Agreement No. CE 20/2004(EP) North East New Territories (NENT) Landfill Extension

Monthly Environmental Monitoring and Audit Report (No. 5) – April 2023

2023-05-10

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Our Ref.: CL/91823/0409-VES
Date: 12 May 2023

By Email

Veolia Environmental Services Hong Kong Limited
40/F, One Taikoo Place
979 King's Road
Quarry Bay
Hong Kong

Attn.: Mr. Alvin Kam

Dear Sir

Re: Contract No. EP/SP/77/15
North-East New Territories Landfill Extension (NENTX)
Monthly Environmental Monitoring and Audit Report (No.5) – April 2023

I refer to Conditions 3.3 under Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007, regarding the submission of a monthly Environmental Monitoring and Audit report. I hereby verify the captioned "Monthly Environmental Monitoring and Audit Report (No.5) – April 2023" dated 10 May 2023.

Should you have any queries, please do not hesitate to contact the undersigned at 2859 5409.

Yours faithfully
MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD

Claudine Lee
Independent Environmental Checker

Aurecon Hong Kong Limited
Unit 1608, 16/F, Tower B,
Manulife Financial Centre,
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Ref: P521530-0000-REP-NN-0053

By Email

12 May 2023

Meinhardt Infrastructure & Environment Ltd.
10/F Genesis
33-35 Wong Chuk Hand Road
Hong Kong

Attn: Ms. Claudine Lee,

Dear Claudine,

Re: Contract No. EP/SP/77/15
Northeast New Territories Landfill Extension
Submission of Monthly Environmental Monitoring and Audit Report (No.5) – April 2023

In accordance with the requirement specified in Condition 3.3 of Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007, we are pleased to submit the certified "Monthly Environmental Monitoring and Audit Report (No.5) – April 2023" dated 10 May 2023 for your verification.

Should you require any further information or clarification, please do not hesitate to contact the undersigned or our Mr. Keith Chau on 3664 6788.

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

Fredrick Leong
Environmental Team Leader

Encl.
1. Monthly Environmental Monitoring and Audit Report (No.5) – April 2023

cc.
1. IEC - Ms. Claudine Lee (By email: claudinelee@meinhardt.com.hk)
2. IEC Representative – Ms. Echo Hung (By email: echohung@meinhardt.com.hk)

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Reviewer's signature		Approver's signature	
Name	Keith Chau	Name	Fredrick Leong
Title	Associate, Environmental	Title	Environmental Team Leader

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Executive Summary

Aurecon Hong Kong Limited (Aurecon) was appointed to undertake the role of Environmental Team (ET) and carry out Environmental Monitoring and Audit for the North East New Territories (NENT) Landfill Extension.

The construction phase and EM&A programme of the Project commenced on 1 December 2022.

This 5th Monthly EM&A Report presents the EM&A works conducted from 1 to 30 April 2023 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during Report Period

The major construction works undertaken during the reporting period include:

- Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground
- Permanent site office foundation works with pouring of concrete at Portion D
- Site clearance at Portion A, E3-1, B1 & E4
- Installation of permanent fencing at Portion A, B1 & E4
- Site formation at Portion A & E3-1
- Tree felling at Portion E3-1 & E4

Environmental Monitoring and Audit Progress

A summary of the monitoring activities in this reporting period is listed below:

	Items	Times	Date
-	Air Quality Monitoring during normal weekdays at each monitoring station	5 times	6, 12, 18, 24 & 29 April 2023
-	Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	6, 12, 18 & 24 April 2023
-	Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	6 April 2023
-	Landfill Gas Monitoring during normal weekdays for Construction Works	22 times	1, 3, 4, 6, 11 to 15, 17 to 29 April 2023
-	Post-translocation Monitoring during normal weekdays at recipient site	1 time	19 April 2023
-	Post-transplantation monitoring and audit during normal weekdays for transplanted plants and receptor sites	1 time	21 April 2023
-	Joint Environmental Site Inspection	4 times	3, 11, 17 & 24 April 2023

Environmental Exceedance

Air Quality, Noise, Surface Water Quality & Landfill Gas Monitoring

No exceedance of the Action and Limit Levels for was recorded at designated monitoring stations during the reporting period.

Environmental Non-conformance/Compliant/Summons and Prosecution

No non-compliance event and complaint were recorded during the reporting period.

No summons/prosecutions were received in this reporting period.

Reporting Change

There was no reporting change in the reporting period.

Future Key Issues

Works to be undertaken in the next month include:

-	Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground
-	Permanent site office foundation works with pouring of concrete at Portion D
-	Site clearance at Portion A, E3-1, B1 & E4
-	Installation of permanent fencing at Portion A, B1 & E4
-	Site formation at Portion A & E3-1
-	Tree felling at Portion E3-1 & E4

Potential environmental impacts arising from the above construction activities are mainly associated with air quality, construction noise, water quality, waste management, landfill gas monitoring, landscape and visual, cultural heritage and ecology.

1. Introduction

1.1. Background

1.1.1. The North East New Territories Landfill Extension (the NENTX Project) is located adjacent to the existing North East New Territories (NENT) Landfill at Ta Kwu Ling. The extension site is located in a valley covering mainly the existing NENT Landfill Stockpile and Borrow Area that was formed to the east of the existing landfill as part of the original site development of the landfill, and layout plan shown in **Figure 1**.

1.1.2. The NENTX is a designated project. The Environmental Impact Assessment (EIA) Report (AEIAR-111/2007) and an Environmental Monitoring and Audit Manual were approved on 20 September 2007. The project is governed by an Environmental Permit (EP) (EP-292/2007) which was granted on 26 November 2007. A further of EP (FEP) was applied and the FEP (FEP-01/292/2007) was subsequently granted on 28 April 2022.

1.1.3. In accordance with the requirements specified in Section 2.6 to 2.10 and Section 12.3 of the approved Environmental Monitoring and Audit (EM&A) Manual and Environmental Permit (EP and FEP) condition 3.3, Monthly EM&A report should be submitted to the Director of Environmental Protection (DEP), within 2 weeks after the end of the reporting month. The submissions shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC).

1.1.4. The construction phase and EM&A programme of the Project commenced on 1 December 2022.

1.2. Nature, Scale and Scope of the captioned Designated Project

1.2.1 The Nature, Scale and Scope of the captioned Designated Project is presented in **Table 1-1**.

Table 1-1 Nature, Scale and Scope of the captioned Designated Project

Item(s)	Content
Nature of Designated Project	Construction and operation of a landfill for waste as defined in the "Waste Disposal Ordinance" (Cap. 354)
Scale and Scope of Designated Project	The Project mainly consists of the followings: - Construction and operation of a landfill extension of about 70 hectares with a target void space of at least 19 million cubic metres on the eastern side of the existing NENT Landfill, including the followings: - i. Site formation and preparation; ii. Installation of liner system; iii. Installation of leachate collection, treatment and disposal facilities; iv. Installation of gas collection, utilization and management facilities; v. Utilities provisions and drainage diversion; vi. Landfilling operation; vii. Restoration and aftercare in subsequent stages; and viii. Measures to mitigate environmental impacts as well as environmental monitoring and auditing to be implemented.

1.3. Purpose of this Report

1.3.1. This is the 5th Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 01 to 30 April 2023.

1.4. Structure of the Report

1.4.1. The structure of the report is as follows:

Section 1 – Introduction
- details the background, purpose and structure of the report.

Section 2 – Project Information
- summarises background and scope of the Project, site description, project organization and contact details, construction programme, the construction works undertaken and the status of Environmental Permit(s)/License(s) during the reporting period.

Section 3 – Air Quality Monitoring

- Construction Dust

Section 4 – Noise Monitoring

Section 5 – Water Quality Monitoring

- Groundwater Monitoring

- Surface Water Monitoring

Section 6 – Waste Management

Section 7 – Landfill Gas Monitoring

Section 8 – Landscape and Visual

Section 9 – Cultural Heritage

Section 10 – Ecological Monitoring

Section 11 – Site Inspection and Audit

Section 12 – Environmental Non-Conformance

Section 13 – Implementation Status on Environmental Mitigation Measures

Section 14 – Future Key Issues

2. Project Information

2.1. Construction Activities

2.1.1. A summary of the major construction activities undertaken in this reporting period is shown in **Appendix L**. Construction programme is illustrated in **Appendix A**.

2.2. Project Organization & Management Structure

2.2.1. The Project Organization Chart & Management Structure are shown in **Appendix B**. The key personnel contact information is summarized in **Table 2-1**.

Table 2-1 Contact Information of Key Personnel

Party	Name	Contact Number
Contractor (Veolia Environmental Service Hong Kong Ltd.)	Mr. William Wan	2902 5296
Independent Environmental Checker (IEC) (Meinhardt Infrastructure and Environment Ltd.)	Ms. Claudine Lee	2859 5409
Environmental Team Leader (ETL) (Aurecon Hong Kong Limited)	Mr. Fredrick Leong	3664 6888

2.3. Status of Submission required under the FEP & EP during reporting period

2.3.1. The status of statutory environmental compliance with the EP conditions under the EIAO, submission status under the FEP & EP during reporting period are presented in **Table 2-2**. The detail status of statutory environmental compliance with the EP conditions under the EIAO, submission status under the FEP & EP for NENTX project are shown in **Appendix O**.

Table 2-2 Status of Submissions required under the FEP & EP during reporting period

FEP Condition	EP Condition	Submission / Measures	Status
2.1	2.3	Management Organization of Main Construction Companies	Submitted
2.2	2.4	Setting up of Community Liaison Group (CLG)	Community Liaison Group was set up.
2.3	2.5	Submission of EM&A Manual	Submitted
2.5	2.7	Submission of Vegetation Survey (Transplantation Proposal)	Submitted
2.6	2.8	Submission of translocation proposal	Submitted
2.7	2.9	Submission of Transplantation Report and Post-Transplantation Monitoring	Submitted 9th post-transplantation monitoring (21 Apr 2023)
2.8	2.10	Submission of Translocation Report and Post-Translocation Monitoring	Translocation was carried out and the report submitted. 9th post-translocation monitoring (19 Apr 2023)
2.9	2.11	Submission of Detailed Landfill Gas Hazard Assessment Report	Submitted
2.10	2.12	Submission of Waste Management Plan	Submitted
3.2	3.2	Submission of Baseline Monitoring Report	Submitted

2.4. Status of Environmental Approval Document

2.4.1. A summary of the relevant valid permits, licences, and/or notifications on environmental protection for this Project since the granting of the FEP & EP is presented in **Table 2-4**.

Table 2-4 Summary of the relevant valid permits, licences, and/or notifications on environmental protection

Permit / Licenses / Notification	Reference	Expiry Date	Remark
Environmental Permit (EP)	EP-292/2007	Throughout the Contract	Permit granted on 26 November 2007
Further Environmental Permit (FEP)	FEP-210/2022	Throughout the Contract	Permit granted on 28 April 2022
Notification of Construction Works as required under Air Pollution Control (Construction Dust) Regulation	479809	Throughout the Construction Phase	Notified on 13 May 2022
Registration of Waste Producer under Waste Disposal Ordinance	7043692	Throughout the Contract	Registered on 13 April 2022
Registration as Chemical Waste Producer	5213-642-P1034-18	Throughout the Contract	Registered on 11 July 2022
Construction Noise Permit	GW-RN0299-23	22 June 2023	Permit granted on 21 March 2023
Effluent Discharge License under Water Pollution Control Ordinance	WT00042301-2022	31 October 2027	Permit granted on 18 October 2022 Variation of Licence (Permit granted on 7 February 2023)

2.5. Environmental Monitoring and Audit Progress

2.5.1. A summary of the monitoring activities in this reporting period is presented in **Table2-5**.

Table 2-5 Summary of the Monitoring Activities in this reporting period

Items	Times	Date
- Air Quality Monitoring during normal weekdays at each monitoring station	5 times	6, 12, 18, 24 & 29 April 2023
- Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	6, 12, 18 & 24 April 2023
- Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	6 April 2023
- Landfill Gas Monitoring during normal weekdays for Construction Works	22 times	1, 3, 4, 6, 11 to 15, 17 to 29 April 2023
- Post-translocation Monitoring during normal weekdays at recipient site	1 time	19 April 2023
- Post-transplantation monitoring and audit during normal weekdays for transplanted plants and receptor sites	1 time	21 April 2023
- Joint Environmental Site Inspection	4 times	3, 11, 17 & 24 April 2023

Air Quality

5 sets of 1-hr & 24-hr TSP construction dust measurement were carried out at each monitoring stations during normal weekdays of the reporting period.

No Action / Limit Level exceedance for 1-hr & 24-hr TSP impact monitoring at AM1, AM2 & AM3 was recorded during the period.

Noise

4 sets of 30-minute construction noise measurement were carried out at each monitoring stations during normal weekdays of the reporting period. No exceedance of Action and Limit Levels of construction noise was recorded during the reporting period.

Groundwater

Site clearance of future landfilling area is in progress. The installation of groundwater monitoring boreholes will be installed after the site formation work of the landfilling area. The target commencement period of groundwater monitoring will be in 2026. No groundwater monitoring is required before the completion of site formation work of the landfilling area.

Surface Water Quality

1 set of surface water quality measurement were carried out at each monitoring stations during normal weekdays of the reporting period. No exceedance of Action and Limit Levels of surface water quality was recorded during the reporting period

Landfill Gas

22 sets of landfill gas measurement were carried out at a designated monitoring location during normal weekdays of the reporting period. No exceedance of Action and Limit Levels of landfill gas was recorded during the reporting period.

Landscape and Visual

All the specified and affected LCAs, LRs and VSRs have been monitored during the reporting period. No exceedance of Action and Limit Levels of landscape and visual was recorded during the reporting period.

Cultural Heritage

Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

Ecology

1 set of post-translocation monitoring at recipient site and 1 set of post-transplantation monitoring and audit for transplanted plants and receptor sites during normal weekdays of the reporting period were carried out. Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

Environmental Site Inspection

4 weekly environmental site inspections were carried out during the reporting period. A joint environmental site inspection was carried out by the representatives of the Employer's Representative (ER), the Contractor, IEC and the ET on 17 April 2023. The Contractor has generally implemented the mitigation measures as recommended.

3. Air Quality Monitoring

3.1 Construction Dust

3.1.1 Monitoring Requirement

3.1.1.1 In accordance with the EM&A Manual, 1-hr & 24-hr Total Suspended Particulates (TSP) levels should be measured at the designated air quality monitoring stations in every 6 days to ensure that any deteriorating air quality could be readily detected, and timely action shall be undertaken to rectify such situation. For 1-hr TSP monitoring, the sampling frequency of at least three times in every six-days should be undertaken when the highest dust impact occurs. The specific time to start and stop the 24- hr TSP monitoring shall be clearly defined for each location.

3.1.2 Monitoring Parameters, Frequency and Location

3.1.2.1 According to the EM&A Manual, three monitoring stations namely AM(D)1, AM(D)2 and AM(D)3 are selected for the impact monitoring.

3.1.2.2 A baseline monitoring plan has been submitted to IEC and EPD on 31 May 2022 including the proposal with justification of change of monitoring locations. Due to limited access to the original monitoring locations at AM(D)1, AM(D)2 and AM(D)3, the adjusted stations at AM1, AM2 and AM3 were agreed with IEC prior to the baseline and impact monitoring. The locations of adjusted dust monitoring locations are shown in **Figure 2**.

3.1.2.3 The detailed monitoring schedule is shown in **Appendix C**. The locations of dust monitoring stations are shown in **Table 3-1**. The monitoring parameters, frequency and duration are shown in **Table 3-2**.

Table 3-1 Locations of Dust Monitoring Stations

Monitoring Station	Representative for	Monitoring Parameters
AM1	Tung Lo Hang	1-hr and 24-hr TSP
AM2	Heung Yuen Wai	1-hr and 24-hr TSP
AM3	Wo Keng Shan Tsuen	1-hr and 24-hr TSP

Remarks:

The contractor passed correspondence including original monitoring locations specified on the Approved EM&A Manual to the village representatives on 26 April 2022. After a meeting with Ta Kwu Ling District Rural Committee (RC) Chairman, representative from the RC and a few villagers on 1 May 2022, all the Village Heads of Wo Keng Shan Tsuen, Heung Yuen Wai and Lin Ma Hang verbally refused to accept our proposal for installation of dust and / or noise monitoring equipment within or next to their villages, for the baseline & impact monitoring.

AM(D)1 Tung Lo Hang, AM(D)2 Heung Yuen Wai, AM(D)3 Wo Keng Shan Tsuen are the air monitoring stations for the construction phase EM&A programme as identified in the approved EM&A Manual for the Project. The access to Tung Lo Hang, Heung Yuen

Wai and Wo Keng Shan Tsuen were denied. A search for alternative air monitoring locations (AM1, AM2 & AM3) was carried out during the site visit.

The Baseline Monitoring Plan has been submitted to IEC and EPD including the proposal of change of monitoring locations on 31 May 2022. This arrangement was conducted between baseline and impact monitoring and has been agreed by the Independent Environmental Checker (IEC) and no comment received from EPD.

Due to the adjustment of the location of AM(D)1, AM(D)2 & AM(D)3to AM1, AM2 & AM3, the measured air quality levels at AM1, AM2 & AM3 would represent the air quality levels at AM(D)1, AM(D)2 & AM(D)3.

Table 3-2 Dust Impact Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
AM1, AM2, AM3	1-hr TSP	At least 3 times per 6 days
	24-hr TSP	1 time per 6 days

3.1.3 Monitoring Equipment

3.1.3.1 High volume samplers (HVSs) were used for carrying out 24-hr TSP monitoring. For 1-hr TSP monitoring, direct reading dust meters were used to measure 1-hr TSP levels.

3.1.3.2 **Table 3-3** summarises the equipment that were used in the dust monitoring programme. The calibration certificates are shown in **Appendix D**.

Table 3-3 Dust Monitoring Equipment

Equipment	Model	Expiry Date	Monitoring Station
High Volume Sampler (HVS)	TE-5170X (S/N: 1105)	6 May 2023	AM1
	TE-5170X (S/N: 1106)		AM2
	TE-5170X (S/N: 1856)		AM3
Direct Reading Dust Meter	Sibata LD-5R (S/N: 0Z4545)	2 Dec 2023	AM1 to AM3
	Sibata LD-5R (S/N: 882106)		
	Sibata LD-5R (S/N: 882110)		
	Sibata LD-5R (S/N: 942532)		
Calibration Kit (for HVS)	TE-5025A (S/N: 3465)	28 Jun 2023	AM1 to AM3

3.1.4 Monitoring Methodology

1-hr TSP Monitoring

3.1.4.1 The 1-hr TSP impact monitoring was conducted using a portable direct reading dust meter.

Measuring Procedures

3.1.4.2 The measuring procedures of the 1-hr dust meter has been undertaken in accordance with the Manufacturer's Instruction Manual as follows:

Procedure of starting monitoring

- Place the 1-hr dust meter at least 1.3m above ground;
- Turn on the "On/Off" button at the side of instrument. Program will be changed to "BG" mode and leave it for 1 minute.
- Pull out the Suction adaptor and turn the button at the side. Cover with hand at the suction adaptor measure the background for 10 seconds.
- Press " UP" and " DOWN" for choosing "SPAM Mode" for SPAM Measurement.
- Press "Up" and "Down" to select "Measurement Mode" with 60 minutes interval and unit in ug/m3.
- Press "Start/Stop" to start monitoring.

Procedure of setting measurement timer

- Press "Up" or "Down" to find "Setting LOG".
- Select "Record Cycle" and change the record time subject to different project requirement. For example, setting the record cycle as 60 minutes for normal operation.
- Press "ESCAPS" back to the main page.
- Press "Up" or "Down" to access "Measurement Timer" and select "Measurement time" to change the time to 3 hours.
- Information such as sampling date, time, count value and site condition will be recorded during the monitoring period.

Calibration & Maintenance

3.1.4.3 The direct reading dust meters will be verified against calibrated high volume samples (HVSs) annually. A 2-day, three 3-hour measurement results per day from direct reading dust meter will be taken to compare with the sampling results from the HVS. The correlation between the direct reading dust meter and the HVS will then be concluded. By accounting for the correlation factor, the direct reading dust meter will be considered to achieve comparable results as that of the HVS.

3.1.4.4 All digital dust indicator will be calibrated with on-site HVS annually. Calibration certificate will be provided after calibration. The Calibration process shall eyewitness with the representative of ET & IEC.

Quality Audit

3.1.4.5 Checklist of regular checking for digital dust meter will be conducted bi-weekly by environmental technician to ensure the all-digital dust meter are in good condition and submitted to supervisors. All checklists will be kept by supervisors.

3.1.4.6 Logbook is provided to environmental technician record the transferal of equipment to other colleagues, reporting to supervisors is required.

24-hr TSP Monitoring

3.1.4.7 The 24-hr TSP monitoring has been conducted using a High-Volume Sampler (HVS).

Measuring Procedures

3.1.4.8 The HVS has been set-up at the monitoring location with a fixed power supply for operation. The measuring procedures of the 24-hr TSP measurements has been undertaken in accordance with the specifications listed in the EM&A Manual. Each HVS includes a motor, a filter holder, a flow controller and a sampling inlet in accordance with the performance specification of the USEPA Standard Title 40, Code of Federation Regulations Chapter 1 (Part 50), Appendix B. The measuring procedures of the 24-hr dust meter was undertaken in accordance with the Manufacturer's Instruction Manual as follows:

- The power supply will be checked to ensure the HVS works properly;
- The filter holder and the area surrounding the filter will be cleaned;
- The filter holder will be removed by loosening the four bolts and a new filter on a supporting screen will be aligned carefully;
- The filter will be properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter;
- The swing bolts will be fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges;
- The shelter lid will be closed and secured with the aluminium strip;
- The HVS will be warmed-up to establish run-temperature conditions;
- A new flowrate record sheet will be set into the flow recorder;
- The programmable timer will be set for a sampling period of 24 hour, and the starting time, weather condition and the filter number will be recorded;
- The initial elapsed time will be recorded;
- At the end of sampling, the sampled filter will be removed carefully and folded in half-length so that only surfaces with collected particulate matter will be in contact;
- The sample will be placed in a clean plastic envelope and sealed;
- All monitoring information will be recorded on a standard data sheet; and
- The filters will be taken back to HOKLAS accredited laboratory for analysis.

3.1.4.9 In addition, site conditions and dust sources were recorded in a standard form for direct input into a database.

Calibration & Maintenance

3.1.4.10 The high volume motors and their accessories should be properly maintained, including routine motor brushes replacement and electrical wiring checking, to ensure that the equipment and a continuous power supply were in good working condition.

3.1.4.11 Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually.

The detail procedure of calibration of HVS is listed below:

1. Make sure the electrical circuit is connected properly. The motor should be directly connected to the power source.
2. Open the top cover and unlock the screws at the four corners.
3. Install the orifice and adapter plate to high volume air sample. Tighten the nut securely. Turn the knob of orifice clock-wise to close the four holes on the bottom open.
4. Hold the water manometer on the cover of mass flow controller vertically. Connect one side of a water manometer to the pressure tap on the side of the orifice with a rubber vacuum tube. Leave opposite side of the manometer open to the atmosphere.
5. Turn on the sampler
6. Five flow rates are achieved by changing the different plates to change the resistance. Record the manometer reading and the reading from continuous flow recorder. At least 5 sets of data should be recorded.

3.1.4.12 The Calibration process shall eyewitness with the representative of ET & IEC.

3.1.5 Monitoring Results

3.1.5.1 The impact dust monitoring results are summarized in **Table 3-4** and **Table 3-5.** The monitoring data together with graphical presentations are presented in **Appendix E** and **Appendix F**.

Table 3-4 Summary of Impact 1-hr TSP Monitoring Results

Dust Monitoring Station	Average 1-hr TSP Concentration, µg/m³ (Range)	Action Level, µg/m³	Limit Level, µg/m³
AM1	35 (19 – 55)	>285	>500
AM2	42 (31 – 76)	>279	>500
AM3	40 (23 – 54)	>285	>500

Table 3-5 Summary of Impact 24-hr TSP Monitoring Results

Dust Monitoring Station	Average 24-hr TSP Concentration, µg/m³ (Range)	Action Level, µg/m³	Limit Level, µg/m³
AM1	60 (34 – 112)	>164	>260
AM2	63 (37 – 111)	>152	>260
AM3	70 (40 – 151)	>163	>260

3.1.5.2 The Summary of Impact 1-hr & 24-hr TSP Exceedance are shown in **Table 3-6**. The Notification of Environmental Quality Limits Exceedances are presented in **Appendix G**.

Table 3-6 Summary of Impact 1-hr & 24-hr TSP Exceedance during the reporting period

Dust Monitoring Station	Parameter Level Exceedance	1-hr TSP	24-hr TSP	Exceedance Count
AM1	Action	0	0	0
	Limit	0	0	0
AM2	Action	0	0	0
	Limit	0	0	0
AM3	Action	0	0	0
	Limit	0	0	0

Remarks: * equal to non-project related

3.1.5.3 No Action / Limit Level exceedance for 1-hr & 24-hr TSP impact monitoring at AM1, AM2 & AM3 was recorded during the period.

3.1.6 Wind Data Monitoring

3.1.6.1 During the monitoring period. wind data from existing weather station in the vicinity of the designated monitoring location, i.e Ta Kwu Ling station operated by Hong Kong Observatory was adopted. It is considered that the wind data obtained from Ta Kwu Ling station are representative of the Project area and could be used for the construction dust monitoring programme for the Project. The results for wind data monitoring are presented in **Appendix H**.

3.1.7 Recommended Mitigation Measures

3.1.7.1 The recommended dust mitigation measures from EIA report are listed as followed:

- The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.
- Dust emission from construction vehicle movement is confined within the worksites area.

- Watering facilities will be provided at every designated vehicular exit point.
- Good site practice is recommended during construction phase.

3.1.8 Event and Action Plan

3.1.8.1 Should non-compliance of the criteria occur, action in accordance with the action plan in **Table 3-7** shall be carried out.

Table 3-7 Event and Action Plan for dust impact

Event	ET	IEC	Contractor
Exceedance of Action Level			
Exceedance for one sample	• Identify source • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurement to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below action level	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor on proposed remedial measures	• Rectify any unacceptable practice • Amend working methods if appropriate
Exceedance for two or more consecutive samples	• Identify source • Prepare Notification of Exceedance • Inform Contractor and IEC • Repeat measurements to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below action level • Discuss with IEC for remedial action required • Ensure remedial measures are properly implemented • Continue monitoring at daily intervals if exceedance is due to the Project • If no exceedance for 3 consecutive days, cease additional monitoring	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor on proposed remedial measures • Review with analysed results submitted by ET • Review the proposed remedial measures by Contractor • Supervise the implementation of remedial measures	• Submit proposals for remedial actions to IEC within 3 working days of notification • Implement the agreed proposals • Amend proposal if appropriate

Event	ET	IEC	Contractor
Exceedance of Limit Level			
Exceedance for one sample	• Identify source • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurement to confirm findings • Increase monitoring frequency to daily if exceedance is due to the Project and continue until the monitoring results reduce to below limit level • Assess effectiveness of Contractor's remedial actions and keep EPD and IEC informed of the results	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss with ET and Contractor potential remedial actions • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC within 3 working days of notification • Implement the agreed proposals • Amend proposal if appropriate
Exceedance for two or more consecutive samples	• Identify source • Prepare Notification of Exceedance • Inform IEC and EPD the causes and actions taken for the exceedances • Discuss with IEC for remedial action required • Ensure remedial measures are properly implemented • Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and informed of the results • Increase monitoring frequency to confirm findings • If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working methods • Discuss amongst ET and Contractor on the potential remedial actions. • Review Contractor's remedial actions whenever necessary to assure their effectiveness • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC of notification • Implement the agreed proposals • Resubmit proposals if problem still not under control • Stop the relevant activity of works until the exceedance is abated

4 Noise Monitoring

4.1 Monitoring Requirement

4.1.1 In accordance with the EM&A manual, noise impact monitoring shall be carried out at 2 monitoring stations NM1 and NM2 once a week during normal construction working hour (0700-1900 Monday to Saturday). The minimum logging interval shall be 30 minutes with average of 6 consecutive Leq 5 mins. L10 and L90 shall also be measured at 5 mins intervals.

4.2 Monitoring Locations, Parameters and Frequency

4.2.1 According to the EM&A Manual, two monitoring stations namely NM1 and NM2 are selected for the impact monitoring.

4.2.2 A baseline monitoring plan has been submitted to IEC and EPD on 31 May 2022 including the proposal with justification of change of monitoring locations. Due to limited access to the original monitoring locations at NM1 and NM2, the adjusted stations at NM1a and NM2a were agreed with IEC prior to the baseline and impact monitoring. The noise monitoring locations are summarized in **Table 4-1** and shown in **Figure 2**.

4.2.3 The detailed monitoring schedule is shown in **Appendix C**. The frequency and duration are shown in **Table 4-2**.

Table 4-1 Noise Monitoring Locations

Monitoring Station	Representative for	Type of Measurement
NM1a	Wo Keng Shan Tsuen	Free field
NM2a	Lin Ma Hang	Free field

Remarks:

The contractor passed correspondence including original monitoring locations specified on the Approved EM&A Manual to the village representatives on 26 April 2022. After a meeting with Ta Kwu Ling District Rural Committee (RC) Chairman, representative from the RC and a few villagers on 1 May 2022, all the Village Heads of Wo Keng Shan Tsuen, Heung Yuen Wai and Lin Ma Hang verbally refused to accept our proposal for installation of dust and / or noise monitoring equipment within or next to their villages, for the baseline & impact monitoring.

NM1 Wo Keng Shan Tsuen & NM2 Lin Ma Hang are the noise monitoring stations for the construction phase EM&A programme as identified in the approved EM&A Manual for the Project. The access to Tung Lo Hang, Heung Yuen Wai and Wo Keng Shan Tsuen were denied. A search for alternative noise monitoring locations (NM1a & NM2a) was carried out during the site visit.

The Baseline Monitoring Plan has been submitted to IEC and EPD including the proposal of change of monitoring locations on 31 May 2022. This arrangement was conducted between baseline and impact monitoring and has been agreed by the Independent Environmental Checker (IEC) and no comments received from EPD. Noise measurement at NM1a & NM2a will be considered as free-field and a correction of +3dB(A) would be made to the noise monitoring results.

Due to the adjustment of the location of NM1 & NM2 to NM1a & NM2a, the measured noise levels at NM1 & NM2 would represent the noise levels at NM1 & NM2.

Table 4-2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Station	Parameter	Frequency and Duration
NM1a and NM2a	L_{Aeq} (30mins) average of 6 consecutive L_{eq} (5min); L10 (5min) & L90 (5min)	once a week during normal construction working hour (0700-1900 Monday to Saturday)

4.3 Monitoring Equipment

4.3.1 Integrating Sound Level Meters (SLMs) was used for noise impact monitoring. The SLM complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications shall be used for carrying out noise monitoring. The accuracy of the SLM was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Measurements shall be accepted as valid only if the calibration level from prior to and after the noise measurement agrees to within 1.0dB.

4.3.2 A portable wind speed meter was used for measuring wind speeds in m/s.

4.3.3 **Table 4-3** summarises the equipment that have been used in the impact noise monitoring programme. The calibration certificates are shown in **Appendix D**.

Table 4-3 Noise Monitoring Equipment

Equipment	Model	Expiry Date
Sound Level Meter	NTi XL2 (S/N: A2A-13661-E0)	21 Aug 2023
Acoustic Calibrator	Rion NC-75 (S/N: 34724243)	10 Jul 2023
Anemometer	RS PRO RS-90 (S/N: 210722208)	12 Feb 2025

4.4 Monitoring Methodology

4.4.1 The details of noise measurement procedures are described as follows:

- Free-field measurements were made at the monitoring locations.
- For free field, the Sound Level Meter was set at a height of 1.2 m above the ground. The battery condition was checked to ensure the proper functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
- Frequency weighting: A
- Time weighting: Fast
- Measurement time: 5 minutes (Leq (30-min) would be determined for daytime noise by calculating the logarithmic average of six Leq (5min) data.)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid

and repeat of noise measurement would be required after recalibration or repair of the equipment.

- Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
- At the end of the monitoring period, the Leq, L10 and L90 shall be recorded. In addition, site conditions and noise sources should be recorded on a standard record sheet.
- All noise monitoring will be conducted with the wind speed not exceeding 5m/s and no gusts exceeding 10m/s.

Calibration & Maintenance

4.4.2 The sound level meter, sound calibrator, and anemometer should be properly maintained to ensure that the equipment and a continuous power supply were in good working condition. The sound level meter and sound calibrator will be calibrated annually. The anemometer will be calibrated two years interval in accordance with the HOKLAS Supplementary Criteria No.2. Calibration certificate will be provided after calibration.

4.4.3 The microphone head of the sound level meter and calibrator should be cleaned with a soft cloth at quarterly intervals.

4.5 Monitoring Results

4.5.1 The impact noise monitoring results are summarized in **Table 4-4**. The monitoring data together with graphical presentations are presented in **Appendix E** and **Appendix F**.

Table 4-4 Summary of Noise Monitoring Results during normal working hours (07:00-19:00, Monday to Saturday)

Noise Monitoring Station	Average Leq, 30min, dB(A) (Range)	Action Level	Limit Level
NM1a	56.8 (53.7 – 58.4)	When one documented complaint is received	>75dB(A)
NM2a	60.1 (52.8 – 65.4)		

Remark:

(1) * A correction of +3 dB(A) was made to the free field measurements

(2) 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.

4.5.2 No exceedance of Action and Limit Levels of construction noise was recorded during the reporting period. Therefore, there was no record of Notification of Environmental Quality Limits Exceedance in the **Appendix G**.

4.5.3 No particular observations are identified near the monitoring stations during the monitoring period.

4.6 Recommended Mitigation Measures

4.6.1 The recommended noise mitigation measures from EIA report are listed as followed:

1. Use of good site practices to limit noise emissions by considering the following:
    - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;
    - Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;
    - Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;
    - Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;
    - Mobile plant should be sited as far away from NSRs as possible and practicable;
    - Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.
2. Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards.

4.7 Event and Action Plan

4.7.1 Should non-compliance of the criteria occurs, action in accordance with the action plan in **Table 4-5** shall be carried out.

Table 4-5 Event and action plan for construction noise monitoring

Event	ET	IEC	Contractor
Exceedance of Action Level	• Identify source, investigate the causes of exceedance • Prepare Notification of Exceedance • Inform IEC and Contractor • Report the results of investigation to IEC, and Contractor • Discuss with Contractor and IEC for formulate remedial measures • Ensure remedial measures are properly implemented • Have additional monitoring if exceedance is due to the Project. If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Review the analysed results submitted by ET • Discuss with ET, and Contractor on the potential remedial actions • Review the proposed remedial measures • Supervise the implementation of remedial measures	• Submit noise mitigation proposals to IEC • Implement the agreed noise mitigation proposals
Exceedance of Limit Level	• Identify source, investigate the causes of exceedance • Prepare Notification of Exceedance • Inform IEC and Contractor • Repeat measurements to confirm findings • Discuss with Contractor and IEC for remedial measures • Ensure remedial measures are properly implemented • Assess effectiveness of Contractor's remedial actions and keep IEC and EPD informed of the results • Have additional monitoring if exceedance is due to the Project. If exceedance stops, cease additional monitoring	• Verify the Notification of Exceedance • Review the analysed results submitted by ET • Discuss with ET, and Contractor on the potential remedial actions • Review the proposed remedial measures • Supervise the implementation of remedial measures	• Take immediate action to avoid further exceedance • Submit proposals for remedial actions to IEC of notification • Implement the agreed proposals • Resubmit proposals if problem still not under control • Stop the relevant portion of works as determined by project proponent until the exceedance is abated.

5 Water Quality Monitoring

5.1 Groundwater Monitoring

5.1.1 Monitoring Requirement

5.1.1.1 In accordance with the EM&A manual, groundwater quality monitoring shall be carried out at least once per month at the 35 designated groundwater monitoring locations (i.e ED1 to ED35). Based on the existing construction programme, site clearance and site formation works for future landfilling area are in progress. The groundwater monitoring locations ED1 to ED35 will be installed after the site formation work of the landfilling area. No groundwater monitoring is required before the completion of site formation work of the landfilling area.

5.2 Surface Water Monitoring

5.2.1 Monitoring Requirement

5.2.1.1 In accordance with the EM&A manual, impact surface water quality monitoring was carried out at the two designated surface water discharge points (i.e WM1 and WM2) for once per month from commencement of construction works of the Project.

5.2.2 Monitoring Locations, Parameters and Frequency

5.2.2.1 Impact surface water monitoring was carried out on 6 April 2023 at WM1 and WM2. The monitoring locations are indicated in **Table 5-1** and **Figure 2**.

5.2.2.2 The monitoring parameters, frequency and duration of surface water quality monitoring are summarized in **Table 5-2**. Detailed monitoring schedule is presented in **Appendix C**.

Table 5-1 Surface water quality monitoring locations

Monitoring Station	Location	Coordinates (HK Grid)	
		Easting	Northing
WM1	Upstream of Lin Ma Hang River	836665	845020
WM2	Ping Yuen River	835592	844186

Table 5-2 Surface water quality monitoring Parameters, Frequency and Duration

Parameter	Frequency
pH, Electrical conductivity, DO, Turbidity, SS, Alkalinity, COD, BOD_5, TOC, Ammonia-nitrogen, TKN, Nitrate, Sulphate, Sulphite, Phosphate, Chloride, Sodium, Mg, Ca, K, Fe, Ni, Zn, Mn, Cu, Pb, Cd, Coliform Count, Oil and Grease	once per month

5.2.3 Monitoring Equipment

5.2.3.1 The measurements of pH, electrical conductivity (EC), DO, turbidity, water temperature and air temperature were undertaken in situ. In situ monitoring instruments in compliance with the specifications listed under Section 5.5 of the EM&A Manual were used to undertake the surface water quality monitoring for the Project. **Table 5-3** summarises the equipment used in the impact surface water quality monitoring works. Copies of the calibration certificates are attached in **Appendix D**.

Table 5-3 Surface Water Quality Monitoring Equipment

Equipment	Model	Expiry Date
Water Quality Meter	Horiba U-53 (S/N: PORBNFNT)	16 Apr 2023
Water Flow Meter	FP111 (S/N: 22K100859)	6 Nov 2023

5.2.4 Summary of Surface Water Quality Monitoring Procedure

Operational/ Analytical Procedures

5.2.4.1 In general, water samples were collected from within 500 mm of the water surface. Water was collected by a small clean open-mouthed bucket with the lip pointing upstream. Usually, water was then transferred to the sample bottles until they were filled to the top with no remaining air space before the lid was securely screwed on. For samples that were preserved with acid or alkalis prior to transport to the laboratory, the samples bottles were filled to the level specified by the analytical laboratory.

5.2.4.2 Analyses shall be carried out in accordance with methods described in ASTM or APHA - AWWA-WEF Standard.

Laboratory Analytical Methods

5.2.4.3 The testing of parameters presented in **Table 5-4** for all stations was conducted by ALS Technichem (HK) Pty Ltd. (HOKLAS Registration No. 066). Comprehensive quality assurance and control procedures were in place in order to ensure quality and consistency in results. The detection limits are provided in **Table 5-4**.

Table 5-4 Surface Water Monitoring Detection Limits and Limit of Reporting

Parameters	Detection Limit (in EM&A Manual)	Limit of Reporting	Method Reference
pH	0.1	0.1	APHA 4500 H+ B
Electrical conductivity	1 μS/cm	1 μS/cm	APHA 2510 B
Alkalinity	1 mg/L	1 mg/L	APHA 2320 B
COD	10 mg/L	5 mg/L	APHA 5220 C
BOD_5	3 mg/L	2 mg/L	APHA 5210 B
TOC	1 mg/L	1 mg/L	APHA 5310 B
SS	0.1 mg/L	0.1 mg/L	APHA 2540 D
Ammonia-nitrogen	0.2 mg/L	0.01 mg/L	APHA 4500 NH3 G
TKN	0.4 mg/L	0.1 mg/L	APHA 4500Norg: D
Nitrate	0.5 mg/L	0.01 mg/L	APHA 4500 NO3 I
Sulphate	5 mg/L	1 mg/L	USEPA 375.4
Sulphite	2 mg/L	2 mg/L	APHA 4500 SO3 B
Phosphate	0.01 mg/L	0.01 mg/L	APHA 4500-P B & F
Chloride	0.5 mg/L	0.5 mg/L	USEPA 325.1
Sodium	50 μg/L	50 μg/L	USEPA 6010C
Mg	50 μg/L	50 μg/L	USEPA 6010C
Ca	50 μg/L	50 μg/L	USEPA 6010C
K	50 μg/L	50 μg/L	USEPA 6010C
Fe	50 μg/L	10 μg/L	USEPA 6010C
Ni	1 μg/L	1 μg/L	USEPA 6020A
Zn	10 μg/L	10 μg/L	USEPA 6020A
Mn	1 μg/L	1 μg/L	USEPA 6020A
Cu	1 μg/L	1 μg/L	USEPA 6020A
Pb	1 μg/L	1 μg/L	USEPA 6020A
Cd	0.2 μg/L	0.2 μg/L	USEPA 6020A
Coliform Count	1 cfu/ 100mL	1 cfu/ 100mL	DoE section 7.8, 7.9.4.1 & 3
Oil and Grease	5 mg/L	5 mg/L	APHA 5520 B

QA/ QC Requirements

5.2.4.4 All in situ monitoring instruments were checked, calibrated and certified by a laboratory accredited under HOKLAS or other international accreditation scheme before use, and subsequently re-calibrated at the intervals according to manufacturer's requirement throughout all stages of the surface water quality monitoring programme. Calibration of temperature, DO, salinity, pH and turbidity is conducted in three-month interval. Calibration of water flow is conducted annually. Responses of sensors and electrodes were checked with certified standard solutions before each use. Calibration for a DO meter was carried out before measurement according to the instruction manual of the equipment model. For the on-site calibration of field equipment, the requirements of the BS 1427:2018, "Guide to on-site test methods for the analysis of waters" was observed.

Decontamination Procedures

5.2.4.5 Water sampling equipment used during the course of the monitoring programme was decontaminated by manual washing and rinsed with clean distilled water after each sampling location.

Sampling Management and Supervision

5.2.4.6 All sampling bottles were labelled with the sample ID (including the indication of sampling station), laboratory number and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible after the sampling. All samples were stored in a cool box and kept at less than 4°C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory. The laboratory determination works started within 24 hours after collection of water samples.

Quality Control Measures for Sample Testing

5.2.4.7 The samples testing was performed by ALS Technichem (HK) Pty Ltd. The following quality control programme was performed by the laboratory:

- One method blank; and
- One sample duplicate.

5.2.5 Monitoring Results

5.2.5.1 Impact surface water quality monitoring was conducted at WM1 and WM2 on 6 April 2023. No adverse weather was observed during reporting period. The detailed monitoring schedule is shown in **Appendix C**.

5.2.5.2 The summary of monitoring results is presented in **Table 5-5**. Detailed monitoring results at each monitoring station and graphical presentations of surface water quality (DO, SS and Turbidity) at the monitoring stations are given in **Appendix E** and **Appendix F.**

5.2.5.3 No particular observations are identified near the monitoring stations during the monitoring period.

5.2.5.4 No exceedance of Action and Limit Levels of surface water monitoring was recorded during the reporting period. Therefore, there was no record of Notification of Environmental Quality Limits Exceedance in the **Appendix G**.

Table 5-5 Summary of Impact Surface Water Monitoring Results

Monitoring Parameter(s)	Monitoring Station					
	WM1			WM2		
	Monitoring Results	Action Level	Limit Level	Monitoring Results	Action Level	Limit Level
pH	7.1	>7.7	>7.8	7.3	>7.6	>7.7
Electrical Conductivity in µS/cm	64	---	---	147	---	---
DO in mg/L	7.8	<7.4	<4	6.7	<5	<4
Turbidity in NTU	0.4	>9.2	>9.5	64.3	>108.3	>108.9
SS in mg/L	3.2	>9.7	>11.4	48.1	>94.5	>94.7
Alkalinity	13	---		48	---	
COD	17			15		
BOD_5	<2			2.0		
TOC	2			2		
Ammonia-nitrogen	0.22			<0.01		
TKN	0.4			0.7		
Nitrate	0.03			0.14		
Sulphate	7			9		
Sulphite	<2			<2		
Phosphate	0.0			<0.01		
Chloride	8			7		
Sodium	9170			7890		
Mg	500			1370		
Ca	3720			15400		
K	720			3410		
Fe	480			9240		
Ni	<1			2		
Zn	19			35		
Mn	70			2220		
Cu	2.0			4		
Pb	<1			4		
Cd	<0.2			<0.2		
Coliform Count	420			330		
Oil and Grease	<5			<5		

5.2.6 Recommended Mitigation Measure

5.2.6.1 The recommended surface water mitigation measures from EIA report are listed as followed:

- Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities.
- The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows.
- The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediment traps should be 5 minutes under maximum flow conditions.
- All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads.
- Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.
- Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.

5.2.7 Implementation of the temporary surface water drainage system

5.2.7.1 The site inspection and audits were carried out by ER, IC, ET & Contractor on weekly basis (IEC on monthly basis) to monitor the construction progress, maintenance performance and effectiveness of temporary surface water drainage system in the Project Site to fulfil the FEP Condition 2.13, EP Condition 2.15 and the section 5.2.1.1 of the EM&A Manual. The joint environmental site inspection records are shown in **Appendix J**.

5.2.7.2 All construction site runoff would be treated by silt removal facilities to fulfil the requirement of WPCO licenses from the project. Construction site runoff from the project after treatment was discharged to Ping Yuen River. The surface water monitoring results at WM2 (after the discharge point of silt removal facilities) can reflect the water quality at Ping Yuen River during the reporting period.

5.2.8 Event and Action Plan

5.2.8.1 Should non-compliance of the criteria occurs, action in accordance with the action plan in **Table 5-6** shall be carried out.

Table 5-6 Event and Action Plan for Water Quality

Event	ET	IEC	Contractor
Action level being exceeded by one sampling day	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor • Check monitoring data, all plant, equipment and Contractor's working methods • Repeat measurement on next day of exceedance	• Verify Notification of Exceedance • Check monitoring data and Contractor's working methods	• Rectify unacceptable practice • Amend working methods if appropriate
Action level being exceeded by two or more consecutive sampling days	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss with Contractor and IEC for remedial measures • Ensure mitigation measures are implemented • Increase the monitoring frequency to daily until no exceedance of Action level • Repeat measurement on next day of exceedance	• Verify Notification of Exceedance • Check monitoring data and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Submit proposal of additional mitigation measures to IEC of notification • Implement the agreed mitigation measures • Amend proposal if appropriate

Event	ET	IEC	Contractor
Limit Level being exceeded by one sampling day	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC and Contractor; • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss mitigation measures with IEC and Contractor • Ensure mitigation measure are implemented	• Verify Notification of Exceedance • Check monitoring data submitted By ET and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Critically review the working method • Rectify unacceptable practice • Take immediate corrective actions to avoid further exceedance • Submit proposal of mitigation measures to IEC • Implement the agreed mitigation measures •
Limit level being exceeded by two or more consecutive sampling days	• Repeat in situ measurement to confirm findings • Identify source(s) of impact • Prepare Notification of Exceedance • Inform IEC, contractor and EPD • Check monitoring data, all plant, equipment and Contractor's working methods • Discuss mitigation measures with IEC and Contractor • Ensure mitigation measure are implemented	• Verify Notification of Exceedance • Check monitoring data submitted by ET and Contractor's working method • Discuss with ET and Contractor on possible remedial actions • Review the proposed mitigation measures • Supervise the implementation of mitigation measures	• Critically review the working method • Rectify unacceptable practice • Take immediate corrective actions to avoid further exceedance • Submit proposal of mitigation measures to IEC • Implement the agreed mitigation measures • Resubmit proposals if problem still not under control • Slow down or to stop relevant activity until exceedance is abated

6 Waste Management

6.1.1 Wastes generated from this Project include inert construction and demolition (C&D) materials and non-inert C&D materials. Non-inert C&D materials were made up of general refuse, steels and paper/cardboard packaging materials. Steel materials generated from the Project were also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in **Appendix I**.

6.1.2 A total of 18,466 tonnes of C&D materials was reused at alternative disposal ground (NENT Landfill) during the reporting period. A total of 1.97 tonnes of yard waste was generated during the reporting period. A total of 5.81 tonnes of general refuse and A total of 58.29 tonnes of non-recyclable yard waste was generated during the reporting period. The general refuse generated from the Project were disposed of at the NENT Landfill.

6.1.3 The recommended waste management mitigation measures from EIA report are listed as followed:

- Implement a trip-ticket system to ensure that the movement of C&D materials are properly documented and verified in accordance with DEVB TC(W) No. 6/2010.
- Concrete and masonry should be used as general fill and steel reinforcement bars can be used by scrap steel mills.
- Proper areas should be designated for waste segregation and storage wherever site conditions permit.
- Maximise the use of reusable steel formwork to reduce the amount of C&D material.
- Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement.
- On-site sorting and segregation facility of all type of wastes is considered as one of the best practice in waste management and hence, should be implemented in all projects generating construction waste.
- The sorted public fill and C&D waste should be properly reused.
- Excavated slope, stockpiled material and bund walls should be covered by tarpaulin until used in order to prevent wind-blown dust during dry weather, and to reduce muddy runoff during wet weather.

7 Landfill Gas Monitoring

7.1 Monitoring Requirement during Construction

Monitoring for Construction Works

7.1.1 Intrinsically safe portable gas detectors should be used during excavation or when working in any confined spaces, which have the potential for presence of LFG and risk of explosion or asphyxiation. The monitoring equipment should alarm, both audibly and visually, when the concentrations of the following gases were exceeded:

- CH_4: >10% Lower Explosion Limit (LEL);
- CO_2: >0.5%; and
- O_2: <18% by volume.

7.2 Monitoring Location

Monitoring Locations

7.2.1 During the construction works within the NENT Landfill Extension site with excavation of 1m deep or more, LFG concentrations should be monitored before entry and periodically during the progress of works. If drilling is required, the procedures for safety management and working procedures as stipulated in EPD's Landfill Gas Hazard Assessment – Guidance Note should be strictly adopted.

7.2.2 The monitoring frequency and areas to be monitored should be set down prior to commencement of groundworks by the Safety Officer. All measurements in excavations should be made with the monitoring tube located not more than 10mm from the exposed ground surface. Monitoring of excavations should be undertaken as follows:

7.2.3 For excavation works deeper than 1m, measurements should be made:

• at ground surface prior to excavation;
• immediately before any worker enters the excavation;
• at the beginning of each working day for the entire period the excavation remains open; and
• periodically through the working day whilst workers are in the excavation.

For excavation between 300mm and 1m deep, measurements should be made:

• directly after the excavation has been completed; and
• periodically whilst the excavation remains open.

7.2.4 For excavations less than 300mm deep, monitoring may be omitted, at the discretion of the Safety Officer.

7.2.5 The locations of LFG monitoring locations during reporting period are shown in **Table 7-1**. The Site formation layout plan is shown in **Figure 2**.

Table 7-1 Locations of LFG Monitoring during reporting period

Monitoring Location	Type of works
Portion A +55 mpD to 70 mpD Platform	Excavation Works

7.3 Monitoring Equipment

7.3.1 Gas Detector was used for carrying out LFG monitoring for Construction Works. **Table 7-2** summarises the equipment that were used in the LFG monitoring programme. The calibration certificates are shown in **Appendix D**.

Table 7-2 LFG Monitoring Equipment

Equipment	Model	Expiry Date
Gas Detector	PS200 (S/N: 373075)	16 Nov 2023

7.4 Event and Action Plan (EAP)

7.4.1 Should non-compliance of the criteria occur, action in accordance with the action plan in **Table 7-3** shall be carried out.

Table 7-3 Action Plan for the monitoring during construction phase

Parameter	Monitoring Result	Action
Oxygen (O_2)	Action Level <19% O_2	Ventilate trench/void to restore O_2 to >19%
	Limit Level <18% O_2	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore O_2 to >19%
Methane (CH_4)	Action Level >10% LEL*	Prohibit hot works Increase ventilation to restore CH_4 to <10% LEL
	Limit Level >20% LEL*	Stop works Evacuate personnel/prohibit entry Increase ventilation to restore CH_4 to <10% LEL
Carbon dioxide (CO_2)	Action Level** >0.5%** CO_2	Ventilate to restore CO_2 to <0.5%
	Limit Level >1.5% CO_2	Stop works Evacuate personnel / prohibit entry Increase ventilation to restore CO_2 to <0.5%

* LEL: Lower Explosive Limit - concentrations in air below which there is not enough fuel to continue an explosion.

** This Action Level of CO_2 at 0.5% is set for reference only, assuming no CO_2 emission from a particular location.

Depending on the baseline CO_2 levels, the Action Level at a particular location will be changed.

7.5 Monitoring Results

7.5.1 The LFG monitoring was conducted at Portion A +55 mpD to 70 mpD Platform in April 2023 (Conducted on working days). The LFG monitoring results are summarized in **Table 7-4.**

Table 7-4 Summary of LFG Monitoring Results

LFG Monitoring Station	Monitoring Date	Monitoring Parameter(s)			
		CH_4 in %	LEL in %/v	CO_2 in %	O_2 in %
		Monitoring Results			
Portion A +55 mpD to 70 mpD Platform	1 Apr 2023	0	0	0	20.4
	3 Apr 2023	0	0	0	20.3
	4 Apr 2023	0	0	0	20.2
	6 Apr 2023	0	0	0	20.3
	11 Apr 2023	0	0	0	20.4
	12 Apr 2023	0	0	0	20.2
	13 Apr 2023	0	0	0	20.1
	14 Apr 2023	0	0	0	20.2
	15 Apr 2023	0	0	0	20.1
	17 Apr 2023	0	0	0	20.3
	18 Apr 2023	0	0	0	20.2
	19 Apr 2023	0	0	0	20.2
	20 Apr 2023	0	0	0	20.1
	21 Apr 2023	0	0	0	20.3
	22 Apr 2023	0	0	0	20.2
	23 Apr 2023	0	0	0	20.2
	24 Apr 2023	0	0	0	20.2
	25 Apr 2023	0	0	0	20.3
	26 Apr 2023	0	0	0	20.1
	27 Apr 2023	0	0	0	20.1
	28 Apr 2023	0	0	0	20.2
	29 Apr 2023	0	0	0	20.3
Action Level		>10% LEL	---	>0.5%** CO_2	<19%

* LEL: Lower Explosive Limit - concentrations in air below which there is not enough fuel to continue an explosion.

** This Limit Level of CO_2 at 0.5% is set for reference only, assuming no CO_2 emission from a particular location.

7.5.2 No exceedance of Limit Levels of LFG was recorded during the reporting period. Therefore, there was no record of Notification of Environmental Quality Limits Exceedance in the **Appendix G**.

7.5.3 No effect that arose from the other special phenomena and work progress of the concerned site was noted during the current monitoring month.

7.6 Recommended Mitigation Measures

7.6.1 The recommended landfill gas mitigation measures from EIA report are listed as followed:

- Special LFG precautions should be taken due to close proximity of NENT landfill extension site to existing landfill to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity).
- Prominent safety warning signs should be erected on-site to alert all personnel and visitors of LFG hazards during excavation works.
- No smoking or burning should be permitted on-site.

- Prominent 'No smoking' and ‘No Naked Flames’ signs should be erected on-site.
- No worker should be allowed to work alone at any time in excavated trenches or confined areas on-site.
- Adequate fire fighting equipment should be provided on-site.
- Construction equipment should be equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors.
- Electrical motors and extension cords should be explosion-proof and intrinsically safe for use on-site.
- ’Permit to Work' system should be implemented.
- Welding, flame-cutting or other hot works should be conducted only under ‘Permit to Work’ system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works.

8 Landscape and Visual

8.1 Monitoring Requirement

8.1.1 In order to monitor the landscape and visual impact after providing mitigation measures effectively, all the specified and affected LCAs, LRs and VSRs should be monitored. Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

8.1.2 All relevant environmental mitigation measures listed in the approved EIA Report and the EM&A Manual and their implementation status are summarised in **Appendix K**.

8.2 Result and Observation

8.2.1 Measures to mitigate the landscape and visual impacts during the construction phase has been checked to ensure compliance with the intended aims of the measures within the reporting period. The progress of the engineering works are regularly reviewed on site to identify the earliest practical opportunities for the landscape works to be undertaken.

8.2.2 In order to monitor the landscape and visual impact after providing mitigation measures effectively, all the specified and affected LCAs, LRs and VSRs should be monitored. Implementation of the mitigation measures during construction phase of the Project has been monitored through the regular site inspection/audit.

9 Cultural Heritage

9.1.1 The Mitigation measures for preservation of the cultural landscape feature located within the project area was conducted before commencement of construction of the project based on the requirement of Survey Report and Mapping Records for Boulder Paths BP1 & 2 & Conditions of G2, G4, G5 G6, G7, G8, G14, G15, G25, G26 and G27 within NENTX.

9.1.2 The survey and mapping works carried out on 23 August 2022 and the verification works carried out on 23 August 22 confirmed that both 2 boulder paths BP1 and BP2 are fall outside the site boundary and the Project area.

9.1.3 All the affected graves within the waste boundary have been removed in accordance with section 119(1) of the Public Health and Municipal Services Ordinance (Cap 132). Removal of the graves as shown on Figure 2 attached to the FEP was proven by the visit of graves on 8 July 2022. All the graves as shown on Figure 2 attached to the FEP were abandoned and removed and no mitigation or preservation measures is necessary.

9.1.4 The Survey Report and Mapping Records for Boulder Paths BP1 & 2 was certified by ET on 10 Oct 2022, was verified by IEC and submitted to EPD on 12 Oct 2022. The Conditions of G2, G4, G5 G6, G7, G8, G14, G15, G25, G26 and G27 within NENTX was certified by ET, was verified by IEC and submitted to EPD on 15 Oct 2022. No later than four weeks before commencement of construction of the project in accordance with Condition 2.4 of the FEP-01/292/2007.

9.1.5 Implementation of the mitigation measures such as permanent fencing to protect the boulder path and setting up warning notices during construction phase of the Project has been monitored through the regular site inspection/audit. The permanent fencing locations are shown in **Appendix M**. In case of any presence of undiscovered grave during construction phase, AMO will be informed as soon as possible.

10 Ecological Monitoring

10.1.1 In the reporting period, the post-translocation monitoring for the Endemic Freshwater Crab *Somanniathelphusa zanklon* was conducted on 19 April 2023 based on the requirement of the approved Revised Translocation Proposal for the Endemic Freshwater Crab *Somanniathelphusa zanklon*. The 9th Post-Translocation Monitoring Report (April 2023) presents the details of requirements, monitoring results and site inspection with photos. The site inspection photos are also summarized in **Appendix N**. During the reporting period, no *S. zanklon* individual is identified.

10.1.2 The post-transplantation monitoring was conducted on 21 April 2023 based on the requirement of the approved Transplantation Proposal for Plant Species of Conservation Importance (Rev.1). The 9th Post-transplantation Monitoring and Audit Report (21st April 2023) presents the details of requirements, monitoring results and site inspection with photos. The site inspection photos are also summarized in **Appendix N**. During the reporting period, the numbers, measurements, and health conditions of the transplanted plant species are recorded.

10.1.3 The details of requirements, monitoring results and site inspection with photos for the post-translocation monitoring and post-transplantation monitoring would be reported separately.

10.1.4 The milestone of the ecological monitoring is presented in **Table 10-1.** The softcopies of the submissions are provided in https://www.nentx-ema.com/ep-submissions/.

Table 10-1 Milestone of the Ecological Monitoring

Type of Monitoring	Monitoring Event No.	Monitoring Date
Post-translocation Monitoring	1st (Aug 2022)	29 Aug 2022
	2nd (Sep 2022)	28 Sep 2022
	3rd (Oct 2022)	28 Oct 2022
	4th (Nov 2022)	22 Nov 2022
	5th (Dec 2022)	29 Dec 2022
	6th (Jan 2023)	30 Jan 2023
	7th (Feb 2023)	24 Feb 2023
	8th (Mar 2023)	20 Mar 2023
	9th (Apr 2023)	19 Apr 2023
Post-transplantation Monitoring	1st	24 Nov 2022
	2nd	9 Dec 2022
	3rd	21 Dec 2022
	4th	13 Jan 2023
	5th	26 Jan 2023
	6th	8 Feb 2023
	7th	24 Feb 2023
	8th	20 Mar 2023
	9th	21 Apr 2023

11 Site Inspection and Audit

11.1.1 Site Inspection and audits were carried out by ET on weekly basis to monitor the implementation of proper environmental management practices and mitigation measures in the Project Site.

11.1.2 Weekly ET environmental site inspections were conducted in the reporting period on 3, 11,17 & 24 April 2023. A joint environmental site inspection was carried out by the representatives of the ER, the Contractor, IEC and the ET on 17 April 2023. The joint environmental site inspection records are shown in **Appendix J**. There was no noncompliance recorded during the site inspections.

11.1.3 Major findings and recommendations are summarized as follows:

03 April 2023

- The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream. The contractor was recommended that surface protection shall be implemented on the exposed slope to minimize surface runoff.
- The Contractor was reminded to maintain surface protection work in Portion A. The contractor was reminded that surface protection shall be implemented on the exposed slope to minimize surface runoff.
- The contractor was reminded to ensure the silt removal facilities functioning properly before the holidays. The contractor was reminded silt removal facilities shall be maintained regularly.

11 April 2023

- The entrance of Portion A was observed muddy. The entrance shall be kept clear of dusty and muddy material. The Contractor was recommended to repave the surface of entrance to prevent accumulation of sand and silt.
- The drip tray was filled with water. The Contractor was reminded to clear the drip tray and to minimize the number of chemical containers in the outdoor environment.
- Surface protection shall be applied on the exposed slope behind the WetSep to minimize the surface runoff into the channel. The contractor was recommended that the exposed slope shall be covered with impervious sheets to prevent any surface runoff into the channel.

17 April 2023

- The drip tray in SBA was filled with water. The Contractor was recommended to clear the drip tray.
- The Contractor was reminded to spray water on the surface of dusty material in SBA to prevent dust dispersion. Dusty material shall be sprayed with water to prevent generation of dust.
- The Contractor was reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall.

24 April 2023

- The channels at the entrance of SBA are accumulated with rotten leaves, sand and silt. The contractor was recommended that regular cleaning of channel shall be conducted to prevent any clogging.
- Surface protection works in Portion A shall be maintained properly. The contractor was recommended that earth bunds and exposed slopes shall be paved to control the surface runoff.
- The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall in this week. Silt removal facilities shall be maintained properly and checked if they can function properly.

11.1.4 No Environmental Protection Department-Regional Office (North) conducted general site inspection in April 2023.

12 Environmental Non-conformance

12.1 Summary of Monitoring Exceedance

Air Quality, Noise, Surface Water Quality & Landfill Gas Monitoring

12.1.1 No exceedance of the Action and Limit Levels for was recorded at designated monitoring stations during the reporting period.

12.2 Summary of Environmental Non-compliance

12.2.1 No non-compliance event was recorded during the reporting period.

12.3 Summary of Environmental Complaint

12.3.1 No environmental complaint was recorded during the reporting period.

12.4 Summary of Environmental Summons and Successful Prosecution

12.4.1 No summons was received during the reporting period

13 Implementation Status on Environmental Mitigation Measures

13.1.1 The Contractor has generally implemented environmental mitigation measures and requirements as stated in the EIA Report, the EP and EM&A Manual and the contract documents. The implementation status during the reporting period is summarized in **Appendix K**.

14 Future Key Issues

14.1 Key Issues for the Coming Month

14.1.1 Works to be undertaken for the coming monitoring periods are summarized below. Detailed construction activities and locations are summarized in **Appendix L**.

-	Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground
-	Permanent site office foundation works with pouring of concrete at Portion D
-	Site clearance at Portion A, E3-1, B1 & E4
-	Installation of permanent fencing at Portion A, B1 & E4
-	Site formation at Portion A & E3-1
-	Tree felling at Portion E3-1 & E4

14.1.2 Potential environmental impacts arising from the above construction activities are mainly associated with air quality, construction noise, water quality, waste management, landfill gas monitoring, landscape and visual, cultural heritage and ecology

14.2 Monitoring Schedule for the Next Month

14.2.1 The tentative schedule of environmental monitoring for the next reporting period is presented in **Appendix C**.

14.3 Construction Programme for the Next Month

14.3.1 The most updated construction programme for the Project is presented in **Appendix A**.

15 Conclusion

15.1.1 1-hr & 24-hr TSP impact monitoring was carried out in the reporting month. No Action / Limit Level exceedance for 1-hr & 24-hr TSP impact monitoring at AM1, AM2 & AM3 was recorded during the period.

15.1.2 Construction noise monitoring was carried out in the reporting month. No Action / Limit Level exceedance at NM1a & NM2a was recorded during the period.

15.1.3 Site clearance of future landfilling area is in progress. The installation of groundwater monitoring boreholes will be installed after the site formation work of the landfilling area. The target commencement period of groundwater monitoring will be in 2026. No groundwater monitoring is required before the completion of site formation work of the landfilling area.

15.1.4 Surface water monitoring was carried out in the reporting month. No Action / Limit Level exceedance at WM1 & WM2 was recorded during the period.

15.1.5 Landfill Gas Monitoring was carried out in the reporting month. No exceedance of Limit Levels of LFG was recorded during the reporting period.

15.1.6 In terms of cultural heritage, implementation of the mitigation measures such as permanent fencing to protect the boulder path and setting up warning notices during construction phase of the Project has been monitored through the regular site inspection/audit in the reporting period. All the mitigation measures are in order.

15.1.7 Post-translocation Monitoring was carried out in the reporting period. No *S. zanklon individual* was found. Post-transplantation monitoring was carried out in the reporting month. The numbers, measurements and health conditions of the transplanted species are recorded.

15.1.8 Four environmental site inspections were carried out in the reporting month. Recommendations on mitigation measures for Permit/ Licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.

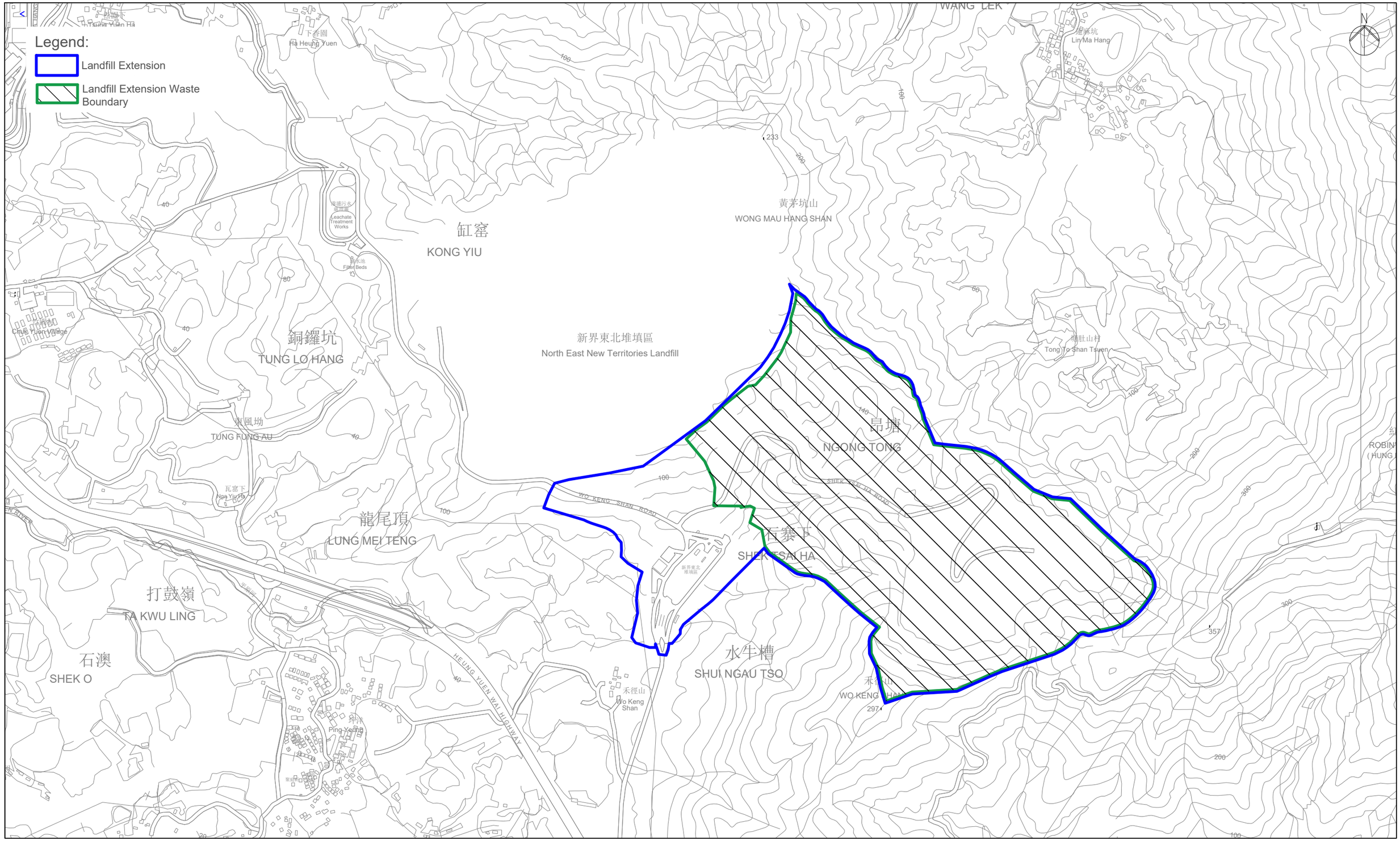
15.1.9 No environmental complaint was recorded during the reporting period.

15.1.10 No non-compliance event was recorded during the reporting period.

15.1.11 No notification of summons and prosecution was received during the reporting period.

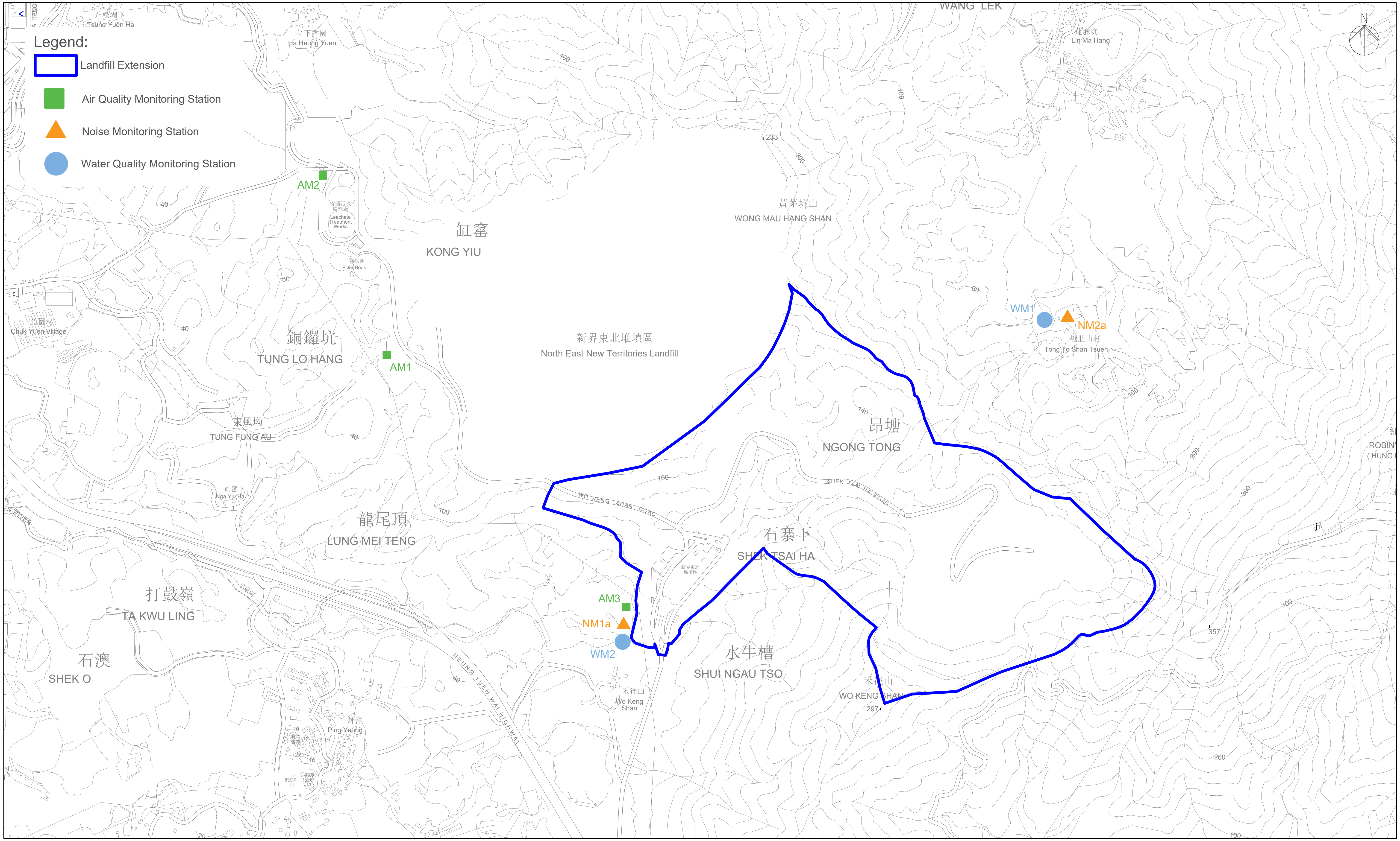
15.1.12 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Figure 1 Location of the Project Site



Aurecon Hong Kong Limited	North-East New Territories (NENT) Landfill Extension Location Plan of the Project Site	Figure 1.1 Scale: 1:10000

Figure 2 Impact Air, Noise & Surface Water Quality Monitoring Locations



Legend:
Landfill Extension
Air Quality Monitoring Station
Noise Monitoring Station
Water Quality Monitoring Station
AM1
AM2
AM3
NM1a
NM2a
WM1
WM2
缸窰
KONG YIU
黃茅坑山
WONG MAU HANG SHAN
新界東北堆填區
North East New Territories Landfill
銅鑼坑
TUNG LO HANG
東風坳
TUNG FUNG AU
龍尾頂
LUNG MEI TENG
打鼓嶺
TA KWU LING
石澳
SHEK O
昂塘
NGONG TONG
石寨下
SHEK TSAI HA
水牛槽
SHUI NGAU TSO
WO KENG SHAN ROAD
SHEK TSAI HA ROAD
HEUNG YUEN WAI HIGHWAY
Lin Ma Hang
Tong To Shan Tsuen
Chuk Yuen Village
Ha Heung Yuen
Tsung Yuen Ha
Wo Keng Shan
Ping Yeung
WANG LEK
N

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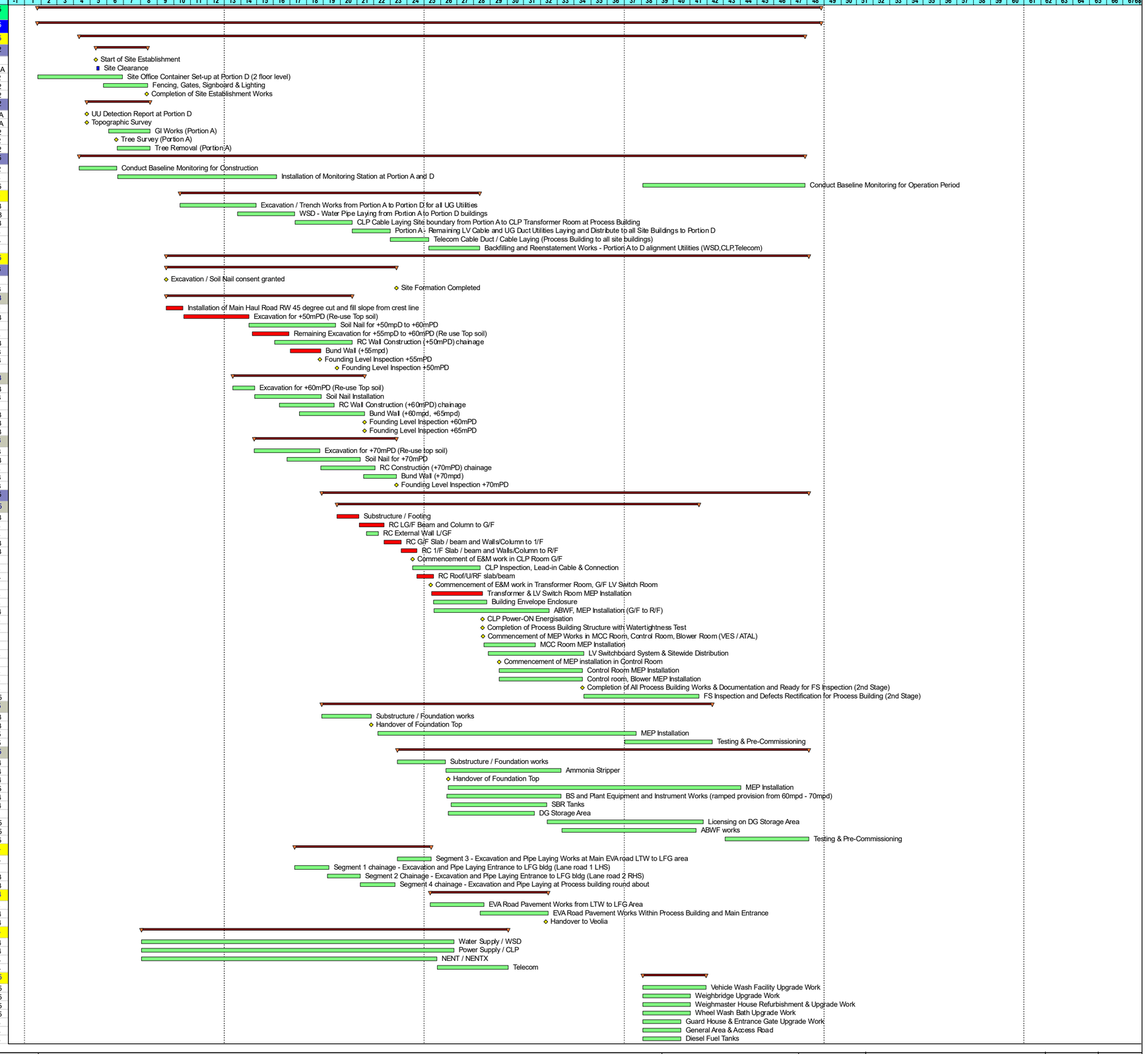
North-East New Territories (NENT) Landfill Extension
Impact Monitoring Locations

Figure 2

Scale: 1:10000

Appendix A Construction Programme

Activity ID	Activity Name	OD	Start	Finish
NENTX		1432	25-Jan-22 A	27-Dec-25
CONSTRUCTION - INITIAL WORKS PHASE 1		1432	25-Jan-22 A	27-Dec-25
PORTION A - Advance Works & Site Establishment		1403	11-Apr-22 A	27-Nov-25
SITE ESTABLISHMENT AND MOBILISATION		202	12-May-22 A	14-Aug-22
05-0001	Start of Site Establishment	0	12-May-22 A	
05-0002	Site Clearance	12	13-May-22 A	18-May-22 A
05-0003	Site Office Container Set-up at Portion D (2 floor level)	60	13-May-22 A	29-Jun-22
05-0004	Fencing, Gates, Signboard & Lighting	80	25-May-22	14-Aug-22
05-0005	Completion of Site Establishment Works	0		12-Aug-22
SITE SURVEY & INVESTIGATION WORKS		75	25-Apr-22 A	18-Aug-22
05-0007	UU Detection Report at Portion D	0		25-Apr-22 A
05-0008	Topographic Survey	0		25-Apr-22 A
05-0009	GI Works (Portion A)	75	04-Jun-22	18-Aug-22
05-0010	Tree Survey (Portion A)	0		17-Jun-22
05-0011	Tree Removal (Portion A)	59	19-Jun-22	18-Aug-22
ENVIRONMENTAL MONITORING		1138	11-Apr-22	27-Nov-25
05-0018	Conduct Baseline Monitoring for Construction	60	11-Apr-22	18-Jun-22
05-0019	Installation of Monitoring Station at Portion A and D	250	20-Jun-22	06-Apr-23
05-0020	Conduct Baseline Monitoring for Operation Period	255	04-Feb-25	27-Nov-25
SITEWIDE Underground UTILITIES (Portion A to Portion D)		470	12-Oct-22	11-Apr-24
05-0012	Excavation / Trench Works from Portion A to Portion D for all UG Utilities	120	12-Oct-22	28-Feb-23
05-0013	WSD - Water Pipe Laying from Portion A to Portion D buildings	90	25-Jan-23	09-May-23
05-0014	CLP Cable Laying Site boundary from Portion A to CLP Transformer Room at Process Building	90	10-May-23	22-Aug-23
05-0015	Portion A - Remaining LV Cable and UG Duct Utilities Laying and Distribute to all Site Buildings t	60	22-Aug-23	31-Oct-23
05-0016	Telecom Cable Duct / Cable Laying (Process Building to all site buildings)	60	31-Oct-23	09-Jan-24
05-0017	Backfilling and Reenstatement Works - Portion A to D alignment Utilities (WSD,CLP,Telecom)	80	09-Jan-24	11-Apr-24
PORTION A - Infrastructure Treatment Area		1174	17-Sep-22	04-Dec-25
SITE FORMATION		397	17-Sep-22	11-Nov-23
05-0021	Excavation / Soil Nail consent granted	0	17-Sep-22	
05-0022	Site Formation Completed	0		11-Nov-23
Soil Ground Platform at +50mPD/+55mPD		320	17-Sep-22	22-Aug-23
05-0023	Installation of Main Haul Road RW 45 degree cut and fill slope from crest line	28	17-Sep-22	17-Oct-22
05-0024	Excavation for +50mPD (Re-use Top soil)	111	19-Oct-22	15-Feb-23
05-0025	Soil Nail for +50mpD to +60mPD	150	15-Feb-23	23-Jul-23
05-0026	Remaining Excavation for +55mpD to +60mPD (Re use Top soil)	64	21-Feb-23	29-Apr-23
05-0027	RC Wall Construction (+50mPD) chainage	134	03-Apr-23	22-Aug-23
05-0028	Bund Wall (+55mpd)	54	02-May-23	26-Jun-23
05-0029	Founding Level Inspection +55mPD	0		24-Jun-23
05-0030	Founding Level Inspection +50mPD	0		26-Jul-23
Soil Ground Platform at +60mPD (LTW Plant)		229	17-Jan-23	14-Sep-23
05-0031	Excavation for +60mPD (Re-use Top soil)	36	17-Jan-23	25-Feb-23
05-0032	Soil Nail Installation	115	25-Feb-23	27-Jun-23
05-0033	RC Wall Construction (+60mPD) chainage	96	12-Apr-23	20-Jul-23
05-0034	Bund Wall (+60mpd, +65mpd)	117	18-May-23	14-Sep-23
05-0035	Founding Level Inspection +60mPD	0		14-Sep-23
05-0036	Founding Level Inspection +65mPD	0		14-Sep-23
Soil Ground Platform at +70mPD (LTW Plant)		248	25-Feb-23	11-Nov-23
05-0037	Excavation for +70mPD (Re-use top soil)	113	25-Feb-23	24-Jun-23
05-0038	Soil Nail for +70mPD	130	26-Apr-23	06-Sep-23
05-0039	RC Construction (+70mPD) chainage	96	26-Jun-23	03-Oct-23
05-0040	Bund Wall (+70mpd)	56	13-Sep-23	11-Nov-23
05-0041	Founding Level Inspection +70mPD	0		11-Nov-23
PROCESS TREATMENT AREA		891	28-Jun-23	04-Dec-25
Process Building (+50mpd)		661	26-Jul-23	17-May-25
05-0042	Substructure / Footing	40	26-Jul-23	04-Sep-23
05-0043	RC LG/F Beam and Column to G/F	42	05-Sep-23	20-Oct-23
05-0044	RC External Wall L/GF	18	18-Sep-23	09-Oct-23
05-0045	RC G/F Slab / beam and Walls/Column to 1/F	30	20-Oct-23	20-Nov-23
05-0046	RC 1/F Slab / beam and Walls/Column to R/F	29	20-Nov-23	19-Dec-23
05-0047	Commencement of E&M work in CLP Room G/F	0	11-Dec-23	
05-0048	CLP Inspection, Lead-in Cable & Connection	107	11-Dec-23	12-Apr-24
05-0050	RC Roof/L/RF slab/beam	27	19-Dec-23	18-Jan-24
05-0051	Commencement of E&M work in Transformer Room, G/F LV Switch Room	0	13-Jan-24	
05-0052	Transformer & LV Switch Room MEP Installation	80	15-Jan-24	17-Apr-24
05-0053	Building Envelope Enclosure	90	18-Jan-24	25-Apr-24
05-0054	ABWF, MEP Installation (G/F to R/F)	180	19-Jan-24	16-Aug-24
05-0055	CLP Power-ON Energisation	0		17-Apr-24
05-0056	Completion of Process Building Structure with Watertightness Test	0		17-Apr-24
05-0057	Commencement of MEP Works in MCC Room, Control Room, Blower Room (VES / ATAL)	0	18-Apr-24	
05-0058	MCC Room MEP Installation	80	19-Apr-24	22-Jul-24
05-0059	LV Switchboard System & Sitewide Distribution	150	27-Apr-24	19-Oct-24
05-0060	Commencement of MEP installation in Control Room	0	17-May-24	
05-0061	Control Room MEP Installation	130	17-May-24	16-Oct-24
05-0062	Control room, Blower MEP Installation	130	17-May-24	16-Oct-24
05-0063	Completion of All Process Building Works & Documentation and Ready for FS Inspection (2nd S	0		16-Oct-24
05-0064	FS Inspection and Defects Rectification for Process Building (2nd Stage)	180	19-Oct-24	17-May-25
LFG Plant (+55mpd)		678	28-Jun-23	10-Jun-25
05-0065	Substructure / Foundation works	90	28-Jun-23	26-Sep-23
05-0066	Handover of Foundation Top	0		26-Sep-23
05-0067	MEP Installation	450	08-Oct-23	22-Jan-25
05-0068	Testing & Pre-Commissioning	150	02-Jan-25	10-Jun-25
LTW Plant (+60mpd, +70mpd)		753	13-Nov-23	04-Dec-25
05-0069	Substructure / Foundation works	86	13-Nov-23	09-Feb-24
05-0070	Ammonia Stripper	180	10-Feb-24	07-Sep-24
05-0071	Handover of Foundation Top	0		14-Feb-24
05-0072	MEP Installation	510	14-Feb-24	01-Aug-25
05-0073	BS and Plant Equipment and Instrument Works (ramped provision from 60mpd - 70mpd)	180	12-Feb-24	07-Sep-24
05-0074	SBR Tanks	150	19-Feb-24	12-Aug-24
05-0075	DG Storage Area	150	14-Feb-24	20-Jul-24
05-0076	Licensing on DG Storage Area	270	13-Aug-24	25-May-25
05-0077	ABWF works	210	09-Sep-24	12-May-25
05-0078	Testing & Pre-Commissioning	150	04-Jul-25	04-Dec-25
PORTION A - Undergound Drainage and Process Pipeworks		240	09-May-23	14-Jan-24
05-0079	Segment 3 - Excavation and Pipe Laying Works at Main EVA road LTW to LFG area	60	13-Nov-23	14-Jan-24
05-0080	Segment 1 chainage - Excavation and Pipe Laying Entrance to LFG bldg (Lane road 1 LHS)	60	09-May-23	11-Jul-23
05-0081	Segment 2 Chainage - Excavation and Pipe Laying Entrance to LFG bldg (Lane road 2 RHS)	60	08-Jul-23	06-Sep-23
05-0082	Segment 4 chainage - Excavation and Pipe Laying at Process building round about	60	06-Sep-23	09-Nov-23
PORTION A - EVA Road Paving Works		203	12-Jan-24	14-Aug-24
05-0067.01	EVA Road Pavement Works from LTW to LFG Area	90	12-Jan-24	19-Apr-24
05-0067.02	EVA Road Pavement Works Within Process Building and Main Entrance	120	12-Apr-24	14-Aug-24
05-0067.03	Handover to Veolia	0		10-Aug-24
SITEWIDE Interfacing and Coordination		633	03-Aug-22	02-Jun-24
05-0083	Water Supply / WSD	540	03-Aug-22	24-Feb-24
05-0084	Power Supply / CLP	540	03-Aug-22	24-Feb-24
05-0085	NENT / NENTX	513	03-Aug-22	24-Jan-24
05-0086	Telecom	120	25-Jan-24	02-Jun-24
PORTION C - Waste Reception Area		100	04-Feb-25	30-May-25
05-0087	Vehicle Wash Facility Upgrade Work	100	04-Feb-25	30-May-25
05-0089	Weighbridge Upgrade Work	75	04-Feb-25	01-May-25
05-0091	Weighmaster House Refurbishment & Upgrade Work	75	04-Feb-25	01-May-25
05-0092	Wheel Wash Bath Upgrade Work	75	04-Feb-25	01-May-25
05-0093	Guard House & Entrance Gate Upgrade Work	60	04-Feb-25	14-Apr-25
05-0094	General Area & Access Road	60	04-Feb-25	14-Apr-25
05-0095	Diesel Fuel Tanks	60	04-Feb-25	14-Apr-25



環境保護署
Environmental Protection Department

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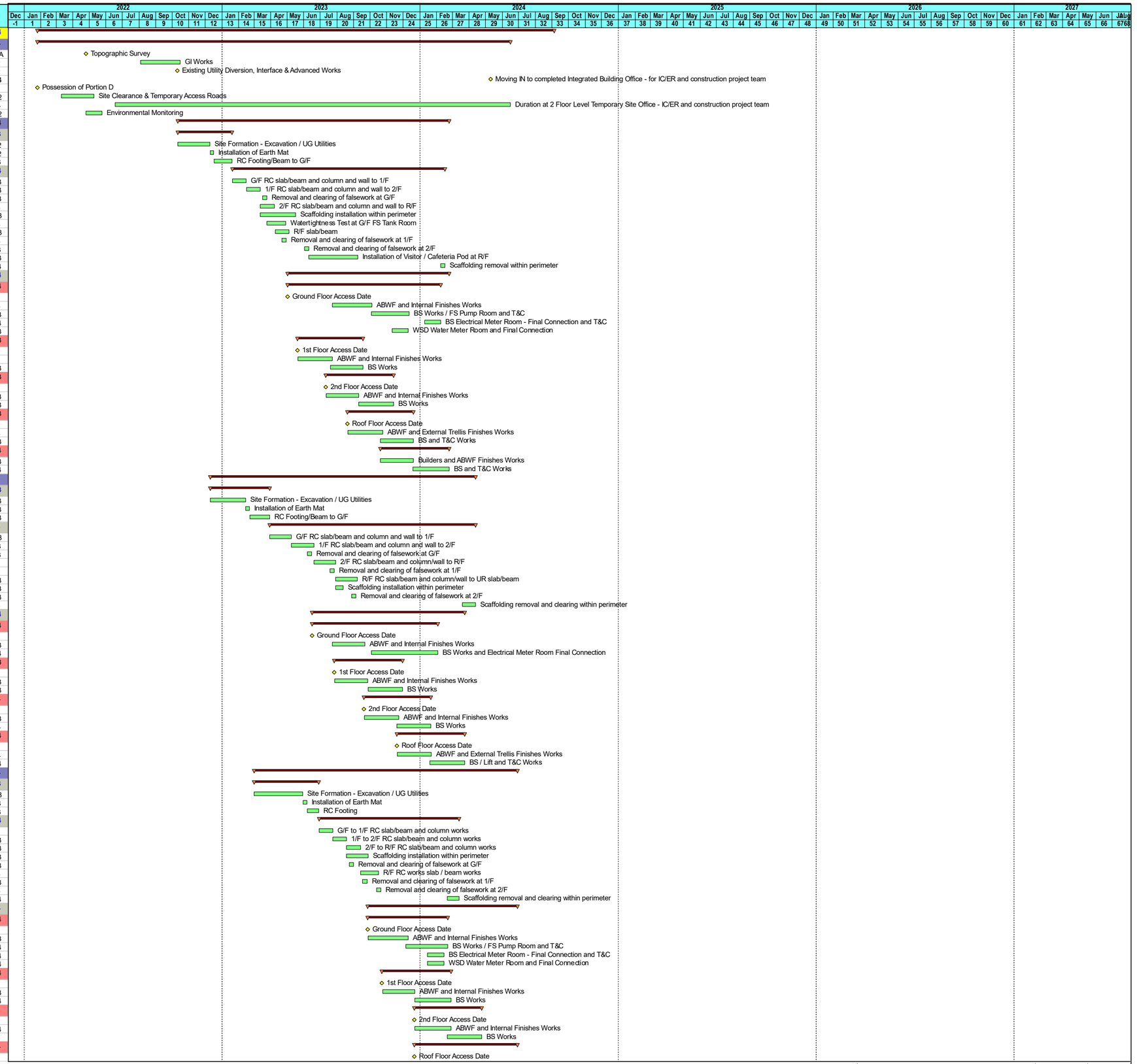
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

BASELINE PROGRAMME - EXTRACTED (REV.3)
INITIAL WORKS (PHASE 1)

VEOLIA

Date	Revision	Checked	Approved
08-Jul-22	EXTRACTED - ISSUED 14JAN2023	DW	AY

Activity ID	Activity Name	OD	Start	Finish
PORTION D - Accomodation Buildings		954	25-Jan-22 A	04-Sep-24
Advanced Works		822	25-Jan-22 A	15-Jun-24
05-00100	Topographic Survey	0		25-Apr-22 A
05-00101	GI Works	70	04-Aug-22	15-Oct-22
05-00102	Existing Utility Diversion, Interface & Advanced Works	0		10-Oct-22
05-00104	Moving IN to completed Integrated Building Office - for IC/ER and construction project team	0		10-May-24
05-0096	Possession of Portion D	0	25-Jan-22	
05-0097	Site Clearance & Temporary Access Roads	52	11-Mar-22	09-May-22
05-0098	Duration at 2 Floor Level Temporary Site Office - IC/ER and construction project team	690	18-Jun-22	15-Jun-24
05-0099	Environmental Monitoring	26	25-Apr-22	24-May-22
FIRE SERVICE BUILDING		501	11-Oct-22	24-Feb-24
Substructure		95	11-Oct-22	19-Jan-23
05-00105	Site Formation - Excavation / UG Utilities	60	11-Oct-22	09-Dec-22
05-00106	Installation of Earth Mat	7	10-Dec-22	16-Dec-22
05-00107	RC Footing/Beam to G/F	28	17-Dec-22	19-Jan-23
Superstructure		393	20-Jan-23	16-Feb-24
05-00108	G/F RC slab/beam and column and wall to 1/F	22	20-Jan-23	14-Feb-23
05-00109	1/F RC slab/beam and column and wall to 2/F	25	15-Feb-23	12-Mar-23
05-00110	Removal and clearing of falsework at G/F	8	16-Mar-23	24-Mar-23
05-00111	2/F RC slab/beam and column and wall to R/F	25	12-Mar-23	07-Apr-23
05-00112	Scaffolding installation within perimeter	65	12-Mar-23	16-May-23
05-00113	Watertightness Test at G/F FS Tank Room	35	24-Mar-23	28-Apr-23
05-00114	R/F slab/beam	24	09-Apr-23	04-May-23
05-00115	Removal and clearing of falsework at 1/F	8	21-Apr-23	29-Apr-23
05-00116	Removal and clearing of falsework at 2/F	8	02-Jun-23	10-Jun-23
05-00117	Installation of Visitor / Cafeteria Pod at R/F	90	10-Jun-23	08-Sep-23
05-00118	Scaffolding removal within perimeter	8	08-Feb-24	16-Feb-24
ABWF & E&M		298	01-May-23	24-Feb-24
Ground Floor		283	01-May-23	08-Feb-24
05-00119	Ground Floor Access Date	0	01-May-23	
05-00120	ABWF and Internal Finishes Works	70	23-Jul-23	04-Oct-23
05-00121	BS Works / FS Pump Room and T&C	70	03-Oct-23	12-Dec-23
05-00122	BS Electrical Meter Room - Final Connection and T&C	30	09-Jan-24	08-Feb-24
05-00123	WSD Water Meter Room and Final Connection	30	10-Nov-23	10-Dec-23
1st Floor		121	20-May-23	18-Sep-23
05-00124	1st Floor Access Date	0	20-May-23	
05-00125	ABWF and Internal Finishes Works	60	21-May-23	23-Jul-23
05-00126	BS Works	60	20-Jul-23	18-Sep-23
2nd Floor		125	11-Jul-23	13-Nov-23
05-00127	2nd Floor Access Date	0	11-Jul-23	
05-00128	ABWF and Internal Finishes Works	60	12-Jul-23	10-Sep-23
05-00129	BS Works	60	10-Sep-23	13-Nov-23
Roof Floor		122	20-Aug-23	20-Dec-23
05-00130	Roof Floor Access Date	0	20-Aug-23	
05-00131	ABWF and External Trellis Finishes Works	60	21-Aug-23	24-Oct-23
05-00132	BS and T&C Works	60	20-Oct-23	20-Dec-23
Visitor Cafeteria POD		119	20-Oct-23	24-Feb-24
05-00331	Builders and ABWF Finishes Works	60	20-Oct-23	20-Dec-23
05-00332	BS and T&C Works	60	19-Dec-23	24-Feb-24
INTEGRATED OFFICE BUILDING		489	10-Dec-22	12-Apr-24
Substructure		101	10-Dec-22	29-Mar-23
05-00133	Site Formation - Excavation / UG Utilities	57	10-Dec-22	13-Feb-23
05-00134	Installation of Earth Mat	7	13-Feb-23	20-Feb-23
05-00135	RC Footing/Beam to G/F	37	21-Feb-23	29-Mar-23
Superstructure		379	30-Mar-23	12-Apr-24
05-00136	G/F RC slab/beam and column and wall to 1/F	35	30-Mar-23	08-May-23
05-00137	1/F RC slab/beam and column and wall to 2/F	40	09-May-23	19-Jun-23
05-00138	Removal and clearing of falsework at G/F	8	07-Jun-23	15-Jun-23
05-00139	2/F RC slab/beam and column/wall to R/F	38	19-Jun-23	29-Jul-23
05-00140	Removal and clearing of falsework at 1/F	8	19-Jul-23	27-Jul-23
05-00141	R/F RC slab/beam and column/wall to UR slab/beam	40	29-Jul-23	07-Sep-23
05-00142	Scaffolding installation within perimeter	14	29-Jul-23	12-Aug-23
05-00143	Removal and clearing of falsework at 2/F	8	28-Aug-23	05-Sep-23
05-00144	Scaffolding removal and clearing within perimeter	24	19-Mar-24	12-Apr-24
ABWF & E&M		281	16-Jun-23	23-Mar-24
Ground Floor		232	16-Jun-23	03-Feb-24
05-00145	Ground Floor Access Date	0	16-Jun-23	
05-00146	ABWF and Internal Finishes Works	60	23-Jul-23	21-Sep-23
05-00147	BS Works and Electrical Meter Room Final Connection	120	03-Oct-23	03-Feb-24
1st Floor		126	27-Jul-23	30-Nov-23
05-00148	1st Floor Access Date	0	27-Jul-23	
05-00149	ABWF and Internal Finishes Works	60	28-Jul-23	26-Sep-23
05-00150	BS Works	60	27-Sep-23	30-Nov-23
2nd Floor		124	19-Sep-23	21-Jan-24
05-00151	2nd Floor Access Date	0	19-Sep-23	
05-00152	ABWF and Internal Finishes Works	60	20-Sep-23	23-Nov-23
05-00153	BS Works	60	19-Nov-23	21-Jan-24
Roof Floor		125	19-Nov-23	23-Mar-24
05-00154	Roof Floor Access Date	0	19-Nov-23	
05-00155	ABWF and External Trellis Finishes Works	60	20-Nov-23	22-Jan-24
05-00156	BS / Lift and T&C Works	60	19-Jan-24	23-Mar-24
OPERATION AND MAINTENANCE BUILDING		487	01-Mar-23	29-Jun-24
Substructure		113	01-Mar-23	28-Jun-23
05-00157	Site Formation - Excavation / UG Utilities	84	01-Mar-23	29-May-23
05-00158	Installation of Earth Mat	7	30-May-23	06-Jun-23
05-00159	RC Footing	21	07-Jun-23	28-Jun-23
Superstructure		259	29-Jun-23	13-Mar-24
05-00160	G/F to 1/F RC slab/beam and column works	25	29-Jun-23	24-Jul-23
05-00161	1/F to 2/F RC slab/beam and column works	25	24-Jul-23	18-Aug-23
05-00162	2/F to R/F RC slab/beam and column works	26	18-Aug-23	13-Sep-23
05-00163	Scaffolding installation within perimeter	40	18-Aug-23	27-Sep-23
05-00164	Removal and clearing of falsework at G/F	8	23-Aug-23	31-Aug-23
05-00165	R/F RC works slab / beam works	30	13-Sep-23	16-Oct-23
05-00166	Removal and clearing of falsework at 1/F	8	17-Sep-23	25-Sep-23
05-00167	Removal and clearing of falsework at 2/F	8	13-Oct-23	21-Oct-23
05-00168	Scaffolding removal and clearing within perimeter	22	20-Feb-24	13-Mar-24
ABWF & E&M		277	26-Sep-23	29-Jun-24
Ground Floor		148	26-Sep-23	21-Feb-24
05-00169	Ground Floor Access Date	0	26-Sep-23	
05-00170	ABWF and Internal Finishes Works	70	27-Sep-23	10-Dec-23
05-00171	BS Works / FS Pump Room and T&C	70	06-Dec-23	21-Feb-24
05-00172	BS Electrical Meter Room - Final Connection and T&C	30	15-Jan-24	14-Feb-24
05-00173	WSD Water Meter Room and Final Connection	30	15-Jan-24	14-Feb-24
1st Floor		128	22-Oct-23	27-Feb-24
05-00174	1st Floor Access Date	0	22-Oct-23	
05-00175	ABWF and Internal Finishes Works	60	24-Oct-23	22-Dec-23
05-00176	BS Works	60	22-Dec-23	27-Feb-24
2nd Floor		125	21-Dec-23	24-Apr-24
05-00177	2nd Floor Access Date	0	21-Dec-23	
05-00178	ABWF and Internal Finishes Works	60	22-Dec-23	27-Feb-24
05-00179	BS Works	60	20-Feb-24	24-Apr-24
Roof Floor		191	21-Dec-23	29-Jun-24
05-00180	Roof Floor Access Date	0	21-Dec-23	



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NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

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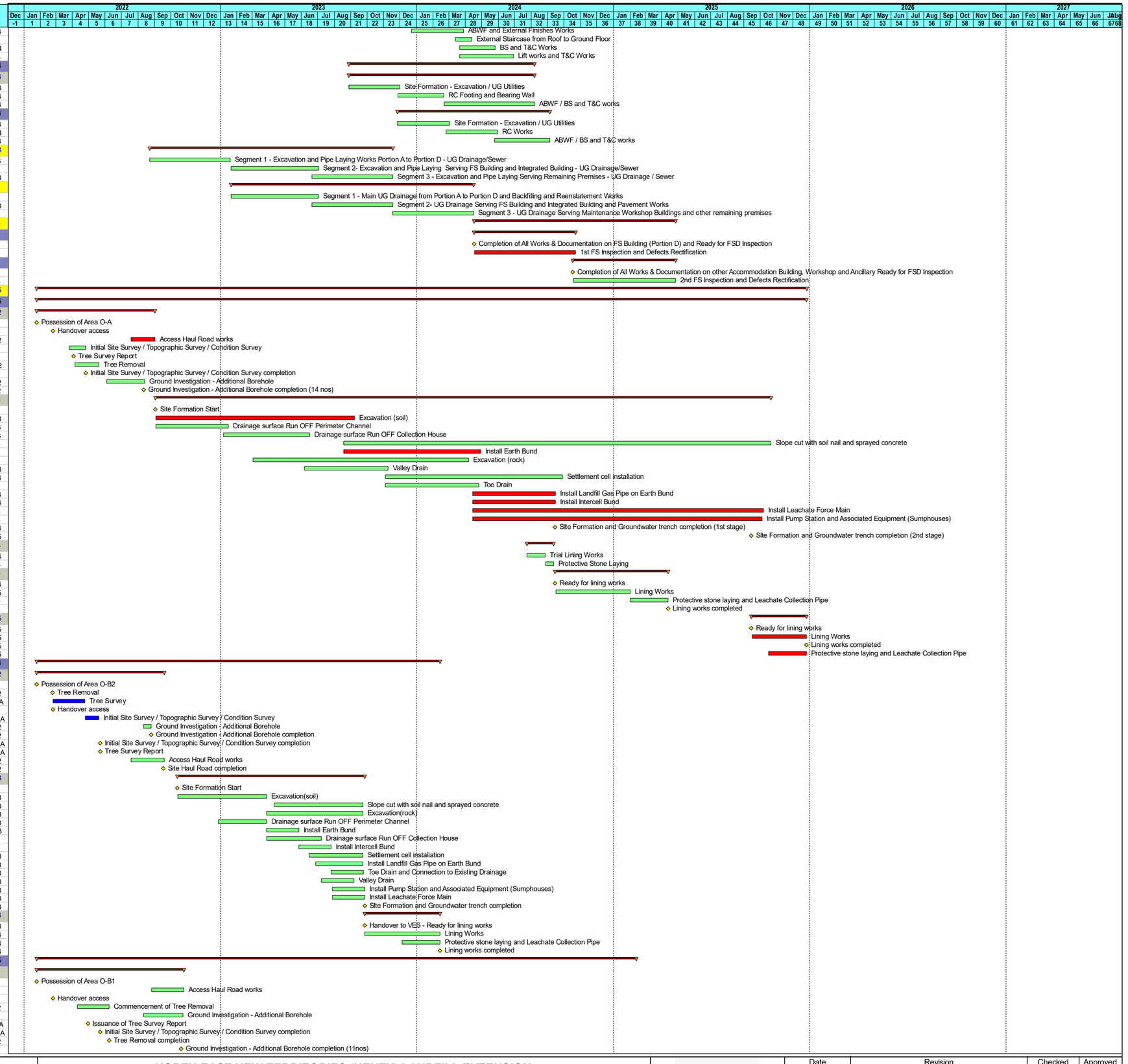
Activity ID	Activity Name	OD	Start	Finish
05-00181	ABWF and External Finishes Works	90	22-Dec-23	28-Mar-24
05-00182	External Staircase from Roof to Ground Floor	30	13-Mar-24	12-Apr-24
05-00183	BS and T&C Works	60	21-Mar-24	26-May-24
05-00184	Lift works and T&C Works	100	21-Mar-24	29-Jun-24
MAINTENANCE WORKSHOP		326	28-Aug-23	07-Aug-24
Vehicle		326	28-Aug-23	07-Aug-24
05-00185	Site Formation - Excavation / UG Utilities	90	28-Aug-23	30-Nov-23
05-00186	RC Footing and Bearing Wall	79	27-Nov-23	20-Feb-24
05-00187	ABWF / BS and T&C works	160	21-Feb-24	07-Aug-24
ANCILLARY BUILDINGS (PORTION D)		268	26-Nov-23	04-Sep-24
05-00188	Site Formation - Excavation / UG Utilities	90	26-Nov-23	02-Mar-24
05-00189	RC Works	90	24-Feb-24	30-May-24
05-00190	ABWF / BS and T&C works	100	25-May-24	04-Sep-24
PORTION D - Underground Drainage and Pipe Laying Works		428	22-Aug-22	17-Nov-23
05-00191	Segment 1 - Excavation and Pipe Laying Works Portion A to Portion D - UG Drainage/Sewer	142	22-Aug-22	19-Jan-23
05-00192	Segment 2- Excavation and Pipe Laying Serving FS Building and Integrated Building - UG Drai	150	21-Jan-23	02-Jul-23
05-00193	Segment 3 - Excavation and Pipe Laying Serving Remaining Premises - UG Drainage / Sewer	144	20-Jun-23	17-Nov-23
PORTION D - EVA Road Road Pavement Works		424	21-Jan-23	16-Apr-24
05-1818	Segment 1 - Main UG Drainage from Portion A to Portion D and Backfilling and Reenstatement	150	21-Jan-23	02-Jul-23
05-1819	Segment 2- UG Drainage Serving FS Building and Integrated Building and Pavement Works	144	20-Jun-23	17-Nov-23
05-1820	Segment 3 - UG Drainage Serving Maintenance Workshop Buildings and other remaining prem	140	17-Nov-23	16-Apr-24
FS Inspection Stages		357	17-Apr-24	26-Apr-25
Stage 1 FS Inspection		181	17-Apr-24	22-Oct-24
05-00194	Completion of All Works & Documentation on FS Building (Portion D) and Ready for FSD Inspec	0		17-Apr-24
05-00195	1st FS Inspection and Defects Rectification	180	18-Apr-24	22-Oct-24
Stage 2 FS Inspection		180	17-Oct-24	26-Apr-25
05-00196	Completion of All Works & Documentation on other Accommodation Building, Workshop and An	0		17-Oct-24
05-00197	2nd FS Inspection and Defects Rectification	180	18-Oct-24	26-Apr-25
Landfill Area (Portion E3, E4, E1, B1 & B2)		1402	25-Jan-22 A	27-Dec-25
AREA 0-A (E4 & B1)		1371	25-Jan-22 A	25-Dec-25
Advanced Works		150	25-Jan-22 A	01-Sep-22
05-00251	Possession of Area O-A	0	25-Jan-22 A	
05-00252	Handover access	0	24-Feb-22 A	
05-00253	Access Haul Road works	44	19-Jul-22	01-Sep-22
05-00254	Initial Site Survey / Topographic Survey / Condition Survey	27	26-Mar-22	25-Apr-22
05-00255	Tree Survey Report	0		03-Apr-22
05-00256	Tree Removal	38	06-Apr-22	20-May-22
05-00257	Initial Site Survey / Topographic Survey / Condition Survey completion	0		25-Apr-22
05-00258	Ground Investigation - Additional Borehole	70	04-Jun-22	13-Aug-22
05-00259	Ground Investigation - Additional Borehole completion (14 nos)	0		11-Aug-22
Landfill Site Formation and Groundwater Trench		1086	02-Sep-22	20-Oct-25
05-00260	Site Formation Start	0	02-Sep-22	
05-00261	Excavation (soil)	349	03-Sep-22	07-Sep-23
05-00262	Drainage surface Run OFF Perimeter Channel	126	03-Sep-22	15-Jan-23
05-00263	Drainage surface Run OFF Collection House	150	07-Jan-23	16-Jun-23
05-00264	Slope cut with soil nail and sprayed concrete	756	18-Aug-23	20-Oct-25
05-00265	Install Earth Bund	240	18-Aug-23	29-Apr-24
05-00266	Excavation (rock)	378	03-Mar-23	06-Apr-24
05-00267	Valley Drain	150	06-Jun-23	09-Nov-23
05-00267.01	Settlement cell installation	314	03-Nov-23	28-Sep-24
05-00268	Toe Drain	163	03-Nov-23	25-Apr-24
05-00269	Install Landfill Gas Pipe on Earth Bund	150	14-Apr-24	15-Sep-24
05-00270	Install Intercell Bund	150	14-Apr-24	15-Sep-24
05-00271	Install Leachate Force Main	518	14-Apr-24	06-Oct-25
05-00272	Install Pump Station and Associated Equipment (Sumphouses)	516	14-Apr-24	04-Oct-25
05-00273	Site Formation and Groundwater trench completion (1st stage)	0		14-Sep-24
05-00273.01	Site Formation and Groundwater trench completion (2nd stage)	0		14-Sep-25
Landfill Trial Area		50	24-Jul-24	11-Sep-24
05-00223	Trial Lining Works	35	24-Jul-24	27-Aug-24
05-00224	Protective Stone Laying	15	28-Aug-24	11-Sep-24
Landfill Liner Stage 1-3 (Portion E4, & B1) - 1st Stage		210	14-Sep-24	12-Apr-25
05-00274	Ready for lining works	0		14-Sep-24
05-0167	Lining Works	120	16-Sep-24	01-Feb-25
05-0168	Protective stone laying and Leachate Collection Pipe	60	01-Feb-25	12-Apr-25
05-0169	Lining works completed	0		12-Apr-25
Landfill Liner Stage 1-3 (Portion E4, & B1) - 2nd Stage		102	14-Sep-25	25-Dec-25
05-00275	Ready for lining works	0		14-Sep-25
05-1815	Lining Works	87	16-Sep-25	25-Dec-25
05-1816	Lining works completed	0		25-Dec-25
05-1817	Protective stone laying and Leachate Collection Pipe	60	16-Oct-25	25-Dec-25
AREA 0-B2 (Portion E3, B1 & E4)		719	25-Jan-22 A	13-Feb-24
Advanced Works		196	25-Jan-22 A	18-Sep-22
05-00198	Possession of Area O-B2	0	25-Jan-22 A	
05-00199	Tree Removal	0		23-Feb-22
05-00200	Tree Survey	58	24-Feb-22 A	24-Apr-22 A
05-00201	Handover access	0	24-Feb-22 A	
05-00202	Initial Site Survey / Topographic Survey / Condition Survey	29	25-Apr-22 A	20-May-22 A
05-00203	Ground Investigation - Additional Borehole	14	11-Aug-22	25-Aug-22
05-00204	Ground Investigation - Additional Borehole completion	0		25-Aug-22
05-00205	Initial Site Survey / Topographic Survey / Condition Survey completion	0		23-May-22 A
05-00206	Tree Survey Report	0		23-May-22 A
05-00207	Access Haul Road works	60	19-Jul-22	18-Sep-22
05-00208	Site Haul Road completion	0		17-Sep-22
Landfill Site Formation and Groundwater Trench		331	13-Oct-22	26-Sep-23
05-00209	Site Formation Start	0	13-Oct-22	
05-00210	Excavation(soil)	156	14-Oct-22	28-Mar-23
05-00211	Slope cut with soil nail and sprayed concrete	162	11-Apr-23	23-Sep-23
05-00212	Excavation(rock)	172	28-Mar-23	23-Sep-23
05-00213	Drainage surface Run OFF Perimeter Channel	84	28-Dec-22	28-Mar-23
05-00214	Install Earth Bund	54	28-Mar-23	27-May-23
05-00215	Drainage surface Run OFF Collection House	94	28-Mar-23	08-Jul-23
05-00216	Install Intercell Bund	58	27-May-23	26-Jul-23
05-00216.01	Settlement cell installation	98	15-Jun-23	23-Sep-23
05-00217	Install Landfill Gas Pipe on Earth Bund	88	27-Jun-23	23-Sep-23
05-00218	Toe Drain and Connection to Existing Drainage	60	26-Jul-23	24-Sep-23
05-00219	Valley Drain	60	08-Jul-23	06-Sep-23
05-00220	Install Pump Station and Associated Equipment (Sumphouses)	60	28-Jul-23	26-Sep-23
05-00221	Install Leachate Force Main	60	28-Jul-23	26-Sep-23
05-00222	Site Formation and Groundwater trench completion	0		26-Sep-23
Landfill Liner Stages 1&2 (Portion E3, B1 & E4)		140	26-Sep-23	13-Feb-24
05-00225	Handover to VES - Ready for lining works	0		26-Sep-23
05-0191	Lining Works	120	26-Sep-23	13-Feb-24
05-0192	Protective stone laying and Leachate Collection Pipe	60	05-Dec-23	13-Feb-24
05-0193	Lining works completed	0		13-Feb-24
AREA 0-B1 (Portion E3)		1040	25-Jan-22 A	12-Feb-25
Advanced Works		187	25-Jan-22 A	25-Oct-22
05-00226	Possession of Area O-B1	0	25-Jan-22 A	
05-00227	Access Haul Road works	58	26-Aug-22	25-Oct-22
05-00228	Handover access	0	24-Feb-22 A	
05-00229	Commencement of Tree Removal	52	10-Apr-22	08-Jun-22
05-00230	Ground Investigation - Additional Borehole	70	11-Aug-22	23-Oct-22
05-00231	Issuance of Tree Survey Report	0		30-Apr-22 A
05-00232	Initial Site Survey / Topographic Survey / Condition Survey completion	0		23-May-22 A
05-00233	Tree Removal completion	0		08-Jun-22
05-00234	Ground Investigation - Additional Borehole completion (11nos)	0		20-Oct-22



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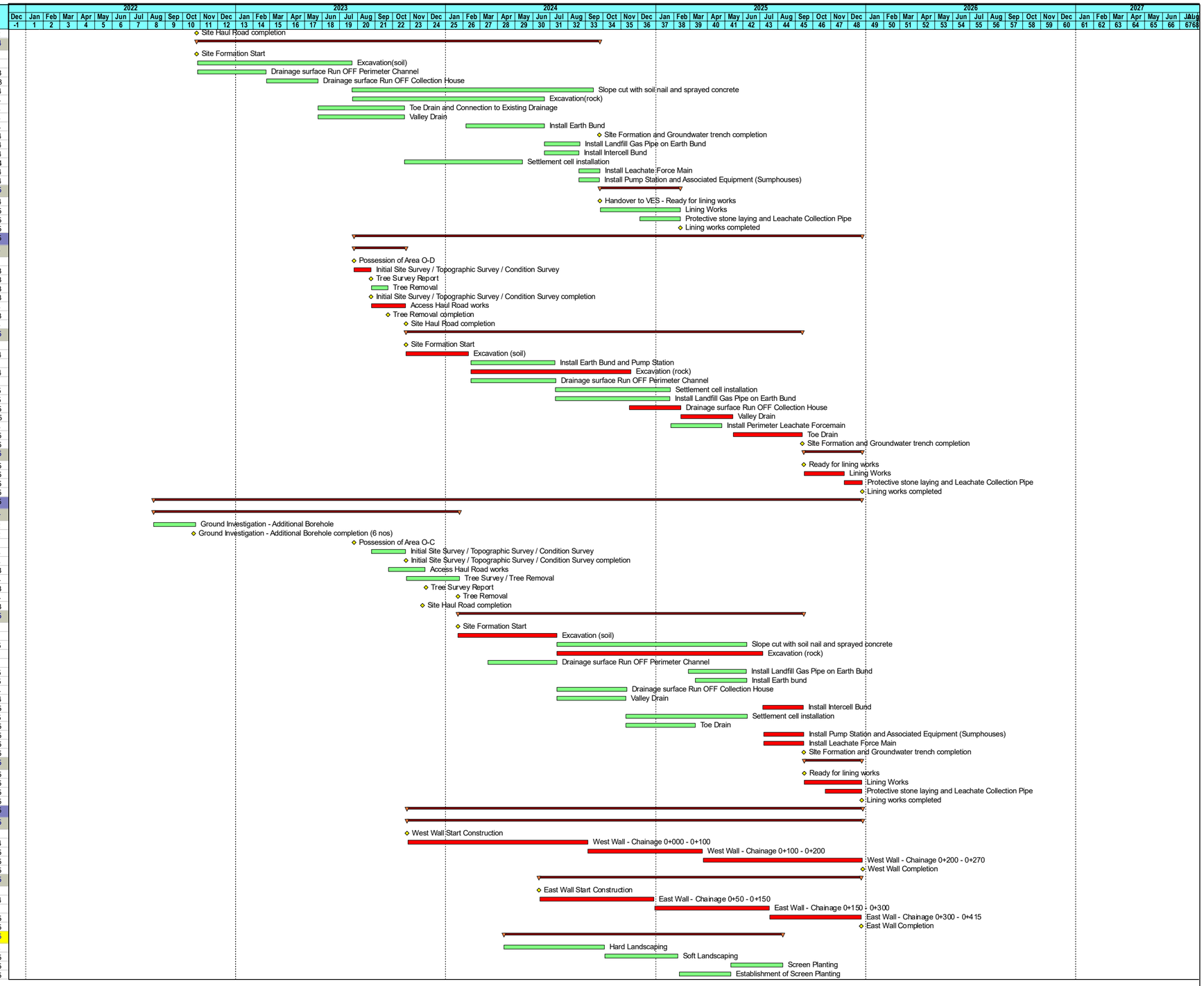
Date	Revision	Checked	Approved
08-Jul-22	EXTRACTED - ISSUED 14JAN2023	DW	AY

Activity ID	Activity Name	OD	Start	Finish
05-00235	Site Haul Road completion	0		25-Oct-22
Landfill Site Formation and Groundwater Trench		664	25-Oct-22	25-Sep-24
05-00236	Site Formation Start	0	25-Oct-22	
05-00237	Excavation(soil)	252	27-Oct-22	22-Jul-23
05-00238	Drainage surface Run OFF Perimeter Channel	111	27-Oct-22	23-Feb-23
05-00239	Drainage surface Run OFF Collection House	85	24-Feb-23	24-May-23
05-00240	Slope cut with soil nail and sprayed concrete	401	22-Jul-23	14-Sep-24
05-00241	Excavation(rock)	317	23-Jul-23	21-Jun-24
05-00242	Toe Drain and Connection to Existing Drainage	144	24-May-23	21-Oct-23
05-00243	Valley Drain	144	24-May-23	21-Oct-23
05-00244	Install Earth Bund	126	05-Feb-24	21-Jun-24
05-00245	Site Formation and Groundwater trench completion	0		24-Sep-24
05-00246	Install Landfill Gas Pipe on Earth Bund	60	21-Jun-24	21-Aug-24
05-00247	Install Intercell Bund	59	21-Jun-24	20-Aug-24
05-00247.01	Settlement cell installation	192	21-Oct-23	13-May-24
05-00248	Install Leachate Force Main	35	20-Aug-24	25-Sep-24
05-00249	Install Pump Station and Associated Equipment (Sumphouses)	34	20-Aug-24	24-Sep-24
Landfill Liner Stage 1-2 (Portion E3)		140	25-Sep-24	12-Feb-25
05-00250	Handover to VES - Ready for lining works	0		25-Sep-24
05-0143	Lining Works	120	26-Sep-24	12-Feb-25
05-0144	Protective stone laying and Leachate Collection Pipe	60	04-Dec-24	12-Feb-25
05-0145	Lining works completed	0		12-Feb-25
Area 0-D (Portion E1 & B2)/ Access Road)		884	26-Jul-23	25-Dec-25
Advanced Works		86	26-Jul-23	24-Oct-23
05-00301	Possession of Area O-D	0	26-Jul-23	
05-00302	Initial Site Survey / Topographic Survey / Condition Survey	30	26-Jul-23	24-Aug-23
05-00303	Tree Survey Report	0		24-Aug-23
05-00304	Tree Removal	30	25-Aug-23	23-Sep-23
05-00305	Initial Site Survey / Topographic Survey / Condition Survey completion	0		24-Aug-23
05-00306	Access Haul Road works	56	25-Aug-23	23-Oct-23
05-00307	Tree Removal completion	0		23-Sep-23
05-00308	Site Haul Road completion	0		24-Oct-23
Landfill Site Formation and Groundwater Trench		690	24-Oct-23	12-Sep-25
05-00309	Site Formation Start	0	24-Oct-23	
05-00310	Excavation (soil)	106	24-Oct-23	10-Feb-24
05-00311	Install Earth Bund and Pump Station	140	14-Feb-24	09-Jul-24
05-00312	Excavation (rock)	268	14-Feb-24	18-Nov-24
05-00313	Drainage surface Run OFF Perimeter Channel	141	14-Feb-24	11-Jul-24
05-00313.01	Settlement cell installation	200	10-Jul-24	26-Jan-25
05-00314	Install Landfill Gas Pipe on Earth Bund	193	10-Jul-24	25-Jan-25
05-00315	Drainage surface Run OFF Collection House	84	16-Nov-24	13-Feb-25
05-00316	Valley Drain	84	13-Feb-25	14-May-25
05-00317	Install Perimeter Leachate Forcemain	82	27-Jan-25	25-Apr-25
05-00318	Toe Drain	118	15-May-25	12-Sep-25
05-00319	Site Formation and Groundwater trench completion	0		12-Sep-25
Landfill Liner Stage 1&2 (Portion E1 & B2)		101	15-Sep-25	25-Dec-25
05-00320	Ready for lining works	0		15-Sep-25
05-0232.04	Lining Works	60	16-Sep-25	24-Nov-25
05-0232.05	Protective stone laying and Leachate Collection Pipe	27	24-Nov-25	25-Dec-25
05-0232.06	Lining works completed	0		25-Dec-25
AREA 0-C (Portion E1,B1 & E4)		1231	11-Aug-22	25-Dec-25
Advanced Works		505	11-Aug-22	25-Jan-24
05-00276	Ground Investigation - Additional Borehole	70	11-Aug-22	23-Oct-22
05-00277	Ground Investigation - Additional Borehole completion (6 nos)	0		20-Oct-22
05-00278	Possession of Area O-C	0	26-Jul-23	
05-00279	Initial Site Survey / Topographic Survey / Condition Survey	56	25-Aug-23	23-Oct-23
05-00280	Initial Site Survey / Topographic Survey / Condition Survey completion	0		24-Oct-23
05-00281	Access Haul Road works	60	24-Sep-23	26-Nov-23
05-00282	Tree Survey / Tree Removal	90	25-Oct-23	25-Jan-24
05-00283	Tree Survey Report	0		28-Nov-23
05-00284	Tree Removal	0		22-Jan-24
05-00285	Site Haul Road completion	0		22-Nov-23
Landfill Site Formation and Groundwater Trench		572	23-Jan-24	15-Sep-25
05-00286	Site Formation Start	0	23-Jan-24	
05-00287	Excavation (soil)	160	23-Jan-24	13-Jul-24
05-00288	Slope cut with soil nail and sprayed concrete	314	13-Jul-24	08-Jun-25
05-00289	Excavation (rock)	341	13-Jul-24	06-Jul-25
05-00290	Drainage surface Run OFF Perimeter Channel	112	15-Mar-24	13-Jul-24
05-00291	Install Landfill Gas Pipe on Earth Bund	95	26-Feb-25	07-Jun-25
05-00292	Install Earth bund	83	10-Mar-25	08-Jun-25
05-00293	Drainage surface Run OFF Collection House	118	13-Jul-24	11-Nov-24
05-00294	Valley Drain	117	13-Jul-24	10-Nov-24
05-00295	Install Intercell Bund	70	06-Jul-25	14-Sep-25
05-00295.01	Settlement cell installation	198	10-Nov-24	09-Jun-25
05-00296	Toe Drain	114	10-Nov-24	10-Mar-25
05-00297	Install Pump Station and Associated Equipment (Sumphouses)	70	07-Jul-25	15-Sep-25
05-00298	Install Leachate Force Main	70	07-Jul-25	15-Sep-25
05-00299	Site Formation and Groundwater trench completion	0		15-Sep-25
Landfill Liner Stage 1&2 (Portion E1, B1 & E4)		100	16-Sep-25	25-Dec-25
05-00300	Ready for lining works	0		16-Sep-25
05-0215	Lining Works	86	16-Sep-25	25-Dec-25
05-0216	Protective stone laying and Leachate Collection Pipe	55	22-Oct-25	25-Dec-25
05-0217	Lining works completed	0		25-Dec-25
Geotechnical Retaining Structure & Access Road		756	26-Oct-23	27-Dec-25
West Wall		756	26-Oct-23	27-Dec-25
05-00321	West Wall Start Construction	0	26-Oct-23	
05-00322	West Wall - Chainage 0+000 - 0+100	298	28-Oct-23	04-Sep-24
05-00323	West Wall - Chainage 0+100 - 0+200	190	05-Sep-24	22-Mar-25
05-00324	West Wall - Chainage 0+200 - 0+270	265	24-Mar-25	25-Dec-25
05-00325	West Wall Completion	0		27-Dec-25
EAST Wall		540	11-Jun-24	24-Dec-25
05-00326	East Wall Start Construction	0	11-Jun-24	
05-00327	East Wall - Chainage 0+50 - 0+150	193	13-Jun-24	28-Dec-24
05-00328	East Wall - Chainage 0+150 - 0+300	188	30-Dec-24	17-Jul-25
05-00329	East Wall - Chainage 0+300 - 0+415	157	18-Jul-25	24-Dec-25
05-00330	East Wall Completion	0		24-Dec-25
Landscape Works		485	12-Apr-24	09-Aug-25
05-0242	Hard Landscaping	150	12-Apr-24	03-Oct-24
05-0243	Soft Landscaping	110	04-Oct-24	08-Feb-25
05-0252	Screen Planting	88	11-May-25	09-Aug-25
05-0262	Establishment of Screen Planting	84	10-Feb-25	11-May-25



環境保護署
Environmental Protection Department

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

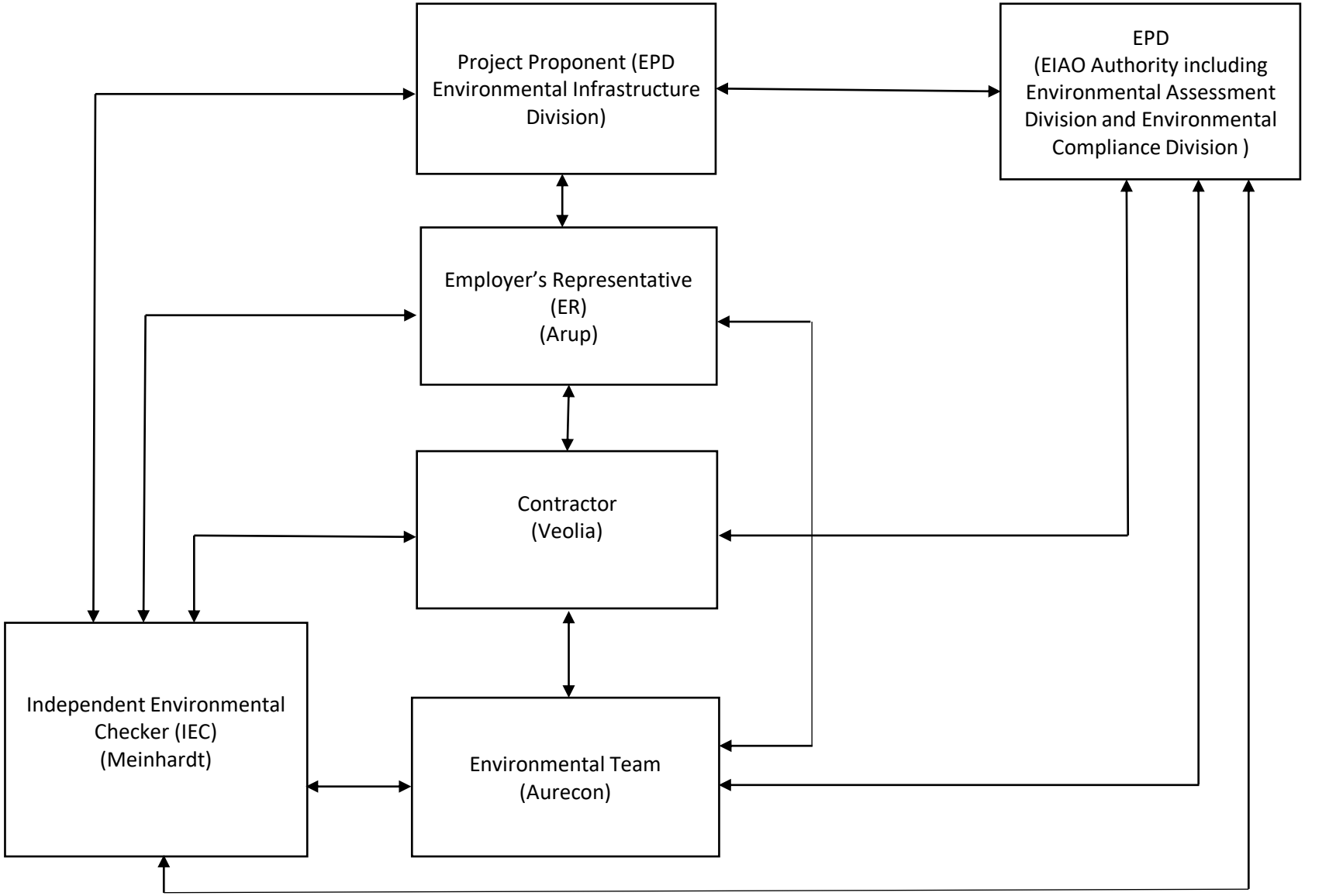
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

BASELINE PROGRAMME - EXTRACTED (REV.3)
INITIAL WORKS (PHASE 1)

VEOLIA

Date	Revision	Checked	Approved
08-Jul-22	EXTRACTED - ISSUED 14JAN2023	DW	AY

Appendix B Project Organization Chart & Management Structure



Notes:
EPD - Environmental Protection Department
Arup – Ove Arup & Partners Limited
Veolia - Veolia Environmental Services Hong Kong Limited
Meinhardt - Meinhardt Infrastructure And Environment Limited
Aurecon - Aurecon Hong Kong Limited

Line of Communication

Appendix C Monitoring Schedule for Reporting Month & Next Month

Impact Monitoring Schedule for NENT Landfill Extension (April 2023) (version 2.0)

4-2023						
Sun	**Mon**	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**
						1
2	**3**	**4**	**5**	**6** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a Surface water quality monitoring at WM1 and WM2	**7**	**8**
9	**10**	**11**	**12** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**13**	**14**	**15**
16	**17**	**18** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**19**	**20**	**21**	**22**
23	**24** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**25**	**26**	**27**	**28**	**29** Air quality monitoring at AM1, AM2 and AM3
30						

Remark:

1. Air quality monitoring includes 1-hour TSP and 24-hour TSP monitoring at AM1, AM2 and AM3 (Ref.: Table 3.1 of the approved EM&A Manual).
2. Noise monitoring includes 30-minute construction noise monitoring at NM1a and NM2a (Ref.: Table 4.1 of the approved EM&A Manual).
3. Surface water quality monitoring includes in-situ measurement and water sampling for laboratory analysis at WM1 and WM2 (Ref.: Table 5.5 and Section 5.5.6 of the approved EM&A Manual).

Impact Monitoring Schedule for NENT Landfill Extension (May 2023) (version 1.0)

5-2023						
Sun	**Mon**	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**
	1	**2**	**3**	**4**	**5** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a Surface water quality monitoring at WM1 and WM2	**6**
7	**8**	**9**	**10**	**11** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**12**	**13**
14	**15**	**16**	**17** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**18**	**19**	**20**
21	**22**	**23** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**24**	**25**	**26**	**27**
28	**29** Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	**30**	**31**	1	2	3 Air quality monitoring at AM1, AM2 and AM3

Remark:

1. The schedule is tentative only and would be subject to changes due to unforeseen circumstances.
2. Air quality monitoring includes 1-hour TSP and 24-hour TSP monitoring at AM1, AM2 and AM3 (Ref.: Table 3.1 of the approved EM&A Manual).
3. Noise monitoring includes 30-minute construction noise monitoring at NM1a and NM2a (Ref.: Table 4.1 of the approved EM&A Manual).
4. Surface water quality monitoring includes in-situ measurement and water sampling for laboratory analysis at WM1 and WM2 (Ref.: Table 5.5 and Section 5.5.6 of the approved EM&A Manual).

Appendix D Calibration Certificates

Air Quality

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Fax : (852) 2698 9383

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

Verification Test Date: 3-Dec-22 to 4-Dec-22
Next Verification Test Date: 2-Dec-23
Unit-under-Test- Model No. Sibata LD-5R
Unit-under-Test Serial No. 0Z4545
Our Report Refrence No. RPT-22-HVS-0026
Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type		Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.		TE-5170X	TE-5025A
Equipment serial no.	MFC	1106	3465
Last Calibration Date		1-Dec-22	28-Jun-22
Next Calibration Date		31-Jan-23	27-Jun-23

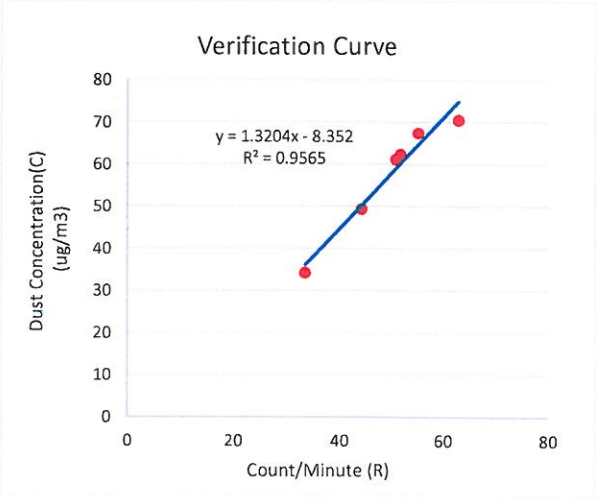
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00120	51	10251	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00102	34	6444	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00111	44	8193	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00122	55	9927	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00120	52	9360	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00112	63	11340	R222044/3	70
					0.00114				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

slope, mh= 1.3204
intercept,ch= -8.3520
*Correlation Coefficient,R= 0.9780
Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: _____ Date: 05-12-2022
Technical Manager

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Fax.: (852) 2698 9383

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

Verification Test Date: 3-Dec-22 to 4-Dec-22
Next Verification Test Date: 2-Dec-23
Unit-under-Test- Model No.: Sibata LD-5R
Unit-under-Test Serial No.: 882106
Our Report Refrence No.: RPT-22-HVS-0027
Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type		Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.		TE-5170X	TE-5025A
Equipment serial no.	MFC	1106	3465
Last Calibration Date		1-Dec-22	28-Jun-22
Next Calibration Date		31-Jan-23	27-Jun-23

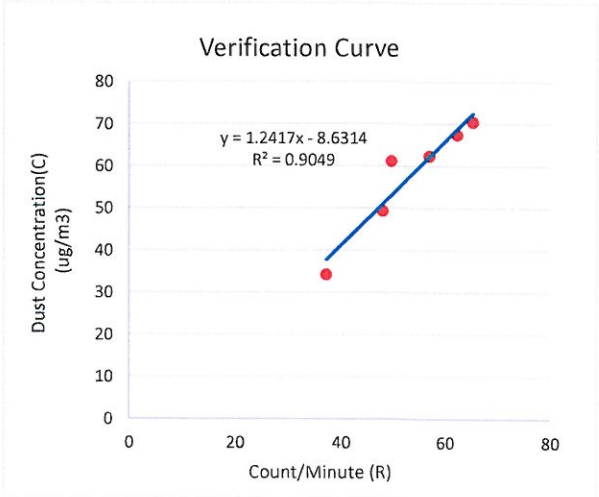
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00123	50	9983	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00092	37	7146	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00103	48	8870	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00108	62	11183	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00110	57	10260	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00108	65	11760	R222044/3	70
					0.00107				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

slope, mh= 1.2417
intercept,ch= -8.6314
*Correlation Coefficient,R= 0.9513
Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: _____ Date: 05-12-2022
Technical Manager

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

Verification Test Date: 3-Dec-22 to 4-Dec-22
Next Verification Test Date: 2-Dec-23
Unit-under-Test- Model No. Sibata LD-5R
Unit-under-Test Serial No. 882110
Our Report Refrence No. RPT-22-HVS-0025
Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type		Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.		TE-5170X	TE-5025A
Equipment serial no.	MFC	1106	3465
Last Calibration Date		1-Dec-22	28-Jun-22
Next Calibration Date		31-Jan-23	27-Jun-23

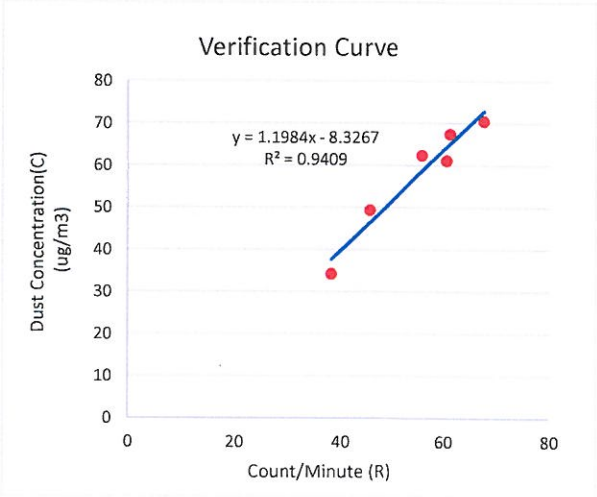
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00101	61	12194	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00089	38	7337	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00108	46	8439	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00110	61	11003	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00112	56	10080	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00104	68	12180	R222044/3	70
					0.00104				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.0

By Linear Regression of y on x:

slope, mh= 1.1984
intercept,ch= -8.3267
*Correlation Coefficient,R= 0.9700
Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: _____ Date: 05-12-2022
Technical Manager

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

Verification Test Date: 3-Dec-22 to 4-Dec-22
Next Verification Test Date: 2-Dec-23
Unit-under-Test- Model No. Sibata LD-5R
Unit-under-Test Serial No. 942532
Our Report Refrence No. RPT-22-HVS-0024
Calibration Location: AM2, Located near the Leachate Treatment Works within the NENT Landfill

Standard Equipment Information			
Verification Equipment Type		Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.		TE-5170X	TE-5025A
Equipment serial no.	MFC	1106	3465
Last Calibration Date		1-Dec-22	28-Jun-22
Next Calibration Date		31-Jan-23	27-Jun-23

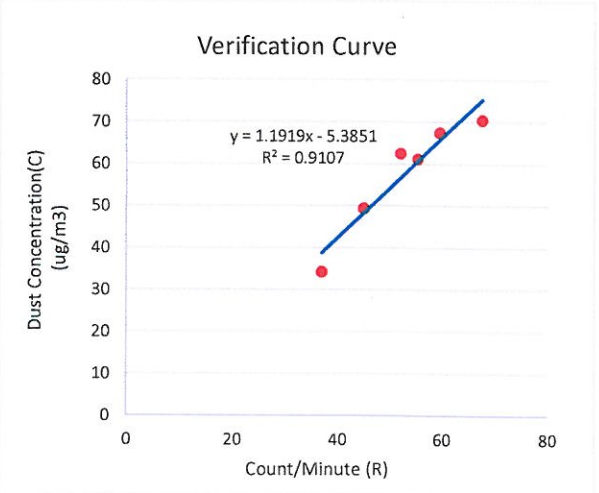
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00111	55	11122	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	0.00093	37	7082	R222043/2	34
3	3/12/2022	201.27	204.35	184.80	0.00110	45	8316	R222043/3	49
4	4/12/2022	252.37	255.36	179.40	0.00113	60	10704	R222044/1	67
5	4/12/2022	255.38	258.38	180.00	0.00120	52	9360	R222044/2	62
6	4/12/2022	258.38	261.38	180.00	0.00104	68	12180	R222044/3	70
					0.00108				

K-Factor to be inputted in LD-5R (corrected 1 decimal point): 1.1

By Linear Regression of y on x:

slope, mh= 1.1919
intercept,ch= -5.3851
*Correlation Coefficient,R= 0.9543
Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Verified By: _____ Date: 05-12-2022
Technical Manager

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HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	NENTX	Site ID:	AM1	Date:	07-Mar-2023
Serial No:	1105	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	759.0	Actual Temperature during Calibration (T_a) (deg K):	296.4

Calibration Orifice

Model:	TE-5025A	Slope (m_c):	2.05924
Serial No.:	3465	Intercept (b_c):	-0.01929
Calibration Due Date:	28-Jun-23	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH_2O (in)	Qa, X-Axis (m^3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	11.30	1.645	55.0	55.11
13	9.20	1.485	50.0	50.10
10	6.90	1.288	44.0	44.09
7	4.50	1.042	37.0	37.08
5	2.80	0.824	30.0	30.06

Sampler Calibtation Relationship (Qa on x-axis, IC on y-axis)

m= 30.2340 b= 5.2945 Corr. Coeff= 0.9998

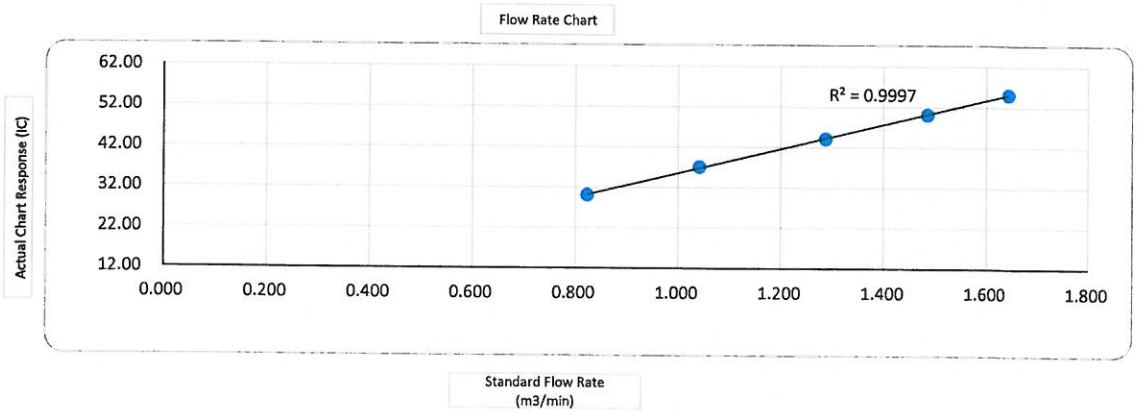
Calculations

$Qa = 1/m_c * [Sqrt (\Delta H_2O * (P_a/P_{Std}) * (T_{Std}/T_a)) - b_c]$

$IC = I * (Sqrt (P_a/P_{Std}) * (T_{Std}/T_a))$

Qa = actual flow rate
IC = corrected chart response
I = actual chart response
m_c = calibrator slope
b_c = calibrator intercept

m = sampler slope
b = sampler intercept
T_{Std} = 298 deg K
P_{Std} = 760 mm Hg
T_a = actual temperature during calibration (deg K)
P_a = actual pressure during calibration (mm Hg)



Checked by: _____ Date: 07-Mar-2023

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HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	NENTX	Site ID:	AM2	Date:	07-Mar-2023
Serial No:	1106	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	759.0	Actual Temperature during Calibration (T_a) (deg K):	296.4

Calibration Orifice

Model:	TE-5025A	Slope (m_c):	2.05924
Serial No.:	3465	Intercept (b_c):	-0.01929
Calibration Due Date:	28-Jun-23	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH_2O (in)	Qa, X-Axis (m^3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.10	1.702	62.0	62.13
13	9.40	1.501	57.0	57.12
10	7.20	1.315	50.0	50.10
7	4.50	1.042	42.0	42.09
5	2.90	0.838	36.0	36.07

Sampler Calibtation Relationship (Qa on x-axis, IC on y-axis)

m= 30.6717 b= 10.2530 Corr. Coeff= 0.9989

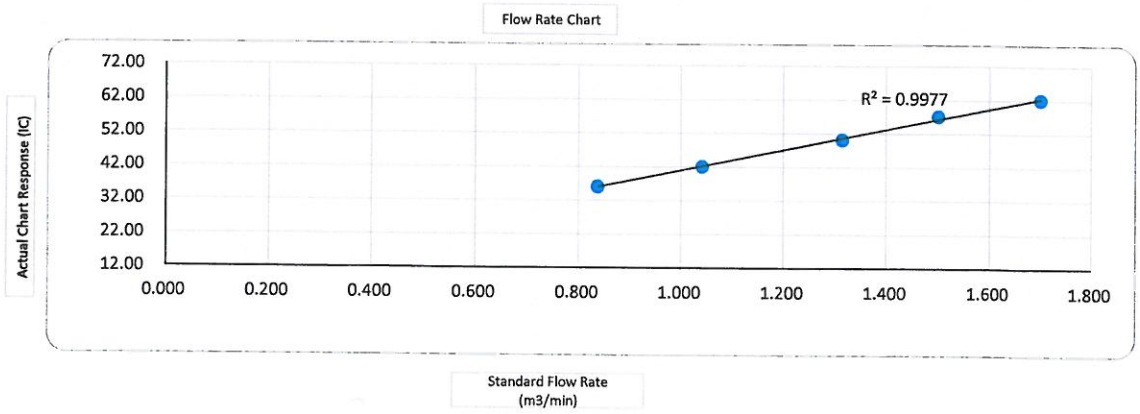
Calculations

$Qa = 1/m_c * [Sqrt (\Delta H_2O * (P_a/P_{Std}) * (T_{Std}/T_a)) - b_c]$

$IC = I * (Sqrt (P_a/P_{Std}) * (T_{Std}/T_a))$

Qa = actual flow rate
IC = corrected chart response
I = actual chart response
m_c = calibrator slope
b_c = calibrator intercept

m = sampler slope
b = sampler intercept
T_{Std} = 298 deg K
P_{Std} = 760 mm Hg
T_a = actual temperature during calibration (deg K)
P_a = actual pressure during calibration (mm Hg)



Checked by: _____ Date: 07-Mar-2023

ACUITY sustainability
Member of the Aurecon Group

aurecon

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	NENTX	Site ID:	AM3	Date:	07-Mar-2023
Serial No:	1856	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	759.0	Actual Temperature during Calibration (T_a) (deg K):	296.4

Calibration Orifice

Model:	TE-5025A	Slope (m_c):	2.05924
Serial No.:	3465	Intercept (b_c):	-0.01929
Calibration Due Date:	28-Jun-23	Corr. Coeff:	0.99998

Calibration Data

Plate or Test #	ΔH_2O (in)	Qa, X-Axis (m^3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.70	1.743	58.0	58.12
13	10.00	1.548	52.0	52.11
10	7.80	1.368	45.0	45.09
7	4.90	1.087	37.0	37.08
5	3.10	0.866	29.0	29.06

Sampler Calibtation Relationship (Qa on x-axis, IC on y-axis)

m= 32.9317 b= 0.7369 Corr. Coeff= 0.9991

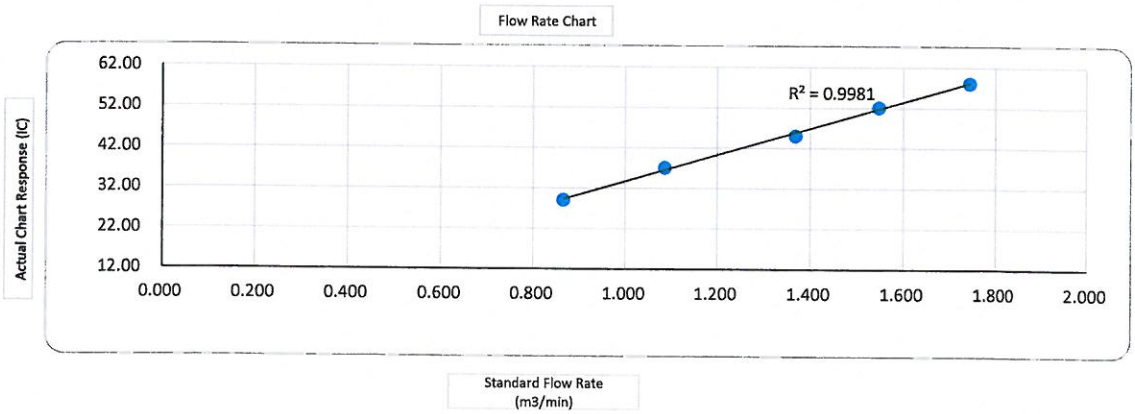
Calculations

$Qa = 1/m_c * [Sqrt (\Delta H_2O * (P_a/P_{Std}) * (T_{Std}/T_a)) - b_c]$

$IC = I * (Sqrt (P_a/P_{Std}) * (T_{Std}/T_a))$

Qa = actual flow rate
IC = corrected chart response
I = actual chart response
m_c = calibrator slope
b_c = calibrator intercept

m = sampler slope
b = sampler intercept
T_{Std} = 298 deg K
P_{Std} = 760 mm Hg
T_a = actual temperature during calibration (deg K)
P_a = actual pressure during calibration (mm Hg)



Checked by: _____ Date: 07-Mar-2023

TISCH Environmental

RECALIBRATION DUE DATE:
June 28, 2023

Certificate of Calibration

Calibration Certification Information					
Cal. Date:	June 28, 2022	**Rootsmeter S/N:** 438320	**Ta:** 296	°K	
Operator:	Jim Tisch		**Pa:** 755.1	mm Hg	
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3465**			

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4290	3.2	2.00
2	3	4	1	1.0130	6.4	4.00
3	5	6	1	0.9050	7.9	5.00
4	7	8	1	0.8590	8.8	5.50
5	9	10	1	0.7110	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)
0.9961	0.6970	1.4144	0.9958	0.6968	0.8854
0.9918	0.9791	2.0003	0.9915	0.9788	1.2522
0.9899	1.0938	2.2364	0.9895	1.0934	1.4000
0.9887	1.1509	2.3456	0.9883	1.1506	1.4683
0.9834	1.3831	2.8289	0.9830	1.3826	1.7708
QSTD	**m=**	**2.05924**	**QA**	**m=**	**1.28946**
	b=	**-0.01929**		**b=**	**-0.01207**
	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

Noise

Certificate of Calibration

for

Description:	***Sound Level Meter***
Manufacturer:	***NTi Audio***
Type No.:	***XL2 (Serial No.: A2A-13661-E0)***
Microphone:	***ACO 7052 (Serial No.:68914)***
Preamplifier:	***NTi Audio MA220 (M2211) (Serial No.:6282)***

Submitted by:

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

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

☑ **Within (31.5Hz – 8kHz)**
☐ **Outside**

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 20 August 2022

Date of calibration: 22 August 2022

Date of NEXT calibration: 21 August 2023

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 22 August 2022

Certificate No.: APJ22-071-CC001

ACOUSTICS AND AIR TESTING LABORATORY CO. LTD. (A+A)*L

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

1. *Calibration Precaution:*

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

2. *Calibration Conditions:*

Air Temperature:	23.4 °C
Air Pressure:	1005 hPa
Relative Humidity:	68.5 %

3. *Calibration Equipment:*

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

4. *Calibration Results*

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	93.8	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	93.8	Ref
			104		103.8	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	93.8	Ref
		Slow			93.8	±0.3

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

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dB SPL	Fast	94	31.5	93.9	±2.0
				63	94.0	±1.5
				125	93.9	±1.5
				250	93.8	±1.4
				500	93.8	±1.4
				1000	93.8	Ref
				2000	93.4	±1.6
				4000	93.0	±1.6
				8000	92.2	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	31.5	54.6	-39.4 ±2.0
				63	67.7	-26.2 ±1.5
				125	77.8	-16.1 ±1.5
				250	85.2	-8.6 ±1.4
				500	90.6	-3.2 ±1.4
				1000	93.8	Ref
				2000	94.6	+1.2 ±1.6
				4000	94.0	+1.0 ±1.6
				8000	91.2	-1.1 +2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBC SPL	Fast	94	31.5	90.9	-3.0 ±2.0
				63	93.1	-0.8 ±1.5
				125	93.7	-0.2 ±1.5
				250	93.8	-0.0 ±1.4
				500	93.8	-0.0 ±1.4
				1000	93.8	Ref
				2000	93.3	-0.2 ±1.6
				4000	92.2	-0.8 ±1.6
				8000	89.3	-3.0 +2.1; -3.1

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

5. *Calibration Results Applied*

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

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.10
	63 Hz	± 0.10
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

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

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

Certificate No. D224349E

JCSS 0197

CALIBRATION CERTIFICATE

Product	:	SOUND CALIBRATOR
Type	:	NC-75
Serial number	:	34724243
Manufacturer	:	RION CO., LTD.
Calibration quantities	:	Sound pressure level (with reference standard microphone)
Calibration method	:	Measured by specified secondary standard microphone according to JCSS calibration procedure specified by RION.
Ambient conditions	:	Temperature 23.9 ℃, Relative humidity 49 %, Static pressure 99.9 kPa
Calibration date	:	05/07/2022 (DD/MM/YYYY)
Calibration location	:	3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan RION CO., LTD. Calibration Room

We hereby certify that the results of this calibration were as follows.

Issue date : 11/07/2022 (DD/MM/YYYY)

Junichi Kawamura
Manager
Quality Assurance Section,
Quality Assurance Department,
Environmental Instrument Division,
RION CO., LTD.
3-20-41 Higashimotomachi, Kokubunji,
Tokyo 185-8533, Japan

Certificate No. D224349E

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured value	Expanded uncertainty *1
93.99 dB	0.09 dB

Specified secondary standard microphone:
Type : 4160
Serial number : 2973341
Reference Sound pressure : 2×10^{-5} Pa

*1 Defines an interval estimated to have a level of confidence of approximately 95 %.
Coverage factor k=2

Calibration result is the calibration value in ambient conditions during calibration.

BE OUT OF JCSS CALIBRATION

1. Frequency

Measured value	Measurement uncertainty (k=2)
1000.0 Hz	3.9×10^{-4} Hz

Working measurement standard universal counter:
Type : 53132A
Serial number : MY40005574
(JCSS Calibration Certificate No. 21081499079575510)

2. Total distortion

Measured value
0.2 %

Working measurement standard distortion meter:
Type : VA-2230A
Serial number : 11076061
(A2LA Calibration Certificate No. 1501-03080)

- closing -

RION

Hong Kong Calibration Ltd.
香 港 校 正 有限公司

A1

Calibration Certificate

Certificate No. 300737 Page 1 of 2 Pages

Customer : Acuity Sustainability Consulting Limited

Address : Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, H.K.

Order No. : Q30320 **Date of receipt :** 2-Feb-23

Item Tested

Description : Hot Wire Anemometer

Manufacturer : RS PRO **I.D. :** ASCL-EQ-111

Model : RS-90 **Serial No. :** 210722208

Test Conditions

Date of Test : 13-Feb-23 **Supply Voltage :** --

Ambient Temperature : (23 ± 3)°C **Relative Humidity :** (50 ± 25) %

Test Specifications

Calibration check.

Ref. Document/Procedure : T03, Z04.

Test Results

All results were within the manufacturer's specification.

The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S155	Std. Anemometer	206240	NIM-PRC
S223C	Std. Thermometer	205617	NIM-PRC

The values given in this Calibration 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 environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : James Yau **Approved by :** Steve Kwan

Date: 13-Feb-23

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

E

Calibration Certificate

Results :

1. Velocity

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.00	0.00	± (3 % of reading + 0.3 m/s)
2.50	2.43	
5.00	5.04	
10.00	10.07	
15.00	15.65	
19.00	19.87	

2. Temperature

Applied Value (°C)	UUT Reading (°C)	Mfr's Spec.
23.12	23.0	± 2 °C

Remark : 1. UUT: Unit-Under-Test
2. Uncertainty : ± (0.9 % + 0.16 m/s) for Velocity, ± 0.1 °C for Temperature, for a confidence probability of not less than 95 %.
3. Atmospheric Pressure: 1 002 hPa

---------- END ----------

Water Quality

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-BC010056
Date of Issue : 18 January 2023

PART A - CUSTOMER INFORMATION

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

PART B - SAMPLE INFORMATION

Name of Equipment :	HORIBA U-53
Manufacturer :	HORIBA
Serial Number :	PORBNFNT
Date of Received :	12 January 2023
Date of Calibration :	17 January 2023
Date of Next Calibration :	16 April 2023
Request No. :	D-BC010056

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500 H^+
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 21e 4500 O
Turbidity	APHA 21e 2130 B

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	3.94	-0.06	Satisfactory
7.42	7.54	0.12	Satisfactory
10.01	9.92	-0.09	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
10	11.03	1.03	Satisfactory
23	24.48	1.48	Satisfactory
33	34.19	1.19	Satisfactory

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

(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.51	-4.90	Satisfactory
20	19.04	-4.80	Satisfactory
30	29.62	-1.27	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning
Assistant Manager (Chemical Testing)

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-BC010056
Date of Issue : 18 January 2023

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
9.00	8.78	-0.22	Satisfactory
5.88	5.44	-0.44	Satisfactory
2.65	2.25	-0.40	Satisfactory
1.14	0.80	-0.34	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.11	--	Satisfactory
10	10.0	0.0	Satisfactory
20	21.5	7.3	Satisfactory
100	108	8.0	Satisfactory
800	812	1.5	Satisfactory

Tolerance of Turbidity 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 ---

Hong Kong Calibration Ltd.
香 港 校 正 有限公司

Calibration Certificate

Certificate No. **210252** Page 1 of 2 Pages

Customer : Acuity Sustainability Consulting Limited

Address : Unit E, 12/F, Ford Glory Plaza, No. 37-39 Wing Hong Street, Cheung Sha Wan, Kowloon, H.K.

Order No. : Q24081 **Date of receipt :** 31-Oct-22

Item Tested

Description : Flow Probe
Manufacturer : Global Water
Model : FP111
I.D. : --
Serial No. : 22K100859

Test Conditions

Date of Test : 7-Nov-22
Ambient Temperature : 23°C
Supply Voltage : --
Relative Humidity : 78%

Test Specifications

Calibration check.
Ref. Document/Procedure : V12

Test Results

All results were within the manufacturer's specification.
The results are shown in the attached page(s).

Main Test equipment used:

Equipment No.	Description	Cert. No.	Traceable to
S179	Std. Tape	201868	NIM-PRC
S136A	Stop Watch	201878	SCL-HKSAR

The values given in this Calibration 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 environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.
The test results apply to the above Unit-Under-Test only

Calibrated by : Kin Wong

Approved by : Alan Chu

Date: 7-Nov-22

This Certificate is issued by:
Hong Kong Calibration Ltd.
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street,Kwai Chung, NT,Hong Kong.
Tel: 2425 8801 Fax: 2425 8646

Calibration Certificate

Certificate No. 210252

Results :

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.96	1.0	± 0.1 m/s

Remarks : 1. UUT : Unit-Under-Test
2. Uncertainty : ± 1 %, for a confidence probability of not less than 95%.

---------- END ----------

Landfill Gas

PROMAT (HK) LTD
寶時(香港)有限公司
901 New Trend Centre, 704 Prince Edward Road East, San Po Kong, Kowloon, Hong Kong
Tel: (852)2661 2392 Fax: (852)2661 2086 Email: info@promat.hk http://www.promat.hk

PROMAT
Your Solution To Testing Instrument

Calibration Certificate

Customer Name	**Paul Y Construction Co. Ltd**
Model	**PS200**
Serial	**373075**
Tested On	**16 November, 2022**
Cal Expires	**16 November, 2023**
Audible Alarm	**PASS**
Visual Alarm	**PASS**
Calibrated For	**METHANE**
100% LEL Equivalent	**4.4% by VOL**
Overall Results	**PASS**

Calibration Result

Gas Applied	Range	Reading	Calibrated	Result
Zero Air	% LEL	0	0	PASS
Zero Air	% O2	20.9	20.9	PASS
Zero Air	PPM CO	0	0	PASS
Zero Air	PPM H2S	0	0	PASS

Gas Applied	Range	Reading	Calibrated	Result
50% LEL Methane	% LEL	61	50	PASS
18% VOL Oxygen	% O2	17.8	N/A	PASS
100 PPM Carbon Monoxide	PPM CO	71	100	PASS
25 PPM Hydrogen Sulphide	PPM H2S	22	25	PASS

Calibrated By Ivan Lo : _____

PROMAT (HK) LTD

Appendix E Monitoring Results

Air Quality

1-hour TSP Concentration (μg/m^3) at Location AM1

Date	Equipment Brand & Model	Equipment Serial No.	K-factor	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) μg/m^3	Reading (2) μg/m^3	Reading (3) μg/m^3	Average μg/m^3	Action Level μg/m^3	Limit Level μg/m^3
6/4/2023	Sibata LD-5R	942532	0.00108	Cloudy	10:01	11:01	12:01	50	53	55	53	285	500
12/4/2023	Sibata LD-5R	942532	0.00108	Fine	10:50	11:50	12:50	21	19	20	20		
18/4/2023	Sibata LD-5R	942532	0.00108	Cloudy	15:12	16:12	17:12	24	22	22	23		
24/4/2023	Sibata LD-5R	942532	0.00108	Cloudy	13:48	14:48	15:48	48	50	45	48		
29/4/2023	Sibata LD-5R	942532	0.00108	Fine	13:09	14:09	15:09	29	34	31	31		
							Average	**35**					
							Max.	**55**					
							Min.	**19**					

1-hour TSP Concentration (μg/m^3) at Location AM2

Date	Equipment Brand & Model	Equipment Serial No.	K-factor	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) μg/m^3	Reading (2) μg/m^3	Reading (3) μg/m^3	Average μg/m^3	Action Level μg/m^3	Limit Level μg/m^3
6/4/2023	Sibata LD-5R	882106	0.00107	Cloudy	9:40	10:40	11:40	33	37	31	34	279	500
12/4/2023	Sibata LD-5R	882106	0.00107	Fine	11:00	12:00	13:00	32	39	33	35		
18/4/2023	Sibata LD-5R	882106	0.00107	Cloudy	15:02	16:02	17:02	44	76	46	55		
24/4/2023	Sibata LD-5R	882106	0.00107	Cloudy	13:59	14:59	15:59	31	41	36	36		
29/4/2023	Sibata LD-5R	882106	0.00107	Fine	13:16	14:16	15:16	52	43	50	48		
							Average	**42**					
							Max.	**76**					
							Min.	**31**					

1-hour TSP Concentration (μg/m^3) at Location AM3

Date	Equipment Brand & Model	Equipment Serial No.	K-factor	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) μg/m^3	Reading (2) μg/m^3	Reading (3) μg/m^3	Average μg/m^3	Action Level μg/m^3	Limit Level μg/m^3
6/4/2023	Sibata LD-5R	0Z4545	0.00114	Cloudy	10:13	11:13	12:13	45	46	43	45	285	500
12/4/2023	Sibata LD-5R	0Z4545	0.00114	Fine	10:40	11:40	12:40	41	50	40	44		
18/4/2023	Sibata LD-5R	0Z4545	0.00114	Cloudy	15:29	16:29	17:29	35	23	24	27		
24/4/2023	Sibata LD-5R	0Z4545	0.00114	Cloudy	13:40	14:40	15:40	48	54	49	50		
29/4/2023	Sibata LD-5R	0Z4545	0.00114	Fine	13:29	14:29	15:29	32	39	34	35		
							Average	**40**					
							Max.	**54**					
							Min.	**23**					

The Summary of TSP 24-hour Concentration (μg/m^3) at Location AM1

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time	Averaged Flow Rate	Averaged Flow Rate	Total Flow Volume	Filter Weight (g)		Particulate weight	Concentration	Action Level	Limit Level
		(℃)	(hPa)	Initial	Final	(minutes)	(cfm)	(m^3/min)	(m^3)	Initial	Final	(g)	(μg/m^3)	(μg/m^3)	(μg/m3)
6/4/2023	Cloudy	22.7	1012.1	951.31	975.31	1440	39.5	1.13	1634	2.7346	2.7898	0.0552	34	164	260
12/4/2023	Fine	22.8	1012.9	975.31	999.31	1440	40	1.15	1659	2.6675	2.8527	0.1852	112		
18/4/2023	Cloudy	25.2	1011.3	999.31	1023.31	1440	40	1.15	1649	2.6750	2.7463	0.0713	43		
24/4/2023	Cloudy	23.4	1014.1	1023.31	1047.31	1440	40	1.15	1660	2.6742	2.7655	0.0913	55		
29/4/2023	Fine	25.0	1011.9	1047.31	1071.31	1440	40	1.15	1650	2.6702	2.7651	0.0949	58		
												Average	**60**		
												Min	**34**		
												Max	**112**		

The Summary of 24-hour TSP Concentration (μg/m^3) at Location AM2

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time	Averaged Flow Rate	Flow Rate	Total Flow Volume	Filter Weight (g)		Particulate weight	Concentration	Action Level	Limit Level
		(℃)	(hPa)	Initial	Final	(minutes)	(cfm)	(m^3/min)	(m^3)	Initial	Final	(g)	(μg/m^3)	(μg/m^3)	(μg/m3)
6/4/2023	Cloudy	22.7	1012.1	724.40	748.40	1440	41	1.01	1449	2.7457	2.7987	0.0530	37	152	260
12/4/2023	Fine	22.8	1012.9	748.40	772.40	1440	41	1.01	1450	2.6845	2.8456	0.1611	111		
18/4/2023	Cloudy	25.2	1011.3	772.40	796.40	1440	40.5	0.98	1416	2.6776	2.7722	0.0946	67		
24/4/2023	Cloudy	23.4	1014.1	796.40	820.41	1441	40.5	0.99	1427	2.6754	2.7482	0.0728	51		
29/4/2023	Fine	25.0	1011.9	820.41	844.41	1440	40.5	0.98	1417	2.6670	2.7388	0.0718	51		
												Average	**63**		
												Min	**37**		
												Max	**111**		

The Summary of 24-hour TSP Concentration (μg/m^3) at Location AM3

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time	Averaged Flow Rate	Flow Rate	Total Flow Volume	Filter Weight (g)		Particulate weight	Concentration	Action Level	Limit Level
		(℃)	(hPa)	Initial	Final	(minutes)	(cfm)	(m^3/min)	(m^3)	Initial	Final	(g)	(μg/m^3)	(μg/m^3)	(μg/m3)
6/4/2023	Cloudy	22.7	1012.1	1729.97	1754.00	1442	40	1.20	1724	2.7311	2.7998	0.0687	40	163	260
12/4/2023	Fine	22.8	1012.9	1754.00	1778.00	1440	43	1.29	1854	2.6673	2.9472	0.2799	151		
18/4/2023	Cloudy	25.2	1011.3	1778.00	1802.00	1440	39	1.16	1669	2.6855	2.7925	0.1070	64		
24/4/2023	Cloudy	23.4	1014.1	1802.00	1826.00	1440	40	1.20	1723	2.6695	2.7474	0.0779	45		
29/4/2023	Fine	25.0	1011.9	1826.00	1850.00	1440	40	1.19	1714	2.6885	2.7738	0.0853	50		
												Average	**70**		
												Min	**40**		
												Max	**151**		

Remarks:
1. Orange Text equal to exceed Action Level
2. Red Text equal to exceed Limit Level

Noise

Impact Phase Construction Noise Monitoring Data at Location NM1a

Date	Weather	Wind speed	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))					
		m/s			1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th
6/4/2023	Cloudy	0	10:32	11:02	52.0	53.7	55.7	57.8	56.8	55.9	55.7	53.6	56.4	57.6	60.4	59	58.1	48.6	48.1	49.9	51.3	50.5	48.4
12/4/2023	Fine	1.7	11:12	11:42	58.1	57.4	58	59.1	57.1	58.2	58.0	73.1	72.6	72.9	74.6	72.4	73.6	44.9	43.1	43.2	44.6	41.6	42.2
18/4/2023	Hazy	1.5	14:12	14:42	54.8	53.4	53.9	53.2	54.1	52.4	53.7	69.6	68.6	68.1	67.6	68.2	69.8	46.9	47	46.1	47.9	46.1	45.2
24/4/2023	Cloudy	2.6	13:00	13:30	57.1	58.2	57.4	59.1	60.1	57.8	58.4	60.1	61.2	62.4	63.4	62.1	61.9	50.1	51.1	50.6	52.2	53.2	51.9

Average	56.8
Baseline Level	55.4
Action Level	When one valid documented complaint is received
Limit Level	75

Impact Phase Construction Noise Monitoring Data at Location NM2a

Date	Weather	Wind speed	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))					
		m/s			1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th
6/4/2023	Cloudy	1.5	14:32	15:02	65.7	66.2	64.3	66.4	65.4	63.4	65.4	68.5	69.3	67.9	70.2	69.1	67.8	60.1	61.2	59.9	62.4	60.2	61.1
12/4/2023	Fine	2.3	16:00	16:30	53.1	54.3	52.1	55.1	53.2	54.1	53.8	55.2	56.3	54.2	57.2	55.3	56.4	50.1	49.1	51.1	52.6	51.9	49.4
18/4/2023	Hazy	2.1	17:20	17:50	52.3	52.2	54	52.1	55	54	53.4	53.6	53.6	55.7	53.6	57.7	55.8	50.7	50.2	50.6	50.4	51.8	50.8
24/4/2023	Cloudy	2.6	15:01	15:31	52.2	54.1	51.9	52.6	52.6	53.1	52.8	57.1	56.4	57.3	56.2	57.6	56.2	49.1	48.6	50.1	49.2	48.2	47.3

Average	60.1
Baseline Level	54.5
Action Level	When one valid documented complaint is received
Limit Level	75

Water Quality

Monitoring Location: WM1

Date	Time	Weather	Water Depth (m)	Water Flow (L/s)	Water Temperature (°C)	DO (mg/L)			pH			Turbidity (NTU)			SS (mg/L)		
						Value	Action Level	Limit Level	Value	Action Level	Limit Level	Value	Action Level	Limit Level	Value	Action Level	Limit Level
6-Apr-23	14:34	Cloudy	0.1	0	24.3	7.8	<7.4	<4	7.1	>7.7	>7.8	0.4	>9.2	>9.5	3.2	>9.7	>11.4

Monitoring Location: WM2

Date	Time	Weather	Water Depth (m)	Water Flow (L/s)	Water Temperature (°C)	DO (mg/L)			pH			Turbidity (NTU)			SS (mg/L)		
						Value	Action Level	Limit Level	Value	Action Level	Limit Level	Value	Action Level	Limit Level	Value	Action Level	Limit Level
6-Apr-23	8:13	Cloudy	0.30	0	25.3	6.7	<5	<4	7.3	>7.6	>7.7	64.3	>108.3	>108.9	48.1	>94.5	>94.7

Remarks

1. Sample will be grabbed on surface when the water depth is less than 1m.

2. "TBC" equal to "To be confirm"

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

CERTIFICATE OF ANALYSIS

Client	: ACUMEN LABORATORY AND TESTING LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 9
Contact	: MR HUNTINGTON HUI	Contact	: Richard Fung	Work Order	: HK2313159
Address	: UNIT D, 12/F, FORD GLORY PLAZA, NOS.37-39 WING HONG STREET, CHEUNG SHA WAN, KOWLOON, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: htthui@acumen-env.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: +852 2333 6823	Telephone	: +852 2610 1044		
Facsimile	: +852 2333 1316	Facsimile	: +852 2610 2021		
Project	: NENTX			Date Samples Received	: 06-Apr-2023
Order number	: ----	Quote number	: HKE/2751/2022_V2	Issue Date	: 24-Apr-2023
C-O-C number	: ----			No. of samples received	: 2
Site	:			No. of samples analysed	: 2

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

Signatories	*Position*	*Authorised results for*
Fung Lim Chee, Richard	Managing Director	Inorganics
Fung Lim Chee, Richard	Managing Director	Metals_ENV
Ng Sin Kou, May	Laboratory Manager	Microbiology_ENV

General Comments

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. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 06-Apr-2023 to 21-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

Specific Comments for Work Order: HK2313159

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition. The result(s) related only to the item(s) tested.

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.

Microbiological sample(s) was/ were collected in 250mL sterile plastic bottles containing sodium thiosulfate. Sample(s) arrived at the laboratory at 18:20.

NOT DETECTED denotes result(s) is (are) less than the Limit of Report (LOR).

ED037 - Titration end point for Total Alkalinity is pH 4.5 while end point for Total Alkalinity <20mg/L is pH 4.2.

Water sample(s) digested by in-house method E-3005 prior to the determination of total metals. The in-house method is developed based on USEPA method 3005.

EA002 - pH value is reported as at 25°C. Calibration range of pH value is 4.0 - 10.0. Results exceeding this range is for reference only.

EA025 - The accredited LOR of Total Suspended Solids is 0.5mg/L. Results below this LOR are for reference only.

Analytical Results

Sub-Matrix: **WATER**

Compound	CAS Number	LOR	Unit	Sample ID: WM1 / Sampling date / time: 06-Apr-2023 / HK2313159-001	WM2 / 06-Apr-2023 / HK2313159-002	---- / ---- / -------	---- / ---- / -------	---- / ---- / -------
EA/ED: Physical and Aggregate Properties								
EA002: pH Value	----	0.1	pH Unit	6.4	6.7	----	----	----
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	70	140	----	----	----
EA025: Suspended Solids (SS)	----	0.1	mg/L	3.2	48.1	----	----	----
ED037: Total Alkalinity as CaCO3	----	1	mg/L	13	48	----	----	----
ED/EK: Inorganic Nonmetallic Parameters								
ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	7	9	----	----	----
ED045K: Chloride	16887-00-6	0.5	mg/L	8	7	----	----	----
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.22	<0.01	----	----	----
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.14	----	----	----
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.4	0.7	----	----	----
EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.01	<0.01	----	----	----
EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	<2	----	----	----
EP: Aggregate Organics								
EP005: Total Organic Carbon	----	1	mg/L	2	2	----	----	----
EP020: Oil & Grease	----	5	mg/L	<5	<5	----	----	----
EP026C: Chemical Oxygen Demand	----	5	mg/L	17	15	----	----	----
EP030: Biochemical Oxygen Demand	----	2	mg/L	<2	2	----	----	----
EG: Metals and Major Cations - Total								
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	----	----	----
EG020: Copper	7440-50-8	1	µg/L	2	4	----	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	4	----	----	----
EG020: Manganese	7439-96-5	1	µg/L	70	2220	----	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	2	----	----	----
EG020: Zinc	7440-66-6	10	µg/L	19	35	----	----	----
EG032: Calcium	7440-70-2	50	µg/L	3720	15400	----	----	----
EG032: Iron	7439-89-6	10	µg/L	480	9240	----	----	----
EG032: Magnesium	7439-95-4	50	µg/L	500	1370	----	----	----
EG032: Potassium	7440-09-7	50	µg/L	720	3410	----	----	----
EG032: Sodium	7440-23-5	50	µg/L	9170	7890	----	----	----

Sub-Matrix: WATER			Sample ID	WM1	WM2	----	----	----
			Sampling date / time	06-Apr-2023	06-Apr-2023	----	----	----
Compound	CAS Number	LOR	Unit	HK2313159-001	HK2313159-002	-------	-------	-------
EM: Microbiological Testing								
EM002: E. coli	----	1	CFU/100mL	400	260	----	----	----
EM003: Total Coliforms	----	1	CFU/100mL	420	330	----	----	----

Laboratory Duplicate (DUP) Report

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				
				LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 4986151)								
HK2313376-001	Anonymous	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	2100	2120	0.8
EA/ED: Physical and Aggregate Properties (QC Lot: 4986152)								
HK2313376-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	7.4	7.4	0.0
HK2313394-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	7.5	7.4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4987647)								
HK2312959-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	40.0	41.3	3.2
HK2313105-008	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.6	2.7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 4987794)								
HK2313376-001	Anonymous	ED037: Total Alkalinity as CaCO3	----	1	mg/L	34	34	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982167)								
HK2312859-003	Anonymous	EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	1.80	1.80	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982496)								
HK2313159-002	WM2	ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	9	9	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982497)								
HK2313159-002	WM2	ED045K: Chloride	16887-00-6	1	mg/L	7	7	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4985940)								
HK2313441-001	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	20.5	16.9	19.5
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4988300)								
HK2313159-001	WM1	EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4995152)								
HK2312989-001	Anonymous	EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	3140	3070	2.3
EP: Aggregate Organics (QC Lot: 4995509)								
HK2314189-005	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	<1	<1	0.0
EP: Aggregate Organics (QC Lot: 5005161)								
HK2311191-003	Anonymous	EP026C: Chemical Oxygen Demand	----	5	mg/L	13	13	0.0
EG: Metals and Major Cations - Total (QC Lot: 4982013)								
HK2313159-001	WM1	EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Copper	7440-50-8	1	µg/L	2	2	0.0
		EG020: Lead	7439-92-1	1	µg/L	<1	<1	0.0
		EG020: Manganese	7439-96-5	1	µg/L	70	68	3.0

Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report: LOR	Unit	Original Result	Duplicate Result	RPD (%)
EG: Metals and Major Cations - Total (QC Lot: 4982013) - Continued								
HK2313159-001	WM1	**EG020: Nickel**	7440-02-0	1	µg/L	<1	<1	0.0
		EG020: Zinc	7440-66-6	10	µg/L	19	19	0.0
EG: Metals and Major Cations - Total (QC Lot: 4982014)								
HK2313159-002	WM2	**EG032: Iron**	7439-89-6	10	µg/L	9240	9360	1.4
		EG032: Calcium	7440-70-2	50	µg/L	15400	15600	0.9
		EG032: Magnesium	7439-95-4	50	µg/L	1370	1380	0.0
		EG032: Potassium	7440-09-7	50	µg/L	3410	3430	0.8
		EG032: Sodium	7440-23-5	50	µg/L	7890	7950	0.7

Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report: LOR	Unit	Result	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report: Spike Concentration	Spike Recovery (%): LCS	DCS	Recovery Limits(%): Low	High	RPD (%): Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC Lot: 4986151)											
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	146.9 µS/cm	99.6	----	93.5	106	----	----
				<1	1412 µS/cm	96.7	----	94.3	105	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4987647)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	10 mg/L	91.5	----	82.4	118	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 4987794)											
ED037: Total Alkalinity as CaCO3	----	1	mg/L	<1	50 mg/L	100	----	95.0	105	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982167)											
EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	101	----	92.4	106	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982496)											
ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	<1	5 mg/L	108	----	89.8	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982497)											
ED045K: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	101	----	88.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4985940)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	96.9	----	89.3	109	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4988300)											

Matrix: **WATER**

Method: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
		LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4988300) - Continued											
EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	----	----	----	----	----	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4995152)											
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	0.5 mg/L	108	----	89.0	120	----	----
EP: Aggregate Organics (QC Lot: 4979267)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	97.0	----	78.6	118	----	----
EP: Aggregate Organics (QC Lot: 4995509)											
EP005: Total Organic Carbon	----	1	mg/L	<1	5 mg/L	104	----	78.1	123	----	----
				<1	100 mg/L	103	----	79.9	119	----	----
EP: Aggregate Organics (QC Lot: 5000446)											
EP020: Oil & Grease	----	2	mg/L	<2	20 mg/L	94.0	----	84.2	110	----	----
EP: Aggregate Organics (QC Lot: 5005161)											
EP026C: Chemical Oxygen Demand	----	----	mg/L	----	25 mg/L	102	----	92.0	108	----	----
				----	250 mg/L	99.8	----	92.3	106	----	----
EG: Metals and Major Cations - Total (QC Lot: 4982013)											
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	5 µg/L	98.7	----	85.0	109	----	----
EG020: Copper	7440-50-8	1	µg/L	<1	50 µg/L	101	----	90.0	111	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	98.3	----	89.0	111	----	----
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	111	----	85.0	115	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	98.2	----	87.0	110	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	99.8	----	86.0	114	----	----
EG: Metals and Major Cations - Total (QC Lot: 4982014)											
EG032: Calcium	7440-70-2	50	µg/L	<50	2000 µg/L	104	----	85.0	115	----	----
EG032: Iron	7439-89-6	10	µg/L	<10	2000 µg/L	111	----	85.0	115	----	----
EG032: Magnesium	7439-95-4	50	µg/L	<50	2000 µg/L	109	----	85.0	115	----	----
EG032: Potassium	7440-09-7	50	µg/L	<50	2000 µg/L	103	----	85.0	115	----	----
EG032: Sodium	7440-23-5	50	µg/L	<50	2000 µg/L	103	----	85.0	115	----	----

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: **WATER**

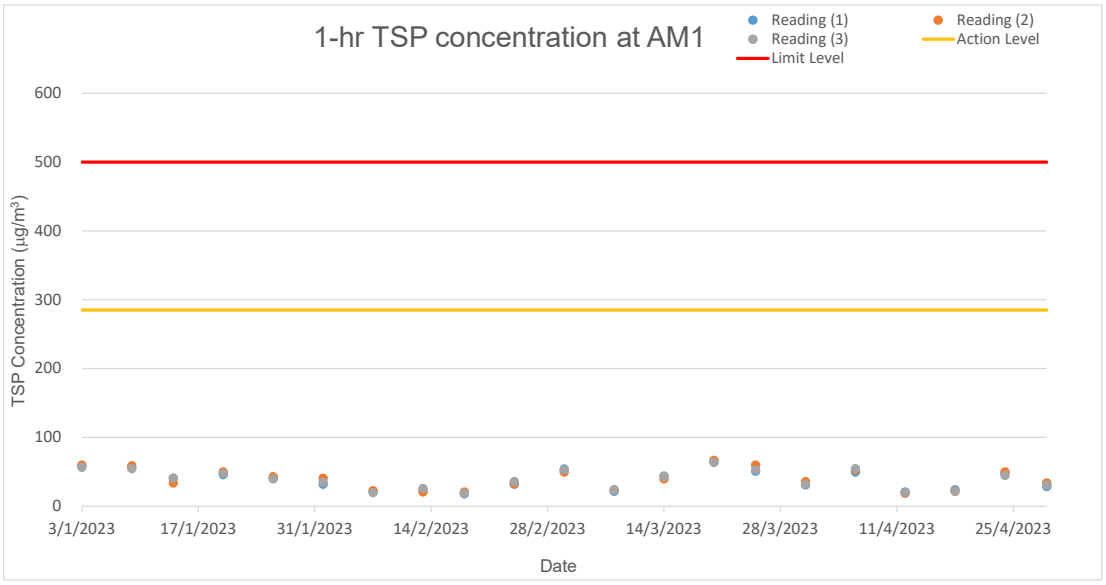
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982167)										
HK2312859-003	Anonymous	**EK071K: Reactive Phosphorus as P**	14265-44-2	5 mg/L	99.6	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982496)										
HK2313159-002	WM2	**ED041K: Sulphate as SO4 - Turbidimetric**	----	5 mg/L	84.9	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4982497)										
HK2313159-002	WM2	**ED045K: Chloride**	16887-00-6	5 mg/L	91.5	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4985940)										
HK2313441-001	Anonymous	**EK055K: Ammonia as N**	7664-41-7	50 mg/L	98.3	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 4995152)										
HK2312989-001	Anonymous	**EK061A: Total Kjeldahl Nitrogen as N**	----	500 mg/L	# Not Determined	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 4995509)										
HK2314189-005	Anonymous	**EP005: Total Organic Carbon**	----	5 mg/L	90.0	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 5005161)										
HK2313159-001	WM1	**EP026C: Chemical Oxygen Demand**	----	10 mg/L	102	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 4982013)										
HK2312932-001	Anonymous	**EG020: Cadmium**	7440-43-9	5 µg/L	101	----	75.0	125	----	----
		EG020: Copper	7440-50-8	50 µg/L	97.3	----	75.0	125	----	----
		EG020: Lead	7439-92-1	50 µg/L	97.4	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	50 µg/L	114	----	75.0	125	----	----
		EG020: Nickel	7440-02-0	50 µg/L	93.6	----	75.0	125	----	----
		EG020: Zinc	7440-66-6	50 µg/L	96.0	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 4982014)										
HK2313159-001	WM1	**EG032: Calcium**	7440-70-2	2000 µg/L	101	----	75.0	125	----	----
		EG032: Iron	7439-89-6	2000 µg/L	106	----	75.0	125	----	----
		EG032: Magnesium	7439-95-4	2000 µg/L	103	----	75.0	125	----	----

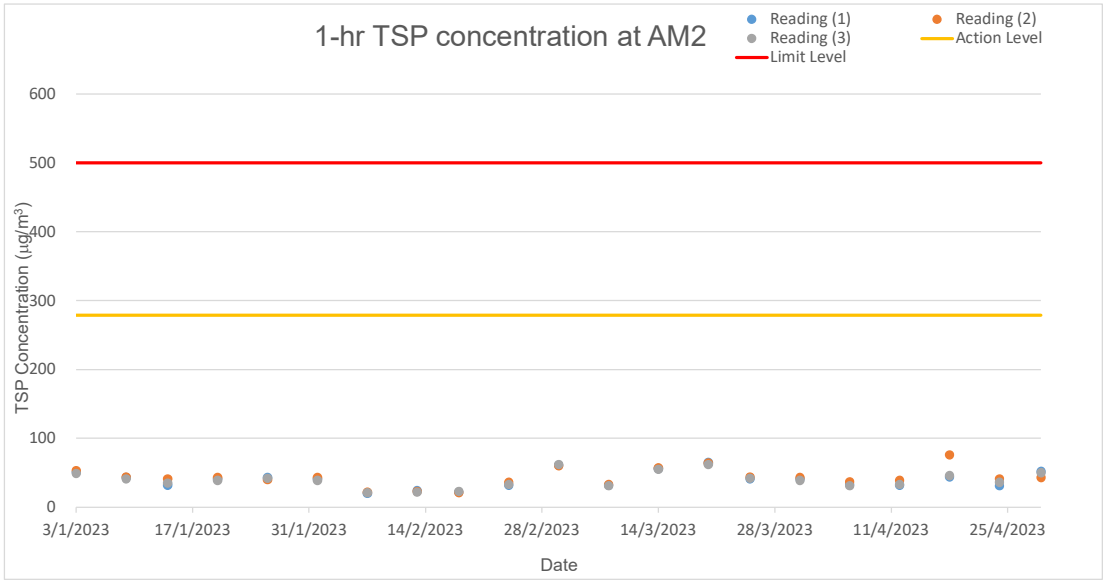
Matrix: **WATER**

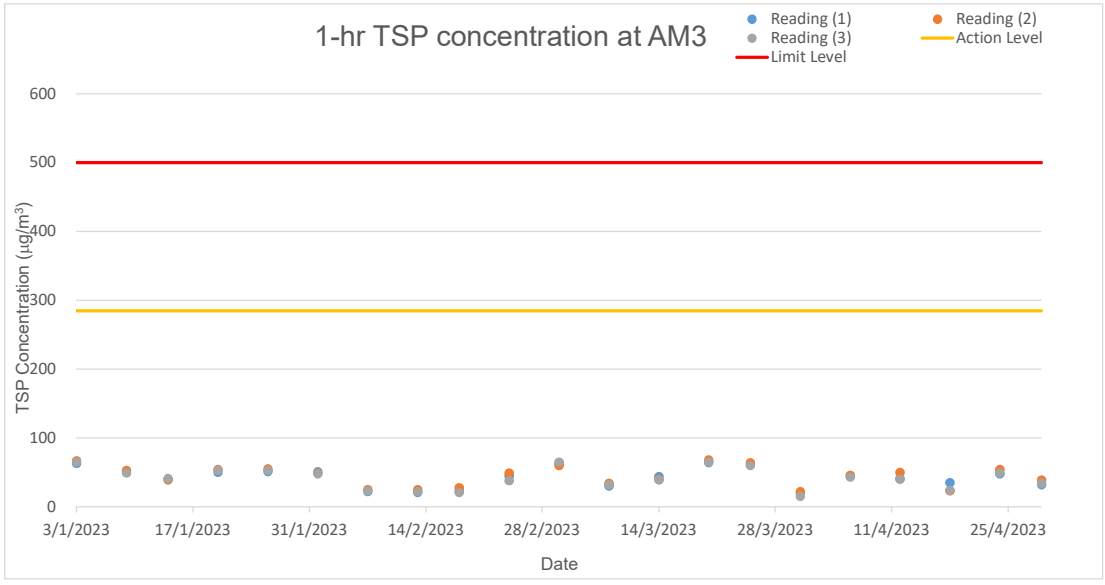
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report										
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Total (QC Lot: 4982014) - Continued										
HK2313159-001	WM1	**EG032: Potassium**	7440-09-7	2000 µg/L	103	----	75.0	125	----	----
		EG032: Sodium	7440-23-5	2000 µg/L	# Not Determined	----	75.0	125	----	----

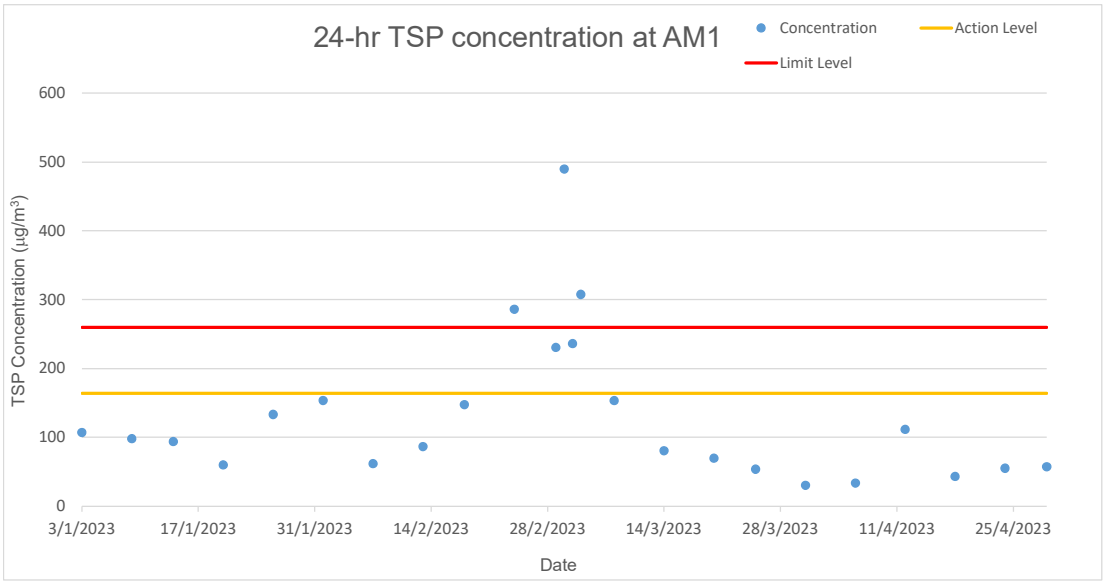
Appendix F Graphical Presentations

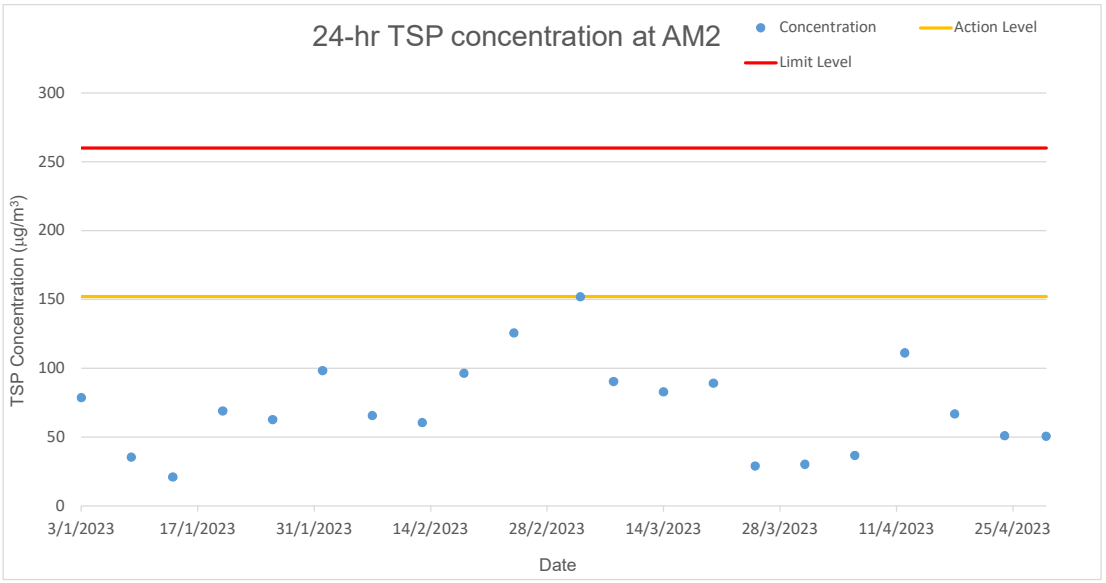
Air Quality

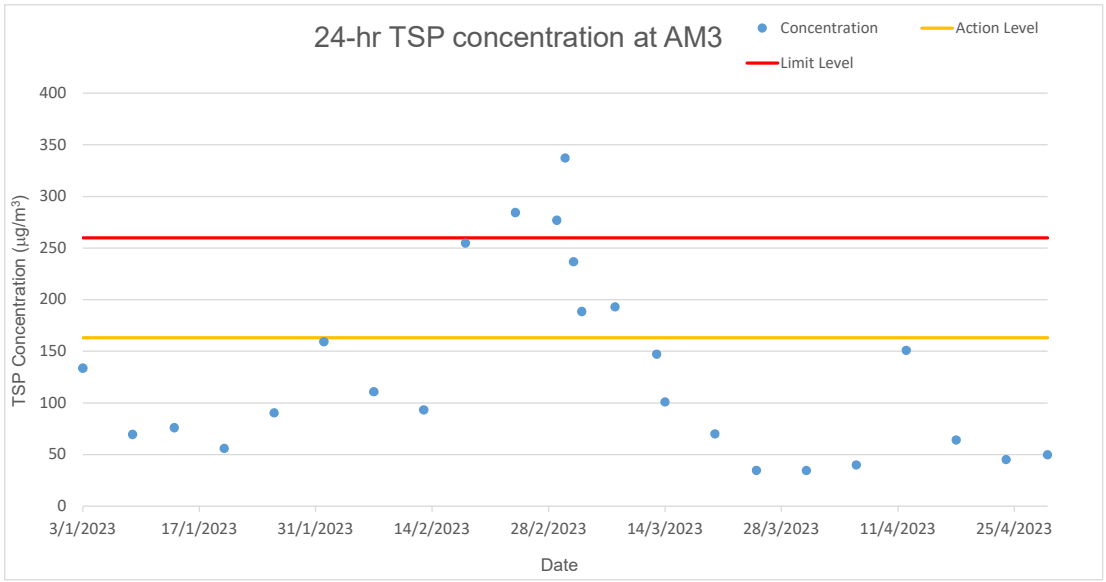

1-hr TSP concentration at AM1
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
600
500
400
300
200
100
0
TSP Concentration (µg/m³)
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date


1-hr TSP concentration at AM2
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
600
500
400
300
200
100
0
TSP Concentration (µg/m³)
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date

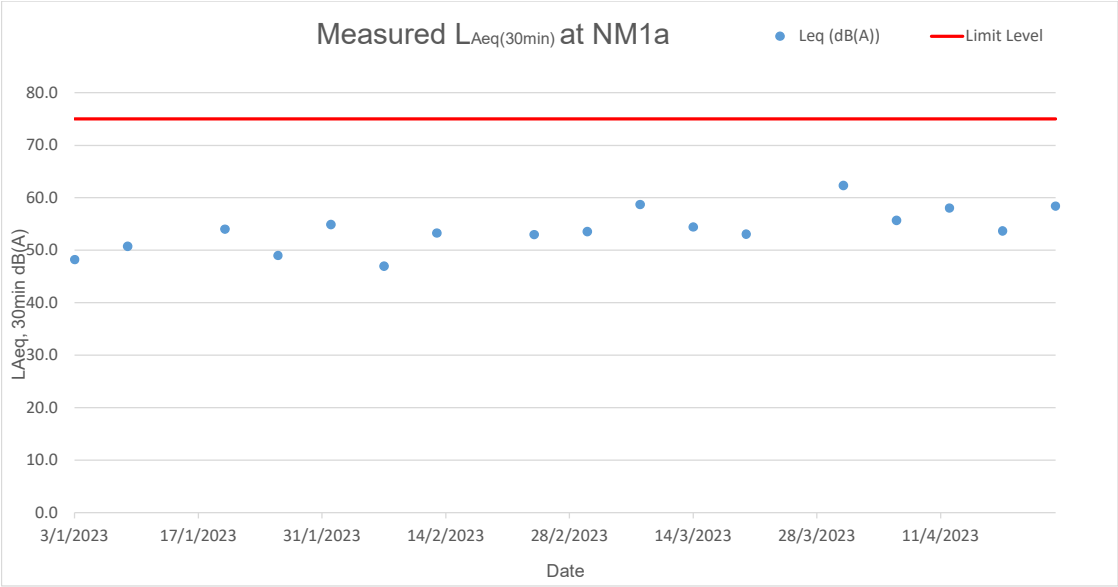

1-hr TSP concentration at AM3
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
600
500
400
300
200
100
0
TSP Concentration (µg/m³)
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date

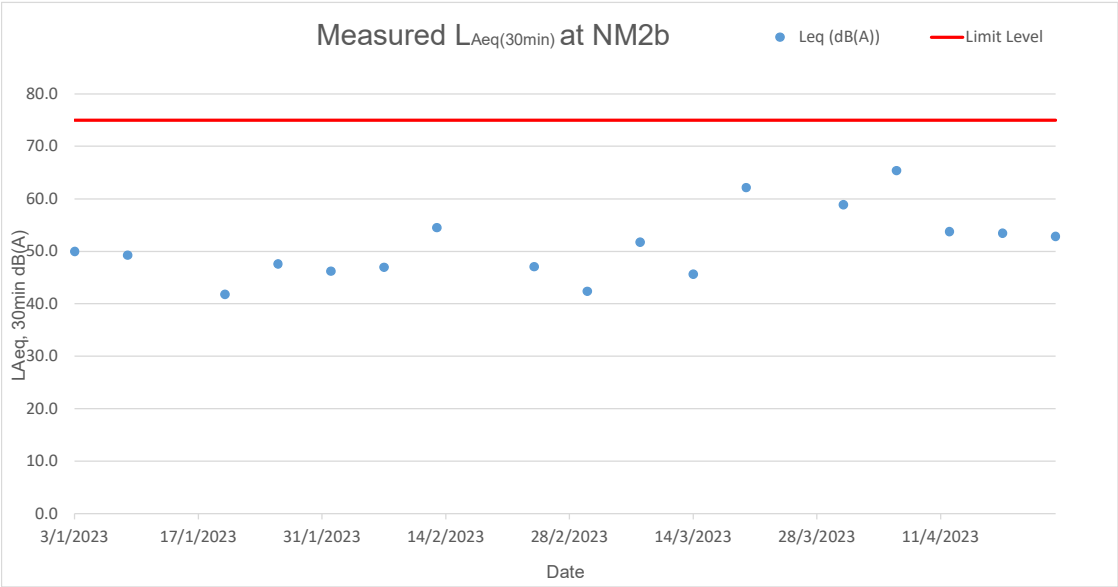

24-hr TSP concentration at AM1
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
600
500
400
300
200
100
0
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date


24-hr TSP concentration at AM2
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
300
250
200
150
100
50
0
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date


24-hr TSP concentration at AM3
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
400
350
300
250
200
150
100
50
0
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
25/4/2023
Date

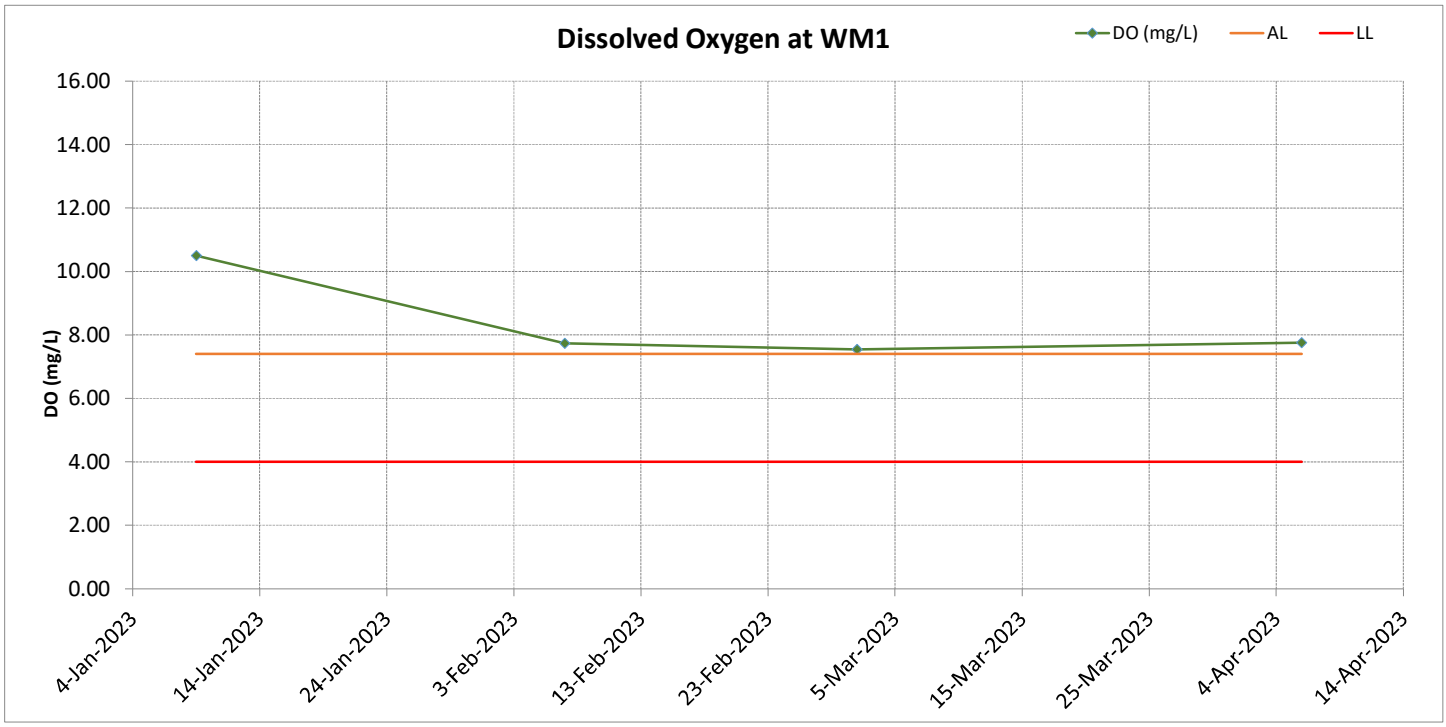
Noise

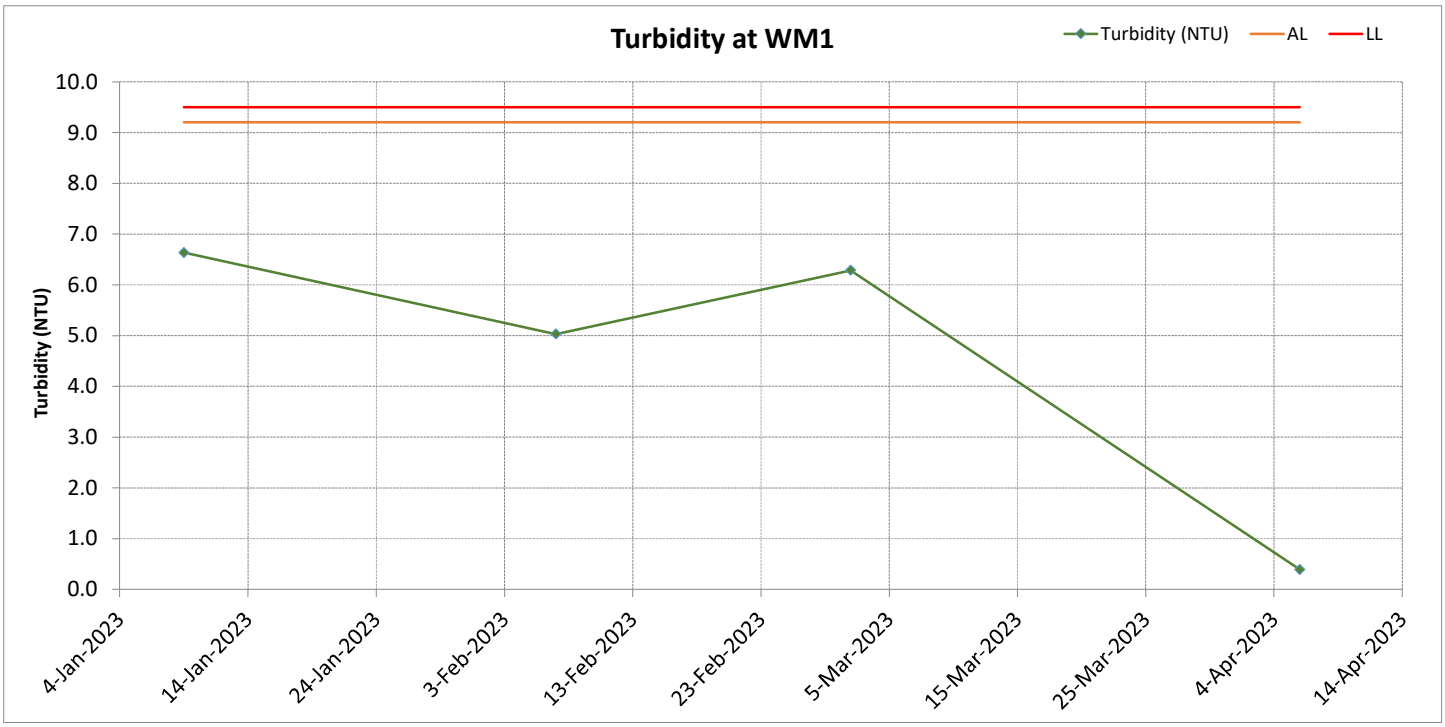

Measured LAeq(30min) at NM1a
Leq (dB(A))
Limit Level
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
LAeq, 30min dB(A)
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
Date


Measured LAeq(30min) at NM2b
Leq (dB(A))
Limit Level
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
LAeq, 30min dB(A)
3/1/2023
17/1/2023
31/1/2023
14/2/2023
28/2/2023
14/3/2023
28/3/2023
11/4/2023
Date

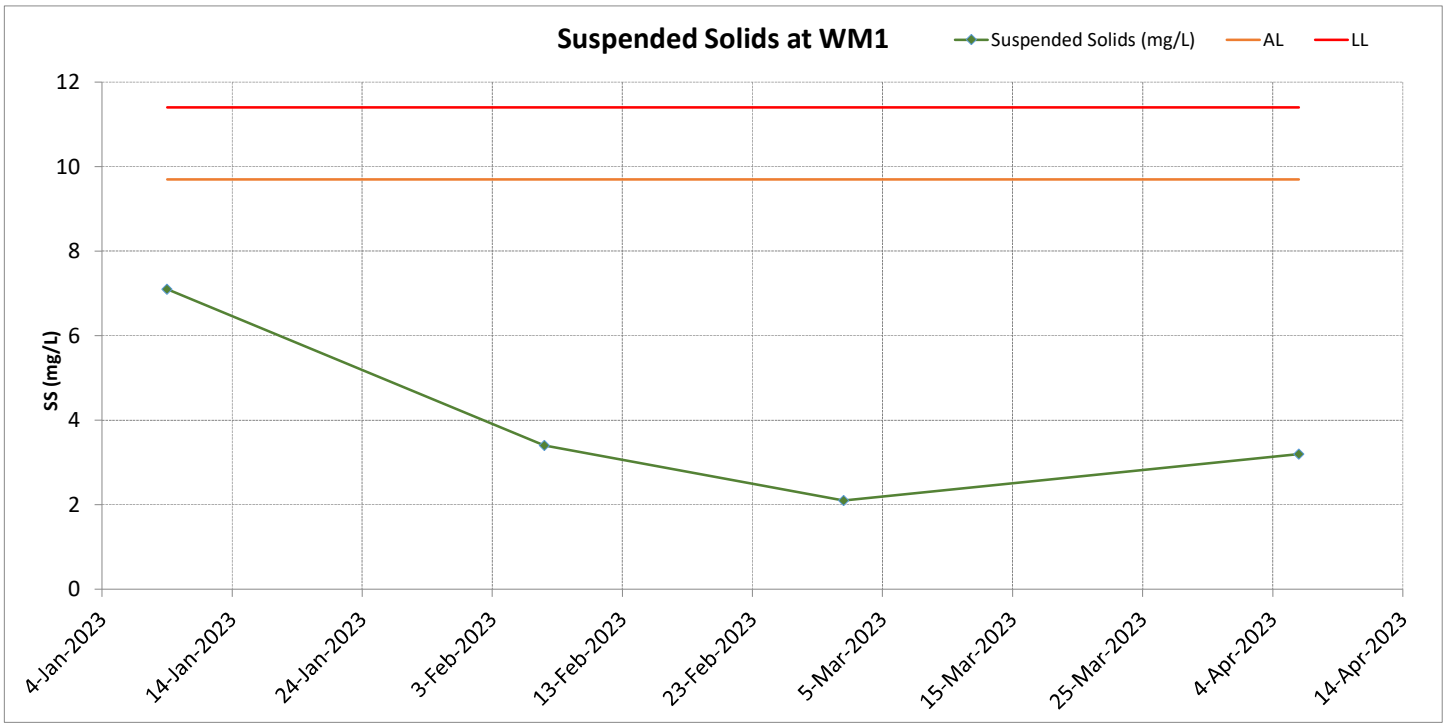
Water Quality

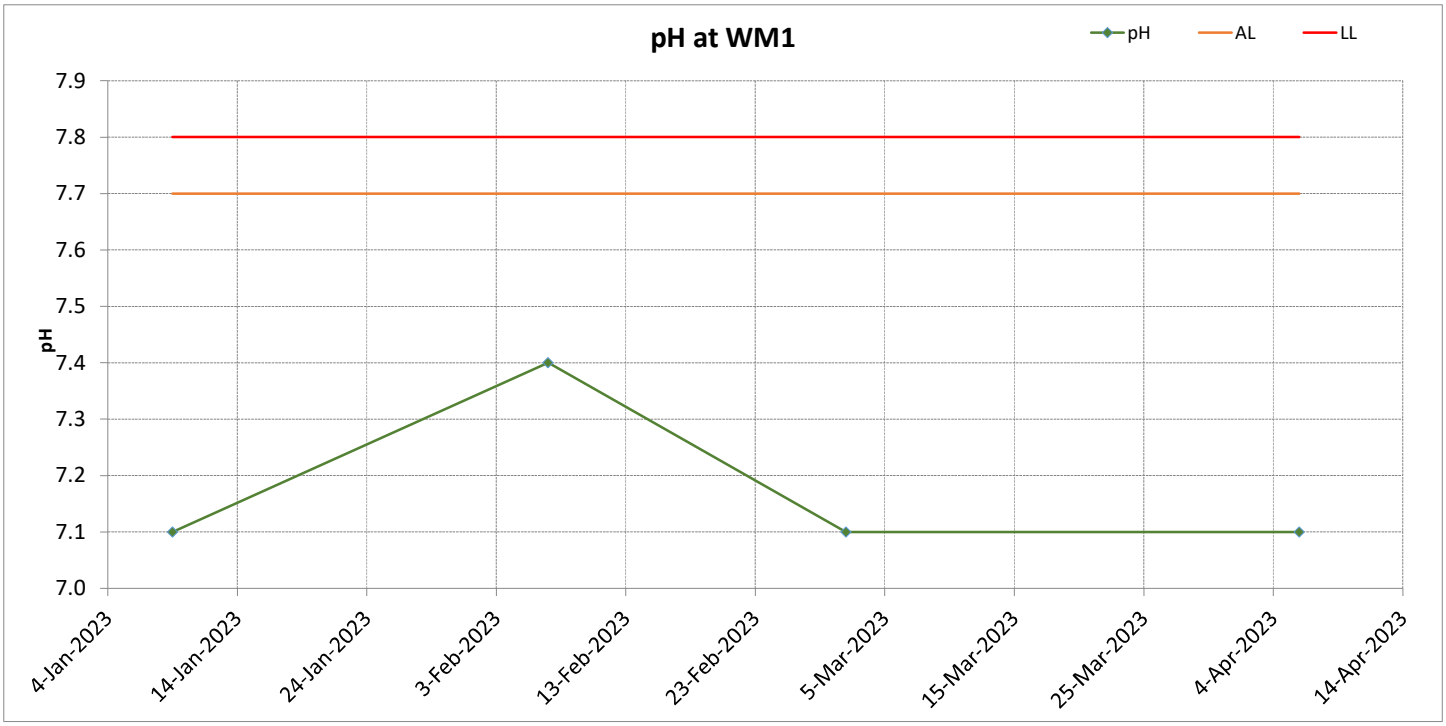
Surface Water Monitoring Results at WM1



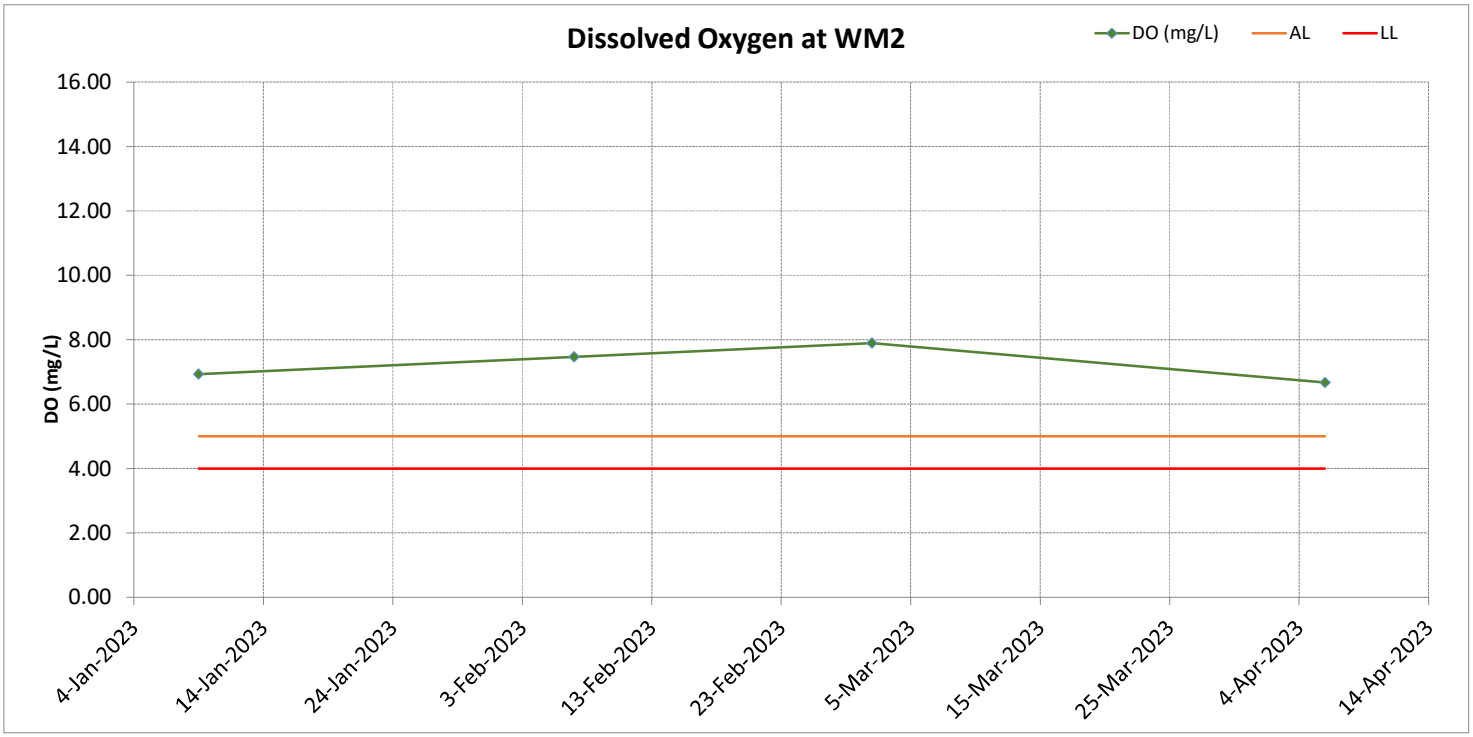


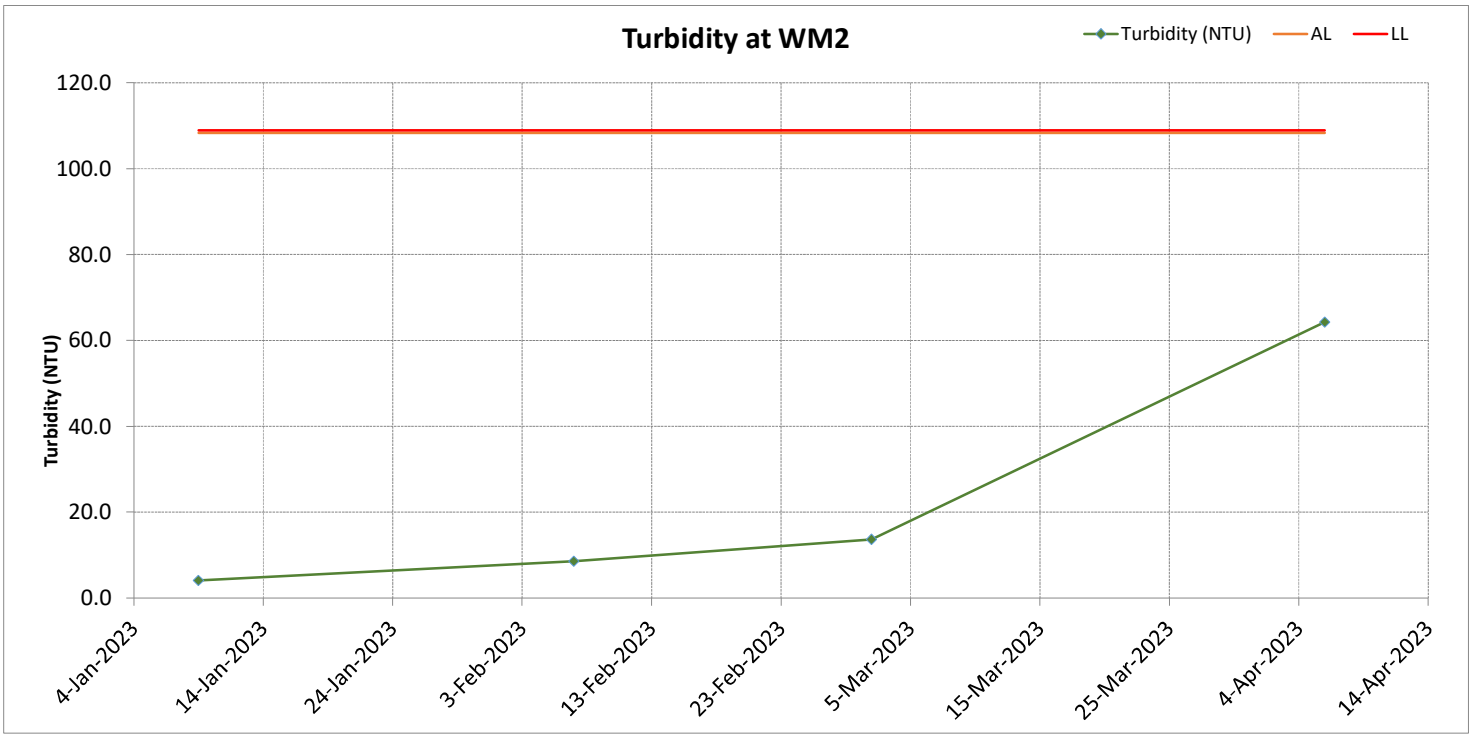
Surface Water Monitoring Results at WM1



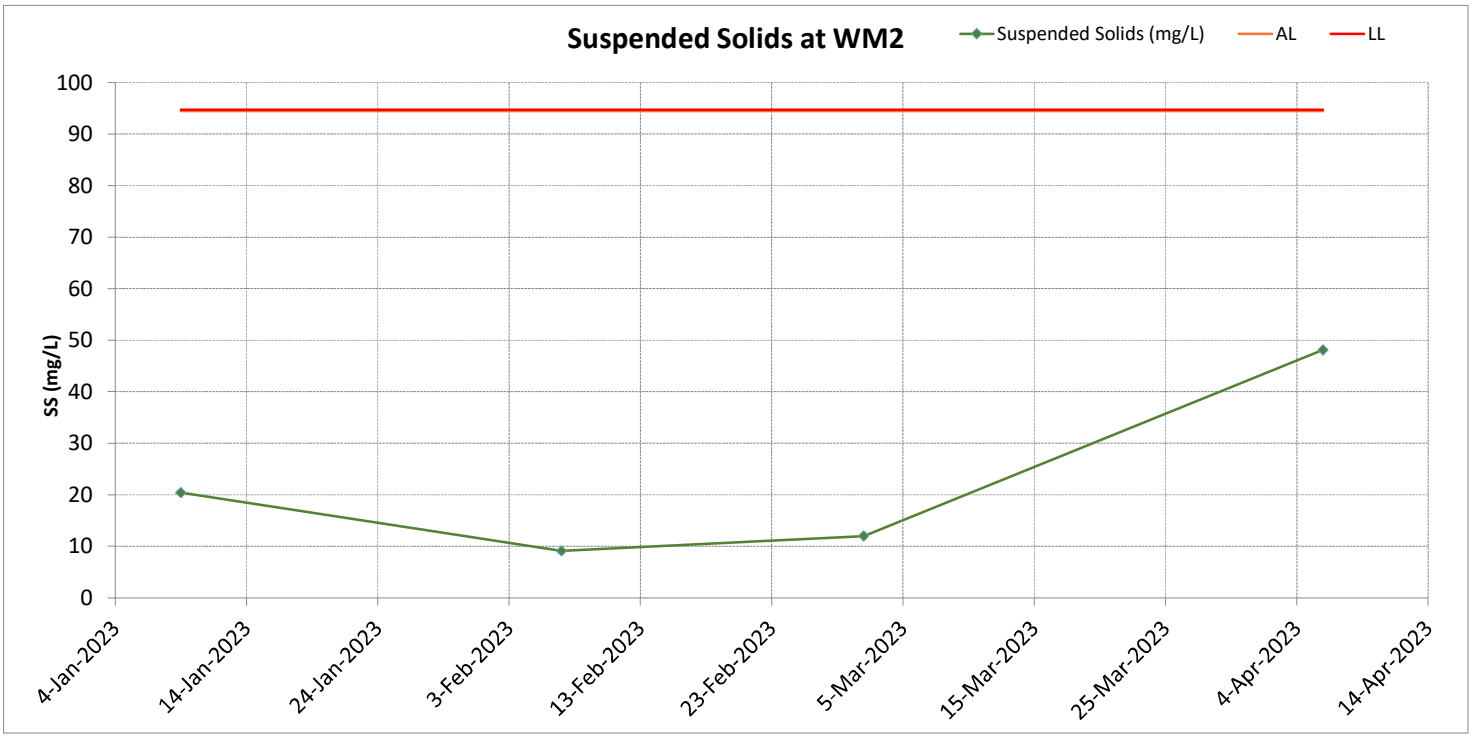


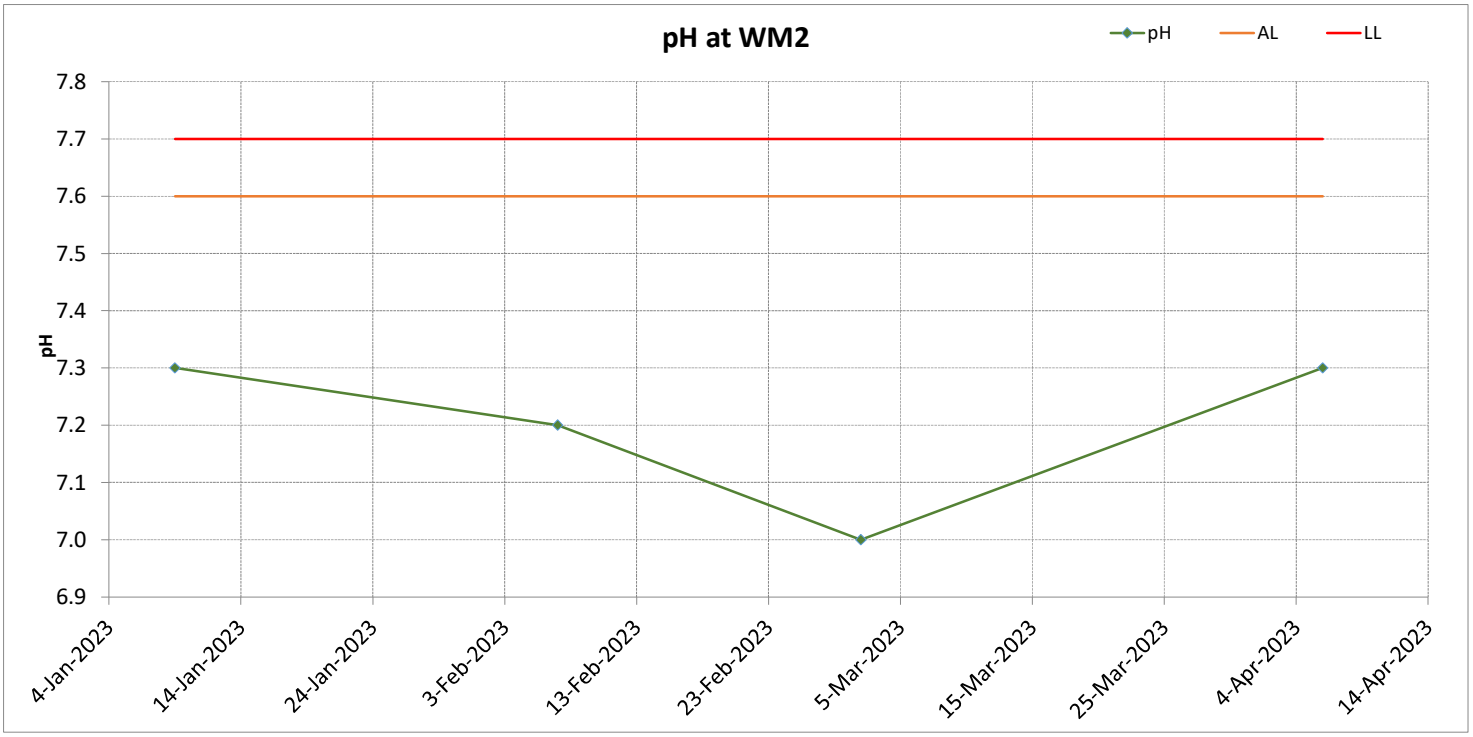
Surface Water Monitoring Results at WM2





Surface Water Monitoring Results at WM2





Appendix G Notification of Environmental Quality Limits Exceedance

Notification of Environmental Quality Limits Exceedance

Construction Dust

Dust Monitoring Station	Parameter	1-hr TSP	24-hr TSP	Exceedance Count			
				Reporting period		Accumulate project to date	
	Level Exceedance			Project related	Non-project replated	Project related	Non-project replated
AM1	Action	0	0	0	0	0	2
	Limit	0	0	0	0	0	3
AM2	Action	0	0	0	0	0	0
	Limit	0	0	0	0	0	0
AM3	Action	0	0	0	0	0	4
	Limit	0	0	0	0	0	3

Remarks: * equal to non-project related

Noise Monitoring

Monitoring Station	Monitoring Parameter(s)	No. of Exceedance	
		Action Level	Limit Level
NM1a	LAeq (30mins)	0	0
NM2a		0	0

Notification of Environmental Quality Limits Exceedance

Surface Water Monitoring

Monitoring Station	Monitoring Parameter(s)	No. of Exceedance	
		Action Level	Limit Level
WM1	Dissolved Oxygen	0	0
	pH	0	0
	Turbidity	0	0
	Suspended Solids	0	0
WM2	Dissolved Oxygen	0	0
	pH	0	0
	Turbidity	0	0
	Suspended Solids	0	0

Landfill Gas (LFG) Monitoring

LFG Monitoring Station	Monitoring Parameter(s)	No. of Exceedance
		Limit Level
Portion A +58 mpD,+55 mpD Platform	CH_4	0
	CO_2	0
	O_2	0

Appendix H Wind Data

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230401_0000	3.9	ESE
20230401_0010	3.9	ESE
20230401_0020	3.9	ESE
20230401_0030	2.8	ESE
20230401_0040	4.4	ESE
20230401_0050	4.2	SE
20230401_0100	4.4	SE
20230401_0110	3.3	SE
20230401_0120	3.6	SE
20230401_0130	3.9	SE
20230401_0140	2.8	SE
20230401_0150	3.3	SE
20230401_0200	1.7	SSE
20230401_0210	2.2	SE
20230401_0220	2.5	ESE
20230401_0230	3.9	ESE
20230401_0240	3.9	ESE
20230401_0250	3.3	ESE
20230401_0300	3.9	ESE
20230401_0310	3.3	ESE
20230401_0320	3.3	ESE
20230401_0330	4.2	ESE
20230401_0340	4.7	ESE
20230401_0350	4.2	ESE
20230401_0400	4.4	ESE
20230401_0410	3.3	ESE
20230401_0420	3.3	ESE
20230401_0430	3.3	ESE
20230401_0440	3.3	ESE
20230401_0450	2.8	ESE
20230401_0500	2.8	ESE
20230401_0510	2.5	ESE
20230401_0520	3.1	ESE
20230401_0530	3.3	SE
20230401_0540	3.3	SE
20230401_0550	2.5	ESE
20230401_0600	2.5	ESE
20230401_0610	2.5	E
20230401_0620	2.2	ESE
20230401_0630	1.7	ESE
20230401_0640	2.2	ESE
20230401_0650	1.7	E
20230401_0700	1.7	E
20230401_0710	1.7	ESE
20230401_0720	1.1	SE
20230401_0730	1.7	ESE
20230401_0740	1.7	SE
20230401_0750	1.9	ESE
20230401_0800	2.2	E
20230401_0810	1.7	E
20230401_0820	2.5	E
20230401_0830	2.8	E
20230401_0840	3.1	E
20230401_0850	2.8	E
20230401_0900	2.5	E
20230401_0910	2.5	E
20230401_0920	2.8	E
20230401_0930	2.5	E
20230401_0940	2.8	E
20230401_0950	2.2	ESE
20230401_1000	2.8	E
20230401_1010	2.5	E
20230401_1020	3.1	ESE
20230401_1030	2.8	E
20230401_1040	2.2	E
20230401_1050	2.8	E
20230401_1100	3.1	E
20230401_1110	3.1	E
20230401_1120	2.5	E
20230401_1130	2.8	E
20230401_1140	2.8	E
20230401_1150	3.1	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230401_1200	3.1	E
20230401_1210	3.1	ESE
20230401_1220	2.8	ESE
20230401_1230	2.8	E
20230401_1240	3.3	E
20230401_1250	3.3	ESE
20230401_1300	4.2	E
20230401_1310	3.9	E
20230401_1320	3.3	E
20230401_1330	3.3	E
20230401_1340	3.1	E
20230401_1350	3.3	ESE
20230401_1400	3.9	E
20230401_1410	3.3	E
20230401_1420	3.1	E
20230401_1430	3.1	E
20230401_1440	3.3	E
20230401_1450	3.3	E
20230401_1500	3.1	E
20230401_1510	3.1	ESE
20230401_1520	3.3	ESE
20230401_1530	3.3	ESE
20230401_1540	2.8	ESE
20230401_1550	3.1	ESE
20230401_1600	2.5	ESE
20230401_1610	3.3	ESE
20230401_1620	3.1	ESE
20230401_1630	3.1	ESE
20230401_1640	2.2	E
20230401_1650	2.2	ESE
20230401_1700	1.7	ESE
20230401_1710	2.2	ESE
20230401_1720	2.5	ESE
20230401_1730	2.5	ESE
20230401_1740	3.3	SE
20230401_1750	1.9	SE
20230401_1800	1.7	SE
20230401_1810	2.5	SE
20230401_1820	2.8	E
20230401_1830	2.2	E
20230401_1840	2.8	E
20230401_1850	2.5	ESE
20230401_1900	1.7	E
20230401_1910	2.2	E
20230401_1920	2.5	ESE
20230401_1930	2.2	ESE
20230401_1940	1.7	SE
20230401_1950	1.7	ESE
20230401_2000	2.5	ESE
20230401_2010	1.9	ESE
20230401_2020	1.7	SE
20230401_2030	1.7	ESE
20230401_2040	1.4	SE
20230401_2050	1.4	ESE
20230401_2100	1.7	ESE
20230401_2110	1.4	ESE
20230401_2120	1.1	SE
20230401_2130	2.2	SE
20230401_2140	1.7	SSE
20230401_2150	2.8	SSE
20230401_2200	1.7	SSE
20230401_2210	2.2	SSE
20230401_2220	2.2	SE
20230401_2230	3.1	SE
20230401_2240	2.2	SE
20230401_2250	2.5	ESE
20230401_2300	2.8	ESE
20230401_2310	2.8	ESE
20230401_2320	2.8	ESE
20230401_2330	1.7	ESE
20230401_2340	2.5	ESE
20230401_2350	2.5	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230402_0000	2.8	ESE
20230402_0010	2.8	ESE
20230402_0020	3.3	ESE
20230402_0030	3.1	ESE
20230402_0040	3.3	E
20230402_0050	3.1	ESE
20230402_0100	2.8	ESE
20230402_0110	3.9	ESE
20230402_0120	3.3	ESE
20230402_0130	2.8	ESE
20230402_0140	3.9	ESE
20230402_0150	3.1	ESE
20230402_0200	3.3	ESE
20230402_0210	3.3	ESE
20230402_0220	3.1	ESE
20230402_0230	3.9	ESE
20230402_0240	4.2	ESE
20230402_0250	3.9	SE
20230402_0300	3.3	SE
20230402_0310	3.3	ESE
20230402_0320	3.3	ESE
20230402_0330	2.8	E
20230402_0340	2.8	ESE
20230402_0350	2.8	ESE
20230402_0400	2.5	SE
20230402_0410	3.3	SE
20230402_0420	3.1	ESE
20230402_0430	2.2	SE
20230402_0440	2.8	ESE
20230402_0450	3.1	ESE
20230402_0500	3.3	ESE
20230402_0510	3.9	E
20230402_0520	4.2	ESE
20230402_0530	4.7	ESE
20230402_0540	4.4	ESE
20230402_0550	3.9	ESE
20230402_0600	3.3	ESE
20230402_0610	2.8	E
20230402_0620	2.8	E
20230402_0630	2.5	E
20230402_0640	2.8	E
20230402_0650	2.2	ENE
20230402_0700	2.5	ENE
20230402_0710	0.6	E
20230402_0720	1.4	E
20230402_0730	1.4	ESE
20230402_0740	1.1	SE
20230402_0750	2.2	SE
20230402_0800	2.5	ESE
20230402_0810	1.7	E
20230402_0820	2.8	E
20230402_0830	2.5	E
20230402_0840	3.3	ESE
20230402_0850	3.3	ESE
20230402_0900	2.8	ESE
20230402_0910	3.1	E
20230402_0920	2.8	ESE
20230402_0930	2.8	E
20230402_0940	3.3	E
20230402_0950	2.8	E
20230402_1000	3.9	E
20230402_1010	3.3	E
20230402_1020	3.3	E
20230402_1030	2.5	E
20230402_1040	2.8	E
20230402_1050	3.3	E
20230402_1100	3.1	ESE
20230402_1110	2.8	ESE
20230402_1120	2.2	E
20230402_1130	2.5	E
20230402_1140	3.1	ESE
20230402_1150	3.3	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230402_1200	3.9	ESE
20230402_1210	2.8	ESE
20230402_1220	2.5	E
20230402_1230	2.8	E
20230402_1240	2.5	E
20230402_1250	2.2	E
20230402_1300	2.2	E
20230402_1310	2.8	E
20230402_1320	2.2	ESE
20230402_1330	2.8	ESE
20230402_1340	2.5	ESE
20230402_1350	3.9	ESE
20230402_1400	3.3	ESE
20230402_1410	3.3	ESE
20230402_1420	3.9	ESE
20230402_1430	3.3	ESE
20230402_1440	2.8	SE
20230402_1450	2.8	SE
20230402_1500	3.3	ESE
20230402_1510	2.5	SE
20230402_1520	2.5	SE
20230402_1530	2.2	ESE
20230402_1540	2.2	ESE
20230402_1550	3.3	ESE
20230402_1600	2.5	ESE
20230402_1610	3.3	ESE
20230402_1620	2.5	ESE
20230402_1630	2.2	SE
20230402_1640	2.2	SE
20230402_1650	2.5	SE
20230402_1700	2.8	SE
20230402_1710	2.8	SE
20230402_1720	3.1	ESE
20230402_1730	1.7	ESE
20230402_1740	2.2	SE
20230402_1750	1.7	SE
20230402_1800	1.7	SE
20230402_1810	1.7	ESE
20230402_1820	1.4	ESE
20230402_1830	2.8	ESE
20230402_1840	3.1	ESE
20230402_1850	3.3	ESE
20230402_1900	3.3	ESE
20230402_1910	1.7	SE
20230402_1920	1.4	SSE
20230402_1930	2.2	SE
20230402_1940	1.7	ESE
20230402_1950	1.7	ESE
20230402_2000	1.9	ESE
20230402_2010	1.7	ESE
20230402_2020	2.8	SE
20230402_2030	3.1	ESE
20230402_2040	3.1	ESE
20230402_2050	3.3	ESE
20230402_2100	3.9	ESE
20230402_2110	3.9	ESE
20230402_2120	4.2	ESE
20230402_2130	3.9	SE
20230402_2140	3.9	ESE
20230402_2150	3.3	ESE
20230402_2200	3.9	ESE
20230402_2210	3.3	ESE
20230402_2220	3.6	ESE
20230402_2230	3.9	ESE
20230402_2240	3.3	ESE
20230402_2250	2.5	ESE
20230402_2300	2.5	E
20230402_2310	2.2	E
20230402_2320	2.2	E
20230402_2330	2.2	ESE
20230402_2340	3.1	ESE
20230402_2350	2.2	SE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230403_0000	3.1	ESE
20230403_0010	3.3	ESE
20230403_0020	3.1	SE
20230403_0030	3.1	ESE
20230403_0040	3.3	ESE
20230403_0050	3.3	SE
20230403_0100	3.3	SE
20230403_0110	3.9	ESE
20230403_0120	3.3	ESE
20230403_0130	3.3	ESE
20230403_0140	3.1	ESE
20230403_0150	3.3	ESE
20230403_0200	3.1	ESE
20230403_0210	2.5	ESE
20230403_0220	3.3	ESE
20230403_0230	3.3	ESE
20230403_0240	2.8	ESE
20230403_0250	2.5	ESE
20230403_0300	1.7	ESE
20230403_0310	2.2	E
20230403_0320	2.2	E
20230403_0330	1.7	E
20230403_0340	3.1	E
20230403_0350	3.1	E
20230403_0400	3.1	E
20230403_0410	2.8	E
20230403_0420	3.1	ESE
20230403_0430	2.8	ESE
20230403_0440	2.8	E
20230403_0450	2.8	ENE
20230403_0500	1.9	E
20230403_0510	1.7	ESE
20230403_0520	2.5	ESE
20230403_0530	1.9	ESE
20230403_0540	2.5	ESE
20230403_0550	1.9	ESE
20230403_0600	1.7	ESE
20230403_0610	3.3	ESE
20230403_0620	2.2	ESE
20230403_0630	2.5	ESE
20230403_0640	2.5	ESE
20230403_0650	2.5	ESE
20230403_0700	2.8	ESE
20230403_0710	2.2	ESE
20230403_0720	2.8	SE
20230403_0730	2.8	SE
20230403_0740	4.2	SE
20230403_0750	4.7	SE
20230403_0800	5	SE
20230403_0810	3.9	SE
20230403_0820	4.7	SE
20230403_0830	4.2	ESE
20230403_0840	3.9	ESE
20230403_0850	4.4	ESE
20230403_0900	4.2	ESE
20230403_0910	4.2	ESE
20230403_0920	4.4	SE
20230403_0930	4.2	SE
20230403_0940	4.4	ESE
20230403_0950	5	ESE
20230403_1000	5.3	ESE
20230403_1010	2.5	SE
20230403_1020	2.2	SE
20230403_1030	3.1	SE
20230403_1040	3.3	ESE
20230403_1050	3.9	ESE
20230403_1100	3.3	SE
20230403_1110	3.3	SE
20230403_1120	3.1	SE
20230403_1130	2.8	SSE
20230403_1140	1.4	ESE
20230403_1150	3.3	SE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230403_1200	3.9	ESE
20230403_1210	3.3	ESE
20230403_1220	3.3	SE
20230403_1230	3.3	ESE
20230403_1240	2.8	SE
20230403_1250	3.1	ESE
20230403_1300	2.5	E
20230403_1310	2.2	ESE
20230403_1320	3.1	ESE
20230403_1330	4.2	ESE
20230403_1340	5.3	ESE
20230403_1350	5.3	ESE
20230403_1400	6.1	SE
20230403_1410	4.4	ESE
20230403_1420	5.8	ESE
20230403_1430	6.4	ESE
20230403_1440	5	ESE
20230403_1450	4.2	E
20230403_1500	3.9	E
20230403_1510	3.3	ESE
20230403_1520	4.2	E
20230403_1530	3.6	ESE
20230403_1540	3.9	ESE
20230403_1550	4.2	E
20230403_1600	3.9	E
20230403_1610	4.2	ESE
20230403_1620	4.2	E
20230403_1630	4.4	E
20230403_1640	3.9	E
20230403_1650	3.1	E
20230403_1700	3.9	E
20230403_1710	2.8	ESE
20230403_1720	1.7	ENE
20230403_1730	3.1	E
20230403_1740	3.3	ESE
20230403_1750	4.4	ESE
20230403_1800	3.9	E
20230403_1810	3.3	E
20230403_1820	3.3	E
20230403_1830	3.3	ESE
20230403_1840	3.9	ESE
20230403_1850	5.3	ESE
20230403_1900	4.4	ESE
20230403_1910	5.3	SE
20230403_1920	4.2	ESE
20230403_1930	6.1	SE
20230403_1940	5.3	SE
20230403_1950	5.8	ESE
20230403_2000	6.1	SE
20230403_2010	5.8	SE
20230403_2020	5.8	SE
20230403_2030	5.3	ESE
20230403_2040	4.7	SE
20230403_2050	3.1	SE
20230403_2100	3.3	SE
20230403_2110	3.9	ESE
20230403_2120	5.3	ESE
20230403_2130	5.3	ESE
20230403_2140	4.2	E
20230403_2150	4.7	ESE
20230403_2200	5	ESE
20230403_2210	3.3	ESE
20230403_2220	4.2	ESE
20230403_2230	3.3	ESE
20230403_2240	3.3	ESE
20230403_2250	4.7	E
20230403_2300	4.4	E
20230403_2310	5.3	ESE
20230403_2320	4.2	ESE
20230403_2330	4.2	ESE
20230403_2340	5	ESE
20230403_2350	5	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230404_0000	5	ESE
20230404_0010	4.7	ESE
20230404_0020	5	ESE
20230404_0030	4.2	E
20230404_0040	4.4	ESE
20230404_0050	4.2	ESE
20230404_0100	3.6	ESE
20230404_0110	3.3	ESE
20230404_0120	3.9	ESE
20230404_0130	3.1	ESE
20230404_0140	4.7	ESE
20230404_0150	3.9	ESE
20230404_0200	3.6	ESE
20230404_0210	4.2	ESE
20230404_0220	3.9	ESE
20230404_0230	3.3	ESE
20230404_0240	3.1	ESE
20230404_0250	2.8	ESE
20230404_0300	3.3	E
20230404_0310	3.1	ESE
20230404_0320	2.5	ESE
20230404_0330	2.8	ESE
20230404_0340	1.7	ESE
20230404_0350	2.2	ESE
20230404_0400	2.8	E
20230404_0410	3.3	E
20230404_0420	3.3	E
20230404_0430	3.1	E
20230404_0440	2.8	E
20230404_0450	3.1	E
20230404_0500	2.5	E
20230404_0510	2.5	E
20230404_0520	2.8	ESE
20230404_0530	2.8	ESE
20230404_0540	2.2	ESE
20230404_0550	1.7	ESE
20230404_0600	2.5	ESE
20230404_0610	2.5	E
20230404_0620	3.1	E
20230404_0630	2.2	ESE
20230404_0640	1.7	SE
20230404_0650	1.4	SSE
20230404_0700	1.4	SE
20230404_0710	1.1	ESE
20230404_0720	2.2	ESE
20230404_0730	1.9	ESE
20230404_0740	1.4	SE
20230404_0750	2.2	ESE
20230404_0800	1.9	SSE
20230404_0810	2.8	SE
20230404_0820	2.8	SSE
20230404_0830	2.8	SE
20230404_0840	3.3	SSE
20230404_0850	3.1	SSE
20230404_0900	3.3	SSE
20230404_0910	3.1	SE
20230404_0920	3.3	SSE
20230404_0930	3.9	SSE
20230404_0940	3.9	SE
20230404_0950	3.6	SSE
20230404_1000	3.3	SSE
20230404_1010	3.3	SSE
20230404_1020	5	SSE
20230404_1030	4.7	SSE
20230404_1040	4.7	SSE
20230404_1050	3.3	SSE
20230404_1100	3.3	SSE
20230404_1110	4.4	SSE
20230404_1120	4.7	SSE
20230404_1130	5	SSE
20230404_1140	4.4	SSE
20230404_1150	3.3	SSE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230404_1200	3.9	SSE
20230404_1210	3.3	SSE
20230404_1220	2.8	SSE
20230404_1230	3.1	SSE
20230404_1240	3.9	SSE
20230404_1250	3.3	SSE
20230404_1300	3.9	SSE
20230404_1310	3.3	SSE
20230404_1320	3.9	SSE
20230404_1330	3.3	SSE
20230404_1340	3.3	SSE
20230404_1350	3.3	SSE
20230404_1400	3.3	SSE
20230404_1410	3.9	SSE
20230404_1420	3.3	SSE
20230404_1430	3.3	SSE
20230404_1440	3.3	SSE
20230404_1450	3.9	SSE
20230404_1500	3.3	SSE
20230404_1510	3.3	SSE
20230404_1520	4.4	SSE
20230404_1530	3.3	SSE
20230404_1540	3.9	SSE
20230404_1550	3.6	SSE
20230404_1600	2.8	SSE
20230404_1610	3.9	SSE
20230404_1620	2.5	SSE
20230404_1630	2.8	SE
20230404_1640	2.2	SSE
20230404_1650	2.5	SSE
20230404_1700	2.2	SSE
20230404_1710	2.5	SSE
20230404_1720	2.5	SSE
20230404_1730	2.8	SE
20230404_1740	1.4	SE
20230404_1750	1.7	ESE
20230404_1800	1.1	SE
20230404_1810	1.4	SE
20230404_1820	1.7	SE
20230404_1830	1.7	SE
20230404_1840	1.4	SE
20230404_1850	0.8	-
20230404_1900	0.3	-
20230404_1910	0.3	ESE
20230404_1920	1.4	ESE
20230404_1930	1.7	E
20230404_1940	2.2	ESE
20230404_1950	2.2	SE
20230404_2000	2.2	SE
20230404_2010	1.7	SE
20230404_2020	1.7	E
20230404_2030	1.4	E
20230404_2040	1.7	ESE
20230404_2050	1.4	SE
20230404_2100	1.7	ESE
20230404_2110	1.7	ESE
20230404_2120	2.2	ESE
20230404_2130	1.7	SE
20230404_2140	2.5	SE
20230404_2150	2.8	SE
20230404_2200	2.8	ESE
20230404_2210	2.5	ESE
20230404_2220	2.5	ESE
20230404_2230	2.8	SE
20230404_2240	3.1	SE
20230404_2250	2.8	SE
20230404_2300	2.2	SE
20230404_2310	2.2	SE
20230404_2320	1.7	ESE
20230404_2330	1.7	ESE
20230404_2340	1.7	SE
20230404_2350	2.5	ESE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230405_0000	1.9	ESE
20230405_0010	2.2	ESE
20230405_0020	1.7	ESE
20230405_0030	1.7	ESE
20230405_0040	2.2	ESE
20230405_0050	1.7	SE
20230405_0100	2.2	ESE
20230405_0110	1.7	ESE
20230405_0120	1.1	ESE
20230405_0130	1.7	ESE
20230405_0140	2.5	ESE
20230405_0150	2.5	ESE
20230405_0200	2.5	ESE
20230405_0210	2.2	ESE
20230405_0220	1.7	ESE
20230405_0230	1.9	ESE
20230405_0240	1.7	ESE
20230405_0250	2.2	E
20230405_0300	2.2	ESE
20230405_0310	1.7	ESE
20230405_0320	2.2	SE
20230405_0330	2.5	ESE
20230405_0340	2.2	ESE
20230405_0350	2.5	E
20230405_0400	1.9	ESE
20230405_0410	1.4	ESE
20230405_0420	1.7	E
20230405_0430	1.4	E
20230405_0440	1.7	ESE
20230405_0450	1.7	ESE
20230405_0500	0.8	SE
20230405_0510	1.4	SE
20230405_0520	1.4	ESE
20230405_0530	1.7	ESE
20230405_0540	1.7	SE
20230405_0550	1.7	SE
20230405_0600	1.1	SE
20230405_0610	0.8	SE
20230405_0620	1.1	ESE
20230405_0630	1.7	SE
20230405_0640	1.7	ESE
20230405_0650	1.4	ESE
20230405_0700	1.4	ESE
20230405_0710	1.7	ESE
20230405_0720	2.2	ESE
20230405_0730	2.2	ESE
20230405_0740	2.5	SE
20230405_0750	2.2	SE
20230405_0800	1.7	SE
20230405_0810	1.4	ESE
20230405_0820	1.9	ESE
20230405_0830	1.1	ESE
20230405_0840	1.4	ESE
20230405_0850	1.7	ESE
20230405_0900	1.7	ESE
20230405_0910	1.1	E
20230405_0920	1.1	ESE
20230405_0930	1.7	E
20230405_0940	1.4	E
20230405_0950	1.1	E
20230405_1000	1.9	ESE
20230405_1010	2.5	ESE
20230405_1020	2.2	ESE
20230405_1030	1.4	SE
20230405_1040	2.5	ESE
20230405_1050	2.2	SE
20230405_1100	1.7	SE
20230405_1110	1.7	ESE
20230405_1120	0.6	SSW
20230405_1130	0.8	S
20230405_1140	1.4	SSE
20230405_1150	1.4	SSE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230405_1200	1.4	SSE
20230405_1210	1.1	SE
20230405_1220	1.4	SSE
20230405_1230	0.8	S
20230405_1240	0.3	SW
20230405_1250	1.4	SSW
20230405_1300	1.7	SSE
20230405_1310	2.2	SSE
20230405_1320	1.4	S
20230405_1330	1.4	SSE
20230405_1340	1.4	SSE
20230405_1350	1.4	SSE
20230405_1400	2.5	S
20230405_1410	1.4	S
20230405_1420	1.7	S
20230405_1430	1.7	S
20230405_1440	1.7	SSE
20230405_1450	1.4	SSE
20230405_1500	1.7	SSE
20230405_1510	1.7	S
20230405_1520	1.1	SSE
20230405_1530	1.7	S
20230405_1540	2.2	S
20230405_1550	2.2	S
20230405_1600	1.1	S
20230405_1610	1.1	S
20230405_1620	1.4	S
20230405_1630	1.1	S
20230405_1640	1.1	SSW
20230405_1650	1.1	SSW
20230405_1700	1.1	SSW
20230405_1710	1.1	SSW
20230405_1720	2.2	SW
20230405_1730	2.5	SW
20230405_1740	2.8	SW
20230405_1750	2.8	SW
20230405_1800	1.7	SSW
20230405_1810	1.4	SSW
20230405_1820	1.4	SSW
20230405_1830	1.1	S
20230405_1840	0.6	N
20230405_1850	0.3	NNE
20230405_1900	0.8	ENE
20230405_1910	0.8	N
20230405_1920	0.3	N
20230405_1930	0.3	SSW
20230405_1940	0.8	SSW
20230405_1950	1.1	SW
20230405_2000	1.4	SW
20230405_2010	1.4	ESE
20230405_2020	0.3	SSE
20230405_2030	0.3	-
20230405_2040	0.6	S
20230405_2050	0.3	S
20230405_2100	0	N
20230405_2110	0.3	E
20230405_2120	0.3	SE
20230405_2130	0.3	-
20230405_2140	0.3	-
20230405_2150	0.3	S
20230405_2200	0.3	SSW
20230405_2210	0.6	SSW
20230405_2220	0.3	SW
20230405_2230	0.3	S
20230405_2240	0.6	SSW
20230405_2250	0.8	SSE
20230405_2300	0.3	ENE
20230405_2310	0	N
20230405_2320	0.3	WNW
20230405_2330	0.3	W
20230405_2340	0.3	-
20230405_2350	0	N

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230406_0000	0.8	WNW
20230406_0010	0	N
20230406_0020	0	N
20230406_0030	0	N
20230406_0040	0.3	-
20230406_0050	0	N
20230406_0100	0.3	SE
20230406_0110	0.3	NW
20230406_0120	0.3	ESE
20230406_0130	0.8	SE
20230406_0140	0	N
20230406_0150	0	N
20230406_0200	0.3	SW
20230406_0210	0	N
20230406_0220	0.3	W
20230406_0230	0	N
20230406_0240	0	N
20230406_0250	0.3	NNE
20230406_0300	0.3	E
20230406_0310	0.3	-
20230406_0320	0	N
20230406_0330	0.3	SE
20230406_0340	0.3	SE
20230406_0350	0.8	-
20230406_0400	0.3	SSW
20230406_0410	0.3	NW
20230406_0420	0.3	NW
20230406_0430	0.3	-
20230406_0440	0.3	SSW
20230406_0450	0	N
20230406_0500	0.6	ENE
20230406_0510	0.8	E
20230406_0520	0.3	N
20230406_0530	0.3	NNE
20230406_0540	0.8	ESE
20230406_0550	0.3	ESE
20230406_0600	0.3	E
20230406_0610	0.3	ESE
20230406_0620	0.8	ESE
20230406_0630	0.8	ESE
20230406_0640	1.1	ESE
20230406_0650	0.8	-
20230406_0700	0.8	-
20230406_0710	1.1	E
20230406_0720	1.7	SE
20230406_0730	1.1	SE
20230406_0740	0.3	SSW
20230406_0750	0.3	WNW
20230406_0800	0.3	WSW
20230406_0810	0.3	SW
20230406_0820	0.8	S
20230406_0830	0.3	-
20230406_0840	0.3	SSW
20230406_0850	0.8	ESE
20230406_0900	0.3	WSW
20230406_0910	0.3	SW
20230406_0920	0.3	NE
20230406_0930	0	N
20230406_0940	0.3	SSW
20230406_0950	0.3	E
20230406_1000	0.3	SE
20230406_1010	0.8	SSE
20230406_1020	0.8	SSE
20230406_1030	0.3	S
20230406_1040	0.3	SSW
20230406_1050	0.6	S
20230406_1100	0.8	SSE
20230406_1110	0.8	SW
20230406_1120	1.4	WSW
20230406_1130	1.7	SW
20230406_1140	2.2	SW
20230406_1150	2.5	SW

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230406_1200	1.7	SSW
20230406_1210	1.7	SSW
20230406_1220	2.2	SW
20230406_1230	2.8	SW
20230406_1240	3.3	SSW
20230406_1250	3.3	SSW
20230406_1300	3.3	SSW
20230406_1310	3.6	SSW
20230406_1320	3.3	SSW
20230406_1330	3.1	SSW
20230406_1340	2.8	SSW
20230406_1350	2.5	SSW
20230406_1400	3.1	SSW
20230406_1410	3.1	SW
20230406_1420	3.3	SW
20230406_1430	3.3	S
20230406_1440	3.3	S
20230406_1450	3.3	S
20230406_1500	3.3	SSW
20230406_1510	3.3	SSW
20230406_1520	3.1	SSW
20230406_1530	2.5	SW
20230406_1540	3.3	WSW
20230406_1550	3.1	WSW
20230406_1600	2.5	WSW
20230406_1610	1.7	WSW
20230406_1620	2.5	WSW
20230406_1630	2.8	WSW
20230406_1640	2.8	WSW
20230406_1650	3.3	WSW
20230406_1700	2.5	SW
20230406_1710	3.3	SW
20230406_1720	3.3	SW
20230406_1730	2.8	SW
20230406_1740	3.1	SW
20230406_1750	3.1	SW
20230406_1800	2.8	SW
20230406_1810	2.5	SW
20230406_1820	2.5	SW
20230406_1830	2.2	SW
20230406_1840	1.7	SW
20230406_1850	1.4	SSW
20230406_1900	1.9	SSW
20230406_1910	1.7	SSW
20230406_1920	1.7	SSW
20230406_1930	1.1	SSW
20230406_1940	0.8	S
20230406_1950	0.3	SW
20230406_2000	0	N
20230406_2010	0.3	NE
20230406_2020	0.3	NE
20230406_2030	0.3	-
20230406_2040	0	N
20230406_2050	0.3	WSW
20230406_2100	1.4	WSW
20230406_2110	2.5	WSW
20230406_2120	1.4	NW
20230406_2130	1.4	W
20230406_2140	0.8	SSW
20230406_2150	0.3	-
20230406_2200	0.3	WSW
20230406_2210	0.3	W
20230406_2220	1.7	NNW
20230406_2230	2.5	N
20230406_2240	2.8	NNE
20230406_2250	2.2	N
20230406_2300	1.9	NNW
20230406_2310	1.1	NNW
20230406_2320	1.7	NNW
20230406_2330	1.4	N
20230406_2340	1.7	NNW
20230406_2350	2.2	NNW

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230407_0000	2.8	N
20230407_0010	2.2	NNW
20230407_0020	2.2	NNW
20230407_0030	2.2	NNW
20230407_0040	2.8	N
20230407_0050	3.1	N
20230407_0100	2.8	N
20230407_0110	2.8	N
20230407_0120	2.5	NNW
20230407_0130	2.5	N
20230407_0140	2.5	N
20230407_0150	1.7	NNE
20230407_0200	1.7	N
20230407_0210	2.8	N
20230407_0220	3.3	N
20230407_0230	3.6	N
20230407_0240	3.9	N
20230407_0250	3.6	N
20230407_0300	3.9	NNE
20230407_0310	3.9	N
20230407_0320	3.6	N
20230407_0330	4.2	N
20230407_0340	5	N
20230407_0350	4.4	N
20230407_0400	4.4	N
20230407_0410	3.6	N
20230407_0420	4.4	N
20230407_0430	5	N
20230407_0440	5	N
20230407_0450	4.7	N
20230407_0500	5	N
20230407_0510	5.3	N
20230407_0520	5	N
20230407_0530	5.3	N
20230407_0540	4.4	NNE
20230407_0550	4.7	N
20230407_0600	5	N
20230407_0610	5.3	N
20230407_0620	5.3	N
20230407_0630	4.7	N
20230407_0640	5.8	NNE
20230407_0650	5.6	NNE
20230407_0700	5.8	N
20230407_0710	4.7	N
20230407_0720	4.7	N
20230407_0730	4.7	N
20230407_0740	5.3	NNE
20230407_0750	4.7	N
20230407_0800	4.2	N
20230407_0810	3.9	N
20230407_0820	4.4	N
20230407_0830	3.3	NNW
20230407_0840	3.3	N
20230407_0850	4.4	N
20230407_0900	3.6	N
20230407_0910	3.9	N
20230407_0920	3.3	N
20230407_0930	4.4	N
20230407_0940	4.7	N
20230407_0950	5	N
20230407_1000	4.2	N
20230407_1010	4.2	N
20230407_1020	4.4	N
20230407_1030	5.3	N
20230407_1040	4.2	N
20230407_1050	3.6	N
20230407_1100	4.7	N
20230407_1110	4.7	N
20230407_1120	4.2	NNE
20230407_1130	4.2	NNE
20230407_1140	3.3	N
20230407_1150	3.9	NNE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230407_1200	2.5	N
20230407_1210	3.9	NNE
20230407_1220	4.2	N
20230407_1230	3.9	N
20230407_1240	3.9	N
20230407_1250	2.8	N
20230407_1300	3.3	N
20230407_1310	2.8	N
20230407_1320	2.8	N
20230407_1330	3.1	N
20230407_1340	3.3	N
20230407_1350	3.3	NNE
20230407_1400	2.8	N
20230407_1410	3.3	N
20230407_1420	3.1	N
20230407_1430	3.1	NNE
20230407_1440	2.5	N
20230407_1450	3.3	NNE
20230407_1500	2.5	NNE
20230407_1510	1.7	-
20230407_1520	1.1	WNW
20230407_1530	0.8	NNW
20230407_1540	0.3	-
20230407_1550	0.8	NE
20230407_1600	0.3	S
20230407_1610	0.8	ESE
20230407_1620	1.4	ESE
20230407_1630	1.7	E
20230407_1640	1.7	ESE
20230407_1650	1.7	E
20230407_1700	1.7	E
20230407_1710	1.7	E
20230407_1720	1.4	ESE
20230407_1730	1.1	ESE
20230407_1740	0.8	ESE
20230407_1750	0.8	SE
20230407_1800	1.1	ESE
20230407_1810	1.1	ESE
20230407_1820	1.1	ESE
20230407_1830	1.7	E
20230407_1840	2.2	ESE
20230407_1850	1.9	E
20230407_1900	2.2	E
20230407_1910	2.2	ESE
20230407_1920	2.2	ESE
20230407_1930	2.2	ESE
20230407_1940	2.5	ESE
20230407_1950	2.8	E
20230407_2000	2.2	E
20230407_2010	2.8	E
20230407_2020	2.8	E
20230407_2030	3.1	ESE
20230407_2040	2.5	E
20230407_2050	3.1	ESE
20230407_2100	2.8	E
20230407_2110	2.8	E
20230407_2120	2.8	E
20230407_2130	2.5	E
20230407_2140	1.7	E
20230407_2150	1.7	E
20230407_2200	1.7	E
20230407_2210	1.4	E
20230407_2220	1.4	E
20230407_2230	1.4	ESE
20230407_2240	1.4	ESE
20230407_2250	1.4	E
20230407_2300	1.4	ESE
20230407_2310	0.8	ESE
20230407_2320	0.8	E
20230407_2330	1.4	E
20230407_2340	1.1	ESE
20230407_2350	1.4	ESE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230408_0000	1.4	E
20230408_0010	1.7	ESE
20230408_0020	1.1	E
20230408_0030	1.1	E
20230408_0030	0.8	ENE
20230408_0040	1.4	ENE
20230408_0050	1.1	NE
20230408_0100	1.4	NNE
20230408_0110	3.3	NNE
20230408_0120	3.1	NNE
20230408_0130	2.5	N
20230408_0140	2.8	N
20230408_0150	3.3	NNE
20230408_0200	2.5	NNE
20230408_0210	2.8	NNE
20230408_0220	3.1	NNE
20230408_0230	3.3	NNE
20230408_0240	3.1	NNE
20230408_0250	2.8	NNE
20230408_0300	2.2	NNE
20230408_0310	2.5	N
20230408_0320	2.5	NNE
20230408_0330	1.1	NE
20230408_0340	1.1	NNE
20230408_0350	0.8	N
20230408_0400	0.8	N
20230408_0410	0.8	N
20230408_0420	0.3	NE
20230408_0430	0.8	SSE
20230408_0440	0	N
20230408_0450	0.3	-
20230408_0500	1.1	ESE
20230408_0510	0.3	NNE
20230408_0520	1.1	E
20230408_0530	2.2	E
20230408_0540	1.7	E
20230408_0550	1.7	ESE
20230408_0600	0.8	SE
20230408_0610	0	N
20230408_0620	0	N
20230408_0630	0.3	SE
20230408_0640	0.6	E
20230408_0650	1.1	SE
20230408_0700	1.4	SE
20230408_0710	0.8	NE
20230408_0720	0.6	ESE
20230408_0730	0.6	-
20230408_0740	0.3	SSE
20230408_0750	1.1	SE
20230408_0800	1.1	ESE
20230408_0810	1.1	SE
20230408_0820	1.1	SSE
20230408_0830	0.3	N
20230408_0840	2.2	NNE
20230408_0850	1.7	N
20230408_0900	1.4	NNE
20230408_0910	1.1	NNE
20230408_0920	1.7	N
20230408_0930	1.9	NNE
20230408_0940	1.4	NE
20230408_0950	1.1	NE
20230408_1000	1.4	NNE
20230408_1010	1.7	NNE
20230408_1020	2.2	NNE
20230408_1030	2.2	NNE
20230408_1040	1.7	N
20230408_1050	1.1	NNE
20230408_1100	1.7	NE
20230408_1110	1.1	N
20230408_1120	1.4	NE
20230408_1130	1.4	ENE
20230408_1140	1.7	ESE
20230408_1150	1.1	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230408_1200	1.7	ESE
20230408_1210	1.9	ESE
20230408_1220	1.7	ESE
20230408_1230	1.7	ESE
20230408_1240	1.4	ESE
20230408_1250	2.2	SE
20230408_1300	1.7	E
20230408_1310	1.1	E
20230408_1320	1.4	ESE
20230408_1330	1.7	ESE
20230408_1340	1.4	ESE
20230408_1350	1.7	ESE
20230408_1400	1.4	ESE
20230408_1410	1.7	E
20230408_1420	1.7	E
20230408_1430	0.8	-
20230408_1440	1.4	ESE
20230408_1450	1.4	ESE
20230408_1500	1.1	ESE
20230408_1510	1.4	ESE
20230408_1520	1.7	ESE
20230408_1530	2.2	E
20230408_1540	1.7	ESE
20230408_1550	1.7	ESE
20230408_1600	1.9	E
20230408_1610	1.7	ESE
20230408_1620	1.4	SE
20230408_1630	1.7	ESE
20230408_1640	1.7	ESE
20230408_1650	1.9	ESE
20230408_1700	2.5	ESE
20230408_1710	2.2	ESE
20230408_1720	1.7	ESE
20230408_1730	2.2	ESE
20230408_1740	2.2	ESE
20230408_1750	1.7	E
20230408_1800	1.7	E
20230408_1810	2.2	ESE
20230408_1820	2.2	ESE
20230408_1830	1.9	ESE
20230408_1840	2.2	ESE
20230408_1850	2.5	ESE
20230408_1900	2.5	ESE
20230408_1910	1.1	ESE
20230408_1920	1.4	E
20230408_1930	1.7	E
20230408_1940	1.7	E
20230408_1950	1.1	ESE
20230408_2000	0.8	ESE
20230408_2010	1.4	E
20230408_2020	1.4	ESE
20230408_2030	0.8	E
20230408_2040	0.8	E
20230408_2050	1.1	E
20230408_2100	1.4	E
20230408_2110	1.7	E
20230408_2120	1.4	E
20230408_2130	1.1	ESE
20230408_2140	1.1	ESE
20230408_2150	1.1	E
20230408_2200	1.1	E
20230408_2210	0.8	E
20230408_2220	0.8	ESE
20230408_2230	0.3	SE
20230408_2240	0	N
20230408_2250	0	N
20230408_2300	0.3	W
20230408_2310	0	N
20230408_2320	0	N
20230408_2330	0	N
20230408_2340	0.3	E
20230408_2350	0.6	E

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230409_0000	0.3	SE
20230409_0010	1.1	ESE
20230409_0020	1.4	ESE
20230409_0030	1.4	ESE
20230409_0030	0.8	E
20230409_0040	0.8	W
20230409_0050	1.1	WNW
20230409_0100	0	N
20230409_0110	0.3	NNE
20230409_0120	0.3	NNE
20230409_0130	0.3	NE
20230409_0140	0.3	NW
20230409_0150	0.3	ESE
20230409_0200	0.3	NE
20230409_0210	1.1	ENE
20230409_0220	1.4	E
20230409_0230	1.4	ENE
20230409_0240	1.4	ESE
20230409_0250	1.7	E
20230409_0300	1.9	ENE
20230409_0310	1.7	E
20230409_0320	1.9	ENE
20230409_0330	2.2	ENE
20230409_0340	2.5	ENE
20230409_0350	1.7	E
20230409_0400	2.2	E
20230409_0410	1.4	ESE
20230409_0420	1.4	E
20230409_0430	1.4	E
20230409_0440	1.7	E
20230409_0450	1.1	ESE
20230409_0500	1.4	E
20230409_0510	0.8	E
20230409_0520	0.3	ENE
20230409_0530	1.1	ENE
20230409_0540	1.1	ESE
20230409_0550	1.1	ESE
20230409_0600	1.1	ENE
20230409_0610	0.8	ENE
20230409_0620	0.3	ESE
20230409_0630	1.1	SE
20230409_0640	0.6	ESE
20230409_0650	0.8	ESE
20230409_0700	1.7	E
20230409_0710	1.7	E
20230409_0720	1.4	ESE
20230409_0730	0.3	E
20230409_0740	0.6	NE
20230409_0750	0.8	ESE
20230409_0800	1.4	ESE
20230409_0810	0.8	ESE
20230409_0820	0.3	NE
20230409_0830	0.3	E
20230409_0840	0	N
20230409_0850	0.8	ESE
20230409_0900	0.3	SE
20230409_0910	0.3	SE
20230409_0920	0	N
20230409_0930	0	N
20230409_0940	0.3	S
20230409_0950	0.8	SSW
20230409_1000	0.3	SSW
20230409_1010	0.3	SSW
20230409_1020	0.3	SSW
20230409_1030	0.3	SSW
20230409_1040	0.3	SW
20230409_1050	0.3	NW
20230409_1100	0.3	WNW
20230409_1110	0	N
20230409_1120	0.3	WNW
20230409_1130	0.3	W
20230409_1140	0.3	SSW
20230409_1150	0.3	W

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230409_1200	0.8	SSW
20230409_1210	0.8	WNW
20230409_1220	0.8	-
20230409_1230	0.6	NNE
20230409_1240	0.8	-
20230409_1250	0.3	SE
20230409_1300	0.8	N
20230409_1310	0.6	S
20230409_1320	0.8	NE
20230409_1330	1.4	ESE
20230409_1340	1.1	ENE
20230409_1350	1.4	E
20230409_1400	1.1	ESE
20230409_1410	1.7	ESE
20230409_1420	1.4	ESE
20230409_1430	1.4	ESE
20230409_1440	1.7	ESE
20230409_1450	1.7	E
20230409_1500	1.7	ENE
20230409_1510	2.2	E
20230409_1520	2.8	E
20230409_1530	2.5	E
20230409_1540	2.5	ESE
20230409_1550	2.8	ESE
20230409_1600	3.1	ESE
20230409_1610	2.5	E
20230409_1620	3.1	ESE
20230409_1630	2.5	E
20230409_1640	2.8	E
20230409_1650	3.3	E
20230409_1700	3.1	ESE
20230409_1710	2.5	E
20230409_1720	2.8	E
20230409_1730	2.2	E
20230409_1740	2.5	E
20230409_1750	2.5	ESE
20230409_1800	2.2	ESE
20230409_1810	2.8	ESE
20230409_1820	2.2	ESE
20230409_1830	1.9	ESE
20230409_1840	2.2	ESE
20230409_1850	2.2	ESE
20230409_1900	1.7	ESE
20230409_1910	1.7	SE
20230409_1920	1.1	SE
20230409_1930	1.7	SE
20230409_1940	1.4	SE
20230409_1950	1.7	SE
20230409_2000	0.8	SSE
20230409_2010	0.3	SSE
20230409_2020	0.8	WSW
20230409_2030	1.1	SSW
20230409_2040	0.8	SSE
20230409_2050	0.8	SSE
20230409_2100	1.1	SSE
20230409_2110	0.6	SSE
20230409_2120	0.8	SSE
20230409_2130	1.7	SSE
20230409_2140	1.1	SSE
20230409_2150	1.4	S
20230409_2200	1.4	SE
20230409_2210	1.1	SE
20230409_2220	1.1	SE
20230409_2230	1.4	ESE
20230409_2240	1.4	ESE
20230409_2250	1.1	SE
20230409_2300	1.7	SE
20230409_2310	1.7	SE
20230409_2320	1.4	ESE
20230409_2330	1.4	SE
20230409_2340	1.7	SE
20230409_2350	1.7	SE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230410_0000	1.7	ESE
20230410_0010	1.7	ESE
20230410_0020	1.7	ESE
20230410_0030	1.7	ESE
20230410_0030	2.2	ESE
20230410_0040	2.2	ESE
20230410_0050	1.7	ESE
20230410_0100	1.4	ESE
20230410_0110	1.9	ESE
20230410_0120	2.2	ESE
20230410_0130	2.2	ESE
20230410_0140	1.4	ESE
20230410_0150	2.5	ESE
20230410_0200	2.2	ESE
20230410_0210	2.2	ESE
20230410_0220	2.2	SE
20230410_0230	2.8	ESE
20230410_0240	2.8	ESE
20230410_0250	3.1	ESE
20230410_0300	3.1	ESE
20230410_0300	2.8	ESE
20230410_0320	3.3	ESE
20230410_0330	2.8	ESE
20230410_0340	3.3	ESE
20230410_0350	3.3	SE
20230410_0400	4.2	SE
20230410_0410	4.4	SE
20230410_0420	4.2	SE
20230410_0430	3.3	ESE
20230410_0440	3.1	ESE
20230410_0450	2.8	ESE
20230410_0500	2.8	ESE
20230410_0510	2.8	SE
20230410_0520	3.1	ESE
20230410_0530	2.5	ESE
20230410_0540	2.8	ESE
20230410_0550	2.8	ESE
20230410_0600	2.8	ESE
20230410_0610	2.5	ESE
20230410_0620	3.1	E
20230410_0630	1.1	ENE
20230410_0640	1.1	ENE
20230410_0650	1.7	E
20230410_0700	1.7	E
20230410_0710	1.4	ESE
20230410_0720	1.1	ESE
20230410_0730	1.4	ESE
20230410_0740	0.8	E
20230410_0750	1.4	ESE
20230410_0800	2.2	SE
20230410_0810	1.7	SE
20230410_0820	2.5	ESE
20230410_0830	2.2	ESE
20230410_0840	2.8	ESE
20230410_0850	3.3	E
20230410_0900	2.8	E
20230410_0910	2.5	ESE
20230410_0920	3.3	E
20230410_0930	3.3	ESE
20230410_0940	2.5	ESE
20230410_0950	2.5	E
20230410_1000	2.8	ESE
20230410_1010	2.2	ESE
20230410_1020	2.2	ESE
20230410_1030	3.1	E
20230410_1040	3.3	ESE
20230410_1050	2.5	ESE
20230410_1100	3.6	ESE
20230410_1110	2.8	E
20230410_1120	2.5	ESE
20230410_1130	3.1	E
20230410_1140	3.3	E
20230410_1150	3.9	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230410_1200	3.9	E
20230410_1210	3.3	E
20230410_1220	3.6	ESE
20230410_1230	3.3	E
20230410_1240	3.6	E
20230410_1250	3.3	ESE
20230410_1300	3.6	E
20230410_1310	2.8	E
20230410_1320	2.8	E
20230410_1330	3.6	E
20230410_1340	3.9	E
20230410_1350	3.9	E
20230410_1400	4.2	E
20230410_1410	4.2	E
20230410_1420	3.3	E
20230410_1430	3.3	E
20230410_1440	3.1	E
20230410_1450	3.3	ENE
20230410_1500	3.1	E
20230410_1510	2.8	E
20230410_1520	2.8	E
20230410_1530	2.5	E
20230410_1540	2.8	ESE
20230410_1550	2.8	ESE
20230410_1600	2.8	ESE
20230410_1610	2.8	E
20230410_1620	2.8	ESE
20230410_1630	2.2	ESE
20230410_1640	2.5	ESE
20230410_1650	2.8	ESE
20230410_1700	2.8	ESE
20230410_1710	3.1	ESE
20230410_1720	2.8	ESE
20230410_1730	3.1	ESE
20230410_1740	3.1	ESE
20230410_1750	2.5	ESE
20230410_1800	1.7	ESE
20230410_1810	1.7	ESE
20230410_1820	1.7	ESE
20230410_1830	2.5	ESE
20230410_1840	2.8	ESE
20230410_1850	2.8	ESE
20230410_1900	2.2	ESE
20230410_1910	2.5	ESE
20230410_1920	3.1	ESE
20230410_1930	2.2	ESE
20230410_1940	2.8	ESE
20230410_1950	2.5	ESE
20230410_2000	2.2	SE
20230410_2010	2.5	ESE
20230410_2020	1.7	ESE
20230410_2030	1.7	ESE
20230410_2040	2.2	ESE
20230410_2050	2.5	ESE
20230410_2100	2.2	ESE
20230410_2110	2.5	ESE
20230410_2120	1.9	ESE
20230410_2130	1.9	ESE
20230410_2140	2.2	ESE
20230410_2150	2.8	ESE
20230410_2200	3.3	ESE
20230410_2210	3.3	ESE
20230410_2220	3.6	ESE
20230410_2230	3.6	ESE
20230410_2240	3.3	ESE
20230410_2250	2.5	ESE
20230410_2300	3.1	ESE
20230410_2310	3.3	SE
20230410_2320	3.3	SE
20230410_2330	3.3	ESE
20230410_2340	3.1	ESE
20230410_2350	3.3	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230411_0000	3.3	ESE
20230411_0010	3.1	ESE
20230411_0020	3.3	ESE
20230411_0030	3.3	ESE
20230411_0030	3.1	ESE
20230411_0040	2.8	ESE
20230411_0050	3.3	ESE
20230411_0100	3.3	ESE
20230411_0110	3.3	ESE
20230411_0120	3.3	ESE
20230411_0130	2.8	ESE
20230411_0140	3.1	ESE
20230411_0150	3.3	ESE
20230411_0200	3.3	ESE
20230411_0210	2.5	ESE
20230411_0220	2.8	ESE
20230411_0230	3.9	ESE
20230411_0240	2.8	ESE
20230411_0250	3.1	ESE
20230411_0300	3.1	ESE
20230411_0310	2.8	ESE
20230411_0320	3.3	ESE
20230411_0330	3.3	ESE
20230411_0340	3.3	ESE
20230411_0350	2.8	ESE
20230411_0400	3.1	ESE
20230411_0410	3.1	E
20230411_0420	2.8	E
20230411_0430	3.1	E
20230411_0440	3.3	E
20230411_0450	2.5	ESE
20230411_0500	2.8	ESE
20230411_0510	2.8	E
20230411_0520	2.5	E
20230411_0530	2.2	E
20230411_0540	2.8	ESE
20230411_0550	2.5	ESE
20230411_0600	2.2	ESE
20230411_0610	2.8	E
20230411_0620	2.8	ESE
20230411_0630	2.2	ESE
20230411_0640	3.1	E
20230411_0650	2.5	E
20230411_0700	2.8	E
20230411_0710	2.5	ESE
20230411_0720	3.1	ESE
20230411_0730	2.8	ESE
20230411_0740	2.8	ESE
20230411_0750	2.8	ESE
20230411_0800	2.5	E
20230411_0810	2.8	E
20230411_0820	2.2	E
20230411_0830	1.9	ENE
20230411_0840	2.2	E
20230411_0850	2.8	ESE
20230411_0900	2.8	ESE
20230411_0910	2.2	ESE
20230411_0920	1.7	ESE
20230411_0930	1.7	SE
20230411_0940	1.7	SE
20230411_0950	2.8	E
20230411_1000	2.5	SE
20230411_1010	2.5	ESE
20230411_1020	2.2	SE
20230411_1030	2.8	SE
20230411_1040	1.7	E
20230411_1050	3.3	ESE
20230411_1100	3.1	E
20230411_1110	2.8	ESE
20230411_1120	3.3	E
20230411_1130	3.3	E
20230411_1140	2.5	ESE
20230411_1150	2.5	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230411_1200	2.5	SE
20230411_1210	2.8	ESE
20230411_1220	3.3	ESE
20230411_1230	3.1	ESE
20230411_1240	2.8	ESE
20230411_1250	2.2	SE
20230411_1300	2.2	ESE
20230411_1310	2.8	ESE
20230411_1320	2.2	ESE
20230411_1330	2.5	ESE
20230411_1340	2.5	ESE
20230411_1350	2.5	ESE
20230411_1400	2.5	ESE
20230411_1410	1.7	E
20230411_1420	1.9	E
20230411_1430	1.7	E
20230411_1440	2.2	E
20230411_1450	2.2	E
20230411_1500	1.7	ESE
20230411_1510	2.5	E
20230411_1520	2.5	E
20230411_1530	2.5	E
20230411_1540	2.8	E
20230411_1550	3.3	E
20230411_1600	3.3	E
20230411_1610	3.6	E
20230411_1620	3.3	E
20230411_1630	3.1	E
20230411_1640	2.8	E
20230411_1650	2.8	E
20230411_1700	3.3	E
20230411_1710	2.2	E
20230411_1720	2.8	E
20230411_1730	2.8	E
20230411_1740	3.1	E
20230411_1750	3.1	ESE
20230411_1800	3.1	ESE
20230411_1810	2.2	ESE
20230411_1820	2.5	ESE
20230411_1830	2.8	ESE
20230411_1840	2.8	ESE
20230411_1850	2.5	ESE
20230411_1900	1.4	ESE
20230411_1910	2.8	ESE
20230411_1920	1.1	ESE
20230411_1930	0.3	
20230411_1940	1.1	ESE
20230411_1950	1.4	ESE
20230411_2000	1.4	ESE
20230411_2010	1.4	E
20230411_2020	0.8	E
20230411_2030	0.3	
20230411_2040	1.1	ENE
20230411_2050	0.3	
20230411_2100	0.3	
20230411_2110	0.6	S
20230411_2120	0.8	SE
20230411_2130	0.6	SE
20230411_2140	0.3	NW
20230411_2150	0.3	WSW
20230411_2200	0.8	WNW
20230411_2210	0.3	SSW
20230411_2220	0.8	SSE
20230411_2230	1.4	ESE
20230411_2240	1.1	SE
20230411_2250	1.4	SSE
20230411_2300	1.1	SE
20230411_2310	0.3	SE
20230411_2320	0.8	ESE
20230411_2330	0.3	SE
20230411_2340	0.6	S
20230411_2350	1.4	SE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230412_0000	0.3	
20230412_0010	0.3	SW
20230412_0020	1.1	SW
20230412_0030	1.1	SW
20230412_0030	0.8	ESE
20230412_0040	1.1	E
20230412_0050	1.1	E
20230412_0100	1.4	SE
20230412_0110	1.4	SSE
20230412_0120	1.4	SE
20230412_0130	1.1	SE
20230412_0140	1.4	SE
20230412_0150	1.1	SE
20230412_0200	0.3	ESE
20230412_0210	0.3	SSE
20230412_0220	1.1	SSE
20230412_0230	0.6	SE
20230412_0240	0.3	SE
20230412_0250	0.8	SSE
20230412_0300	0.3	SSE
20230412_0310	0.8	SSW
20230412_0320	0.8	SSE
20230412_0330	0.3	SE
20230412_0340	0.3	SSE
20230412_0350	1.1	S
20230412_0400	0.3	SSW
20230412_0410	0	N
20230412_0420	0	N
20230412_0430	0	N
20230412_0440	0.3	SSE
20230412_0450	0.3	SSE
20230412_0500	0.8	SSE
20230412_0510	0.3	
20230412_0520	0.3	SSW
20230412_0530	1.4	S
20230412_0540	0.3	SSW
20230412_0550	0.3	S
20230412_0600	0.8	SSE
20230412_0610	0.8	S
20230412_0620	0.3	S
20230412_0630	0.3	SSW
20230412_0640	0	N
20230412_0650	0.6	NNE
20230412_0700	0.3	NNE
20230412_0710	0.3	NNE
20230412_0720	0	N
20230412_0730	0	N
20230412_0740	0	N
20230412_0750	0.3	SSW
20230412_0800	0.3	S
20230412_0810	0.3	SSW
20230412_0820	0.3	SE
20230412_0830	0.3	WNW
20230412_0840	0.3	ENE
20230412_0850	0.3	NE
20230412_0900	0.8	NE
20230412_0910	0.3	SE
20230412_0920	0.3	NNE
20230412_0930	0.3	N
20230412_0940	1.1	ESE
20230412_0950	0.3	S
20230412_1000	0.6	NNE
20230412_1010	0.3	SW
20230412_1020	1.4	SW
20230412_1030	1.1	SSW
20230412_1040	1.4	SE
20230412_1050	1.4	ENE
20230412_1100	1.4	
20230412_1110	1.1	N
20230412_1120	1.1	SE
20230412_1130	1.4	SE
20230412_1140	1.7	ENE
20230412_1150	2.8	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230412_1200	2.5	E
20230412_1210	2.2	ESE
20230412_1220	2.5	E
20230412_1230	2.5	E
20230412_1240	2.2	E
20230412_1250	2.8	E
20230412_1300	2.5	E
20230412_1310	2.8	E
20230412_1320	2.8	E
20230412_1330	2.2	ESE
20230412_1340	2.2	E
20230412_1350	2.2	E
20230412_1400	2.5	E
20230412_1410	1.7	E
20230412_1420	1.9	
20230412_1430	2.5	E
20230412_1440	2.5	E
20230412_1450	2.5	E
20230412_1500	2.8	E
20230412_1510	2.2	E
20230412_1520	2.5	ESE
20230412_1530	3.3	E
20230412_1540	3.1	E
20230412_1550	3.3	ESE
20230412_1600	3.3	E
20230412_1610	3.1	E
20230412_1620	3.1	E
20230412_1630	3.1	E
20230412_1640	3.3	E
20230412_1650	3.3	E
20230412_1700	3.3	ESE
20230412_1710	2.5	ESE
20230412_1720	2.8	ESE
20230412_1730	2.5	ESE
20230412_1740	2.8	ESE
20230412_1750	2.5	E
20230412_1800	2.5	ESE
20230412_1810	1.1	SE
20230412_1820	1.1	SE
20230412_1830	1.1	ENE
20230412_1840	1.1	
20230412_1850	1.9	SE
20230412_1900	2.2	ESE
20230412_1910	2.2	SE
20230412_1920	2.8	ESE
20230412_1930	3.3	ESE
20230412_1940	3.3	E
20230412_1950	3.3	ESE
20230412_2000	2.8	E
20230412_2010	2.5	E
20230412_2020	1.7	E
20230412_2030	1.7	E
20230412_2040	2.2	E
20230412_2050	2.2	E
20230412_2100	1.7	ESE
20230412_2110	1.7	ESE
20230412_2120	1.9	ESE
20230412_2130	1.7	SE
20230412_2140	0.8	SE
20230412_2150	1.4	ESE
20230412_2200	1.7	E
20230412_2210	2.5	ESE
20230412_2220	2.5	ESE
20230412_2230	3.1	ESE
20230412_2240	3.3	ESE
20230412_2250	3.3	ESE
20230412_2300	3.3	ESE
20230412_2310	3.9	ESE
20230412_2320	3.6	ESE
20230412_2330	3.9	ESE
20230412_2340	3.6	ESE
20230412_2350	4.2	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230413_0000	4.7	ESE
20230413_0010	4.2	ESE
20230413_0020	4.2	ESE
20230413_0030	3.6	ESE
20230413_0040	4.4	ESE
20230413_0050	5	ESE
20230413_0100	5.3	ESE
20230413_0110	5.3	ESE
20230413_0120	4.2	E
20230413_0130	4.4	ESE
20230413_0140	3.9	E
20230413_0150	3.3	E
20230413_0200	3.3	E
20230413_0210	3.3	E
20230413_0220	3.6	E
20230413_0230	3.3	ENE
20230413_0240	3.3	ENE
20230413_0250	2.8	E
20230413_0300	3.1	E
20230413_0310	2.5	E
20230413_0320	2.8	E
20230413_0330	2.8	ESE
20230413_0340	2.8	ESE
20230413_0350	3.1	ESE
20230413_0400	2.5	ESE
20230413_0410	2.5	ESE
20230413_0420	2.5	ESE
20230413_0430	2.8	ESE
20230413_0440	2.2	ESE
20230413_0450	1.9	ESE
20230413_0500	1.7	ESE
20230413_0510	1.4	ESE
20230413_0520	1.7	ESE
20230413_0530	1.9	ESE
20230413_0540	1.4	E
20230413_0550	1.9	ESE
20230413_0600	1.1	SE
20230413_0610	1.1	ESE
20230413_0620	1.7	E
20230413_0630	2.2	E
20230413_0640	2.2	ESE
20230413_0650	2.5	SE
20230413_0700	3.6	ESE
20230413_0710	3.3	SE
20230413_0720	4.2	SE
20230413_0730	3.6	ESE
20230413_0740	2.5	ESE
20230413_0750	3.3	SE
20230413_0800	3.9	ESE
20230413_0810	4.2	SE
20230413_0820	4.2	SE
20230413_0830	4.2	ESE
20230413_0840	4.2	ESE
20230413_0850	3.9	ESE
20230413_0900	3.9	ESE
20230413_0910	4.2	ESE
20230413_0920	4.2	ESE
20230413_0930	4.4	ESE
20230413_0940	4.4	ESE
20230413_0950	4.2	ESE
20230413_1000	4.4	ESE
20230413_1010	4.4	ESE
20230413_1020	3.3	ESE
20230413_1030	4.7	ESE
20230413_1040	4.4	E
20230413_1050	4.2	E
20230413_1100	4.2	ESE
20230413_1110	3.9	ESE
20230413_1120	3.9	SE
20230413_1130	4.2	E
20230413_1140	3.9	ESE
20230413_1150	3.3	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230413_1200	3.3	E
20230413_1210	3.3	E
20230413_1220	3.9	E
20230413_1230	3.3	E
20230413_1240	3.9	E
20230413_1250	3.3	E
20230413_1300	3.1	E
20230413_1310	3.3	ENE
20230413_1320	3.3	E
20230413_1330	3.3	E
20230413_1340	3.3	E
20230413_1350	3.9	E
20230413_1400	3.3	E
20230413_1410	2.5	SE
20230413_1420	2.2	SE
20230413_1430	2.8	SSE
20230413_1440	3.1	SSE
20230413_1450	3.6	SSE
20230413_1500	2.5	ESE
20230413_1510	3.3	ESE
20230413_1520	3.6	E
20230413_1530	3.9	E
20230413_1540	3.3	E
20230413_1550	3.3	ESE
20230413_1600	3.3	E
20230413_1610	3.1	E
20230413_1620	3.9	E
20230413_1630	3.3	ESE
20230413_1640	3.3	E
20230413_1650	3.9	ESE
20230413_1700	3.3	ESE
20230413_1710	3.1	ESE
20230413_1720	3.1	ESE
20230413_1730	3.1	ESE
20230413_1740	2.8	ESE
20230413_1750	2.5	ESE
20230413_1800	2.2	ESE
20230413_1810	2.5	SE
20230413_1820	2.8	E
20230413_1830	2.5	ESE
20230413_1840	2.5	SE
20230413_1850	2.2	ESE
20230413_1900	1.7	ESE
20230413_1910	1.7	SE
20230413_1920	2.2	SE
20230413_1930	3.3	SE
20230413_1940	2.5	SE
20230413_1950	2.5	SE
20230413_2000	2.8	SE
20230413_2010	2.2	SE
20230413_2020	1.7	ESE
20230413_2030	2.5	ESE
20230413_2040	1.7	ESE
20230413_2050	2.5	ESE
20230413_2100	2.8	ESE
20230413_2110	3.3	ESE
20230413_2120	3.1	ESE
20230413_2130	1.9	ESE
20230413_2140	2.2	ESE
20230413_2150	2.8	ESE
20230413_2200	2.8	ESE
20230413_2210	3.1	SE
20230413_2220	2.5	SE
20230413_2230	2.2	SE
20230413_2240	1.7	SE
20230413_2250	2.2	SE
20230413_2300	2.2	SE
20230413_2310	2.5	SE
20230413_2320	2.2	ESE
20230413_2330	1.4	SSE
20230413_2340	1.7	SE
20230413_2350	1.7	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230414_0000	2.5	ESE
20230414_0010	2.8	ESE
20230414_0020	2.5	SE
20230414_0020	2.2	ESE
20230414_0030	2.2	ESE
20230414_0040	2.2	ESE
20230414_0050	1.7	ESE
20230414_0100	1.9	ESE
20230414_0110	1.4	ESE
20230414_0120	1.4	ESE
20230414_0130	1.4	E
20230414_0140	1.4	E
20230414_0150	1.7	ESE
20230414_0200	1.4	ESE
20230414_0210	1.1	ESE
20230414_0220	1.1	SE
20230414_0230	1.1	SE
20230414_0240	1.4	SE
20230414_0250	1.4	SE
20230414_0300	1.4	SSE
20230414_0310	0.8	SE
20230414_0320	0.3	ESE
20230414_0330	0.3	ESE
20230414_0340	0.3	SE
20230414_0350	0.3	SE
20230414_0400	1.1	ESE
20230414_0410	0.8	ESE
20230414_0420	0.3	ESE
20230414_0430	0.3	ESE
20230414_0440	1.4	ESE
20230414_0450	0.8	SE
20230414_0500	1.4	SE
20230414_0510	1.4	SE
20230414_0520	1.1	ESE
20230414_0530	1.1	ESE
20230414_0540	2.2	ESE
20230414_0550	1.7	ESE
20230414_0600	2.2	ESE
20230414_0610	1.7	ESE
20230414_0620	2.5	SE
20230414_0630	2.2	SSE
20230414_0640	1.9	SSE
20230414_0650	1.7	SSE
20230414_0700	2.2	SE
20230414_0710	2.5	SE
20230414_0720	1.7	ESE
20230414_0730	2.8	SE
20230414_0740	2.2	SE
20230414_0750	2.8	SE
20230414_0800	2.5	SE
20230414_0810	2.5	ESE
20230414_0820	2.8	ESE
20230414_0830	2.8	ESE
20230414_0840	2.2	ESE
20230414_0850	1.9	ESE
20230414_0900	2.5	E
20230414_0910	2.5	
20230414_0920	2.5	E
20230414_0930	2.5	ESE
20230414_0940	1.7	E
20230414_0950	2.2	ESE
20230414_1000	1.7	ESE
20230414_1010	2.5	E
20230414_1020	2.2	E
20230414_1030	2.8	ESE
20230414_1040	2.5	E
20230414_1050	2.5	E
20230414_1100	2.5	E
20230414_1110	2.8	E
20230414_1120	2.5	E
20230414_1130	2.2	E
20230414_1140	2.5	SE
20230414_1150	1.7	SSE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230414_1200	1.7	SSE
20230414_1210	1.7	ENE
20230414_1220	1.7	
20230414_1230	2.8	ENE
20230414_1240	2.5	ENE
20230414_1250	2.8	E
20230414_1300	2.8	E
20230414_1310	2.8	E
20230414_1320	2.8	E
20230414_1330	2.5	E
20230414_1340	1.7	E
20230414_1350	2.2	ESE
20230414_1400	2.2	E
20230414_1410	2.5	ESE
20230414_1420	1.7	E
20230414_1430	1.9	E
20230414_1440	2.5	E
20230414_1450	2.8	E
20230414_1500	2.8	ESE
20230414_1510	2.2	E
20230414_1520	2.8	ESE
20230414_1530	2.5	ESE
20230414_1540	2.5	E
20230414_1550	1.7	E
20230414_1600	2.2	E
20230414_1610	2.5	ESE
20230414_1620	2.2	E
20230414_1630	1.7	ESE
20230414_1640	1.7	E
20230414_1650	1.7	ESE
20230414_1700	1.9	SE
20230414_1710	1.1	SSE
20230414_1720	1.4	S
20230414_1730	1.4	S
20230414_1740	1.1	WSW
20230414_1750	0.8	SSW
20230414_1800	1.1	SW
20230414_1810	0.8	SSW
20230414_1820	0.8	S
20230414_1830	0.6	SSE
20230414_1840	1.1	E
20230414_1850	0.6	ESE
20230414_1900	0	N
20230414_1910	0.3	E
20230414_1920	0.8	ESE
20230414_1930	0.3	SE
20230414_1940	0.3	SSE
20230414_1950	0.6	SSW
20230414_2000	0.8	S
20230414_2010	0.8	SSE
20230414_2020	1.1	SSE
20230414_2030	0.8	S
20230414_2040	0.3	SSW
20230414_2050	0.8	SW
20230414_2100	0.3	SW
20230414_2110	0.3	
20230414_2120	0.3	SE
20230414_2130	0.3	E
20230414_2140	0	N
20230414_2150	0	N
20230414_2200	0	N
20230414_2210	0	N
20230414_2220	0	N
20230414_2230	0	N
20230414_2240	0	N
20230414_2250	0.3	SSE
20230414_2300	0	N
20230414_2310	0.3	S
20230414_2320	0.3	SE
20230414_2330	0.3	ESE
20230414_2340	0	N
20230414_2350	0.3	SSE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230415_0000	0.8	SE
20230415_0010	0	N
20230415_0020	0	N
20230415_0020	0	N
20230415_0030	0	N
20230415_0040	0	N
20230415_0050	0	N
20230415_0100	0	N
20230415_0110	0.3	NNE
20230415_0120	0	N
20230415_0130	0.3	SE
20230415_0140	0.3	E
20230415_0150	0	N
20230415_0200	0	N
20230415_0210	0	N
20230415_0220	0	N
20230415_0230	0	N
20230415_0240	0	N
20230415_0250	0	N
20230415_0300	0	N
20230415_0310	0	N
20230415_0320	0	N
20230415_0330	0	N
20230415_0340	0.3	ESE
20230415_0350	0	N
20230415_0400	0	N
20230415_0410	0	N
20230415_0420	0	N
20230415_0430	0	N
20230415_0440	0	N
20230415_0450	0	N
20230415_0500	0	N
20230415_0510	0	N
20230415_0520	0	N
20230415_0530	0	N
20230415_0540	0	N
20230415_0550	0	N
20230415_0600	0	N
20230415_0610	0	N
20230415_0620	0	N
20230415_0630	0	N
20230415_0640	0	N
20230415_0650	0	N
20230415_0700	0	N
20230415_0710	0	N
20230415_0720	0.3	SW
20230415_0730	0	N
20230415_0740	0	N
20230415_0750	0	N
20230415_0800	0	N
20230415_0810	0	N
20230415_0820	0	N
20230415_0830	0.3	ENE
20230415_0840	0.6	NNE
20230415_0850	1.4	N
20230415_0900	0.8	NW
20230415_0910	1.1	NNE
20230415_0920	1.1	NNE
20230415_0930	1.7	NNE
20230415_0940	2.5	NNE
20230415_0950	3.9	NNE
20230415_1000	3.1	N
20230415_1010	3.3	N
20230415_1020	3.9	N
20230415_1030	4.2	N
20230415_1040	4.7	NNE
20230415_1050	4.4	NNE
20230415_1100	4.2	N
20230415_1110	4.2	NNE
20230415_1120	3.3	NNE
20230415_1130	2.8	NNE
20230415_1140	2.8	N
20230415_1150	2.5	NNE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230415_1200	2.2	N
20230415_1210	1.7	N
20230415_1220	1.4	N
20230415_1230	2.5	NNW
20230415_1240	2.2	N
20230415_1250	1.7	N
20230415_1300	3.1	NNE
20230415_1310	2.8	N
20230415_1320	2.5	N
20230415_1330	2.2	N
20230415_1340	3.1	N
20230415_1350	3.9	N
20230415_1400	2.2	NNW
20230415_1410	1.9	NNW
20230415_1420	4.2	N
20230415_1430	3.1	N
20230415_1440	4.2	N
20230415_1450	3.9	NNE
20230415_1500	2.5	N
20230415_1510	1.9	NNE
20230415_1520	1.7	NNE
20230415_1530	1.7	NNE
20230415_1540	2.8	NNE
20230415_1550	1.7	NNE
20230415_1600	2.5	N
20230415_1610	2.8	N
20230415_1620	2.5	NNE
20230415_1630	2.5	NNE
20230415_1640	2.8	NE
20230415_1650	2.2	NE
20230415_1700	1.7	NE
20230415_1710	2.2	NE
20230415_1720	1.7	NE
20230415_1730	1.4	NNE
20230415_1740	1.7	NNE
20230415_1750	1.7	ENE
20230415_1800	1.4	ENE
20230415_1810	1.4	ENE
20230415_1820	1.4	E
20230415_1830	1.4	ENE
20230415_1840	1.7	NE
20230415_1850	2.8	NE
20230415_1900	3.3	NE
20230415_1910	2.5	NE
20230415_1920	2.8	NE
20230415_1930	1.4	NE
20230415_1940	0.3	ENE
20230415_1950	0	N
20230415_2000	0.3	ESE
20230415_2010	0	N
20230415_2020	0	N
20230415_2030	0	N
20230415_2040	0.3	S
20230415_2050	0	N
20230415_2100	0.8	NNW
20230415_2110	0	N
20230415_2120	0.3	SSW
20230415_2130	0.6	S
20230415_2140	1.4	SSE
20230415_2150	0.8	S
20230415_2200	1.1	S
20230415_2210	0.3	SSW
20230415_2220	0.3	
20230415_2230	0.3	S
20230415_2240	0.3	
20230415_2250	0.3	
20230415_2300	0.3	ESE
20230415_2310	0.3	
20230415_2320	0	N
20230415_2330	0	N
20230415_2340	0	N
20230415_2350	0	N

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230416_0000	0.6	SSE
20230416_0010	0	N
20230416_0020	0	N
20230416_0020	0	N
20230416_0030	0	N
20230416_0040	0	N
20230416_0050	0	N
20230416_0100	0	N
20230416_0110	0	N
20230416_0120	0	N
20230416_0130	0	N
20230416_0140	0.3	
20230416_0150	0	N
20230416_0200	0	N
20230416_0210	0	N
20230416_0220	0	N
20230416_0230	0	N
20230416_0240	0.6	SSW
20230416_0250	0	N
20230416_0300	0	N
20230416_0310	0	N
20230416_0320	0	N
20230416_0330	0	N
20230416_0340	0	N
20230416_0350	0	N
20230416_0400	0	N
20230416_0410	0	N
20230416_0420	0	N
20230416_0430	0	N
20230416_0440	0	N
20230416_0450	0	N
20230416_0500	0	N
20230416_0510	0	N
20230416_0520	0	N
20230416_0530	0	N
20230416_0540	0	N
20230416_0550	0	N
20230416_0600	0	N
20230416_0610	0	N
20230416_0620	0	N
20230416_0630	0	N
20230416_0640	0	N
20230416_0650	0	N
20230416_0700	0	N
20230416_0710	0	N
20230416_0720	0.3	SSW
20230416_0730	0	N
20230416_0740	0	N
20230416_0750	0	N
20230416_0800	0	N
20230416_0810	0.3	N
20230416_0820	0.3	N
20230416_0830	0.3	
20230416_0840	0.3	NNE
20230416_0850	0.3	E
20230416_0900	0.3	NE
20230416_0910	0.3	
20230416_0920	1.1	NNE
20230416_0930	0.8	S
20230416_0940	1.1	NW
20230416_0950	1.1	NNW
20230416_1000	0.3	
20230416_1010	1.1	NNW
20230416_1020	1.7	NNE
20230416_1030	1.4	NNW
20230416_1040	1.4	SE
20230416_1050	1.7	E
20230416_1100	1.1	SSE
20230416_1110	1.1	S
20230416_1120	1.7	SE
20230416_1130	1.7	ESE
20230416_1140	1.7	SSE
20230416_1150	3.1	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230416_1200	2.5	E
20230416_1210	2.5	E
20230416_1220	2.8	E
20230416_1230	3.3	E
20230416_1240	3.3	E
20230416_1250	3.3	E
20230416_1300	3.3	E
20230416_1310	3.9	ENE
20230416_1320	3.3	E
20230416_1330	3.9	E
20230416_1340	3.9	ENE
20230416_1350	4.4	E
20230416_1400	4.4	E
20230416_1410	4.2	E
20230416_1420	4.2	E
20230416_1430	3.9	E
20230416_1440	3.9	E
20230416_1450	3.9	E
20230416_1500	3.9	E
20230416_1510	3.9	E
20230416_1520	4.4	E
20230416_1530	3.3	E
20230416_1540	5	E
20230416_1550	5	E
20230416_1600	4.2	ESE
20230416_1610	3.9	ESE
20230416_1620	4.2	E
20230416_1630	4.2	ESE
20230416_1640	4.2	E
20230416_1650	4.2	E
20230416_1700	4.2	E
20230416_1710	3.6	E
20230416_1720	3.9	E
20230416_1730	3.6	E
20230416_1740	3.9	E
20230416_1750	3.9	E
20230416_1800	3.3	E
20230416_1810	2.8	ESE
20230416_1820	2.8	ESE
20230416_1830	3.3	E
20230416_1840	3.3	ESE
20230416_1850	3.1	E
20230416_1900	2.8	ESE
20230416_1910	2.2	ESE
20230416_1920	2.2	ESE
20230416_1930	2.5	ESE
20230416_1940	2.5	ESE
20230416_1950	2.5	ESE
20230416_2000	2.2	SE
20230416_2010	1.7	SE
20230416_2020	1.7	SSE
20230416_2030	1.1	SE
20230416_2040	1.7	SE
20230416_2050	2.2	ESE
20230416_2100	0.8	NW
20230416_2110	0.8	W
20230416_2120	0.3	
20230416_2130	0.8	
20230416_2140	1.1	ESE
20230416_2150	1.1	ESE
20230416_2200	1.4	ESE
20230416_2210	1.7	SE
20230416_2220	1.7	SE
20230416_2230	2.2	SE
20230416_2240	1.7	ESE
20230416_2250	1.7	SE
20230416_2300	1.1	SE
20230416_2310	1.7	SE
20230416_2320	1.4	SE
20230416_2330	2.2	SE
20230416_2340	1.7	SE
20230416_2350	1.7	SE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230417_0000	2.2	ESE
20230417_0010	2.2	ESE
20230417_0020	2.2	ESE
20230417_0030	1.7	SSE
20230417_0040	1.4	ESE
20230417_0050	1.4	SE
20230417_0100	1.1	
20230417_0110	2.2	SE
20230417_0120	2.2	SE
20230417_0130	1.7	ESE
20230417_0140	1.7	SE
20230417_0150	1.7	SE
20230417_0200	1.4	SE
20230417_0210	1.4	SSE
20230417_0220	1.4	SE
20230417_0230	1.1	SSE
20230417_0240	1.1	SSE
20230417_0250	1.7	SSE
20230417_0300	1.7	SE
20230417_0310	1.4	SE
20230417_0320	1.4	ESE
20230417_0330	2.2	ESE
20230417_0340	1.9	E
20230417_0350	1.7	ESE
20230417_0400	1.4	ESE
20230417_0410	1.1	SE
20230417_0420	1.1	S
20230417_0430	1.1	S
20230417_0440	0.8	S
20230417_0450	1.1	SSE
20230417_0500	0.8	SE
20230417_0510	0.3	E
20230417_0520	1.1	E
20230417_0530	0.8	SE
20230417_0540	1.4	SE
20230417_0550	0.8	SE
20230417_0600	1.1	SE
20230417_0610	1.1	ESE
20230417_0620	1.1	ESE
20230417_0630	0.8	ESE
20230417_0640	0.3	S
20230417_0650	0.3	ESE
20230417_0700	0.8	SE
20230417_0710	0.3	
20230417_0720	1.4	E
20230417_0730	1.9	E
20230417_0740	1.7	E
20230417_0750	2.2	E
20230417_0800	2.2	E
20230417_0810	1.7	ESE
20230417_0820	2.2	E
20230417_0830	1.7	ESE
20230417_0840	1.4	ESE
20230417_0850	1.7	ESE
20230417_0900	1.7	ESE
20230417_0910	1.9	E
20230417_0920	1.9	E
20230417_0930	1.7	ESE
20230417_0940	1.9	E
20230417_0950	1.7	ESE
20230417_1000	2.2	E
20230417_1010	2.8	E
20230417_1020	2.2	E
20230417_1030	2.5	E
20230417_1040	3.1	E
20230417_1050	2.8	E
20230417_1100	2.8	E
20230417_1110	2.5	E
20230417_1120	3.1	E
20230417_1130	3.3	E
20230417_1140	3.3	E
20230417_1150	3.9	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230417_1200	3.9	E
20230417_1210	4.4	E
20230417_1220	4.2	E
20230417_1230	3.9	E
20230417_1240	3.3	E
20230417_1250	2.5	E
20230417_1300	3.3	E
20230417_1310	3.3	E
20230417_1320	3.9	E
20230417_1330	3.3	E
20230417_1340	3.3	ESE
20230417_1350	3.1	SE
20230417_1400	3.1	E
20230417_1410	2.5	ESE
20230417_1420	3.1	E
20230417_1430	2.5	ESE
20230417_1440	3.9	E
20230417_1450	3.3	E
20230417_1500	3.9	E
20230417_1510	3.3	E
20230417_1520	3.3	ESE
20230417_1530	3.3	E
20230417_1540	4.2	E
20230417_1550	3.3	ESE
20230417_1600	3.3	ESE
20230417_1610	3.3	ESE
20230417_1620	4.4	E
20230417_1630	3.9	ESE
20230417_1640	3.3	E
20230417_1650	3.6	ESE
20230417_1700	3.3	ESE
20230417_1710	4.2	ESE
20230417_1720	3.3	ESE
20230417_1730	3.3	ESE
20230417_1740	3.3	ESE
20230417_1750	4.2	ESE
20230417_1800	4.7	ESE
20230417_1810	3.9	ESE
20230417_1820	4.2	ESE
20230417_1830	3.9	ESE
20230417_1840	4.2	ESE
20230417_1850	5	ESE
20230417_1900	5	ESE
20230417_1910	4.2	ESE
20230417_1920	4.4	ESE
20230417_1930	4.7	ESE
20230417_1940	4.2	ESE
20230417_1950	3.9	ESE
20230417_2000	3.9	E
20230417_2010	3.3	ESE
20230417_2020	2.8	E
20230417_2030	3.3	E
20230417_2040	3.6	E
20230417_2050	3.3	E
20230417_2100	3.1	E
20230417_2110	3.1	E
20230417_2120	2.8	ESE
20230417_2130	1.9	E
20230417_2140	2.5	E
20230417_2150	2.2	E
20230417_2200	2.2	E
20230417_2210	1.4	ESE
20230417_2220	1.7	SE
20230417_2230	1.4	SSE
20230417_2240	1.4	SE
20230417_2250	1.1	ESE
20230417_2300	2.8	ESE
20230417_2310	2.2	SE
20230417_2320	2.8	SE
20230417_2330	3.1	ESE
20230417_2340	3.1	ESE
20230417_2350	2.8	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230418_0000	2.8	ESE
20230418_0010	2.5	E
20230418_0020	2.5	ESE
20230418_0030	2.8	ESE
20230418_0040	2.8	SE
20230418_0050	2.5	ESE
20230418_0100	2.8	SE
20230418_0110	2.5	SE
20230418_0120	1.7	SE
20230418_0130	1.7	SSE
20230418_0140	1.4	S
20230418_0150	1.1	SE
20230418_0200	1.1	ESE
20230418_0210	0.3	ESE
20230418_0220	0.3	SE
20230418_0230	0.8	ESE
20230418_0240	1.1	E
20230418_0250	1.4	E
20230418_0300	1.1	ESE
20230418_0310	1.1	ESE
20230418_0320	1.1	ESE
20230418_0330	1.4	ESE
20230418_0340	1.1	ESE
20230418_0350	1.1	SE
20230418_0400	0.8	SSE
20230418_0410	1.4	SE
20230418_0420	0.8	SE
20230418_0430	0.6	SE
20230418_0440	0.3	S
20230418_0450	0.3	ESE
20230418_0500	0.6	SSW
20230418_0510	0.8	SW
20230418_0520	0.3	WSW
20230418_0530	0.3	SSW
20230418_0540	0.8	E
20230418_0550	0.3	WNW
20230418_0600	0.3	WNW
20230418_0610	0	N
20230418_0620	0.8	ESE
20230418_0630	0.8	ESE
20230418_0640	0.6	
20230418_0650	0	N
20230418_0700	0	N
20230418_0710	1.1	ESE
20230418_0720	1.4	ESE
20230418_0730	1.7	ESE
20230418_0740	1.4	SE
20230418_0750	1.7	SE
20230418_0800	1.4	SE
20230418_0810	1.4	SSE
20230418_0820	1.4	SSE
20230418_0830	1.7	ESE
20230418_0840	1.7	SE
20230418_0850	1.7	E
20230418_0900	2.2	ESE
20230418_0910	2.5	E
20230418_0920	1.4	S
20230418_0930	2.8	SE
20230418_0940	2.8	SE
20230418_0950	3.1	SSE
20230418_1000	3.3	SSE
20230418_1010	3.3	SE
20230418_1020	3.3	SSE
20230418_1030	3.3	SSE
20230418_1040	3.3	SE
20230418_1050	3.3	SE
20230418_1100	3.9	SE
20230418_1110	3.3	SE
20230418_1120	3.9	SE
20230418_1130	3.9	SE
20230418_1140	3.3	SE
20230418_1150	2.8	SSE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230418_1200	3.3	SSE
20230418_1210	3.1	SSE
20230418_1220	3.3	SE
20230418_1230	3.1	SSE
20230418_1240	2.8	SSE
20230418_1250	2.8	SSE
20230418_1300	2.5	ESE
20230418_1310	2.2	SE
20230418_1320	3.1	ESE
20230418_1330	3.1	ESE
20230418_1340	3.3	E
20230418_1350	2.5	ESE
20230418_1400	2.8	ESE
20230418_1410	2.8	ESE
20230418_1420	2.5	SE
20230418_1430	2.8	SSE
20230418_1440	1.7	SSE
20230418_1450	2.2	SSE
20230418_1500	2.2	SSE
20230418_1510	2.2	SSE
20230418_1520	2.2	SE
20230418_1530	1.7	SE
20230418_1540	1.7	SE
20230418_1550	1.7	SE
20230418_1600	1.4	ESE
20230418_1610	1.7	SE
20230418_1620	1.7	ESE
20230418_1630	1.7	ESE
20230418_1640	1.4	SSE
20230418_1650	1.7	SSE
20230418_1700	1.4	SE
20230418_1710	1.4	SE
20230418_1720	1.7	ESE
20230418_1730	1.4	SE
20230418_1740	1.7	ESE
20230418_1750	1.7	SE
20230418_1800	2.5	SE
20230418_1810	1.1	SE
20230418_1820	1.7	SSE
20230418_1830	1.4	SE
20230418_1840	1.4	ESE
20230418_1850	1.7	SE
20230418_1900	0.8	SE
20230418_1910	1.1	SE
20230418_1920	1.4	SE
20230418_1930	1.4	SE
20230418_1940	0.8	SE
20230418_1950	0.3	
20230418_2000	0.3	SW
20230418_2010	0.3	SSE
20230418_2020	1.1	ESE
20230418_2030	0.3	
20230418_2040	0	N
20230418_2050	0.3	SSW
20230418_2100	0.8	ESE
20230418_2110	0.3	S
20230418_2120	0.8	S
20230418_2130	0.8	SSW
20230418_2140	0.8	SSW
20230418_2150	1.7	SSW
20230418_2200	1.4	SSW
20230418_2210	1.4	SSW
20230418_2220	1.4	S
20230418_2230	1.4	SSW
20230418_2240	0.8	SW
20230418_2250	0.3	SW
20230418_2300	0	N
20230418_2310	0	N
20230418_2320	0.3	SSW
20230418_2330	1.1	SSW
20230418_2340	2.2	SSW
20230418_2350	1.9	SW

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230419_0000	2.2	SSW
20230419_0010	2.5	S
20230419_0020	2.2	S
20230419_0030	1.1	S
20230419_0040	0.3	
20230419_0050	0.8	S
20230419_0100	1.4	SSW
20230419_0110	0.8	SSW
20230419_0120	0.3	SW
20230419_0130	0.8	SW
20230419_0140	1.7	SW
20230419_0150	2.8	SW
20230419_0200	2.5	SW
20230419_0210	2.2	SW
20230419_0220	1.7	SW
20230419_0230	2.2	SSW
20230419_0240	2.8	SW
20230419_0250	2.5	SSW
20230419_0300	2.2	SSW
20230419_0310	1.7	SW
20230419_0320	2.5	SW
20230419_0330	2.2	SW
20230419_0340	1.9	SW
20230419_0350	2.5	SSW
20230419_0400	2.2	SW
20230419_0410	1.4	SSW
20230419_0420	1.1	SSW
20230419_0430	0.8	SSW
20230419_0440	0.8	SSW
20230419_0450	0.6	SW
20230419_0500	0.6	SW
20230419_0510	0.3	SW
20230419_0520	1.1	SW
20230419_0530	1.7	SW
20230419_0540	1.4	SSW
20230419_0550	1.4	SSW
20230419_0600	1.1	SW
20230419_0610	0.8	SSW
20230419_0620	0.8	SW
20230419_0630	1.7	SSW
20230419_0640	1.4	SW
20230419_0650	1.1	WSW
20230419_0700	1.1	WSW
20230419_0710	1.9	WSW
20230419_0720	2.2	SW
20230419_0730	2.5	SW
20230419_0740	1.1	SW
20230419_0750	2.5	SW
20230419_0800	3.3	SW
20230419_0810	3.3	SW
20230419_0820	3.1	SW
20230419_0830	3.3	SW
20230419_0840	2.8	SW
20230419_0850	3.9	SSW
20230419_0900	3.3	SW
20230419_0910	3.1	SW
20230419_0920	2.2	SW
20230419_0930	3.1	SW
20230419_0940	3.1	SW
20230419_0950	2.2	SW
20230419_1000	3.3	SW
20230419_1010	4.4	WSW
20230419_1020	3.3	SW
20230419_1030	3.6	SSW
20230419_1040	2.8	SSW
20230419_1050	3.9	SSW
20230419_1100	3.3	SW
20230419_1110	5.3	WSW
20230419_1120	3.6	WSW
20230419_1130	3.3	W
20230419_1140	3.3	WSW
20230419_1150	1.7	

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230419_1200	1.1	SE
20230419_1210	2.2	SE
20230419_1220	3.1	ESE
20230419_1230	1.1	N
20230419_1240	0	N
20230419_1250	0.3	E
20230419_1300	2.2	ESE
20230419_1310	1.7	ESE
20230419_1320	0.6	
20230419_1330	0.3	SE
20230419_1340	0.3	
20230419_1350	0.8	ENE
20230419_1400	1.1	SE
20230419_1410	0.8	SSE
20230419_1420	1.4	SE
20230419_1430	0.8	NE
20230419_1440	0.8	SW
20230419_1450	0	N
20230419_1500	0.3	
20230419_1510	0.3	WNW
20230419_1520	1.4	WNW
20230419_1530	1.1	W
20230419_1540	1.4	WSW
20230419_1550	1.1	SW
20230419_1600	0.6	W
20230419_1610	0.3	WSW
20230419_1620	0.3	SW
20230419_1630	0.8	S
20230419_1640	1.1	S
20230419_1650	0.8	S
20230419_1700	0.8	S
20230419_1710	0.3	WSW
20230419_1720	0.3	NNW
20230419_1730	0.3	WSW
20230419_1740	1.4	NNE
20230419_1750	1.1	NNE
20230419_1800	0.8	N
20230419_1810	1.1	ENE
20230419_1820	0.8	SE
20230419_1830	1.1	ESE
20230419_1840	1.7	ENE
20230419_1850	0.8	ENE
20230419_1900	0.6	NNE
20230419_1910	1.1	SE
20230419_1920	2.2	E
20230419_1930	2.8	ESE
20230419_1940	2.5	E
20230419_1950	2.2	ESE
20230419_2000	1.7	ESE
20230419_2010	2.2	SE
20230419_2020	1.7	ESE
20230419_2030	1.9	E
20230419_2040	1.4	NE
20230419_2050	0.3	S
20230419_2100	0.8	NNE
20230419_2110	0.8	NNE
20230419_2120	0	N
20230419_2130	0.8	SSE
20230419_2140	0.8	ESE
20230419_2150	0.3	E
20230419_2200	0.3	ENE
20230419_2210	1.1	ESE
20230419_2220	1.9	SE
20230419_2230	1.7	E
20230419_2240	1.4	E
20230419_2250	1.1	ESE
20230419_2300	0.8	ESE
20230419_2310	0.8	E
20230419_2320	0.8	ESE
20230419_2330	0.8	SSE
20230419_2340	0.6	S
20230419_2350	1.1	E

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230420_0000	1.7	ENE
20230420_0010	1.1	ESE
20230420_0020	1.4	SE
20230420_0030	0.8	SE
20230420_0040	0.8	SSE
20230420_0050	1.1	SE
20230420_0100	1.1	E
20230420_0110	1.1	ENE
20230420_0120	0.3	SSE
20230420_0130	0.3	WSW
20230420_0140	0.3	SE
20230420_0150	1.1	E
20230420_0200	1.1	E
20230420_0210	0.8	ENE
20230420_0220	0	N
20230420_0230	0	N
20230420_0240	0.3	NE
20230420_0250	0	N
20230420_0300	0.3	S
20230420_0310	0.3	SE
20230420_0320	0.3	E
20230420_0330	0.6	SE
20230420_0340	0.3	ESE
20230420_0350	0	N
20230420_0400	0	N
20230420_0410	0.3	NE
20230420_0420	0.3	ENE
20230420_0430	0.8	E
20230420_0440	0.8	ENE
20230420_0450	1.1	E
20230420_0500	0.6	E
20230420_0510	0.8	E
20230420_0520	0.6	ESE
20230420_0530	0.3	
20230420_0540	1.1	SE
20230420_0550	0.8	ENE
20230420_0600	0.6	NE
20230420_0610	0.6	S
20230420_0620	0.3	ENE
20230420_0630	0.6	NE
20230420_0640	0.3	SE
20230420_0650	0.3	SW
20230420_0700	0.3	SSW
20230420_0710	0.3	NE
20230420_0720	0.3	NE
20230420_0730	0.3	NNE
20230420_0740	0.3	
20230420_0750	0.6	SSE
20230420_0800	0.3	SE
20230420_0810	1.1	SE
20230420_0820	1.1	SSE
20230420_0830	1.1	SSE
20230420_0840	1.1	SE
20230420_0850	1.7	SSE
20230420_0900	1.4	SE
20230420_0910	1.4	E
20230420_0920	1.7	E
20230420_0930	1.4	ESE
20230420_0940	1.7	E
20230420_0950	2.2	E
20230420_1000	1.7	ESE
20230420_1010	2.5	E
20230420_1020	1.7	ESE
20230420_1030	1.7	ESE
20230420_1040	2.2	SE
20230420_1050	1.9	ESE
20230420_1100	1.7	ESE
20230420_1110	2.2	E
20230420_1120	1.4	SE
20230420_1130	2.2	ESE
20230420_1140	1.7	ESE
20230420_1150	2.2	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230420_1200	1.7	ESE
20230420_1210	1.7	SE
20230420_1220	3.1	ESE
20230420_1230	2.8	SE
20230420_1240	2.5	SE
20230420_1250	2.8	ESE
20230420_1300	2.2	ESE
20230420_1310	2.2	SE
20230420_1320	3.1	SE
20230420_1330	3.1	ESE
20230420_1340	2.8	ESE
20230420_1350	3.1	ESE
20230420_1400	2.8	ESE
20230420_1410	2.8	ESE
20230420_1420	2.2	ESE
20230420_1430	3.1	ESE
20230420_1440	2.8	ESE
20230420_1450	2.8	ESE
20230420_1500	2.2	SE
20230420_1510	2.5	SE
20230420_1520	3.3	SE
20230420_1530	2.8	SE
20230420_1540	2.8	SE
20230420_1550	3.1	SE
20230420_1600	3.3	SE
20230420_1610	2.8	SE
20230420_1620	3.1	ESE
20230420_1630	3.3	ESE
20230420_1640	3.3	ESE
20230420_1650	2.5	SE
20230420_1700	1.9	ESE
20230420_1710	2.5	ESE
20230420_1720	2.8	ESE
20230420_1730	2.2	ESE
20230420_1740	2.5	SE
20230420_1750	2.8	SE
20230420_1800	3.1	ESE
20230420_1810	3.1	ESE
20230420_1820	2.8	ESE
20230420_1830	3.3	ESE
20230420_1840	2.8	ESE
20230420_1850	3.3	ESE
20230420_1900	3.6	ESE
20230420_1910	3.3	SE
20230420_1920	3.1	SE
20230420_1930	3.9	SE
20230420_1940	4.2	ESE
20230420_1950	4.4	ESE
20230420_2000	4.2	ESE
20230420_2010	5	ESE
20230420_2020	4.7	ESE
20230420_2030	3.9	ESE
20230420_2040	3.9	ESE
20230420_2050	4.4	ESE
20230420_2100	4.7	ESE
20230420_2110	4.2	ESE
20230420_2120	3.3	ESE
20230420_2130	3.1	ESE
20230420_2140	3.3	ESE
20230420_2150	4.7	E
20230420_2200	4.4	ESE
20230420_2210	3.6	ESE
20230420_2220	3.9	ESE
20230420_2230	3.3	ESE
20230420_2240	3.9	ESE
20230420_2250	3.3	ESE
20230420_2300	3.9	E
20230420_2310	3.3	E
20230420_2320	3.3	E
20230420_2330	4.2	ESE
20230420_2340	3.3	ESE
20230420_2350	3.1	E

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230421_0000	3.3	ESE
20230421_0010	1.4	
20230421_0020	3.3	ESE
20230421_0030	2.2	ESE
20230421_0040	1.7	ESE
20230421_0050	2.5	ESE
20230421_0100	2.5	E
20230421_0110	2.2	E
20230421_0120	2.5	ESE
20230421_0130	3.1	ESE
20230421_0140	2.5	E
20230421_0150	2.5	ESE
20230421_0200	2.5	E
20230421_0210	2.5	ESE
20230421_0220	1.9	ESE
20230421_0230	1.4	SE
20230421_0240	1.7	ENE
20230421_0250	0.8	E
20230421_0300	0.8	W
20230421_0310	3.9	S
20230421_0320	3.1	NNW
20230421_0330	1.7	N
20230421_0340	0.8	SE
20230421_0350	1.7	SE
20230421_0400	1.7	SSE
20230421_0410	2.2	SE
20230421_0420	2.5	ESE
20230421_0430	2.5	E
20230421_0440	3.1	E
20230421_0450	3.1	E
20230421_0500	3.3	ESE
20230421_0510	2.8	E
20230421_0520	2.8	ESE
20230421_0530	3.3	ESE
20230421_0540	1.4	ESE
20230421_0550	1.7	ESE
20230421_0600	1.7	ESE
20230421_0610	2.5	E
20230421_0620	2.2	ESE
20230421_0630	2.2	SE
20230421_0640	2.2	ESE
20230421_0650	2.5	ESE
20230421_0700	2.5	ESE
20230421_0710	2.5	ESE
20230421_0720	2.2	SE
20230421_0730	2.2	SE
20230421_0740	2.5	ESE
20230421_0750	3.1	SE
20230421_0800	2.8	ESE
20230421_0810	2.5	ESE
20230421_0820	3.3	ESE
20230421_0830	3.3	ESE
20230421_0840	3.9	ESE
20230421_0850	3.3	ESE
20230421_0900	3.3	ESE
20230421_0910	4.2	ESE
20230421_0920	3.3	SE
20230421_0930	2.8	SE
20230421_0940	3.3	ESE
20230421_0950	3.1	ESE
20230421_1000	3.3	SE
20230421_1010	3.9	ESE
20230421_1020	3.9	ESE
20230421_1030	3.6	ESE
20230421_1040	3.3	ESE
20230421_1050	3.9	ESE
20230421_1100	4.2	ESE
20230421_1110	4.2	ESE
20230421_1120	4.2	ESE
20230421_1130	4.7	ESE
20230421_1140	4.4	E
20230421_1150	4.2	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230421_1200	4.2	ESE
20230421_1210	4.2	E
20230421_1220	3.9	ESE
20230421_1230	3.3	ESE
20230421_1240	4.2	E
20230421_1250	3.9	E
20230421_1300	4.7	E
20230421_1310	3.9	E
20230421_1320	3.9	ESE
20230421_1330	4.4	E
20230421_1340	5	E
20230421_1350	4.2	E
20230421_1400	4.7	E
20230421_1410	4.7	ESE
20230421_1420	3.3	ESE
20230421_1430	4.4	ESE
20230421_1440	3.3	SE
20230421_1450	2.5	ESE
20230421_1500	2.8	ESE
20230421_1510	2.2	ESE
20230421_1520	2.8	ESE
20230421_1530	3.1	ESE
20230421_1540	3.1	ESE
20230421_1550	2.5	ESE
20230421_1600	2.2	ESE
20230421_1610	2.5	SE
20230421_1620	2.5	E
20230421_1630	3.3	E
20230421_1640	3.9	E
20230421_1650	3.9	ESE
20230421_1700	3.3	ESE
20230421_1710	4.7	E
20230421_1720	5.3	E
20230421_1730	5.8	E
20230421_1740	5.3	ESE
20230421_1750	5.8	ESE
20230421_1800	4.7	E
20230421_1810	4.4	E
20230421_1820	3.1	E
20230421_1830	3.9	E
20230421_1840	4.2	ESE
20230421_1850	2.8	E
20230421_1900	2.5	E
20230421_1910	2.8	E
20230421_1920	2.5	ENE
20230421_1930	2.2	ENE
20230421_1940	2.5	ENE
20230421_1950	2.2	ENE
20230421_2000	2.2	NE
20230421_2010	2.2	ESE
20230421_2020	3.3	ESE
20230421_2030	5	SE
20230421_2040	3.9	ESE
20230421_2050	3.3	ESE
20230421_2100	4.7	SE
20230421_2110	4.4	SE
20230421_2120	3.3	SE
20230421_2130	4.4	ESE
20230421_2140	4.2	E
20230421_2150	3.9	E
20230421_2200	4.2	ESE
20230421_2210	6.1	ESE
20230421_2220	6.1	ESE
20230421_2230	0.3	SE
20230421_2240	0.3	SE
20230421_2250	8.1	ESE
20230421_2300	6.7	ESE
20230421_2310	5.3	E
20230421_2320	4.2	E
20230421_2330	3.9	E
20230421_2340	4.4	ESE
20230421_2350	4.2	ESE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230422_0000	3.3	ESE
20230422_0010	2.2	ESE
20230422_0020	3.3	ESE
20230422_0030	3.3	E
20230422_0040	3.9	E
20230422_0050	3.9	ESE
20230422_0100	4.2	ESE
20230422_0110	3.9	E
20230422_0120	3.9	E
20230422_0130	4.4	E
20230422_0140	4.2	E
20230422_0150	3.3	E
20230422_0200	4.2	E
20230422_0210	4.2	E
20230422_0220	4.2	E
20230422_0230	3.6	E
20230422_0240	3.9	E
20230422_0250	3.9	E
20230422_0300	3.6	E
20230422_0310	3.6	E
20230422_0320	4.2	E
20230422_0330	3.9	E
20230422_0340	4.7	ESE
20230422_0350	3.6	ESE
20230422_0400	4.4	E
20230422_0410	3.9	E
20230422_0420	3.3	E
20230422_0430	3.9	E
20230422_0440	3.9	E
20230422_0450	3.6	E
20230422_0500	2.8	ESE
20230422_0510	3.3	E
20230422_0520	3.3	E
20230422_0530	3.6	E
20230422_0540	4.2	E
20230422_0550	3.9	E
20230422_0600	3.9	E
20230422_0610	3.3	E
20230422_0620	4.2	E
20230422_0630	3.9	E
20230422_0640	3.1	E
20230422_0650	3.1	E
20230422_0700	3.9	E
20230422_0710	3.3	E
20230422_0720	4.2	E
20230422_0730	3.9	E
20230422_0740	3.9	E
20230422_0750	3.9	E
20230422_0800	3.3	E
20230422_0810	3.3	E
20230422_0820	3.1	ESE
20230422_0830	3.1	ESE
20230422_0840	2.5	E
20230422_0850	3.3	E
20230422_0900	3.3	E
20230422_0910	4.2	E
20230422_0920	4.4	ESE
20230422_0930	4.7	ESE
20230422_0940	4.4	ESE
20230422_0950	4.2	ESE
20230422_1000	4.2	ESE
20230422_1010	4.2	ESE
20230422_1020	5.3	ESE
20230422_1030	4.7	ESE
20230422_1040	5.3	ESE
20230422_1050	4.2	ESE
20230422_1100	4.4	ESE
20230422_1110	4.4	ESE
20230422_1120	4.4	ESE
20230422_1130	3.9	SE
20230422_1140	5.3	SE
20230422_1150	3.3	SW

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230422_1200	5	SE
20230422_1210	4.7	SE
20230422_1220	4.7	SE
20230422_1230	5	SE
20230422_1240	5.3	SE
20230422_1250	5	SE
20230422_1300	4.7	SE
20230422_1310	5.3	SE
20230422_1320	5.3	SE
20230422_1330	5.6	SE
20230422_1340	5.3	SE
20230422_1350	5	SE
20230422_1400	5.8	SE
20230422_1410	4.7	SE
20230422_1420	4.2	SE
20230422_1430	4.2	ESE
20230422_1440	3.9	SE
20230422_1450	4.2	SE
20230422_1500	5.3	SE
20230422_1510	5	SE
20230422_1520	4.4	SE
20230422_1530	5.3	SE
20230422_1540	5	SE
20230422_1550	4.4	ESE
20230422_1600	5	ESE
20230422_1610	5	ESE
20230422_1620	4.7	ESE
20230422_1630	5.3	ESE
20230422_1640	4.2	ESE
20230422_1650	3.9	ESE
20230422_1700	3.6	ESE
20230422_1710	3.3	ESE
20230422_1720	4.2	ESE
20230422_1730	4.7	SE
20230422_1740	5	ESE
20230422_1750	4.2	ESE
20230422_1800	4.2	ESE
20230422_1810	3.3	ESE
20230422_1820	4.2	ESE
20230422_1830	3.6	ESE
20230422_1840	3.3	ESE
20230422_1850	4.7	ESE
20230422_1900	4.4	ESE
20230422_1910	4.2	ESE
20230422_1920	3.3	ESE
20230422_1930	4.2	ESE
20230422_1940	5.3	ESE
20230422_1950	5.3	SE
20230422_2000	5.3	ESE
20230422_2010	4.4	ESE
20230422_2020	4.4	ESE
20230422_2030	5	ESE
20230422_2040	4.7	ESE
20230422_2050	3.9	ESE
20230422_2100	4.7	ESE
20230422_2110	4.7	ESE
20230422_2120	4.7	ESE
20230422_2130	4.7	ESE
20230422_2140	4.7	ESE
20230422_2150	4.7	ESE
20230422_2200	3.6	ESE
20230422_2210	3.9	ESE
20230422_2220	4.2	ESE
20230422_2230	5	ESE
20230422_2240	4.7	ESE
20230422_2250	5.3	ESE
20230422_2300	5.6	ESE
20230422_2310	5.8	ESE
20230422_2320	5	ESE
20230422_2330	6.4	ESE
20230422_2340	5	ESE
20230422_2350	5.3	ESE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230423_0000	5	ESE
20230423_0010	4.7	ESE
20230423_0020	4.7	ESE
20230423_0030	5	ESE
20230423_0040	6.1	ESE
20230423_0050	5	ESE
20230423_0100	4.7	ESE
20230423_0110	4.4	ESE
20230423_0120	3.9	ESE
20230423_0130	3.9	ESE
20230423_0140	3.1	ESE
20230423_0150	3.9	E
20230423_0200	4.2	ESE
20230423_0210	4.2	E
20230423_0220	3.9	E
20230423_0230	4.2	E
20230423_0240	3.9	E
20230423_0250	3.3	E
20230423_0300	3.9	ESE
20230423_0310	3.9	ESE
20230423_0320	3.3	ESE
20230423_0330	3.3	ESE
20230423_0340	3.9	ESE
20230423_0350	3.1	ESE
20230423_0400	3.3	ESE
20230423_0410	4.2	ESE
20230423_0420	4.2	ESE
20230423_0430	4.7	ESE
20230423_0440	4.4	ESE
20230423_0450	4.4	ESE
20230423_0500	4.4	ESE
20230423_0510	3.6	ESE
20230423_0520	4.7	ESE
20230423_0530	3.9	ESE
20230423_0540	3.9	ESE
20230423_0550	4.4	ESE
20230423_0600	4.2	ESE
20230423_0610	3.6	ESE
20230423_0620	4.2	ESE
20230423_0630	4.4	SE
20230423_0640	4.7	SE
20230423_0650	4.2	SE
20230423_0700	3.3	SE
20230423_0710	4.7	SE
20230423_0720	4.7	SE
20230423_0730	3.3	ESE
20230423_0740	4.7	SE
20230423_0750	4.2	ESE
20230423_0800	3.3	SE
20230423_0810	3.1	SSE
20230423_0820	3.1	ESE
20230423_0830	4.2	ESE
20230423_0840	4.2	ESE
20230423_0850	4.7	ESE
20230423_0900	5	ESE
20230423_0910	4.4	ESE
20230423_0920	5.8	ESE
20230423_0930	5.8	ESE
20230423_0940	4.7	ESE
20230423_0950	5	ESE
20230423_1000	6.1	ESE
20230423_1010	5.3	ESE
20230423_1020	4.7	ESE
20230423_1030	5	ESE
20230423_1040	5	ESE
20230423_1050	5	SE
20230423_1100	5.3	ESE
20230423_1110	5.3	ESE
20230423_1120	5.3	ESE
20230423_1130	5.3	ESE
20230423_1140	4.4	ESE
20230423_1150	5	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230423_1200	4.7	ESE
20230423_1210	4.2	E
20230423_1220	4.7	ESE
20230423_1230	4.7	ESE
20230423_1240	5	ESE
20230423_1250	4.2	ESE
20230423_1300	5	ESE
20230423_1310	4.2	E
20230423_1320	4.4	ESE
20230423_1330	3.6	ESE
20230423_1340	4.7	ESE
20230423_1350	4.2	ESE
20230423_1400	4.7	E
20230423_1410	4.7	E
20230423_1420	4.4	ESE
20230423_1430	4.7	ESE
20230423_1440	4.2	ESE
20230423_1450	4.7	ESE
20230423_1500	4.7	ESE
20230423_1510	5.3	ESE
20230423_1520	5	ESE
20230423_1530	4.2	ESE
20230423_1540	5.3	ESE
20230423_1550	4.7	ESE
20230423_1600	4.7	ESE
20230423_1610	4.2	ESE
20230423_1620	5	ESE
20230423_1630	4.7	ESE
20230423_1640	5	ESE
20230423_1650	4.7	ESE
20230423_1700	4.7	ESE
20230423_1710	5	ESE
20230423_1720	4.2	ESE
20230423_1730	4.7	ESE
20230423_1740	3.9	ESE
20230423_1750	3.3	ESE
20230423_1800	4.2	ESE
20230423_1810	4.2	ESE
20230423_1820	3.3	ESE
20230423_1830	3.3	ESE
20230423_1840	4.2	ESE
20230423_1850	4.2	ESE
20230423_1900	3.9	ESE
20230423_1910	4.2	ESE
20230423_1920	3.6	E
20230423_1930	3.1	ESE
20230423_1940	3.9	ESE
20230423_1950	4.7	ESE
20230423_2000	3.3	ESE
20230423_2010	3.3	ESE
20230423_2020	2.2	ESE
20230423_2030	2.8	ESE
20230423_2040	2.8	ESE
20230423_2050	1.4	SE
20230423_2100	1.7	SE
20230423_2110	1.7	ESE
20230423_2120	2.2	SE
20230423_2130	1.9	ESE
20230423_2140	3.9	ESE
20230423_2150	3.9	ESE
20230423_2200	3.6	ESE
20230423_2210	4.2	ESE
20230423_2220	4.7	ESE
20230423_2230	5	ESE
20230423_2240	5.6	ESE
20230423_2250	4.7	ESE
20230423_2300	4.2	ESE
20230423_2310	4.4	ESE
20230423_2320	4.7	ESE
20230423_2330	4.2	ESE
20230423_2340	3.1	ESE
20230423_2350	3.3	ESE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230424_0000	3.9	ESE
20230424_0010	3.9	SE
20230424_0020	4.4	ESE
20230424_0030	3.9	ESE
20230424_0040	4.4	ESE
20230424_0050	3.9	ESE
20230424_0100	3.6	SE
20230424_0110	2.8	SE
20230424_0120	2.8	ESE
20230424_0130	2.8	ESE
20230424_0140	3.3	ESE
20230424_0150	2.8	ESE
20230424_0200	3.3	ESE
20230424_0210	2.8	ESE
20230424_0220	2.2	ESE
20230424_0230	2.8	ESE
20230424_0240	2.2	ESE
20230424_0250	2.8	ESE
20230424_0300	3.3	ESE
20230424_0310	3.1	E
20230424_0320	2.8	E
20230424_0330	2.8	ESE
20230424_0340	2.5	ESE
20230424_0350	1.7	E
20230424_0400	2.8	ESE
20230424_0410	3.3	ESE
20230424_0420	3.3	E
20230424_0430	3.9	ESE
20230424_0440	3.9	ESE
20230424_0450	2.8	ESE
20230424_0500	2.8	ESE
20230424_0510	2.5	ESE
20230424_0520	2.2	ESE
20230424_0530	3.1	ESE
20230424_0540	2.5	ESE
20230424_0550	2.5	ESE
20230424_0600	2.2	ESE
20230424_0610	2.2	SE
20230424_0620	2.5	SE
20230424_0630	1.7	SE
20230424_0640	2.2	SE
20230424_0650	1.7	ESE
20230424_0700	1.7	ESE
20230424_0710	2.2	SE
20230424_0720	2.5	SE
20230424_0730	3.3	SE
20230424_0740	2.8	SE
20230424_0750	2.2	SE
20230424_0800	2.8	ESE
20230424_0810	3.3	ESE
20230424_0820	2.5	ESE
20230424_0830	2.5	ESE
20230424_0840	2.2	ESE
20230424_0850	2.5	SE
20230424_0900	2.8	ESE
20230424_0910	3.3	ESE
20230424_0920	3.1	ESE
20230424_0930	3.9	ESE
20230424_0940	3.9	ESE
20230424_0950	3.3	ESE
20230424_1000	4.2	ESE
20230424_1010	4.4	ESE
20230424_1020	4.2	ESE
20230424_1030	3.3	ESE
20230424_1040	3.3	ESE
20230424_1050	2.8	E
20230424_1100	3.1	E
20230424_1110	2.8	E
20230424_1120	3.3	ENE
20230424_1130	2.2	ENE
20230424_1140	2.5	E
20230424_1150	2.8	E

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230424_1200	2.5	E
20230424_1210	2.5	E
20230424_1220	2.5	E
20230424_1230	2.5	E
20230424_1240	2.5	E
20230424_1250	1.9	E
20230424_1300	2.2	E
20230424_1310	2.8	E
20230424_1320	2.8	E
20230424_1330	2.8	E
20230424_1340	3.3	E
20230424_1350	2.5	E
20230424_1400	2.5	E
20230424_1410	2.5	E
20230424_1420	2.5	E
20230424_1430	1.7	E
20230424_1440	2.2	E
20230424_1450	1.7	ENE
20230424_1500	2.2	E
20230424_1510	1.7	E
20230424_1520	1.7	E
20230424_1530	1.4	E
20230424_1540	1.9	ESE
20230424_1550	2.2	ESE
20230424_1600	1.4	ESE
20230424_1610	1.7	ESE
20230424_1620	1.1	ESE
20230424_1630	1.4	ESE
20230424_1640	1.1	ESE
20230424_1650	0.8	ESE
20230424_1700	0.8	ESE
20230424_1710	0.6	SE
20230424_1720	0.8	SE
20230424_1730	0.8	SE
20230424_1740	0.8	ESE
20230424_1750	0.8	E
20230424_1800	1.7	E
20230424_1810	1.9	ESE
20230424_1820	2.5	ESE
20230424_1830	3.1	ESE
20230424_1840	3.3	ESE
20230424_1850	3.3	ESE
20230424_1900	3.9	ESE
20230424_1910	4.2	ESE
20230424_1920	3.3	ESE
20230424_1930	4.4	ESE
20230424_1940	3.6	E
20230424_1950	2.5	ESE
20230424_2000	2.2	ESE
20230424_2010	1.1	E
20230424_2020	1.7	ESE
20230424_2030	1.4	ESE
20230424_2040	1.4	ESE
20230424_2050	1.1	ESE
20230424_2100	0.8	ESE
20230424_2110	0.3	E
20230424_2120	0.6	ESE
20230424_2130	0.8	SE
20230424_2140	0.3	SE
20230424_2150	0.8	SE
20230424_2200	0.8	SSE
20230424_2210	0.8	SSE
20230424_2220	0.8	SSE
20230424_2230	0.6	SSW
20230424_2240	0	N
20230424_2250	0.3	SSE
20230424_2300	0.3	-
20230424_2310	1.1	E
20230424_2320	0.6	S
20230424_2330	0.8	SSE
20230424_2340	0.3	SSE
20230424_2350	0.3	S

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230425_0000	0.8	SSW
20230425_0010	1.1	S
20230425_0020	0.3	S
20230425_0030	0.3	S
20230425_0040	0.3	SE
20230425_0050	1.1	SE
20230425_0100	0.8	SE
20230425_0110	0.3	SSE
20230425_0120	0.3	-
20230425_0130	0.0	ESE
20230425_0140	0.3	SE
20230425_0150	0.3	SE
20230425_0200	0.0	N
20230425_0210	0.0	W
20230425_0220	0.0	-
20230425_0230	0.0	SSW
20230425_0240	0.0	-
20230425_0250	0.0	-
20230425_0300	0.0	NNE
20230425_0310	0.3	NE
20230425_0320	1.1	NNE
20230425_0330	1.7	N
20230425_0340	1.7	NNE
20230425_0350	2.2	N
20230425_0400	1.4	NNE
20230425_0410	0.8	NNE
20230425_0420	0.3	NNW
20230425_0430	0.0	-
20230425_0440	0.0	N
20230425_0450	0.3	NNW
20230425_0500	0.3	NW
20230425_0510	0.0	NNW
20230425_0520	0.3	N
20230425_0530	1.1	N
20230425_0540	1.1	N
20230425_0550	1.7	N
20230425_0600	1.1	N
20230425_0610	1.4	NNW
20230425_0620	0.8	NNW
20230425_0630	0.8	NNW
20230425_0640	1.4	NNW
20230425_0650	0.8	NNW
20230425_0700	0.8	NNW
20230425_0710	0.3	NNW
20230425_0720	0.3	W
20230425_0730	1.1	NW
20230425_0740	0.8	NW
20230425_0750	0.3	WNW
20230425_0800	0.8	WNW
20230425_0810	1.1	NW
20230425_0820	0.8	N
20230425_0830	1.1	N
20230425_0840	2.2	NNE
20230425_0850	2.2	N
20230425_0900	1.4	N
20230425_0910	1.4	NNW
20230425_0920	1.1	N
20230425_0930	1.4	N
20230425_0940	1.7	NNW
20230425_0950	1.4	N
20230425_1000	1.4	NW
20230425_1010	1.1	NW
20230425_1020	1.1	NW
20230425_1030	1.1	NW
20230425_1040	1.1	NNW
20230425_1050	1.1	N
20230425_1100	1.4	NW
20230425_1110	1.7	NW
20230425_1120	1.7	NNW
20230425_1130	1.4	NNW
20230425_1140	1.7	NNW
20230425_1150	1.7	N

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230425_1200	2.5	N
20230425_1210	1.7	N
20230425_1220	1.7	NNE
20230425_1230	1.7	N
20230425_1240	1.1	N
20230425_1250	1.4	NNW
20230425_1300	0.8	N
20230425_1310	1.7	NNE
20230425_1320	1.4	NNE
20230425_1330	1.1	NNE
20230425_1340	1.1	N
20230425_1350	2.2	N
20230425_1400	2.8	NNE
20230425_1410	1.7	NNE
20230425_1420	1.7	N
20230425_1430	2.2	N
20230425_1440	1.7	N
20230425_1450	1.7	NNW
20230425_1500	2.2	N
20230425_1510	1.9	N
20230425_1520	1.7	N
20230425_1530	1.7	NNE
20230425_1540	1.7	N
20230425_1550	2.2	N
20230425_1600	1.7	N
20230425_1610	2.8	N
20230425_1620	2.2	N
20230425_1630	2.5	NNE
20230425_1640	2.5	N
20230425_1650	2.5	N
20230425_1700	2.2	N
20230425_1710	1.7	N
20230425_1720	1.7	NNW
20230425_1730	1.7	N
20230425_1740	2.2	N
20230425_1750	2.2	N
20230425_1800	1.9	N
20230425_1810	2.5	N
20230425_1820	1.7	N
20230425_1830	1.4	N
20230425_1840	1.4	N
20230425_1850	1.7	N
20230425_1900	2.8	N
20230425_1910	2.5	NNE
20230425_1920	1.4	NNE
20230425_1930	1.9	N
20230425_1940	1.7	N
20230425_1950	2.2	N
20230425_2000	1.9	N
20230425_2010	1.7	N
20230425_2020	1.9	N
20230425_2030	1.7	N
20230425_2040	1.4	N
20230425_2050	0.8	N
20230425_2100	1.4	NNW
20230425_2110	1.7	N
20230425_2120	1.4	N
20230425_2130	1.4	N
20230425_2140	1.7	N
20230425_2150	1.4	NNW
20230425_2200	1.7	N
20230425_2210	1.4	N
20230425_2220	1.1	N
20230425_2230	0.8	NNW
20230425_2240	1.4	NNW
20230425_2250	1.1	NNW
20230425_2300	1.7	NW
20230425_2310	1.7	NW
20230425_2320	1.4	N
20230425_2330	1.7	N
20230425_2340	2.5	N
20230425_2350	2.8	N

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230426_0000	2.2	N
20230426_0010	1.7	N
20230426_0020	1.4	NNW
20230426_0030	1.4	NNW
20230426_0040	1.7	N
20230426_0050	1.9	N
20230426_0100	2.5	N
20230426_0110	3.1	N
20230426_0120	2.8	N
20230426_0130	2.5	N
20230426_0140	2.5	N
20230426_0150	2.8	N
20230426_0200	2.5	NNE
20230426_0210	2.8	NNE
20230426_0220	1.7	NNE
20230426_0230	1.7	N
20230426_0240	2.5	N
20230426_0250	2.5	N
20230426_0300	2.2	N
20230426_0310	2.5	N
20230426_0320	2.2	N
20230426_0330	2.8	N
20230426_0340	3.1	N
20230426_0350	2.8	N
20230426_0400	3.9	N
20230426_0410	3.3	N
20230426_0420	3.9	N
20230426_0430	3.3	N
20230426_0440	3.6	N
20230426_0450	3.3	N
20230426_0500	3.9	N
20230426_0510	3.9	N
20230426_0520	3.9	N
20230426_0530	3.3	N
20230426_0540	4.2	N
20230426_0550	3.1	N
20230426_0600	3.3	N
20230426_0610	3.3	N
20230426_0620	3.3	N
20230426_0630	4.2	N
20230426_0640	3.6	N
20230426_0650	3.3	N
20230426_0700	3.9	N
20230426_0710	4.7	N
20230426_0720	4.4	N
20230426_0730	4.7	NNE
20230426_0740	4.7	N
20230426_0750	4.7	NNE
20230426_0800	5	NNE
20230426_0810	5.3	N
20230426_0820	5	N
20230426_0830	5.8	N
20230426_0840	5.8	NNE
20230426_0850	4.7	NNE
20230426_0900	5.3	NNE
20230426_0910	4.7	NNE
20230426_0920	5.3	NNE
20230426_0930	5.3	NNE
20230426_0940	5.3	N
20230426_0950	5	N
20230426_1000	4.2	NNE
20230426_1010	4.2	N
20230426_1020	4.2	N
20230426_1030	3.9	N
20230426_1040	3.3	N
20230426_1050	3.3	N
20230426_1100	3.1	N
20230426_1110	3.1	N
20230426_1120	3.3	N
20230426_1130	3.1	N
20230426_1140	2.8	N
20230426_1150	2.5	NNW

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230426_1200	3.6	NNE
20230426_1210	1.9	-
20230426_1220	2.2	N
20230426_1230	1.7	NW
20230426_1240	2.2	N
20230426_1250	2.8	N
20230426_1300	2.2	WNW
20230426_1310	2.5	NW
20230426_1320	2.5	NNW
20230426_1330	1.7	-
20230426_1340	1.9	NNE
20230426_1350	2.8	NNW
20230426_1400	2.2	N
20230426_1410	1.7	N
20230426_1420	2.2	N
20230426_1430	2.5	NE
20230426_1440	1.9	ENE
20230426_1450	2.2	E
20230426_1500	2.2	ESE
20230426_1510	1.7	E
20230426_1520	2.5	ESE
20230426_1530	2.2	E
20230426_1540	2.2	E
20230426_1550	1.7	E
20230426_1600	1.9	E
20230426_1610	2.5	E
20230426_1620	2.2	ESE
20230426_1630	2.5	ESE
20230426_1640	2.2	E
20230426_1650	2.2	E
20230426_1700	2.5	E
20230426_1710	2.8	E
20230426_1720	2.8	E
20230426_1730	2.5	E
20230426_1740	2.5	ESE
20230426_1750	1.7	E
20230426_1800	2.2	ESE
20230426_1810	3.1	ESE
20230426_1820	3.3	ESE
20230426_1830	2.8	ESE
20230426_1840	3.1	ESE
20230426_1850	2.5	E
20230426_1900	2.5	E
20230426_1910	2.2	E
20230426_1920	2.8	E
20230426_1930	2.2	E
20230426_1940	1.7	E
20230426_1950	1.1	E
20230426_2000	1.1	ESE
20230426_2010	0.8	ESE
20230426_2020	0.8	ESE
20230426_2030	1.4	SE
20230426_2040	1.7	ESE
20230426_2050	1.7	ESE
20230426_2100	1.4	ESE
20230426_2110	1.4	ESE
20230426_2120	1.4	ESE
20230426_2130	1.1	ESE
20230426_2140	1.4	ESE
20230426_2150	1.7	ESE
20230426_2200	1.1	SE
20230426_2210	1.1	ESE
20230426_2220	1.7	ESE
20230426_2230	2.2	SE
20230426_2240	1.4	SE
20230426_2250	0.8	SE
20230426_2300	2.5	ESE
20230426_2310	2.2	SE
20230426_2320	2.2	SE
20230426_2330	1.9	SE
20230426_2340	1.9	ESE
20230426_2350	2.2	SE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230427_0000	2.2	ESE
20230427_0010	2.5	SE
20230427_0020	2.5	SE
20230427_0030	2.5	SE
20230427_0040	2.8	SE
20230427_0050	1.7	SE
20230427_0100	1.1	ESE
20230427_0110	1.1	ESE
20230427_0120	3.3	SE
20230427_0130	3.1	ESE
20230427_0140	3.1	SE
20230427_0150	2.8	ESE
20230427_0200	2.5	ESE
20230427_0210	2.8	ESE
20230427_0220	2.2	ESE
20230427_0230	1.4	ESE
20230427_0240	2.8	ESE
20230427_0250	2.5	ESE
20230427_0300	1.7	ESE
20230427_0310	1.9	ESE
20230427_0320	1.7	SE
20230427_0330	1.1	SE
20230427_0340	1.7	ESE
20230427_0350	1.9	ESE
20230427_0400	1.9	ESE
20230427_0410	1.9	ESE
20230427_0420	1.4	ESE
20230427_0430	1.7	SE
20230427_0440	1.4	ESE
20230427_0450	2.5	ESE
20230427_0500	2.5	ESE
20230427_0510	2.5	ESE
20230427_0520	1.7	ESE
20230427_0530	1.7	ESE
20230427_0540	1.7	ESE
20230427_0550	1.7	ESE
20230427_0600	1.7	SE
20230427_0610	2.2	SE
20230427_0620	2.2	ESE
20230427_0630	3.3	ESE
20230427_0640	2.5	ESE
20230427_0650	2.8	ESE
20230427_0700	3.3	ESE
20230427_0710	2.2	ESE
20230427_0720	1.7	E
20230427_0730	2.5	E
20230427_0740	2.5	E
20230427_0750	2.2	E
20230427_0800	2.5	E
20230427_0810	1.9	E
20230427_0820	3.1	E
20230427_0830	3.3	ESE
20230427_0840	3.3	ESE
20230427_0850	2.8	ESE
20230427_0900	3.6	ESE
20230427_0910	2.8	ESE
20230427_0920	3.3	ESE
20230427_0930	3.3	E
20230427_0940	2.5	ESE
20230427_0950	3.1	ESE
20230427_1000	3.3	E
20230427_1010	3.1	E
20230427_1020	2.8	E
20230427_1030	2.5	E
20230427_1040	2.8	ESE
20230427_1050	3.1	E
20230427_1100	2.8	E
20230427_1110	2.8	E
20230427_1120	2.5	E
20230427_1130	3.3	ESE
20230427_1140	3.3	ESE
20230427_1150	2.8	ESE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230427_1200	3.9	ESE
20230427_1210	3.3	ESE
20230427_1220	4.2	ESE
20230427_1230	3.9	ESE
20230427_1240	5	E
20230427_1250	5	ESE
20230427_1300	5	E
20230427_1310	4.2	E
20230427_1320	4.7	E
20230427_1330	5.3	E
20230427_1340	4.2	E
20230427_1350	4.7	E
20230427_1400	4.4	E
20230427_1410	4.2	E
20230427_1420	4.2	ESE
20230427_1430	4.2	ESE
20230427_1440	3.3	ESE
20230427_1450	3.9	ESE
20230427_1500	4.2	ESE
20230427_1510	3.9	ESE
20230427_1520	4.4	ESE
20230427_1530	4.7	ESE
20230427_1540	4.7	ESE
20230427_1550	3.9	ESE
20230427_1600	3.3	ESE
20230427_1610	3.9	SE
20230427_1620	3.9	ESE
20230427_1630	5	E
20230427_1640	3.3	ESE
20230427_1650	4.2	E
20230427_1700	3.9	E
20230427_1710	4.2	E
20230427_1720	3.9	ESE
20230427_1730	3.3	E
20230427_1740	3.3	ESE
20230427_1750	3.1	E
20230427_1800	3.3	ESE
20230427_1810	3.1	E
20230427_1820	2.8	E
20230427_1830	2.2	ESE
20230427_1840	1.9	ESE
20230427_1850	2.5	ESE
20230427_1900	3.1	ESE
20230427_1910	2.5	ESE
20230427_1920	1.9	ESE
20230427_1930	2.8	ESE
20230427_1940	1.9	SE
20230427_1950	2.2	ESE
20230427_2000	3.1	ESE
20230427_2010	2.5	ESE
20230427_2020	1.7	SE
20230427_2030	1.7	ESE
20230427_2040	2.2	SE
20230427_2050	2.2	SE
20230427_2100	1.7	SE
20230427_2110	2.5	SE
20230427_2120	1.7	SE
20230427_2130	2.2	ESE
20230427_2140	2.5	ESE
20230427_2150	4.4	ESE
20230427_2200	4.2	ESE
20230427_2210	3.3	E
20230427_2220	3.3	ESE
20230427_2230	3.1	E
20230427_2240	3.9	E
20230427_2250	3.1	E
20230427_2300	2.2	ESE
20230427_2310	2.5	ESE
20230427_2320	3.3	ESE
20230427_2330	3.3	ESE
20230427_2340	2.8	E
20230427_2350	2.5	E

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230428_0000	2.8	ESE
20230428_0010	3.3	ESE
20230428_0020	3.3	ESE
20230428_0030	2.8	E
20230428_0040	3.1	E
20230428_0050	3.3	E
20230428_0100	2.8	E
20230428_0110	2.8	E
20230428_0120	2.8	E
20230428_0130	3.1	ESE
20230428_0140	2.5	E
20230428_0150	2.2	ESE
20230428_0200	2.2	E
20230428_0210	1.7	ESE
20230428_0220	1.7	ENE
20230428_0230	1.7	ENE
20230428_0240	1.7	E
20230428_0250	1.1	ENE
20230428_0300	0.8	S
20230428_0310	0.8	SSE
20230428_0320	1.4	ESE
20230428_0330	1.1	SE
20230428_0340	1.4	ESE
20230428_0350	1.9	E
20230428_0400	0.8	E
20230428_0410	1.1	E
20230428_0420	0.8	SE
20230428_0430	1.1	ESE
20230428_0440	1.7	E
20230428_0450	1.7	E
20230428_0500	1.1	ENE
20230428_0510	1.1	ESE
20230428_0520	0.6	SE
20230428_0530	1.1	SE
20230428_0540	1.1	ESE
20230428_0550	1.4	SE
20230428_0600	1.7	SE
20230428_0610	2.2	SE
20230428_0620	1.4	ESE
20230428_0630	1.7	E
20230428_0640	1.4	ESE
20230428_0650	1.7	E
20230428_0700	1.1	E
20230428_0710	0.8	ESE
20230428_0720	1.1	ESE
20230428_0730	1.7	SE
20230428_0740	1.7	SE
20230428_0750	2.2	SE
20230428_0800	1.9	SE
20230428_0810	2.2	SE
20230428_0820	2.5	ESE
20230428_0830	3.3	ESE
20230428_0840	4.2	ESE
20230428_0850	3.3	ESE
20230428_0900	4.4	ESE
20230428_0910	4.4	ESE
20230428_0920	4.2	ESE
20230428_0930	4.7	ESE
20230428_0940	3.6	ESE
20230428_0950	4.2	ESE
20230428_1000	3.3	ESE
20230428_1010	4.4	E
20230428_1020	3.9	E
20230428_1030	3.9	E
20230428_1040	4.2	E
20230428_1050	4.4	ESE
20230428_1100	4.4	E
20230428_1110	3.9	E
20230428_1120	3.3	E
20230428_1130	2.8	ESE
20230428_1140	3.3	ENE
20230428_1150	3.6	ENE

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230428_1200	3.3	E
20230428_1210	2.8	E
20230428_1220	3.3	E
20230428_1230	2.5	E
20230428_1240	3.3	E
20230428_1250	2.8	ESE
20230428_1300	3.3	E
20230428_1310	3.3	ESE
20230428_1320	3.3	E
20230428_1330	3.3	E
20230428_1340	3.9	E
20230428_1350	3.3	E
20230428_1400	4.4	ENE
20230428_1410	3.3	E
20230428_1420	3.9	E
20230428_1430	2.5	E
20230428_1440	3.6	E
20230428_1450	2.5	E
20230428_1500	3.9	E
20230428_1510	3.3	E
20230428_1520	4.2	E
20230428_1530	3.9	E
20230428_1540	3.3	E
20230428_1550	3.1	E
20230428_1600	3.3	E
20230428_1610	3.9	E
20230428_1620	3.3	E
20230428_1630	3.3	E
20230428_1640	3.9	E
20230428_1650	4.2	ESE
20230428_1700	3.9	E
20230428_1710	3.3	ESE
20230428_1720	3.3	E
20230428_1730	3.6	ESE
20230428_1740	3.3	ESE
20230428_1750	3.9	ESE
20230428_1800	4.2	ESE
20230428_1810	3.9	ESE
20230428_1820	3.6	ESE
20230428_1830	3.3	ESE
20230428_1840	3.6	ESE
20230428_1850	2.8	ESE
20230428_1900	3.1	ESE
20230428_1910	2.8	ESE
20230428_1920	2.2	ESE
20230428_1930	2.8	SE
20230428_1940	2.5	SE
20230428_1950	3.1	ESE
20230428_2000	2.8	ESE
20230428_2010	2.2	SE
20230428_2020	2.5	SE
20230428_2030	2.5	SE
20230428_2040	2.8	SE
20230428_2050	2.2	SE
20230428_2100	1.7	SE
20230428_2110	1.9	SE
20230428_2120	2.2	SE
20230428_2130	2.2	ESE
20230428_2140	2.2	SE
20230428_2150	2.5	SE
20230428_2200	2.2	SE
20230428_2210	2.8	SE
20230428_2220	2.5	SE
20230428_2230	1.7	SE
20230428_2240	1.4	ESE
20230428_2250	1.7	ESE
20230428_2300	2.2	ESE
20230428_2310	2.2	ESE
20230428_2320	1.7	ESE
20230428_2330	2.2	ESE
20230428_2340	2.5	E
20230428_2350	1.7	ESE

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Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230429_0000	1.1	ESE
20230429_0010	1.7	ESE
20230429_0020	1.9	ESE
20230429_0030	1.1	SSE
20230429_0040	1.7	SE
20230429_0050	1.7	SE
20230429_0100	1.7	SE
20230429_0110	1.7	SE
20230429_0120	1.7	SE
20230429_0130	1.9	ESE
20230429_0140	1.4	SE
20230429_0150	1.1	ESE
20230429_0200	0.8	ESE
20230429_0210	0.8	SE
20230429_0220	0.8	SE
20230429_0230	1.1	SE
20230429_0240	0.3	E
20230429_0250	0.3	SE
20230429_0300	0.6	SE
20230429_0310	0.8	ESE
20230429_0320	0.8	E
20230429_0330	0.8	ESE
20230429_0340	1.1	ESE
20230429_0350	1.4	ESE
20230429_0400	1.1	ESE
20230429_0410	0.8	SE
20230429_0420	1.1	SSE
20230429_0430	0.8	SE
20230429_0440	0.3	ENE
20230429_0450	0.8	E
20230429_0500	0.8	SE
20230429_0510	0.8	ESE
20230429_0520	1.4	ESE
20230429_0530	1.4	ESE
20230429_0540	1.1	ESE
20230429_0550	1.1	ESE
20230429_0600	1.4	E
20230429_0610	1.4	E
20230429_0620	1.1	E
20230429_0630	1.4	ESE
20230429_0640	1.4	E
20230429_0650	1.4	ESE
20230429_0700	1.1	ESE
20230429_0710	1.7	E
20230429_0720	1.4	E
20230429_0730	1.4	E
20230429_0740	1.4	E
20230429_0750	1.7	E
20230429_0800	1.1	E
20230429_0810	1.4	ESE
20230429_0820	1.1	E
20230429_0830	1.4	E
20230429_0840	1.4	E
20230429_0850	1.4	E
20230429_0900	0.8	E
20230429_0910	1.4	NE
20230429_0920	1.1	ENE
20230429_0930	0.3	ESE
20230429_0940	0.8	E
20230429_0950	1.1	SE
20230429_1000	1.4	NE
20230429_1010	1.1	NE
20230429_1020	0.8	ESE
20230429_1030	1.1	E
20230429_1040	0.8	NE
20230429_1050	0.8	-
20230429_1100	0.8	E
20230429_1110	0.8	SW
20230429_1120	1.1	SSW
20230429_1130	1.1	S
20230429_1140	0.3	-
20230429_1150	0.6	-

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230429_1200	1.1	SSW
20230429_1210	0.8	W
20230429_1220	0.8	-
20230429_1230	1.1	NW
20230429_1240	0.3	ENE
20230429_1250	1.1	WNW
20230429_1300	2.5	WSW
20230429_1310	2.8	NW
20230429_1320	2.2	NW
20230429_1330	1.1	N
20230429_1340	0.6	N
20230429_1350	1.1	NE
20230429_1400	0.6	NE
20230429_1410	1.1	NNE
20230429_1420	0.6	NE
20230429_1430	0.8	NE
20230429_1440	1.4	NNE
20230429_1450	1.7	NNE
20230429_1500	2.5	N
20230429_1510	2.2	NNE
20230429_1520	1.7	N
20230429_1530	1.7	N
20230429_1540	2.2	N
20230429_1550	1.7	N
20230429_1600	1.1	NNW
20230429_1610	1.1	N
20230429_1620	1.1	NNE
20230429_1630	1.7	NNE
20230429_1640	3.6	N
20230429_1650	2.5	N
20230429_1700	1.7	NNW
20230429_1710	1.7	NNW
20230429_1720	1.1	NNW
20230429_1730	1.1	NNW
20230429_1740	0.8	NNW
20230429_1750	0.3	NNW
20230429_1800	0.8	NNW
20230429_1810	0.6	NW
20230429_1820	0.8	NNW
20230429_1830	1.1	N
20230429_1840	1.4	N
20230429_1850	1.4	N
20230429_1900	2.2	N
20230429_1910	2.5	N
20230429_1920	1.7	NNW
20230429_1930	1.9	NNW
20230429_1940	1.4	NNW
20230429_1950	0.8	NNW
20230429_2000	0.3	NNW
20230429_2010	0.8	NNW
20230429_2020	0.3	NW
20230429_2030	0.8	NNW
20230429_2040	0.3	NNW
20230429_2050	0.3	NNW
20230429_2100	0.3	NNW
20230429_2110	0.8	N
20230429_2120	0.3	NNW
20230429_2130	1.4	NNE
20230429_2140	1.1	N
20230429_2150	1.4	ENE
20230429_2200	0.8	NNW
20230429_2210	0.3	W
20230429_2220	0.8	NE
20230429_2230	1.1	WNW
20230429_2240	0.3	NW
20230429_2250	0.3	NE
20230429_2300	0.8	NNW
20230429_2310	1.1	N
20230429_2320	2.2	N
20230429_2330	1.7	NNW
20230429_2340	1.1	N
20230429_2350	1.1	NE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230430_0000	0.3	E
20230430_0010	1.4	WNW
20230430_0020	2.8	NNE
20230430_0030	3.3	N
20230430_0040	2.8	N
20230430_0050	2.8	N
20230430_0100	2.5	N
20230430_0110	2.5	N
20230430_0120	2.2	NNE
20230430_0130	2.5	NNE
20230430_0140	3.1	NNE
20230430_0150	2.2	N
20230430_0200	3.3	N
20230430_0210	3.9	NNE
20230430_0220	3.3	N
20230430_0230	2.8	NNE
20230430_0240	2.2	N
20230430_0250	1.7	N
20230430_0300	1.7	NNE
20230430_0310	0.8	-
20230430_0320	1.4	N
20230430_0330	2.8	N
20230430_0340	2.2	N
20230430_0350	2.2	NNW
20230430_0400	2.2	NNE
20230430_0410	1.4	NE
20230430_0420	0.8	-
20230430_0430	1.4	NE
20230430_0440	2.2	N
20230430_0450	2.8	N
20230430_0500	3.1	NNE
20230430_0510	2.2	N
20230430_0520	2.5	NNW
20230430_0530	2.8	N
20230430_0540	1.7	N
20230430_0550	1.4	SE
20230430_0600	0.3	-
20230430_0610	1.1	ESE
20230430_0620	0.8	N
20230430_0630	2.8	N
20230430_0640	3.3	N
20230430_0650	3.3	N
20230430_0700	2.8	N
20230430_0710	2.5	N
20230430_0720	3.3	N
20230430_0730	3.1	N
20230430_0740	2.2	NNW
20230430_0750	2.8	NNW
20230430_0800	3.3	N
20230430_0810	3.3	N
20230430_0820	2.5	NNW
20230430_0830	2.5	N
20230430_0840	3.1	N
20230430_0850	3.1	N
20230430_0900	3.1	N
20230430_0910	3.3	N
20230430_0920	3.3	N
20230430_0930	3.3	N
20230430_0940	2.8	N
20230430_0950	3.3	N
20230430_1000	3.6	N
20230430_1010	3.3	N
20230430_1020	2.8	N
20230430_1030	3.1	N
20230430_1040	2.8	N
20230430_1050	3.9	N
20230430_1100	2.8	N
20230430_1110	3.9	N
20230430_1120	2.5	N
20230430_1130	2.5	NNW
20230430_1140	2.2	NW
20230430_1150	2.5	NNW

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (From)
20230430_1200	1.9	NNW
20230430_1210	1.9	NNW
20230430_1220	1.9	NNW
20230430_1230	1.9	N
20230430_1240	1.9	N
20230430_1250	2.2	NNW
20230430_1300	2.2	N
20230430_1310	1.9	N
20230430_1320	1.9	N
20230430_1330	2.8	NNE
20230430_1340	3.1	NNE
20230430_1350	3.3	NNE
20230430_1400	2.8	NNE
20230430_1410	2.2	ENE
20230430_1420	2.5	E
20230430_1430	3.3	E
20230430_1440	3.1	E
20230430_1450	2.8	E
20230430_1500	3.1	ESE
20230430_1510	2.5	E
20230430_1520	2.8	ESE
20230430_1530	2.8	E
20230430_1540	2.8	E
20230430_1550	2.8	E
20230430_1600	2.5	E
20230430_1610	2.8	ESE
20230430_1620	3.1	ESE
20230430_1630	2.5	E
20230430_1640	2.8	E
20230430_1650	2.8	E
20230430_1700	3.1	ESE
20230430_1710	2.5	E
20230430_1720	2.2	ESE
20230430_1730	1.7	ESE
20230430_1740	1.7	E
20230430_1750	1.7	ESE
20230430_1800	2.2	ESE
20230430_1810	2.2	ESE
20230430_1820	1.9	ESE
20230430_1830	1.7	SE
20230430_1840	1.9	ESE
20230430_1850	1.7	ESE
20230430_1900	1.7	ESE
20230430_1910	2.2	ESE
20230430_1920	1.7	ESE
20230430_1930	1.7	E
20230430_1940	1.7	ESE
20230430_1950	2.2	E
20230430_2000	2.2	ESE
20230430_2010	1.9	ESE
20230430_2020	1.7	ESE
20230430_2030	2.5	ESE
20230430_2040	2.5	ESE
20230430_2050	3.1	ESE
20230430_2100	2.8	ESE
20230430_2110	2.5	ESE
20230430_2120	3.1	ESE
20230430_2130	2.2	ESE
20230430_2140	1.9	ESE
20230430_2150	2.2	SE
20230430_2200	2.5	SE
20230430_2210	2.5	SE
20230430_2220	1.7	SE
20230430_2230	1.9	SE
20230430_2240	1.7	SE
20230430_2250	1.1	ESE
20230430_2300	1.4	ESE
20230430_2310	1.9	SE
20230430_2320	2.2	SE
20230430_2330	1.7	SE
20230430_2340	2.2	SE
20230430_2350	2.5	SE

The relevant wind data of Ta Kwu Ling weather station is extracted from the Hong Kong Observatory website (https://www.hko.gov.hk/en/wxinfo/awsgis/regional_weather_gis.html)

Appendix I Waste Flow Table

Waste Flow Table

Month	Total Quantity Generated	Total Quantities of Inert C&D Materials to be Generated from the Contract					Total Quantities of Recyclables Generation				Total Quantities of C&D Materials to be Generated from the Contract		
		Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in Other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastics	Yard Waste (to Y-Park)	Chemical Waste	General Refuse	Others, e.g. non-recyclable yard waste
	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in tonne)	(in '000L)	(in tonne)	(in tonne)
Dec-22	84.77	0	0	0	0	0	0	0	0	11.49	0	7.53	65.75
Jan-23	24.51	0	0	0	0	0	0	0	0	0	0	24.51	0
Feb-23	506.45	0	0	0	0	0	0	0	0	3.16	0	5.85	497.44
Mar-23	9,581	0	0	9,187	0	0	0	0	0	3.69	0	6.96	383.5
Apr-23	18,532	0	0	18,466	0	0	0	0	0	1.97	0	5.81	58.29
Total	28,729	0	0	27,653	0	0	0	0	0	20.31	0	50.66	1004.98

Note:

1. The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
2. Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Appendix J Joint Environmental Site Inspection Records

Inspection Date:	3 April 2023	Inspected By:	Andy Ng, Jason Man
Time:	14:00	Weather Condition:	Overcast
Participants:	Sylvia Ho (ER), Kristy Wong (Contractor), Andy Ng (ET), Jason Man (ET)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	☐	☒	☐	EP No.: EP-292/2007 FEP No.: FEP-01/292/2007
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	CNP No: GW-RN0131-23
A3	Is wastewater discharge licence available for inspection?	☐	☒	☐	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	☐	☒	☐	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	☐	☒	☐	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	☐	☒	☐	
B2	Are completed earthworks sealed as soon as practicable?	☒	☐	☐	N/A
B3	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B4	Any remedial action undertaken?	☒	☐	☐	N/A
B5	Observed dust source(s)				
		☐ Wind erosion			
		☐ Vehicle/ Equipment Movements			
		☐ Loading/ unloading of materials			
		☒ Others: Not Observed			
B6	Are unpaved areas/ designated roads watered regularly to avoid dust generation?	☐	☒	☐	
B7	Are dusty materials covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading?	☐	☒	☐	
B8	After removal of stockpile, are the remained dusty materials wetted with water and cleared from surface of roads?	☒	☐	☐	N/A
B9	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?	☐	☒	☐	

B10	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B11	Are wheel washing facilities with high pressure water jet provided at all site exits if practicable?	☐	☒	☐	
B12	Are all vehicles and plant cleaned before they leave the construction site?	☐	☒	☐	
B13	Are hoarding ≥ 2.4m tall provided beside roads or area with public access?	☒	☐	☐	N/A
B14	Is the portion of any road leading only to construction site (within 30m of a vehicle entrance or exit) kept clear of dusty materials?	☐	☒	☐	
B15	Are surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations takes place sprayed with water or a dust suppression chemical continuously?	☐	☒	☐	
B16	Is the area involved demolition activities sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet?	☒	☐	☐	N/A
B17	Is scaffolding erected around the perimeter of a building under construction?	☒	☐	☐	N/A
B18	Are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the building, or a canopy provided from the first floor level up to the highest level of the scaffolding?	☒	☐	☐	N/A
B19	Is the skip for materials transport enclosed by impervious sheeting?	☒	☐	☐	N/A
B20	Is every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) covered entirely by impervious sheeting or placed in an area sheltered on the top and 3 sides?	☐	☒	☐	
B21	Are the areas of washing facilities and the road section between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	☐	☒	☐	
B22	Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility?	☒	☐	☐	N/A
B23	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system?	☒	☐	☐	N/A
B24	Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	
B25	Are the worksites wetted with water regularly?	☐	☒	☐	
B26	Is generation of dust avoided during loading or unloading?	☒	☐	☐	Not Observed
B27	Are all trucks loaded to a level within the side and tail boards?	☐	☒	☐	
B28	Are appropriate speed limit sign displayed?	☐	☒	☐	

B29	Are designated roads paved?	☐	☒	☐	
B30	Are site vehicle movements confined to designated roads?	☐	☒	☐	
B31	Are NRMM labels properly affixed on the PMEs?	☐	☒	☐	

C	Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	☐	☒	☐	
C2	Are vehicles and equipment switched off or throttled down while not in use?	☐	☒	☐	
C3	Is the noise directed away from nearby NSRs?	☐	☒	☐	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	☒	☐	☐	N/A
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?	☐	☒	☐	
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	☒	☐	☐	N/A
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	☒	☐	☐	N/A
C8	Are noise barriers (typically density @14kg/m^2) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	☒	☐	☐	N/A
C9	Is the sequencing operation of construction plants where practicable?	☐	☒	☐	
C10	Is the hoarding maintained properly?	☒	☐	☐	N/A
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	☒	☐	☐	N/A
C12	Are compressor operated with doors closed?	☒	☐	☐	N/A
C13	QPME used with valid noise labels?	☒	☐	☐	Not Observed
C14	Major noise source(s)				
		☐ Traffic			
		☒ Construction activities inside of site			
		☐ Construction activities outside of site			
		☐ Others: _____			

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Construction Activities					
D1	At the start of site establishment, are perimeter cut-off drains constructed to direct off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented?	☐	☒	☐	
D2	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?	☐	☒	☐	
D3	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	☐	☒	☐	
D4	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D5	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D6	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	☐	☒	☐	
D7	Is surface excavation works minimised during rainy seasons (April to September), as possible?	☒	☐	☐	To be implemented during wet season
D8	Are all exposed earth areas completed or vegetated as soon as possible after earthworks completed, or alternatively, within 14 days of the cessation of earthworks where practicable.	☒	☐	☐	N/A
D9	Are exposed slope surfaces covered by tarpaulin sheets?	☐	☐	☒	Refer to Observation 1
D10	Have the overall slope of the site should be kept a minimum?	☐	☒	☐	
D11	Are all trafficked areas and access roads protected by coarse stone ballast	☐	☒	☐	
D12	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface	☐	☒	☐	
D13	Are the silt removal facilities, channels and manholes maintained regularly?	☐	☐	☒	Refer to Reminder 2
D14	Is the deposite silt and grit removed regularly?	☐	☒	☐	
D15	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	☒	☐	☐	N/A
D16	Is rainwater pumped out from trenches discharged into storm drains via silt system?	☒	☐	☐	N/A
D17	Are open stockpiles of construction materials e.g. aggregates and sand of more than $50m^3$ on site covered with tarpaulin or similar fabric during rainstorms?	☒	☐	☐	N/A
D18	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D19	Are the discharges of surface run-off into foul sewer always prevented?	☐	☒	☐	

D20	Is a wheel washing bay provided at every site exit?	☐	☒	☐	
D21	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	☐	☒	☐	
D22	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?	☐	☒	☐	
D23	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	☒	☐	☐	Not Observed
D24	Are site drainage systems provided over the entire project site with sediment control facilities?	☐	☒	☐	
D25	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D26	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?	☐	☒	☐	
D27	Are portable chemical toilets and sewage holding tanks provided?	☐	☒	☐	
D28	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D29	Is there any sediment plume observed in nearby watercourses?	☒	☐	☐	N/A
D30	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources? And the oil interceptors are emptied and cleaned regularly? Has a bypass provided to prevent flushing during heavy rain?	☒	☐	☐	Not Observed
D31	Is chemical leakage or spillages contained and cleaned up immediately?	☒	☐	☐	N/A
D32	Service workshop and maintenance facilities located within a bunded area, and sumps and oil interceptors be provided?	☒	☐	☐	N/A

E	**Waste / Chemical Management**	**N/A or Not Observed**	**Yes**	**No**	**Remarks / Photo**
General Waste					
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?	☐	☒	☐	
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E3	Does accumulation of waste avoid?	☐	☒	☐	
E4	Is waste disposed regularly?	☐	☒	☐	
E5	Regular waste collection by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E6	Burning of refuse on construction site prohibited?	☐	☒	☐	

Construction Waste					
E7	Are the temporary stockpiles maintained regularly?	☐	☒	☐	
E8	Is the excavated fill material reused for backfilling and reinstatement?	☐	☒	☐	
E9	Are the C&D materials sorted and recycled on-site?	☐	☒	☐	
E10	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	☒	☐	☐	Not Observed
E11	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E12	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?	☐	☒	☐	
E13	Is the durable formwork or plastic facing for construction works used?	☒	☐	☐	N/A
E14	Do the wooden hoardings avoid to be used?	☒	☐	☐	N/A
E15	Is metal hoarding used to enhance the possibility of recycling?	☒	☐	☐	N/A
E16	Is the segregation and storage of C&D wastes undertaken in designated area?	☐	☒	☐	
E17	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E18	Do the excavated materials appear contaminated?	☐	☐	☒	
E19	If suspected contaminated, appropriate procedures followed?	☒	☐	☐	N/A
E20	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	☒	☐	☐	N/A
Chemical / Fuel Storage Area					
E21	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	☒	☐	☐	Not Observed
E22	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?	☒	☐	☐	Not Observed
E23	Are the storage areas labelled and separated (if needed)?	☒	☐	☐	Not Observed
E24	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?	☒	☐	☐	Not Observed
E25	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?	☒	☐	☐	Not Observed
E26	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?	☒	☐	☐	Not Observed
Chemical Waste / Waste Oil					

E27	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?	☐	☒	☐	
E28	Are chemicals and waste oil recycled or disposed properly?	☒	☐	☐	Not Observed
E29	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E30	Is a licensed waste hauler used for waste collection?	☐	☒	☐	
E31	Are the records of quantities of wastes generated, recycled and disposed properly kept?	☐	☒	☐	
E32	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	☒	☐	☐	N/A

F	LFG	N/A or Not Observed	Yes	No	Remarks / Photo
F1	Are special LFG precautions taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	Not Observed
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	☐	☒	☐	
F3	Is no smoking or burning permitted on-site?	☐	☒	☐	
F4	Are prominent 'No smoking' and ‘No Naked Flames’ signs erected on-site?	☐	☒	☐	
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	☒	☐	☐	N/A
F6	Is adequate fire fighting equipment provided on-site?	☐	☒	☐	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	☒	☐	☐	Not Observed
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	Not Observed
F9	Is ’Permit to Work' system implemented?	☐	☒	☐	
F10	Are welding, flame-cutting or other hot works conducted only under ‘Permit to Work’ system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works?	☐	☒	☐	
F11a	For piping assembly or conduit construction, are all valves and seals closed immediately after installation?	☒	☐	☐	Not Observed
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter >600mm) is required?	☒	☐	☐	Not Observed
F11c	Is forced ventilation implemented prior to operation of installed pipeline?	☒	☐	☐	Not Observed
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m?	☒	☐	☐	Not Observed

F12	Is frequency and location of LFG monitoring within excavation area determined prior to commencement of works? *LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.	☐	☒	☐	
F13	For excavation works, Is LFG monitoring conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation?	☐	☒	☐	
F14	Are LFG monitoring conducted periodically when any cracks on ground level encountered on-site? *Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.	☒	☐	☐	Not Observed
F15a	Are LFG precautionary measures involved in excavation and piping works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	☒	☐	☐	Not Observed
F15b	Are temporary offices or buildings located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm?	☒	☐	☐	Not Observed
F16	Is a Safety Officer trained in the use of gas detection equipment and LFG- related hazards present on-site throughout the groundwork phase? *The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%	☒	☐	☐	Not Observed
F17a	Periodically during groundwork construction, Is the works area monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment? *The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person.	☒	☐	☐	Not Observed
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	☐	☒	☐	
F17c	Are all measurements in excavations made with monitoring tube located not more than 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations deeper than 1m, are measurements conducted? • At ground surface before excavation commences;	☐	☒	☐	

	• Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and • Periodically throughout the working day whilst workers are in excavation.				
F19	For excavations between 300mm and 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations less than 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	☐	☒	☐	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	☐	☒	☐	
G2	Is damage to surrounding areas avoided?	☐	☒	☐	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	☐	☒	☐	
G4	Is early planting using fast growing plants at strategic locations within site implemented?	☒	☐	☐	N/A
G5	Is boundary green belt planting implemented around the site perimeter and the construction of temporary soil bunds?	☒	☐	☐	N/A
G6	Is temporary landscape treatment as green surface cover implemented?	☒	☐	☐	N/A
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	☒	☐	☐	Not Observed

H	Ecology	N/A or Not Observed	Yes	No	Remarks / Photo
H1	Is transplantation of the important plant species implemented? Is post-transplantation maintained and monitored regularly?	☒	☐	☐	Not Observed

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	☐	☐	☒	

J	General Housekeeping / Others	N/A or Not Observed	Yes	No	Remarks / Photo
J1	Are the defined boundaries of working areas identified to prevent loss of vegetation	☐	☒	☐	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	☐	☒	☐	

Follow up action for previous Site Inspection:

1. The chemical containers were removed.
2. Sand and silt were removed at the entrance of SBA.
3. The Contractor scheduled watering in the construction site.

Observation(s):

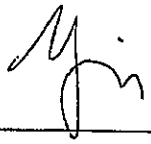
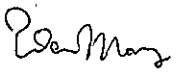
1. The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream.

Reminder(s):

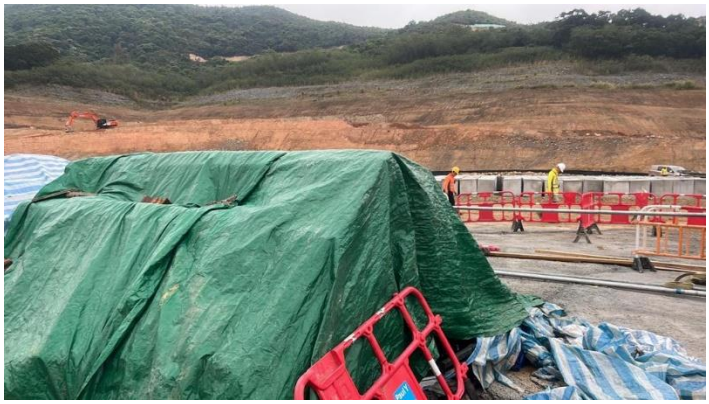
1. The Contractor has been reminded to maintain surface protection work in Portion A.
2. The Contractor has been reminded to ensure the silt removal facilities functioning properly before the holidays.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

1. Surface protection shall be implemented on the exposed slope to minimize surface runoff.
2. Silt removal facilities shall be maintained regularly.

	Environmental Team Representative:	IEC's Representative:	Contractor's Representative:	Engineer's Representative
Signature:		/		
Name:	Andy Ng	/	William Wan	Sylvia Ho
Date:	3 April 2023	/	3 April 2023	3 April 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
  1. Stockpiles of dusty material in SBA are not covered with impervious sheets.	  The dusty stockpiles were covered with impervious sheets.

2. Sand and silt are observed at the vehicle entrance in SBA.

Sand and silt were removed at the entrance of SBA.

3. Chemical containers are observed in the open area and some of them are not placed inside the drip tray.

The chemical containers were placed in the drip and covered with impervious sheets.

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
 1. The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream.	
 2. The Contractor has been reminded to maintain surface protection work in Portion A.	
Portion E3 	

Portion A  Portion D  3. The Contractor has been reminded to ensure the silt removal facilities functioning properly before the holidays.	

Inspection Date:	11 April 2023	Inspected By:	Andy Ng
Time:	14:00	Weather Condition:	Overcast
Participants:	Sylvia Ho (ER), William Wan (Contractor), Andy Ng (ET)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	☐	☒	☐	EP No.: EP-292/2007 FEP No.: FEP-01/292/2007
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	CNP No: GW-RN0131-23
A3	Is wastewater discharge licence available for inspection?	☐	☒	☐	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	☐	☒	☐	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	☐	☒	☐	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	☐	☒	☐	
B2	Are completed earthworks sealed as soon as practicable?	☒	☐	☐	N/A
B3	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B4	Any remedial action undertaken?	☒	☐	☐	N/A
B5	Observed dust source(s)				
		☐ Wind erosion			
		☐ Vehicle/ Equipment Movements			
		☐ Loading/ unloading of materials			
		☒ Others: Not Observed			
B6	Are unpaved areas/ designated roads watered regularly to avoid dust generation?	☐	☒	☐	
B7	Are dusty materials covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading?	☐	☒	☐	
B8	After removal of stockpile, are the remained dusty materials wetted with water and cleared from surface of roads?	☒	☐	☐	N/A
B9	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?	☐	☒	☐	

B10	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B11	Are wheel washing facilities with high pressure water jet provided at all site exits if practicable?	☐	☒	☐	
B12	Are all vehicles and plant cleaned before they leave the construction site?	☐	☒	☐	
B13	Are hoarding ≥ 2.4m tall provided beside roads or area with public access?	☒	☐	☐	N/A
B14	Is the portion of any road leading only to construction site (within 30m of a vehicle entrance or exit) kept clear of dusty materials?	☐	☐	☒	Refer to Observation 1
B15	Are surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations takes place sprayed with water or a dust suppression chemical continuously?	☐	☒	☐	
B16	Is the area involved demolition activities sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet?	☒	☐	☐	N/A
B17	Is scaffolding erected around the perimeter of a building under construction?	☒	☐	☐	N/A
B18	Are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the building, or a canopy provided from the first floor level up to the highest level of the scaffolding?	☒	☐	☐	N/A
B19	Is the skip for materials transport enclosed by impervious sheeting?	☒	☐	☐	N/A
B20	Is every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) covered entirely by impervious sheeting or placed in an area sheltered on the top and 3 sides?	☐	☒	☐	
B21	Are the areas of washing facilities and the road section between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	☐	☒	☐	
B22	Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility?	☒	☐	☐	N/A
B23	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system?	☒	☐	☐	N/A
B24	Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	
B25	Are the worksites wetted with water regularly?	☐	☒	☐	
B26	Is generation of dust avoided during loading or unloading?	☒	☐	☐	Not Observed
B27	Are all trucks loaded to a level within the side and tail boards?	☐	☒	☐	
B28	Are appropriate speed limit sign displayed?	☐	☒	☐	

B29	Are designated roads paved?	☐	☒	☐	
B30	Are site vehicle movements confined to designated roads?	☐	☒	☐	
B31	Are NRMM labels properly affixed on the PMEs?	☐	☒	☐	

C	Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	☐	☒	☐	
C2	Are vehicles and equipment switched off or throttled down while not in use?	☐	☒	☐	
C3	Is the noise directed away from nearby NSRs?	☐	☒	☐	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	☒	☐	☐	N/A
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?	☐	☒	☐	
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	☒	☐	☐	N/A
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	☒	☐	☐	N/A
C8	Are noise barriers (typically density @14kg/m^2) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	☒	☐	☐	N/A
C9	Is the sequencing operation of construction plants where practicable?	☐	☒	☐	
C10	Is the hoarding maintained properly?	☒	☐	☐	N/A
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	☒	☐	☐	N/A
C12	Are compressor operated with doors closed?	☒	☐	☐	N/A
C13	QPME used with valid noise labels?	☒	☐	☐	Not Observed
C14	Major noise source(s)				
		☐ Traffic			
		☒ Construction activities inside of site			
		☐ Construction activities outside of site			
		☐ Others: _____			

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Construction Activities					
D1	At the start of site establishment, are perimeter cut-off drains constructed to direct off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented?	☐	☒	☐	
D2	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?	☐	☒	☐	
D3	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	☐	☒	☐	
D4	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D5	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D6	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	☐	☒	☐	
D7	Is surface excavation works minimised during rainy seasons (April to September), as possible?	☒	☐	☐	To be implemented during wet season
D8	Are all exposed earth areas completed or vegetated as soon as possible after earthworks completed, or alternatively, within 14 days of the cessation of earthworks where practicable.	☒	☐	☐	N/A
D9	Are exposed slope surfaces covered by tarpaulin sheets?	☐	☐	☒	Refer to Observation 2 Will be treated with shotcrete in Portion E3-1
D10	Have the overall slope of the site should be kept a minimum?	☐	☒	☐	
D11	Are all trafficked areas and access roads protected by coarse stone ballast	☐	☒	☐	
D12	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface	☐	☒	☐	
D13	Are the silt removal facilities, channels and manholes maintained regularly?	☐	☒	☐	
D14	Is the deposite silt and grit removed regularly?	☐	☒	☐	
D15	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	☒	☐	☐	N/A
D16	Is rainwater pumped out from trenches discharged into storm drains via silt system?	☒	☐	☐	N/A
D17	Are open stockpiles of construction materials e.g. aggregates and sand of more than $50m^3$ on site covered with tarpaulin or similar fabric during rainstorms?	☒	☐	☐	N/A
D18	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	

D19	Are the discharges of surface run-off into foul sewer always prevented?	☐	☒	☐	
D20	Is a wheel washing bay provided at every site exit?	☐	☒	☐	
D21	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	☐	☒	☐	
D22	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?	☐	☒	☐	
D23	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	☒	☐	☐	Not Observed
D24	Are site drainage systems provided over the entire project site with sediment control facilities?	☐	☒	☐	
D25	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D26	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?	☐	☒	☐	
D27	Are portable chemical toilets and sewage holding tanks provided?	☐	☒	☐	
D28	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D29	Is there any sediment plume observed in nearby watercourses?	☒	☐	☐	N/A
D30	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources? And the oil interceptors are emptied and cleaned regularly? Has a bypass provided to prevent flushing during heavy rain?	☒	☐	☐	Not Observed
D31	Is chemical leakage or spillages contained and cleaned up immediately?	☒	☐	☐	N/A
D32	Service workshop and maintenance facilities located within a bunded area, and sumps and oil interceptors be provided?	☒	☐	☐	N/A

E	**Waste / Chemical Management**	**N/A or Not Observed**	**Yes**	**No**	**Remarks / Photo**
General Waste					
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?	☐	☒	☐	
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E3	Does accumulation of waste avoid?	☐	☒	☐	
E4	Is waste disposed regularly?	☐	☒	☐	
E5	Regular waste collection by approved waste collector in purpose-built vehicles?	☐	☒	☐	

E6	Burning of refuse on construction site prohibited?	☐	☒	☐	
Construction Waste					
E7	Are the temporary stockpiles maintained regularly?	☐	☒	☐	
E8	Is the excavated fill material reused for backfilling and reinstatement?	☐	☒	☐	
E9	Are the C&D materials sorted and recycled on-site?	☐	☒	☐	
E10	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	☒	☐	☐	Not Observed
E11	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E12	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?	☐	☒	☐	
E13	Is the durable formwork or plastic facing for construction works used?	☒	☐	☐	N/A
E14	Do the wooden hoardings avoid to be used?	☒	☐	☐	N/A
E15	Is metal hoarding used to enhance the possibility of recycling?	☒	☐	☐	N/A
E16	Is the segregation and storage of C&D wastes undertaken in designated area?	☐	☒	☐	
E17	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E18	Do the excavated materials appear contaminated?	☐	☐	☒	
E19	If suspected contaminated, appropriate procedures followed?	☒	☐	☐	N/A
E20	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	☒	☐	☐	N/A
Chemical / Fuel Storage Area					
E21	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	☐	☐	☒	Refer to Observation 3
E22	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?	☐	☐	☒	Refer to Observation 3
E23	Are the storage areas labelled and separated (if needed)?	☒	☐	☐	Not Observed
E24	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?	☐	☐	☒	Refer to Observation 3
E25	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?	☐	☐	☒	Refer to Observation 3
E26	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?	☒	☐	☐	Not Observed
Chemical Waste / Waste Oil					

E27	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?	☐	☒	☐	
E28	Are chemicals and waste oil recycled or disposed properly?	☒	☐	☐	Not Observed
E29	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E30	Is a licensed waste hauler used for waste collection?	☐	☒	☐	
E31	Are the records of quantities of wastes generated, recycled and disposed properly kept?	☐	☒	☐	
E32	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	☒	☐	☐	N/A

F	LFG	N/A or Not Observed	Yes	No	Remarks / Photo
F1	Are special LFG precautions taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	Not Observed
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	☐	☒	☐	
F3	Is no smoking or burning permitted on-site?	☐	☒	☐	
F4	Are prominent 'No smoking' and ‘No Naked Flames’ signs erected on-site?	☐	☒	☐	
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	☒	☐	☐	N/A
F6	Is adequate fire fighting equipment provided on-site?	☐	☒	☐	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	☒	☐	☐	Not Observed
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	Not Observed
F9	Is ’Permit to Work' system implemented?	☐	☒	☐	
F10	Are welding, flame-cutting or other hot works conducted only under ‘Permit to Work’ system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works?	☐	☒	☐	
F11a	For piping assembly or conduit construction, are all valves and seals closed immediately after installation?	☒	☐	☐	Not Observed
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter >600mm) is required?	☒	☐	☐	Not Observed
F11c	Is forced ventilation implemented prior to operation of installed pipeline?	☒	☐	☐	Not Observed
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m?	☒	☐	☐	Not Observed

F12	Is frequency and location of LFG monitoring within excavation area determined prior to commencement of works? *LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.	☐	☒	☐	
F13	For excavation works, Is LFG monitoring conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation?	☐	☒	☐	
F14	Are LFG monitoring conducted periodically when any cracks on ground level encountered on-site? *Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.	☒	☐	☐	Not Observed
F15a	Are LFG precautionary measures involved in excavation and piping works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	☒	☐	☐	Not Observed
F15b	Are temporary offices or buildings located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm?	☒	☐	☐	Not Observed
F16	Is a Safety Officer trained in the use of gas detection equipment and LFG- related hazards present on-site throughout the groundwork phase? *The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%	☒	☐	☐	Not Observed
F17a	Periodically during groundwork construction, Is the works area monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment? *The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person.	☒	☐	☐	Not Observed
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	☐	☒	☐	
F17c	Are all measurements in excavations made with monitoring tube located not more than 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations deeper than 1m, are measurements conducted? • At ground surface before excavation commences;	☐	☒	☐	

	• Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and • Periodically throughout the working day whilst workers are in excavation.				
F19	For excavations between 300mm and 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations less than 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	☐	☒	☐	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	☐	☒	☐	
G2	Is damage to surrounding areas avoided?	☐	☒	☐	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	☐	☒	☐	
G4	Is early planting using fast growing plants at strategic locations within site implemented?	☒	☐	☐	N/A
G5	Is boundary green belt planting implemented around the site perimeter and the construction of temporary soil bunds?	☒	☐	☐	N/A
G6	Is temporary landscape treatment as green surface cover implemented?	☒	☐	☐	N/A
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	☒	☐	☐	Not Observed

H	Ecology	N/A or Not Observed	Yes	No	Remarks / Photo
H1	Is transplantation of the important plant species implemented? Is post-transplantation maintained and monitored regularly?	☒	☐	☐	Not Observed

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	☐	☐	☒	

J	General Housekeeping / Others	N/A or Not Observed	Yes	No	Remarks / Photo
J1	Are the defined boundaries of working areas identified to prevent loss of vegetation	☐	☒	☐	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	☐	☒	☐	

Follow up action for previous Site Inspection:

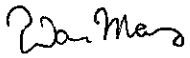
1. The exposed slope was treated with shotcrete in Portion A.

Observation(s):

1. The entrance of Portion A is observed muddy.
2. The drip tray is filled with water.
3. Surface protection shall be applied on the exposed slope behind the wetsep to minimize the surface runoff into the channel.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

1. The entrance shall be kept clear of dusty and muddy material. The Contractor has been reminded repave the surface of entrance to prevent accumulation of sand and silt.
2. The Contractor has been reminded to clear the drip tray and to minimize the number of chemical containers in the outdoor environment.
3. The exposed slope shall be covered with impervious sheets to prevent any surface runoff into the channel.

	Environmental Team Representative:	IEC's Representative:	Contractor's Representative:	Engineer's Representative
Signature:		/		
Name:	Andy Ng	/	William Wan	Sylvia Ho
Date:	11 April 2023	/	11 April 2023	11 April 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
 1. The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream.	Waiting for Contractor's Input
 2. Sand and silt are observed at the vehicle entrance in SBA.	 The exposed slope was treated with shotcrete in Portion A.
Portion E3 	

Portion A  Portion D  3. The Contractor has been reminded to ensure the silt removal facilities functioning properly before the holidays.	Waiting for Contractor's Input

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
 1. The entrance of Portion A is observed muddy.	
 2. The drip tray is filled with water.	

Observation and Recommendation	Follow-up status
 3. Surface protection shall be applied on the exposed slope behind the wetsep to minimize the surface runoff into the channel.	

Inspection Date:	17 April 2023	Inspected By:	Andy Ng, Jason Man
Time:	14:00	Weather Condition:	Cloudy
Participants:	Sylvia Ho (ER), William Wan (Contractor), Kristy Wong (Contractor), Andy Ng (ET), Jason Man (ET), Echo Hung (IEC)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	☐	☒	☐	EP No.: EP-292/2007 FEP No.: FEP-01/292/2007
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	CNP No: GW-RN0131-23
A3	Is wastewater discharge licence available for inspection?	☐	☒	☐	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	☐	☒	☐	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	☐	☒	☐	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	☐	☒	☐	
B2	Are completed earthworks sealed as soon as practicable?	☒	☐	☐	N/A
B3	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B4	Any remedial action undertaken?	☒	☐	☐	N/A
B5	Observed dust source(s)				
		☐ Wind erosion			
		☒ Vehicle/ Equipment Movements			
		☐ Loading/ unloading of materials			
		☐ Others: _____			
B6	Are unpaved areas/ designated roads watered regularly to avoid dust generation?	☐	☒	☐	
B7	Are dusty materials covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading?	☐	☐	☒	Refer to Reminder 1
B8	After removal of stockpile, are the remained dusty materials wetted with water and cleared from surface of roads?	☒	☐	☐	N/A
B9	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?	☐	☒	☐	

B10	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B11	Are wheel washing facilities with high pressure water jet provided at all site exits if practicable?	☐	☒	☐	
B12	Are all vehicles and plant cleaned before they leave the construction site?	☐	☒	☐	
B13	Are hoarding ≥ 2.4m tall provided beside roads or area with public access?	☒	☐	☐	N/A
B14	Is the portion of any road leading only to construction site (within 30m of a vehicle entrance or exit) kept clear of dusty materials?	☐	☒	☐	
B15	Are surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations takes place sprayed with water or a dust suppression chemical continuously?	☐	☒	☐	
B16	Is the area involved demolition activities sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet?	☒	☐	☐	N/A
B17	Is scaffolding erected around the perimeter of a building under construction?	☒	☐	☐	N/A
B18	Are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the building, or a canopy provided from the first floor level up to the highest level of the scaffolding?	☒	☐	☐	N/A
B19	Is the skip for materials transport enclosed by impervious sheeting?	☒	☐	☐	N/A
B20	Is every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) covered entirely by impervious sheeting or placed in an area sheltered on the top and 3 sides?	☐	☒	☐	
B21	Are the areas of washing facilities and the road section between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	☐	☒	☐	
B22	Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility?	☒	☐	☐	N/A
B23	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system?	☒	☐	☐	N/A
B24	Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	
B25	Are the worksites wetted with water regularly?	☐	☒	☐	
B26	Is generation of dust avoided during loading or unloading?	☒	☐	☐	Not Observed
B27	Are all trucks loaded to a level within the side and tail boards?	☐	☒	☐	
B28	Are appropriate speed limit sign displayed?	☐	☒	☐	

B29	Are designated roads paved?	☐	☒	☐	
B30	Are site vehicle movements confined to designated roads?	☐	☒	☐	
B31	Are NRMM labels properly affixed on the PMEs?	☐	☒	☐	

C	Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	☐	☒	☐	
C2	Are vehicles and equipment switched off or throttled down while not in use?	☐	☒	☐	
C3	Is the noise directed away from nearby NSRs?	☐	☒	☐	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	☒	☐	☐	N/A
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?	☐	☒	☐	
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	☒	☐	☐	N/A
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	☒	☐	☐	N/A
C8	Are noise barriers (typically density @14kg/m^2) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	☒	☐	☐	N/A
C9	Is the sequencing operation of construction plants where practicable?	☐	☒	☐	
C10	Is the hoarding maintained properly?	☒	☐	☐	N/A
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	☒	☐	☐	N/A
C12	Are compressor operated with doors closed?	☒	☐	☐	N/A
C13	QPME used with valid noise labels?	☒	☐	☐	Not Observed
C14	Major noise source(s)				
		☐ Traffic			
		☒ Construction activities inside of site			
		☐ Construction activities outside of site			
		☐ Others: _____			

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Construction Activities					
D1	At the start of site establishment, are perimeter cut-off drains constructed to direct off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented?	☐	☒	☐	
D2	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?	☐	☒	☐	
D3	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	☐	☒	☐	
D4	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D5	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D6	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	☐	☒	☐	
D7	Is surface excavation works minimised during rainy seasons (April to September), as possible?	☐	☒	☐	
D8	Are all exposed earth areas completed or vegetated as soon as possible after earthworks completed, or alternatively, within 14 days of the cessation of earthworks where practicable.	☒	☐	☐	N/A
D9	Are exposed slope surfaces covered by tarpaulin sheets?	☐	☐	☒	Will be treated with shotcrete in Portion E3-1
D10	Have the overall slope of the site should be kept a minimum?	☐	☒	☐	
D11	Are all trafficked areas and access roads protected by coarse stone ballast	☐	☒	☐	
D12	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface	☐	☒	☐	
D13	Are the silt removal facilities, channels and manholes maintained regularly?	☐	☐	☒	Refer to Reminder 2
D14	Is the deposite silt and grit removed regularly?	☐	☒	☐	
D15	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	☒	☐	☐	N/A
D16	Is rainwater pumped out from trenches discharged into storm drains via silt system?	☒	☐	☐	N/A
D17	Are open stockpiles of construction materials e.g. aggregates and sand of more than $50m^3$ on site covered with tarpaulin or similar fabric during rainstorms?	☒	☐	☐	N/A
D18	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D19	Are the discharges of surface run-off into foul sewer always prevented?	☐	☒	☐	

D20	Is a wheel washing bay provided at every site exit?	☐	☒	☐	
D21	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	☐	☒	☐	
D22	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?	☐	☒	☐	
D23	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	☒	☐	☐	Not Observed
D24	Are site drainage systems provided over the entire project site with sediment control facilities?	☐	☒	☐	
D25	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D26	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?	☐	☒	☐	
D27	Are portable chemical toilets and sewage holding tanks provided?	☐	☒	☐	
D28	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D29	Is there any sediment plume observed in nearby watercourses?	☒	☐	☐	N/A
D30	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources? And the oil interceptors are emptied and cleaned regularly? Has a bypass provided to prevent flushing during heavy rain?	☒	☐	☐	Not Observed
D31	Is chemical leakage or spillages contained and cleaned up immediately?	☒	☐	☐	N/A
D32	Service workshop and maintenance facilities located within a bunded area, and sumps and oil interceptors be provided?	☒	☐	☐	N/A

E	**Waste / Chemical Management**	**N/A or Not Observed**	**Yes**	**No**	**Remarks / Photo**
General Waste					
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?	☐	☒	☐	
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E3	Does accumulation of waste avoid?	☐	☒	☐	
E4	Is waste disposed regularly?	☐	☒	☐	
E5	Regular waste collection by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E6	Burning of refuse on construction site prohibited?	☐	☒	☐	

Construction Waste					
E7	Are the temporary stockpiles maintained regularly?	☐	☒	☐	
E8	Is the excavated fill material reused for backfilling and reinstatement?	☐	☒	☐	
E9	Are the C&D materials sorted and recycled on-site?	☐	☒	☐	
E10	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	☒	☐	☐	Not Observed
E11	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E12	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?	☐	☒	☐	
E13	Is the durable formwork or plastic facing for construction works used?	☒	☐	☐	N/A
E14	Do the wooden hoardings avoid to be used?	☒	☐	☐	N/A
E15	Is metal hoarding used to enhance the possibility of recycling?	☒	☐	☐	N/A
E16	Is the segregation and storage of C&D wastes undertaken in designated area?	☐	☒	☐	
E17	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E18	Do the excavated materials appear contaminated?	☐	☐	☒	
E19	If suspected contaminated, appropriate procedures followed?	☒	☐	☐	N/A
E20	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	☒	☐	☐	N/A
Chemical / Fuel Storage Area					
E21	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	☒	☐	☐	Not Observed
E22	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?	☒	☐	☐	Not Observed
E23	Are the storage areas labelled and separated (if needed)?	☒	☐	☐	Not Observed
E24	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?	☒	☐	☐	Not Observed
E25	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?	☒	☐	☐	Not Observed
E26	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?	☒	☐	☐	Not Observed
Chemical Waste / Waste Oil					

E27	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?	☐	☒	☐	
E28	Are chemicals and waste oil recycled or disposed properly?	☒	☐	☐	Not Observed
E29	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E30	Is a licensed waste hauler used for waste collection?	☐	☒	☐	
E31	Are the records of quantities of wastes generated, recycled and disposed properly kept?	☐	☒	☐	
E32	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	☒	☐	☐	N/A

F	LFG	N/A or Not Observed	Yes	No	Remarks / Photo
F1	Are special LFG precautions taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	Not Observed
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	☐	☒	☐	
F3	Is no smoking or burning permitted on-site?	☐	☒	☐	
F4	Are prominent 'No smoking' and ‘No Naked Flames’ signs erected on-site?	☐	☒	☐	
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	☒	☐	☐	N/A
F6	Is adequate fire fighting equipment provided on-site?	☐	☒	☐	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	☒	☐	☐	Not Observed
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	Not Observed
F9	Is ’Permit to Work' system implemented?	☐	☒	☐	
F10	Are welding, flame-cutting or other hot works conducted only under ‘Permit to Work’ system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works?	☐	☒	☐	
F11a	For piping assembly or conduit construction, are all valves and seals closed immediately after installation?	☒	☐	☐	Not Observed
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter >600mm) is required?	☒	☐	☐	Not Observed
F11c	Is forced ventilation implemented prior to operation of installed pipeline?	☒	☐	☐	Not Observed
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m?	☒	☐	☐	Not Observed

F12	Is frequency and location of LFG monitoring within excavation area determined prior to commencement of works? *LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.	☐	☒	☐	
F13	For excavation works, Is LFG monitoring conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation?	☐	☒	☐	
F14	Are LFG monitoring conducted periodically when any cracks on ground level encountered on-site? *Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.	☒	☐	☐	Not Observed
F15a	Are LFG precautionary measures involved in excavation and piping works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	☒	☐	☐	Not Observed
F15b	Are temporary offices or buildings located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm?	☒	☐	☐	Not Observed
F16	Is a Safety Officer trained in the use of gas detection equipment and LFG- related hazards present on-site throughout the groundwork phase? *The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%	☒	☐	☐	Not Observed
F17a	Periodically during groundwork construction, Is the works area monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment? *The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person.	☒	☐	☐	Not Observed
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	☐	☒	☐	
F17c	Are all measurements in excavations made with monitoring tube located not more than 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations deeper than 1m, are measurements conducted? • At ground surface before excavation commences;	☐	☒	☐	

	• Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and • Periodically throughout the working day whilst workers are in excavation.				
F19	For excavations between 300mm and 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations less than 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	☐	☒	☐	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	☐	☒	☐	
G2	Is damage to surrounding areas avoided?	☐	☒	☐	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	☐	☒	☐	
G4	Is early planting using fast growing plants at strategic locations within site implemented?	☒	☐	☐	N/A
G5	Is boundary green belt planting implemented around the site perimeter and the construction of temporary soil bunds?	☒	☐	☐	N/A
G6	Is temporary landscape treatment as green surface cover implemented?	☒	☐	☐	N/A
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	☒	☐	☐	Not Observed

H	Ecology	N/A or Not Observed	Yes	No	Remarks / Photo
H1	Is transplantation of the important plant species implemented? Is post-transplantation maintained and monitored regularly?	☒	☐	☐	Not Observed

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	☐	☐	☒	

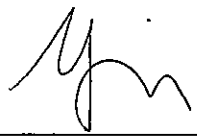
J	General Housekeeping / Others	N/A or Not Observed	Yes	No	Remarks / Photo
J1	Are the defined boundaries of working areas identified to prevent loss of vegetation	☐	☒	☐	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	☐	☒	☐	

Follow up action for previous Site Inspection:
Waiting for Contractor's Input

Observation(s):
1. The drip tray in SBA is filled with water.

Reminder(s):
1. The Contractor has been reminded to spray water on the surface of dusty material in SBA to prevent dust dispersion.
2. The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):
1. The Contractor has been reminded to clear the drip tray.
2. Dusty material shall be sprayed with water to prevent generation of dust.
3. Silt removal facilities shall be maintained properly.

	Environmental Team Representative:	IEC's Representative:	Contractor's Representative:	Engineer's Representative
Signature:				
Name:	Andy Ng	Echo Hung	William Wan	Sylvia Ho
Date:	17 April 2023	17 April 2023	17 April 2023	17 April 2023

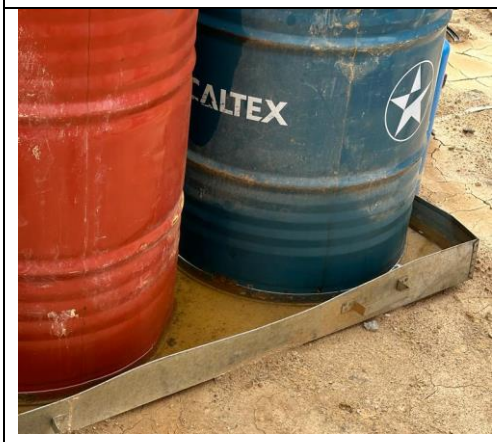
PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
  1. The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream.	Waiting for Contractor's Input
Portion E3 	

Portion A  Portion D  2. The Contractor has been reminded to ensure the silt removal facilities functioning properly before the holidays.	Waiting for Contractor's Input

 3. The entrance of Portion A is observed muddy.	Waiting for Contractor's Input
 4. The drip tray is filled with water.	Waiting for Contractor's Input

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
 1. The drip tray in SBA is filled with water.	
 2. The Contractor has been reminded to spray water on the surface of dusty material in SBA to prevent dust dispersion.	
Portion E3-1  3. The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall.	

Inspection Date:	24 April 2023	Inspected By:	Andy Ng
Time:	14:00	Weather Condition:	Overcast
Participants:	Sylvia Ho (ER), William Wan (Contractor), Kristy Wong (Contractor), Andy Ng (ET)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	☐	☒	☐	EP No.: EP-292/2007 FEP No.: FEP-01/292/2007
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	CNP No: GW-RN0131-23
A3	Is wastewater discharge licence available for inspection?	☐	☒	☐	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	☐	☒	☐	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	☐	☒	☐	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	☐	☒	☐	
B2	Are completed earthworks sealed as soon as practicable?	☒	☐	☐	N/A
B3	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B4	Any remedial action undertaken?	☒	☐	☐	N/A
B5	Observed dust source(s)				
		☐ Wind erosion			
		☐ Vehicle/ Equipment Movements			
		☐ Loading/ unloading of materials			
		☒ Others: Not Observed			
B6	Are unpaved areas/ designated roads watered regularly to avoid dust generation?	☐	☒	☐	
B7	Are dusty materials covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading?	☒	☐	☐	Not Observed
B8	After removal of stockpile, are the remained dusty materials wetted with water and cleared from surface of roads?	☒	☐	☐	N/A
B9	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones?	☐	☒	☐	

B10	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B11	Are wheel washing facilities with high pressure water jet provided at all site exits if practicable?	☐	☒	☐	
B12	Are all vehicles and plant cleaned before they leave the construction site?	☐	☒	☐	
B13	Are hoarding ≥ 2.4m tall provided beside roads or area with public access?	☒	☐	☐	N/A
B14	Is the portion of any road leading only to construction site (within 30m of a vehicle entrance or exit) kept clear of dusty materials?	☐	☒	☐	
B15	Are surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations takes place sprayed with water or a dust suppression chemical continuously?	☐	☒	☐	
B16	Is the area involved demolition activities sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet?	☒	☐	☐	N/A
B17	Is scaffolding erected around the perimeter of a building under construction?	☒	☐	☐	N/A
B18	Are effective dust screens, sheeting or netting provided to enclose the scaffolding from the ground floor level of the building, or a canopy provided from the first floor level up to the highest level of the scaffolding?	☒	☐	☐	N/A
B19	Is the skip for materials transport enclosed by impervious sheeting?	☒	☐	☐	N/A
B20	Is every stock of more than 20 bags of cement or dry pulverized fuel ash (PFA) covered entirely by impervious sheeting or placed in an area sheltered on the top and 3 sides?	☒	☐	☐	Not Observed
B21	Are the areas of washing facilities and the road section between the washing facilities and the exit point paved with concrete, bituminous materials or hardcores?	☐	☒	☐	
B22	Are the activities of loading, unloading, transfer, handing or storage of bulk cement or dry PFA carried out in a totally enclosed system or facility?	☒	☐	☐	N/A
B23	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system?	☒	☐	☐	N/A
B24	Is the exposed earth properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	
B25	Are the worksites wetted with water regularly?	☐	☒	☐	
B26	Is generation of dust avoided during loading or unloading?	☒	☐	☐	Not Observed
B27	Are all trucks loaded to a level within the side and tail boards?	☐	☒	☐	
B28	Are appropriate speed limit sign displayed?	☐	☒	☐	

B29	Are designated roads paved?	☐	☒	☐	
B30	Are site vehicle movements confined to designated roads?	☐	☒	☐	
B31	Are NRMM labels properly affixed on the PMEs?	☐	☒	☐	

C	Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	☐	☒	☐	
C2	Are vehicles and equipment switched off or throttled down while not in use?	☐	☒	☐	
C3	Is the noise directed away from nearby NSRs?	☐	☒	☐	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	☒	☐	☐	N/A
C5	Are mobile and/or noisy plant sited as far away from NSRs as possible and practicable and orientated so that the noise is directed away from nearby NSRs?	☐	☒	☐	
C6	Are material stockpiles, mobile container officer and other structures utilised to screen noisy activates?	☒	☐	☐	N/A
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	☒	☐	☐	N/A
C8	Are noise barriers (typically density @14kg/m^2) acoustic mat or full enclosure close to noise plants including air compressor, generators and saw etc. provided to protect NSRs?	☒	☐	☐	N/A
C9	Is the sequencing operation of construction plants where practicable?	☐	☒	☐	
C10	Is the hoarding maintained properly?	☒	☐	☐	N/A
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	☒	☐	☐	N/A
C12	Are compressor operated with doors closed?	☒	☐	☐	N/A
C13	QPME used with valid noise labels?	☒	☐	☐	Not Observed
C14	Major noise source(s)				
		☐ Traffic			
		☒ Construction activities inside of site			
		☐ Construction activities outside of site			
		☐ Others: _____			

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Construction Activities					
D1	At the start of site establishment, are perimeter cut-off drains constructed to direct off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented?	☐	☒	☐	
D2	Are channels, earth bunds or sandbag barriers provided on site to properly direct stormwater to such silt removal facilities?	☐	☒	☐	
D3	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	☐	☒	☐	
D4	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D5	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D6	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	☐	☒	☐	
D7	Is surface excavation works minimised during rainy seasons (April to September), as possible?	☐	☒	☐	
D8	Are all exposed earth areas completed or vegetated as soon as possible after earthworks completed, or alternatively, within 14 days of the cessation of earthworks where practicable.	☒	☐	☐	N/A
D9	Are exposed slope surfaces covered by tarpaulin sheets?	☐	☐	☒	Will be treated with shotcrete in Portion E3-1.
D10	Have the overall slope of the site should be kept a minimum?	☐	☒	☐	
D11	Are all trafficked areas and access roads protected by coarse stone ballast	☐	☒	☐	
D12	Is wastewater from temporary site facilities controlled to prevent direct discharge to surface	☐	☒	☐	
D13	Are the silt removal facilities, channels and manholes maintained regularly?	☐	☐	☒	Refer to Observation 1 and Reminder 2
D14	Is the deposite silt and grit removed regularly?	☐	☒	☐	
D15	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	☒	☐	☐	N/A
D16	Is rainwater pumped out from trenches discharged into storm drains via silt system?	☒	☐	☐	N/A
D17	Are open stockpiles of construction materials e.g. aggregates and sand of more than 50m^3 on site covered with tarpaulin or similar fabric during rainstorms?	☒	☐	☐	N/A
D18	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D19	Are the discharges of surface run-off into foul sewer always prevented?	☐	☒	☐	

D20	Is a wheel washing bay provided at every site exit?	☐	☒	☐	
D21	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	☐	☒	☐	
D22	Is the section of construction road between the wheel washing bay and the public road surfaced with crushed stone or coarse gravel?	☐	☒	☐	
D23	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	☒	☐	☐	Not Observed
D24	Are site drainage systems provided over the entire project site with sediment control facilities?	☐	☒	☐	
D25	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D26	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning?	☐	☒	☐	
D27	Are portable chemical toilets and sewage holding tanks provided?	☐	☒	☐	
D28	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D29	Is there any sediment plume observed in nearby watercourses?	☒	☐	☐	N/A
D30	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources? And the oil interceptors are emptied and cleaned regularly? Has a bypass provided to prevent flushing during heavy rain?	☒	☐	☐	Not Observed
D31	Is chemical leakage or spillages contained and cleaned up immediately?	☒	☐	☐	N/A
D32	Service workshop and maintenance facilities located within a bunded area, and sumps and oil interceptors be provided?	☒	☐	☐	N/A

E	**Waste / Chemical Management**	**N/A or Not Observed**	**Yes**	**No**	**Remarks / Photo**
General Waste					
E1	Is the general waste generated on-site stored in enclosed bins or compaction units separately from the construction and chemical wastes?	☐	☒	☐	
E2	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E3	Does accumulation of waste avoid?	☐	☒	☐	
E4	Is waste disposed regularly?	☐	☒	☐	
E5	Regular waste collection by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E6	Burning of refuse on construction site prohibited?	☐	☒	☐	

Construction Waste					
E7	Are the temporary stockpiles maintained regularly?	☐	☒	☐	
E8	Is the excavated fill material reused for backfilling and reinstatement?	☐	☒	☐	
E9	Are the C&D materials sorted and recycled on-site?	☐	☒	☐	
E10	Is there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	☒	☐	☐	Not Observed
E11	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E12	Are the public fill and C&D waste segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal?	☐	☒	☐	
E13	Is the durable formwork or plastic facing for construction works used?	☒	☐	☐	N/A
E14	Do the wooden hoardings avoid to be used?	☒	☐	☐	N/A
E15	Is metal hoarding used to enhance the possibility of recycling?	☒	☐	☐	N/A
E16	Is the segregation and storage of C&D wastes undertaken in designated area?	☐	☒	☐	
E17	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E18	Do the excavated materials appear contaminated?	☐	☐	☒	
E19	If suspected contaminated, appropriate procedures followed?	☒	☐	☐	N/A
E20	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	☒	☐	☐	N/A
Chemical / Fuel Storage Area					
E21	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	☒	☐	☐	Not Observed
E22	Are the storage area enclosed 3 sides by walls/ fence of ≥2m tall and bounded with adequate bund capacity (>110% of largest container) or do the storage area allow storage of 20% of total volume of waste?	☒	☐	☐	Not Observed
E23	Are the storage areas labelled and separated (if needed)?	☒	☐	☐	Not Observed
E24	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering?	☒	☐	☐	Not Observed
E25	Are the containers used for the storage of chemical wastes suitable for the substance that are holding, resist to corrosion, maintained in a good condition, and securely closed?	☒	☐	☐	Not Observed
E26	If no specification has been approved by EPD, are container with <450L capacity provided for storage of chemicals waste?	☒	☐	☐	Not Observed
Chemical Waste / Waste Oil					

E27	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area?	☐	☒	☐	
E28	Are chemicals and waste oil recycled or disposed properly?	☒	☐	☐	Not Observed
E29	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E30	Is a licensed waste hauler used for waste collection?	☐	☒	☐	
E31	Are the records of quantities of wastes generated, recycled and disposed properly kept?	☐	☒	☐	
E32	For the demolition material/ waste, is the number of loads for each day recorded as appropriate?	☒	☐	☐	N/A

F	LFG	N/A or Not Observed	Yes	No	Remarks / Photo
F1	Are special LFG precautions taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	Not Observed
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	☐	☒	☐	
F3	Is no smoking or burning permitted on-site?	☐	☒	☐	
F4	Are prominent 'No smoking' and ‘No Naked Flames’ signs erected on-site?	☐	☒	☐	
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	☒	☐	☐	N/A
F6	Is adequate fire fighting equipment provided on-site?	☐	☒	☐	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	☒	☐	☐	Not Observed
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	Not Observed
F9	Is ’Permit to Work' system implemented?	☐	☒	☐	
F10	Are welding, flame-cutting or other hot works conducted only under ‘Permit to Work’ system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works?	☐	☒	☐	
F11a	For piping assembly or conduit construction, are all valves and seals closed immediately after installation?	☒	☐	☐	Not Observed
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter >600mm) is required?	☒	☐	☐	Not Observed
F11c	Is forced ventilation implemented prior to operation of installed pipeline?	☒	☐	☐	Not Observed
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m?	☒	☐	☐	Not Observed

F12	Is frequency and location of LFG monitoring within excavation area determined prior to commencement of works? *LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.	☐	☒	☐	
F13	For excavation works, Is LFG monitoring conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation?	☐	☒	☐	
F14	Are LFG monitoring conducted periodically when any cracks on ground level encountered on-site? *Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.	☒	☐	☐	Not Observed
F15a	Are LFG precautionary measures involved in excavation and piping works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	☒	☐	☐	Not Observed
F15b	Are temporary offices or buildings located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm?	☒	☐	☐	Not Observed
F16	Is a Safety Officer trained in the use of gas detection equipment and LFG- related hazards present on-site throughout the groundwork phase? *The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%	☒	☐	☐	Not Observed
F17a	Periodically during groundwork construction, Is the works area monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment? *The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person.	☒	☐	☐	Not Observed
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	☐	☒	☐	
F17c	Are all measurements in excavations made with monitoring tube located not more than 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations deeper than 1m, are measurements conducted? • At ground surface before excavation commences;	☐	☒	☐	

	• Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and • Periodically throughout the working day whilst workers are in excavation.				
F19	For excavations between 300mm and 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations less than 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	☐	☒	☐	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	☐	☒	☐	
G2	Is damage to surrounding areas avoided?	☐	☒	☐	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	☐	☒	☐	
G4	Is early planting using fast growing plants at strategic locations within site implemented?	☒	☐	☐	N/A
G5	Is boundary green belt planting implemented around the site perimeter and the construction of temporary soil bunds?	☒	☐	☐	N/A
G6	Is temporary landscape treatment as green surface cover implemented?	☒	☐	☐	N/A
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	☒	☐	☐	Not Observed

H	Ecology	N/A or Not Observed	Yes	No	Remarks / Photo
H1	Is transplantation of the important plant species implemented? Is post-transplantation maintained and monitored regularly?	☒	☐	☐	Not Observed

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	☐	☐	☒	

J	General Housekeeping / Others	N/A or Not Observed	Yes	No	Remarks / Photo
J1	Are the defined boundaries of working areas identified to prevent loss of vegetation	☐	☒	☐	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	☐	☒	☐	

Follow up action for previous Site Inspection:

1. The exposed slope surface near the stream has been covered with impervious sheets as a temporary mitigation measure. Shotcrete will be applied on the exposed surface by the end of April to prevent surface runoff into stream in long term.
2. The chemical containers were removed in Portion E3. The Contractor has been reminded to store chemical containers properly.
3. The Contractor drained off the water in the drip tray in SBA. The sand and silt in the drip tray shall be cleared off.
4. The silt removal facilities were functioned properly.

Observation(s):

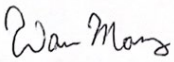
1. The channels at the entrance of SBA are accumulated with rotten leaves, sand and silt.

Reminder(s):

1. Surface protection works in Portion A shall be maintained properly.
2. The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall in this week.

Corrective Actions – Mitigation Measures Implemented or Proposed (if any):

1. Regular cleaning of channel shall be conducted to prevent any clogging.
2. Earth bunds and exposed slopes shall be paved to control the surface runoff.
3. Silt removal facilities shall be maintained properly and checked if they can function properly.

	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Andy Ng	/	William Wan	Sylvia Ho
Date:	24 April 2023	/	24 April 2023	24 April 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
  1. The exposed surface in Portion E3-1 shall be covered with impervious sheets to minimize surface runoff into the stream.	 The exposed slope surface near the stream has been covered with impervious sheets as a temporary mitigation measure. Shotcrete will be applied by the end of April to prevent surface runoff into stream in long term.
Portion E3 	Portion E3 

Portion A

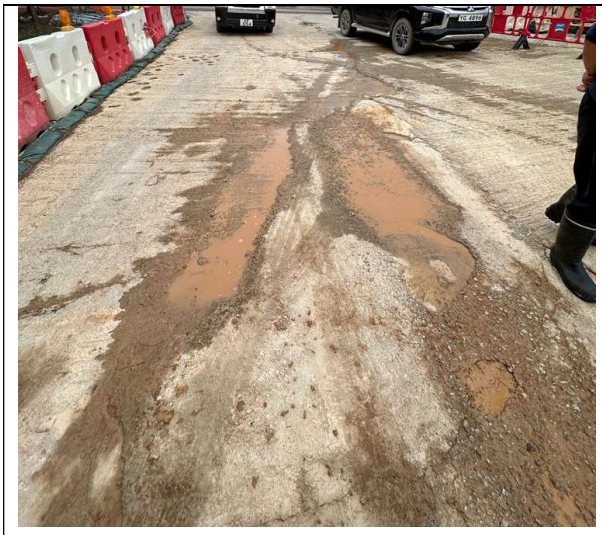
Portion D

2. The Contractor has been reminded to ensure the silt removal facilities functioning properly before the holidays.
3. The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall.

Portion A

Portion D

The silt removal facilities were functioned properly.

 4. The entrance of Portion A was observed muddy.	 The Contractor scheduled watering at the entrance of Portion A.
 5. The drip tray was filled with water.	 The chemical containers were removed. The Contractor has been reminded to store chemical containers properly.
 6. The drip tray in SBA was filled with water.	 The Contractor drained off the water in the drip tray. Sand and silt in drip tray should be cleared off.

7. The Contractor has been reminded to spray water on the surface of dusty material in SBA to prevent dust dispersion.

The contractor was increased the frequency of watering on the surface of dusty material in SBA to prevent dust dispersion.

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
  1. The channels at the entrance of SBA are accumulated with rotten leaves, sand and silt.	  Rotten leaves were removed from the channels.

Observation and Recommendation	Follow-up status
 2. The surface protection works in Portion A shall be maintained properly.	 The surface protection works at Portion A was conducted by contractor.
Portion E3  Portion A	Portion E3  Portion A

Observation and Recommendation	Follow-up status
	
Portion D  3. The Contractor has been reminded to ensure all silt removal facilities functioning properly for the upcoming rainfall.	Portion D   The Silt Removal Facilities were functioned properly and the Contractor conducted cleaning work on the them.

Appendix K Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Log Ref.	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Air Quality							
S3.8.1	S3.1.8	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation. • Dust emission from construction vehicle movement is confined within the worksites area. • Watering facilities will be provided at every designated vehicular exit point. • Good site practice is recommended during construction phase.	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	Entire NENT Landfill Extension site	To control the dust impact to within the HKAQO and TM - EIA criteria (Ref. 1-hr and 24hr TSP levels are 500 $\mu g/m^{-3}$ and 260 $\mu g/m^{-3}$, respectively)	✓
Construction Noise							
S4	S4.9	1) Use of good site practices to limit noise emissions by considering the following: • Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; • Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; • Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; • Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; • Mobile plant should be sited as far away from NSRs as possible and practicable; • Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	Control construction airborne noise by means of good site practices	Contractor	Entire construction site	Noise Control Ordinance	✓
S4	S4.9	2) Select “Quiet plants” which comply with the BS 5228 Part 1 or TM standards.	Reduce the noise levels of plant items	Contractor	Entire construction site	Noise Control Ordinance & its TM Annex 5, TM-EIA	✓

EIA Ref.	EM&A Log Ref	Recommended Precautionary/Mitigation Measures (to be implemented when the trigger level is exceeded, where necessary)	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	What requirement or standards for the measures to achieve?	Status
Construction Runoff							
S5.8.1	S5.2.1	Construction on Site Runoff • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. • The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. • The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediment traps should be 5 minutes under maximum flow conditions. • Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means. • The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all traffic areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows. • All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire construction site	ProPECC PN 1/94 Water Pollution Control Ordinance	✓

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Construction Runoff (Cont'd)							
S5.8.1	S5.2.1	• Measures should be taken to minimise the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities. • Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m^3 should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. • Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers. • Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silly surface runoff during storm events, especially for areas located near steep slopes. • All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing bay should be provided at every construction site exit. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silly water to public roads and drains. • Oil interceptors should be provided in the site drainage system downstream of any oil/fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire Construction site	ProPECC PN 1/94 Water Pollution Control Ordinance	✓

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Construction Runoff							
S5.8.1	S5.2.1	• Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts. Requirements for solid waste management are detailed in Section 6 of this Report. • All fuel tanks and storage areas should be provided with docks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. • To prevent pollution risks arising from works area (waste reception area) and haul roads, intercepting bund or barrier along the roadside should be constructed.	Control construction runoff and erosion from site surface, drainage channel, stockpiles, wheel washing facilities, etc to minimize water quality during construction stage	Contractor	Entire construction site	ProPECC PN 1/94 Water Pollution Control Ordinance	✓
S5.8.1	S5.2.1	<u>Sewage Effluent from Workforce</u> • Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. • Notices will be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. • Regular environmental audit on the construction site can provide an effective control of any malpractices and can achieve continual improvement of environmental performance on site.	Control sewage effluent arising from the sanitary facilities provided for the on- site construction workforce	Contractor	On-site sanitary facilities	ProPECC PN 1/94 Water Pollution Control Ordinance Waste Disposal Ordinance	✓
S5.8.1	S5.2.1	<u>Accidental Spillage of Chemical</u> Any service workshop and maintenance facilities shall be located within a bunded area, and sumps and oil interceptors shall be provided. Maintenance of equipment involving activities with potential for leakage and spillage will only be undertaken within the areas.	Control of chemical leakage	Contractor	Service workshop and maintenance facilities	ProPECC PN 1/94 Water Pollution Control Ordinance Waste Disposal Ordinance	✓

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Erosion Control Measures							
S5.8.2	S5.2.2	<u>Erosion Control /Measures</u> a. Preserve Natural Vegetation This Best Management Practices will involve preserving natural vegetation to the greatest extent possible during the construction process. and after construction where appropriate. Maintaining natural vegetation is the most effective and inexpensive form of erosion prevention control. b. Provision of Buffer Zone A buffer zone consists of an undisturbed area or strip of natural vegetation or an established suitable planting adjacent to a disturbed area that reduces erosion and runoff. The rooted vegetation holds soils acts as a wind break and filters runoff that may leave the site. c. Seeding (Temporary/Permanent) A well-established vegetative cover is one of the most effective methods of reducing erosion. Vegetation should be established on construction sites as the slopes are finished, rather than waiting until all the grading is complete. Besides, Hydroseeding will be applied on the surface of stockpiled soil and on temporary soil covers for inactive tipping areas to prevent soil erosion during rainy season. d. Ground Cover Ground Cover is a protective layer of straw or other suitable material applied to the soil surface. Straw mulch and/or hydromulch are also used in conjunction with seeding of critical areas for the establishment of temporary or permanent vegetation. Ground cover provides immediate temporary protection from erosion. Mulch also enhances plant establishment by conserving moisture, holding fertilizer, seed, and topsoil in place, and moderating soil temperatures.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	✓

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Erosion Control Measures							
S5.8.2	S5.2.2	e. Hydraulic Application Hydraulic application is a mechanical method of applying erosion control materials to bare soil in order to establish erosion-resistant vegetation on disturbed areas and critical slopes. By using hydraulic equipment, soil amendments, mulch, tackifying agents, Bonded Fiber Matrix (BFM) and liquid co-polymers can be uniformly broadcast, as homogenous slurry, onto the soil. These erosion and dust control materials can often be applied in one operation. f. Sod Establishes permanent turf for immediate erosion protection and stabilizes rainageways. g. Matting There are numerous erosion control products available that can be described in various ways, such as matting, blankets, fabric and nets. These products are referred as matting. A wide range of materials and combination of materials are used to produce matting including, but not limited to: straw, jute, wood fiber, coir (coconut fiber), plastic netting, and Bonded Fiber Matrix. The selection of matting materials for a site can make a significant difference in the effectiveness of the Best Management Practices. h. Plastic Sheeting Plastic Sheeting will provide immediate protection to slopes and stockpiles. However, it has been known to transfer erosion problems because water will sheet flow off the plastic at high velocity. This is usually attributable to poor application, installation and maintenance. i. Dust Control Dust Control is one preventative measure to minimize the wind transport of soil, prevent traffic hazards and reduce sediment transported by wind and deposited in water resources.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	✓

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Surface Water Drainage System							
S5.8.2	S5.2.2	Temporary surface water drainage system will be provided to manage runoff during construction and operation. This system will consist of channels as constructed around the perimeter of the site area. This system will collect surface water from the areas of higher elevations to those of lower elevations and ultimately to the point of discharge. Erosion will therefore be minimised. The temporary surface water drainage system will include the use of a silt fence around the soil stockpile areas to prevent sediment from entering the system. Regular cleaning will be carried out to prevent blockage of the passage of water flow in silt fence. Intermediate drainage system will be installed for filled cell/phase. The major purpose of the intermediate drainage system is to prevent the clean surface water run-off from the filled phases coming into contact with the waste mass in active cell and to prevent excessive surface water infiltration through the intermediate cover, thus contribute to increasing volume of leachate. The intermediate drainage system will collect the clean surface water run-off and divert it to the permanent discharge channels connected to the public drainage system. In addition, surface flow from the haul road (especially near the wheel washing facility) will be collected to a dry weather flow interceptor and conveyed to the on-site leachate treatment plant for further treatment.	Surface Water Management/ Control run off	Contractor	Surface water system Construction	Water Pollution Control Ordinance TM-water	✓

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Waste Management							
S6	WM1	<u>C&D Materials</u> Implement proper waste management measures during construction phase as stipulated in the Environmental Management Plan (EMP) in accordance with the ETWB TC(W) No. 19/2005 Environmental Management in Construction Sites. Implement a trip-ticket system to ensure that the movement of C&D materials are properly documented and verified in accordance with DEVB TC(W) No. 6/2010. Copies/counterfoils from trip-tickets (with quantities of C&D Materials off-site) should be kept for record purposes. Appropriate waste management should be implemented in accordance with the ETWB TC(W) No. 19/2005. Make provisions in Contract documents to allow and promote the use of recycled aggregates where appropriate. Ensure material balance in terms of excavated C&D materials in the design of NENT landfill extension project. The contract specifications should specify no excavated materials should be removed from the landfill extension site, but should be fully reused. Careful design, planning and good site management to minimise over-ordering and waste materials such as concrete, mortars and cement grouts. The design of formwork should maximise the use of standard wooden panels so that high reuse levels can be achieved. Alternatives such as steel formwork or plastic fencing should be considered to increase the potential for reuse. The Contractor should recycle as much as possible the C&D waste on-site through proper waste segregation on-site. Concrete and masonry should be used as general fill and steel reinforcement bars can be used by scrap steel mills. Proper areas should be designated for waste segregation and storage wherever site conditions permit. Maximise the use of reusable steel formwork to reduce the amount of C&D material. Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement. On-site sorting and segregation facility of all type of wastes is considered as one of the best practice in waste management and hence, should be implemented in all projects generating construction waste. The sorted public fill and C&D waste should be properly reused.	Good site practice to minimise C&D waste generation and reuse/recycle all C&D on-site as far as possible	Contractor	Entire construction site	Waste Disposal Ordinance ETWB TC(W) No. 19/2005 DEVB TC(W) No. 6/2010	✓

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S6	WM1	<u>C&D Materials (Cont'd)</u> Excavated slope, stockpiled material and bund walls should be covered by tarpaulin until used in order to prevent wind-blown dust during dry weather, and to reduce muddy runoff during wet weather. Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. If any topsoil-like materials need to be stockpiled for any length of time, consideration should be given to hydroseeding of the topsoil on the stockpile to improve its visual appearance and prevent soil erosion. Nomination of approved personnel to be responsible for good site practices and making arrangements for collection of all wastes generated on-site and effective disposal. Training of site personnel for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concepts. Regular cleaning and maintenance programme systems, sumps and oil interceptors. Prior to disposal of C&D waste, wood, steel and other metals should be separated for re-use and/or recycling to minimise the quantity of waste to be disposed of to landfill. Proper storage and site practices should be implemented to minimise the potential for damage or contamination of construction materials. Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. Minimise excessive ordering of concrete, mortars and cement grout by doing careful check before ordering.	Good site practice to minimise C&D waste generation and reuse/recycle all C&D on-site as far as possible	Contractor	Entire construction site	Waste Disposal Ordinance ETWB TC(W) No. 19/2005 DEVB TC(W) No. 6/2010	✓
S6	WM2	<u>Chemical Waste</u> Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Plant/equipment maintenance schedule should be designed to optimise maintenance effectiveness and to minimise the generation of chemical wastes. Where possible, chemical wastes (e.g. waste lube oil) should be recycled by licensed treatment facilities	Ensure proper disposal of chemical waste generated on-site to minimise the associated hazards on human health and environment	Contractor	Entire construction site	Waste Disposal (Chemical Waste) General Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	✓

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S6	WM2	<u>Chemical Waste (Cont'd)</u> Containers used for storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD. Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulation. The storage area for chemical wastes should be clearly labelled and used solely for storage of chemical waste, enclosed with at least 3 sides, having an impermeable floor and bund of sufficient capacity to accommodate 110% of volume of the largest container or 20 % of total volume of waste stored in that area, whichever is the greatest, having adequate ventilation, being covered to prevent rainfall entering, and being arranged so that incompatible materials are adequately separated. Chemical waste should be collected by licensed waste collectors and disposed of at licensed facility, e.g. Chemical Waste Treatment Centre.	Ensure proper disposal of chemical waste generated on-site to minimise the associated hazards on human health and environment.	Contractor	Entire construction site	Waste Disposal (Chemical Waste) General Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	✓
S6	WM3	<u>General Refuse</u> General refuse generated on-site should be properly stored in enclosed bins or compaction units separately from construction and chemical wastes. All recyclable materials (separated from the general waste) should be stored on-site in appropriate containers with cover prior to collection by a local recycler for subsequent reuse and recycling. Residual, non-recyclable, general waste should be stored in appropriate containers to avoid odour. Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts during transportation Reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. Aluminium cans should be separated from general waste stream and collected by recyclers. Proper collection bins should be provided on- site to facilitate the waste sorting.	Minimise generation of general refuse to avoid odour, pest and visual nuisance	Contractor	Entire construction site	Waste Disposal Ordinance	✓

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S6	WM3	<u>General Refuse (Cont'd)</u> Office waste paper should recycled if the volume warrant collection by recyclers. Participation in community waste paper recycling programme should be considered by the Contractor, including waste paper, aluminium cans, plastic bottles, waste batteries, etc.	Minimise generation of general refuse to avoid odour, pest and visual nuisance	Contractor	Entire construction site	Waste Disposal Ordinance	✓

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LFG							
Within NENT Landfill Extension							
S7	LFG1	Special LFG precautions should be taken due to close proximity of NENT landfill extension site to existing landfill to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity).	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) F&IU (Confined Spaces) Regulations Code of Practice on Safety and Health at Work in Confined Spaces	✓
S7	LFG2	Prominent safety warning signs should be erected on-site to alert all personnel and visitors of LFG hazards during excavation works.					✓
S7	LFG3	No smoking or burning should be permitted on-site.					✓
S7	LFG4	Prominent 'No smoking' and 'No Naked Flames' signs should be erected on-site.					✓
S7	LFG5	No worker should be allowed to work alone at any time in excavated trenches or confined areas on-site.					✓
S7	LFG6	Adequate fire fighting equipment should be provided on-site.					✓
S7	LFG7	Construction equipment should be equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors.					✓
S7	LFG8	Electrical motors and extension cords should be explosion-proof and intrinsically safe for use on-site.					✓
S7	LFG9	'Permit to Work' system should be implemented.					✓
S7	LFG10	Welding, flame-cutting or other hot works should be conducted only under 'Permit to Work' system following clear safety requirements, gas monitoring procedures and presence of qualified persons to supervise the works.					✓
S7	LFG11	For piping assembly or conduit construction, all valves and seals should be closed immediately after installation to avoid accumulation and migration of LFG. If installation of large diameter pipes (diameter >600mm) is required, the pipe ends should be sealed on one side during installation. Forced ventilation is required prior to operation of installed pipeline. Forced ventilation should also be required for works inside trenches deeper than 1m.	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) F&IU (Confined Spaces) Regulations Code of Practice on Safety and Health at Work in Confined Spaces	✓
S7	LFG12	Frequency and location of LFG monitoring within excavation area should be determined prior to commencement of works. LFG monitoring in excavations should be conducted at no more than 10mm from exposed ground surface.					✓

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LFG							
Within NENT Landfill Extension							
S7	LFG13	For excavation works, LFG monitoring should be conducted (1) at ground surface prior to excavation, (2) immediately before workers entering excavations, (3) at the beginning of each half-day work, and (4) periodically throughout the working day when workers are in the excavation.	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) F&IU (Confined Spaces) Regulations Code of Practice on Safety and Health at Work in Confined Spaces	✓
S7	LFG14	Any cracks on ground level encountered on-site should be monitored for LFG periodically. Appropriate action should be taken in accordance with the action plan in Table 7.6 of EIA Report.					✓
S7	LFG15	LFG precautionary measures involved in excavation and piping works should be provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase. Temporary offices or buildings should be located where free LFG has been proven or raised clear of ground at a separation distance of at least 500mm.					✓
S7	LFG16	For large development such as NENT landfill extension, a Safety Officer trained in the use of gas detection equipment and LFG-related hazards should be present on-site throughout the groundwork phase. The Safety Officer should be provided with an intrinsically safe portable instrument appropriately calibrated and capable of measuring the following gases: •CH_4: 0-100% and LEL: 0-100%/v •CO_2: 0-100% •O_2: 0-21%					✓
S7	LFG17	Periodically during groundwork construction, the works area should be monitored for CH_4 CO_2 and O_2 using appropriately calibrated portable gas detection equipment. The monitoring frequency and areas should be established prior to commencement of groundwork either by Safety Officer or appropriately qualified person. Routine monitoring should be carried out in all excavations, manholes, created by temporary storage of building materials on-site. All measurements in excavations should be made with monitoring tube located not more than 10mm from exposed ground surface.					✓

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Within NENT Landfill Extension (Cont'd)							
S7	LFG18	For excavations deeper than 1m, measurements should be conducted: • At ground surface before excavation commences; • Immediately before any worker enters the excavation; • At the beginning of each working day for entire period the excavation remains open; and • Periodically throughout the working day whilst workers are in excavation.	To minimise the risk of LFG hazards to personnel in construction site	Contractor	Entire construction site	Landfill Gas Hazard Assessment Guidance Note (EPD/TR8/97) F&IU (Confined Spaces) Regulations Code of Practice on Safety and Health at Work in Confined Spaces	✓
S7	LFG19	For excavations between 300mm and 1m, measurements should be conducted: • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.					✓
S7	LFG20	For excavations less than 300mm, monitoring may be omitted at the discretion of Safety Officer or appropriately qualified person.					✓

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Landscape and Visual Phases							
S8	LV1	<u>Advanced screening tree planting</u> • Early planting using fast growing trees and tall shrubs at strategic locations within site to block major view corridors to the site from the VSRs, and to locally screen haul roads, excavation works and site preparation works. • Roadside planter and shrub planting design in front of Cheung Shan Temple.	To minimise the impact on existing vegetation retained by personnel in construction To provide initiation on permanent landscape and visual mitigation measures	Contractor	Entire construction site	DEVB TC(W) No. 4/2020 - Tree Preservation DEVB TC(W)) No. 6/2015 - Maintenance of Vegetation and Hard Landscape Features DEVB TC(W) No. 6/2011 - Maintenance of Man-made Slopes and Emergency Repair on Stability of Land	Advanced screen tree planting is under planning.
S8	LV2	<u>Boundary Green Belt planting</u> • Considerable planting belts proposed around the site perimeter and the construction of temporary soil bunds will screen the landfill operations to a certain degree. Fast growing and fire resistant plant species will be used.					To be implemented during operation phase
S8	LV3	<u>Temporary landscape treatment as green surface cover</u> • For certain areas where landfilling operations would have to be suspended temporarily for periods of years, simple temporary landscape treatment such as hydroseeding should be considered. During construction and operational phases, grass hydroseeding or synthetic covering material of green colour should also be used as a temporary slope cover if applicable.					Grass hydroseeding will be applied at Portion E3-2.
S8	LV4	<u>Existing tree preservation</u> • Transplant existing trees and vegetation, which are identified as ecologically significant in Ecological Impact Assessment and as rare tree species recorded in the tree survey, under circumstances where technically feasible. For all affected trees, the principle of avoidance of tree felling and tree transplanting of tree before felling should apply whenever possible. A tree felling application should be submitted to DEVB-GLTMS and be approved before any trees are felled or transplanted.					✓

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Ecology							
General Protection Measures:							
S10	E1	Restriction of construction activities to the work areas that would be clearly demarcated.	To minimise environmental impacts and therefore potential ecological impacts within and near the construction site	Contractor	Entire construction site	Practice Note for Professional Persons (ProPECC), Construction Site Drainage (PN1/94) Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, EPD (1992) ETWB TC(W)) No. 33/2002 Management of Construction and Demolition Material Including Rock DEVB TC(W) No. 6/2010 Trip Ticket System for Disposal of Construction and Demolition Materials ETWB TC(W)No.19/2005 Environmental Management on Construction Sites	✓
S10	E2	Reinstatement of the work areas immediately after completion of the works.					✓
S10	E3	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.					✓
S10	E4	Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum.					✓
S10	E5	Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs.					✓
S10	E6	Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works.					To be implemented
S10	E7	Mobile plant should be sited as far away from NSRs as possible and practicable.					✓
S10	E8	Material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					✓
S10	E9	Use of “quiet” plant and working methods.					✓
S10	E10	Construction phase mitigation measures in the Practice Note for Professional Persons on Construction Site Drainage.					✓

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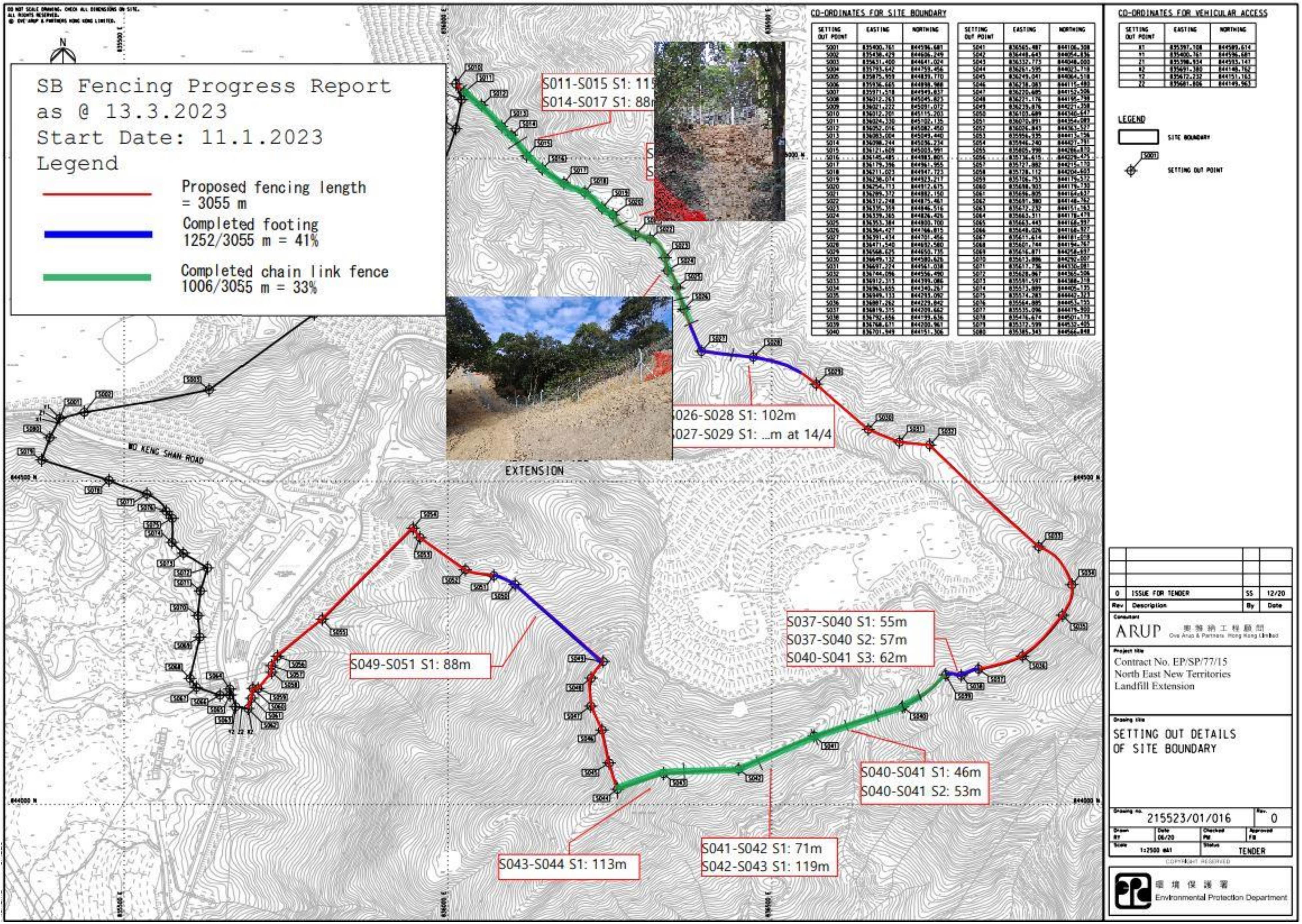
Ecology							
General Protection Measures:							
S10	E11	Design and set up of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction.	To minimise environmental impacts and therefore potential ecological impacts within and near the construction site	Contractor	Entire construction	WBTC No. 12/2002, Specifications Facilitating the Use of Recycled Aggregates WBTC Nos. 25/99,25/99A and 25/99C. Incorporation of Information on Construction and Demolition Material Management in Public Works Subcommittee Papers	✓
S10	E12	Design and incorporation of silt/sediment traps in the permanent drainage channels to enhance deposition rates and regular removal of reposited silt and grit.					✓
S10	E13	Minimization of surface excavation works during the rainy seasons (April to September), and in particular,control of silty surface runoff during storm events, especially for areas located near steep slopes.					✓
S10	E14	Regular inspection and maintenance of all drainage facilities and erosion and sediment control structures to ensure proper and efficient operation at all times and particularly following rainstorms.					✓
S10	E15	Provision of oil interceptors in the drainage system downstream of any oil/fuel pollution sources					✓

Appendix L Construction Site Activities

Construction Activities	Photos	When	Where	Who	What - ENV Impacts	Mitigation Measures
Material loading and unloading, site traffic		Dec 22 to Dec 23	Portion A, SBA to Alternative Disposal Ground	PYE	Dust, bringing mud to the common haul road	Speed limit, covering of materials and water spraying, lorry washing at the exit of the site
Permanent site office foundation works with pouring of concrete		Dec 22 to June 23	Portion D	PYE	Washout flowing to site water discharge point, dust emissions	Avoid the spillage of concrete, lorry washing at designated area, operation and maintenance of water treatment facility at discharge point
Site clearance		Dec 22 to June 23	Portion A, Portion E3-1	PYE	Wash out going to surface water channel and site water discharge point, generation of yard waste	Cover exposed slope by tarpaulin, diversion of surface water, operation and maintenance of water treatment facility at discharge point, implementation of trip ticket system
Installation of permanent fencing		Dec 22 to June 23	Portion A, Portion B1, Portion E4	PYE	Dust	Covering of cement storage area, enclosure of mixing area
Site formation		Dec 22 to Dec 23	Portion A, Portion E3-1	PYE	Generation of C&D waste	Implementation of trip ticket system, waste recycling, internal waste transfer
Tree Felling		Dec 22 to June 23	Portion E3-1, E4	PYE	Generation of yard waste	Implementation of trip ticket system, waste recycling, internal waste transfer

Remark:
PYE is the Sub-contractor for this project.

Appendix M Mitigation Measures of Cultural Landscape Features


SB Fencing Progress Report
as @ 13.3.2023
Start Date: 11.1.2023
Legend
Proposed fencing length = 3055 m
Completed footing 1252/3055 m = 41%
Completed chain link fence 1006/3055 m = 33%
S011-S015 S1: 115
S014-S017 S1: 88m
026-S028 S1: 102m
027-S029 S1: ...m at 14/4
S049-S051 S1: 88m
S037-S040 S1: 55m
S037-S040 S2: 57m
S040-S041 S3: 62m
S040-S041 S1: 46m
S040-S041 S2: 53m
S043-S044 S1: 113m
S041-S042 S1: 71m
S042-S043 S1: 119m
WO KENG SHAN ROAD
EXTENSION
CO-ORDINATES FOR SITE BOUNDARY
CO-ORDINATES FOR VEHICULAR ACCESS
LEGEND
SITE BOUNDARY
SETTING OUT POINT
0 ISSUE FOR TENDER SS 12/20
Rev Description By Date
Consultant
ARUP
Ove Arup & Partners Hong Kong Limited
Project title
Contract No. EP/SP/77/15
North East New Territories
Landfill Extension
Drawing title
SETTING OUT DETAILS
OF SITE BOUNDARY
Drawing no. 215523/01/016
Rev. 0
Drawn RY
Date 06/20
Checked PM
Approved FB
Scale 1:2500 @A1
Status TENDER
COPYRIGHT RESERVED
環 境 保 護 署
Environmental Protection Department

Appendix N Ecological Monitoring Record

Post-translocation monitoring photo record extracted from post-translocation report (April 2023)

Site photos of the monitoring area

Hand netting to search for *S. zanklon*


Kick-netting to search for *S. zanklon*


Direct Observation to search for *S. zanklon*

B.1 Incense Tree *Aquilaria sinensis*

Photo B.1.1. : General view of the transplanted individual AS-03.

Photo B.1.2. : Stem condition of the transplanted individual AS-03.

Photo B.1.3. : General view of the transplanted individual AS-02.

Photo B.1.4. : Branch condition of the transplanted individual AS-02.

B.2 Lamb of Tartary *Cibotium barometz*

Photo B.2.1. : General view of the transplanted individual CB-01.

Photo B.2.2. : New foliage of the transplanted individual CB-01.

Photo B.2.3. : Leaf condition of the new foliage.

Photo B.2.4. : General view of the transplanted individual CB-01.

B.3 Bottlebrush Orchid *Goodyera procera*

Photo B.3.1: Individual GP-01. Flowering.

Photo B.3.2: Individual GP-02.

Photo B.3.3: Individual GP-03.

Photo B.3.4: Individual GP-03. Flowering.

Photo B.3.5: Individual GP-04.

Photo B.3.6: Individual GP-04. Flowering.

Photo B.3.7: Individual GP-05.

Photo B.3.8: Individual GP-05. Flowering.

Photo B.3.9: Individual GP-06.

Photo B.3.10: Individual GP-06. Flowering.

Photo B.3.11: Individual GP-07.

Photo B.3.12: Individual GP-07. Partially wilted leaf.

Photo B.3.13: Individual GP-08.

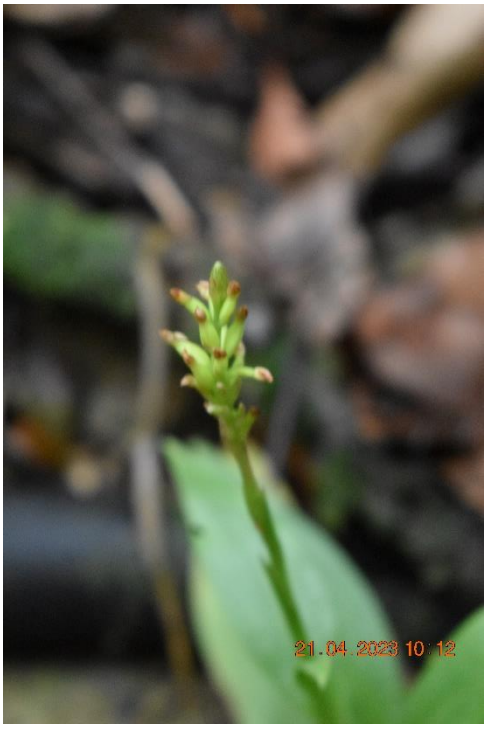


Photo B.3.14: Individual GP-08. Flowering.

Photo B.3.15: Individual GP-09. Flowering.

Photo B.3.16: Individual GP-10. Flowering.

Photo B.3.17: Individual GP-11. Flowering.

Photo B.3.18: Individual GP-11. Flowering.

Photo B.3.19: Individual GP-12. Flowering.

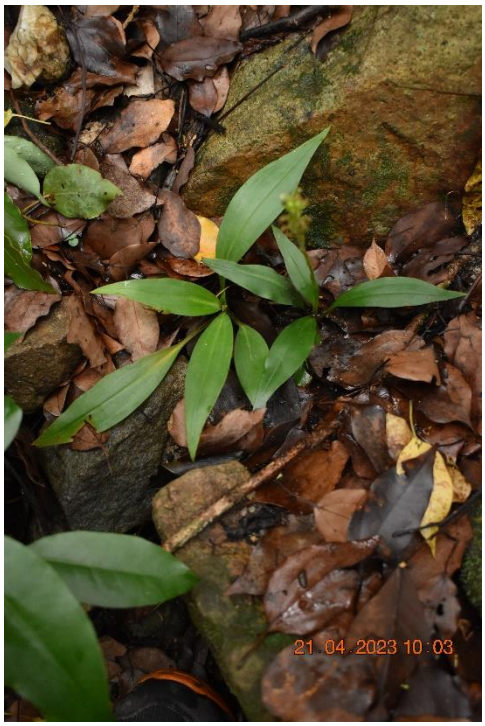


Photo B.3.20: Individual GP-13. Flowering.

Photo B.3.21: Individual GP-14.

Photo B.3.22: Individual GP-14. Flowering.

Photo B.3.23: Individual GP-15.

Photo B.3.24: Individual GP-15. Flowering.

Photo B.3.25: Individual GP-16.

Photo B.3.26: Individual GP-16. Flowering.

Photo B.3.27: Individual GP-17.

Photo B.3.28: Individual GP-18. Flowering.

Photo B.3.29: Individual GP-18. Flowering.

Photo B.3.30: Individual GP-19. Flowering.

Photo B.3.31: Individual GP-19. Flowering

Appendix O Detail Status of EP Submission

Detail Status of Submissions required under the FEP & EP

FEP Condition	EP Condition	Submission / Measures	Status
2.1	2.3	Management Organization of Main Construction Companies	Submission Date (12 Oct 2022)
2.2	2.4	Setting up of Community Liaison Group (CLG)	Submission Date (12 Oct 2022) 1st CLG meeting (12 Jan 2023)
2.3	2.5	Submission of EM&A Manual	Submission Date (12 Oct 2022)
2.4	2.6	Submission of Preservation of Cultural Landscape Features	Survey and Preservation of Grave Records: Submission Date (15 Oct 2022) Survey and Preservation of Boulder Paths: Submission Date (12 Oct 2022)
2.5	2.7	Submission of Vegetation Survey (Transplantation Proposal)	Submission Date (2 September 2022)
2.6	2.8	Submission of translocation proposal	Submission Date (8 July 2022)
2.7	2.9	Submission of Transplantation Report and Post-Transplantation Monitoring	Submission Date (19 Jan 2023) 1st monitoring (24 Nov 2022) 2nd monitoring (9 Dec 2022) 3rd monitoring (21 Dec 2022) 4th monitoring (13 Jan 2023) 5th monitoring (26 Jan 2023) 6th monitoring (8 Feb 2023) 7th monitoring (24 Feb 2023) 8th monitoring (20 Mar 2023) 9th monitoring (21 Apr 2023)

FEP Condition	EP Condition	Submission / Measures	Status
2.8	2.10	Submission of Translocation Report and Post-Translocation Monitoring	Translocation was carried out in July 2022 Submission Date (27 December 2022) 1st monitoring (29 Aug 2022) 2nd monitoring (28 Sep 2022) 3rd monitoring (28 Oct 2022) 4th monitoring (28 Oct 2022) 5th monitoring (29 Dec 2022) 6th monitoring (30 Jan 2023) 7th monitoring (24 Feb 2023) 8th monitoring (20 Mar 2023) 9th monitoring (19 Apr 2023)
2.9	2.11	Submission of Detailed Landfill Gas Hazard Assessment Report	Submission Date (6 Oct 2022)
2.10	2.12	Submission of Waste Management Plan	Submission Date (30 December 2022)
3.2	3.2	Submission of Baseline Monitoring Report	Submission Date (30 Nov 2022)

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