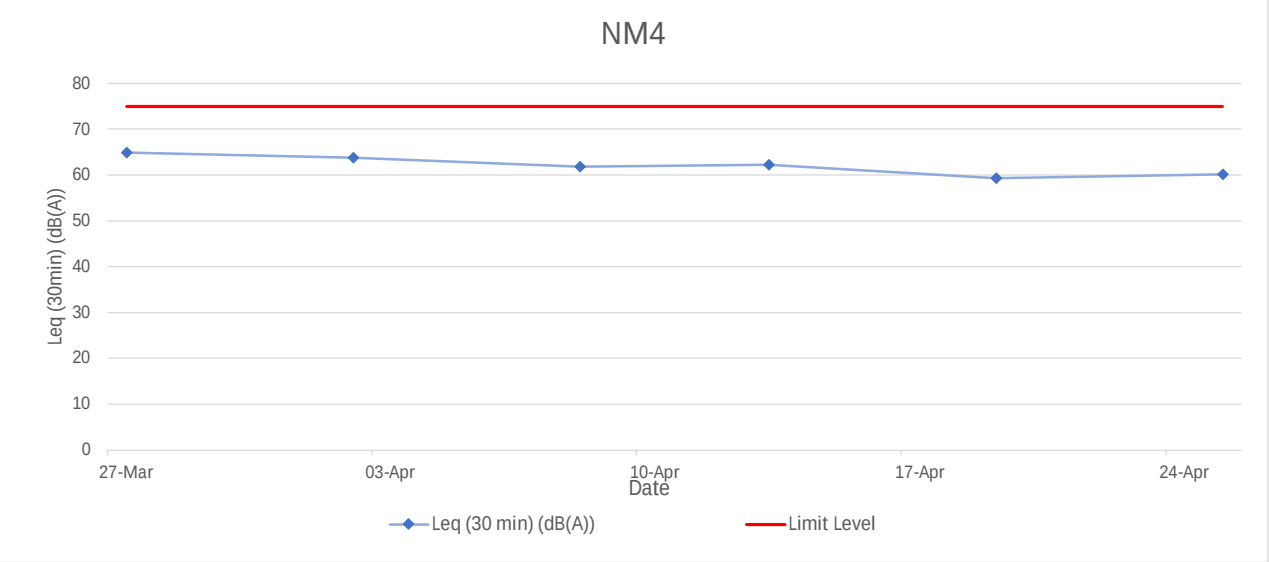
Note: +3dB for Free Field is added.



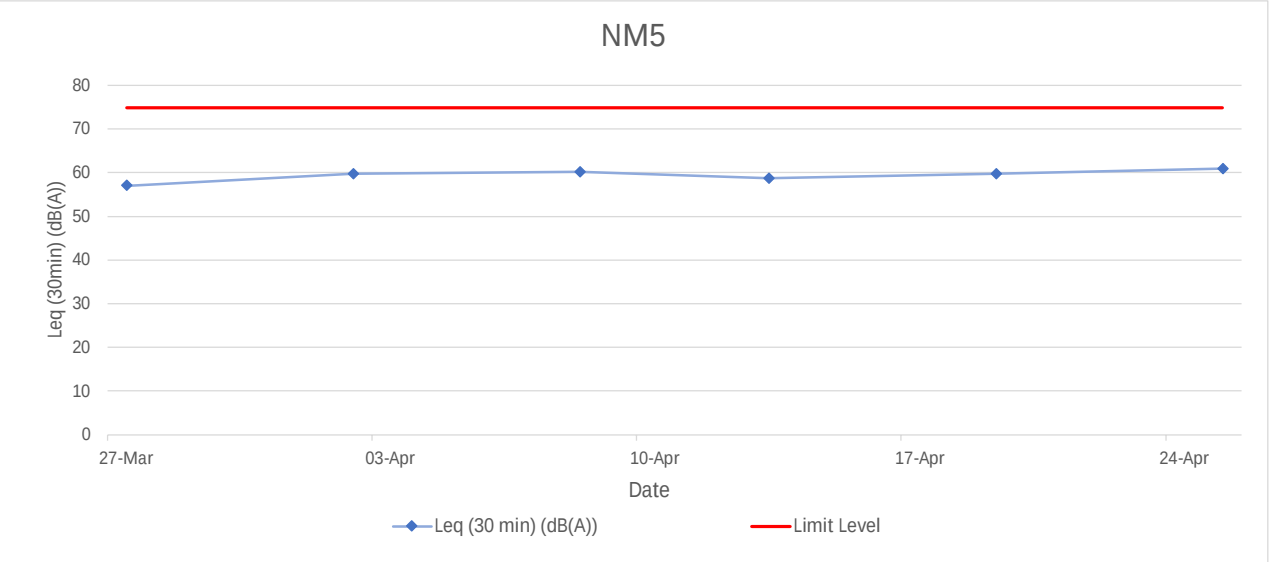
Note: +3dB for Free Field is added. Limit Level reduced to 70 dB(A) for schools.



Note: +3dB for Free Field is added.



Note: +3dB for Free Field is added.



Note: +3dB for Free Field is added.

Appendix E - Monitoring Result (Water Quality

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
27 Mar 2024	C1	10:42	<0.5	23.1	23.1	7.2	7.2	3.0	2.9	34.5	34.5	39.9	39.9	12	12.0
		10:42		23.1		7.2		2.9		34.4		40.0		12	
	C3	11:10	<0.5	24.3	24.3	7.3	7.3	3.3	3.3	39.5	39.4	16.5	16.6	28	27.5
		11:10		24.3		7.3		3.2		39.3		16.6		27	
	W1	10:33	<0.5	25.8	25.8	7.6	7.6	6.8	6.8	86	86.0	39.8	39.9	83	83.5
		10:33		25.8		7.6		6.8		86		39.9		84	
	W3	11:00	1	25.7	25.7	7.0	7.0	4.0	4.0	52.3	52.2	17.6	17.6	25	25.0
		11:00		25.7		7.0		4.0		52.1		17.7		25	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3 Apr 2024	C1	08:41	<0.5	25.6	25.6	6.6	6.6	3.1	3.1	39	38.8	13.4	13.3	30	31.5
		08:41		25.6		6.6		3.1		38.6		13.2		33	
	C3	08:54	<0.5	24.4	24.4	6.7	6.6	4.5	4.5	53.8	53.8	10.1	10.0	17	17.0
		08:54		24.4		6.6		4.5		53.7		10.0		17	
	W1	08:35	<0.5	26.1	26.1	6.7	6.7	4.5	4.5	57.2	57.2	41.2	40.8	73	73.5
		08:35		26.1		6.7		4.5		57.2		40.3		74	
	W3	08:47	1	25.7	25.7	6.6	6.6	3.5	3.5	42	42.0	8.7	8.6	12	21.5
		08:47		25.7		6.6		3.5		41.9		8.6		31	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
5 Apr 2024	C1	07:57	<0.5	25.7	25.7	6.7	6.7	3.4	3.3	42.1	42.0	11.8	11.9	37	37.5
		07:57		25.7		6.7		3.3		41.8		11.9		38	
	C3	08:12	<0.5	24.1	24.1	6.6	6.6	4.1	4.1	48.6	48.5	23.7	23.8	34	34.0
		08:12		24.1		6.6		4.1		48.4		24.0		34	
	W1	07:51	<0.5	26.3	26.3	6.7	6.7	4.7	4.7	60.3	60.3	26.8	26.7	45	44.5
		07:51		26.3		6.7		4.7		60.2		26.6		44	
	W3	08:05	1	25.4	25.4	6.6	6.6	3.6	3.6	44.9	44.9	8.3	8.3	13	13.0
		08:05		25.4		6.6		3.6		44.8		8.3		13	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
8 Apr 2024	C1	09:21	<0.5	25.6	25.6	6.9	6.9	3.9	3.8	47.7	47.7	23.7	23.7	35	36.0
		09:21		25.6		6.9		3.8		47.6		23.7		37	
	C3	09:42	<0.5	25.7	25.7	6.7	6.7	3.9	3.9	48.1	48.1	13.4	13.4	23	22.5
		09:42		25.7		6.7		3.9		48.1		13.5		22	
	W1	09:15	<0.5	26.3	26.3	6.7	6.7	4.7	4.7	58.6	58.6	40.8	41.0	119	120.0
		09:16		26.3		6.7		4.7		58.6		41.2		121	
	W3	09:35	1	25.9	25.9	6.6	6.6	3.9	3.9	49.8	49.7	13.3	13.3	23	22.0
		09:35		25.9		6.6		3.9		49.6		13.2		21	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
10 Apr 2024	C1	07:38	<0.5	22.7	22.7	6.9	6.9	3.4	3.4	39.6	39.5	13.7	13.7	30	29.5
		07:38		22.7		6.9		3.4		39.4		13.7		29	
	C3	07:54	<0.5	22.7	22.7	6.7	6.6	6.4	6.4	74.6	74.6	41.2	41.5	74	75.5
		07:54		22.7		6.6		6.4		74.5		41.9		77	
	W1	07:32	<0.5	23.5	23.5	6.7	6.7	3.7	3.7	43.8	43.7	15.7	15.7	23	24.0
		07:32		23.5		6.7		3.7		43.6		15.8		25	
	W3	07:46	<0.5	23.0	23.0	6.6	6.6	4.3	4.3	50	50.0	49.6	49.5	383	390.5
		07:46		23.0		6.6		4.2		49.9		49.5		398	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
12 Apr 2024	C1	08:18	<0.5	24.7	24.7	7.1	7.1	4.0	4.0	48.2	48.2	16.7	16.6	54	54.5
		08:18		24.7		7.1		4.0		48.1		16.6		55	
	C3	08:39	<0.5	24.2	24.2	6.7	6.7	5.9	5.9	70.9	70.8	37.4	37.1	84	83.5
		08:39		24.2		6.7		5.9		70.7		36.9		83	
	W1	08:12	<0.5	25.6	25.6	6.8	6.8	5.1	5.0	63.1	63.1	14.7	14.7	29	28.5
		08:12		25.6		6.8		5.0		63		14.7		28	
	W3	08:32	<0.5	24.4	24.4	6.7	6.7	4.0	4.0	48.7	48.7	47.5	47.6	74	73.5
		08:32		24.4		6.7		4.0		48.7		47.8		73	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
15 Apr 2024	C1	10:25	<0.5	26.7	26.7	7.2	7.2	5.5	5.5	69.6	69.6	20.1	20.1	74	75.0
		10:25		26.7		7.2		5.5		69.5		20.0		76	
	C3	10:37	<0.5	26.8	26.8	6.8	6.8	6.2	6.2	78	77.9	36.5	36.4	41	41.5
		10:37		26.8		6.8		6.2		77.7		36.4		42	
	W1	10:19	<0.5	28.9	28.9	7.4	7.4	7.7	7.7	102.6	102.7	25.8	25.8	48	49.5
		10:19		28.9		7.4		7.7		102.7		25.7		51	
	W3	10:30	<0.5	27.3	27.3	7.0	7.0	6.6	6.5	83.8	83.7	26.6	26.6	39	40.0
		10:30		27.3		7.0		6.5		83.6		26.6		41	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
17 Apr 2024	C1	08:49	<0.5	27.3	27.3	7.1	7.1	3.8	3.8	48.7	48.5	19.1	19.0	64	65.0
		08:49		27.3		7.1		3.8		48.3		19.0		66	
	C3	09:00	<0.5	25.5	25.5	6.7	6.7	3.3	3.3	40.4	40.3	9.9	9.9	25	26.5
		09:00		25.5		6.7		3.3		40.1		9.9		28	
	W1	08:43	<0.5	28.5	28.5	6.9	6.9	4.1	4.1	54	54.0	20.1	20.0	38	38.0
		08:43		28.5		6.9		4.1		53.9		19.9		38	
	W3	08:54	<0.5	27.7	27.7	6.9	6.9	4.8	4.8	62	61.9	15.8	15.8	30	31.0
		08:54		27.7		6.9		4.8		61.8		15.9		32	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
19 Apr 2024	C1	09:50	<0.5	26.3	26.3	6.9	6.9	3.5	3.5	44.5	44.4	12.3	12.3	29	29.0
		09:50		26.3		6.9		3.5		44.2		12.4		29	
	C3	10:11	<0.5	25.2	25.2	6.7	6.7	3.4	3.4	41.4	41.1	12.5	12.5	18	17.0
		10:11		25.2		6.7		3.3		40.7		12.4		16	
	W1	09:44	<0.5	26.9	26.9	6.8	6.8	4.6	4.6	58.4	58.4	23.2	23.2	45	45.5
		09:44		26.9		6.8		4.6		58.4		23.3		46	
	W3	10:05	<0.5	26.3	26.3	6.7	6.7	3.4	3.4	42.5	42.5	28.6	28.6	43	44.0
		10:05		26.3		6.7		3.4		42.5		28.5		45	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
22 Apr 2024	C1	09:20	<0.5	24.3	24.3	10.0	10.0	3.0	3.0	36.4	36.4	56.2	56.4	96	100.5
		09:20		24.3		10.0		3.0		36.4		56.5		105	
	C3	09:34	<0.5	24.3	24.3	6.8	6.8	4.8	4.8	57.7	57.7	21.8	21.8	24	24.0
		09:34		24.3		6.8		4.8		57.6		21.8		24	
	W1	09:11	<0.5	24.7	24.7	6.7	6.7	3.9	3.9	47.3	47.3	40.5	40.7	52	51.0
		09:11		24.7		6.7		3.9		47.3		40.9		50	
	W3	09:27	1	24.4	24.4	6.8	6.8	3.7	3.7	44.8	44.7	35.0	35.1	35	35.5
		09:27		24.4		6.8		3.7		44.6		35.2		36	

Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
24 Apr 2024	C1	08:02	<0.5	25.0	25.0	10.0	10.0	3.2	3.2	39.3	39.3	58.9	58.8	79	79.0
		08:02		25.0		10.0		3.2		39.2		58.8		79	
	C3	08:17	<0.5	24.6	24.6	6.6	6.6	5.9	5.9	70.5	70.5	23.7	23.6	32	31.0
		08:17		24.6		6.6		5.9		70.4		23.5		30	
	W1	07:55	<0.5	25.2	25.2	8.9	8.9	4.1	4.1	25.6	25.6	42.0	42.1	133	134.5
		07:55		25.2		8.9		4.1		25.5		42.1		136	
	W3	08:10	1	24.9	24.9	6.7	6.7	3.9	3.9	46.7	46.7	49.3	49.4	94	96.5
		08:10		24.9		6.7		3.9		46.6		49.5		99	

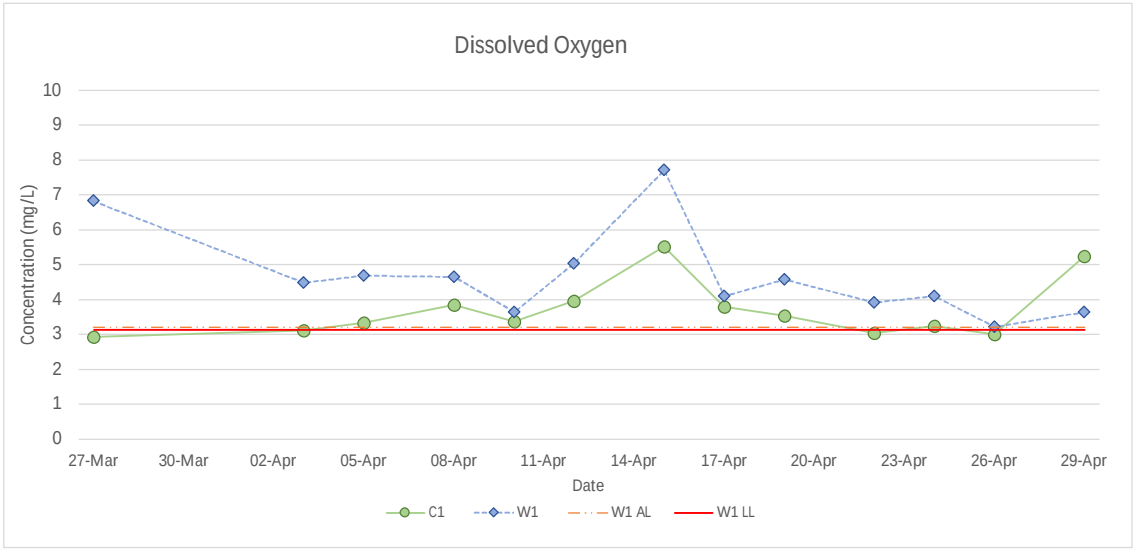
Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
26 Apr 2024	C1	08:23	<0.5	25.7	25.7	9.8	9.8	3.0	3.0	37.1	37.1	26.4	25.2	71	70.5
		08:23		25.7		9.8		3.0		37		24.0		70	
	C3	08:36	<0.5	25.4	25.4	6.7	6.7	4.7	4.7	57.3	57.3	60.4	60.5	69	71.5
		08:36		25.4		6.7		4.7		57.2		60.6		74	
	W1	08:16	<0.5	26.2	26.2	7.3	7.3	3.2	3.2	40.1	40.1	29.0	29.1	34	36.5
		08:16		26.2		7.3		3.2		40.1		29.1		39	
	W3	08:29	1	25.9	25.9	6.8	6.8	3.6	3.6	44.8	44.7	48.8	48.6	108	112.0
		08:29		25.9		6.8		3.6		44.6		48.4		116	

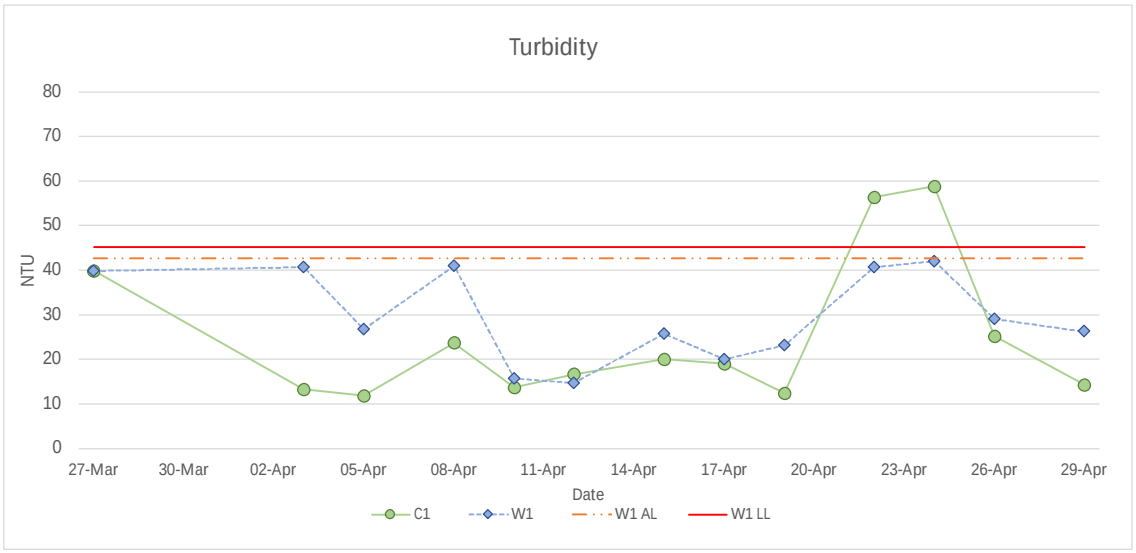
Date	Monitoring Location	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
29 Apr 2024	C1	13:28	<0.5	26.9	26.9	10.7	10.7	5.3	5.3	65.8	65.8	14.3	14.2	22	21.0
		13:28		26.9		10.7		5.3		65.8		14.2		20	
	C3	13:54	<0.5	26.9	26.9	7.4	7.4	3.4	3.4	42.9	42.9	31.2	31.2	29	29.0
		13:54		26.9		7.4		3.4		42.9		31.1		29	
	W1	13:17	<0.5	27.2	27.2	7.9	7.9	3.7	3.7	46.1	46.1	26.3	26.3	28	28.0
		13:17		27.2		7.9		3.7		46.1		26.3		28	
	W3	13:41	1	27.7	27.7	7.6	7.6	3.6	3.6	38.7	38.7	12.1	12.1	15	15.0
		13:41		27.7		7.6		3.6		38.7		12.0		15	

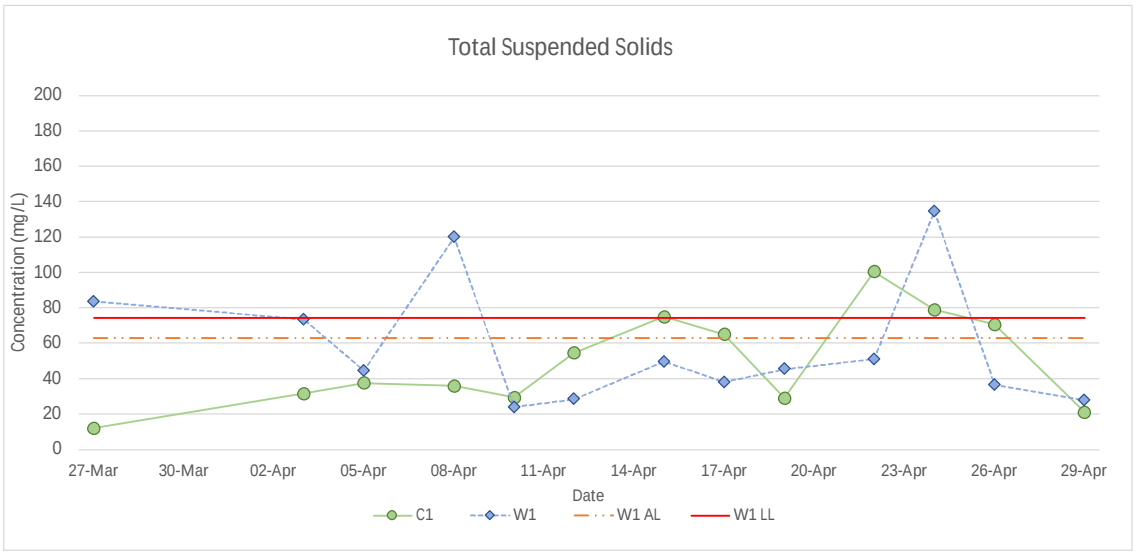
Remarks:
1. Action Level exceedances are Bolded; Limit Level exceedances are Bolded and Underlined
2. In case of measurements below reporting limit, the reporting liimt will be used to calculate the average values.

Appendix E - Monitoring Result (Water Quality

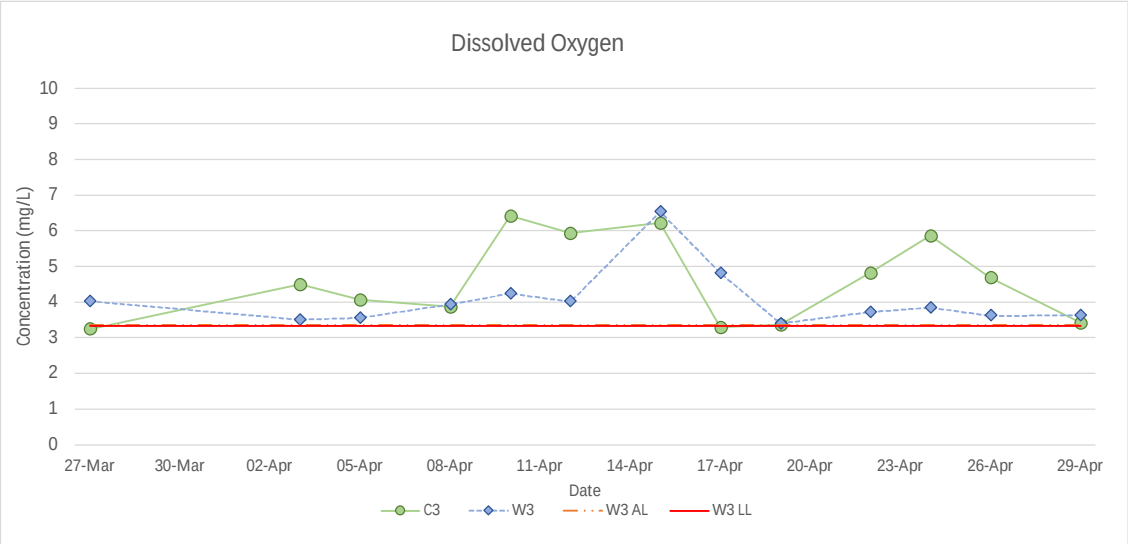
Monitoring Results for C1, W1

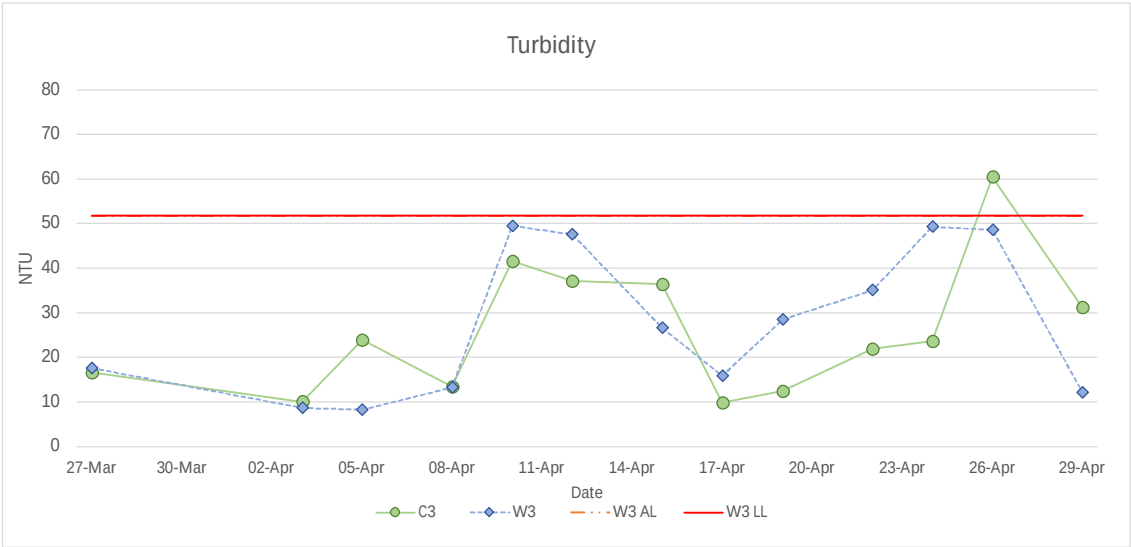


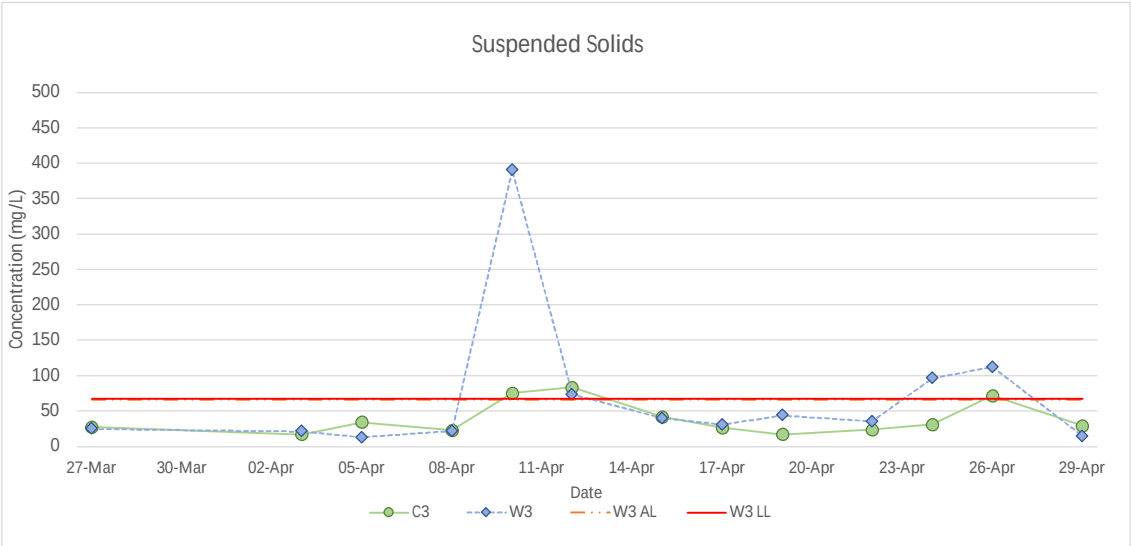




Monitoring Results for C3, W3







Ecological Monitoring Results

Common Names	Scientific Names	Habitats										Commonness and Distribution in Hong Kong *
		DC	TP	AL	DA	G	SG	PO	PL	RE	WG	
Northern Shoveler	*Spatula clypeata*		2									Abundant winter visitor. Found in Deep Bay area.
Chinese Pond Heron	*Ardeola bacchus*	7		1								Common resident. Widely distributed in Hong Kong.
Great Egret	*Ardea alba*	3	1				1	1				Common resident, migrant and winter visitor. Widely distributed in Hong Kong.
Intermediate Egret	*Ardea intermedia*		1									Resident and passage migrant. Found in Deep Bay area, Tai Long Wan, Starling Inlet, Tai O, Cape D'Aguilar.
Little Egret	*Egretta garzetta*	6										Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.
Black Kite	*Milvus migrans*						1					Common resident and winter visitor. Widely distributed in Hong Kong.
White-breasted Waterhen	*Amaurornis phoenicurus*	1										Common resident. Widely distributed in wetland throughout Hong Kong.
Black-winged Stilt	*Himantopus himantopus*		9	2								Common migrant and winter visitor. Found in Deep Bay area, Long Valley, Kam Tin.
Black-tailed Godwit	*Limosa limosa*		3									Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Redshank	*Tringa totanus*	5										Abundant passage migrant and winter visitor. Found in Deep Bay area.
Common Greenshank	*Tringa nebularia*	5	1									Abundant winter visitor and migrant. Found in Deep Bay area.

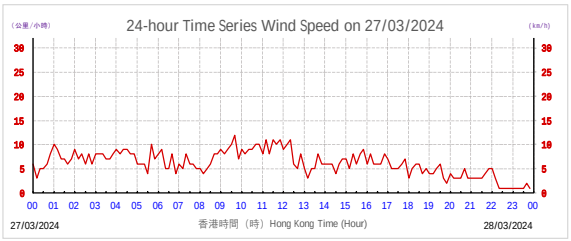
Common Names	Scientific Names	Habitats										Commonness and Distribution in Hong Kong *
		DC	TP	AL	DA	G	SG	PO	PL	RE	WG	
Wood Sandpiper	*Tringa glareola*		2									Common migrant and winter visitor. Widely distributed in wetland area throughout Hong Kong.
Spotted Dove	*Spilopelia chinensis*	3									1	Abundant resident. Widely distributed in Hong Kong.
Greater Coucal	*Centropus sinensis*	1										Common resident. Widely distributed in Hong Kong.
Asian Koel	*Eudynamys scolopaceus*	1			1		1		1			Common resident. Widely distributed in Hong Kong.
Plaintive Cuckoo	*Cacomantis merulinus*						1				1	Passage migrant and common visitor. Widely distributed in open area throughout Hong Kong.
Large Hawk-Cuckoo	*Hierococcyx sparverioides*							1				Locally common spring and summer visitor. Widely distributed in woodland throughout in Hong Kong.
Common Kingfisher	*Alcedo atthis*	1										Common passage migrant and winter visitor. Widely distributed in wetland habitat throughout Hong Kong.
Long-tailed Shrike	*Lanius schach*		1				1					Common resident. Widely distributed in open areas throughout Hong Kong.
Large-billed Crow	*Corvus macrorhynchos*	1							2			Common resident. Widely distributed in Hong Kong
Cinereous Tit	*Parus cinereus*	2				1				1		Common resident. Widely distributed in Hong Kong.
Red-whiskered Bulbul	*Pycnonotus jocosus*				1		1		2	1		Abundant resident. Widely distributed in Hong Kong.
Chinese Bulbul	*Pycnonotus sinensis*	7			1		4	3				Abundant resident. Widely distributed in Hong Kong.
Barn Swallow	*Hirundo rustica*				3	1			3		1	Abundant passage migrant and uncommon winter visitor. Widely distributed in Hong Kong.
Dusky Warbler	*Phylloscopus fuscatus*					1		2			1	Abundant winter visitor and migrant. Widely distributed in shrubland and waterside vegetation throughout Hong Kong.

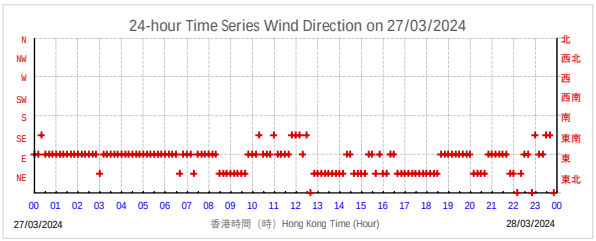
Common Names	Scientific Names	Habitats										Commonness and Distribution in Hong Kong *
		DC	TP	AL	DA	G	SG	PO	PL	RE	WG	
Yellow-browed Warbler	*Phylloscopus inornatus*							1				Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.
Oriental Reed Warbler	*Acrocephalus orientalis*	1										Common passage migrant. Widely distributed in reed beds throughout Hong Kong.
Yellow-bellied Prinia	*Prinia flaviventris*	6	2				7					Common resident. Widely distributed in Hong Kong.
Plain Prinia	*Prinia inornata*	1				1	3					Locally common resident. Widely distributed in grassland throughout Hong Kong.
Common Tailorbird	*Orthotomus sutorius*	1			2		2	4	1			Common resident. Widely distributed in Hong Kong.
Masked Laughingthrush	*Pterorhinus perspicillatus*	4		2	3		4	4				Abundant resident. Widely distributed in shrubland throughout Hong Kong.
Japanese White-eye	*Zosterops simplex*	5			2		2	1	2		2	Abundant resident. Widely distributed in Hong Kong.
Crested Myna	*Acridotheres cristatellus*	6			5		3	1	2		2	Abundant resident. Widely distributed in Hong Kong.
Black-collared Starling	*Gracupica nigricollis*	2			1			1				Common resident. Widely distributed in Hong Kong.
Oriental Magpie-Robin	*Copsychus saularis*	1						1				Abundant resident. Widely distributed in Hong Kong.
Eurasian Tree Sparrow	*Passer montanus*							2		2		Abundant resident. Widely distributed in Hong Kong.
Scaly-breasted Munia	*Lonchura punctulata*					1						Abundant resident. Widely distributed in Hong Kong.
Grey Wagtail	*Motacilla cinerea*	1										Common passage migrant and winter visitor. Widely distributed in hill streams throughout Hong Kong.
White Wagtail	*Motacilla alba*	7	2							1		Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.

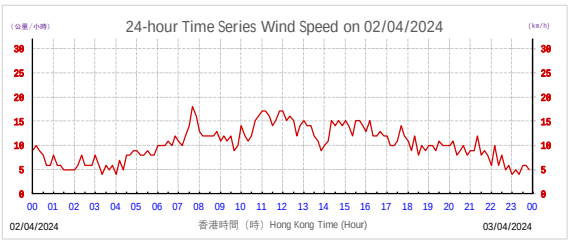
Common Names	Scientific Names	Habitats										Commonness and Distribution in Hong Kong *
		DC	TP	AL	DA	G	SG	PO	PL	RE	WG	
Olive-backed Pipit	*Anthus hodgsoni*	1										Common passage migrant and winter visitor. Widely distributed in Hong Kong.
Total Birds		79	24	5	19	5	31	22	13	5	8	
Total Species		25	10	3	9	5	13	12	7	4	6	

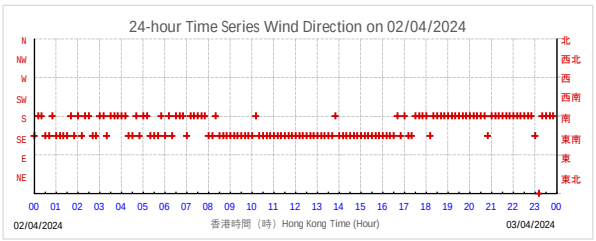
Appendix F Weather and Meteorological Conditions

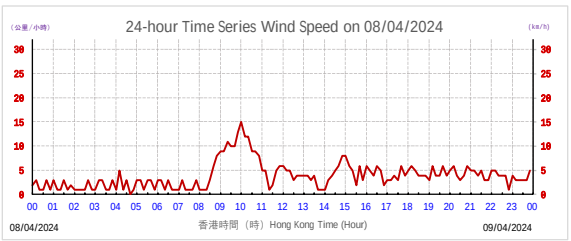
Appendix F - Weather and Metereological Conditions

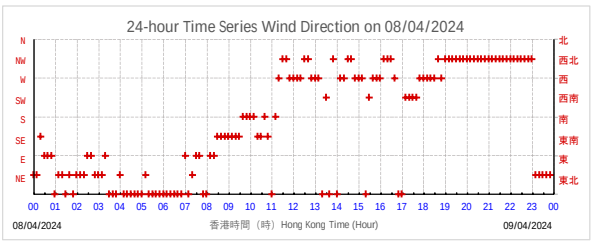


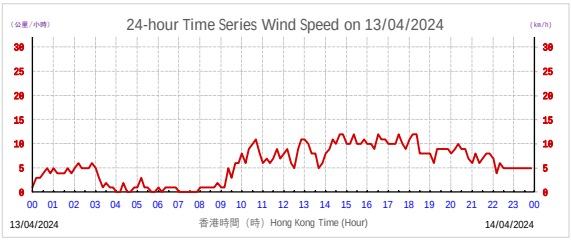


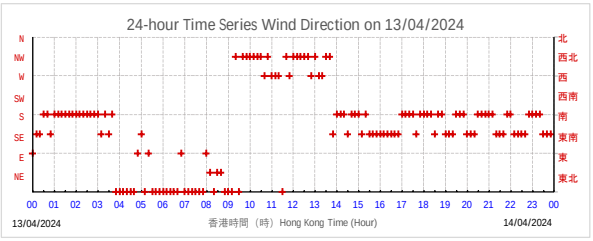


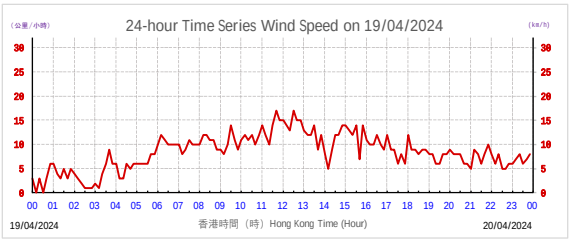


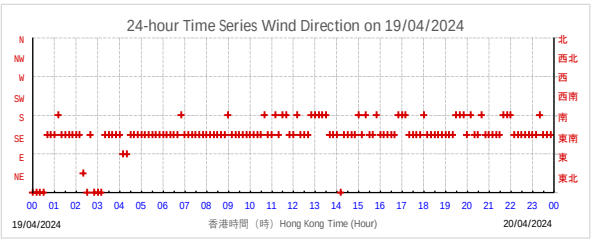


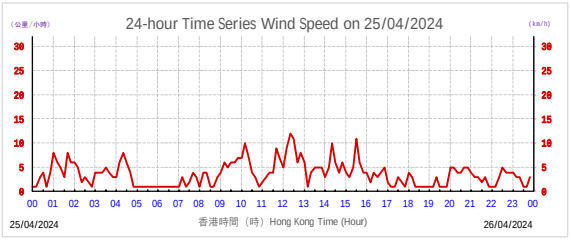


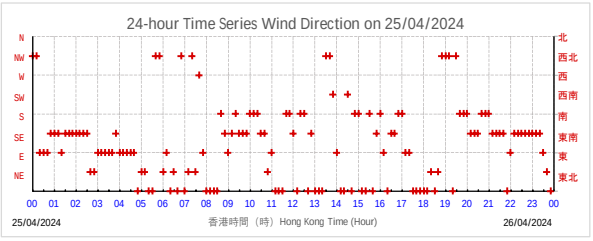


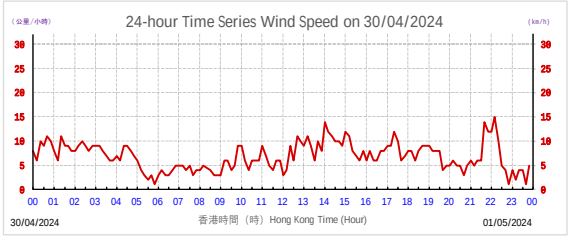


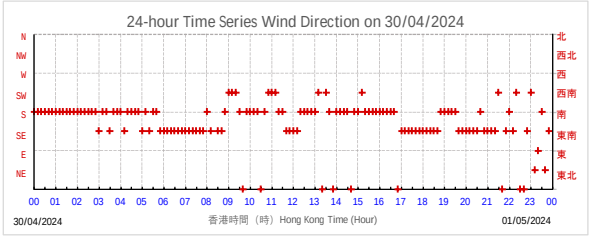












Appendix G Event and Action Plan

Appendix G Event and Action Plan for Air Quality

EVENT	ACTION			
	ET Leader	**IEC**	**ER**	**CONTRACTOR**
Action Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Inform ER, IEC and Contractor 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily	1. Check monitoring data submitted by ET 2. Check Contractor's working method	1. Notify Contractor	1.Rectify any unacceptable practice 2. Amend working methods if appropriate
Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Inform ER, IEC and Contractor 3. Repeat measurements to confirm findings 4. Increase monitoring frequency to daily 5. Discuss with IEC and Contractor on remedial actions 6. If exceedance continues, arrange meeting with IEC and ER 7. If exceedance stops, cease additional monitoring	1. Checking monitoring data submitted by ET 2. Check Contractor's working method 3. Discuss with ET Leader and Contractor on possible remedial measures 4. Advise the ER on the effectiveness of the proposed remedial measures 5. Supervisor implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Ensure remedial measures properly implemented	1. Submit proposals for remedial actions to IEC within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if appropriate

EVENT	ACTION			
	ET Leader	**IEC**	**ER**	**CONTRACTOR**
Limit Level				
Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Inform ER, EPD, IEC and Contractor 3. Repeat measurement to confirm finding 4. Increase monitoring frequency to daily 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results	3. Checking monitoring data submitted by ET 4. Check Contractor's working method 5. Discuss with ET and Contractor on possible remedial measures 6. Advise the ER on the effectiveness of the proposed remedial measures 7. Supervisor implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Ensure remedial measures properly implemented	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Amend proposal if appropriate
Exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Notify ER, EPD, IEC and Contractor 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results 8. If exceedance stops, cease additional monitoring	1. Discuss amongst ER, ET and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented 4. Ensure remedial measures properly implemented 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

Appendix G Event and Action Plan for Construction Noise Monitoring

	ACTION			
EVENT	**ET Leader**	**IEC**	**ER**	**CONTRACTOR**
		ACTION LEVEL		
Action Level	1. Notify ER, IEC and Contractor 2. Carry out investigation 3. Report the results of investigation to the ER, IEC and Contractor 4. Discuss with the IEC and Contractor, and formulate remedial measures 5. Increase monitoring frequency to check mitigation effectiveness	1. Review the analysed results submitted by the ET 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analysed noise problem 4. Ensure remedial measures are properly implemented	1. Submit noise mitigation proposals to IEC 2. Implement noise mitigation proposals
Limit Level	1. Notify IEC, ER, EPD and Contractor 2. Identify source 3. Repeat measurement to confirm findings 4. Increase monitoring frequency to daily 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented 6. Inform IEC, ER and EPD the causes & actions taken for the exceedances 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results 8. If exceedance stops, cease additional monitoring	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing 2. Notify Contractor 3. Require Contractor to propose remedial measures for the analysed noise problem 4. Ensure remedial measures are properly implemented 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated

Appendix G Event and Action Plan for Water Quality Monitoring

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
ACTION LEVEL				
Action level being exceeded by one sampling day	1.Identify source(s) of impact; 2.Inform IEC, contractor and ER; 3.Check monitoring data, all plant, equipment and Contractor's working methods; 4.Discuss mitigation measures with IEC and Contractor; and 5.Repeat measurement on next day of exceedance.	1.Discuss with ET and Contractor on the mitigation measures. 2.Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3.Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; and 2. Make agreement on the mitigation measures to be implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice, if any; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures; 6. Implement the agreed mitigation measures.
Action level being exceeded by two or more consecutive sampling days	1.Identify source(s) of impact; 2.Inform IEC, contractor and ER; 3.Check monitoring data, all plant, equipment and Contractor's working methods; 4.Discuss mitigation measures with IEC, ER and Contractor; 5.Ensure mitigation measures are implemented; 6.Prepare to increase the monitoring frequency to daily; 7.Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures. 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; and 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; and 2. Make agreement on the mitigation measures to be implemented. 3. Assess the effectiveness of the implemented mitigation measures.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
Limit Level				
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Ensure mitigation measures are implemented; and 6. Discuss mitigation measures with IEC, ER and Contractor;	1. Check monitoring data submitted by ET and Contractor's working methods; 2. Discuss with ET and Contractor on possible mitigation measures; and 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly.	1. Confirm receipt of notification of failure in writing; 2. Discuss with IEC, ET and Contractor on the proposed mitigation; 3. Request Contractor to critically review the working methods; 4. Make agreement on mitigation measures to be implemented; and 5. Ensure mitigation measures are properly implemented.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Discuss with ET, IEC and ER and propose mitigation measures to ER and IEC within 3 working days; and 5. Implement the agreed mitigation measures.
Limit level being exceeded by two or more consecutive sampling days	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, ER and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; and 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Check monitoring data submitted by ET and Contractor's working methods. 2. Discuss with ET and Contractor on possible mitigation measures; 3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly; and 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Ensure mitigation measures are properly implemented; and 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Take immediate action to avoid further exceedance; 3. Discuss with ET, IEC and ER and propose mitigation measures to ER and IEC within 3 working days; 4. Implement the agreed mitigation measures; 5. Resubmit proposals of mitigation measures if problem still not under control; and 6. As directed by the ER, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix H Waste Flow Table

Architectural Services Department	Form No. D/OI.03/09.002

Contract No. / Works Order No.: - **SSM518**

Final Submission No

Monthly Summary Waste Flow Table for **2024** **[year] [to be submitted not later than the 15th day of each month following reporting month]**

(All quantities shall be rounded off to 3 decimal places.)

Month	Actual Quantities of Inert Construction Waste Generated Monthly				
	(a)=(b)+(c)+(d)+(e) Total Quantity Generated	(b) Broken Concrete (see Note 4)	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill
	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)
Jan	0.000	0.000	0.000	0.000	0.000
Feb	0.020	0.000	0.000	0.000	0.020
Mar	0.429	0.000	0.000	0.000	0.429
Apr	0.182	0.000	0.000	0.000	0.182
May	0.000	0.000	0.000	0.000	0.000
Jun	0.000	0.000	0.000	0.000	0.000
Sub-total	0.631	0.000	0.000	0.000	0.631
Jul	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000
Sep	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000
Total	0.631	0.000	0.000	0.000	0.631

Month	Actual Quantities of Non-inert Construction Waste Generated Monthly												
	Timber		Metals		Paper/ cardboard packaging		Plastics (see Note 3)		Chemical Waste		Other Recyclable Materials _____ (pls. specify)		General Refuse disposed of at Landfill
	(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000kg)		(in '000m^3)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
Jan	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.023
Feb	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.215
Mar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.293
Apr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.267
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Jun	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sub-total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.796
Jul	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Aug	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sep	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Oct	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nov	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.796

Notes:
(1) The performance targets are given in the Particular Specification on Environmental Management Plan.
(2) The waste flow table shall also include construction waste that are specified in the Contract to be imported for use at the site.
(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
(4) Broken concrete for recycling into aggregates.
(5) If necessary, use the conversion factor: 1 full load of dumping truck being equivalent to 6.5 m^3 by volume.

Appendix I Summaries of Environmental Complaint Warning Summon and Notification of Successful Prosecution

Environmental Complaints Log

Complaint Log	Date of Complaint	Received from	Location	Nature of Complaint	Outcome	Status
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix J Summary of Observations and Findings made in Site Audit and Inspection in the Reporting Period

Summary of Site Audit in Reporting Month

Parameter	Date	Observations and Reminders
Air Quality	28 March 2024	Stockpile should be covered to avoid dust generation (South).
	12 April 2024	Watering should be provided to haul road regularly.
Noise	N/A	No particular observation
Water Quality	N/A	No particular observation
Chemical and Waste Management	5 April 2024	Oil leakage was observed (North portion), Contractor was reminded to remove. Drip trap should be provided to chemical containers.
	25 April 2024	Waste should be sorted properly and stored in the designated area.
Ecology	N/A	No particular observation
Landscape and Visual	N/A	No particular observation
Permits/ Licences	N/A	No particular observation

Appendix K Notification of Exceedance

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W001					
Monitoring Details						
Date	27 Mar 24		Time	10:33		
Station	W1					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**83.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, mock up of MIC modules was carried out on 27 March 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
			Depth (m)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
27 Mar 2024	C1	10:42	<0.5	<0.5	23.1	23.1	7.2	7.2	3.0	2.9	7.2	7.2	39.9	12.0	12.0
		10:42			23.1		7.2		2.9		7.2		40.0	12.0	
	C3	11:10	<0.5	<0.5	24.3	24.3	7.3	7.3	3.3	3.3	7.3	7.3	16.5	28.0	27.5
		11:10			24.3		7.3		3.2		7.3		16.6	27.0	
	W1	10:33	<0.5	<0.5	25.8	25.8	7.6	7.6	6.8	6.8	7.6	7.6	39.8	83.0	**83.5**
		10:33			25.8		7.6		6.8		7.6		39.9	84.0	
	W3	11:00	<0.5	1	25.7	25.7	7.0	7.0	4.0	4.0	7.0	7.0	17.6	25.0	25.0
		11:00			25.7		7.0		4.0		7.0		17.7	25.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W002					
Monitoring Details						
Date	3 Apr 24		Time	08:35		
Station	W1					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**73.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 3 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
3 Apr 2024	C1	08:41	<0.5	<0.5	25.6	25.6	6.6	6.6	3.1	3.1	6.6	6.6	13.4	30.0	31.5
		08:41			25.6		6.6		3.1		6.6		13.2	33.0	
	C3	08:54	<0.5	<0.5	24.4	24.4	6.7	6.6	4.5	4.5	6.7	6.6	10.1	17.0	17.0
		08:54			24.4		6.6		4.5		6.6		10.0	17.0	
	W1	08:35	0.5	<0.5	26.1	26.1	6.7	6.7	4.5	4.5	6.7	6.7	41.2	73.0	**73.5**
		08:35			26.1		6.7		4.5		6.7		40.3	74.0	
	W3	08:47	<0.5	1	25.7	25.7	6.6	6.6	3.5	3.5	6.6	6.6	8.7	12.0	21.5
		08:47			25.7		6.6		3.5		6.6		8.6	31.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W003					
Monitoring Details						
Date	8 Apr 24		Time	09:15		
Station	W1					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**120.0**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 8 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
			Depth (m)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
8 Apr 2024	C1	09:21	0.6	<0.5	25.6	25.6	6.9	6.9	3.9	3.8	6.9	6.9	23.7	35.0	36.0
		09:21			25.6		6.9		3.8		6.9		23.7	37.0	
	C3	09:42	<0.5	<0.5	25.7	25.7	6.7	6.7	3.9	3.9	6.7	6.7	13.4	23.0	22.5
		09:42			25.7		6.7		3.9		6.7		13.5	22.0	
	W1	09:15	<0.5	<0.5	26.3	26.3	6.7	6.7	4.7	4.7	6.7	6.7	40.8	119.0	**<u>120.0</u>**
		09:15			26.3		6.7		4.7		6.7		41.2	121.0	
	W3	09:35	0.5	1	25.9	25.9	6.6	6.6	3.9	3.9	6.6	6.6	13.3	23.0	22.0
		09:35			25.9		6.6		3.9		6.6		13.2	21.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W004					
Monitoring Details						
Date	10 Apr 24		Time	07:46		
Station	W3					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**390.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 10 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
			Depth (m)	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
10 Apr 2024	C1	07:38	<0.5	<0.5	22.7	22.7	6.9	6.9	3.4	3.4	6.9	6.9	13.7	30.0	29.5
		07:38			22.7		6.9		3.4		6.9		13.7	29.0	
	C3	07:54	<0.5	<0.5	22.7	22.7	6.7	6.6	6.4	6.4	6.7	6.6	41.2	74.0	75.5
		07:54			22.7		6.6		6.4		6.6		41.9	77.0	
	W1	07:32	<0.5	<0.5	23.5	23.5	6.7	6.7	3.7	3.7	6.7	6.7	15.7	23.0	24.0
		07:32			23.5		6.7		3.7		6.7		15.8	25.0	
	W3	07:46	<0.5	<0.5	23.0	23.0	6.6	6.6	4.3	4.3	6.6	6.6	49.6	383.0	**390.5**
		07:46			23.0		6.6		4.2		6.6		49.5	398.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W005					
Monitoring Details						
Date	12 Apr 24		Time	08:32		
Station	W3					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**73.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓	• Notifiy ER / IEC / Contractor on 7 May 2024				
		• Others:				
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 12 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
12 Apr 2024	C1	08:18	<0.5	<0.5	24.7	24.7	7.1	7.1	4.0	4.0	7.1	7.1	16.7	54.0	54.5
		08:18			24.7		7.1		4.0		7.1		16.6	55.0	
	C3	08:39	<0.5	<0.5	24.2	24.2	6.7	6.7	5.9	5.9	6.7	6.7	37.4	84.0	83.5
		08:39			24.2		6.7		5.9		6.7		36.9	83.0	
	W1	08:12	<0.5	<0.5	25.6	25.6	6.8	6.8	5.1	5.0	6.8	6.8	14.7	29.0	28.5
		08:12			25.6		6.8		5.0		6.8		14.7	28.0	
	W3	08:32	<0.5	<0.5	24.4	24.4	6.7	6.7	4.0	4.0	6.7	6.7	47.5	74.0	**<u>73.5</u>**
		08:32			24.4		6.7		4.0		6.7		47.8	73.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W006					
Monitoring Details						
Date	24 Apr 24		Time	07:55		
Station	W1					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**134.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 24 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
24 Apr 2024	C1	08:02	<0.5	<0.5	25.0	25.0	10.0	10.0	3.2	3.2	10.0	10.0	58.9	79.0	79.0
		08:02			25.0		10.0		3.2		10.0		58.8	79.0	
	C3	08:17	<0.5	<0.5	24.6	24.6	6.6	6.6	5.9	5.9	6.6	6.6	23.7	32.0	31.0
		08:17			24.6		6.6		5.9		6.6		23.5	30.0	
	W1	07:55	<0.5	<0.5	25.2	25.2	8.9	8.9	4.1	4.1	8.9	8.9	42.0	133.0	**<u>134.5</u>**
		07:55			25.2		8.9		4.1		8.9		42.1	136.0	
	W3	08:10	<0.5	1	24.9	24.9	6.7	6.7	3.9	3.9	6.7	6.7	49.3	94.0	**<u>96.5</u>**
		08:10			24.9		6.7		3.9		6.7		49.5	99.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W007					
Monitoring Details						
Date	24 Apr 24		Time	08:10		
Station	W3					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**96.5**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓ • Notifiy ER / IEC / Contractor on 7 May 2024					
	• Others:					
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 24 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
24 Apr 2024	C1	08:02	<0.5	<0.5	25.0	25.0	10.0	10.0	3.2	3.2	10.0	10.0	58.9	79.0	79.0
		08:02			25.0		10.0		3.2		10.0		58.8	79.0	
	C3	08:17	<0.5	<0.5	24.6	24.6	6.6	6.6	5.9	5.9	6.6	6.6	23.7	32.0	31.0
		08:17			24.6		6.6		5.9		6.6		23.5	30.0	
	W1	07:55	<0.5	<0.5	25.2	25.2	8.9	8.9	4.1	4.1	8.9	8.9	42.0	133.0	**<u>134.5</u>**
		07:55			25.2		8.9		4.1		8.9		42.1	136.0	
	W3	08:10	<0.5	1	24.9	24.9	6.7	6.7	3.9	3.9	6.7	6.7	49.3	94.0	**<u>96.5</u>**
		08:10			24.9		6.7		3.9		6.7		49.5	99.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Light Public Housing at Yau Pok Road, Yuen Long

Water Quality Monitoring
~~Notification of Exceedance /~~ Investigation Report

~~NOE /~~ IR No.	KPR_202404_W008					
Monitoring Details						
Date	26 Apr 24		Time	08:29		
Station	W3					
Parameter(s)	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
Result(s)					**112.0**	
AL/LL criteria	DO (mg/L)		Turbidity (NTU)		SS (mg/L)	
	AL	LL	AL	LL	AL	LL
W1	3.2	3.1	42.7	45.3	63.1	74.3
W3	3.4	3.3	51.7	51.8	66.5	67.7
Actions taken / to be taken						
	✓	• Notifiy ER / IEC / Contractor on 7 May 2024				
		• Others:				
Works undertaken at the time of monitoring event	According to the information provided by the Contractor, installation of MIC modules was carried out on 26 April 2024.					
Possible Reason for Action or Limit Level Exceedance(s)	The followings were reviewed / considered: • Control and mitigation measure for water quality impact from above mentioned works were implement including 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 AquaSet has been checked by contractor and ET during regular site audit, and is functional and well maintained; and • No surface runoff and no effluent discharge from construction activities into the concerned waterbody were observed on monitoring day and during the regular site audit. Hence, it is considered that there was no evidence to suggest the exceedance was related to the project works, and was possibly due to natural variations.					

Prepared by: Theo Chan

Signature:

Date of Issue: 14 May 24

Certifeid by: Y H Hui (ET Leader)

Signature:

Date	Station	Time	Water Depth (m)	Temperature (°C)		pH		DO (mg/L)		DO (% saturation)		Turbidity (NTU)		SS (mg/L)	
				Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
26 Apr 2024	C1	08:23	<0.5	<0.5	25.7	25.7	9.8	9.8	3.0	3.0	9.8	9.8	26.4	71.0	70.5
		08:23			25.7		9.8		3.0		9.8		24.0	70.0	
	C3	08:36	<0.5	<0.5	25.4	25.4	6.7	6.7	4.7	4.7	6.7	6.7	60.4	69.0	71.5
		08:36			25.4		6.7		4.7		6.7		60.6	74.0	
	W1	08:16	<0.5	<0.5	26.2	26.2	7.3	7.3	3.2	3.2	7.3	7.3	29.0	34.0	36.5
		08:16			26.2		7.3		3.2		7.3		29.1	39.0	
	W3	08:29	<0.5	1	25.9	25.9	6.8	6.8	3.6	3.6	6.8	6.8	48.8	108.0	**<u>112.0</u>**
		08:29			25.9		6.8		3.6		6.8		48.4	116.0	

Note: 1. Bold numbers indicate action level exceeded

2. Bold and underlined numbers indicate limit level exceeded

Appendix L Implementation Status of Environment Mitigation Measures

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
Air Quality				
A1	PP: 6.2.1 EIA: 3.9.1	Dust and gaseous emissions mitigation measures as stipulated in the Air Pollution Control (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation and Air Pollution Control (Fuel Restriction) Regulation;	Air Pollution (Construction Dust) Regulation, Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation, Air Pollution (Fuel Restriction) Regulation	✓
A2	PP: 6.2.1 EIA: 3.9.1	The designated haul road should be hard paved to minimize fugitive dust emission;	Air Pollution (Construction Dust) Regulation	✓
A3	PP: 6.2.1 EIA: 3.9.1	During the site formation works, the active works areas should be water sprayed with water browser or sprayed manually hourly during construction period. The Contractor should ensure that the amount of water spraying is just enough to dampen the exposed surfaces without over-watering which could result in surface water runoff;	Air Pollution (Construction Dust) Regulation	✓
A4	PP: 6.2.1 EIA: 3.9.1	Dump trucks for transporting dusty materials should be totally enclosed using impervious sheeting;	Air Pollution (Construction Dust) Regulation	✓
A5	PP: 6.2.1 EIA: 3.9.1	Any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated as soon as possible;	Air Pollution (Construction Dust) Regulation	✓
A6	PP: 6.2.1 EIA: 3.9.1	Dusty materials remaining after a stockpile is removed should be wetted with water;	Air Pollution (Construction Dust) Regulation	✓
A7	PP: 6.2.1 EIA: 3.9.1	The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with e.g. concrete, bituminous materials or hardcore or similar;	Air Pollution (Construction Dust) Regulation	✓
A8	PP: 6.2.1 EIA: 3.9.1	The Contractor shall only transport adequate amount of fill materials to the Project Site to minimize stockpiling of fill materials on-site, thus reducing fugitive dust emission due to wind erosion;	Air Pollution (Construction Dust) Regulation	✓
A9	PP: 6.2.1 EIA: 3.9.1	Should temporary stockpiling of dusty materials be required, it shall be either covered entirely by impervious sheeting, placed in an area sheltered on the top and the 3 sides; or sprayed with water so as to maintain the entire surface wet;	Air Pollution (Construction Dust) Regulation	✓
A10	PP: 6.2.1 EIA: 3.9.1	All dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty material wet;	Air Pollution (Construction Dust) Regulation	✓

[1] PP (2023) = approved Project Profile (PP-652/2023); EIA (2014) = approved EIA Report (AEIAR-182/2014)

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
A11	PP: 6.2.1 EIA: 3.9.1	Vehicle speed to be limited to 10 kph except on completed access roads;	Air Pollution (Construction Dust) Regulation	✓
A12	PP: 6.2.1 EIA: 3.9.1	The portion of road leading only to a construction site that is within 30 m of a designated vehicle entrance or exit should be kept clear of dusty materials;	Air Pollution (Construction Dust) Regulation	✓
A13	PP: 6.2.1 EIA: 3.9.1	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites;	Air Pollution (Construction Dust) Regulation	✓
A14	PP: 6.2.1 EIA: 3.9.1	The load of dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle;	Air Pollution (Construction Dust) Regulation	✓
A15	PP: 6.2.1 EIA: 3.9.1	The working area of excavation should be sprayed with water immediately before, during and immediately after (as necessary) the operations so as to maintain the entire surface wet;	Air Pollution (Construction Dust) Regulation	✓
A16	PP: 6.2.1 EIA: 3.9.1	Use of effective dust screens, sheeting or netting to be provided to enclose dry scaffolding which may be provided from the ground floor level of the building or if a canopy is provided at the first floor level, from the first floor level, up to the highest level (maximum three floors high for this Project) of the scaffolding where scaffolding is erected around the perimeter of a building under construction; and	Air Pollution (Construction Dust) Regulation	✓
A17	PP: 6.2.1	Electric power supply shall be provided for on-site machinery as far as practicable.	Air Pollution (Construction Dust) Regulation	✓
Noise				
N1	PP: 6.3.1-6.3.4 EIA: 4.8.1	Adoption of quieter construction method;	Noise control	✓
N2	PP: 6.3.1-6.3.4 EIA: 4.8.1	Use of QPMEs;	Noise control	✓
N3	PP: 6.3.1-6.3.4 EIA: 4.8.2, 4.8.3	Use of movable noise barriers and noise enclosure;	Noise control	✓
N4	PP: 6.3.1-6.3.4 EIA: 4.8.4	Scheduling of works; and	Noise control	✓

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
N5	PP: 6.3.1-6.3.4 EIA: 4.8.4	Implementation of good site practices and noise management.	Noise control	✓
Water Quality				
W1	PP: 6.4.1 EIA: 5.6.1.1	High loading of suspended solids (SS) in construction site runoff shall be prevented through proper site management;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W2	PP: 6.4.1 EIA: 5.6.1.1	The boundary of critical work areas shall be surrounded by ditches or embankment;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W3	PP: 6.4.1 EIA: 5.6.1.1	Accidental release of soil or refuse into the adjoining land should be prevented by the provision of site earth bunds, etc. at the Project Site boundary. These facilities should be constructed in advance of site formation works and roadworks;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W4	PP: 6.4.1 EIA: 5.6.1.1	Consideration should be given to plan construction activities to allow the use of natural topography of the PS as a barrier to minimize uncontrolled non-point source discharge of construction site runoff;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W5	PP: 6.4.1 EIA: 5.6.1.1	Temporary ditches, earth bunds should be provided to facilitate directed and controlled discharge of runoff into storm drains via sand/ silt removal facilities such as sand traps, silt traps and sediment retention basin. Oil and grease removal facilities should also be provided where appropriate, for example, in area near plant workshop/ maintenance areas;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W6	PP: 6.4.1 EIA: 5.6.1.1	Sand and silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, and at the onset of and after each rainstorm to ensure that these facilities area functioning properly;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W7	PP: 6.4.1 EIA: 5.6.1.1	Slope exposure should be minimized where practicable especially during the wet season. Exposed soil surfaces should be protected from rainfall through covering temporarily exposed slope surfaces or stockpiles with tarpaulin or the like;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W8	PP: 6.4.1 EIA: 5.6.1.1	Haul roads should be protected by crushed rock, gravel or other granular materials to minimize discharge of contaminated runoff;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W9	PP: 6.4.1 EIA: 5.6.1.1	Slow down water run-off flowing across exposed soil surfaces;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W10	PP: 6.4.1 EIA: 5.6.1.1	Plant workshop/ maintenance areas should be bunded and constructed on a hard standing. Sediment traps and oil interceptors should be provided at appropriate locations;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W11	PP: 6.4.1 EIA: 5.6.1.1	Manholes (including newly constructed ones) should be adequately covered or temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
W12	PP: 6.4.1 EIA: 5.6.1.1	Construction works should be programmed to minimize soil excavation works where practicable during rainy conditions;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W13	PP: 6.4.1 EIA: 5.6.1.1	Chemical stores should be contained (bunded) to prevent any spills from contact with water bodies. All fuel tanks and/ or storage areas should be provided with locks and be sited on hard surface;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W14	PP: 6.4.1EIA: 5.6.1.1	Chemical waste arising from the Project Site should be properly stored, handled, treated and disposed of in compliance with the requirements stipulated under the Waste Disposal (Chemical Waste) (General) Regulation;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W15	PP: 6.4.1 EIA: 5.6.1.1	Drainage facilities must be adequate for the controlled release of storm flows;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W16	PP: 6.4.1 EIA: 5.6.1.1	Appropriate peripheral drainage system shall be constructed along the Project Site boundary to divert away surface runoff in accordance with requirements stipulated in ProPECC PN 2/23 to collect surface runoff and discharge it into the nearby existing stormwater drains nearby roadside of Yau Pok Road, and via which into the existing NTMDC;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W17	PP: 6.4.1 EIA: 5.6.1.1	Temporary drains, sedimentation basins, sand traps and similar facilities shall be provided during the construction works in accordance with the ProPECC PN 2/23; and	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W18	PP: 6.4.1 EIA: 5.6.1.1	The Contractor shall apply for a discharge licence under the WPCO and the discharge shall comply with the terms and conditions of the licence;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W19	PP: 6.4.1 EIA: 5.6.1.2	Sewage generated from the construction workforce should be contained in chemical toilets before connection to public foul sewer becomes available. Chemical toilets should be provided at a minimum rate of about 1 per 50 workers. The facility should be serviced and cleaned by a specialist contractor at regular intervals;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W20	PP: 6.4.1 EIA: 5.6.1.2	Vehicle wheel washing facilities should be provided at the site exit such that mud, debris, etc. deposited onto the vehicle wheels or body can be washed off before the vehicles are leaving the site area;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W21	PP: 6.4.1 EIA: 5.6.1.2	Section of the 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;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
W22	PP: 6.4.1 EIA: 5.6.1.2	Although use of bentonite in diaphragm wall and bore-pile construction is not expected, in case bentonite slurries is generated it should be reconditioned and reused as far as practicable;	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W23	PP: 6.4.1 EIA: 5.6.1.2	Spent bentonite should be kept in a separate slurry collection system for disposal at a marine spoil grounds subject to obtaining a marine dumping licence from EPD. If used bentonite slurry is to be disposed of through public drainage system, it should be treated to meet the respective applicable effluent standards for discharges into sewers, storm drains or the receiving waters; and	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
W24	PP: 6.4.1 EIA: 5.6.1.3	Spillage of fuel oils or other polluting fluids should be prevented at source. It is recommended that all stocks should be stored inside proper containers and sited on sealed areas, preferably surrounded by bunds.	Stormwater and Non-point Source Pollution Control, ProPECC PN2/23	✓
Ecology				
E1	PP: 6.5.1 – 6.5.3 EIA: 8.8	Plan construction sequence carefully to minimise site formation in the northeastern corner of the PS where it abuts the temporary ponds in YMST in peak wintering season for migratory birds (i.e. October - March);	Avoidance of disturbance	✓
E2	PP: 6.5.1 – 6.5.3 EIA: 8.8	Provide screening / barriers along the Project Site boundary to reduce the visual disturbance arising from the construction activities to nearby habitats such as NTMDC and the temporary ponds in YMST;	Avoidance of disturbance	✓
E3	PP: 6.5.1 – 6.5.3 EIA: 8.8	Demarcate the construction site clearly and regularly check the boundaries to ensure that they are not breached;	Avoidance of disturbance	✓
E4	PP: 6.5.1 – 6.5.3 EIA: 8.8	Brief site workers and other staff the sensitivity of the surrounding areas before commencement of the works, and instruct them not to disturb any areas nearby;	Avoidance of disturbance	✓
E5	PP: 6.5.1 – 6.5.3 EIA: 8.8	Use quiet PME and movable noise barriers wherever necessary;	Avoidance of disturbance	✓
E6	PP: 6.5.1 – 6.5.3 EIA: 8.8	Phasing of construction activities to minimise concurrent operation of PME;	Avoidance of disturbance	✓
E7	PP: 6.5.1 – 6.5.3 EIA: 8.8– 6.5.3	Use only well-maintained plant on-site.	Avoidance of disturbance	✓
E8	PP: 6.5.1 – 6.5.3 EIA: 8.8	Ensure the plant to be serviced regularly during the construction program;	Avoidance of disturbance	✓
E9	PP: 6.5.1 – 6.5.3 EIA: 8.8	Machines and plant (such as trucks) that may be in intermittent use to be shut down between work periods or to be throttled down to a minimum;	Avoidance of disturbance	✓

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
E10	PP: 6.5.1 – 6.5.3 EIA: 8.8	Plant known to emit noise strongly in one direction to be, wherever possible, orientated so that the noise is directed away from the NTMDC and the wetlands in YMST project;	Avoidance of disturbance	✓
E11	PP: 6.5.1 – 6.5.3 EIA: 8.8	Material stockpiles and other structures to be effectively utilized, wherever practicable, in screening noise from on-site construction activities	Avoidance of disturbance	✓
E12	PP: 6.5.1 – 6.5.3 EIA: 8.8	Comply with NCO and implement general good site practices;	Avoidance of disturbance	✓
E13	PP: 6.5.1 – 6.5.3 EIA: 8.8	Implement dust control measures e.g. hard paving of the haul road, frequent watering, covering dusty materials, careful site formation scheduling etc.;	Avoidance of disturbance	✓
E14	PP: 6.5.1 – 6.5.3 EIA: 8.8	Controlled wastewater discharge to the nearby water bodies in accordance with the guidelines stipulated in EPD's ProPECC PN2/23 to properly control site run-off and drainage and to minimise the potential water quality impact;	Avoidance of disturbance	✓
E15	PP: 6.5.1 – 6.5.3 EIA: 8.8	Provide a properly designed temporary drainage system within the construction site to direct discharge away from the watercourses downstream to nearby drainage channel. The drainage system will be equipped with sand/silt removal facilities to treat the surface runoff;	Avoidance of disturbance	✓
E16	PP: 6.5.1 – 6.5.3 EIA: 8.8	Provide portable chemical toilets for site workers. Ensure that chemical toilets are used and properly maintained, and that licensed contractors are employed to collect and dispose of the waste off-site at approved locations;	Avoidance of disturbance	✓
E17	PP: 6.5.1 – 6.5.3 EIA: 8.8	Implementation of measures to minimise magnitude of construction runoff and to avoid/ minimise the potential impact of spillage events, if any;	Avoidance of disturbance	✓
E18	PP: 6.5.1 – 6.5.3 EIA: 8.8	Excavated materials will be covered and/or properly disposed of as soon as possible to avoid being washed into nearby water bodies; and	Avoidance of disturbance	✓
E19	PP: 6.5.1 – 6.5.3 EIA: 8.8	Other mitigation measures proposed for potential impacts on water quality for this Project.	Avoidance of disturbance	✓
Landscape and Visual				
LV1	PP: 6.6.1 EIA: 11.10.1	Proper protection of existing trees designated to retained in-situ;	Avoid impacts on adjacent landscape	✓
LV2	PP: 6.6.1 EIA: 11.10.1	Optimisations of construction areas and providing temporary landscape on temporary construction;	Avoid impacts on adjacent landscape	✓
LV3	PP: 6.6.1 EIA: 11.10.1	Preservation of marsh and reedbed;	Avoid impacts on adjacent landscape	✓

EM&A Log Ref.	PP (2023) / EIA (2014)[1]	Recommended Environmental Protection Measures/ Mitigation Measures in Construction Phase	Objectives of the recommended measures & main concerns to address	Implementation Status
LV4	PP: 6.6.1 EIA: 11.10.1	Define works area and temporary works area to minimise the extent of construction works area and its residual impacts during construction;	Avoid impacts on adjacent landscape	✓
LV5	PP: 6.6.1 EIA: 11.10.1	Protection of watercourse/ channels of higher ecological value;	Avoid impacts on adjacent landscape	✓
LV6	PP: 6.6.1 EIA: 11.10.1	Good site practice should be adopted to minimize landscape and visual impact, for example to adopt suitable height and design of temporary barriers / noise barrier to help blend in with the surrounding environment, retention of existing trees as screen planting, control of night-time lighting by hooding all lights, and reduction of construction period to practical minimum.	Avoid impacts on adjacent landscape	✓
Cultural Heritage				
CH1	PP 6.7.2	As a precautionary measure, the Antiquities and Monuments Office (AMO) should be informed immediately in case of discovery of antiquities or supposed antiquities in the course of works, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO.	Preserve any terrestrial archaeology or built heritage resources.	N/A
Waste Management				
WM1	PP: 6.8.1-6.8.5 EIA: 7.5	All C&D materials generated should be sorted into different categories on-site for recycling and reuse as fill materials as far as practicable prior to disposal at public filling reception facilities and landfills. To prohibit illegal dumping and landfilling of C&D materials, the dump trucks engaged on site should be equipped with GPS or equivalent automatic system for real time tracking and monitoring of their travel routings, parking locations and disposal activities.	Waste management	✓
WM2	PP: 6.8.1-6.8.5 EIA: 7.5	Chemical wastes should be handled, stored and disposed of properly and in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	Waste management, ProPECC PN2/23, Water Pollution Control Ordinance	✓
WM3	PP: 6.8.1-6.8.5 EIA: 7.4.5	General refuse should be stored in enclosed bins or compaction units. A reputable waste collector should be employed by the contractor to remove general refuse from the Project Site on a daily basis or every other day to minimise odour, pest and litter impacts.	Waste management, Air Pollution Control (Open Burning) Regulation	✓