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

Monthly Environmental Monitoring and Audit Report (No. 12) – November 2023

2023-12-12

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Our Ref.: CL/91823/0926-VES
Date: 14 December 2023

By Email

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

Attn.: Mr. Colin Mitchell

Dear Sir

Re: Contract No. EP/SP/77/15
North-East New Territories Landfill Extension (NENTX)
Monthly Environmental Monitoring and Audit Report (No.12) – November 2023

I refer to Condition 3.3 under Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007 and FEP-02/292/2007, regarding the submission of a monthly Environmental Monitoring and Audit report. I hereby verify the captioned "Monthly Environmental Monitoring and Audit Report (No.12) – November 2023" dated 12 December 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,
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Ref: P521530-0000-REP-NN-0078

By Email

13 December 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.12) – November 2023

In accordance with the requirement specified in Condition 3.3 of Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-02/292/2007, we are pleased to submit the certified "Monthly Environmental Monitoring and Audit Report (No.12) – November 2023" dated 12 December 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.12) – November 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

Contents

Figure

Appendix

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 12th Monthly EM&A Report presents the EM&A works conducted from 1 to 30 November 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
-	Construction of site buildings at Portion D
-	Site clearance at Portion A, B2/E1, E3-1 & E4
-	Installation of permanent fencing at Portion A, B1 & E4
-	Site formation at Portion A & E3-1
-	Tree felling at Portion B2/E1, E3-1 & E4
-	Shotcreting (Permanent and Temporary)

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	2, 8 (Only at AM1 & AM3), 14, 15 (Only at AM2), 20 & 25 November 2023
-	Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	3, 8, 14 & 20 November 2023
-	Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	8 November 2023
-	Landfill Gas Monitoring during normal weekdays for Construction Works	26 times	1 to 4, 6 to 11, 13 to 18, 20 to 25, 27 to 30 November 2023
-	Joint Environmental Site Inspection	4 times	6, 13, 20 & 27 November 2023
-	General Site Inspection by EPD-RNG	1 time	27 November 2023

Environmental Exceedance

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

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

Environmental Non-conformance/Complaint/Summons and Prosecution

No non-compliance event, complaint and summons/prosecutions were recorded during the 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
-	Construction of site buildings at Portion D
-	Site clearance at Portion A, B2/E1, E3-1 & E4
-	Installation of permanent fencing at Portion A, B1 & E4
-	Site formation at Portion A & E3-1
-	Tree felling at Portion B2/E1, E3-1 & E4
-	Shotcreting (Permanent and Temporary)

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. Another further of EP (FEP-02/292/2007) was subsequently granted on 23 August 2023.

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 12th 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 November 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

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 Hong Kong Holding Ltd.)	Mr. Matt Choy	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 N**.

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
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 2-3**.

Table 2-3 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-01/292/2007	Throughout the Contract	Permit granted on 28 April 2022
Further Environmental Permit (FEP)	FEP-02/292/2007	Throughout the Contract	Permit granted on23 August 2023
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-RN1012-23	22 December 2023	Permit granted on 22 September 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 **Table2-4**.

Table 2-4 Summary of the Monitoring Activities in this reporting period

	Items	Times	Date
-	Air Quality Monitoring during normal weekdays at each monitoring station	5 times	2, 8 (Only at AM1 & AM3), 14, 15 (Only at AM2), 20 & 25 November 2023
-	Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	3, 8, 14 & 20 November 2023
-	Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	8 November 2023
-	Landfill Gas Monitoring during normal weekdays for Construction Works	26 times	1 to 4, 6 to 11, 13 to 18, 20 to 25, 27 to 30 November 2023
-	Joint Environmental Site Inspection	4 times	6, 13, 20 & 27 November 2023
-	General Site Inspection by EPD-RNG	1 time	27 November 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 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 at each monitoring stations was recorded during the reporting period.

Landfill Gas

26 sets of landfill gas measurement were carried out at the designated monitoring locations 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

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 20 November 2023. The Contractor has generally implemented part of the mitigation measures as recommended. One general site inspection was conducted by Environmental Protection Department-Regional Office (North) (EPD-RNG) during the reporting period.

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)	3 Jan 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: 942532)		
Calibration Kit (for HVS)	TE-5025A (S/N: 4166)	19 Jun 2024	AM1 to AM3

Remarks:
The Expiry Date of Calibration Kit (for HVS) reflected that the calibration certificate fulfils the bi-monthly calibration interval requirement for the HVS.

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 "ESCAPE" 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

Month	Average 1-hr TSP Concentration, µg/m³ (Range)		
	Dust Monitoring Station		
	AM1	AM2	AM3
Nov 2023	28 (22 – 36)	34 (30 – 39)	37 (30 – 43)
Action Level	**>285**	**>279**	**>285**
Limit Level	**>500**		

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

Month	Average 24-hr TSP Concentration, μg/m³ (Range)		
	Dust Monitoring Station		
	AM1	AM2	AM3
Nov 2023	112 (101 – 128)	89 (70 – 110)	101 (88 – 117)
Action Level	**>164**	**>152**	**>163**
Limit Level	**>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		AM1		AM2		AM3	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level	Action Level	Limit Level
1-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	0	0	0
24-hr TSP	Exceedance Date	-	-	-	-	-	-
	Exceedance Count	0	0	0	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-13663-F0)	14 Feb 2024
Acoustic Calibrator	Rion NC-75 (S/N: 34724245)	2 Aug 2024
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)

Month	Average Leq, 30min, dB(A) (Range)	
	Noise Monitoring Station	
	NM1a	NM2a
Nov 2023	60.0 (52.2 – 63.3)	49.1 (47.7 – 49.8)
Action Level	**When one documented complaint is received**	
Limit Level	**>75dB(A)**	

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.

4.5.4 The Summary of Impact Noise Exceedance are shown in **Table 4-5**.

Table 4-5 Summary of Impact Noise Exceedance during the reporting period

Noise Monitoring Station		NM1(a)		NM2(a)	
Parameters / Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
LA_{eq}(30mins)	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

4.5.5 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 F**.

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 4-6** shall be carried out.

Table 4-6 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 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: PPHNOMXY)	21 Nov 2023
Water Flow Meter	Global Water FP211 (S/N: 22K100858)	26 Mar 2024

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 8 November 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.

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	7.6	>7.7	>7.8	7.5	>7.6	>7.7
DO in mg/L	7.5	<7.4	<4	6.5	<5	<4
Turbidity in NTU	5.1	>9.2	>9.5	20.8	>108.3	>108.9
Electrical Conductivity in µS/cm	59	---	---	159	---	---
SS in mg/L	2.5	>9.7	>11.4	10.0	>94.5	>94.7
Alkalinity in mg/L	17	---		44	---	
COD in mg/L	7			<5		
BOD_5 in mg/L	<2			<2		
TOC in mg/L	2			2		
Ammonia-nitrogen in mg/L	0.07			0.06		
TKN in mg/L	0.5			0.1		
Nitrate in mg/L	0.05			0.19		
Sulphate in mg/L	<1			24		
Sulphite in mg/L	<2			<2		
Phosphorus in mg/L	0.0			<0.01		
Chloride in mg/L	6			6		
Sodium in µg/L	8120			6010		
Magnesium in µg/L	480			1470		
Calcium in µg/L	3330			19400		
Potassium in µg/L	600			2010		
Iron in µg/L	420			1340		
Nickel in µg/L	<1			2		
Zinc in µg/L	13			20		
Manganese in µg/L	41			1350		
Copper in µg/L	2.0			1		
Lead in µg/L	<1			1		
Cadmium in µg/L	<0.2			<0.2		
Coliform Count in cfu/100mL	25			56		
Oil and Grease in mg/L	<5			<5		

5.2.5.4 The Summary of Impact Surface Water Quality Exceedance are shown in **Table 5-6**.

Table 5-6 Summary of Impact Surface Water Quality Exceedance during the reporting period

Surface Water Quality Monitoring Station		WM1		WM2	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
pH	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
DO	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
Turbidity	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
SS	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

5.2.5.5 No exceedance of Action and Limit Level of surface water quality at designated locations was recorded during the reporting period. The Notification of Environmental Quality Limits Exceedance is presented in **Appendix G**.

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 layout of the temporary surface water drainage system is presented in **Appendix P**. 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 5-7** shall be carried out.

Table 5-7 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 73,352 tonnes of C&D materials was reused at alternative disposal ground (NENT Landfill) during the reporting period. No Yard waste (collected to Y-Park) was generated during the reporting period. A total of 2629.37 tonnes of Imported fill was generated during the reporting period. A total of 35.13 tonnes of general refuse and A total of 110.74 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 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 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.

7.2.4 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.

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

7.2.6 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** and the Layout of LFG monitoring locations is presented in **Figure 3**.

Table 7-1 Locations of LFG Monitoring during reporting period

Monitoring Location	Type of works
Portion A +50 mpD to 70 mpD Platform	Excavation Works

7.3 Monitoring Equipment

7.3.1.1 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**. The detection limits are provided in **Table 7-3**.

Table 7-2 LFG Monitoring Equipment

Monitoring Parameters	Equipment	Model	Expiry Date
CH_4, CO_2 & O_2	Gas Analyser	GEM5000 (S/N: G505207)	30 Aug 2024

Table 7-3 Landfill Gas Monitoring Detection Limits

Parameters	Detection Limit
CH_4	1% LEL
O_2	0.1%
CO_2	0.1%

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 7-4** shall be carried out.

Table 7-4 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 carried out two rounds (at the beginning of works in the morning and after lunch) at the working days. The monitoring period of each round of LFG monitoring is around 5 minutes.

7.5.2 The LFG monitoring was conducted at Portion A +50 mpD to 70 mpD Platform in November 2023 (Conducted on working days). The LFG monitoring results are summarized in **Table 7-5.**

Table 7-5 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 %
		Average Monitoring Results			
Portion A +50 mpD to 70 mpD Platform	1 Nov 2023	0	0	0	20.1
	2 Nov 2023	0	0	0	20.2
	3 Nov 2023	0	0	0	20.1
	4 Nov 2023	0	0	0	20.2
	6 Nov 2023	0	0	0	20.2
	7 Nov 2023	0	0	0	20.1
	8 Nov 2023	0	0	0	20.1
	9 Nov 2023	0	0	0	20.2
	10 Nov 2023	0	0	0	20.1
	11 Nov 2023	0	0	0	20.0
	13 Nov 2023	0	0	0	20.1
	14 Nov 2023	0	0	0	20.1
	15 Nov 2023	0	0	0	20.1
	16 Nov 2023	0	0	0	20.1
	17 Nov 2023	0	0	0	20.0
	18 Nov 2023	0	0	0	20.2
	20 Nov 2023	0	0	0	20.1
	21 Nov 2023	0	0	0	20.1
	22 Nov 2023	0	0	0	20.1
	23 Nov 2023	0	0	0	20.1
	24 Nov 2023	0	0	0	20.1
	25 Nov 2023	0	0	0	20.1
	27 Nov 2023	0	0	0	20.1
	28 Nov 2023	0	0	0	20.1
	29 Nov 2023	0	0	0	20.1
	30 Nov 2023	0	0	0	20.1
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.

5.1.1.1 The Summary of Landfill Gas Exceedance are shown in **Table 7-6**.

Table 7-6 Summary of Landfill Gas Exceedance during the reporting period

Landfill Gas Monitoring Station		Portion A +50 mpD to 70 mpD Platform	
Parameters \ Level Exceedance		Action Level	Limit Level
CH_4	Exceedance Date	-	-
	Exceedance Count	0	0
CO_2	Exceedance Date	-	-
	Exceedance Count	0	0
O_2	Exceedance Date	-	-
	Exceedance Count	0	0

Remarks: * equal to non-project related

7.5.3 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**.

7.5.4 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 2022 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 The post-transplantation monitoring had been completed in October 2023. No further post-transplantation monitoring will be conducted in accordance with the requirement of the approved Transplantation Proposal for Plant Species of Conservation Importance (Rev.1).

10.1.2 The post-translocation monitoring had been completed in July 2023. No further post-translocation monitoring will be conducted in accordance with the requirements of the Revised Translocation Proposal for the Endemic Freshwater Crab *Somanniathelphusa zanklon*.

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-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
	10th	12 May 2023
	11th	16 Jun 2023
	12th	18 Jul 2023
	13th	11 Aug 2023
	14th	15 Sep 2023
	15 th	13 Oct 2023
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
	10th (May 2023)	17 May 2023
	11th (Jun 2023)	7 Jun 2023
	12th (Jul 2023)	12 Jul 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 06, 13, 20 & 27 November 2023. A joint environmental site inspection was carried out by the representatives of the ER, the Contractor, IEC and the ET on 20 November 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:

06 November 2023

Observation(s):

- The outside surrounding of the scaffolding without dust screen, sheeting or netting was found at the Portion D. The contractor was advised that the effective dust screens, sheeting or netting should be 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.
- The muddy water which is caused from the water spraying by the water sprinkler at the Portion A was found. The deposited silt and grit are found under the tower crane at the Portion A. The contractor was recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.
- The food waste was found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor was advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.
- The slope surface at the Portion E4 should be covered by impervious sheet properly. The contractor has been advised to cover the exposed slope surface by impervious sheet properly.

13 November 2023

Observation(s):

- The loaded dump truck without covering impervious sheet was found at the assess road between Portion A and E4. The contractor was recommended to ensure all of loaded dump trucks should be covered by impervious sheeting.

20 November 2023

Observation(s):

- The overloading of accumulated waste at portion A was found. The contractor was advised that the enough waste skip should be provided, and the waste should be clean regularly at portion A to prevent and avoid accumulated waste place on the floor.

- The general waste at the waste skip of SBA was found. The contractor was reminded that the general waste includes food waste should be stored at the enclosed bins. The enclosed bin with clear label should be provided at SBA near the waste skip.

- The slope surface at SBA without covering impervious sheets properly was found. The contractor was recommended that the exposed slope should be covered by impervious sheet.

27 November 2023

Reminder(s):

- The contractor has been reminded that water spraying shall be provided regularly for dust control.

11.1.4 One general site inspection was conducted by Environmental Protection Department-Regional Office (North) (EPD-RNG) during reporting period.

12 Environmental Non-conformance

12.1 Summary of Monitoring Exceedance

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

12.1.1 No exceedance of the Action Levels and Limit Level were recorded at designated monitoring stations during the reporting period. The Notification of Environmental Quality Limits Exceedance is presented in **Appendix G**.

12.1.2 The Summary of Impact 1-hr & 24-hr TSP Exceedance are shown in **Table 12-1**.

Table 12-1 Summary of Impact 1-hr & 24-hr TSP Exceedance during the reporting period

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

Remarks: * equal to non-project related

12.1.3 The Summary of Impact Noise Exceedance are shown in **Table 12-2**.

Table 12-2 Summary of Impact Noise Exceedance during the reporting period

Noise Monitoring Station		NM1(a)		NM2(a)	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
LA_{eq}(30mins)	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

12.1.4 The Summary of Impact Surface Water Quality Exceedance are shown in **Table 12-3**.

Table 12-3 Summary of Impact Surface Water Quality Exceedance during the reporting period

Surface Water Quality Monitoring Station		WM1		WM2	
Parameters \ Level Exceedance		Action Level	Limit Level	Action Level	Limit Level
pH	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
DO	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
Turbidity	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0
SS	Exceedance Date	-	-	-	-
	Exceedance Count	0	0	0	0

Remarks: * equal to non-project related

12.1.5 The Summary of Landfill Gas Exceedance are shown in **Table 12-4**.

Table 12-4 Summary of Landfill Gas Exceedance during the reporting period

Landfill Gas Monitoring Station		Portion A +50 mpD to 70 mpD Platform	
Parameters \ Level Exceedance		Action Level	Limit Level
CH_4	Exceedance Date	-	-
	Exceedance Count	0	0
CO_2	Exceedance Date	-	-
	Exceedance Count	0	0
O_2	Exceedance Date	-	-
	Exceedance Count	0	0

Remarks: * equal to non-project related

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 complaint was recorded during the reporting period. The cumulative statistics on environmental complaints are presented in **Table 12-5**.

Table 12-5 Cumulative Statistics on Environmental Complaints

Reporting Period		Environmental Aspects				
		Air Quality	Noise	Water Quality	Waste	Ecology
Nov 2022	Complaint Date	-	-	-	-	-
	No. of Complaint	0	0	0	0	0
Reporting Period Total		0	0	0	0	0
Accumulate of project		1	0	5	0	0

Remarks: * equal to non-project related after the investigation.

12.3.2 Cumulative complaint / enquiry log, Summaries of complaints and enquiries & Environmental complaint reports are presented in **Appendix O**.

12.4 Summary of Environmental Summons and Successful Prosecution

12.4.1 No summons and successful prosecution were received during the reporting period.

13 Implementation Status on Environmental Mitigation Measures

13.1 General

13.1.1 The Contractor has generally implemented part of 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**.

13.2 Temporary Surface Water Drainage System (TSWDS)

13.2.1 The effectiveness of the TSWDS is keeping reviewing and improve by the contractor. The layout of the TSWDS is presented in **Appendix P**.

13.3 Hydroseeding

13.3.1 The implementation of hydroseeding at the site boundary is keeping conducting by the contractor. The layout of implementation of hydroseeding is presented in **Appendix P**.

13.4 Slope Surface Protection

13.4.1 The implementation of measure for control of construction runoff is keeping conducting by the contractor. The layout & photo record of implementation of measure for control of construction runoff is presented in **Appendix P**.

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
-	Construction of site buildings at Portion D
-	Site clearance at Portion A, B2/E1, E3-1 & E4
-	Installation of permanent fencing at Portion A, B1 & E4
-	Site formation at Portion A & E3-1
-	Tree felling at Portion B2/E1, E3-1 & E4
-	Shotcreting (Permanent and Temporary)

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 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 Quality Monitoring was carried out in the reporting month. No Action / Limit Level exceedance of surface water quality was recorded during the reporting 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 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.

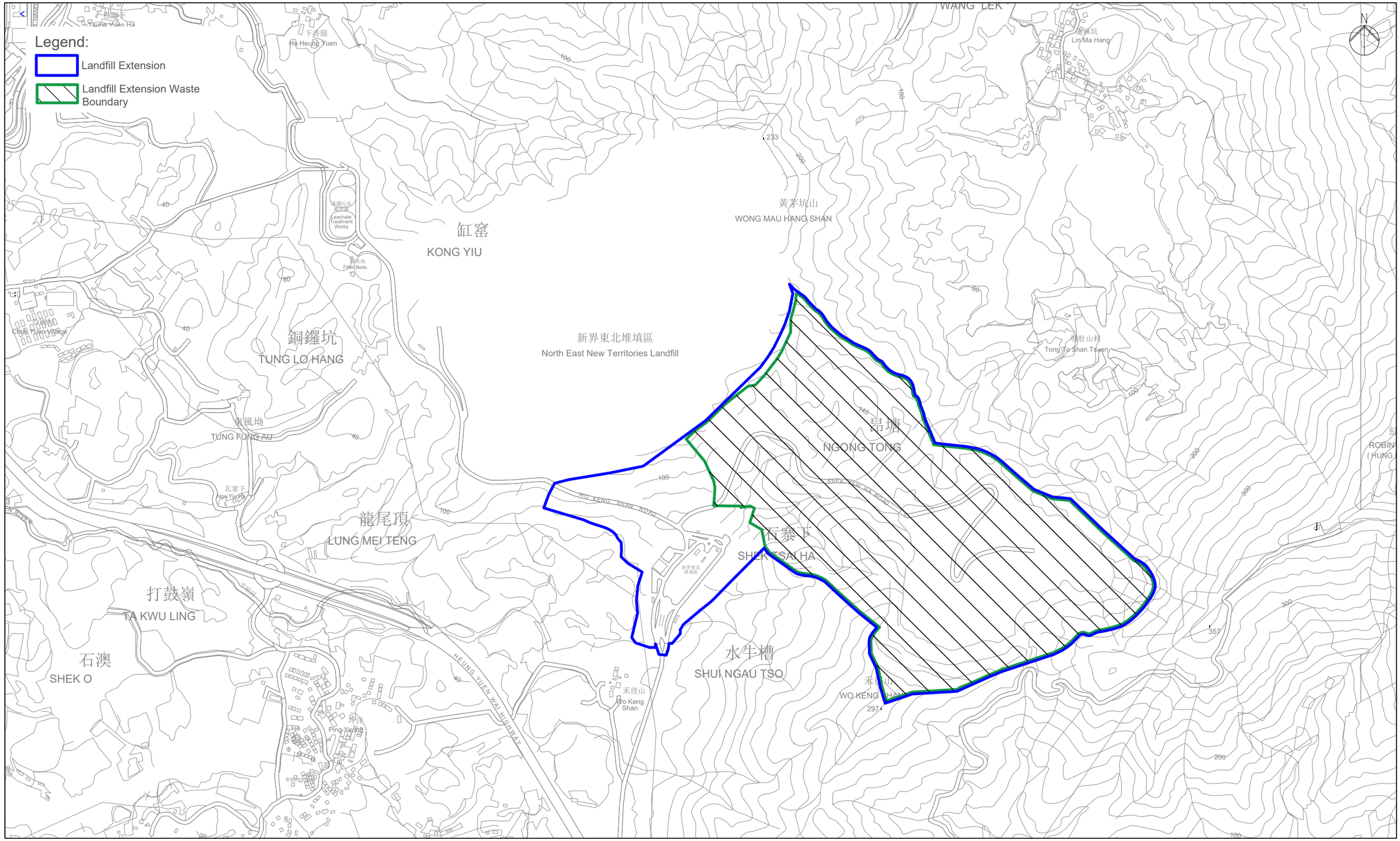
15.1.8 No complaint was recorded during the reporting period.

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

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

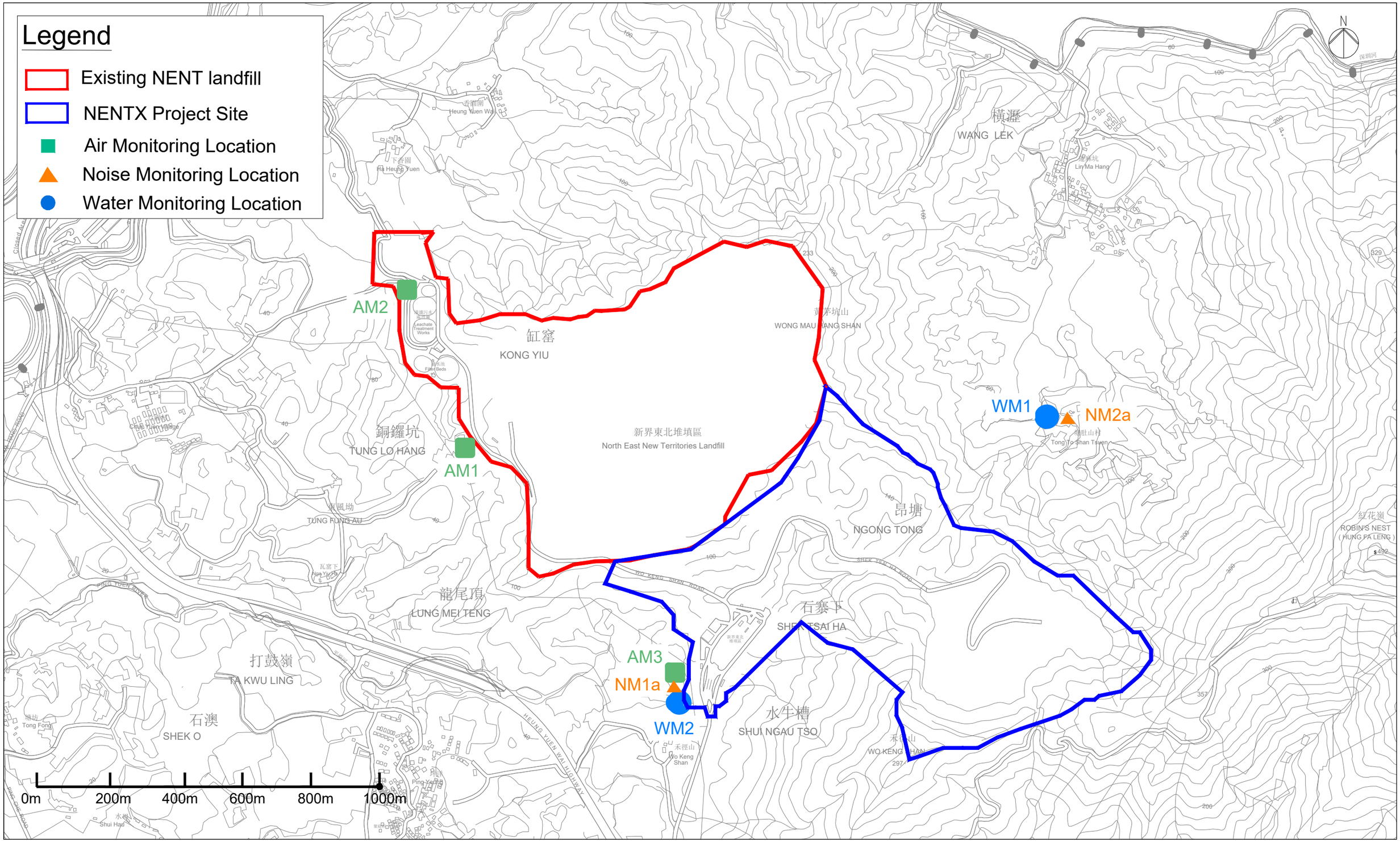
15.1.11 The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Figure 1 Location of the Project Site



aurecon 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 Quality, Noise & Surface Water Quality Monitoring Locations

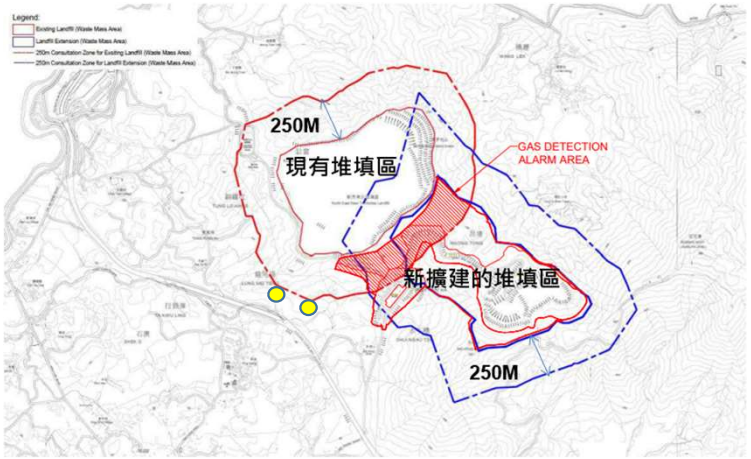


aurecon Aurecon Hong Kong Limited	North East New Territories (NENT) Landfill Extension Impact Monitoring Location	Figure 2

Figure 3 Landfill Gas Monitoring Locations

Gas Monitoring Point

Monitoring Frequency: 2 times per day



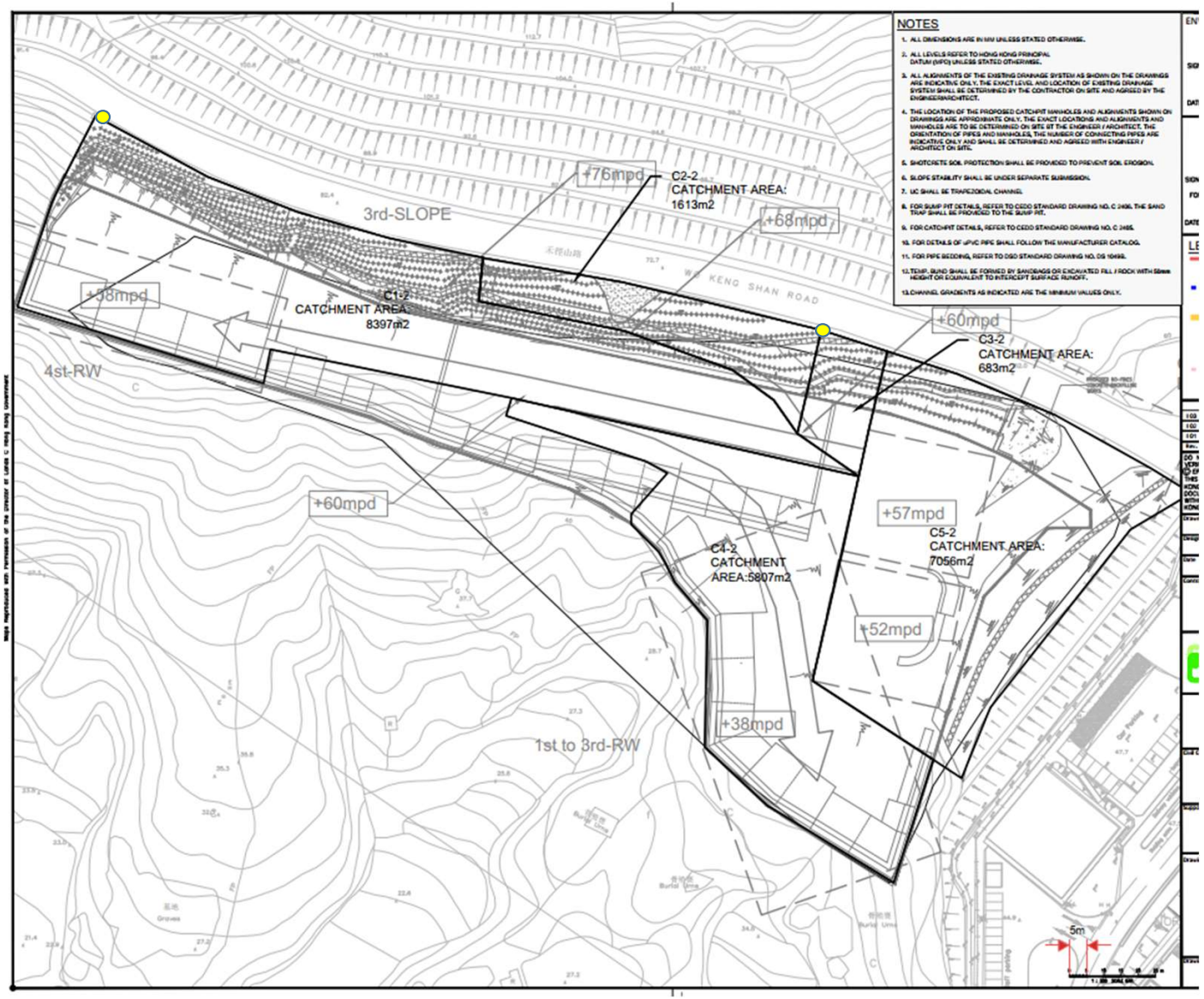
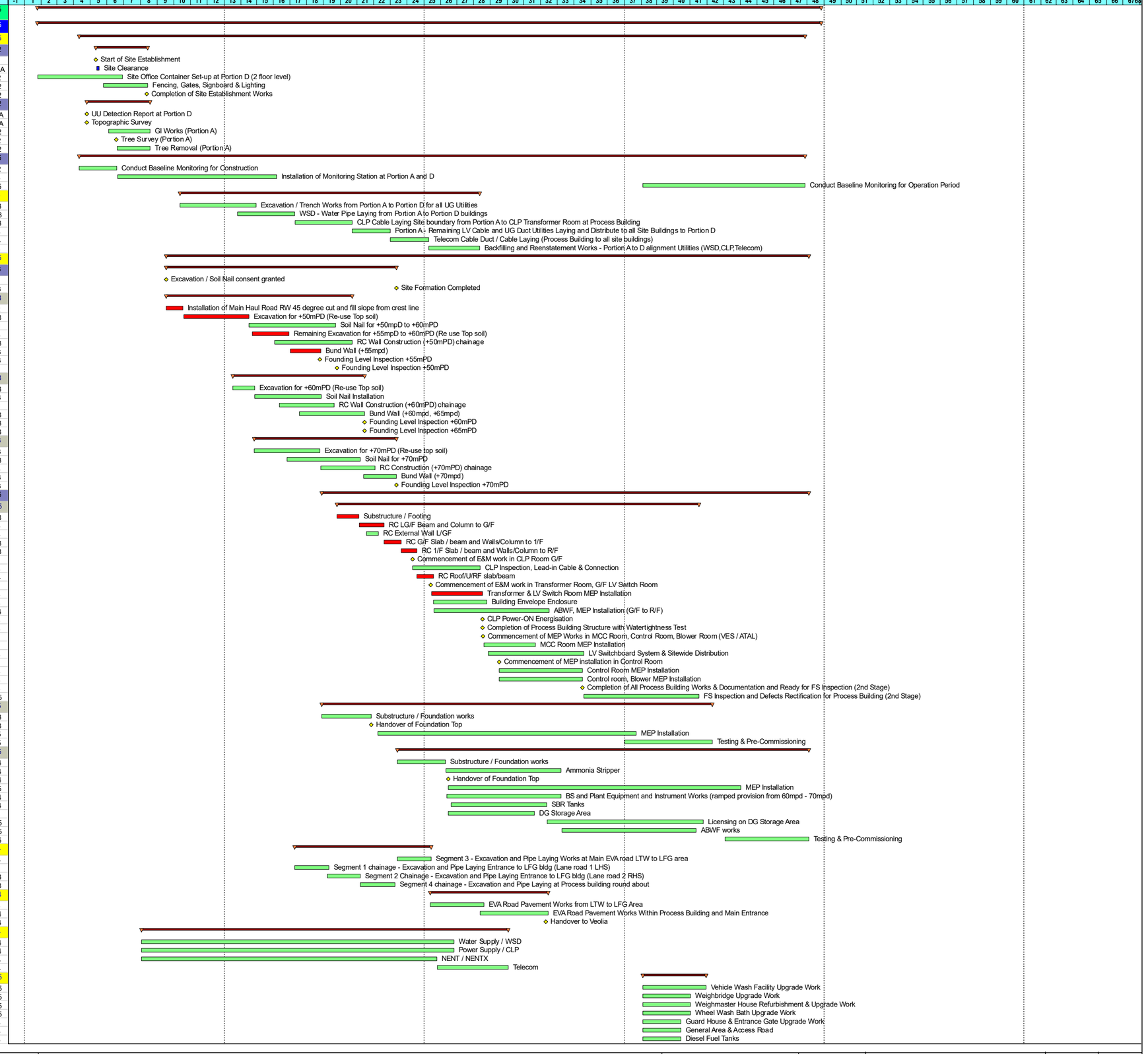


Figure 3 Landfill Gas Monitoring Locations

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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- Remaining Work
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- Summary

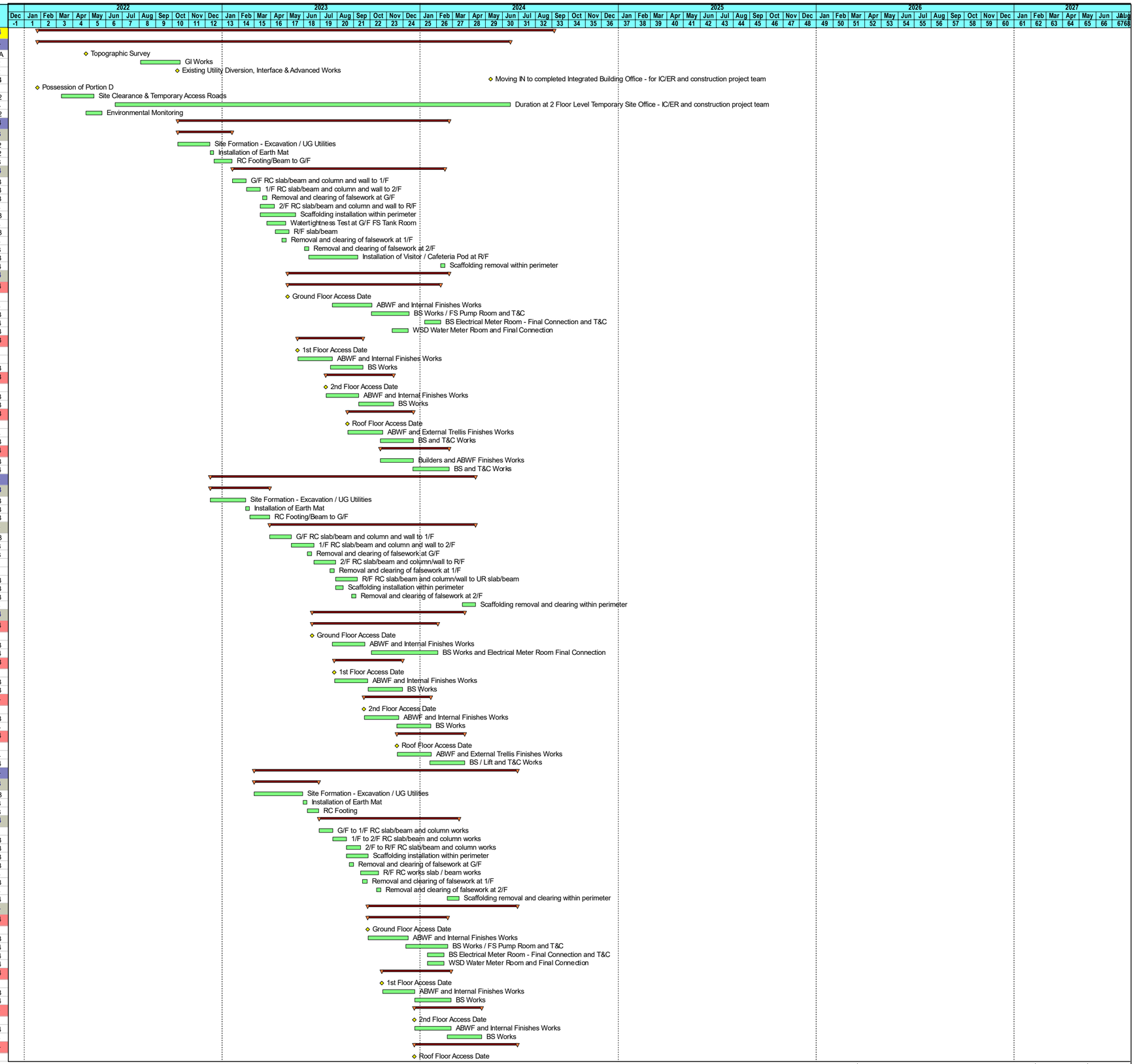
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

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

VEOLIA

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

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	



Remaining Level of Effort
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環境保護署
Environmental Protection Department

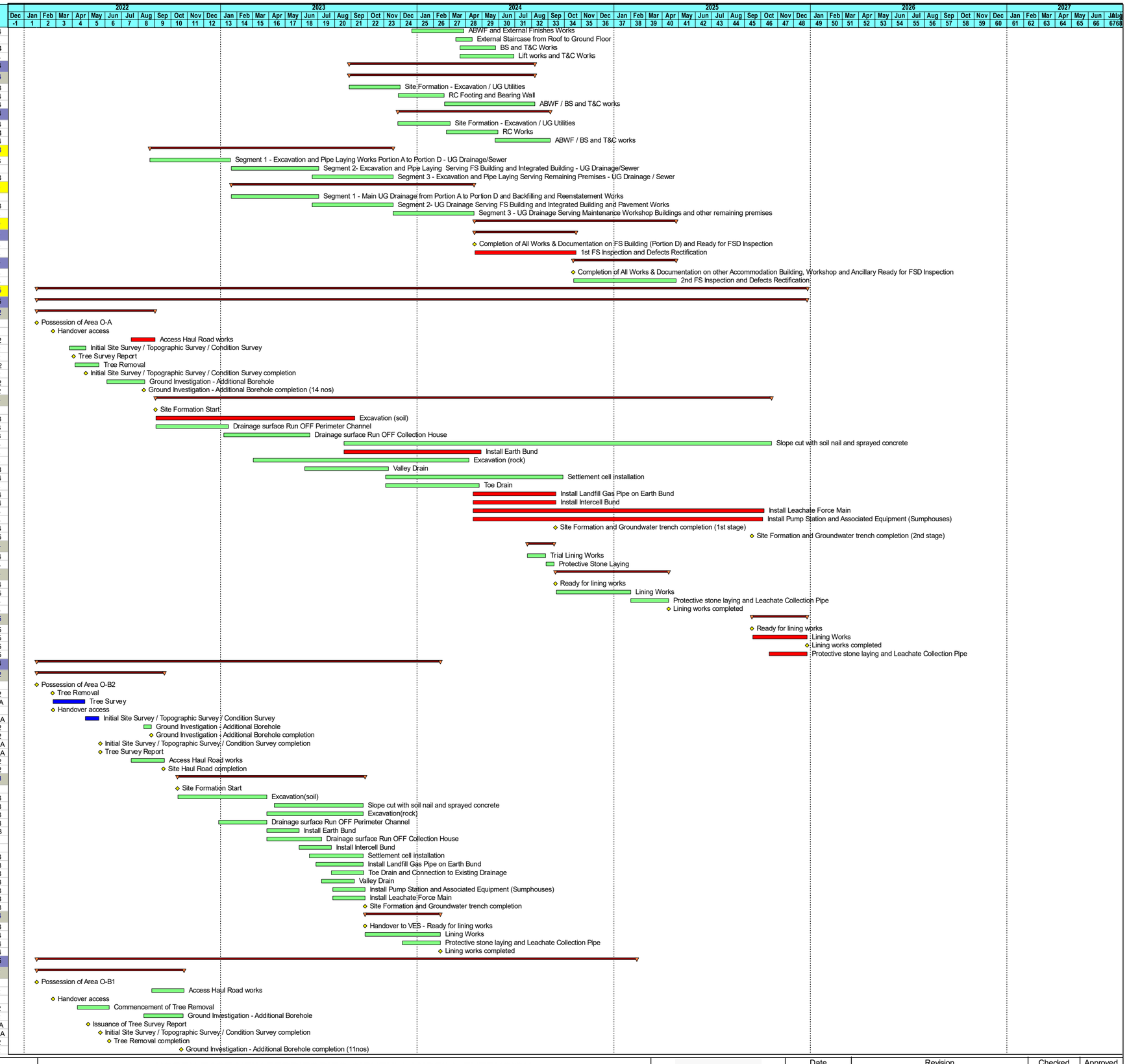
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

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
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



環境保護署
Environmental Protection Department

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

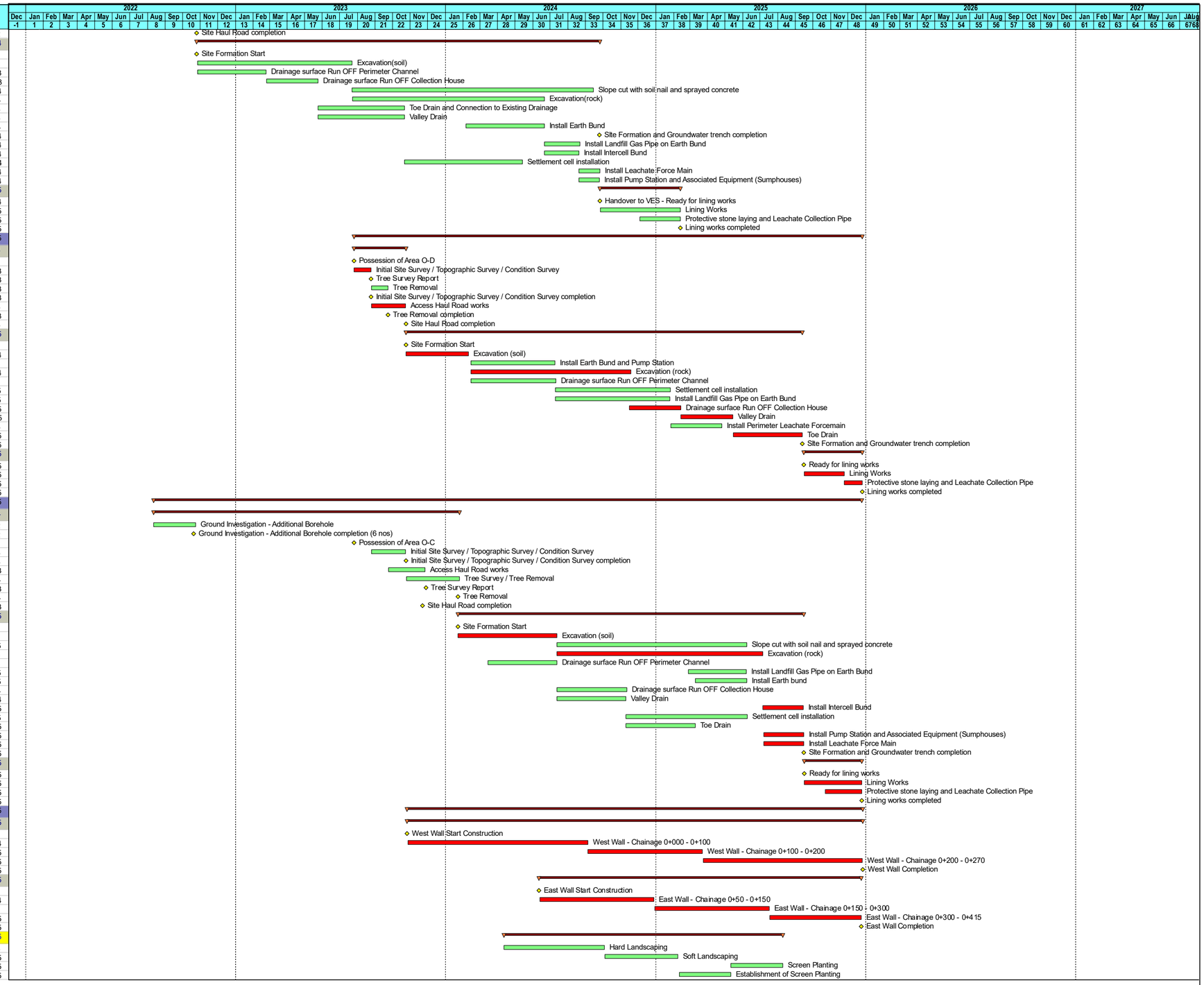
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

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

VEOLIA

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

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

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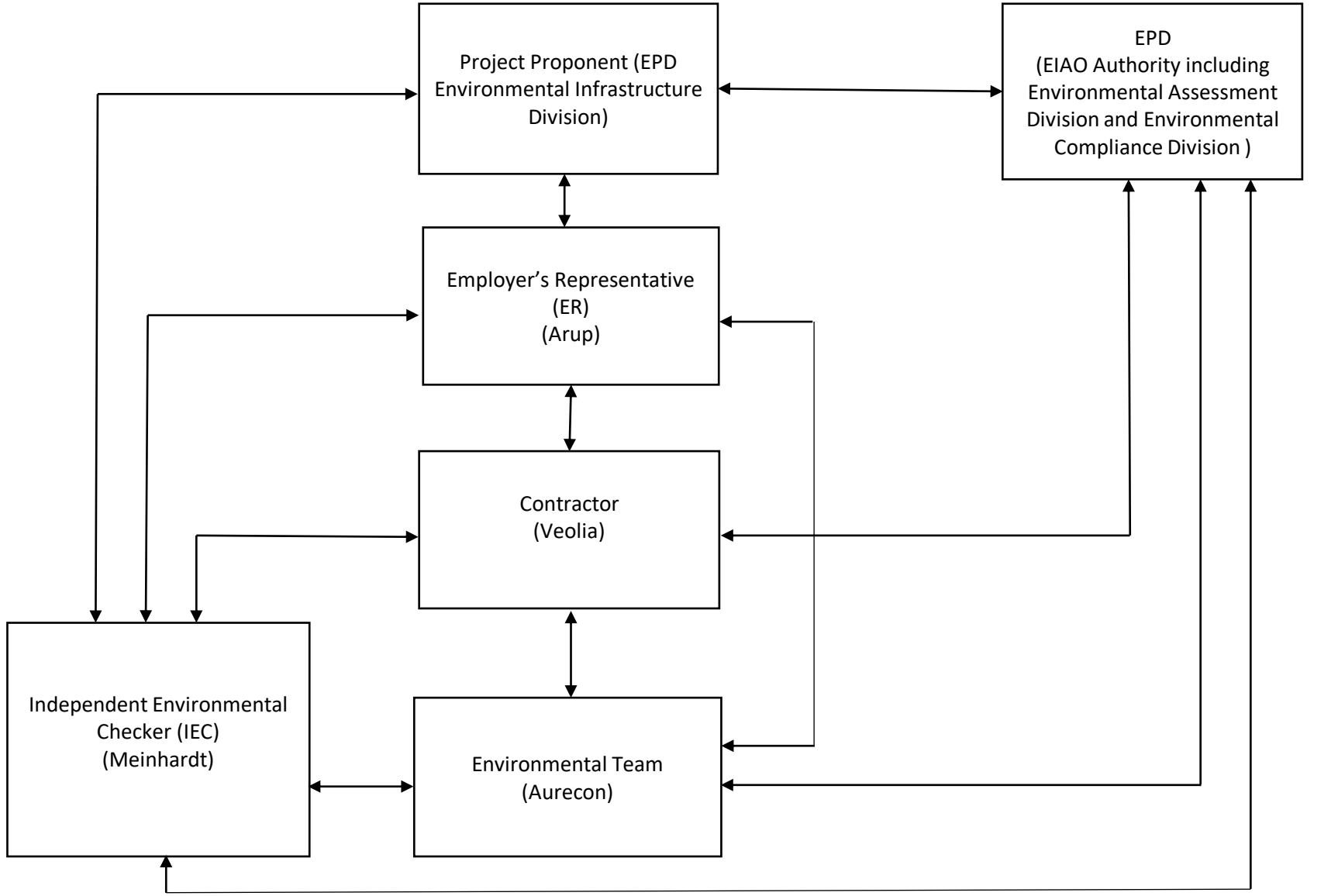
NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION

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

VEOLIA

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

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 (November 2023) (version 3.0)

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

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).
5. Additional air quality monitoring at AM2 on 15 November 2023 due to the construction works on 8 November 2023.
6. **Please arrange a Veolia staff to accompany our staff(s) to each locations for every monitoring.**

Date: 17 October 2023

Impact Monitoring Schedule for NENT Landfill Extension (December 2023) (version 3.0)

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

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).
5. Please arrange a Veolia staff to accompany our staff(s) to each locations for every monitoring.

Date: 21 November 2023

Appendix D Calibration Certificates

Air Quality

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative ForTung Lo Hang**	**Site ID:**	**AM1**	**Date:**	**04-Sep-2023**
Serial No:	**1105**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1002.1	**Actual Temperature during Calibration (T_a) (deg K):**	299.0

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	13.00	2.137	53.0	60.76
13	11.00	1.979	47.0	53.88
10	9.00	1.807	44.0	50.44
7	6.30	1.539	36.0	41.27
5	4.50	1.327	28.0	32.10

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

m= 34.0375 b= -12.1429 Corr. Coeff= 0.9950

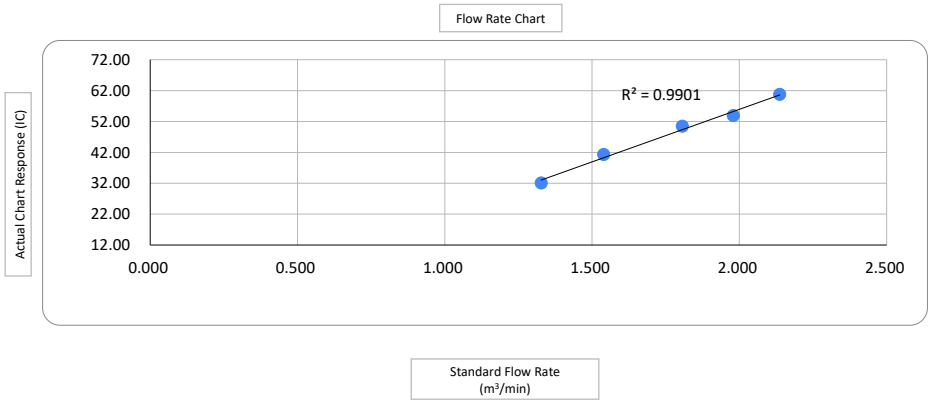
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Sep-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative ForTung Lo Hang**	**Site ID:**	**AM1**	**Date:**	**04-Nov-2023**
Serial No:	**1105**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1013.9	**Actual Temperature during Calibration (T_a) (deg K):**	299.0

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	13.40	2.179	57.0	65.73
13	9.60	1.870	50.0	57.65
10	7.00	1.622	46.0	53.04
7	4.00	1.268	40.0	46.12
5	2.00	0.946	34.0	39.21

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

m= 21.0403 b= 19.1736 Corr. Coeff= 0.9983

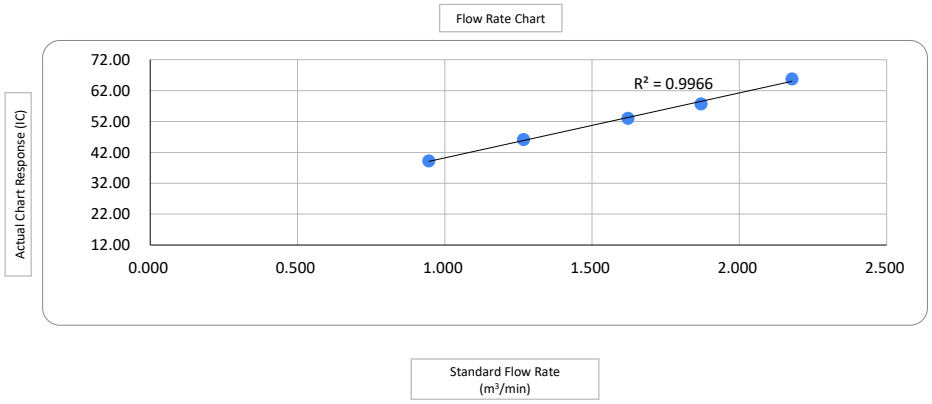
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Nov-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative For Heung Yuen Wai**	**Site ID:**	**AM2**	**Date:**	**04-Sep-2023**
Serial No:	**1106**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1002.1	**Actual Temperature during Calibration (T_a) (deg K):**	299.0

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	11.00	1.979	60.0	68.78
13	9.40	1.842	56.0	64.20
10	7.00	1.613	49.0	56.17
7	4.60	1.340	42.0	48.15
5	3.60	1.205	40.0	45.85

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

m= 30.2611 b= 8.3322 Corr. Coeff= 0.9963

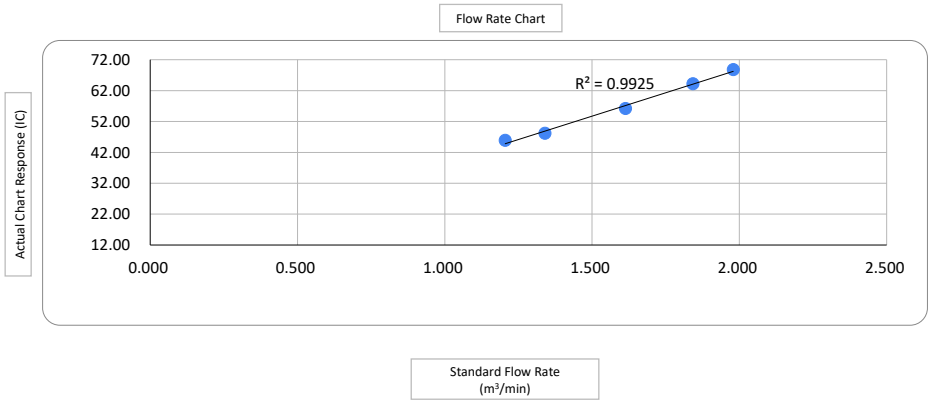
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Sep-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative For Heung Yuen Wai**	**Site ID:**	**AM2**	**Date:**	**04-Nov-2023**
Serial No:	**1106**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1013.9	**Actual Temperature during Calibration (T_a) (deg K):**	299.0

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	12.00	2.071	55.0	63.42
13	9.40	1.852	49.0	56.50
10	6.40	1.558	43.0	49.58
7	4.40	1.321	40.0	46.12
5	2.40	1.020	33.0	38.05

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

m= 23.1977 b= 14.4432 Corr. Coeff= 0.9950

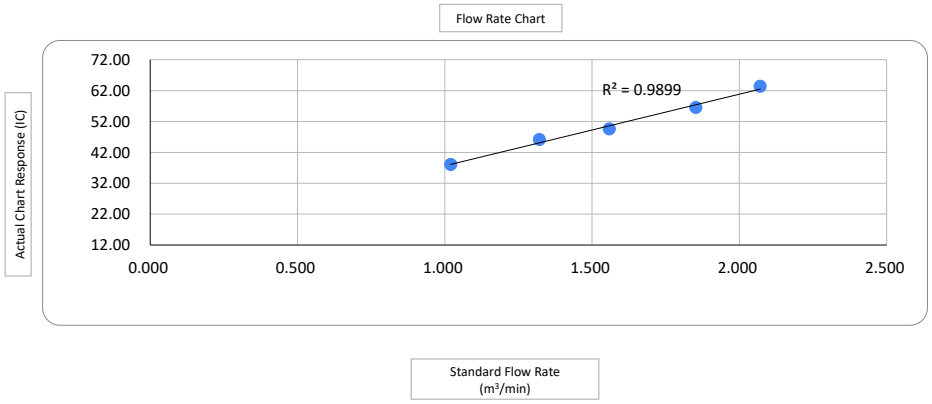
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Nov-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative For Wo Keng Shan Tsuen**	**Site ID:**	**AM3**	**Date:**	**04-Sep-2023**
Serial No:	**1856**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1002.1	**Actual Temperature during Calibration (T_a) (deg K):**	299.0

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	13.50	2.174	55.0	63.05
13	11.40	2.012	51.0	58.46
10	9.10	1.816	48.0	55.03
7	6.00	1.506	41.0	47.00
5	4.00	1.261	38.0	43.56

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

m= 21.5825 b= 15.5690 Corr. Coeff= 0.9953

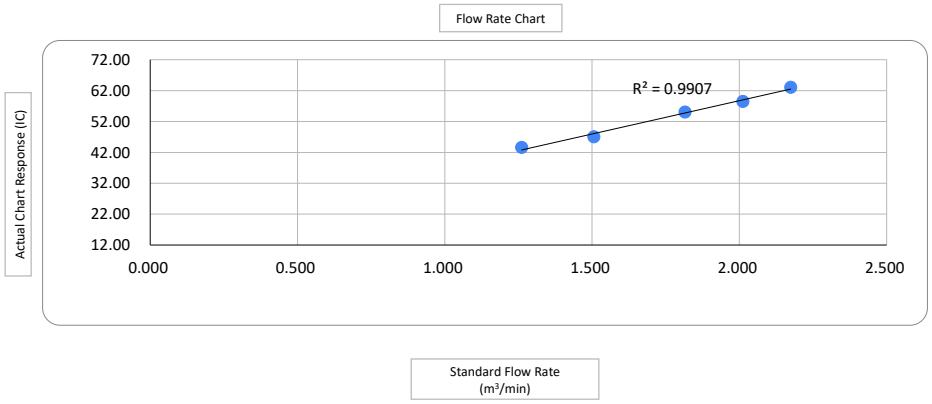
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Sep-2023

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	**Representative For Wo Keng Shan Tsuen**	**Site ID:**	**AM3**	**Date:**	**04-Nov-2023**
Serial No:	**1856**	**Model:**	**TE-5170X**	**Operator:**	**Andy Li**

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	1013.9	**Actual Temperature during Calibration (T_a) (deg K):**	302.3

Calibration Orifice

Model:	TE-5025A	**Slope (m_c):**	2.10188
Serial No.:	4166	**Intercept (b_c):**	-0.35800
Calibration Due Date:	19-Jun-24	**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	12.40	2.092	57.0	65.37
13	8.40	1.752	48.0	55.05
10	6.40	1.551	44.0	50.46
7	4.20	1.288	40.0	45.87
5	2.40	1.016	34.0	38.99

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

m= 23.8033 b= 14.4997 Corr. Coeff= 0.9949

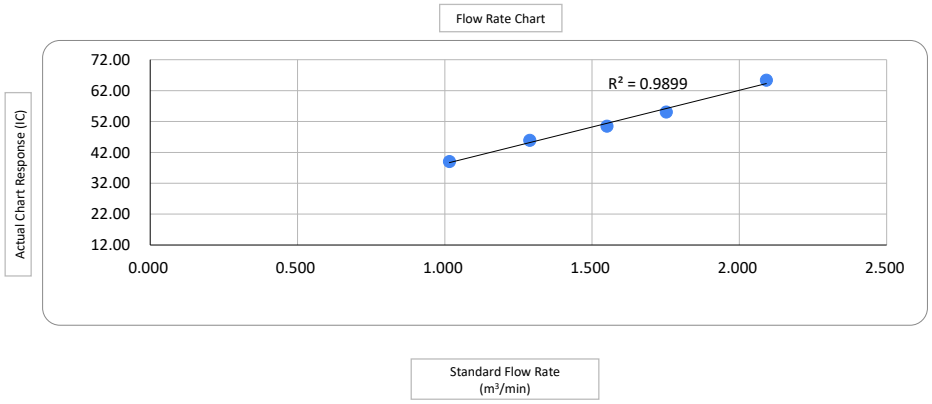
Calculations

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

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

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: Tandy Tse
Senior Consultant, Environmental

Date: 04-Nov-2023

ACUITY
SUSTAINABILITY
CONSULTING LIMITED

Website: www.acuityhk.com
Unit E, 12/f, Ford Glory Plaza
Nos. 37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon
Tel : (852) 2698 6833
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

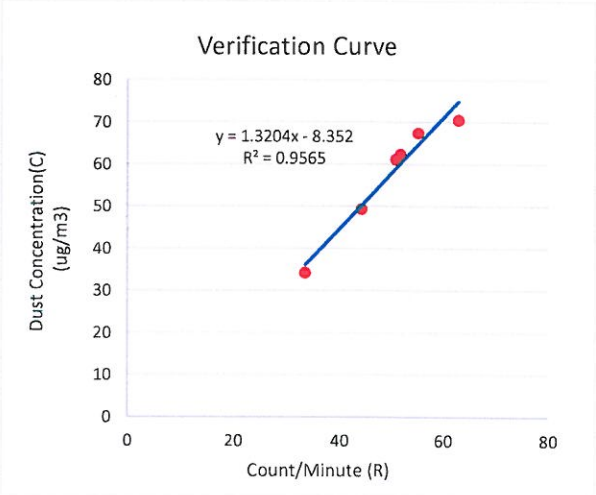
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00120	51	10251	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	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

ACUITY SUSTAINABILITY CONSULTING LIMITED

Website: www.acuityhk.com
Unit E, 12/F, Ford Glory Plaza
Nos 37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon.
Tel.: (852) 2698 6833
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

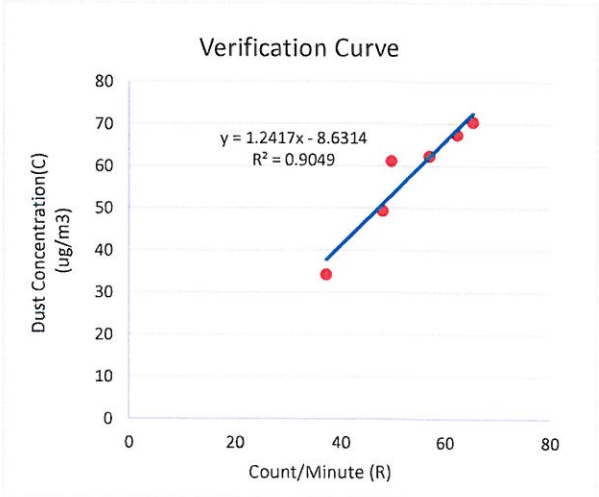
Verification Test No.	Date	Time			K-Factor	Counts/ Minute (R)	Total Counts (TC)	TSP Sample ID No.	Dust Concentration (ug/m3), (C)
		Start-time	End-time	Elapsed Time (in min)	K-Factor (K=C/R)	x-axis			y axis
1	3/12/2022	194.73	198.08	201.00	0.00123	50	9983	R222043/1	61
2	3/12/2022	198.08	201.27	191.40	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

ACUITY
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CONSULTING LIMITED

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Cheung Sha Wan, Kowloon
Tel.: (852) 2698 6833
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.	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:

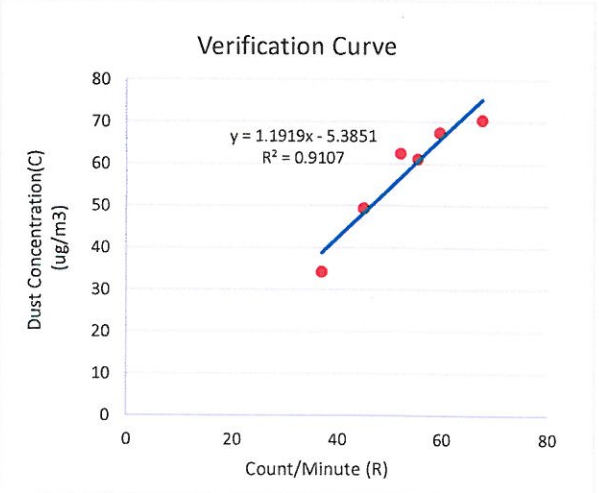
slope, mh= 1.1919

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

TISCH Environmental

RECALIBRATION DUE DATE:
June 19, 2024

Certificate of Calibration

Calibration Certification Information				
Cal. Date: June 19, 2023	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator: Jim Tisch		**Pa:** 754.9	mm Hg
Calibration Model #: TE-5025A	**Calibrator S/N:** **4166**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4500	3.2	2.00
2	3	4	1	1.0260	6.4	4.00
3	5	6	1	0.9170	8.0	5.00
4	7	8	1	0.8770	8.8	5.50
5	9	10	1	0.7240	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)
1.0025	0.6914	1.4190	0.9958	0.6867	0.8826
0.9983	0.9730	2.0068	0.9915	0.9664	1.2481
0.9961	1.0863	2.2436	0.9894	1.0790	1.3955
0.9951	1.1346	2.3532	0.9883	1.1270	1.4636
0.9897	1.3670	2.8380	0.9830	1.3578	1.7651
QSTD	**m=**	**2.10188**	**QA**	**m=**	**1.31616**
	b=	**-0.03580**		**b=**	**-0.02227**
	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

Manufacturer Calibration Certificate

The following instrument has been tested and calibrated to the manufacturer specifications.
The calibration is traceable in accordance with ISO/IEC 17025 covering all instrument functions.

- Device Type: **XL2 Audio and Acoustic Analyzer**
- Serial Number: **A2A-13663-F0**

- Certificate Issued: **15 February 2023**
- Certificate Number: **44972-A2A-13663-F0**
- Results: **PASSED**
  (for detailed report see next page)

Tested by: M. Frick

Signature:

Stamp:

NTi Audio AG
Im alten Riet 102
LI - 9494 Schaan
www.nti-audio.com

Calibration of: XL2 Audio and Acoustic Analyzer
Serial Number: A2A-13663-F0
Date: 15 February 2023

- Detailed Calibration Test Results:

		reference	actual	unit	actual error	XL2 tolerance	calibration uncertainty[2]
RMS Level @ 1kHz, XLR Input		0.1	**0.100**	V	≤0.1%	±0.5%	±0.10%
		1	**0.999**	V	-0.1%	±0.5%	±0.09%
		10	**9.982**	V	-0.2%	±0.5%	±0.09%
Flatness, XLR Input[1]	20 Hz	1	**0.995**	V	-0.5%	±1.1%	±0.09%
	20 kHz	1	**1.003**	V	0.3%	±1.1%	±0.09%
Frequency		1000	**1000.00**	Hz	≤0.003%	±0.003%	±0.01%
Residual Noise	XLR		**< 2 uV**			<2 uV	±0.50%
THD+N @ 0 dBu, 1 kHz, XLR Input			**-100.5**	dB		typ. -100 dB	±0.50%

- Test Conditions:

Temperature:	**24.9**	°C
Relative Humidity:	**19.8**	%

- Calibration Equipment Used:

- Agilent Multimeter, Typ 34401A, Serial No. MY 5300 4607
  Last calibration: 15.09.2022, Next calibration: 15.09.2023
  Calibrated by ELCAL to the national standards maintained
  at Swiss Federal Office of Metrology. SCS 0002

- FX100 Audio Analyzer, Serial No. 10408
  Last Calibration: 11.10.2022, Next Calibration: 11.10.2023
  Manufacturer calibration based on Agilent 34410, Serial No. MY47014254,
  Last Calibration: 26.05.2022, Next Calibration: 26.05.2023
  which is calibrated by ELCAL to national standards maintained
  at Swiss Federal Office of Metrology. SCS 002

[1] The specified tolerance +/-0.1 dB @ 1V = +/- 1.1%

[2] The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with the regulations of the GUM.

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

Certificate of Calibration

for

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

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**
☐ **Outside**

the allowable tolerance.

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

Date of receipt: 27 July 2023

Date of calibration: 3 August 2023

Date of NEXT calibration: 2 August 2024

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: **3 August 2023**

Certificate No.: APJ23-049-CC003

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

1. *Calibration Precautions:*

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

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

2. *Calibration Specifications:*

Calibration check

3. *Calibration Conditions:*

Air Temperature:	22.6 °C
Air Pressure:	1006 hPa
Relative Humidity:	52.9 %

4. *Calibration Equipment:*

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

5. *Calibration Results*

5.1 Sound Pressure Level

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

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

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

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

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

Amendment Test Report No. : R-BC090067
Amendment Test Report Date of Issue : 20 September 2023

Superseded Test Report No. : D-BC080079
Superseded Test Report Date of Issue : 25 August 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 :	PPHNOMXY
Date of Received :	22 August 2023
Date of Calibration :	22 August 2023
Date of Next Calibration :	21 November 2023
Request No. :	D-BC080079

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.16	0.16	Satisfactory
7.42	7.56	0.14	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
18	19.15	1.15	Satisfactory
28	27.79	-0.21	Satisfactory
37	36.58	-0.42	Satisfactory

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

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED SIGNATORY:

LEE Chun-ning
Assistant Manager

專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED
Unit 10, 5/F, Wah Wai Centre, 38-40 Au Pui Wan St., Fotan, Hong Kong
Email: info@qualityprotest.com; Website: www.qualityprotest.com
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(3) Salinity

Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	10.11	1.10	Satisfactory
20	21.27	6.35	Satisfactory
30	32.28	7.60	Satisfactory

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

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.50	7.88	0.38	Satisfactory
6.31	6.76	0.45	Satisfactory
1.11	1.29	0.18	Satisfactory
0.07	0.00	-0.07	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance (%)	Result
0	0.98	--	Satisfactory
10	10.7	7.00	Satisfactory
20	20.7	3.50	Satisfactory
100	107	7.00	Satisfactory
800	807	0.90	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. 300745

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 : Global Flow Probe
Manufacturer : Global Water
Model : FP111
I.D. : --
Serial No. : 22K100858

Test Conditions

Date of Test : 27-Mar-23
Ambient Temperature : 20°C
Supply Voltage : --
Relative Humidity : 75%

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	301321	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: 27-Mar-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

Calibration Certificate

Certificate No. 300745

Results :

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.78	0.8	± 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

CERTIFICATION OF CALIBRATION

4533

Date Of Calibration: 31-Aug-2023

Certificate Number: G505207_1/33483

Issued by: QED Environmental Systems Ltd.

Customer: **Onuee Electronics Ltd**
C3-E TCL Science Park No.1001 Zhong Shan Yuan Rd.
Nanshan Shenzhen 518052 CHINA

Description: Gas Analyser

Model: GEM5000

Serial Number: G505207

UKAS Accredited results:

Results after adjustment :

Methane (CH_4)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	5.0	0.072
15.0	15.1	0.13
60.0	59.7	0.42

Carbon Dioxide (CO_2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
5.0	4.8	0.074
15.0	14.5	0.13
40.0	39.9	0.29

Oxygen (O_2)		
Certified Gas (%)	**Instrument Reading (%)**	**Uncertainty (%)**
20.2	20.3	0.25

The inwards assessment was carried out 21-Aug-2023.
The maximum adjustment is larger than the specification limit.
Inwards assessment data is available if requested.

All concentrations are molar.

CH_4, CO_2 readings recorded at : 33.2 °C ± 2.5 °C

O2 readings recorded at : 24.4 °C ± 2.5 °C

Barometric Pressure : 0998 mbar ± 4 mbar

Method of Test : The analyser is calibrated in a temperature controlled chamber using a series of reference gases, in compliance with procedure LP004.

Instrument has passed calibration as the measurement result is within the specification limit. The specification limit takes into account the measurement uncertainty.
The results relate only to the item calibrated

Calibration Instance:117 IGC Instance:117

www.qedenv.com +44 (0) 333 800 0088 sales@qedenv.co.uk

QED Environmental Systems Ltd. Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

Registered in England and Wales 1898734

CERTIFICATION OF CALIBRATION

4533

Date Of Calibration: 31-Aug-2023

Certificate Number: G505207_1/33483

Issued by: QED Environmental Systems Ltd.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Calibrations marked 'Non-UKAS Accredited results' on this certificate have been included for completeness.

Non-UKAS accredited results after adjustment:

Barometer (mbar)	
Reference	**Instrument Reading**
998	999

Additional Gas Cells		
Gas	**Certified Gas (ppm)**	**Instrument Reading (ppm)**
CO	501	507

Date of Issue : 07-Sep-2023 **Approved by Signatory**

Fani Zolota

Laboratory Inspection

End of Certificate

Calibration Instance: 117 IGC Instance: 117

www.qedenv.com +44 (0) 333 800 0088 sales@qedenv.co.uk

QED Environmental Systems Ltd. Cyan Park - Unit 3, Jimmy Hill Way, Coventry, CV2 4QP, UNITED KINGDOM

Registered in England and Wales 1898734

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
2/11/2023	Sibata LD-5R	882106	0.00107	Fine	8:16	9:16	10:16	29	31	28	29	285	500
8/11/2023	Sibata LD-5R	882106	0.00107	Fine	13:16	14:16	15:16	29	36	34	33		
14/11/2023	Sibata LD-5R	882106	0.00107	Fine	13:01	14:01	15:01	26	27	23	25		
20/11/2023	Sibata LD-5R	882106	0.00107	Fine	8:10	9:10	10:10	22	29	23	25		
25/11/2023	Sibata LD-5R	882106	0.00107	Fine	8:16	9:16	10:16	26	31	28	28		
							Average	**28**					
							Max.	**36**					
							Min.	**22**					

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
2/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:59	9:59	10:59	34	36	36	35	279	500
8/11/2023	Sibata LD-5R	942532	0.00108	Fine	13:12	14:12	15:12	36	38	39	38		
15/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	13:36	14:36	15:36	31	30	32	31		
20/11/2023	Sibata LD-5R	942532	0.00108	Fine	8:25	9:25	10:25	31	34	32	32		
25/11/2023	Sibata LD-5R	942532	0.00108	Fine	8:30	9:30	10:30	32	39	34	35		
							Average	**34**					
							Max.	**39**					
							Min.	**30**					

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
2/11/2023	Sibata LD-5R	942532	0.00108	Fine	8:25	9:25	10:25	31	40	36	36	285	500
8/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	13:39	14:39	15:39	39	41	43	41		
14/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	13:30	14:30	15:30	36	39	35	37		
20/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:20	9:20	10:20	31	33	30	31		
25/11/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:55	9:55	10:55	35	39	41	38		
							Average	**37**					
							Max.	**43**					
							Min.	**30**					

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)
2/11/2023	Fine	28.8	1014.6	1861.01	1885.01	1440	40	1.53	2198	2.6298	2.8522	0.2224	101	164	260
8/11/2023	Fine	26.7	1015.6	2113.03	2137.03	1440	40	0.99	1424	2.7177	2.8782	0.1605	113		
14/11/2023	Fine	24.6	1022.2	2139.71	2163.71	1440	40	1.01	1451	2.6479	2.7998	0.1519	105		
20/11/2023	Fine	21.5	1016.7	2166.85	2190.85	1440	42	1.10	1589	2.6587	2.8410	0.1823	115		
25/11/2023	Fine	24.8	1020.6	2192.93	2216.93	1440	41	1.03	1481	2.6524	2.8423	0.1899	128		
												Average	**112**		
												Min	**101**		
												Max	**128**		

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)
2/11/2023	Fine	28.8	1014.6	1621.28	1645.28	1440	39	1.01	1450	2.6598	2.8199	0.1601	110	152	260
14/11/2023	Fine	24.6	1022.2	1648.51	1672.51	1440	40	1.12	1610	2.6502	2.7895	0.1393	87		
15/11/2023	Fine	23.8	1022.7	1676.63	1700.63	1440	40	1.12	1615	2.6501	2.7830	0.1329	82		
20/11/2023	Fine	21.5	1016.7	1703.23	1727.23	1440	40	1.12	1610	2.6370	2.7501	0.1131	70		
25/11/2023	Fine	24.8	1020.6	1734.10	1758.10	1440	40	1.11	1605	2.6528	2.8097	0.1569	98		
												Average	**89**		
												Min	**70**		
												Max	**110**		

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)
2/11/2023	Fine	28.8	1014.6	2626.46	2650.46	1440	41	1.17	1683	2.6287	2.8261	0.1974	117	163	260
8/11/2023	Fine	26.7	1015.6	2654.12	2678.12	1440	42	1.15	1663	2.6384	2.7857	0.1473	89		
14/11/2023	Fine	24.6	1022.2	2679.75	2703.75	1440	39	1.04	1505	2.6533	2.7973	0.1440	96		
20/11/2023	Fine	21.5	1016.7	2706.86	2730.86	1440	41	1.13	1626	2.7064	2.8499	0.1435	88		
25/11/2023	Fine	24.8	1020.6	2736.56	2760.56	1440	38.5	1.02	1470	2.7381	2.9085	0.1704	116		
												Average	**101**		
												Min	**88**		
												Max	**117**		

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 m/s	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))					
					1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th
3/11/2023	Fine	2.4	10:05	10:35	49.4	48.6	50.6	53.6	53.9	54.1	52.2	53.2	52.6	53.6	56.6	56.3	58.1	45.4	45.5	47.1	51.5	51.6	53.0
8/11/2023	Fine	1.6	14:30	15:00	62.3	63.1	63.6	62.1	63.5	64.5	63.3	64.3	65.4	66.4	65.2	65.1	67.1	60.2	61.2	62.1	61.9	62.5	63.1
14/11/2023	Fine	1.4	13:00	13:30	59.2	60.2	61.3	61.9	62.1	62.9	61.4	62.4	63.4	64.4	64.9	65.4	65.9	54.2	55.3	56.4	56.9	56.4	55.2
20/11/2023	Fine	1.6	14:30	15:00	55.6	56.1	55.4	55.1	54.9	55.1	55.4	53.2	52.4	50.1	51.9	50.6	52.4	48.1	47.5	46.2	48.6	49.1	48.6

Average	60.0
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 m/s	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))					
					1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th
3/11/2023	Fine	2.1	14:10	14:40	47.6	48.1	50.2	47.6	48.3	49.6	48.7	50.6	51.4	53.4	50.5	51.2	53.6	43.5	44.5	48.1	46.1	47.2	48.4
8/11/2023	Fine	1.7	10:00	10:30	48.5	47.5	48.2	47.6	47.1	47.4	47.7	51.2	52.1	52.2	52.6	51.6	52.1	43.5	42.5	43.2	45.1	42.4	43.2
14/11/2023	Fine	1.7	14:30	15:00	50.2	47.6	48.4	50.2	51.3	49.7	49.7	61.4	59.4	60.6	61.6	62.6	61.2	48.2	45.2	46.2	48.1	49.1	47.2
20/11/2023	Fine	1.7	11:19	11:49	50.1	49.6	48.2	50.4	49.9	50.4	49.8	56.2	57.2	56.1	57.1	55.4	56.2	53.3	54.4	53.1	54.2	52.5	53.2

Average	49.1
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
8-Nov-23	10:02	Sunny	0.16	0.1	18.5	7.5	<7.4	<4	7.6	>7.7	>7.8	5.1	>9.2	>9.5	2.5	>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
8-Nov-23	7:45	Sunny	0.21	0.2	20.1	6.5	<5	<4	7.5	>7.6	>7.7	20.8	>108.3	>108.9	10.0	>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"

3. Orange Text equal to exceed Action Level

4. Red Text equal to exceed Limit Level

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	: HUNTINGTON HUI	Contact	: Richard Fung	Work Order	: HK2344804
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	: Huntington.Hui@aurecongroup.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: ----	Telephone	: +852 2610 1044		
Facsimile	: ----	Facsimile	: +852 2610 2021		
Project	: NENTX			Date Samples Received	: 08-Nov-2023
Order number	: ----	Quote number	: HKE/2751/2022_V3	Issue Date	: 22-Nov-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 08-Nov-2023 to 21-Nov-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: HK2344804

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in chilled condition.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.

Microbiological sample(s) was/ were collected in 250mL sterile plastic bottles containing sodium thiosulfate. Sample(s) arrived at the laboratory at 19:35.

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	WM2	----	----	----
				Sampling date / time	08-Nov-2023	08-Nov-2023	----	----	----
					HK2344804-001	HK2344804-002	-------	-------	-------
EA/ED: Physical and Aggregate Properties									
EA002: pH Value	----	0.1	pH Unit		6.9	7.4	----	----	----
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm		60	151	----	----	----
EA025: Suspended Solids (SS)	----	0.1	mg/L		2.5	10.0	----	----	----
ED037: Total Alkalinity as CaCO3	----	1	mg/L		17	44	----	----	----
ED/EK: Inorganic Nonmetallic Parameters									
ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L		<1	24	----	----	----
ED045K: Chloride	16887-00-6	0.5	mg/L		6	6	----	----	----
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.07	0.06	----	----	----
EK058A: Nitrate as N	14797-55-8	0.01	mg/L		0.05	0.19	----	----	----
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L		0.5	0.1	----	----	----
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		7	<5	----	----	----
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	1	----	----	----
EG020: Lead	7439-92-1	1	µg/L		<1	1	----	----	----
EG020: Manganese	7439-96-5	1	µg/L		41	1350	----	----	----
EG020: Nickel	7440-02-0	1	µg/L		<1	2	----	----	----
EG020: Zinc	7440-66-6	10	µg/L		13	20	----	----	----
EG032: Calcium	7440-70-2	50	µg/L		3330	19400	----	----	----
EG032: Iron	7439-89-6	10	µg/L		420	1340	----	----	----
EG032: Magnesium	7439-95-4	50	µg/L		480	1470	----	----	----
EG032: Potassium	7440-09-7	50	µg/L		600	2010	----	----	----
EG032: Sodium	7440-23-5	50	µg/L		8120	6010	----	----	----

Sub-Matrix: WATER				Sample ID	WM1	WM2	----	----	----
				Sampling date / time	08-Nov-2023	08-Nov-2023	----	----	----
Compound	CAS Number	LOR	Unit		HK2344804-001	HK2344804-002	-------	-------	-------
EM: Microbiological Testing									
EM002: E. coli	----	1	CFU/100mL		11	19	----	----	----
EM003: Total Coliforms	----	1	CFU/100mL		25	56	----	----	----

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: 5414128)								
HK2344783-003	Anonymous	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	170	170	0.0
HK2344804-002	WM2	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	151	151	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5415132)								
HK2343238-002	Anonymous	ED037: Total Alkalinity as CaCO3	----	1	mg/L	131	131	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5415135)								
HK2344804-002	WM2	EA002: pH Value	----	0.1	pH Unit	7.4	7.4	0.0
HK2344956-001	Anonymous	EA002: pH Value	----	0.1	pH Unit	9.1	9.1	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5416660)								
HK2344804-001	WM1	EA025: Suspended Solids (SS)	----	0.5	mg/L	2.5	2.1	17.2
HK2344811-008	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.4	1.1	18.2
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414216)								
HK2344727-001	Anonymous	ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	<1	<1	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414217)								
HK2344727-001	Anonymous	ED045K: Chloride	16887-00-6	1	mg/L	<1	<1	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416823)								
HK2344868-001	Anonymous	EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416838)								
HK2343099-003	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	1.68	1.56	7.7
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5433020)								
HK2344804-001	WM1	EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.5	0.5	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5433970)								
HK2344804-001	WM1	EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	<2	0.0
EP: Aggregate Organics (QC Lot: 5431603)								
HK2345267-005	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	<1	<1	0.0
EP: Aggregate Organics (QC Lot: 5431668)								
HK2344804-002	WM2	EP026C: Chemical Oxygen Demand	----	5	mg/L	<5	<5	0.0
EG: Metals and Major Cations - Total (QC Lot: 5416710)								
HK2344804-002	WM2	EG032: Iron	7439-89-6	10	µg/L	1340	1330	0.0
		EG032: Calcium	7440-70-2	50	µg/L	19400	19200	0.7
		EG032: Magnesium	7439-95-4	50	µg/L	1470	1450	1.2

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: 5416710) - Continued								
HK2344804-002	WM2	EG032: Potassium	7440-09-7	50	µg/L	2010	1980	1.6
		EG032: Sodium	7440-23-5	50	µg/L	6010	5970	0.7
EG: Metals and Major Cations - Total (QC Lot: 5416711)								
HK2344804-002	WM2	EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Copper	7440-50-8	1	µg/L	1	1	0.0
		EG020: Lead	7439-92-1	1	µg/L	1	1	0.0
		EG020: Manganese	7439-96-5	1	µg/L	1350	1370	1.5
		EG020: Nickel	7440-02-0	1	µg/L	2	2	0.0
		EG020: Zinc	7440-66-6	10	µg/L	20	18	10.0

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

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
EA/ED: Physical and Aggregate Properties (QC Lot: 5414128)											
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	146.9 µS/cm	101	----	93.5	106	----	----
				<1	1412 µS/cm	95.2	----	94.3	105	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 5415132)											
ED037: Total Alkalinity as CaCO3	----	1	mg/L	<1	50 mg/L	102	----	95.0	105	----	----
				<1	2000 mg/L	100	----	95.0	105	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 5416660)											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	10 mg/L	90.5	----	86.6	113	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414216)											
ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	<1	5 mg/L	99.4	----	91.4	109	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414217)											
ED045K: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	99.8	----	88.2	108	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416823)											
EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	98.6	----	92.4	106	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416838)											

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: 5416838) - Continued											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	104	----	89.3	109	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5433020)											
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	0.5 mg/L	103	----	89.0	120	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5433970)											
EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	----	----	----	----	----	----	----
EP: Aggregate Organics (QC Lot: 5414608)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	92.3	----	77.6	118	----	----
EP: Aggregate Organics (QC Lot: 5431603)											
EP005: Total Organic Carbon	----	1	mg/L	<1	5 mg/L	112	----	87.3	120	----	----
				<1	100 mg/L	110	----	88.8	120	----	----
EP: Aggregate Organics (QC Lot: 5431668)											
EP026C: Chemical Oxygen Demand	----	----	mg/L	----	25 mg/L	94.0	----	92.0	108	----	----
				----	250 mg/L	100.0	----	92.3	106	----	----
EP: Aggregate Organics (QC Lot: 5435328)											
EP020: Oil & Grease	----	2	mg/L	<2	20 mg/L	88.0	----	81.7	105	----	----
EG: Metals and Major Cations - Total (QC Lot: 5416710)											
EG032: Calcium	7440-70-2	50	µg/L	<50	2000 µg/L	107	----	85.0	115	----	----
EG032: Iron	7439-89-6	10	µg/L	<10	2000 µg/L	104	----	85.0	115	----	----
EG032: Magnesium	7439-95-4	50	µg/L	<50	2000 µg/L	102	----	85.0	115	----	----
EG032: Potassium	7440-09-7	50	µg/L	<50	2000 µg/L	99.2	----	85.0	115	----	----
EG032: Sodium	7440-23-5	50	µg/L	<50	2000 µg/L	107	----	85.0	115	----	----
EG: Metals and Major Cations - Total (QC Lot: 5416711)											
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	99.6	----	90.0	111	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	99.2	----	89.0	111	----	----
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	96.3	----	85.0	115	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	98.3	----	87.0	110	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	96.4	----	86.0	114	----	----

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

Matrix: **WATER**

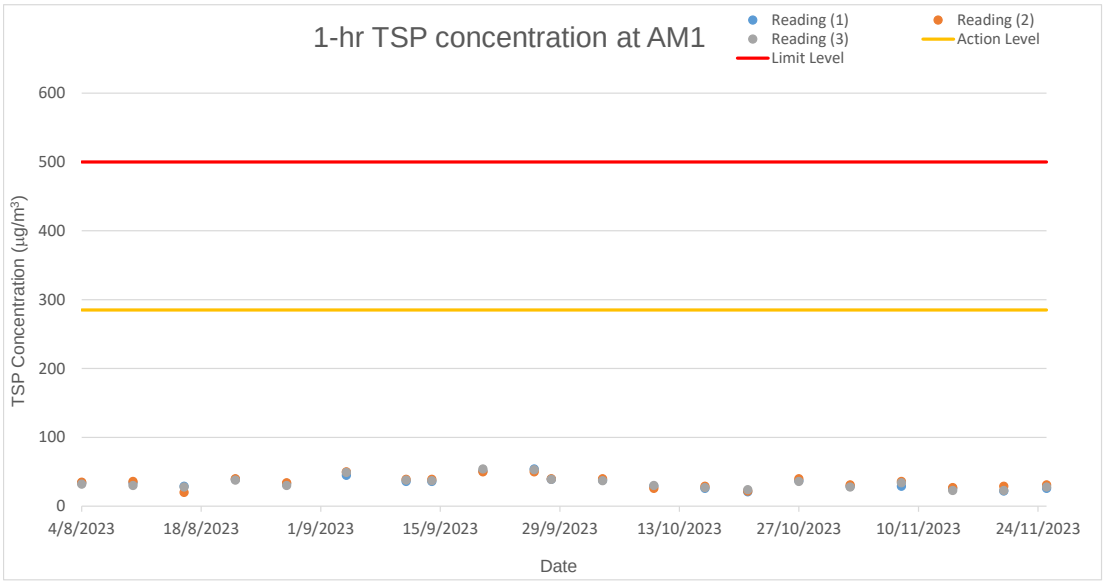
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414216)										
HK2344727-001	Anonymous	ED041K: Sulphate as SO4 - Turbidimetric	----	5 mg/L	90.7	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5414217)										
HK2344727-001	Anonymous	ED045K: Chloride	16887-00-6	5 mg/L	94.0	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416823)										
HK2344868-001	Anonymous	EK071K: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	102	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5416838)										
HK2343099-003	Anonymous	EK055K: Ammonia as N	7664-41-7	5 mg/L	97.1	----	75.0	125	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5433020)										
HK2344804-001	WM1	EK061A: Total Kjeldahl Nitrogen as N	----	0.5 mg/L	89.9	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 5431603)										
HK2345267-005	Anonymous	EP005: Total Organic Carbon	----	5 mg/L	102	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 5431668)										
HK2344804-001	WM1	EP026C: Chemical Oxygen Demand	----	10 mg/L	102	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 5416710)										
HK2344804-001	WM1	EG032: Calcium	7440-70-2	2000 µg/L	94.2	----	75.0	125	----	----
		EG032: Iron	7439-89-6	2000 µg/L	103	----	75.0	125	----	----
		EG032: Magnesium	7439-95-4	2000 µg/L	98.8	----	75.0	125	----	----
		EG032: Potassium	7440-09-7	2000 µg/L	99.2	----	75.0	125	----	----
		EG032: Sodium	7440-23-5	2000 µg/L	# Not Determined	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 5416711)										
HK2344804-001	WM1	EG020: Cadmium	7440-43-9	5 µg/L	98.3	----	75.0	125	----	----
		EG020: Copper	7440-50-8	50 µg/L	98.0	----	75.0	125	----	----
		EG020: Lead	7439-92-1	50 µg/L	97.7	----	75.0	125	----	----
		EG020: Manganese	7439-96-5	50 µg/L	95.3	----	75.0	125	----	----

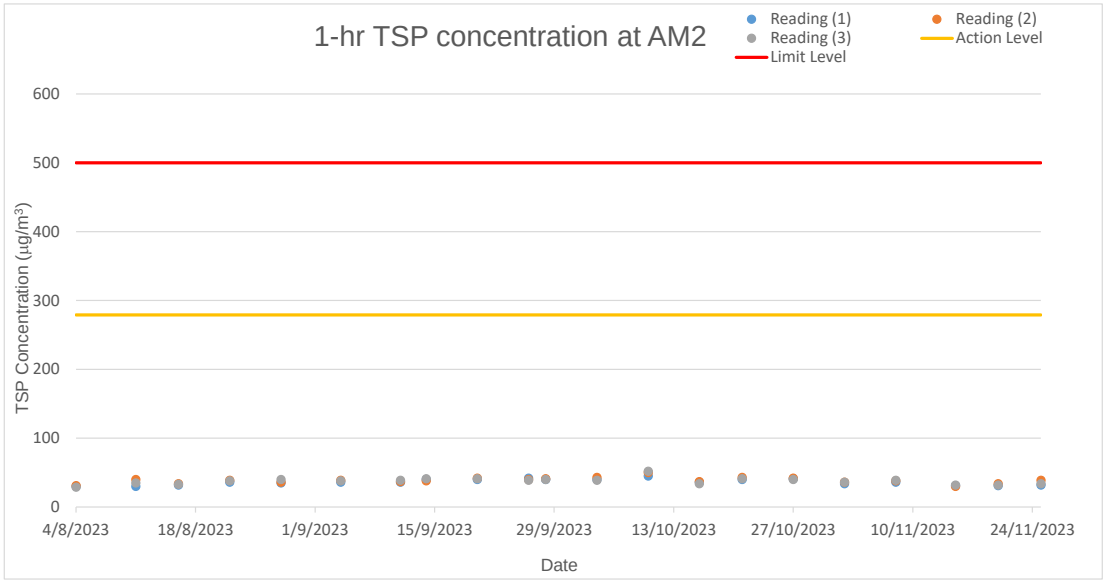
Matrix: **WATER**

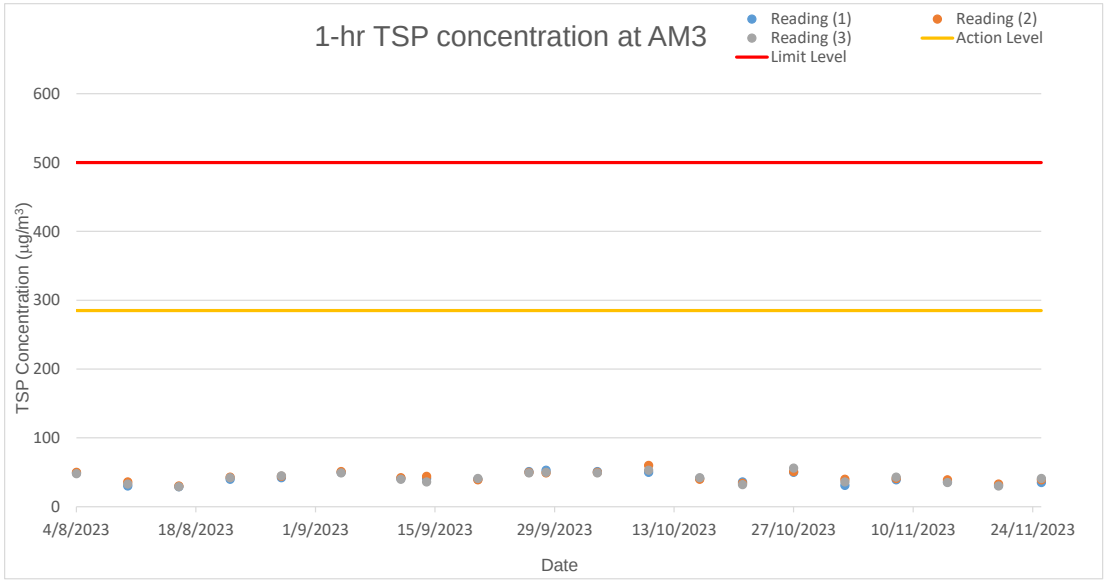
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
EG: Metals and Major Cations - Total (QC Lot: 5416711) - Continued										
HK2344804-001	WM1	**EG020: Nickel**	7440-02-0	50 µg/L	99.4	----	75.0	125	----	----
		EG020: Zinc	7440-66-6	50 µg/L	96.0	----	75.0	125	----	----

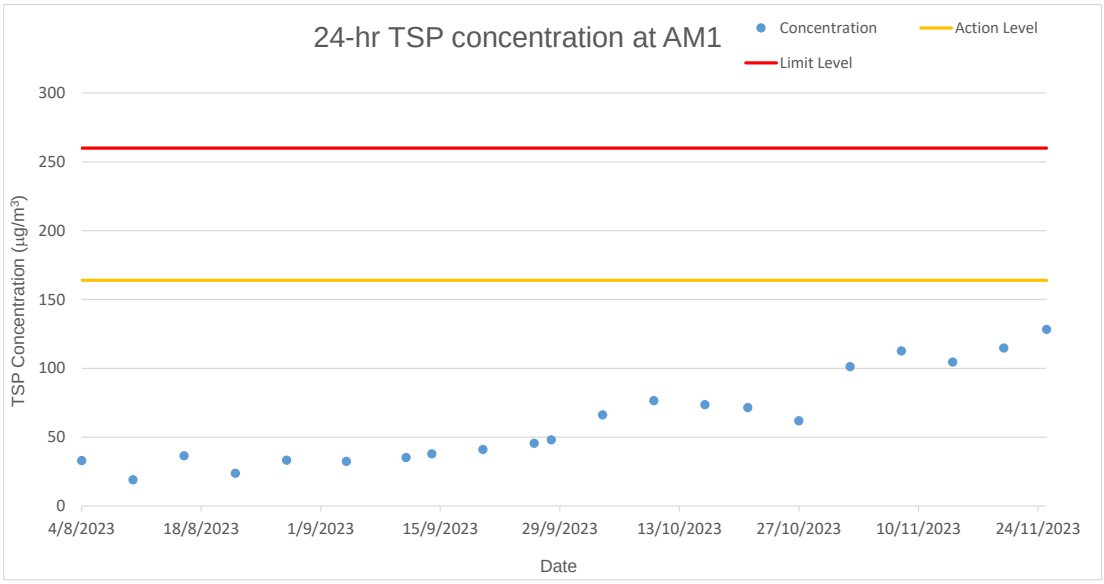
Appendix F Graphical Presentations

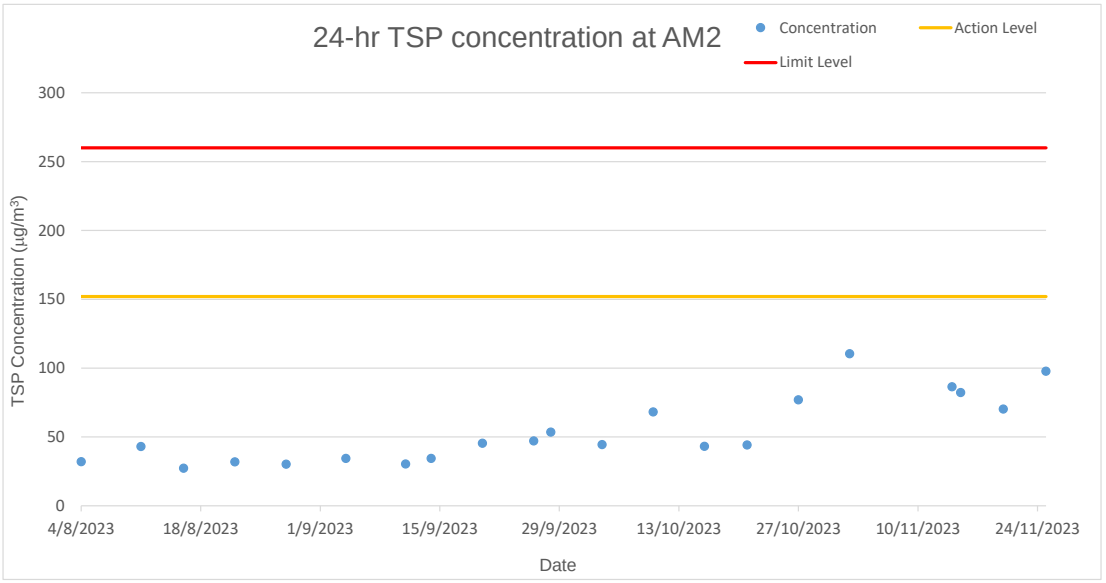
Air Quality

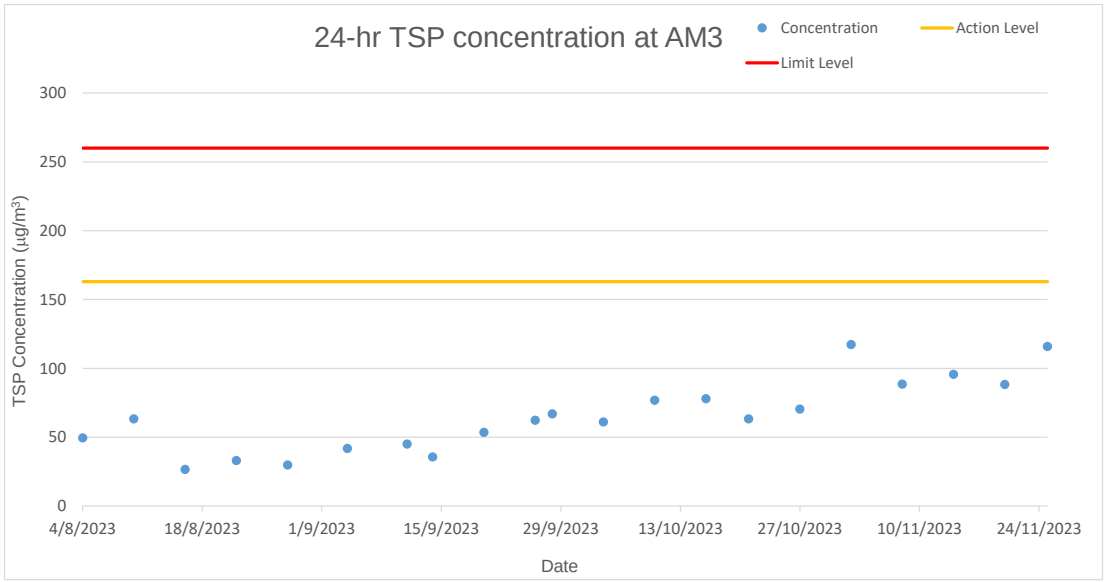

1-hr TSP concentration at AM1
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
600
500
400
300
200
100
0
TSP Concentration (µg/m³)
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date


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)
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date

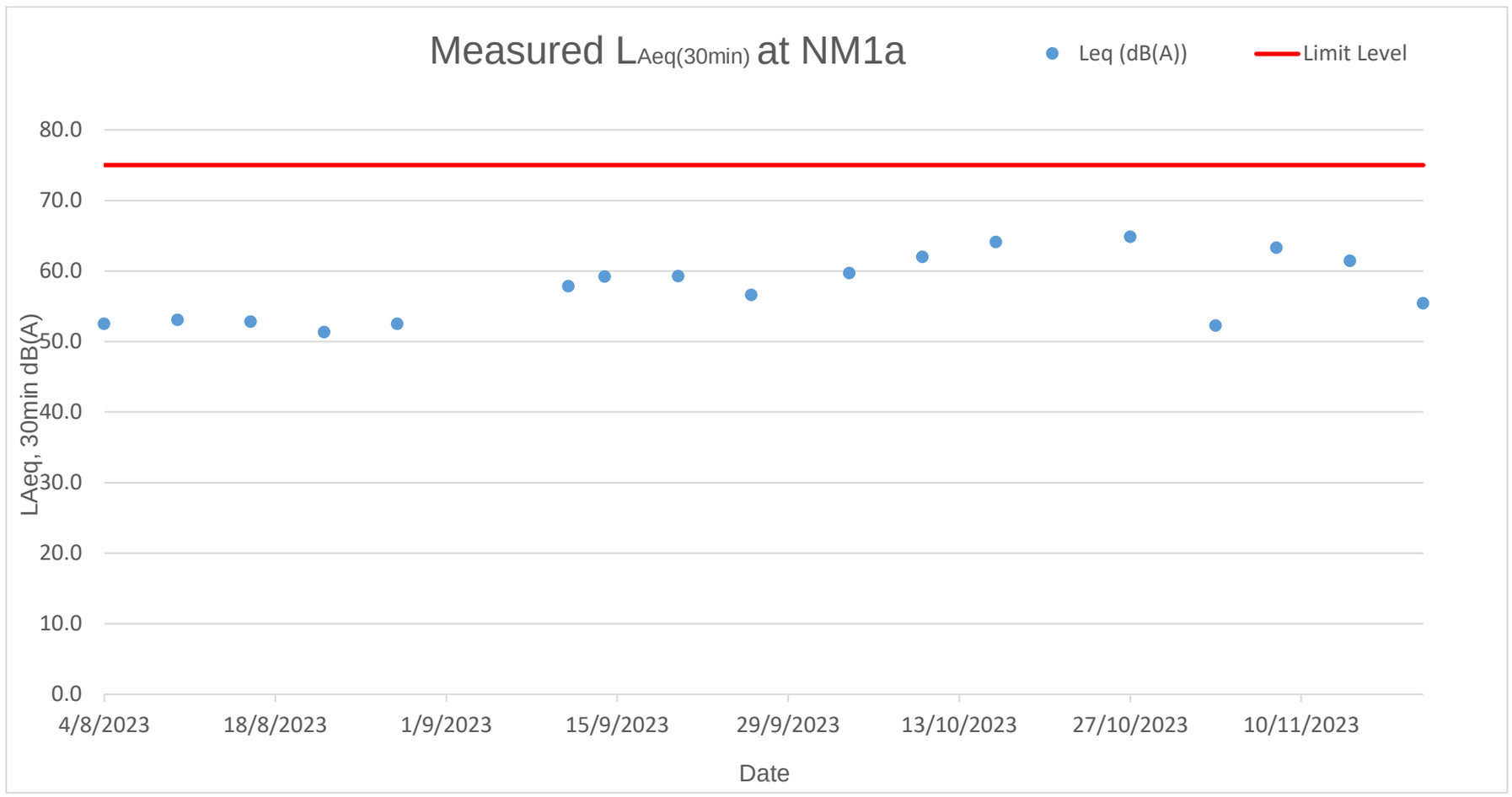

1-hr TSP concentration at AM3
Reading (1)
Reading (2)
Reading (3)
Action Level
Limit Level
600
500
400
300
200
100
0
TSP Concentration (µg/m³)
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date

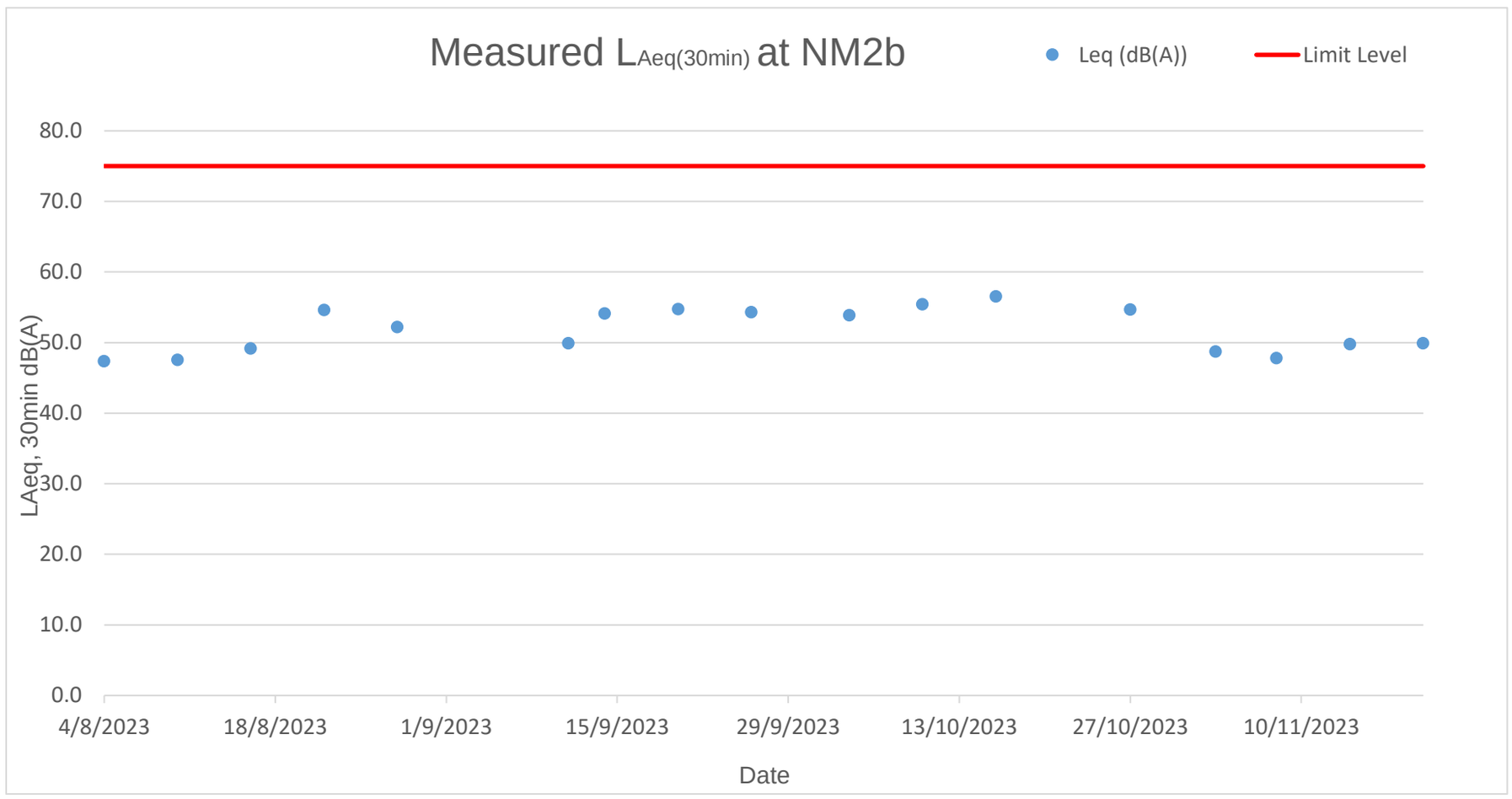

24-hr TSP concentration at AM1
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
300
250
200
150
100
50
0
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date


24-hr TSP concentration at AM2
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
300
250
200
150
100
50
0
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date


24-hr TSP concentration at AM3
Concentration
Action Level
Limit Level
TSP Concentration (μg/m³)
300
250
200
150
100
50
0
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
24/11/2023
Date

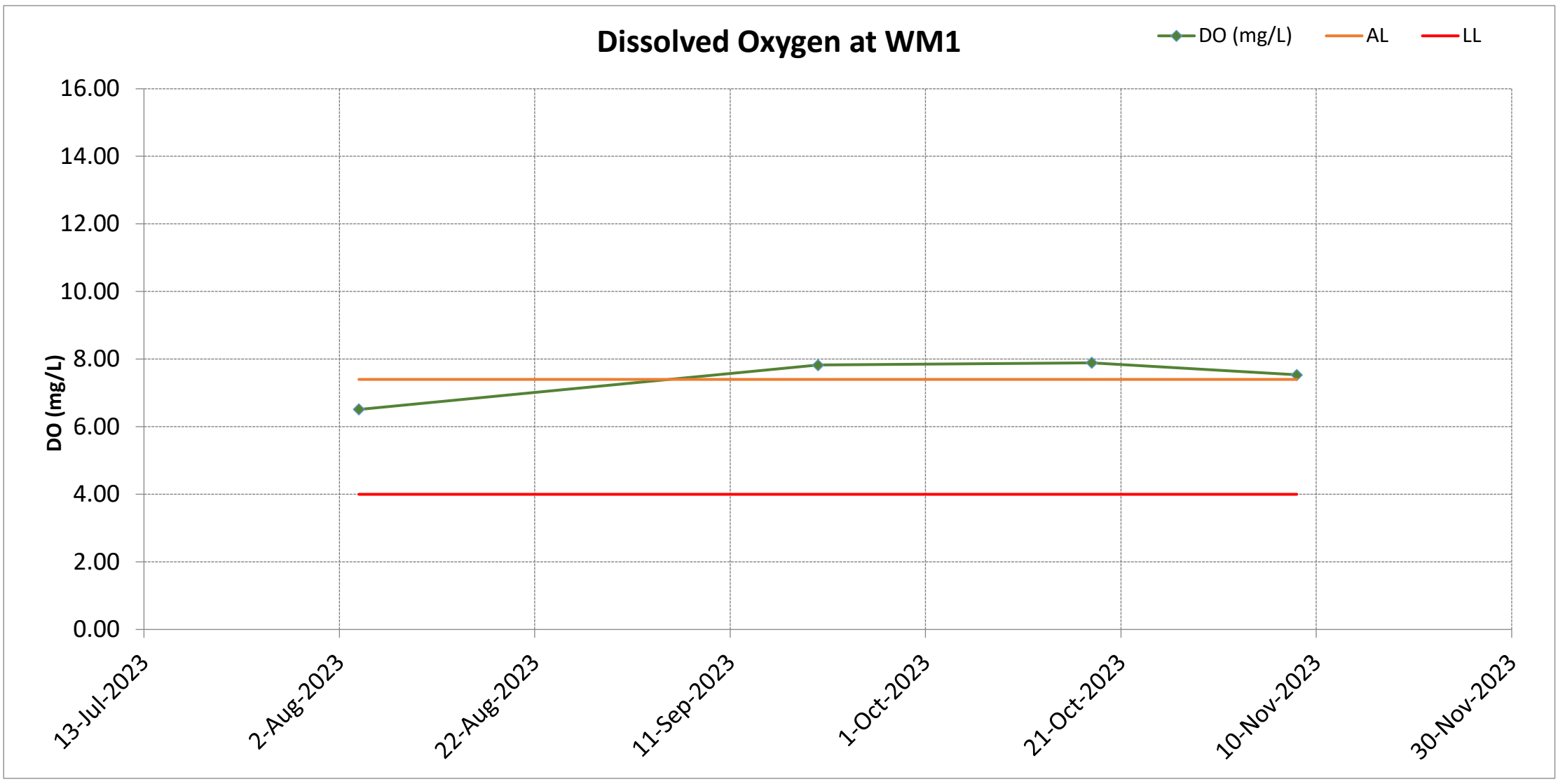
Noise

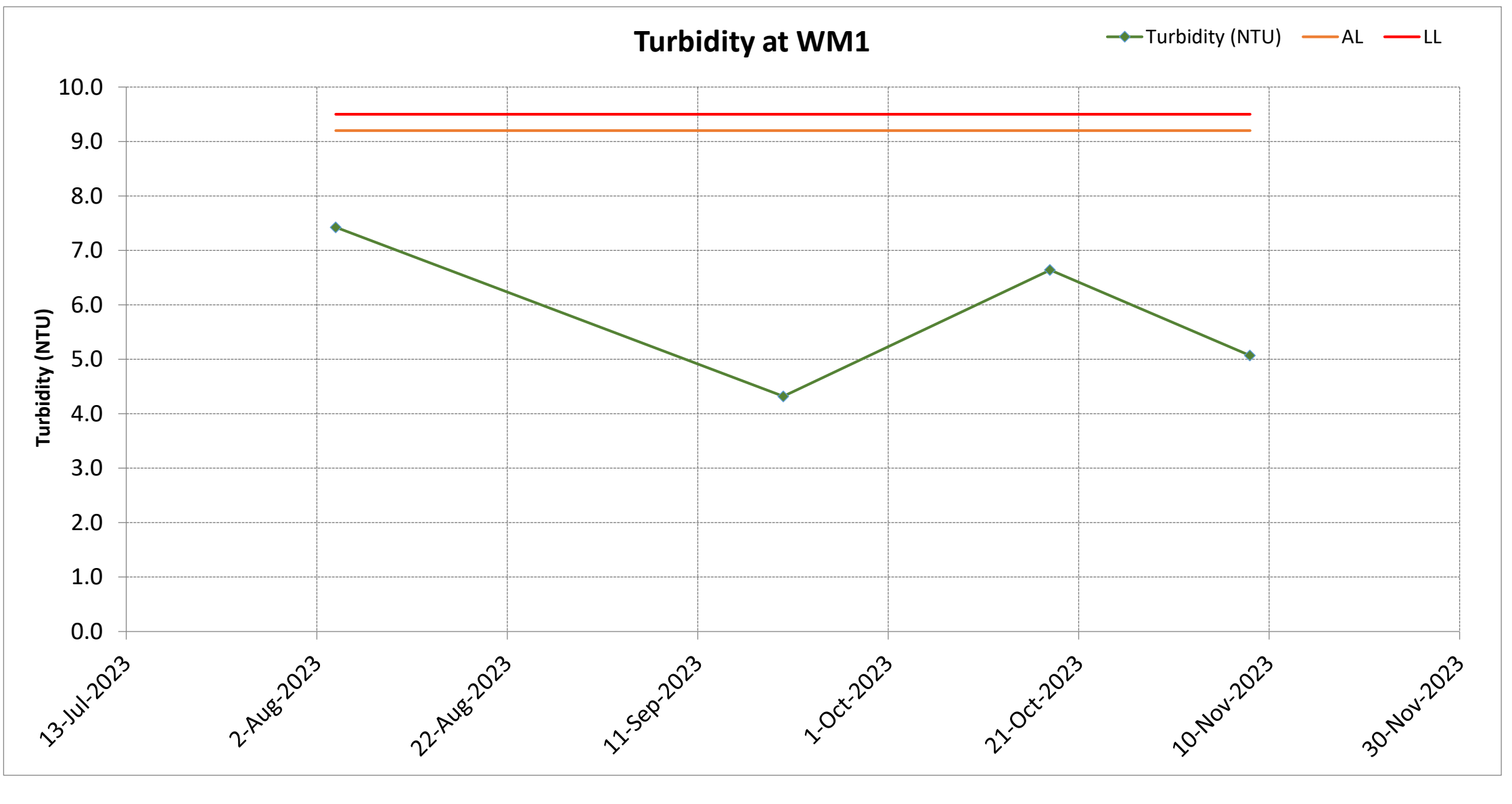

Measured LAeq(30min) at NM1a
Leq (dB(A))
Limit Level
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
LAeq, 30min dB(A)
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
Date


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)
4/8/2023
18/8/2023
1/9/2023
15/9/2023
29/9/2023
13/10/2023
27/10/2023
10/11/2023
Date

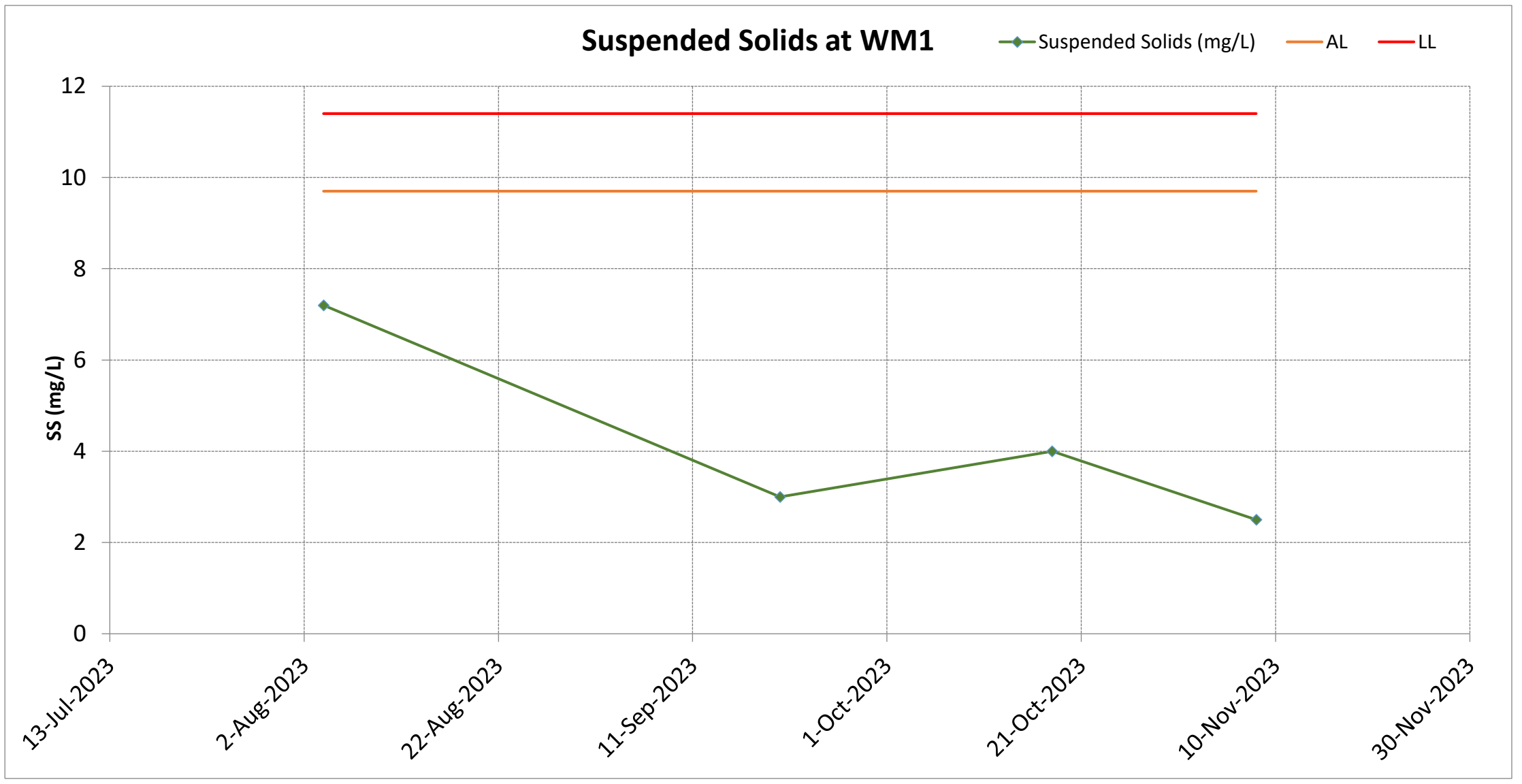
Water Quality

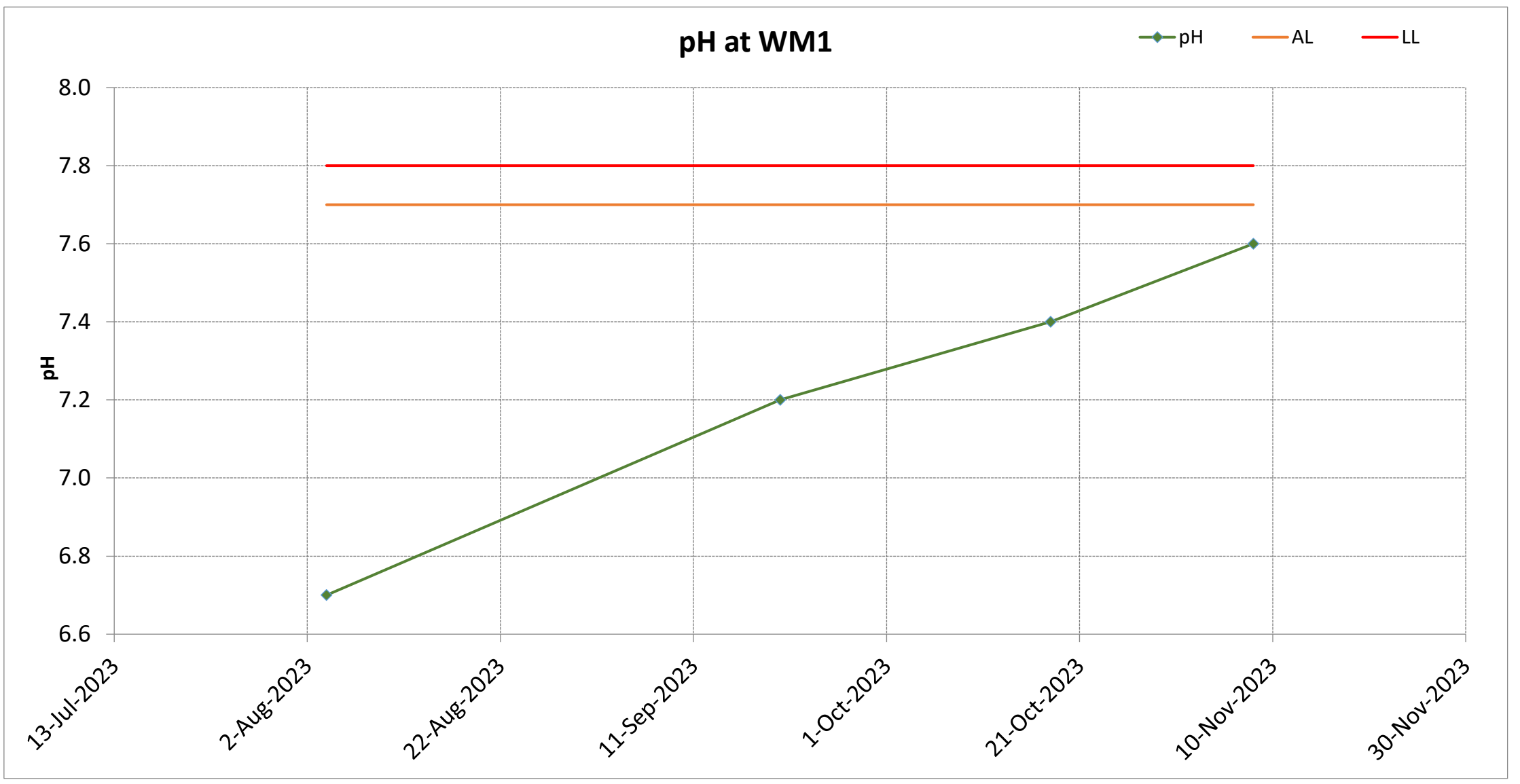
Surface Water Monitoring Results at WM1



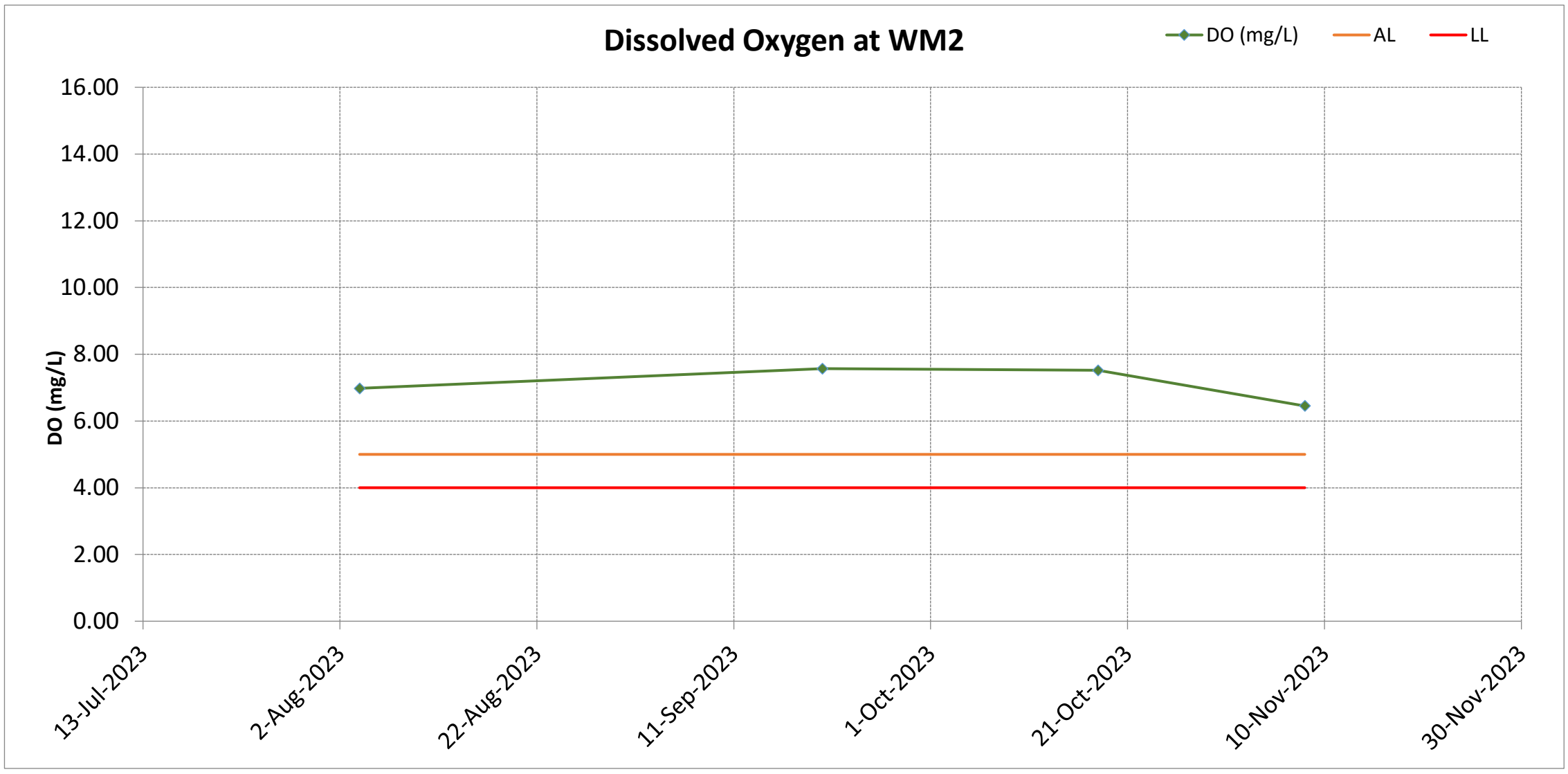


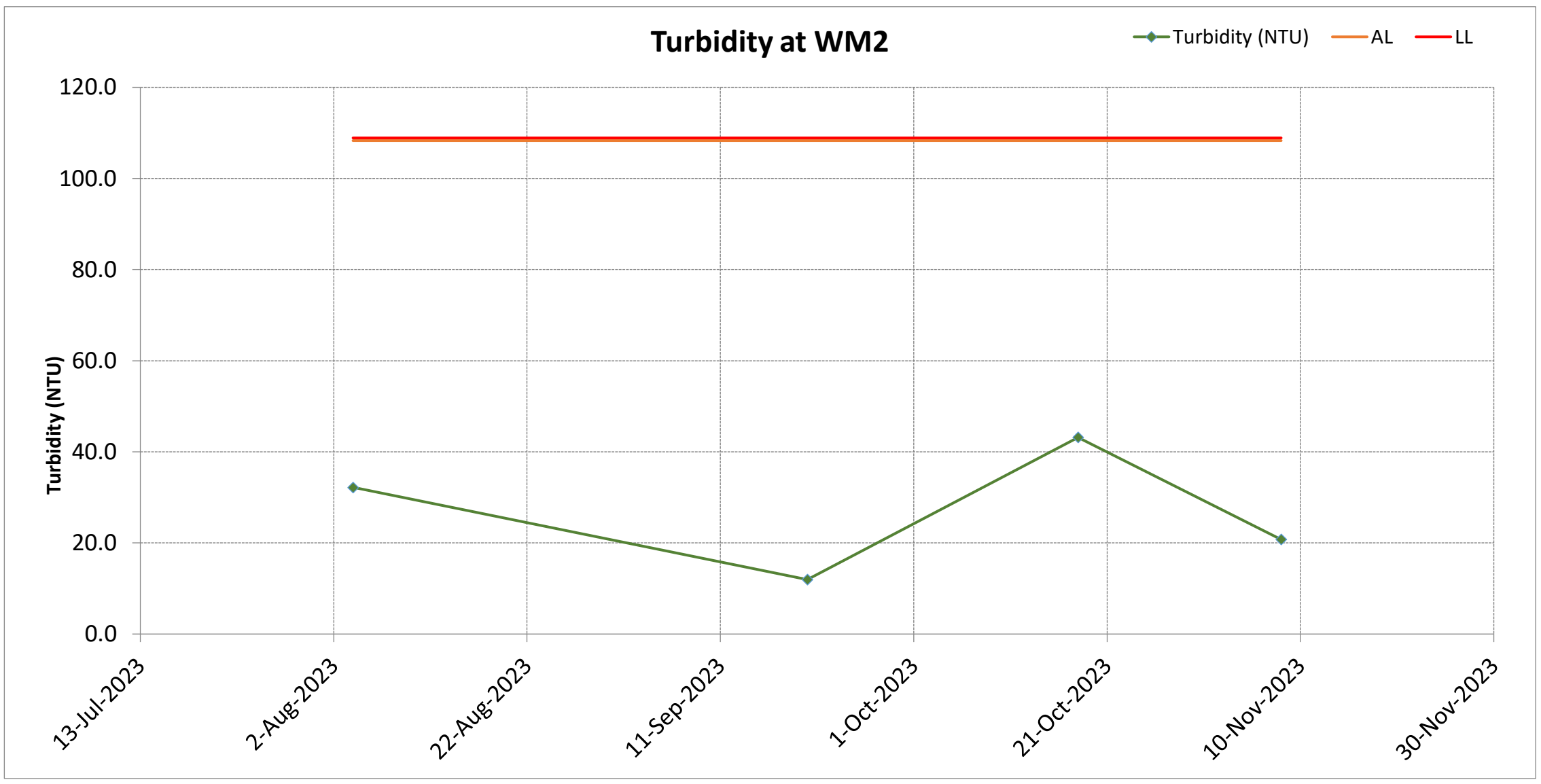
Surface Water Monitoring Results at WM1



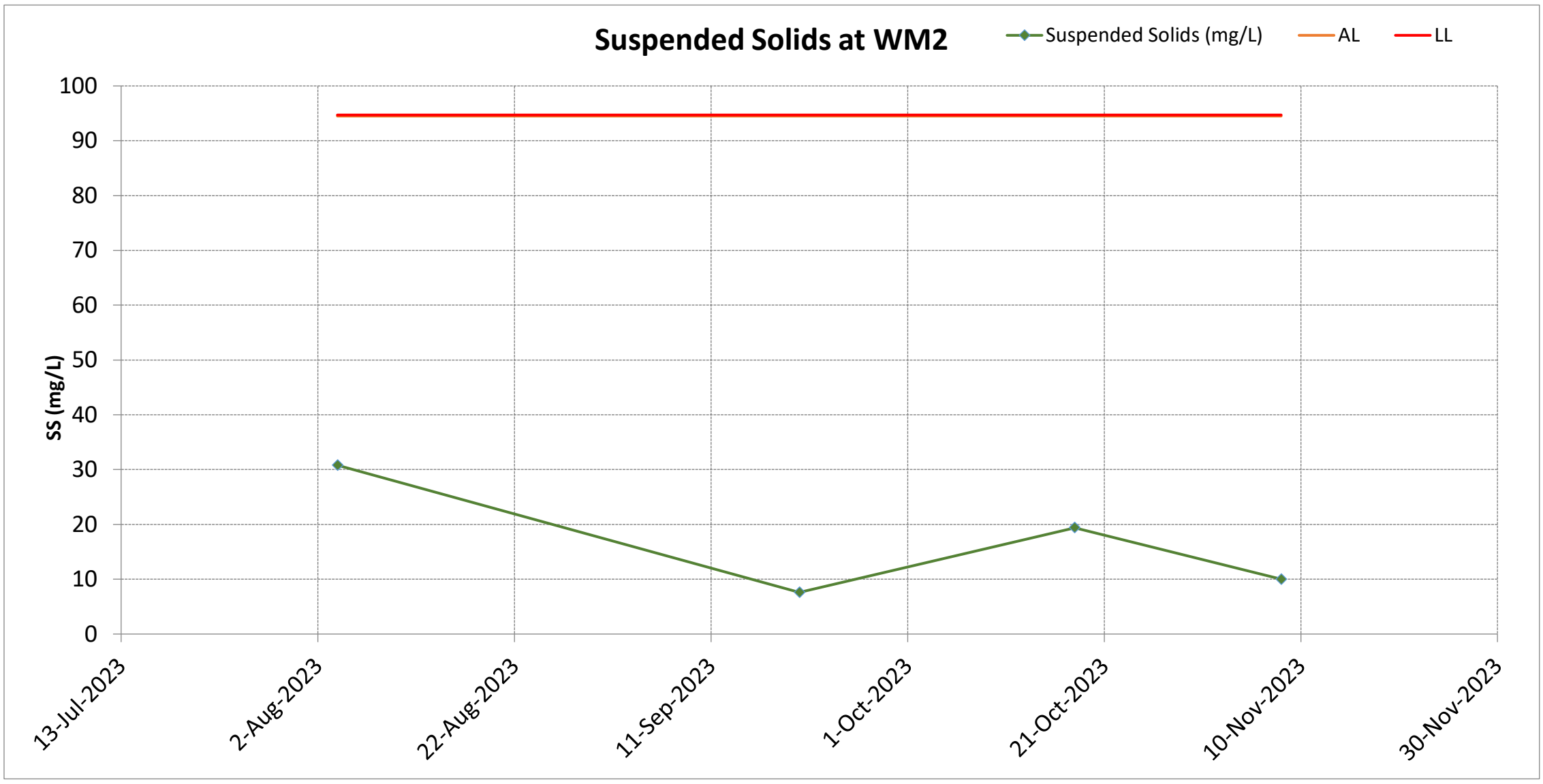


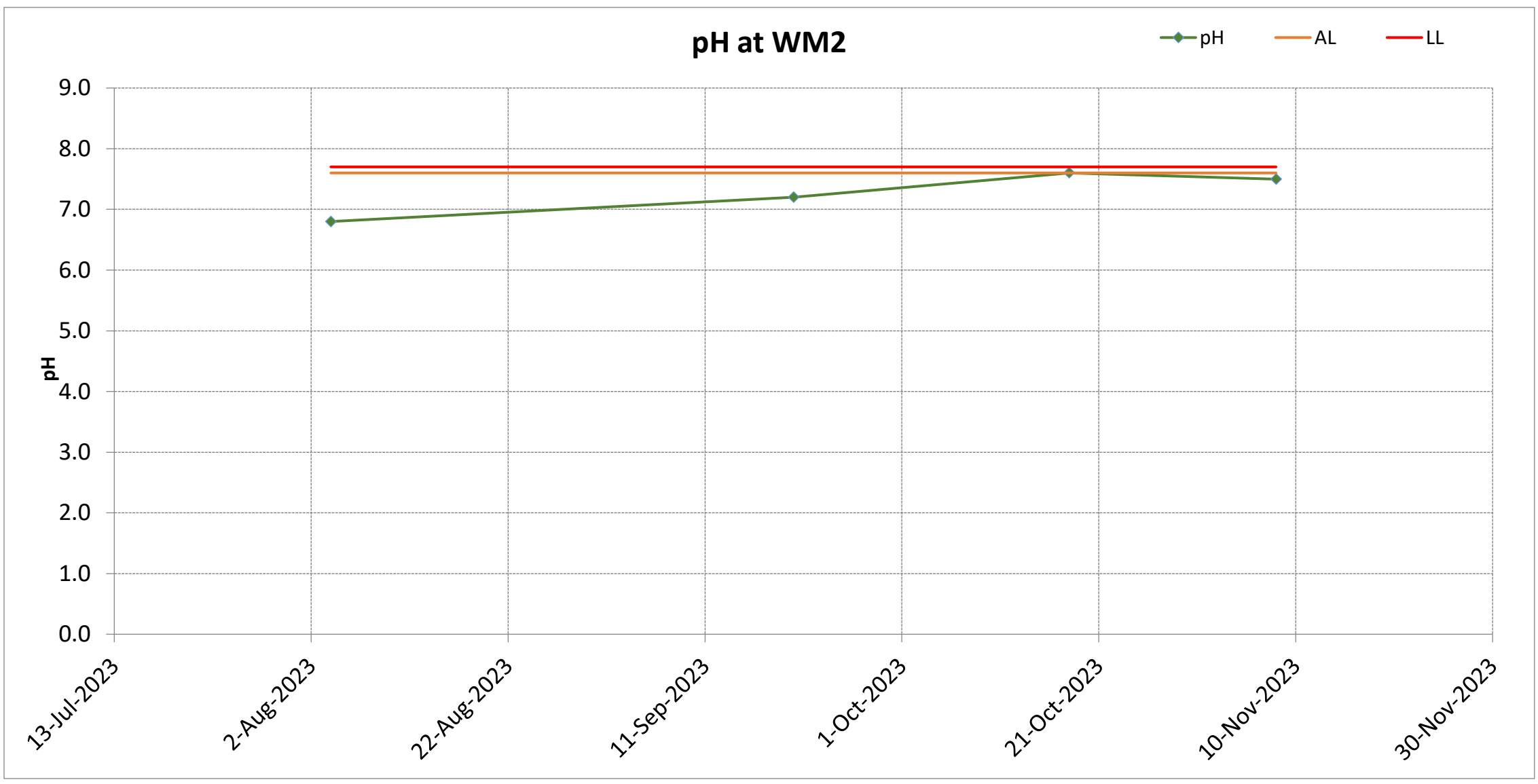
Surface Water Monitoring Results at WM2





Surface Water Monitoring Results at WM2





Appendix G Notification of Environmental Quality Limits Exceedance

Notification of Environmental Quality Limits Exceedance

Air Quality Monitoring - Construction Dust

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

Noise Monitoring

Noise Monitoring Station	Level Exceedance	Monitoring Parameter	LAeq (30mins) Exceedance Count			
			Reporting period		Accumulate project to date	
		LAeq (30mins)	Project related	Non-project related	Project related	Non-project related
NM1a	Action	0	0	0	0	0
	Limit	0	0	0	0	0
NM2a	Action	0	0	0	0	0
	Limit	0	0	0	0	0

Notification of Environmental Quality Limits Exceedance

Surface Water Monitoring

Surface Water Quality Monitoring Station	Level Exceedance	Monitoring Parameter (s)				Exceedance Count															
						Reporting period								Accumulate project to date							
						Project related				Non-project replated				Project related				Non-project replated			
		DO	pH	Turb	SS	DO	pH	Turb	SS	DO	pH	Turb	SS	DO	pH	Turb	SS	DO	pH	Turb	SS
WM1	Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WM2	Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Remarks:

1. “DO” equal to Dissolved Oxygen
2. “Turb” equal to Turbidity
3. “SS” equal to Suspended Solids

Landfill Gas (LFG) Monitoring

LFG Monitoring Station	Monitoring Parameter(s)	No. of Exceedance
		Limit Level
Portion A +50 mpD to +70 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 (Degree)
20231101_0000	0.1	162
20231101_0010	0.1	155
20231101_0020	0.1	86
20231101_0030	0.8	63
20231101_0040	0.1	149
20231101_0050	0.1	127
20231101_0100	0.1	125
20231101_0110	1	79
20231101_0120	0.1	140
20231101_0130	0.3	10
20231101_0140	0.1	146
20231101_0150	0.5	153
20231101_0200	0.3	56
20231101_0210	0.1	120
20231101_0220	0.4	15
20231101_0230	0.1	97
20231101_0240	0.3	105
20231101_0250	0.1	348
20231101_0300	0.1	177
20231101_0310	0.1	284
20231101_0320	0.2	75
20231101_0330	0.6	159
20231101_0340	0.1	125
20231101_0350	0.1	316
20231101_0400	0.1	283
20231101_0410	0.1	165
20231101_0420	0.1	135
20231101_0430	0.1	206
20231101_0440	0.1	199
20231101_0450	0.1	219
20231101_0500	0.1	57
20231101_0510	0.1	150
20231101_0520	0.1	15
20231101_0530	0.1	66
20231101_0540	0.1	48
20231101_0550	0.1	45
20231101_0600	0.1	62
20231101_0610	0.1	40
20231101_0620	0.1	47
20231101_0630	0.1	47
20231101_0640	0.1	53
20231101_0650	0.1	25
20231101_0700	0.1	48
20231101_0710	0.1	61
20231101_0720	0.1	57
20231101_0730	0.1	59
20231101_0740	0.1	72
20231101_0750	0.1	99
20231101_0800	0.1	104
20231101_0810	0.1	116
20231101_0820	0.1	99
20231101_0830	0.1	123
20231101_0840	0.1	85
20231101_0850	0.1	127
20231101_0900	0.1	163
20231101_0910	0.1	176
20231101_0920	0.1	145
20231101_0930	0.4	162
20231101_0940	0.4	140
20231101_0950	0.3	101
20231101_1000	0.1	124
20231101_1010	0.1	7
20231101_1020	0.2	54
20231101_1030	0.1	21
20231101_1040	0.1	68
20231101_1050	0.2	225
20231101_1100	0.5	199
20231101_1110	0.1	87
20231101_1120	0.3	229
20231101_1130	0.3	197
20231101_1140	0.2	178
20231101_1150	0.3	113

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231101_1200	0.1	312
20231101_1210	1.5	187
20231101_1220	0.1	49
20231101_1230	0.3	152
20231101_1240	0.1	156
20231101_1250	0.1	128
20231101_1300	1.4	255
20231101_1310	0.1	155
20231101_1320	0.2	137
20231101_1330	0.1	52
20231101_1340	0.1	322
20231101_1350	0.4	11
20231101_1400	0.2	22
20231101_1410	0.3	22
20231101_1420	0.2	292
20231101_1430	0.1	73
20231101_1440	0.5	12
20231101_1450	0.4	327
20231101_1500	0.1	298
20231101_1510	0.8	95
20231101_1520	1.2	104
20231101_1530	0.1	160
20231101_1540	0.9	86
20231101_1550	0.4	110
20231101_1600	0.3	117
20231101_1610	0.1	242
20231101_1620	0.1	72
20231101_1630	0.1	74
20231101_1640	0.2	213
20231101_1650	0.1	18
20231101_1700	0.2	354
20231101_1710	0.1	81
20231101_1720	0.1	240
20231101_1730	0.1	330
20231101_1740	2.1	313
20231101_1750	0.1	336
20231101_1800	0.2	344
20231101_1810	0.1	342
20231101_1820	0.4	331
20231101_1830	0.1	348
20231101_1840	0.1	86
20231101_1850	0.1	4
20231101_1900	0.6	112
20231101_1910	0.1	161
20231101_1920	0.1	300
20231101_1930	0.2	101
20231101_1940	0.6	324
20231101_1950	6.4	26
20231101_2000	0.1	144
20231101_2010	1.1	127
20231101_2020	0.2	76
20231101_2030	0.1	295
20231101_2040	0.1	48
20231101_2050	0.1	99
20231101_2100	0.1	200
20231101_2110	0.1	112
20231101_2120	0.1	85
20231101_2130	0.1	300
20231101_2140	0.1	148
20231101_2150	0.1	164
20231101_2200	0.1	271
20231101_2210	0.1	97
20231101_2220	0.1	112
20231101_2230	0.1	204
20231101_2240	0.1	317
20231101_2250	0.1	283
20231101_2300	0.1	74
20231101_2310	0.1	130
20231101_2320	0.1	124
20231101_2330	0.1	295
20231101_2340	0.1	119
20231101_2350	0.1	261

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231102_0000	0.1	283
20231102_0010	0.1	52
20231102_0020	0.1	160
20231102_0030	0.1	94
20231102_0040	0.1	73
20231102_0050	0.1	93
20231102_0100	0.1	162
20231102_0110	0.1	312
20231102_0120	0.1	124
20231102_0130	0.1	33
20231102_0140	0.1	118
20231102_0150	0.1	55
20231102_0200	0.1	173
20231102_0210	0.1	93
20231102_0220	0.1	90
20231102_0230	0.1	329
20231102_0240	0.1	104
20231102_0250	0.1	114
20231102_0300	0.1	49
20231102_0310	0.1	33
20231102_0320	0.1	89
20231102_0330	0.1	298
20231102_0340	0.1	86
20231102_0350	0.1	290
20231102_0400	0.1	277
20231102_0410	0.1	310
20231102_0420	0.2	310
20231102_0430	0.1	324
20231102_0440	0.1	310
20231102_0450	0.1	353
20231102_0500	0.1	70
20231102_0510	1	5
20231102_0520	0.1	81
20231102_0530	0.1	302
20231102_0540	0.1	133
20231102_0550	0.1	101
20231102_0600	0.1	277
20231102_0610	0.1	201
20231102_0620	0.1	186
20231102_0630	0.1	5
20231102_0640	0.1	317
20231102_0650	0.1	344
20231102_0700	0.1	342
20231102_0710	0.1	29
20231102_0720	0.1	339
20231102_0730	0.1	331
20231102_0740	0.1	27
20231102_0750	0.1	346
20231102_0800	0.1	312
20231102_0810	0.1	342
20231102_0820	0.1	351
20231102_0830	0.1	120
20231102_0840	0.3	284
20231102_0850	0.6	273
20231102_0900	0.1	174
20231102_0910	1.4	149
20231102_0920	0.1	237
20231102_0930	0.1	3
20231102_0940	0.1	138
20231102_0950	0.2	152
20231102_1000	0.1	77
20231102_1010	0.1	195
20231102_1020	0.3	31
20231102_1030	0.1	175
20231102_1040	0.4	115
20231102_1050	0.1	151
20231102_1100	0.3	194
20231102_1110	1.5	49
20231102_1120	0.4	18
20231102_1130	1.6	209
20231102_1140	0.4	266
20231102_1150	1	74

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231102_1200	0.1	113
20231102_1210	2.4	163
20231102_1220	2.2	109
20231102_1230	1.8	31
20231102_1240	0.3	3
20231102_1250	1.6	146
20231102_1300	1	339
20231102_1310	2.7	156
20231102_1320	0.5	91
20231102_1330	0.9	122
20231102_1340	0.1	290
20231102_1350	1.4	120
20231102_1400	0.5	2
20231102_1410	1	68
20231102_1420	1.5	62
20231102_1430	3.9	191
20231102_1440	0.9	86
20231102_1450	1.1	193
20231102_1500	0.8	35
20231102_1510	0.1	166
20231102_1520	0.2	151
20231102_1530	0.1	189
20231102_1540	0.2	93
20231102_1550	0.1	49
20231102_1600	1.9	118
20231102_1610	1.5	141
20231102_1620	4.4	70
20231102_1630	0.2	136
20231102_1640	0.1	145
20231102_1650	0.8	118
20231102_1700	1.6	73
20231102_1710	0.5	97
20231102_1720	1.2	44
20231102_1730	0.1	104
20231102_1740	0.4	103
20231102_1750	0.1	162
20231102_1800	1.2	139
20231102_1810	0.1	103
20231102_1820	0.1	39
20231102_1830	0.1	18
20231102_1840	0.1	13
20231102_1850	0.1	52
20231102_1900	0.1	347
20231102_1910	0.1	85
20231102_1920	0.1	64
20231102_1930	0.1	57
20231102_1940	0.1	108
20231102_1950	0.1	124
20231102_2000	0.1	14
20231102_2010	0.1	339
20231102_2020	0.1	120
20231102_2030	0.1	70
20231102_2040	0.1	66
20231102_2050	0.1	66
20231102_2100	0.1	42
20231102_2110	0.1	143
20231102_2120	0.1	315
20231102_2130	0.1	67
20231102_2140	0.1	162
20231102_2150	0.1	100
20231102_2200	0.1	164
20231102_2210	0.1	116
20231102_2220	0.1	24
20231102_2230	0.1	253
20231102_2240	0.1	52
20231102_2250	0.1	15
20231102_2300	0.1	246
20231102_2310	0.1	47
20231102_2320	0.2	54
20231102_2330	0.1	239
20231102_2340	0.1	86
20231102_2350	0.1	95

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231103_0000	0.1	89
20231103_0010	0.1	71
20231103_0020	0.1	2
20231103_0030	0.1	78
20231103_0040	0.1	56
20231103_0050	0.1	2
20231103_0100	0.1	168
20231103_0110	0.1	328
20231103_0120	0.1	344
20231103_0130	0.1	116
20231103_0140	0.1	76
20231103_0150	0.1	80
20231103_0200	0.1	71
20231103_0210	0.1	139
20231103_0220	0.1	51
20231103_0230	0.1	56
20231103_0240	0.1	115
20231103_0250	0.1	272
20231103_0300	0.1	144
20231103_0310	0.1	85
20231103_0320	0.1	47
20231103_0330	0.1	49
20231103_0340	0.1	38
20231103_0350	0.1	50
20231103_0400	0.1	52
20231103_0410	0.1	19
20231103_0420	0.1	32
20231103_0430	0.1	18
20231103_0440	0.1	47
20231103_0450	0.1	30
20231103_0500	0.1	296
20231103_0510	0.1	309
20231103_0520	0.1	33
20231103_0530	0.1	45
20231103_0540	0.1	46
20231103_0550	0.1	33
20231103_0600	0.1	54
20231103_0610	0.1	12
20231103_0620	0.1	59
20231103_0630	0.1	53
20231103_0640	0.1	16
20231103_0650	0.1	27
20231103_0700	0.1	22
20231103_0710	0.1	87
20231103_0720	0.1	290
20231103_0730	0.4	269
20231103_0740	0.1	47
20231103_0750	0.1	295
20231103_0800	0.1	42
20231103_0810	0.3	300
20231103_0820	0.1	66
20231103_0830	0.1	146
20231103_0840	0.1	111
20231103_0850	0.5	351
20231103_0900	0.2	116
20231103_0910	1	306
20231103_0920	0.2	301
20231103_0930	0.1	187
20231103_0940	1	12
20231103_0950	0.1	143
20231103_1000	0.2	332
20231103_1010	0.3	346
20231103_1020	0.9	335
20231103_1030	0.9	198
20231103_1040	0.1	64
20231103_1050	0.4	19
20231103_1100	0.9	43
20231103_1110	0.7	355
20231103_1120	0.1	55
20231103_1130	0.9	84
20231103_1140	0.1	34
20231103_1150	0.5	158

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231103_1200	1.7	54
20231103_1210	0.3	181
20231103_1220	1.5	346
20231103_1230	0.6	166
20231103_1240	0.1	186
20231103_1250	0.3	54
20231103_1300	4.1	156
20231103_1310	0.1	35
20231103_1320	0.4	0
20231103_1330	0.4	54
20231103_1340	2.8	122
20231103_1350	0.2	111
20231103_1400	0.1	129
20231103_1410	0.4	108
20231103_1420	1.6	112
20231103_1430	1.3	215
20231103_1440	2.6	95
20231103_1450	2.3	141
20231103_1500	1.2	180
20231103_1510	0.8	92
20231103_1520	0.4	97
20231103_1530	0.2	102
20231103_1540	0.4	107
20231103_1550	1	60
20231103_1600	0.1	66
20231103_1610	0.2	95
20231103_1620	0.4	127
20231103_1630	0.1	112
20231103_1640	0.1	115
20231103_1650	0.1	192
20231103_1700	0.2	43
20231103_1710	0.1	52
20231103_1720	0.1	53
20231103_1730	0.9	62
20231103_1740	0.1	28
20231103_1750	0.3	80
20231103_1800	0.5	112
20231103_1810	1.5	101
20231103_1820	0.2	106
20231103_1830	0.2	111
20231103_1840	0.1	143
20231103_1850	0.1	82
20231103_1900	0.1	10
20231103_1910	0.1	16
20231103_1920	0.1	20
20231103_1930	0.1	7
20231103_1940	0.1	7
20231103_1950	0.1	27
20231103_2000	0.1	30
20231103_2010	0.1	23
20231103_2020	0.1	85
20231103_2030	0.1	95
20231103_2040	0.2	134
20231103_2050	0.7	92
20231103_2100	0.2	92
20231103_2110	0.1	35
20231103_2120	0.1	54
20231103_2130	0.1	355
20231103_2140	0.1	304
20231103_2150	0.1	43
20231103_2200	0.1	104
20231103_2210	0.1	92
20231103_2220	0.5	186
20231103_2230	0.1	78
20231103_2240	0.1	279
20231103_2250	0.1	1
20231103_2300	0.1	60
20231103_2310	0.1	308
20231103_2320	0.1	9
20231103_2330	0.3	5
20231103_2340	0.6	34
20231103_2350	0.1	66

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231104_0000	0.2	311
20231104_0010	0.1	187
20231104_0020	0.1	170
20231104_0030	0.1	6
20231104_0040	0.1	325
20231104_0050	0.1	249
20231104_0100	0.1	100
20231104_0110	0.1	46
20231104_0120	0.1	121
20231104_0130	0.1	207
20231104_0140	0.2	154
20231104_0150	0.1	144
20231104_0200	0.1	208
20231104_0210	0.1	96
20231104_0220	0.1	96
20231104_0230	0.1	100
20231104_0240	0.1	104
20231104_0250	0.1	122
20231104_0300	0.1	93
20231104_0310	0.1	49
20231104_0320	0.1	79
20231104_0330	0.1	48
20231104_0340	0.1	66
20231104_0350	0.1	67
20231104_0400	0.1	44
20231104_0410	0.1	51
20231104_0420	0.1	50
20231104_0430	0.1	49
20231104_0440	0.1	33
20231104_0450	0.1	177
20231104_0500	0.1	177
20231104_0510	0.1	91
20231104_0520	0.1	66
20231104_0530	0.1	346
20231104_0540	0.1	76
20231104_0550	0.1	5
20231104_0600	0.1	93
20231104_0610	0.1	94
20231104_0620	0.1	77
20231104_0630	0.1	53
20231104_0640	0.1	83
20231104_0650	0.1	83
20231104_0700	0.1	83
20231104_0710	0.1	83
20231104_0720	0.1	256
20231104_0730	0.1	134
20231104_0740	0.1	100
20231104_0750	0.1	49
20231104_0800	0.1	122
20231104_0810	0.1	153
20231104_0820	0.1	2
20231104_0830	0.7	56
20231104_0840	0.1	346
20231104_0850	0.2	110
20231104_0900	0.1	112
20231104_0910	0.1	346
20231104_0920	0.1	272
20231104_0930	0.1	347
20231104_0940	0.4	109
20231104_0950	0.1	29
20231104_1000	0.1	354
20231104_1010	0.1	75
20231104_1020	0.1	331
20231104_1030	0.1	280
20231104_1040	1.1	17
20231104_1050	0.1	55
20231104_1100	0.5	43
20231104_1110	3.8	336
20231104_1120	0.6	68
20231104_1130	0.1	99
20231104_1140	1.3	128
20231104_1150	1	296

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231104_1200	1.1	94
20231104_1210	0.1	65
20231104_1220	0.9	29
20231104_1230	0.4	56
20231104_1240	0.9	348
20231104_1250	0.7	353
20231104_1300	3	60
20231104_1310	0.3	89
20231104_1320	1	353
20231104_1330	0.1	63
20231104_1340	0.2	331
20231104_1350	0.2	3
20231104_1400	2.9	330
20231104_1410	0.1	1
20231104_1420	0.1	292
20231104_1430	0.1	37
20231104_1440	0.1	18
20231104_1450	0.2	71
20231104_1500	0.9	1
20231104_1510	1.4	51
20231104_1520	0.1	34
20231104_1530	0.3	251
20231104_1540	1.1	148
20231104_1550	0.1	177
20231104_1600	1.7	149
20231104_1610	0.3	120
20231104_1620	1	101
20231104_1630	1.8	112
20231104_1640	0.1	125
20231104_1650	0.2	12
20231104_1700	0.1	94
20231104_1710	0.2	333
20231104_1720	0.3	132
20231104_1730	0.1	334
20231104_1740	1	103
20231104_1750	0.1	276
20231104_1800	0.1	185
20231104_1810	0.1	15
20231104_1820	0.2	88
20231104_1830	0.2	153
20231104_1840	0.1	100
20231104_1850	0.1	56
20231104_1900	0.1	38
20231104_1910	0.1	114
20231104_1920	0.1	54
20231104_1930	0.1	289
20231104_1940	0.1	119
20231104_1950	0.2	281
20231104_2000	0.2	238
20231104_2010	0.1	256
20231104_2020	0.1	282
20231104_2030	0.1	56
20231104_2040	0.1	154
20231104_2050	0.1	284
20231104_2100	0.1	13
20231104_2110	0.1	84
20231104_2120	0.1	166
20231104_2130	0.1	24
20231104_2140	0.1	76
20231104_2150	0.2	117
20231104_2200	0.1	164
20231104_2210	0.1	54
20231104_2220	0.1	119
20231104_2230	0.1	173
20231104_2240	0.1	170
20231104_2250	0.1	118
20231104_2300	0.1	82
20231104_2310	0.1	78
20231104_2320	0.1	93
20231104_2330	0.1	83
20231104_2340	0.1	94
20231104_2350	0.1	59

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231105_0000	0.1	47
20231105_0010	0.1	100
20231105_0020	0.1	15
20231105_0030	0.1	89
20231105_0040	0.1	106
20231105_0050	0.1	185
20231105_0100	0.1	47
20231105_0110	0.1	109
20231105_0120	0.1	245
20231105_0130	0.1	274
20231105_0140	0.1	121
20231105_0150	0.1	15
20231105_0200	0.1	343
20231105_0210	0.1	299
20231105_0220	0.1	26
20231105_0230	0.1	56
20231105_0240	0.1	0
20231105_0250	0.1	24
20231105_0300	0.1	344
20231105_0310	0.1	342
20231105_0320	0.1	324
20231105_0330	0.1	161
20231105_0340	0.1	68
20231105_0350	0.1	25
20231105_0400	0.1	24
20231105_0410	0.1	109
20231105_0420	0.1	23
20231105_0430	0.1	40
20231105_0440	0.1	49
20231105_0450	0.1	52
20231105_0500	0.1	23
20231105_0510	0.1	23
20231105_0520	0.1	21
20231105_0530	0.1	21
20231105_0540	0.1	10
20231105_0550	0.1	80
20231105_0600	0.1	61
20231105_0610	0.1	74
20231105_0620	0.1	5
20231105_0630	0.1	311
20231105_0640	0.1	140
20231105_0650	0.1	57
20231105_0700	0.1	18
20231105_0710	0.1	136
20231105_0720	0.3	176
20231105_0730	0.2	122
20231105_0740	0.1	30
20231105_0750	0.1	20
20231105_0800	0.1	120
20231105_0810	0.1	149
20231105_0820	0.1	248
20231105_0830	0.1	116
20231105_0840	0.1	69
20231105_0850	0.4	206
20231105_0900	0.1	176
20231105_0910	0.1	15
20231105_0920	0.1	68
20231105_0930	0.1	33
20231105_0940	0.3	63
20231105_0950	0.1	311
20231105_1000	0.1	314
20231105_1010	2.7	312
20231105_1020	0.1	86
20231105_1030	0.1	215
20231105_1040	0.1	126
20231105_1050	0.1	175
20231105_1100	0.5	331
20231105_1110	0.1	154
20231105_1120	0.9	52
20231105_1130	0.8	139
20231105_1140	0.1	310
20231105_1150	0.1	152

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231105_1200	0.1	137
20231105_1210	1.1	120
20231105_1220	0.2	5
20231105_1230	0.1	337
20231105_1240	0.1	307
20231105_1250	0.2	325
20231105_1300	0.1	132
20231105_1310	0.1	72
20231105_1320	0.1	345
20231105_1330	0.2	119
20231105_1340	0.1	295
20231105_1350	0.1	340
20231105_1400	0.3	9
20231105_1410	0.9	43
20231105_1420	0.2	30
20231105_1430	0.8	12
20231105_1440	0.1	323
20231105_1450	0.1	66
20231105_1500	0.3	116
20231105_1510	0.1	153
20231105_1520	0.7	117
20231105_1530	0.1	39
20231105_1540	1.4	104
20231105_1550	0.1	84
20231105_1600	2.8	337
20231105_1610	1.2	120
20231105_1620	0.1	97
20231105_1630	0.7	26
20231105_1640	0.1	78
20231105_1650	0.1	9
20231105_1700	0.1	88
20231105_1710	1.0	114
20231105_1720	0.3	115
20231105_1730	0.8	104
20231105_1740	1.1	121
20231105_1750	0.1	101
20231105_1800	0.1	182
20231105_1810	0.1	28
20231105_1820	0.1	173
20231105_1830	0.1	45
20231105_1840	0.1	0
20231105_1850	0.1	6
20231105_1900	0.1	45
20231105_1910	0.1	157
20231105_1920	0.1	80
20231105_1930	0.1	10
20231105_1940	0.1	34
20231105_1950	0.1	128
20231105_2000	0.1	84
20231105_2010	0.1	18
20231105_2020	0.1	69
20231105_2030	0.1	29
20231105_2040	0.1	295
20231105_2050	0.1	27
20231105_2100	0.1	2
20231105_2110	0.1	36
20231105_2120	0.1	9
20231105_2130	0.1	0
20231105_2140	0.1	2
20231105_2150	0.1	34
20231105_2200	0.1	94
20231105_2210	0.1	80
20231105_2220	0.1	69
20231105_2230	0.1	18
20231105_2240	0.1	173
20231105_2250	0.1	117
20231105_2300	0.1	26
20231105_2310	0.1	81
20231105_2320	0.1	207
20231105_2330	0.1	49
20231105_2340	0.1	27
20231105_2350	0.1	38

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231106_0000	0.1	167
20231106_0010	0.1	91
20231106_0020	0.1	77
20231106_0030	0.1	19
20231106_0040	0.1	23
20231106_0050	0.1	50
20231106_0100	0.1	92
20231106_0110	0.1	8
20231106_0120	0.1	74
20231106_0130	0.1	71
20231106_0140	0.1	10
20231106_0150	0.1	23
20231106_0200	0.1	18
20231106_0210	0.1	55
20231106_0220	0.1	225
20231106_0230	0.1	117
20231106_0240	0.1	56
20231106_0250	0.1	32
20231106_0300	0.1	74
20231106_0310	0.1	167
20231106_0320	0.1	61
20231106_0330	0.1	61
20231106_0340	0.1	66
20231106_0350	0.1	58
20231106_0400	0.1	47
20231106_0410	0.1	47
20231106_0420	0.1	55
20231106_0430	0.1	50
20231106_0440	0.1	95
20231106_0450	0.1	69
20231106_0500	0.1	71
20231106_0510	0.1	25
20231106_0520	0.1	47
20231106_0530	0.1	56
20231106_0540	0.1	29
20231106_0550	0.1	57
20231106_0600	0.1	38
20231106_0610	0.1	41
20231106_0620	0.1	207
20231106_0630	0.1	26
20231106_0640	0.1	343
20231106_0650	0.1	314
20231106_0700	0.1	233
20231106_0710	0.1	216
20231106_0720	0.1	68
20231106_0730	0.1	70
20231106_0740	0.1	53
20231106_0750	0.1	168
20231106_0800	0.1	168
20231106_0810	0.1	119
20231106_0820	0.1	77
20231106_0830	0.1	185
20231106_0840	0.3	143
20231106_0850	0.1	148
20231106_0900	0.1	142
20231106_0910	0.7	175
20231106_0920	1.2	221
20231106_0930	0.1	176
20231106_0940	0.2	102
20231106_0950	6.1	229
20231106_1000	1.0	54
20231106_1010	1.2	60
20231106_1020	0.2	48
20231106_1030	0.9	298
20231106_1040	0.2	290
20231106_1050	0.9	56
20231106_1100	0.1	40
20231106_1110	0.1	49
20231106_1120	0.1	331
20231106_1130	0.1	262
20231106_1140	0.1	138
20231106_1150	0.4	64

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231106_1200	3.3	58
20231106_1210	0.6	53
20231106_1220	2.9	355
20231106_1230	0.6	343
20231106_1240	0.2	29
20231106_1250	0.1	53
20231106_1300	0.1	6
20231106_1310	1.2	79
20231106_1320	0.6	42
20231106_1330	0.7	21
20231106_1340	2.2	5
20231106_1350	0.1	28
20231106_1400	0.1	3
20231106_1410	1.0	153
20231106_1420	1.5	59
20231106_1430	0.4	348
20231106_1440	0.2	324
20231106_1450	4.0	59
20231106_1500	0.1	290
20231106_1510	0.1	70
20231106_1520	0.1	1
20231106_1530	0.7	43
20231106_1540	0.6	43
20231106_1550	0.1	197
20231106_1600	1.6	104
20231106_1610	0.1	249
20231106_1620	1.6	68
20231106_1630	2.6	149
20231106_1640	0.4	301
20231106_1650	2.4	7
20231106_1700	0.5	237
20231106_1710	0.1	221
20231106_1720	2.3	152
20231106_1730	0.1	56
20231106_1740	5.4	29
20231106_1750	1.2	133
20231106_1800	1.4	162
20231106_1810	0.3	177
20231106_1820	0.1	163
20231106_1830	0.1	6
20231106_1840	0.1	102
20231106_1850	0.2	249
20231106_1900	0.3	157
20231106_1910	0.1	83
20231106_1920	0.1	296
20231106_1930	0.1	84
20231106_1940	0.1	13
20231106_1950	0.1	37
20231106_2000	0.1	54
20231106_2010	0.1	43
20231106_2020	0.1	37
20231106_2030	0.1	44
20231106_2040	0.1	56
20231106_2050	0.1	45
20231106_2100	0.1	50
20231106_2110	0.1	45
20231106_2120	0.1	46
20231106_2130	0.1	41
20231106_2140	0.1	43
20231106_2150	0.1	48
20231106_2200	0.1	43
20231106_2210	0.1	22
20231106_2220	0.1	329
20231106_2230	0.1	45
20231106_2240	0.1	39
20231106_2250	0.1	43
20231106_2300	0.1	79
20231106_2310	0.1	52
20231106_2320	0.1	43
20231106_2330	0.1	43
20231106_2340	0.1	29
20231106_2350	0.1	43

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231107_0000	0.1	42
20231107_0010	0.1	47
20231107_0020	0.1	36
20231107_0030	0.1	44
20231107_0040	0.1	55
20231107_0050	0.1	25
20231107_0100	0.1	80
20231107_0110	0.1	50
20231107_0120	0.1	48
20231107_0130	0.1	48
20231107_0140	0.1	46
20231107_0150	0.1	60
20231107_0200	0.1	68
20231107_0210	0.1	48
20231107_0220	0.1	43
20231107_0230	0.1	49
20231107_0240	0.1	26
20231107_0250	0.1	4
20231107_0300	0.1	50
20231107_0310	0.1	25
20231107_0320	0.1	21
20231107_0330	0.1	25
20231107_0340	0.1	41
20231107_0350	0.1	45
20231107_0400	0.1	45
20231107_0410	0.1	22
20231107_0420	0.1	36
20231107_0430	0.1	25
20231107_0440	0.1	349
20231107_0450	0.1	31
20231107_0500	0.1	49
20231107_0510	0.1	31
20231107_0520	0.1	41
20231107_0530	0.1	50
20231107_0540	0.1	258
20231107_0550	0.1	20
20231107_0600	0.1	216
20231107_0610	0.1	184
20231107_0620	0.1	82
20231107_0630	0.1	50
20231107_0640	0.1	21
20231107_0650	0.1	160
20231107_0700	0.1	353
20231107_0710	0.1	34
20231107_0720	0.1	63
20231107_0730	0.1	176
20231107_0740	0.1	110
20231107_0750	0.1	324
20231107_0800	0.1	149
20231107_0810	0.1	101
20231107_0820	0.1	110
20231107_0830	0.1	243
20231107_0840	0.1	191
20231107_0850	0.1	152
20231107_0900	0.1	130
20231107_0910	0.3	115
20231107_0920	0.2	169
20231107_0930	0.1	153
20231107_0940	1.3	20
20231107_0950	0.1	5
20231107_1000	0.1	2
20231107_1010	4.4	13
20231107_1020	0.1	312
20231107_1030	0.1	349
20231107_1040	0.4	320
20231107_1050	0.4	337
20231107_1100	3	42
20231107_1110	1.5	54
20231107_1120	0.1	268
20231107_1130	0.1	69
20231107_1140	0.1	329
20231107_1150	0.1	337

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231107_1200	0.1	56
20231107_1210	0.1	110
20231107_1220	1.4	171
20231107_1230	0.2	346
20231107_1240	0.1	140
20231107_1250	0.1	58
20231107_1300	0.1	2
20231107_1310	0.1	348
20231107_1320	0.1	56
20231107_1330	0.2	176
20231107_1340	0.5	168
20231107_1350	0.1	131
20231107_1400	0.1	23
20231107_1410	0.1	195
20231107_1420	0.1	65
20231107_1430	1.3	158
20231107_1440	0.1	63
20231107_1450	1.6	93
20231107_1500	0.2	110
20231107_1510	0.1	162
20231107_1520	0.1	199
20231107_1530	0.2	132
20231107_1540	0.1	320
20231107_1550	0.6	168
20231107_1600	0.1	104
20231107_1610	0.8	60
20231107_1620	0.1	224
20231107_1630	2.1	134
20231107_1640	1.2	53
20231107_1650	1.6	105
20231107_1700	0.1	16
20231107_1710	0.2	339
20231107_1720	0.4	125
20231107_1730	0.1	0
20231107_1740	0.1	122
20231107_1750	0.5	159
20231107_1800	0.1	190
20231107_1810	0.1	124
20231107_1820	0.1	84
20231107_1830	0.3	325
20231107_1840	0.1	101
20231107_1850	0.1	46
20231107_1900	0.2	119
20231107_1910	0.4	320
20231107_1920	0.1	215
20231107_1930	0.4	19
20231107_1940	0.2	343
20231107_1950	3.4	292
20231107_2000	0.2	286
20231107_2010	0.1	240
20231107_2020	0.3	346
20231107_2030	3	60
20231107_2040	3.5	326
20231107_2050	0.6	54
20231107_2100	0.3	48
20231107_2110	0.2	7
20231107_2120	0.4	67
20231107_2130	0.1	318
20231107_2140	0.3	288
20231107_2150	2.4	154
20231107_2200	0.3	108
20231107_2210	0.1	82
20231107_2220	0.8	107
20231107_2230	0.1	114
20231107_2240	0.1	47
20231107_2250	0.1	38
20231107_2300	1.6	63
20231107_2310	0.5	94
20231107_2320	0.1	167
20231107_2330	0.1	171
20231107_2340	0.1	311
20231107_2350	0.2	311

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231108_0000	0.1	45
20231108_0010	0.1	306
20231108_0020	1.9	92
20231108_0030	0.1	302
20231108_0040	3.3	104
20231108_0050	0.1	335
20231108_0100	0.2	75
20231108_0110	0.8	346
20231108_0120	0.7	54
20231108_0130	0.8	97
20231108_0140	0.3	5
20231108_0150	0.9	299
20231108_0200	0.4	141
20231108_0210	0.1	271
20231108_0220	0.1	237
20231108_0230	0.1	211
20231108_0240	0.1	225
20231108_0250	0.3	272
20231108_0300	0.1	336
20231108_0310	0.2	35
20231108_0320	0.8	39
20231108_0330	0.2	191
20231108_0340	0.5	105
20231108_0350	1.9	135
20231108_0400	0.1	138
20231108_0410	0.1	324
20231108_0420	0.4	83
20231108_0430	0.1	290
20231108_0440	0.6	142
20231108_0450	0.5	106
20231108_0500	1.5	4
20231108_0510	0.1	181
20231108_0520	0.4	204
20231108_0530	0.1	337
20231108_0540	0.1	49
20231108_0550	0.1	73
20231108_0600	0.1	18
20231108_0610	0.2	353
20231108_0620	0.2	308
20231108_0630	0.3	126
20231108_0640	1.2	327
20231108_0650	0.2	151
20231108_0700	0.1	125
20231108_0710	0.1	72
20231108_0720	0.1	157
20231108_0730	0.5	342
20231108_0740	0.6	306
20231108_0750	0.8	324
20231108_0800	3.1	294
20231108_0810	0.5	257
20231108_0820	0.6	182
20231108_0830	0.4	34
20231108_0840	0.1	170
20231108_0850	1.5	112
20231108_0900	1	52
20231108_0910	0.1	255
20231108_0920	1.9	88
20231108_0930	5.1	120
20231108_0940	0.1	296
20231108_0950	0.4	271
20231108_1000	0.2	175
20231108_1010	1.3	285
20231108_1020	0.1	122
20231108_1030	0.6	222
20231108_1040	0.2	7
20231108_1050	0.1	68
20231108_1100	0.1	129
20231108_1110	0.1	85
20231108_1120	0.4	335
20231108_1130	1.4	284
20231108_1140	1	10
20231108_1150	1.9	22

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231108_1200	0.2	25
20231108_1210	1.4	43
20231108_1220	0.1	109
20231108_1230	0.1	230
20231108_1240	0.2	277
20231108_1250	0.1	231
20231108_1300	0.1	342
20231108_1310	1.9	307
20231108_1320	0.3	23
20231108_1330	0.1	138
20231108_1340	0.1	61
20231108_1350	0.2	51
20231108_1400	0.3	331
20231108_1410	0.1	86
20231108_1420	0.1	87
20231108_1430	0.2	305
20231108_1440	0.6	355
20231108_1450	0.1	350
20231108_1500	0.4	298
20231108_1510	0.2	8
20231108_1520	0.4	320
20231108_1530	0.1	52
20231108_1540	0.1	123
20231108_1550	0.1	299
20231108_1600	0.1	73
20231108_1610	0.1	70
20231108_1620	0.1	146
20231108_1630	0.1	59
20231108_1640	0.1	162
20231108_1650	0.3	337
20231108_1700	0.1	232
20231108_1710	0.1	330
20231108_1720	0.1	87
20231108_1730	0.1	71
20231108_1740	0.1	354
20231108_1750	0.1	55
20231108_1800	0.1	165
20231108_1810	0.2	87
20231108_1820	0.7	33
20231108_1830	0.1	71
20231108_1840	0.1	30
20231108_1850	0.1	127
20231108_1900	0.1	27
20231108_1910	0.1	180
20231108_1920	0.3	115
20231108_1930	0.1	249
20231108_1940	0.1	214
20231108_1950	0.7	33
20231108_2000	0.8	334
20231108_2010	0.1	332
20231108_2020	2.2	317
20231108_2030	0.4	7
20231108_2040	2.6	341
20231108_2050	0.7	4
20231108_2100	1.6	16
20231108_2110	0.4	92
20231108_2120	0.2	13
20231108_2130	0.4	34
20231108_2140	0.1	305
20231108_2150	0.1	136
20231108_2200	0.1	231
20231108_2210	0.1	156
20231108_2220	0.1	92
20231108_2230	0.3	339
20231108_2240	0.9	37
20231108_2250	0.1	5
20231108_2300	0.3	64
20231108_2310	0.2	310
20231108_2320	0.1	321
20231108_2330	4.4	158
20231108_2340	0.2	115
20231108_2350	0.3	314

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231109_0000	0.2	336
20231109_0010	0.1	325
20231109_0020	0.1	305
20231109_0030	0.2	24
20231109_0030	0.2	112
20231109_0040	0.5	351
20231109_0050	0.1	59
20231109_0100	0.4	11
20231109_0110	0.3	123
20231109_0120	0.1	20
20231109_0130	0.1	194
20231109_0140	0.2	107
20231109_0150	0.1	132
20231109_0200	0.2	162
20231109_0210	0.1	342
20231109_0220	0.1	346
20231109_0230	0.1	110
20231109_0240	0.2	17
20231109_0250	0.1	278
20231109_0300	0.1	188
20231109_0310	0.1	247
20231109_0320	0.3	56
20231109_0330	0.1	207
20231109_0340	0.1	351
20231109_0350	0.1	321
20231109_0400	0.1	175
20231109_0410	0.1	192
20231109_0420	0.1	211
20231109_0430	0.1	312
20231109_0440	0.1	50
20231109_0450	0.1	283
20231109_0500	0.1	68
20231109_0510	1.6	66
20231109_0520	0.1	73
20231109_0530	0.2	314
20231109_0540	0.1	160
20231109_0550	0.1	243
20231109_0600	0.4	110
20231109_0610	0.1	69
20231109_0620	0.1	326
20231109_0630	0.1	303
20231109_0640	0.5	109
20231109_0650	0.1	156
20231109_0700	0.1	31
20231109_0710	1.8	47
20231109_0720	3.2	27
20231109_0730	0.3	139
20231109_0740	0.8	54
20231109_0750	0.6	73
20231109_0800	0.2	55
20231109_0810	2	352
20231109_0820	0.2	349
20231109_0830	0.1	73
20231109_0840	0.2	184
20231109_0850	0.1	159
20231109_0900	0.1	332
20231109_0910	0.1	310
20231109_0920	0.5	338
20231109_0930	0.6	142
20231109_0940	0.3	311
20231109_0950	1.5	38
20231109_1000	0.2	35
20231109_1010	0.1	243
20231109_1020	0.1	331
20231109_1030	0.1	285
20231109_1040	0.1	138
20231109_1050	0.1	2
20231109_1100	0.1	340
20231109_1110	0.3	132
20231109_1120	0.3	27
20231109_1130	0.1	351
20231109_1140	0.1	349

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231109_1200	0.1	92
20231109_1210	2.2	327
20231109_1220	9	1
20231109_1230	0.3	3
20231109_1240	0.1	308
20231109_1250	0.2	52
20231109_1300	0.8	64
20231109_1310	0.2	20
20231109_1320	0.1	68
20231109_1330	0.4	183
20231109_1340	0.1	306
20231109_1350	0.8	41
20231109_1400	0.1	345
20231109_1410	0.1	324
20231109_1420	0.1	259
20231109_1430	1.1	17
20231109_1440	0.1	16
20231109_1450	0.2	284
20231109_1500	0.1	104
20231109_1510	1.4	141
20231109_1520	0.2	38
20231109_1530	0.1	113
20231109_1540	0.2	36
20231109_1550	0.1	147
20231109_1600	0.1	44
20231109_1610	0.1	56
20231109_1620	0.1	117
20231109_1630	0.1	326
20231109_1640	0.1	53
20231109_1650	0.1	103
20231109_1700	0.1	65
20231109_1710	0.2	84
20231109_1720	0.1	211
20231109_1730	1.7	159
20231109_1740	0.1	105
20231109_1750	0.1	90
20231109_1800	0.1	203
20231109_1810	0.1	71
20231109_1820	0.9	118
20231109_1830	0.1	262
20231109_1840	0.3	2
20231109_1850	0.4	142
20231109_1900	1	91
20231109_1910	0.4	323
20231109_1920	0.1	63
20231109_1930	0.1	274
20231109_1940	0.1	187
20231109_1950	0.1	284
20231109_2000	0.2	276
20231109_2010	0.1	305
20231109_2020	0.1	187
20231109_2030	0.1	248
20231109_2040	0.1	181
20231109_2050	0.1	176
20231109_2100	0.4	149
20231109_2110	0.1	321
20231109_2120	0.1	306
20231109_2130	0.1	251
20231109_2140	0.1	9
20231109_2150	0.4	57
20231109_2200	0.4	132
20231109_2210	0.2	34
20231109_2220	0.2	87
20231109_2230	0.2	88
20231109_2240	0.4	254
20231109_2250	0.1	172
20231109_2300	0.1	244
20231109_2310	0.4	129
20231109_2320	0.1	133
20231109_2330	0.1	78
20231109_2340	0.3	189
20231109_2350	0.5	54

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231110_0000	0.4	198
20231110_0010	0.2	282
20231110_0020	0.1	296
20231110_0030	0.4	112
20231110_0030	0.1	290
20231110_0040	0.1	55
20231110_0050	0.1	46
20231110_0100	0.1	334
20231110_0110	0.1	36
20231110_0120	0.4	349
20231110_0130	0.5	330
20231110_0140	0.1	297
20231110_0150	0.1	102
20231110_0200	0.1	2
20231110_0210	0.1	349
20231110_0220	1.1	102
20231110_0230	0.1	60
20231110_0240	0.1	149
20231110_0250	0.1	131
20231110_0300	0.1	20
20231110_0300	0.1	61
20231110_0320	0.1	6
20231110_0330	0.1	244
20231110_0340	0.1	278
20231110_0350	0.1	243
20231110_0400	0.1	145
20231110_0410	0.1	322
20231110_0420	0.1	313
20231110_0430	0.2	180
20231110_0440	0.1	154
20231110_0450	0.1	216
20231110_0500	0.1	98
20231110_0510	0.1	64
20231110_0520	0.1	20
20231110_0530	0.1	285
20231110_0540	0.1	353
20231110_0550	0.1	110
20231110_0600	0.1	153
20231110_0610	0.1	130
20231110_0620	0.1	63
20231110_0630	0.1	49
20231110_0640	0.1	3
20231110_0650	0.2	71
20231110_0700	0.1	135
20231110_0710	0.6	32
20231110_0720	0.1	288
20231110_0730	0.9	301
20231110_0740	1.8	108
20231110_0750	0.1	35
20231110_0800	0.1	159
20231110_0810	0.9	19
20231110_0820	0.1	148
20231110_0830	0.1	193
20231110_0840	0.1	86
20231110_0850	0.1	18
20231110_0900	1.2	121
20231110_0910	0.1	93
20231110_0920	0.1	345
20231110_0930	0.3	62
20231110_0940	0.1	246
20231110_0950	0.1	34
20231110_1000	0.1	99
20231110_1010	1.5	88
20231110_1020	1.8	340
20231110_1030	0.1	65
20231110_1040	0.1	106
20231110_1050	0.1	329
20231110_1100	0.2	18
20231110_1110	0.1	92
20231110_1120	0.7	331
20231110_1130	0.8	310
20231110_1140	0.1	213

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231110_1200	1.9	61
20231110_1210	0.1	254
20231110_1220	0.1	168
20231110_1230	0.1	45
20231110_1240	0.1	316
20231110_1250	0.3	57
20231110_1300	0.2	338
20231110_1310	8.9	171
20231110_1320	1.3	159
20231110_1330	1.6	104
20231110_1340	0.1	328
20231110_1350	4.1	158
20231110_1400	2.8	114
20231110_1410	0.1	327
20231110_1420	0.1	103
20231110_1430	0.1	78
20231110_1440	1.5	109
20231110_1450	2.5	314
20231110_1500	0.3	119
20231110_1510	0.1	211
20231110_1520	0.1	351
20231110_1530	0.1	159
20231110_1540	0.1	134
20231110_1550	0.9	340
20231110_1600	0.1	32
20231110_1610	0.3	13
20231110_1620	0.7	6
20231110_1630	0.1	107
20231110_1640	0.1	152
20231110_1650	0.1	45
20231110_1700	0.2	102
20231110_1710	0.1	313
20231110_1720	0.1	90
20231110_1730	1.8	118
20231110_1740	0.1	88
20231110_1750	0.7	104
20231110_1800	0.1	210
20231110_1810	0.2	271
20231110_1820	0.1	231
20231110_1830	0.9	189
20231110_1840	0.7	354
20231110_1850	0.5	318
20231110_1900	3.4	224
20231110_1910	0.8	4
20231110_1920	1.3	20
20231110_1930	0.2	324
20231110_1940	0.1	14
20231110_1950	0.4	26
20231110_2000	0.2	62
20231110_2010	0.1	27
20231110_2020	0.1	69
20231110_2030	0.1	144
20231110_2040	0.1	351
20231110_2050	0.1	322
20231110_2100	0.2	158
20231110_2110	0.1	274
20231110_2120	0.1	275
20231110_2130	0.1	149
20231110_2140	0.1	110
20231110_2150	0.2	132
20231110_2200	0.1	162
20231110_2210	0.1	310
20231110_2220	0.4	68
20231110_2230	0.1	93
20231110_2240	0.6	129
20231110_2250	0.7	0
20231110_2300	0.2	87
20231110_2310	0.3	342
20231110_2320	2	347
20231110_2330	0.9	111
20231110_2340	0.8	130
20231110_2350	0.3	110

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231111_0000	0.2	47
20231111_0010	0.2	175
20231111_0020	0.1	11
20231111_0030	0.1	33
20231111_0030	0.1	62
20231111_0040	0.1	48
20231111_0050	0.3	112
20231111_0100	0.1	8
20231111_0110	0.1	77
20231111_0120	1.4	14
20231111_0130	1.8	352
20231111_0140	0.9	75
20231111_0150	0.8	19
20231111_0200	0.4	284
20231111_0210	6.8	118
20231111_0220	0.1	243
20231111_0230	0.5	113
20231111_0240	0.6	328
20231111_0250	0.2	187
20231111_0300	0.1	352
20231111_0310	1.5	65
20231111_0320	0.1	71
20231111_0330	0.1	332
20231111_0340	0.2	169
20231111_0350	0.6	31
20231111_0400	0.1	85
20231111_0410	0.1	127
20231111_0420	0.1	39
20231111_0430	0.9	353
20231111_0440	1.1	16
20231111_0450	0.1	153
20231111_0500	1.3	158
20231111_0510	0.9	172
20231111_0520	0.1	67
20231111_0530	0.7	150
20231111_0540	0.1	77
20231111_0550	0.3	90
20231111_0600	0.1	125
20231111_0610	0.5	157
20231111_0620	0.1	172
20231111_0630	1.8	140
20231111_0640	0.1	7
20231111_0650	1.1	30
20231111_0700	0.1	99
20231111_0710	0.4	153
20231111_0720	0.1	47
20231111_0730	0.5	60
20231111_0740	0.1	160
20231111_0750	0.1	251
20231111_0800	0.2	175
20231111_0810	0.1	117
20231111_0820	2.2	306
20231111_0830	2	353
20231111_0840	4.2	36
20231111_0850	0.1	124
20231111_0900	1.1	99
20231111_0910	2.1	106
20231111_0920	0.9	120
20231111_0930	1.5	109
20231111_0940	1.2	63
20231111_0950	1.3	120
20231111_1000	2.8	4
20231111_1010	0.1	211
20231111_1020	2.4	305
20231111_1030	1.4	28
20231111_1040	0.1	222
20231111_1050	0.1	92
20231111_1100	0.1	262
20231111_1110	5.9	28
20231111_1120	0.5	300
20231111_1130	0.1	182
20231111_1140	1.4	45

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231111_1200	0.2	14
20231111_1210	0.1	305
20231111_1220	0.1	201
20231111_1230	0.1	104
20231111_1240	0.2	338
20231111_1250	0.1	55
20231111_1300	1.4	120
20231111_1310	0.6	54
20231111_1320	0.1	334
20231111_1330	0.3	353
20231111_1340	0.1	135
20231111_1350	1.3	354
20231111_1400	0.5	169
20231111_1410	0.1	172
20231111_1420	0.5	344
20231111_1430	0.1	68
20231111_1440	1.3	342
20231111_1450	0.1	132
20231111_1500	0.2	7
20231111_1510	0.1	56
20231111_1520	0.1	310
20231111_1530	0.5	4
20231111_1540	0.1	149
20231111_1550	1.6	156
20231111_1600	0.1	296
20231111_1610	0.1	22
20231111_1620	0.1	66
20231111_1630	0.2	36
20231111_1640	0.1	340
20231111_1650	2	43
20231111_1700	2.2	23
20231111_1710	0.2	4
20231111_1720	0.3	135
20231111_1730	0.1	98
20231111_1740	0.1	119
20231111_1750	0.1	140
20231111_1800	0.2	111
20231111_1810	0.3	183
20231111_1820	0.1	28
20231111_1830	0.1	331
20231111_1840	0.1	115
20231111_1850	0.1	91
20231111_1900	0.1	128
20231111_1910	0.7	111
20231111_1920	0.5	45
20231111_1930	0.1	178
20231111_1940	0.1	328
20231111_1950	0.1	83
20231111_2000	0.2	119
20231111_2010	0.1	27
20231111_2020	0.1	35
20231111_2030	0.1	57
20231111_2040	0.1	132
20231111_2050	0.1	69
20231111_2100	0.1	99
20231111_2110	0.1	70
20231111_2120	0.1	352
20231111_2130	0.1	144
20231111_2140	0.1	120
20231111_2150	0.1	140
20231111_2200	0.2	101
20231111_2210	0.1	58
20231111_2220	0.1	232
20231111_2230	0.1	200
20231111_2240	0.1	60
20231111_2250	0.1	187
20231111_2300	0.1	78
20231111_2310	0.1	344
20231111_2320	0.1	148
20231111_2330	0.1	141
20231111_2340	0.1	134
20231111_2350	0.1	142

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231112_0000	0.1	110
20231112_0010	0.1	110
20231112_0020	0.1	110
20231112_0030	0.1	52
20231112_0030	0.1	74
20231112_0040	0.1	110
20231112_0050	0.1	110
20231112_0100	0.1	77
20231112_0110	0.1	114
20231112_0120	0.1	155
20231112_0130	0.1	15
20231112_0140	0.1	147
20231112_0150	0.1	41
20231112_0200	0.4	0
20231112_0210	0.1	51
20231112_0220	0.1	49
20231112_0230	0.1	131
20231112_0240	0.1	295
20231112_0250	0.1	161
20231112_0300	0.1	184
20231112_0310	0.1	74
20231112_0320	0.1	169
20231112_0330	0.1	17
20231112_0340	0.1	321
20231112_0350	0.1	102
20231112_0400	0.1	102
20231112_0410	0.1	133
20231112_0420	0.1	84
20231112_0430	0.1	183
20231112_0440	0.1	183
20231112_0450	0.1	201
20231112_0500	0.1	167
20231112_0510	0.1	210
20231112_0520	0.1	137
20231112_0530	0.1	160
20231112_0540	0.1	314
20231112_0550	0.1	93
20231112_0600	0.1	93
20231112_0610	0.1	93
20231112_0620	0.1	212
20231112_0630	0.1	187
20231112_0640	0.1	258
20231112_0650	0.1	200
20231112_0700	0.2	228
20231112_0710	0.1	115
20231112_0720	0.1	182
20231112_0730	0.1	211
20231112_0740	0.1	195
20231112_0750	0.1	324
20231112_0800	0.1	209
20231112_0810	0.2	183
20231112_0820	0.3	163
20231112_0830	0.1	221
20231112_0840	0.1	166
20231112_0850	0.1	73
20231112_0900	0.1	244
20231112_0910	0.3	206
20231112_0920	0.3	106
20231112_0930	0.2	190
20231112_0940	0.1	118
20231112_0950	0.6	314
20231112_1000	0.1	315
20231112_1010	0.1	322
20231112_1020	0.1	276
20231112_1030	0.1	66
20231112_1040	1.6	64
20231112_1050	0.3	350
20231112_1100	0.1	282
20231112_1110	1.3	352
20231112_1120	0.1	17
20231112_1130	0.1	70
20231112_1140	0.1	73

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231112_1200	0.1	92
20231112_1210	2.3	76
20231112_1220	1.8	130
20231112_1230	0.4	135
20231112_1240	0.4	98
20231112_1250	0.1	53
20231112_1300	0.2	132
20231112_1310	0.1	47
20231112_1320	2.3	46
20231112_1330	0.3	311
20231112_1340	1	350
20231112_1350	0.1	8
20231112_1400	4.9	57
20231112_1410	0.1	332
20231112_1420	0.6	86
20231112_1430	0.1	47
20231112_1440	0.1	31
20231112_1450	0.1	166
20231112_1500	0.1	224
20231112_1510	0.4	12
20231112_1520	0.1	25
20231112_1530	1.9	66
20231112_1540	1.8	52
20231112_1550	0.2	44
20231112_1600	0.1	272
20231112_1610	3.1	284
20231112_1620	0.1	288
20231112_1630	0.1	110
20231112_1640	2.5	349
20231112_1650	0.1	333
20231112_1700	0.2	108
20231112_1710	0.8	336
20231112_1720	0.1	279
20231112_1730	0.2	56
20231112_1740	0.1	319
20231112_1750	0.1	2
20231112_1800	0.1	75
20231112_1810	0.7	104
20231112_1820	0.1	174
20231112_1830	0.1	12
20231112_1840	0.3	36
20231112_1850	0.1	84
20231112_1900	1	22
20231112_1910	0.1	127
20231112_1920	0.3	323
20231112_1930	0.1	332
20231112_1940	0.1	75
20231112_1950	0.1	92
20231112_2000	0.1	25
20231112_2010	0.1	78
20231112_2020	0.1	92
20231112_2030	0.1	47
20231112_2040	0.1	19
20231112_2050	0.1	72
20231112_2100	0.1	68
20231112_2110	0.1	144
20231112_2120	0.1	303
20231112_2130	0.5	304
20231112_2140	0.5	312
20231112_2150	0.1	292
20231112_2200	0.1	292
20231112_2210	0.1	280
20231112_2220	0.1	283
20231112_2230	0.5	291
20231112_2240	0.1	47
20231112_2250	0.1	83
20231112_2300	0.1	164
20231112_2310	0.5	326
20231112_2320	0.1	138
20231112_2330	0.1	42
20231112_2340	0.1	321
20231112_2350	0.1	91

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231113_0000	0.1	145
20231113_0010	0.1	303
20231113_0020	0.1	343
20231113_0030	0.1	85
20231113_0040	2.7	283
20231113_0050	0.1	340
20231113_0100	0.4	330
20231113_0110	0.1	28
20231113_0120	1.8	40
20231113_0130	0.9	27
20231113_0140	0.1	223
20231113_0150	0.1	125
20231113_0200	0.5	324
20231113_0210	0.1	226
20231113_0220	0.1	336
20231113_0230	0.1	17
20231113_0240	0.1	47
20231113_0250	0.1	81
20231113_0300	0.1	279
20231113_0310	0.1	300
20231113_0320	0.1	148
20231113_0330	0.1	121
20231113_0340	0.5	313
20231113_0350	0.1	267
20231113_0400	0.1	312
20231113_0410	1	316
20231113_0420	0.3	334
20231113_0430	0.1	97
20231113_0440	0.1	318
20231113_0450	0.1	340
20231113_0500	0.1	173
20231113_0510	0.1	38
20231113_0520	0.1	53
20231113_0530	0.1	128
20231113_0540	0.1	348
20231113_0550	0.1	300
20231113_0600	0.1	332
20231113_0610	0.1	266
20231113_0620	0.1	294
20231113_0630	0.1	282
20231113_0640	0.1	62
20231113_0650	0.1	311
20231113_0700	0.1	180
20231113_0710	0.1	108
20231113_0720	0.1	311
20231113_0730	0.1	310
20231113_0740	0.1	52
20231113_0750	0.1	304
20231113_0800	0.1	105
20231113_0810	0.1	47
20231113_0820	1.1	46
20231113_0830	0.1	308
20231113_0840	0.1	43
20231113_0850	2.2	302
20231113_0900	0.1	330
20231113_0910	0.1	51
20231113_0920	2.9	51
20231113_0930	2.9	333
20231113_0940	0.1	12
20231113_0950	2.4	53
20231113_1000	2.2	52
20231113_1010	0.4	146
20231113_1020	0.9	41
20231113_1030	0.1	236
20231113_1040	0.1	342
20231113_1050	1.3	56
20231113_1100	0.3	25
20231113_1110	0.3	12
20231113_1120	0.5	33
20231113_1130	1	72
20231113_1140	0.6	59
20231113_1150	0.2	296

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231113_1200	3.3	81
20231113_1210	0.1	43
20231113_1220	0.5	337
20231113_1230	2.3	93
20231113_1240	0.1	63
20231113_1250	2.3	105
20231113_1300	1	106
20231113_1310	0.1	18
20231113_1320	0.2	57
20231113_1330	0.2	183
20231113_1340	2.5	14
20231113_1350	0.4	81
20231113_1400	0.2	210
20231113_1410	0.2	266
20231113_1420	0.1	333
20231113_1430	0.1	321
20231113_1440	0.1	36
20231113_1450	0.1	85
20231113_1500	0.7	293
20231113_1510	0.2	102
20231113_1520	0.5	11
20231113_1530	0.2	36
20231113_1540	0.2	298
20231113_1550	0.1	59
20231113_1600	0.4	27
20231113_1610	0.1	354
20231113_1620	0.8	65
20231113_1630	0.1	348
20231113_1640	0.1	23
20231113_1650	0.1	4
20231113_1700	0.2	294
20231113_1710	0.1	347
20231113_1720	0.3	252
20231113_1730	0.1	341
20231113_1740	0.1	350
20231113_1750	0.3	335
20231113_1800	0.1	147
20231113_1810	0.1	312
20231113_1820	0.1	275
20231113_1830	0.1	334
20231113_1840	1	3
20231113_1850	0.2	343
20231113_1900	0.1	141
20231113_1910	0.1	114
20231113_1920	0.1	329
20231113_1930	0.1	61
20231113_1940	0.3	306
20231113_1950	0.1	2
20231113_2000	0.1	308
20231113_2010	0.1	143
20231113_2020	0.1	115
20231113_2030	0.1	160
20231113_2040	0.1	300
20231113_2050	0.1	78
20231113_2100	0.1	284
20231113_2110	0.1	342
20231113_2120	0.1	63
20231113_2130	0.1	60
20231113_2140	0.1	109
20231113_2150	0.5	28
20231113_2200	0.1	237
20231113_2210	0.1	347
20231113_2220	0.1	271
20231113_2230	0.1	96
20231113_2240	0.1	152
20231113_2250	0.1	218
20231113_2300	0.1	241
20231113_2310	0.1	104
20231113_2320	0.1	13
20231113_2330	0.1	161
20231113_2340	0.1	81
20231113_2350	0.1	59

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231114_0000	0.1	113
20231114_0010	0.1	199
20231114_0020	0.1	169
20231114_0020	0.1	326
20231114_0030	0.1	292
20231114_0040	1.3	330
20231114_0050	0.1	76
20231114_0100	0.5	333
20231114_0110	0.1	40
20231114_0120	0.1	322
20231114_0130	0.1	52
20231114_0140	0.1	232
20231114_0150	0.1	94
20231114_0200	0.1	52
20231114_0210	0.1	111
20231114_0220	0.1	168
20231114_0230	0.1	87
20231114_0240	0.1	97
20231114_0250	0.1	342
20231114_0300	0.1	266
20231114_0310	0.3	352
20231114_0320	0.1	306
20231114_0330	0.1	87
20231114_0340	0.1	352
20231114_0350	0.1	333
20231114_0400	0.3	339
20231114_0410	1.1	316
20231114_0420	0.1	297
20231114_0430	0.1	248
20231114_0440	0.3	315
20231114_0450	1.3	70
20231114_0500	0.2	286
20231114_0510	0.1	342
20231114_0520	0.5	299
20231114_0530	0.1	149
20231114_0540	0.1	238
20231114_0550	0.1	350
20231114_0600	0.1	272
20231114_0610	0.1	95
20231114_0620	0.1	66
20231114_0630	0.1	311
20231114_0640	0.1	120
20231114_0650	0.1	90
20231114_0700	0.1	102
20231114_0710	0.1	224
20231114_0720	0.1	266
20231114_0730	0.1	241
20231114_0740	0.2	184
20231114_0750	0.1	100
20231114_0800	0.1	108
20231114_0810	0.1	139
20231114_0820	0.1	59
20231114_0830	0.6	97
20231114_0840	0.1	10
20231114_0850	0.1	106
20231114_0900	0.1	158
20231114_0910	0.1	166
20231114_0920	0.1	229
20231114_0930	1.8	131
20231114_0940	0.4	226
20231114_0950	0.1	220
20231114_1000	0.1	113
20231114_1010	0.3	78
20231114_1020	1.9	163
20231114_1030	0.1	181
20231114_1040	0.1	68
20231114_1050	0.3	123
20231114_1100	0.1	20
20231114_1110	0.2	117
20231114_1120	0.1	117
20231114_1130	0.1	51
20231114_1140	1.5	104

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231114_1200	0.4	55
20231114_1210	0.2	158
20231114_1220	0.3	11
20231114_1230	3.2	241
20231114_1240	1.7	258
20231114_1250	1.4	14
20231114_1300	1.5	312
20231114_1310	0.9	328
20231114_1320	1.7	122
20231114_1330	2.4	121
20231114_1340	3.7	106
20231114_1350	0.3	64
20231114_1400	0.2	241
20231114_1410	0.1	89
20231114_1420	0.8	0
20231114_1430	0.1	67
20231114_1440	0.3	315
20231114_1450	0.1	67
20231114_1500	0.1	38
20231114_1510	0.5	327
20231114_1520	0.1	107
20231114_1530	0.9	113
20231114_1540	0.1	61
20231114_1550	0.1	271
20231114_1600	0.1	28
20231114_1610	0.1	314
20231114_1620	0.1	238
20231114_1630	0.1	326
20231114_1640	0.1	60
20231114_1650	0.1	337
20231114_1700	0.1	122
20231114_1710	0.1	81
20231114_1720	0.1	66
20231114_1730	0.1	7
20231114_1740	0.1	329
20231114_1750	0.1	16
20231114_1800	0.1	63
20231114_1810	0.1	40
20231114_1820	0.1	337
20231114_1830	0.1	80
20231114_1840	0.1	1
20231114_1850	0.1	75
20231114_1900	0.1	43
20231114_1910	0.1	64
20231114_1920	0.1	350
20231114_1930	0.1	61
20231114_1940	0.1	345
20231114_1950	0.1	49
20231114_2000	0.1	62
20231114_2010	0.1	13
20231114_2020	0.1	103
20231114_2030	0.1	98
20231114_2040	0.1	60
20231114_2050	0.1	6
20231114_2100	0.1	52
20231114_2110	0.1	47
20231114_2120	0.1	48
20231114_2130	0.1	69
20231114_2140	0.1	331
20231114_2150	0.1	131
20231114_2200	0.1	153
20231114_2210	0.1	88
20231114_2220	0.1	61
20231114_2230	0.1	9
20231114_2240	0.1	50
20231114_2250	0.1	66
20231114_2300	0.1	161
20231114_2310	0.1	128
20231114_2320	0.1	56
20231114_2330	0.1	47
20231114_2340	0.1	47
20231114_2350	0.1	183

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231115_0000	0.1	167
20231115_0010	0.1	237
20231115_0020	0.1	94
20231115_0020	0.1	61
20231115_0030	0.1	53
20231115_0040	0.1	49
20231115_0050	0.1	349
20231115_0100	0.1	87
20231115_0110	0.1	102
20231115_0120	0.1	106
20231115_0130	0.1	154
20231115_0140	0.1	341
20231115_0150	0.1	67
20231115_0200	0.1	86
20231115_0210	0.1	113
20231115_0220	0.1	123
20231115_0230	0.1	172
20231115_0240	0.1	64
20231115_0250	0.1	58
20231115_0300	0.1	79
20231115_0310	0.1	346
20231115_0320	0.1	347
20231115_0330	0.1	295
20231115_0340	0.1	169
20231115_0350	0.1	127
20231115_0400	0.1	162
20231115_0410	0.1	158
20231115_0420	0.1	147
20231115_0430	0.1	160
20231115_0440	0.1	159
20231115_0450	0.1	74
20231115_0500	0.1	68
20231115_0510	0.1	123
20231115_0520	0.1	100
20231115_0530	0.1	60
20231115_0540	0.1	64
20231115_0550	0.1	11
20231115_0600	0.1	74
20231115_0610	0.1	34
20231115_0620	0.1	62
20231115_0630	0.1	19
20231115_0640	0.1	70
20231115_0650	0.1	35
20231115_0700	0.1	149
20231115_0710	0.1	224
20231115_0720	0.1	184
20231115_0730	0.1	212
20231115_0740	0.1	204
20231115_0750	0.1	149
20231115_0800	0.1	178
20231115_0810	0.2	209
20231115_0820	0.1	144
20231115_0830	0.1	142
20231115_0840	0.1	161
20231115_0850	0.1	92
20231115_0900	0.1	102
20231115_0910	0.1	129
20231115_0920	0.1	184
20231115_0930	0.1	199
20231115_0940	0.1	105
20231115_0950	0.6	214
20231115_1000	0.3	220
20231115_1010	1	195
20231115_1020	0.1	311
20231115_1030	0.4	7
20231115_1040	0.1	186
20231115_1050	0.7	7
20231115_1100	1.3	333
20231115_1110	2	51
20231115_1120	0.1	47
20231115_1130	0.2	221
20231115_1140	0.7	159

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231115_1200	4.3	132
20231115_1210	0.1	36
20231115_1220	0.8	100
20231115_1230	2.6	171
20231115_1240	0.2	106
20231115_1250	0.6	339
20231115_1300	0.1	193
20231115_1310	0.4	334
20231115_1320	0.2	130
20231115_1330	0.1	82
20231115_1340	0.5	54
20231115_1350	0.4	303
20231115_1400	0.6	19
20231115_1410	0.6	8
20231115_1420	1	125
20231115_1430	1	50
20231115_1440	0.3	75
20231115_1450	0.8	348
20231115_1500	0.7	50
20231115_1510	0.2	32
20231115_1520	0.4	34
20231115_1530	0.1	163
20231115_1540	0.1	89
20231115_1550	2.2	348
20231115_1600	0.1	128
20231115_1610	0.1	349
20231115_1620	0.1	230
20231115_1630	0.1	25
20231115_1640	0.3	187
20231115_1650	0.1	128
20231115_1700	0.2	135
20231115_1710	0.1	67
20231115_1720	0.1	351
20231115_1730	0.1	89
20231115_1740	0.3	108
20231115_1750	0.1	54
20231115_1800	0.1	108
20231115_1810	0.1	109
20231115_1820	0.1	61
20231115_1830	0.1	67
20231115_1840	0.1	45
20231115_1850	0.1	105
20231115_1900	0.1	81
20231115_1910	0.1	57
20231115_1920	0.1	36
20231115_1930	0.1	17
20231115_1940	0.1	316
20231115_1950	0.1	57
20231115_2000	0.1	50
20231115_2010	0.1	324
20231115_2020	0.1	25
20231115_2030	0.1	63
20231115_2040	0.1	49
20231115_2050	0.1	32
20231115_2100	0.1	61
20231115_2110	0.1	57
20231115_2120	0.1	22
20231115_2130	0.1	42
20231115_2140	0.1	0
20231115_2150	0.1	55
20231115_2200	0.1	171
20231115_2210	0.1	160
20231115_2220	0.1	74
20231115_2230	0.1	181
20231115_2240	0.1	225
20231115_2250	0.1	145
20231115_2300	0.1	26
20231115_2310	0.2	237
20231115_2320	0.1	297
20231115_2330	0.1	48
20231115_2340	0.1	98
20231115_2350	0.1	265

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231116_0000	0.1	216
20231116_0010	0.1	138
20231116_0020	0.1	197
20231116_0020	0.1	12
20231116_0030	0.1	63
20231116_0040	0.1	61
20231116_0050	0.1	63
20231116_0100	0.1	201
20231116_0110	0.1	339
20231116_0120	0.1	56
20231116_0130	0.1	117
20231116_0140	0.1	7
20231116_0150	0.1	38
20231116_0200	0.1	12
20231116_0210	0.1	70
20231116_0220	0.1	87
20231116_0230	0.1	101
20231116_0240	0.1	101
20231116_0250	0.1	82
20231116_0300	0.1	75
20231116_0310	0.1	55
20231116_0320	0.1	55
20231116_0330	0.1	74
20231116_0340	0.1	105
20231116_0350	0.1	105
20231116_0400	0.1	139
20231116_0410	0.6	79
20231116_0420	0.2	86
20231116_0430	0.1	83
20231116_0440	0.1	65
20231116_0450	0.3	97
20231116_0500	0.2	102
20231116_0510	0.1	184
20231116_0520	0.1	103
20231116_0530	0.1	22
20231116_0540	0.1	46
20231116_0550	0.3	96
20231116_0600	0.1	67
20231116_0610	0.1	148
20231116_0620	0.1	165
20231116_0630	0.1	179
20231116_0640	0.5	160
20231116_0650	0.1	154
20231116_0700	0.1	93
20231116_0710	0.1	88
20231116_0720	0.1	232
20231116_0730	0.3	222
20231116_0740	0.6	167
20231116_0750	0.3	177
20231116_0800	0.1	151
20231116_0810	0.1	181
20231116_0820	2.4	162
20231116_0830	0.5	187
20231116_0840	0.2	181
20231116_0850	0.1	110
20231116_0900	0.3	180
20231116_0910	0.1	15
20231116_0920	0.1	152
20231116_0930	0.1	38
20231116_0940	0.1	303
20231116_0950	0.1	50
20231116_1000	0.2	328
20231116_1010	0.2	93
20231116_1020	0.1	10
20231116_1030	0.6	100
20231116_1040	0.5	351
20231116_1050	0.2	82
20231116_1100	0.2	347
20231116_1110	1.2	332
20231116_1120	1.4	258
20231116_1130	0.2	154
20231116_1140	3.5	297

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231116_1200	0.2	41
20231116_1210	10	335
20231116_1220	0.6	320
20231116_1230	0.1	331
20231116_1240	2.4	61
20231116_1250	0.8	116
20231116_1300	0.4	328
20231116_1310	0.8	96
20231116_1320	1.4	66
20231116_1330	0.3	84
20231116_1340	0.3	221
20231116_1350	1.7	22
20231116_1400	0.4	36
20231116_1410	3.8	100
20231116_1420	0.3	141
20231116_1430	1.2	65
20231116_1440	0.8	139
20231116_1450	1	59
20231116_1500	0.1	89
20231116_1510	3.5	112
20231116_1520	3.2	13
20231116_1530	0.1	11
20231116_1540	2.9	87
20231116_1550	0.7	116
20231116_1600	0.3	279
20231116_1610	1.3	60
20231116_1620	0.6	67
20231116_1630	1.8	326
20231116_1640	0.9	309
20231116_1650	1.1	299
20231116_1700	0.1	30
20231116_1710	0.1	110
20231116_1720	0.1	211
20231116_1730	0.3	261
20231116_1740	0.1	321
20231116_1750	0.1	309
20231116_1800	1.1	37
20231116_1810	0.3	336
20231116_1820	0.2	70
20231116_1830	0.1	114
20231116_1840	0.2	54
20231116_1850	0.1	347
20231116_1900	0.2	39
20231116_1910	0.1	29
20231116_1920	0.4	263
20231116_1930	0.4	78
20231116_1940	0.2	330
20231116_1950	0.2	138
20231116_2000	0.2	284
20231116_2010	0.1	164
20231116_2020	1.8	280
20231116_2030	3.1	271
20231116_2040	1.8	288
20231116_2050	2.1	99
20231116_2100	0.1	151
20231116_2110	0.2	45
20231116_2120	0.2	224
20231116_2130	1.5	194
20231116_2140	0.1	37
20231116_2150	0.1	339
20231116_2200	1.9	153
20231116_2210	0.1	286
20231116_2220	0.3	279
20231116_2230	0.4	311
20231116_2240	0.1	297
20231116_2250	0.6	51
20231116_2300	0.7	252
20231116_2310	0.6	227
20231116_2320	0.1	240
20231116_2330	0.1	232
20231116_2340	0.1	74
20231116_2350	0.1	57

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231117_0000	0.1	18
20231117_0010	0.1	262
20231117_0020	0.6	261
20231117_0030	1.3	64
20231117_0040	0.1	31
20231117_0050	1.6	314
20231117_0100	5.7	322
20231117_0110	0.9	31
20231117_0120	0.1	53
20231117_0130	0.4	76
20231117_0140	0.1	293
20231117_0150	0.1	314
20231117_0200	0.1	238
20231117_0210	1.5	53
20231117_0220	0.1	305
20231117_0230	0.1	7
20231117_0240	5.6	107
20231117_0250	1.8	243
20231117_0300	0.3	50
20231117_0310	0.1	186
20231117_0320	1.8	218
20231117_0330	0.2	199
20231117_0340	1.1	24
20231117_0350	1.8	140
20231117_0400	3.1	37
20231117_0410	1.8	32
20231117_0420	2	80
20231117_0430	1.5	8
20231117_0440	0.2	207
20231117_0450	0.1	72
20231117_0500	0.9	145
20231117_0510	0.1	189
20231117_0520	0.1	315
20231117_0530	1.3	59
20231117_0540	3.3	125
20231117_0550	1.8	152
20231117_0600	2.1	294
20231117_0610	3.1	196
20231117_0620	0.7	209
20231117_0630	4.9	238
20231117_0640	0.1	334
20231117_0650	2.8	183
20231117_0700	1.9	118
20231117_0710	1.2	162
20231117_0720	9.5	102
20231117_0730	3	219
20231117_0740	1.3	183
20231117_0750	0.2	187
20231117_0800	2.8	182
20231117_0810	0.1	61
20231117_0820	9.2	95
20231117_0830	1.2	160
20231117_0840	0.2	49
20231117_0850	0.9	170
20231117_0900	3.7	98
20231117_0910	0.1	81
20231117_0920	3.5	1
20231117_0930	0.4	345
20231117_0940	0.3	297
20231117_0950	0.1	353
20231117_1000	3.2	300
20231117_1010	0.1	44
20231117_1020	0.3	213
20231117_1030	0.4	38
20231117_1040	3.2	313
20231117_1050	3.3	355
20231117_1100	1.5	341
20231117_1110	0.2	272
20231117_1120	3.7	302
20231117_1130	0.9	304
20231117_1140	0.2	329
20231117_1150	2.9	338

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231117_1200	1.9	35
20231117_1210	0.2	68
20231117_1220	4.3	25
20231117_1230	0.2	247
20231117_1240	2.1	106
20231117_1250	0.7	31
20231117_1300	0.2	66
20231117_1310	1.2	339
20231117_1320	1.3	64
20231117_1330	0.1	347
20231117_1340	2.3	305
20231117_1350	0.1	191
20231117_1400	0.2	284
20231117_1410	1.3	345
20231117_1420	2.3	330
20231117_1430	0.6	49
20231117_1440	0.1	17
20231117_1450	0.4	278
20231117_1500	1.1	320
20231117_1510	2.5	274
20231117_1520	0.4	220
20231117_1530	0.1	324
20231117_1540	0.5	86
20231117_1550	0.1	123
20231117_1600	0.1	352
20231117_1610	0.1	165
20231117_1620	0.1	49
20231117_1630	0.7	22
20231117_1640	0.2	39
20231117_1650	1.4	119
20231117_1700	0.2	57
20231117_1710	0.9	338
20231117_1720	0.1	57
20231117_1730	0.1	6
20231117_1740	0.1	47
20231117_1750	0.1	39
20231117_1800	0.1	137
20231117_1810	0.1	76
20231117_1820	0.1	98
20231117_1830	1	82
20231117_1840	0.1	151
20231117_1850	0.1	266
20231117_1900	1	42
20231117_1910	0.1	47
20231117_1920	0.1	6
20231117_1930	2.9	13
20231117_1940	7.5	344
20231117_1950	1.2	132
20231117_2000	0.2	87
20231117_2010	0.1	93
20231117_2020	1.2	84
20231117_2030	1.9	300
20231117_2040	0.9	308
20231117_2050	0.4	91
20231117_2100	0.1	26
20231117_2110	0.1	273
20231117_2120	0.1	47
20231117_2130	1.3	55
20231117_2140	0.2	57
20231117_2150	1.8	103
20231117_2200	1.2	27
20231117_2210	1.1	29
20231117_2220	0.7	104
20231117_2230	0.2	11
20231117_2240	3.3	42
20231117_2250	3.2	103
20231117_2300	0.1	314
20231117_2310	0.1	181
20231117_2320	0.1	294
20231117_2330	0.1	48
20231117_2340	0.1	29
20231117_2350	0.1	353

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231118_0000	0.1	100
20231118_0010	0.1	51
20231118_0020	0.1	42
20231118_0030	0.1	21
20231118_0040	0.1	19
20231118_0050	0.1	79
20231118_0100	0.1	117
20231118_0110	0.1	48
20231118_0120	0.1	117
20231118_0130	0.1	74
20231118_0140	0.1	42
20231118_0150	0.1	52
20231118_0200	0.1	50
20231118_0210	0.1	39
20231118_0220	0.1	49
20231118_0230	0.1	29
20231118_0240	0.1	36
20231118_0250	0.1	53
20231118_0300	0.1	81
20231118_0310	0.2	67
20231118_0320	0.1	79
20231118_0330	0.1	40
20231118_0340	0.1	44
20231118_0350	0.1	37
20231118_0400	0.1	40
20231118_0410	0.1	53
20231118_0420	0.1	53
20231118_0430	0.1	46
20231118_0440	0.1	42
20231118_0450	0.1	27
20231118_0500	0.1	41
20231118_0510	0.1	27
20231118_0520	0.1	57
20231118_0530	0.1	19
20231118_0540	0.1	19
20231118_0550	0.1	44
20231118_0600	0.1	40
20231118_0610	0.1	21
20231118_0620	0.1	44
20231118_0630	0.1	33
20231118_0640	0.1	47
20231118_0650	0.1	46
20231118_0700	0.1	41
20231118_0710	0.1	14
20231118_0720	0.1	57
20231118_0730	0.1	109
20231118_0740	0.1	54
20231118_0750	0.1	89
20231118_0800	0.1	114
20231118_0810	0.1	330
20231118_0820	0.1	182
20231118_0830	0.1	112
20231118_0840	0.2	116
20231118_0850	0.1	146
20231118_0900	0.4	140
20231118_0910	0.1	197
20231118_0920	0.1	174
20231118_0930	0.5	251
20231118_0940	0.1	119
20231118_0950	0.2	107
20231118_1000	1.3	251
20231118_1010	0.5	235
20231118_1020	0.6	340
20231118_1030	0.1	176
20231118_1040	3.1	304
20231118_1050	0.2	61
20231118_1100	0.3	97
20231118_1110	0.8	333
20231118_1120	3.6	47
20231118_1130	0.2	266
20231118_1140	1.2	339
20231118_1150	1	321

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231118_1200	2.7	5
20231118_1210	0.2	284
20231118_1220	1	57
20231118_1230	0.8	191
20231118_1240	0.1	85
20231118_1250	0.2	355
20231118_1300	2	347
20231118_1310	3.6	96
20231118_1320	0.1	272
20231118_1330	0.1	47
20231118_1340	0.1	261
20231118_1350	0.5	168
20231118_1400	1.7	191
20231118_1410	0.7	35
20231118_1420	0.1	123
20231118_1430	0.2	44
20231118_1440	0.1	70
20231118_1450	0.2	49
20231118_1500	0.1	338
20231118_1510	0.1	104
20231118_1520	1	52
20231118_1530	0.2	67
20231118_1540	1.2	115
20231118_1550	0.1	96
20231118_1600	0.1	14
20231118_1610	0.2	12
20231118_1620	0.1	105
20231118_1630	0.1	66
20231118_1640	0.1	100
20231118_1650	0.1	81
20231118_1700	0.1	16
20231118_1710	0.1	29
20231118_1720	0.1	352
20231118_1730	0.1	40
20231118_1740	0.1	342
20231118_1750	0.1	346
20231118_1800	0.1	336
20231118_1810	0.1	5
20231118_1820	0.1	354
20231118_1830	0.1	9
20231118_1840	0.1	330
20231118_1850	0.1	344
20231118_1900	0.1	19
20231118_1910	0.1	4
20231118_1920	0.1	5
20231118_1930	0.1	18
20231118_1940	0.1	348
20231118_1950	0.1	32
20231118_2000	0.1	31
20231118_2010	0.1	15
20231118_2020	0.1	21
20231118_2030	0.1	18
20231118_2040	0.1	30
20231118_2050	0.1	327
20231118_2100	0.1	78
20231118_2110	0.1	353
20231118_2120	0.1	67
20231118_2130	0.1	51
20231118_2140	0.1	53
20231118_2150	0.1	61
20231118_2200	0.1	40
20231118_2210	0.1	52
20231118_2220	0.1	21
20231118_2230	0.1	59
20231118_2240	0.1	42
20231118_2250	0.1	44
20231118_2300	0.1	33
20231118_2310	0.1	32
20231118_2320	0.1	46
20231118_2330	0.1	50
20231118_2340	0.1	85
20231118_2350	0.1	60

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231119_0000	0.1	295
20231119_0010	0.1	156
20231119_0020	0.1	90
20231119_0030	0.1	97
20231119_0040	0.1	69
20231119_0050	0.1	135
20231119_0100	0.1	87
20231119_0110	0.1	73
20231119_0120	0.1	56
20231119_0130	0.1	32
20231119_0140	0.1	78
20231119_0150	0.1	27
20231119_0200	0.1	58
20231119_0210	0.1	50
20231119_0220	0.1	41
20231119_0230	0.1	50
20231119_0240	0.1	79
20231119_0250	0.1	77
20231119_0300	0.1	26
20231119_0310	0.1	103
20231119_0320	0.1	93
20231119_0330	0.1	77
20231119_0340	0.1	197
20231119_0350	0.1	52
20231119_0400	0.1	87
20231119_0410	0.1	230
20231119_0420	0.1	43
20231119_0430	0.1	30
20231119_0440	0.1	32
20231119_0450	0.1	178
20231119_0500	0.1	316
20231119_0510	0.1	71
20231119_0520	0.1	62
20231119_0530	0.1	42
20231119_0540	0.1	348
20231119_0550	0.1	341
20231119_0600	0.1	324
20231119_0610	0.1	106
20231119_0620	0.1	78
20231119_0630	0.1	72
20231119_0640	0.1	49
20231119_0650	0.1	31
20231119_0700	0.1	36
20231119_0710	0.1	58
20231119_0720	0.1	8
20231119_0730	0.1	168
20231119_0740	0.1	156
20231119_0750	0.1	0
20231119_0800	0.1	117
20231119_0810	0.1	148
20231119_0820	0.1	106
20231119_0830	0.1	140
20231119_0840	0.1	124
20231119_0850	0.1	148
20231119_0900	0.2	143
20231119_0910	0.1	84
20231119_0920	0.1	150
20231119_0930	0.1	174
20231119_0940	0.1	161
20231119_0950	0.1	153
20231119_1000	0.5	98
20231119_1010	0.1	55
20231119_1020	0.9	117
20231119_1030	0.1	14
20231119_1040	0.1	-1
20231119_1050	0.2	106
20231119_1100	0.2	133
20231119_1110	1.1	141
20231119_1120	0.3	139
20231119_1130	0.5	8
20231119_1140	0.2	325
20231119_1150	0.7	103

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231119_1200	0.1	7
20231119_1210	0.2	104
20231119_1220	2.5	117
20231119_1230	0.1	294
20231119_1240	0.2	117
20231119_1250	1.1	216
20231119_1300	0.1	336
20231119_1310	0.4	171
20231119_1320	0.1	190
20231119_1330	0.4	40
20231119_1340	1.5	48
20231119_1350	0.1	148
20231119_1400	0.6	324
20231119_1410	0.6	342
20231119_1420	0.1	246
20231119_1430	0.1	274
20231119_1440	0.6	356
20231119_1450	0.1	41
20231119_1500	0.3	133
20231119_1510	0.5	26
20231119_1520	0.1	269
20231119_1530	0.1	287
20231119_1540	0.1	65
20231119_1550	0.8	109
20231119_1600	2.4	107
20231119_1610	0.1	179
20231119_1620	0.1	118
20231119_1630	1.2	171
20231119_1640	0.1	27
20231119_1650	0.1	48
20231119_1700	0.8	58
20231119_1710	0.1	118
20231119_1720	0.1	18
20231119_1730	0.1	13
20231119_1740	0.1	33
20231119_1750	0.1	21
20231119_1800	0.1	40
20231119_1810	0.1	39
20231119_1820	0.1	43
20231119_1830	0.1	33
20231119_1840	0.1	345
20231119_1850	0.1	92
20231119_1900	0.1	348
20231119_1910	0.1	332
20231119_1920	0.1	342
20231119_1930	0.1	350
20231119_1940	0.1	1
20231119_1950	0.1	344
20231119_2000	0.1	59
20231119_2010	0.1	20
20231119_2020	0.1	162
20231119_2030	0.1	67
20231119_2040	0.1	56
20231119_2050	0.1	56
20231119_2100	0.1	29
20231119_2110	0.1	35
20231119_2120	0.1	60
20231119_2130	0.1	118
20231119_2140	0.1	54
20231119_2150	0.1	43
20231119_2200	0.1	44
20231119_2210	0.1	52
20231119_2220	0.1	59
20231119_2230	0.1	55
20231119_2240	0.1	17
20231119_2250	0.1	263
20231119_2300	0.1	36
20231119_2310	0.1	24
20231119_2320	0.1	26
20231119_2330	0.1	26
20231119_2340	0.1	292
20231119_2350	0.1	293

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231120_0000	0.1	52
20231120_0010	0.1	81
20231120_0020	0.1	67
20231120_0030	0.1	53
20231120_0040	0.1	57
20231120_0050	0.1	165
20231120_0100	0.1	65
20231120_0110	0.1	92
20231120_0120	0.1	80
20231120_0130	0.1	60
20231120_0140	0.1	73
20231120_0150	0.1	51
20231120_0200	0.1	15
20231120_0210	0.1	36
20231120_0220	0.1	18
20231120_0230	0.1	47
20231120_0240	0.1	152
20231120_0250	0.1	192
20231120_0300	0.1	55
20231120_0310	0.1	53
20231120_0320	0.1	188
20231120_0330	0.1	103
20231120_0340	0.1	102
20231120_0350	0.1	74
20231120_0400	0.1	61
20231120_0410	0.1	56
20231120_0420	0.1	135
20231120_0430	0.1	92
20231120_0440	0.1	67
20231120_0450	0.1	89
20231120_0500	0.1	114
20231120_0510	0.1	57
20231120_0520	0.1	164
20231120_0530	0.1	183
20231120_0540	0.1	103
20231120_0550	0.1	46
20231120_0600	0.1	70
20231120_0610	0.1	75
20231120_0620	0.1	66
20231120_0630	0.1	57
20231120_0640	0.1	29
20231120_0650	0.1	45
20231120_0700	0.1	68
20231120_0710	0.1	94
20231120_0720	0.1	96
20231120_0730	0.1	141
20231120_0740	0.1	140
20231120_0750	0.1	219
20231120_0800	0.1	116
20231120_0810	0.1	89
20231120_0820	0.1	129
20231120_0830	0.1	137
20231120_0840	0.1	140
20231120_0850	0.1	159
20231120_0900	0.1	129
20231120_0910	0.1	146
20231120_0920	0.1	183
20231120_0930	0.1	205
20231120_0940	0.2	147
20231120_0950	0.1	213
20231120_1000	0.1	153
20231120_1010	0.1	140
20231120_1020	0.1	173
20231120_1030	1.1	145
20231120_1040	2.7	187
20231120_1050	2.2	115
20231120_1100	0.9	96
20231120_1110	0.9	101
20231120_1120	0.2	112
20231120_1130	0.9	158
20231120_1140	1.8	46
20231120_1150	0.1	84

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231120_1200	0.3	224
20231120_1210	0.1	353
20231120_1220	1.1	150
20231120_1230	0.6	29
20231120_1240	2.9	164
20231120_1250	1.4	62
20231120_1300	0.1	37
20231120_1310	2	117
20231120_1320	0.1	278
20231120_1330	0.1	340
20231120_1340	0.1	209
20231120_1350	3.1	117
20231120_1400	1.7	135
20231120_1410	0.5	22
20231120_1420	2.6	139
20231120_1430	0.1	286
20231120_1440	1.1	158
20231120_1450	0.1	207
20231120_1500	0.9	124
20231120_1510	0.4	130
20231120_1520	0.7	58
20231120_1530	1.6	88
20231120_1540	0.1	106
20231120_1550	0.3	111
20231120_1600	1	15
20231120_1610	1.2	109
20231120_1620	0.1	168
20231120_1630	1.4	290
20231120_1640	0.1	80
20231120_1650	1.5	183
20231120_1700	0.3	299
20231120_1710	0.1	173
20231120_1720	0.1	15
20231120_1730	0.1	311
20231120_1740	0.1	119
20231120_1750	0.1	72
20231120_1800	0.1	110
20231120_1810	0.1	168
20231120_1820	0.1	102
20231120_1830	0.1	85
20231120_1840	0.1	42
20231120_1850	0.1	0
20231120_1900	0.1	28
20231120_1910	0.1	34
20231120_1920	0.1	56
20231120_1930	0.1	35
20231120_1940	0.1	21
20231120_1950	0.1	117
20231120_2000	0.1	51
20231120_2010	0.1	40
20231120_2020	0.1	10
20231120_2030	0.1	342
20231120_2040	0.1	70
20231120_2050	0.1	67
20231120_2100	0.1	75
20231120_2110	0.1	53
20231120_2120	0.1	213
20231120_2130	0.1	70
20231120_2140	0.1	78
20231120_2150	0.1	355
20231120_2200	0.1	50
20231120_2210	0.1	79
20231120_2220	0.1	67
20231120_2230	0.1	39
20231120_2240	0.1	68
20231120_2250	0.1	88
20231120_2300	0.1	25
20231120_2310	0.1	63
20231120_2320	0.1	76
20231120_2330	0.1	75
20231120_2340	0.1	76
20231120_2350	0.1	49

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231121_0000	0.1	62
20231121_0010	0.1	56
20231121_0020	0.1	142
20231121_0030	0.1	317
20231121_0040	0.1	33
20231121_0050	0.1	43
20231121_0100	0.1	50
20231121_0110	0.1	82
20231121_0120	0.1	128
20231121_0130	0.1	98
20231121_0140	0.1	93
20231121_0150	0.1	146
20231121_0200	0.1	37
20231121_0210	0.1	32
20231121_0220	0.1	105
20231121_0230	0.1	107
20231121_0240	0.1	52
20231121_0250	0.1	330
20231121_0300	0.1	197
20231121_0310	0.1	46
20231121_0320	0.1	63
20231121_0330	0.1	32
20231121_0340	0.1	190
20231121_0350	0.1	73
20231121_0400	0.1	3
20231121_0410	0.1	157
20231121_0420	0.1	215
20231121_0430	0.1	88
20231121_0440	0.1	217
20231121_0450	0.1	239
20231121_0500	0.1	270
20231121_0510	0.1	274
20231121_0520	0.1	97
20231121_0530	0.1	2
20231121_0540	0.1	241
20231121_0550	0.1	208
20231121_0600	0.1	31
20231121_0610	0.1	155
20231121_0620	0.1	27
20231121_0630	0.1	64
20231121_0640	0.1	68
20231121_0650	0.1	303
20231121_0700	0.1	173
20231121_0710	0.1	21
20231121_0720	0.1	84
20231121_0730	0.1	349
20231121_0740	0.1	68
20231121_0750	0.1	66
20231121_0800	0.1	37
20231121_0810	0.1	159
20231121_0820	0.1	84
20231121_0830	0.1	119
20231121_0840	0.1	97
20231121_0850	0.1	122
20231121_0900	0.1	124
20231121_0910	0.1	171
20231121_0920	0.3	56
20231121_0930	0.2	128
20231121_0940	0.2	38
20231121_0950	0.2	311
20231121_1000	0.1	337
20231121_1010	0.5	336
20231121_1020	0.1	116
20231121_1030	0.2	83
20231121_1040	0.1	349
20231121_1050	0.1	28
20231121_1100	0.1	101
20231121_1110	0.1	42
20231121_1120	0.1	218
20231121_1130	1.4	101
20231121_1140	0.3	37
20231121_1150	0.5	39

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231121_1200	0.1	8
20231121_1210	1.5	140
20231121_1220	1.2	289
20231121_1230	0.7	336
20231121_1240	0.3	346
20231121_1250	1.7	46
20231121_1300	0.5	73
20231121_1310	0.1	248
20231121_1320	0.5	24
20231121_1330	0.1	75
20231121_1340	0.1	30
20231121_1350	0.4	59
20231121_1400	1.9	95
20231121_1410	0.4	122
20231121_1420	5.6	168
20231121_1430	0.1	17
20231121_1440	1.3	145
20231121_1450	0.5	136
20231121_1500	1.4	52
20231121_1510	0.1	322
20231121_1520	0.3	157
20231121_1530	1	18
20231121_1540	0.2	313
20231121_1550	0.5	200
20231121_1600	0.4	314
20231121_1610	0.1	342
20231121_1620	1.5	338
20231121_1630	0.1	188
20231121_1640	1.4	316
20231121_1650	0.2	355
20231121_1700	0.1	347
20231121_1710	0.1	353
20231121_1720	0.1	60
20231121_1730	0.1	351
20231121_1740	0.5	322
20231121_1750	0.4	332
20231121_1800	0.1	115
20231121_1810	0.1	183
20231121_1820	0.1	321
20231121_1830	0.1	28
20231121_1840	0.1	139
20231121_1850	0.1	128
20231121_1900	0.1	81
20231121_1910	0.1	75
20231121_1920	0.1	81
20231121_1930	0.1	68
20231121_1940	0.1	60
20231121_1950	0.1	72
20231121_2000	0.1	75
20231121_2010	0.1	115
20231121_2020	0.1	94
20231121_2030	0.1	80
20231121_2040	0.1	173
20231121_2050	0.1	44
20231121_2100	0.1	130
20231121_2110	0.3	223
20231121_2120	0.1	240
20231121_2130	0.1	68
20231121_2140	0.1	160
20231121_2150	0.1	317
20231121_2200	0.1	307
20231121_2210	0.1	316
20231121_2220	0.1	93
20231121_2230	0.1	252
20231121_2240	0.1	208
20231121_2250	0.1	141
20231121_2300	0.1	287
20231121_2310	0.1	277
20231121_2320	0.1	115
20231121_2330	0.1	87
20231121_2340	0.1	54
20231121_2350	0.1	98

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231122_0000	0.1	84
20231122_0010	0.1	61
20231122_0020	0.1	44
20231122_0030	0.1	4
20231122_0040	0.1	25
20231122_0050	0.1	41
20231122_0100	0.1	81
20231122_0110	0.1	54
20231122_0120	0.1	49
20231122_0130	0.1	61
20231122_0140	0.1	49
20231122_0150	0.1	28
20231122_0200	0.1	165
20231122_0210	0.1	102
20231122_0220	0.1	61
20231122_0230	0.1	32
20231122_0240	0.1	27
20231122_0250	0.1	101
20231122_0300	0.1	312
20231122_0310	0.1	46
20231122_0320	0.1	55
20231122_0330	0.1	40
20231122_0340	0.1	266
20231122_0350	0.1	343
20231122_0400	0.1	39
20231122_0410	0.1	223
20231122_0420	0.1	56
20231122_0430	0.1	47
20231122_0440	0.1	41
20231122_0450	0.1	33
20231122_0500	0.1	191
20231122_0510	0.1	352
20231122_0520	0.1	48
20231122_0530	0.1	8
20231122_0540	0.1	236
20231122_0550	0.1	326
20231122_0600	0.1	58
20231122_0610	0.1	54
20231122_0620	0.1	11
20231122_0630	0.1	351
20231122_0640	0.1	59
20231122_0650	0.1	1
20231122_0700	0.1	237
20231122_0710	0.1	256
20231122_0720	0.1	59
20231122_0730	0.1	49
20231122_0740	0.1	111
20231122_0750	0.1	339
20231122_0800	0.1	194
20231122_0810	0.1	95
20231122_0820	0.1	214
20231122_0830	0.1	86
20231122_0840	0.1	120
20231122_0850	0.1	128
20231122_0900	0.1	187
20231122_0910	0.6	109
20231122_0920	0.1	257
20231122_0930	0.5	317
20231122_0940	0.2	39
20231122_0950	0.4	28
20231122_1000	0.2	332
20231122_1010	0.7	331
20231122_1020	0.1	56
20231122_1030	0.1	2
20231122_1040	0.2	300
20231122_1050	0.1	315
20231122_1100	0.1	295
20231122_1110	0.4	288
20231122_1120	0.3	317
20231122_1130	0.1	291
20231122_1140	0.3	329
20231122_1150	0.1	156

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231122_1200	0.1	184
20231122_1210	0.3	50
20231122_1220	0.6	69
20231122_1230	0.1	20
20231122_1240	0.3	306
20231122_1250	1.5	147
20231122_1300	0.1	20
20231122_1310	0.1	101
20231122_1320	0.3	121
20231122_1330	0.2	124
20231122_1340	0.1	194
20231122_1350	0.1	28
20231122_1400	0.6	57
20231122_1410	0.1	205
20231122_1420	0.5	86
20231122_1430	1.2	181
20231122_1440	0.1	268
20231122_1450	0.2	130
20231122_1500	0.1	56
20231122_1510	0.3	50
20231122_1520	0.1	84
20231122_1530	1.6	123
20231122_1540	0.1	55
20231122_1550	0.1	87
20231122_1600	1.2	108
20231122_1610	0.1	115
20231122_1620	2.6	97
20231122_1630	0.9	65
20231122_1640	0.1	63
20231122_1650	0.1	144
20231122_1700	0.1	33
20231122_1710	0.1	54
20231122_1720	0.1	30
20231122_1730	0.1	95
20231122_1740	0.1	71
20231122_1750	0.1	348
20231122_1800	0.1	336
20231122_1810	0.1	354
20231122_1820	0.1	62
20231122_1830	0.1	44
20231122_1840	0.1	10
20231122_1850	0.1	7
20231122_1900	0.1	348
20231122_1910	0.1	17
20231122_1920	0.1	15
20231122_1930	0.1	69
20231122_1940	0.1	35
20231122_1950	0.1	63
20231122_2000	0.1	55
20231122_2010	0.1	21
20231122_2020	0.1	55
20231122_2030	0.1	46
20231122_2040	0.1	21
20231122_2050	0.1	51
20231122_2100	0.1	19
20231122_2110	0.1	348
20231122_2120	0.1	37
20231122_2130	0.1	348
20231122_2140	0.1	39
20231122_2150	0.1	59
20231122_2200	0.1	336
20231122_2210	0.1	84
20231122_2220	0.1	142
20231122_2230	0.1	106
20231122_2240	0.1	82
20231122_2250	0.1	85
20231122_2300	0.1	39
20231122_2310	0.1	30
20231122_2320	0.1	67
20231122_2330	0.1	344
20231122_2340	0.1	63
20231122_2350	0.1	66

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231123_0000	0.1	66
20231123_0010	0.1	79
20231123_0020	0.1	67
20231123_0030	0.1	59
20231123_0040	0.1	53
20231123_0050	0.1	29
20231123_0100	0.1	9
20231123_0110	0.1	49
20231123_0120	0.1	139
20231123_0130	0.1	42
20231123_0140	0.1	3
20231123_0150	0.1	277
20231123_0200	0.1	155
20231123_0210	0.1	76
20231123_0220	0.1	57
20231123_0230	0.1	149
20231123_0240	0.1	57
20231123_0250	0.1	60
20231123_0300	0.1	34
20231123_0310	0.1	243
20231123_0320	0.1	343
20231123_0330	0.1	7
20231123_0340	0.1	97
20231123_0350	0.1	116
20231123_0400	0.1	35
20231123_0410	0.1	76
20231123_0420	0.1	47
20231123_0430	0.1	48
20231123_0440	0.1	34
20231123_0450	0.1	25
20231123_0500	0.1	40
20231123_0510	0.1	41
20231123_0520	0.1	9
20231123_0530	0.1	346
20231123_0540	0.1	1
20231123_0550	0.1	252
20231123_0600	0.1	252
20231123_0610	0.1	23
20231123_0620	0.1	24
20231123_0630	0.1	25
20231123_0640	0.1	25
20231123_0650	0.1	52
20231123_0700	0.1	52
20231123_0710	0.1	52
20231123_0720	0.1	52
20231123_0730	0.1	184
20231123_0740	0.1	179
20231123_0750	0.1	179
20231123_0800	0.1	179
20231123_0810	0.1	160
20231123_0820	0.1	118
20231123_0830	0.1	183
20231123_0840	0.1	156
20231123_0850	0.1	152
20231123_0900	0.1	155
20231123_0910	0.1	137
20231123_0920	0.1	126
20231123_0930	0.1	142
20231123_0940	0.1	145
20231123_0950	0.1	209
20231123_1000	0.1	137
20231123_1010	0.1	169
20231123_1020	0.1	115
20231123_1030	0.5	217
20231123_1040	1.2	129
20231123_1050	1.7	244
20231123_1100	0.2	168
20231123_1110	0.1	202
20231123_1120	1.5	182
20231123_1130	0.1	181
20231123_1140	0.1	133
20231123_1150	0.1	254

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231123_1200	0.1	169
20231123_1210	0.9	131
20231123_1220	0.1	202
20231123_1230	0.2	169
20231123_1240	0.1	343
20231123_1250	0.1	170
20231123_1300	2.4	257
20231123_1310	0.2	260
20231123_1320	1.4	287
20231123_1330	0.1	240
20231123_1340	0.1	152
20231123_1350	0.1	74
20231123_1400	0.9	155
20231123_1410	0.1	329
20231123_1420	0.7	288
20231123_1430	0.1	67
20231123_1440	0.9	198
20231123_1450	0.1	32
20231123_1500	1.4	186
20231123_1510	0.1	233
20231123_1520	0.1	162
20231123_1530	0.4	53
20231123_1540	0.1	10
20231123_1550	0.9	124
20231123_1600	0.1	24
20231123_1610	0.4	138
20231123_1620	0.1	62
20231123_1630	0.1	339
20231123_1640	0.1	119
20231123_1650	0.1	51
20231123_1700	0.1	70
20231123_1710	0.1	47
20231123_1720	0.1	18
20231123_1730	0.1	31
20231123_1740	0.1	17
20231123_1750	0.1	348
20231123_1800	0.1	77
20231123_1810	0.1	40
20231123_1820	0.1	48
20231123_1830	0.1	43
20231123_1840	0.1	57
20231123_1850	0.1	21
20231123_1900	0.1	46
20231123_1910	0.1	45
20231123_1920	0.1	67
20231123_1930	0.1	23
20231123_1940	0.1	342
20231123_1950	0.1	354
20231123_2000	0.2	336
20231123_2010	0.1	332
20231123_2020	0.1	341
20231123_2030	0.1	26
20231123_2040	0.1	181
20231123_2050	0.1	61
20231123_2100	0.1	56
20231123_2110	0.1	68
20231123_2120	0.1	44
20231123_2130	0.1	40
20231123_2140	0.1	48
20231123_2150	0.1	50
20231123_2200	0.1	43
20231123_2210	0.1	46
20231123_2220	0.1	61
20231123_2230	0.1	32
20231123_2240	0.1	51
20231123_2250	0.1	50
20231123_2300	0.1	60
20231123_2310	0.1	68
20231123_2320	0.1	50
20231123_2330	0.1	51
20231123_2340	0.1	40
20231123_2350	0.1	57

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231124_0000	0.1	35
20231124_0010	0.1	50
20231124_0020	0.1	90
20231124_0030	0.1	50
20231124_0040	0.1	53
20231124_0050	0.1	28
20231124_0100	0.1	19
20231124_0110	0.1	45
20231124_0120	0.1	38
20231124_0130	0.1	25
20231124_0140	0.1	306
20231124_0150	0.1	31
20231124_0200	0.1	19
20231124_0210	0.1	26
20231124_0220	0.1	9
20231124_0230	0.1	47
20231124_0240	0.1	71
20231124_0250	0.1	61
20231124_0300	0.1	76
20231124_0310	0.1	66
20231124_0320	0.1	83
20231124_0330	0.1	104
20231124_0340	0.1	59
20231124_0350	0.1	122
20231124_0400	0.1	185
20231124_0410	0.1	16
20231124_0420	0.1	133
20231124_0430	0.1	148
20231124_0440	0.1	59
20231124_0450	0.1	252
20231124_0500	0.1	171
20231124_0510	0.1	105
20231124_0520	0.1	25
20231124_0530	0.1	85
20231124_0540	0.1	49
20231124_0550	0.1	343
20231124_0600	0.1	1
20231124_0610	0.1	1
20231124_0620	0.1	168
20231124_0630	0.1	59
20231124_0640	0.1	19
20231124_0650	0.1	69
20231124_0700	0.1	56
20231124_0710	0.1	48
20231124_0720	0.1	65
20231124_0730	0.1	58
20231124_0740	0.1	60
20231124_0750	0.1	202
20231124_0800	0.1	73
20231124_0810	0.1	147
20231124_0820	0.1	128
20231124_0830	0.8	41
20231124_0840	0.1	145
20231124_0850	0.5	149
20231124_0900	1.1	114
20231124_0910	0.1	91
20231124_0920	0.1	149
20231124_0930	0.3	300
20231124_0940	0.1	344
20231124_0950	0.1	210
20231124_1000	1.7	131
20231124_1010	0.4	237
20231124_1020	0.1	338
20231124_1030	1.4	38
20231124_1040	0.1	166
20231124_1050	0.7	335
20231124_1100	0.3	109
20231124_1110	2.2	347
20231124_1120	1.2	281
20231124_1130	3.5	12
20231124_1140	0.1	35
20231124_1150	1.4	148

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231124_1200	1.2	319
20231124_1210	0.1	327
20231124_1220	0.6	118
20231124_1230	4.2	56
20231124_1240	0.1	223
20231124_1250	0.1	309
20231124_1300	1.3	27
20231124_1310	0.1	351
20231124_1320	1.2	284
20231124_1330	1.1	111
20231124_1340	1.5	220
20231124_1350	0.1	114
20231124_1400	1.8	1
20231124_1410	1.7	157
20231124_1420	0.4	29
20231124_1430	1.3	15
20231124_1440	0.9	95
20231124_1450	0.4	64
20231124_1500	0.3	58
20231124_1510	0.1	172
20231124_1520	2.3	164
20231124_1530	0.7	81
20231124_1540	0.7	43
20231124_1550	0.1	312
20231124_1600	0.5	92
20231124_1610	0.2	10
20231124_1620	0.1	20
20231124_1630	2.5	78
20231124_1640	0.1	9
20231124_1650	0.1	0
20231124_1700	1.2	120
20231124_1710	0.7	156
20231124_1720	0.3	109
20231124_1730	0.1	19
20231124_1740	0.1	219
20231124_1750	0.6	104
20231124_1800	0.1	78
20231124_1810	0.1	132
20231124_1820	0.2	94
20231124_1830	0.2	192
20231124_1840	0.4	52
20231124_1850	0.5	129
20231124_1900	0.5	106
20231124_1910	0.3	155
20231124_1920	0.3	110
20231124_1930	1.2	60
20231124_1940	0.2	118
20231124_1950	2.7	129
20231124_2000	1.3	77
20231124_2010	1.2	53
20231124_2020	1.4	167
20231124_2030	1	34
20231124_2040	0.1	99
20231124_2050	1.7	98
20231124_2100	0.9	116
20231124_2110	2	41
20231124_2120	0.9	100
20231124_2130	1.2	126
20231124_2140	0.1	13
20231124_2150	3.5	15
20231124_2200	0.4	96
20231124_2210	4.6	49
20231124_2220	1.3	36
20231124_2230	0.3	38
20231124_2240	0.7	152
20231124_2250	0.3	114
20231124_2300	0.1	194
20231124_2310	0.2	54
20231124_2320	1.5	101
20231124_2330	2.5	54
20231124_2340	4.7	50
20231124_2350	4.4	136

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231125_0000	1.6	97
20231125_0010	0.4	93
20231125_0020	1.3	57
20231125_0030	0.1	126
20231125_0040	0.2	306
20231125_0050	3.1	16
20231125_0100	0.1	96
20231125_0110	0.1	51
20231125_0120	2	122
20231125_0130	0.4	169
20231125_0140	0.1	136
20231125_0150	1.4	52
20231125_0200	0.4	212
20231125_0210	0.1	334
20231125_0220	1.5	57
20231125_0230	0.1	346
20231125_0240	0.1	35
20231125_0250	0.1	59
20231125_0300	1.4	354
20231125_0310	0.1	209
20231125_0320	0.1	172
20231125_0330	1.3	354
20231125_0340	0.1	5
20231125_0350	0.1	79
20231125_0400	0.1	195
20231125_0410	0.4	145
20231125_0420	0.1	315
20231125_0430	0.6	282
20231125_0440	0.1	132
20231125_0450	0.1	98
20231125_0500	0.1	77
20231125_0510	0.1	86
20231125_0520	0.1	96
20231125_0530	0.1	123
20231125_0540	0.1	44
20231125_0550	0.1	202
20231125_0600	0.1	0
20231125_0610	0.1	192
20231125_0620	0.1	235
20231125_0630	0.1	203
20231125_0640	0.1	188
20231125_0650	0.1	164
20231125_0700	0.1	188
20231125_0710	0.1	92
20231125_0720	0.1	86
20231125_0730	0.1	338
20231125_0740	0.1	174
20231125_0750	0.1	223
20231125_0800	0.1	86
20231125_0810	0.1	101
20231125_0820	0.1	72
20231125_0830	0.1	109
20231125_0840	0.2	131
20231125_0850	0.5	177
20231125_0900	0.3	105
20231125_0910	0.1	255
20231125_0920	0.1	340
20231125_0930	0.1	111
20231125_0940	0.3	20
20231125_0950	0.1	313
20231125_1000	0.5	22
20231125_1010	1.8	120
20231125_1020	0.1	95
20231125_1030	0.1	190
20231125_1040	0.1	307
20231125_1050	0.1	313
20231125_1100	0.1	6
20231125_1110	0.1	25
20231125_1120	0.1	126
20231125_1130	0.1	27
20231125_1140	0.6	89
20231125_1150	0.1	209

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231125_1200	0.5	192
20231125_1210	1.1	57
20231125_1220	0.1	5
20231125_1230	0.2	205
20231125_1240	0.1	124
20231125_1250	0.1	170
20231125_1300	0.7	116
20231125_1310	0.6	206
20231125_1320	1.8	101
20231125_1330	0.1	104
20231125_1340	0.1	69
20231125_1350	0.1	315
20231125_1400	2.2	208
20231125_1410	0.1	196
20231125_1420	0.1	36
20231125_1430	1.6	156
20231125_1440	2.5	135
20231125_1450	0.8	33
20231125_1500	2.1	98
20231125_1510	0.1	269
20231125_1520	0.1	294
20231125_1530	0.1	165
20231125_1540	0.1	186
20231125_1550	0.2	96
20231125_1600	0.4	120
20231125_1610	0.1	65
20231125_1620	0.1	158
20231125_1630	0.1	259
20231125_1640	0.1	285
20231125_1650	0.1	28
20231125_1700	0.1	9
20231125_1710	0.1	14
20231125_1720	0.1	37
20231125_1730	0.1	170
20231125_1740	0.1	319
20231125_1750	0.1	40
20231125_1800	0.3	103
20231125_1810	0.9	84
20231125_1820	0.1	213
20231125_1830	0.2	134
20231125_1840	0.2	13
20231125_1850	0.2	325
20231125_1900	1.4	50
20231125_1910	4.4	64
20231125_1920	0.1	0
20231125_1930	1.7	73
20231125_1940	1.3	43
20231125_1950	0.4	111
20231125_2000	0.1	294
20231125_2010	3	78
20231125_2020	0.2	47
20231125_2030	1.4	54
20231125_2040	0.1	82
20231125_2050	0.1	69
20231125_2100	0.7	125
20231125_2110	1.3	312
20231125_2120	0.4	108
20231125_2130	2.5	2
20231125_2140	1.2	11
20231125_2150	0.1	79
20231125_2200	1	62
20231125_2210	0.2	322
20231125_2220	0.1	7
20231125_2230	1.5	109
20231125_2240	0.1	76
20231125_2250	0.1	84
20231125_2300	0.3	47
20231125_2310	0.1	60
20231125_2320	0.1	47
20231125_2330	1.2	153
20231125_2340	0.5	105
20231125_2350	0.1	27

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231126_0000	0.5	150
20231126_0010	0.2	88
20231126_0020	0.1	342
20231126_0030	0.1	352
20231126_0040	0.2	270
20231126_0050	0.1	27
20231126_0100	0.1	78
20231126_0110	0.2	324
20231126_0120	0.3	1
20231126_0130	0.1	130
20231126_0140	0.1	97
20231126_0150	0.1	39
20231126_0200	3.5	37
20231126_0210	0.2	310
20231126_0220	0.1	133
20231126_0230	0.1	62
20231126_0240	0.2	45
20231126_0250	0.1	293
20231126_0300	0.1	350
20231126_0310	0.1	99
20231126_0320	0.1	293
20231126_0330	0.1	188
20231126_0340	0.1	194
20231126_0350	0.1	79
20231126_0400	0.1	6
20231126_0410	0.1	105
20231126_0420	0.1	210
20231126_0430	0.1	210
20231126_0440	0.1	121
20231126_0450	0.1	43
20231126_0500	0.1	18
20231126_0510	0.1	80
20231126_0520	0.1	99
20231126_0530	0.1	22
20231126_0540	0.1	52
20231126_0550	0.1	55
20231126_0600	0.1	44
20231126_0610	0.1	49
20231126_0620	0.1	39
20231126_0630	0.1	55
20231126_0640	0.1	41
20231126_0650	0.1	36
20231126_0700	0.1	37
20231126_0710	0.1	8
20231126_0720	0.1	64
20231126_0730	0.1	0
20231126_0740	0.1	17
20231126_0750	0.1	67
20231126_0800	0.1	155
20231126_0810	0.1	185
20231126_0820	0.1	110
20231126_0830	0.1	178
20231126_0840	0.1	147
20231126_0850	0.1	147
20231126_0900	0.1	126
20231126_0910	0.1	137
20231126_0920	0.1	159
20231126_0930	0.4	181
20231126_0940	0.2	159
20231126_0950	0.1	107
20231126_1000	0.4	192
20231126_1010	0.1	120
20231126_1020	2.2	163
20231126_1030	0.7	257
20231126_1040	0.1	286
20231126_1050	0.9	109
20231126_1100	0.3	36
20231126_1110	0.6	80
20231126_1120	0.7	73
20231126_1130	0.6	190
20231126_1140	1.4	158
20231126_1150	0.4	98

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231126_1200	0.1	68
20231126_1210	0.1	104
20231126_1220	2.3	120
20231126_1230	0.1	166
20231126_1240	0.4	218
20231126_1250	0.1	2
20231126_1300	0.8	90
20231126_1310	0.1	59
20231126_1320	0.1	98
20231126_1330	2.9	60
20231126_1340	0.1	304
20231126_1350	3.3	75
20231126_1400	0.1	48
20231126_1410	0.2	167
20231126_1420	0.3	69
20231126_1430	0.5	115
20231126_1440	1.6	82
20231126_1450	0.1	42
20231126_1500	0.1	62
20231126_1510	0.1	93
20231126_1520	0.1	329
20231126_1530	0.2	337
20231126_1540	0.1	8
20231126_1550	0.1	309
20231126_1600	0.8	163
20231126_1610	0.1	80
20231126_1620	0.2	109
20231126_1630	0.1	113
20231126_1640	0.1	200
20231126_1650	0.1	78
20231126_1700	0.1	39
20231126_1710	0.1	79
20231126_1720	0.1	55
20231126_1730	0.1	50
20231126_1740	0.1	340
20231126_1750	0.1	325
20231126_1800	0.1	326
20231126_1810	0.1	336
20231126_1820	0.1	16
20231126_1830	0.1	319
20231126_1840	0.1	5
20231126_1850	0.1	27
20231126_1900	0.1	350
20231126_1910	0.1	324
20231126_1920	0.1	288
20231126_1930	0.1	26
20231126_1940	0.1	56
20231126_1950	0.1	45
20231126_2000	0.1	66
20231126_2010	0.1	353
20231126_2020	0.1	72
20231126_2030	0.1	51
20231126_2040	0.1	52
20231126_2050	0.1	52
20231126_2100	0.1	252
20231126_2110	0.1	43
20231126_2120	0.1	28
20231126_2130	0.1	262
20231126_2140	0.1	55
20231126_2150	0.1	37
20231126_2200	0.1	42
20231126_2210	0.1	82
20231126_2220	0.1	47
20231126_2230	0.1	65
20231126_2240	0.1	53
20231126_2250	0.1	52
20231126_2300	0.1	18
20231126_2310	0.1	49
20231126_2320	0.1	16
20231126_2330	0.1	77
20231126_2340	0.1	60
20231126_2350	0.1	101

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231127_0000	0.1	58
20231127_0010	0.1	34
20231127_0020	0.1	68
20231127_0030	0.1	25
20231127_0040	0.1	25
20231127_0050	0.1	68
20231127_0100	0.1	75
20231127_0110	0.1	354
20231127_0120	0.1	53
20231127_0130	0.1	72
20231127_0140	0.1	57
20231127_0150	0.1	59
20231127_0200	0.1	45
20231127_0210	0.1	61
20231127_0220	0.1	50
20231127_0230	0.1	43
20231127_0240	0.1	354
20231127_0250	0.1	279
20231127_0300	0.1	62
20231127_0310	0.1	61
20231127_0320	0.1	66
20231127_0330	0.1	61
20231127_0340	0.1	64
20231127_0350	0.1	2
20231127_0400	0.1	25
20231127_0410	0.1	45
20231127_0420	0.1	48
20231127_0430	0.1	335
20231127_0440	0.1	20
20231127_0450	0.1	43
20231127_0500	0.1	51
20231127_0510	0.1	52
20231127_0520	0.1	88
20231127_0530	0.1	17
20231127_0540	0.1	19
20231127_0550	0.1	68
20231127_0600	0.1	165
20231127_0610	0.1	123
20231127_0620	0.1	79
20231127_0630	0.1	34
20231127_0640	0.1	64
20231127_0650	0.1	31
20231127_0700	0.1	120
20231127_0710	0.1	156
20231127_0720	0.1	115
20231127_0730	0.1	75
20231127_0740	0.1	74
20231127_0750	0.1	148
20231127_0800	0.1	63
20231127_0810	0.1	101
20231127_0820	0.1	300
20231127_0830	0.1	166
20231127_0840	0.1	126
20231127_0850	0.1	178
20231127_0900	0.2	145
20231127_0910	0.1	126
20231127_0920	0.2	164
20231127_0930	0.1	161
20231127_0940	0.1	108
20231127_0950	0.1	161
20231127_1000	0.7	144
20231127_1010	1.7	173
20231127_1020	0.5	154
20231127_1030	0.2	112
20231127_1040	0.1	158
20231127_1050	0.1	10
20231127_1100	0.5	160
20231127_1110	0.1	3
20231127_1120	0.1	251
20231127_1130	0.1	249
20231127_1140	0.5	186
20231127_1150	0.1	37

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231127_1200	0.1	128
20231127_1210	0.1	132
20231127_1220	2.6	35
20231127_1230	0.2	8
20231127_1240	0.1	117
20231127_1250	0.2	121
20231127_1300	0.3	115
20231127_1310	0.3	143
20231127_1320	0.1	66
20231127_1330	2	47
20231127_1340	0.7	33
20231127_1350	0.1	303
20231127_1400	0.1	78
20231127_1410	0.2	91
20231127_1420	0.1	172
20231127_1430	0.4	15
20231127_1440	0.1	30
20231127_1450	0.1	108
20231127_1500	0.6	65
20231127_1510	0.1	264
20231127_1520	2.1	50
20231127_1530	0.1	7
20231127_1540	2.4	67
20231127_1550	0.7	84
20231127_1600	0.5	39
20231127_1610	0.1	348
20231127_1620	0.1	313
20231127_1630	0.1	294
20231127_1640	0.1	355
20231127_1650	0.1	10
20231127_1700	0.1	106
20231127_1710	0.1	31
20231127_1720	0.1	82
20231127_1730	0.1	2
20231127_1740	0.1	14
20231127_1750	0.1	0
20231127_1800	0.1	352
20231127_1810	0.1	49
20231127_1820	0.1	4
20231127_1830	0.1	346
20231127_1840	0.1	353
20231127_1850	0.1	24
20231127_1900	0.1	55
20231127_1910	0.1	347
20231127_1920	0.1	144
20231127_1930	0.1	72
20231127_1940	0.1	48
20231127_1950	0.1	56
20231127_2000	0.1	26
20231127_2010	0.1	65
20231127_2020	0.1	64
20231127_2030	0.1	97
20231127_2040	0.1	284
20231127_2050	0.1	72
20231127_2100	0.1	238
20231127_2110	0.1	171
20231127_2120	0.1	71
20231127_2130	0.1	167
20231127_2140	0.1	109
20231127_2150	0.1	89
20231127_2200	0.1	12
20231127_2210	0.1	36
20231127_2220	0.1	168
20231127_2230	0.1	234
20231127_2240	0.1	343
20231127_2250	0.1	271
20231127_2300	0.1	145
20231127_2310	0.1	72
20231127_2320	0.1	54
20231127_2330	0.1	103
20231127_2340	0.1	61
20231127_2350	0.1	42

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231128_0000	0.1	86
20231128_0010	0.1	43
20231128_0020	0.1	35
20231128_0030	0.1	53
20231128_0040	0.1	36
20231128_0050	0.1	34
20231128_0100	0.1	47
20231128_0110	0.1	55
20231128_0120	0.1	38
20231128_0130	0.1	39
20231128_0140	0.1	11
20231128_0150	0.1	45
20231128_0200	0.1	50
20231128_0210	0.1	34
20231128_0220	0.1	46
20231128_0230	0.1	50
20231128_0240	0.1	79
20231128_0250	0.1	57
20231128_0300	0.1	39
20231128_0310	0.1	51
20231128_0320	0.1	41
20231128_0330	0.1	51
20231128_0340	0.1	43
20231128_0350	0.1	51
20231128_0400	0.1	44
20231128_0410	0.1	40
20231128_0420	0.1	51
20231128_0430	0.1	39
20231128_0440	0.1	66
20231128_0450	0.1	34
20231128_0500	0.1	41
20231128_0510	0.1	41
20231128_0520	0.1	50
20231128_0530	0.1	51
20231128_0540	0.1	44
20231128_0550	0.1	35
20231128_0600	0.1	54
20231128_0610	0.1	50
20231128_0620	0.1	33
20231128_0630	0.1	41
20231128_0640	0.1	43
20231128_0650	0.1	54
20231128_0700	0.1	35
20231128_0710	0.1	32
20231128_0720	0.1	49
20231128_0730	0.1	172
20231128_0740	0.1	52
20231128_0750	0.1	58
20231128_0800	0.1	119
20231128_0810	0.1	101
20231128_0820	0.1	94
20231128_0830	0.1	123
20231128_0840	0.1	105
20231128_0850	0.1	111
20231128_0900	0.1	149
20231128_0910	0.1	101
20231128_0920	0.1	148
20231128_0930	0.6	154
20231128_0940	0.1	83
20231128_0950	0.1	146
20231128_1000	0.1	284
20231128_1010	0.5	225
20231128_1020	0.1	230
20231128_1030	0.2	86
20231128_1040	0.1	192
20231128_1050	0.1	53
20231128_1100	0.1	181
20231128_1110	0.1	269
20231128_1120	0.1	299
20231128_1130	0.1	184
20231128_1140	2.9	312
20231128_1150	0.6	50

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231128_1200	0.5	284
20231128_1210	0.1	95
20231128_1220	0.9	56
20231128_1230	0.2	150
20231128_1240	1.6	101
20231128_1250	0.1	46
20231128_1300	0.5	211
20231128_1310	0.1	82
20231128_1320	4.2	200
20231128_1330	2.4	110
20231128_1340	0.2	29
20231128_1350	0.1	230
20231128_1400	0.8	64
20231128_1410	0.1	124
20231128_1420	0.6	88
20231128_1430	0.5	56
20231128_1440	0.1	134
20231128_1450	1.2	162
20231128_1500	0.8	163
20231128_1510	1.7	48
20231128_1520	0.1	124
20231128_1530	0.2	14
20231128_1540	0.2	5
20231128_1550	0.1	72
20231128_1600	0.1	176
20231128_1610	0.1	107
20231128_1620	0.1	24
20231128_1630	0.2	310
20231128_1640	0.1	106
20231128_1650	0.1	42
20231128_1700	1	87
20231128_1710	0.2	77
20231128_1720	0.1	170
20231128_1730	0.1	344
20231128_1740	0.1	288
20231128_1750	0.1	23
20231128_1800	0.1	311
20231128_1810	0.1	307
20231128_1820	0.1	173
20231128_1830	0.1	172
20231128_1840	0.1	125
20231128_1850	0.1	152
20231128_1900	0.1	128
20231128_1910	0.1	80
20231128_1920	0.1	25
20231128_1930	0.2	108
20231128_1940	0.1	346
20231128_1950	0.1	106
20231128_2000	1.2	80
20231128_2010	0.1	178
20231128_2020	0.1	49
20231128_2030	0.1	168
20231128_2040	0.1	37
20231128_2050	0.1	110
20231128_2100	0.9	344
20231128_2110	0.1	343
20231128_2120	0.3	116
20231128_2130	0.1	150
20231128_2140	0.1	63
20231128_2150	0.1	126
20231128_2200	0.1	180
20231128_2210	0.1	130
20231128_2220	0.1	182
20231128_2230	0.1	321
20231128_2240	0.4	142
20231128_2250	0.1	84
20231128_2300	2.1	48
20231128_2310	0.8	103
20231128_2320	0.2	118
20231128_2330	0.4	140
20231128_2340	0.5	85
20231128_2350	0.1	138

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231129_0000	0.1	61
20231129_0010	0.1	15
20231129_0020	0.2	316
20231129_0030	0.5	143
20231129_0040	0.1	164
20231129_0050	0.1	110
20231129_0100	0.1	138
20231129_0110	0.1	176
20231129_0120	0.2	152
20231129_0130	0.1	322
20231129_0140	0.2	102
20231129_0150	0.8	130
20231129_0200	0.1	149
20231129_0210	0.3	15
20231129_0220	0.6	79
20231129_0230	0.1	341
20231129_0240	0.2	156
20231129_0250	0.4	90
20231129_0300	0.1	322
20231129_0310	0.1	316
20231129_0320	0.1	290
20231129_0330	0.1	105
20231129_0340	0.6	18
20231129_0350	0.1	228
20231129_0400	0.1	256
20231129_0410	0.1	94
20231129_0420	0.1	355
20231129_0430	0.1	289
20231129_0440	0.1	152
20231129_0450	0.1	286
20231129_0500	0.1	183
20231129_0510	0.1	71
20231129_0520	0.2	32
20231129_0530	0.3	308
20231129_0540	0.1	77
20231129_0550	0.3	111
20231129_0600	0.1	103
20231129_0610	0.1	153
20231129_0620	0.1	85
20231129_0630	0.1	84
20231129_0640	0.1	173
20231129_0650	0.1	174
20231129_0700	0.1	196
20231129_0710	0.1	129
20231129_0720	0.1	198
20231129_0730	0.1	352
20231129_0740	0.1	216
20231129_0750	0.1	129
20231129_0800	0.1	121
20231129_0810	0.1	257
20231129_0820	0.1	165
20231129_0830	0.1	339
20231129_0840	0.5	84
20231129_0850	1.1	78
20231129_0900	0.6	71
20231129_0910	0.1	47
20231129_0920	0.1	109
20231129_0930	0.6	88
20231129_0940	0.1	236
20231129_0950	0.1	33
20231129_1000	0.1	55
20231129_1010	0.1	324
20231129_1020	0.1	163
20231129_1030	0.1	56
20231129_1040	0.1	7
20231129_1050	0.1	295
20231129_1100	0.1	204
20231129_1110	0.2	77
20231129_1120	0.1	214
20231129_1130	0.1	341
20231129_1140	0.3	113
20231129_1150	2.3	154

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231129_1200	0.8	70
20231129_1210	0.6	59
20231129_1220	0.1	102
20231129_1230	0.1	37
20231129_1240	0.2	158
20231129_1250	0.1	68
20231129_1300	1.3	61
20231129_1310	2.8	142
20231129_1320	0.1	228
20231129_1330	1.4	89
20231129_1340	0.2	117
20231129_1350	1	355
20231129_1400	0.1	77
20231129_1410	0.1	10
20231129_1420	0.1	115
20231129_1430	0.1	165
20231129_1440	0.1	98
20231129_1450	0.6	122
20231129_1500	0.1	178
20231129_1510	0.1	42
20231129_1520	0.1	76
20231129_1530	0.1	8
20231129_1540	0.1	113
20231129_1550	0.1	131
20231129_1600	1.6	144
20231129_1610	0.1	196
20231129_1620	0.2	171
20231129_1630	0.1	46
20231129_1640	0.1	138
20231129_1650	0.1	49
20231129_1700	0.1	64
20231129_1710	0.1	90
20231129_1720	0.1	70
20231129_1730	0.1	121
20231129_1740	0.1	179
20231129_1750	0.1	147
20231129_1800	0.1	96
20231129_1810	0.1	4
20231129_1820	0.1	153
20231129_1830	0.2	178
20231129_1840	0.2	158
20231129_1850	0.1	234
20231129_1900	0.1	113
20231129_1910	0.1	48
20231129_1920	0.2	158
20231129_1930	0.1	149
20231129_1940	0.1	202
20231129_1950	0.1	164
20231129_2000	0.1	145
20231129_2010	0.1	239
20231129_2020	0.1	248
20231129_2030	0.1	118
20231129_2040	0.1	53
20231129_2050	0.1	110
20231129_2100	0.1	38
20231129_2110	0.1	324
20231129_2120	0.1	297
20231129_2130	0.1	78
20231129_2140	0.1	265
20231129_2150	0.1	190
20231129_2200	0.1	269
20231129_2210	0.1	146
20231129_2220	0.1	35
20231129_2230	0.1	88
20231129_2240	0.1	92
20231129_2250	0.1	60
20231129_2300	0.1	169
20231129_2310	0.1	57
20231129_2320	0.1	75
20231129_2330	0.1	52
20231129_2340	0.1	90
20231129_2350	0.1	121

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231130_0000	0.1	187
20231130_0010	0.1	253
20231130_0020	0.1	86
20231130_0030	0.1	345
20231130_0040	0.1	104
20231130_0050	0.1	216
20231130_0100	0.1	200
20231130_0110	0.1	54
20231130_0120	0.1	12
20231130_0130	0.1	39
20231130_0140	0.1	14
20231130_0150	0.1	83
20231130_0200	0.1	212
20231130_0210	0.1	45
20231130_0220	0.1	15
20231130_0230	0.1	80
20231130_0240	0.1	75
20231130_0250	0.1	61
20231130_0300	0.1	76
20231130_0310	0.2	59
20231130_0320	0.1	0
20231130_0330	0.1	320
20231130_0340	0.1	34
20231130_0350	0.1	54
20231130_0400	0.1	52
20231130_0410	0.1	124
20231130_0420	0.1	1
20231130_0430	0.1	163
20231130_0440	0.1	161
20231130_0450	0.1	138
20231130_0500	0.1	138
20231130_0510	0.1	56
20231130_0520	0.1	55
20231130_0530	0.1	20
20231130_0540	0.1	30
20231130_0550	0.1	93
20231130_0600	0.1	111
20231130_0610	0.1	50
20231130_0620	0.1	58
20231130_0630	0.1	56
20231130_0640	0.1	42
20231130_0650	0.1	12
20231130_0700	0.1	45
20231130_0710	0.1	338
20231130_0720	0.1	84
20231130_0730	0.1	203
20231130_0740	0.1	219
20231130_0750	0.1	219
20231130_0800	0.1	300
20231130_0810	0.1	214
20231130_0820	0.1	89
20231130_0830	0.1	194
20231130_0840	0.1	247
20231130_0850	0.1	199
20231130_0900	0.1	207
20231130_0910	0.1	178
20231130_0920	0.1	220
20231130_0930	0.1	198
20231130_0940	0.1	150
20231130_0950	0.1	156
20231130_1000	0.7	124
20231130_1010	0.6	187
20231130_1020	0.2	152
20231130_1030	0.1	142
20231130_1040	0.1	189
20231130_1050	1.1	215
20231130_1100	0.1	217
20231130_1110	0.1	225
20231130_1120	0.3	178
20231130_1130	0.1	241
20231130_1140	0.5	2
20231130_1150	0.1	171

Date & Time (YYYYMMBB_HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20231130_1200	0.9	185
20231130_1210	0.5	209
20231130_1220	0.1	127
20231130_1230	0.1	71
20231130_1240	1.2	171
20231130_1250	0.1	33
20231130_1300	1.2	135
20231130_1310	0.8	336
20231130_1320	0.1	210
20231130_1330	0.1	24
20231130_1340	0.1	106
20231130_1350	0.1	209
20231130_1400	0.1	175
20231130_1410	0.1	57
20231130_1420	0.1	7
20231130_1430	1.1	88
20231130_1440	1.5	108
20231130_1450	0.1	133
20231130_1500	0.1	96
20231130_1510	0.2	181
20231130_1520	0.2	338
20231130_1530	0.1	90
20231130_1540	0.9	111
20231130_1550	0.4	109
20231130_1600	0.3	353
20231130_1610	0.1	165
20231130_1620	0.1	198
20231130_1630	0.1	84
20231130_1640	0.1	138
20231130_1650	0.1	117
20231130_1700	0.1	350
20231130_1710	0.1	281
20231130_1720	0.1	22
20231130_1730	0.1	83
20231130_1740	0.1	77
20231130_1750	0.1	83
20231130_1800	0.1	180
20231130_1810	0.1	79
20231130_1820	0.2	104
20231130_1830	0.1	300
20231130_1840	0.6	5
20231130_1850	0.1	68
20231130_1900	0.1	107
20231130_1910	0.1	324
20231130_1920	0.1	154
20231130_1930	0.1	291
20231130_1940	0.1	108
20231130_1950	0.1	127
20231130_2000	0.1	136
20231130_2010	0.1	143
20231130_2020	0.1	137
20231130_2030	0.3	139
20231130_2040	1.2	62
20231130_2050	0.1	115
20231130_2100	0.1	117
20231130_2110	0.1	139
20231130_2120	0.7	121
20231130_2130	1.5	332
20231130_2140	0.1	54
20231130_2150	1.5	70
20231130_2200	0.3	111
20231130_2210	0.1	64
20231130_2220	0.1	106
20231130_2230	0.1	35
20231130_2240	0.1	106
20231130_2250	0.2	39
20231130_2300	0.1	350
20231130_2310	0.1	126
20231130_2320	0.1	165
20231130_2330	0.1	118
20231130_2340	0.1	78
20231130_2350	0.1	108

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	9,581.15	0	0	9,187	0	0	0	0	0	3.69	0	6.96	383.5
Apr-23	18,532.07	0	0	18,466	0	0	0	0	0	1.97	0	5.81	58.29
May-23	28,889.61	0	0	28,473	0	0	0	0	0	0	0	7.45	409.16
Jun-23	11,574.89	0	0	11,211	0	0	0	0	0	2.38	0	14.69	346.82
Jul-23	50,595.49	0	0	50,307	0	0	0	0	0	0	0	25.54	262.95
Aug-23	63,178.52	0	0	63,076	0	0	0	0	0	0	0	30.77	71.75
Sep-23	42,709.75	0	0	42,676	0	0	0	0	0	0	0	33.38	0
Oct-23	55,549.12	0	0	55,405	0	0	0	0	0	0	0	28.05	116.07
Nov-23	76,127.24	0	0	73,352	0	2629.37	0	0	0	0	0	35.13	110.74
Total	357,353.57	0.00	0.00	352,153.37	0.00	2,629.37	0.00	0.00	0.00	22.69	0.00	225.67	2,322.47

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:	06 November 2023	Inspected By:	Jason Man
Time:	14:00	Weather Condition:	Sunny
Participants:	Kim Tang (ER), Matt Choy (Contractor), 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?	☐	☒	☐	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	
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 **plant and equipment** well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B3	Any remedial action undertaken?	☒	☐	☐	N/A
B4	Are the **worksites** wetted with water regularly?	☐	☐	☒	Refer to 25 Sep 2023 Observation 1
B5	Are **NRMM labels** properly affixed on the PMEs?	☐	☒	☐	
B6	Observed dust source(s)				
		☒ Wind erosion			
		☒ Vehicle/ Equipment Movements			
		☒ Loading/ unloading of materials			
		☐ Others: _____			
Air Pollution Control (Construction Dust) Regulation					
Part I Control Requirements for Notifiable Works					
Demolition of building					
B7	Is the area involved demolition activities **sprayed with water** or a dust suppression chemical immediately prior to, during and immediately after the activities?	☒	☐	☐	N/A
Construction of the superstructure of a building					
B8	Is **scaffolding** erected around the perimeter of a building under construction?	☐	☒	☐	

B9	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?	☐	☐	☒	Refer to 6 Nov 2023 Observation 1
B10	Is the **skip** for materials transport enclosed by **impervious sheeting**?	☒	☐	☐	N/O
Part III General Control Requirements					
Site boundary and entrance					
B11	Are **wheel washing facilities** with **high pressure water jet** provided at all site exits if practicable?	☐	☒	☐	
B12	Are the **areas of washing facilities** and the **road section between the washing facilities** and the **exit point** paved with concrete, bituminous materials or hardcore?	☐	☒	☐	
B13	Are the **hoarding** ≥ 2.4m tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	☐	☒	☐	
Assess road					
B14	Are every **main haul road** (having a vehicle passing rate of higher than 4 in any 30 minutes) paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials?	☐	☒	☐	
B15	Are every **main haul road** sprayed with water or a dust suppression chemical?	☐	☒	☐	
B16	Is the portion of any road leading only to construction site (within **30m of a vehicle entrance or exit**) kept clear of dusty materials?	☐	☒	☐	
B17	Are appropriate **speed limit sign** displayed?	☐	☒	☐	
B18	Is **unpaved main haul road** wet by water spraying?	☐	☐	☒	Refer to 25 Sep 2023 Observation 1
Cement and dry pulverized fuel ash (PFA)					
B19	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?	☒	☐	☐	N/O
B20	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
B21	Is any vent or exhaust fitted with an **effective fabric filter or equipment air pollution control system**?	☒	☐	☐	N/A
Exposed earth					
B22	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 6 months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by **impervious sheeting** or (b) placed in an **area sheltered on the top and the 3 sides** or (c) **sprayed with water** or a dust suppression chemical to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the **excavation or unloading**?	☐	☒	☐	
B24	Is the stockpile of dusty materials avoid to be extend beyond the **pedestrian barriers, fencing or traffic cones**?	☐	☒	☐	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials **sprayed with water** or a dust suppression chemical immediately **prior to any loading, unloading or transfer operation** so as to maintain the dusty materials wet?	☐	☒	☐	
B26	Are **all trucks loaded** to a level within the side and tail boards?	☐	☒	☐	
Use of vehicles					
B27	Are **every vehicle washed Immediately** to remove any dusty materials from its body and wheels before leaving a construction site?	☐	☒	☐	
B28	Are **loaded dump trucks** covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B29	Are site **vehicle movements** confined to designated roads?	☐	☒	☐	
Pneumatic or power-driven drilling, cutting and polishing					
B30	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? *Unless the process is accompanied by the operation of an effective dust extraction and filtering device.	☒	☐	☐	N/A
Debris handling					
B31	Are any debris covered entirely by **impervious sheeting** or stored in a **debris collection area** sheltered on the top and the 3 sides?	☒	☐	☐	N/A
B32	Are every **debris chute** shall be enclosed by impervious sheeting or similar materials?	☒	☐	☐	N/A
B33	Are the watering spray or a dust suppression chemical conducted before **debris is dumped** into a debris chute?	☒	☐	☐	N/A

Excavation or earth moving					
B34	Are the working area of any excavation or earth moving operation **sprayed with water** or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
Site clearance					
B35	Are the working area for the **uprooting of trees**, **shrubs**, or **vegetation** or for the **removal of boulders**, **poles**, **pillars** or **temporary** or **permanent structures** sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
B36	Are **all demolished items** (including **trees**, **shrubs**, **vegetation**, **boulders**, **poles**, **pillars**, **structures**, **debris**, **rubbish** and **other items arising from site clearance**) that may dislodge dust particles covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition?	☐	☒	☐	

C	Construction 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/O
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?	☐	☒	☐	
C7	Is **temporary hoarding** installed located on the site boundaries between noisy construction activities and NSRs?	☐	☒	☐	
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/O
C9	Is the sequencing **operation** of **construction plants** where practicable?	☐	☒	☐	
C10	Is the **hoarding** maintained properly?	☐	☒	☐	
C11	**Air compressors** (500 kPa or above) and **hand held percussive breaker** (mass of above 10 kg) with valid noise labels?	☒	☐	☐	N/O
C12	Are **compressor** operated with doors closed?	☐	☒	☐	
C13	**QPME** used with valid noise labels?	☐	☒	☐	
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 Runoff					
D1a	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?	☒	☐	☐	N/O
D1b	Are **channels**, **earth bunds** or **sandbag barriers** provided on site to properly direct stormwater to silt removal facilities?	☐	☐	☒	Refer to 6 Nov 2023 Observation 2
D2a	Have **dikes** or **embankments** for **flood protection** implemented around the boundaries of earthwork areas?	☒	☐	☐	N/A
D2b	Have **temporary ditches** provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D2c	Are the **sediment/ silt traps** incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D3	Are the **retention time for silt/s and traps** of the silt removal facilities be **5 minutes** under maximum flow conditions?	☐	☐	☒	Refer to 18 Sep 2023 Observation 6
D4a	Are **surface excavation works** minimised during rainy seasons (April to September), as possible?	☒	☐	☐	N/A
D4b	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
D4c	Are **exposed slope surfaces** covered by tarpaulin sheets?	☐	☐	☒	Shotcrete in progress. Refer to 6 Nov 2023 Observation 4
D5a	Have the **overall slope** of the site should be kept a minimum?	☒	☐	☐	N/A
D5b	Are **all trafficked areas** and **access roads** protected by coarse stone ballast?	☒	☐	☐	N/A
D6a	Are **all drainage facilities** and **erosion** and **sediment control structures** inspected regularly?	☐	☒	☐	
D6b	Are **all drainage facilities** and **erosion** and **sediment control structures** maintained to ensure proper and efficient operation at all times and particularly following rainstorms?	☐	☒	☐	
D6c	Is the **deposited silt** and **grit** removed regularly and disposed of by spreading evenly over stable?	☐	☒	☐	
D7a	Have the **excavation** of **trenches** in wet periods be dug and backfilled in short sections?	☐	☒	☐	
D7b	Is rainwater pumped out from **trenches** discharged into storm drains via silt system?	☐	☒	☐	
D8	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?	☐	☒	☐	

D9a	Are **manholes** adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D9b	Are the **discharges** of **surface run-off** into foul sewer always prevented?	☐	☒	☐	
D10a	Are particular attention paid to the control of **silty surface runoff** during **storm event**?	☐	☒	☐	
D10b	Are the precautions to be taken at **any time** of year when rainstorms are likely? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be maintained and the **deposited silt** and **grit** should be removed regularly. ii. **Temporarily exposed slope surfaces** should be cover by tarpaulin. iii. **Temporary access roads** should be protected by crushed stone or gravel. iv. **Intercepting channels** should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. v. **Trenches** should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.	☐	☒	☐	
D10c	Are the actions to be taken when a **rainstorm** is **imminent** or **forecas**t? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked to ensure that they can function properly. ii. **Open stockpiles** of **construction materials** (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric. iii. **All temporary covers to slopes and stockpiles** should be secured.	☐	☒	☐	
D10d	Are the actions to be taken **during** or **after rainstorms**? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.	☐	☒	☐	
D11a	Are **all vehicles** and **plant** cleaned before leaving a construction site?	☐	☒	☐	
D11b	Is the **wheel washing bay** provided at every site exit?	☐	☒	☐	
D11c	Are the **vehicle wash-water** have sand and silt settled out and removed at least on a weekly basis?	☐	☒	☐	
D11d	Is the **wheel wash** overflow directed to silt removal facilities before being discharged to the storm drain?	☒	☐	☐	N/O
D11e	Is the section of **construction road between the wheel washing bay and the public road** paved with backfill?	☐	☒	☐	
D11f	Is the treated wastewater reused for **vehicle washing**, **dust suppression** and **general cleaning**?	☐	☒	☐	
D12a	Are **oil interceptors** provided in the site drainage system downstream of any oil/ fuel pollution sources?	☒	☐	☐	N/A

D12b	Are the **oil interceptors** are emptied and cleaned regularly to prevent the release of O&G into the storm water drainage system after accidental spillage?	☒	☐	☐	N/A
D12c	Has a **bypass** provided to prevent flushing during heavy rain?	☐	☒	☐	
D13	Are the **construction solid waste**, **debris** and **rubbish** on site collected, handled and disposed of properly? (same with waste item)	☐	☒	☐	
D14	Are **all fuel tanks** and **storage areas** provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank?	☐	☐	☒	Refer to 30 Oct 2023 Observation 1
D15	Is **Intercepting bund** or **barrier** along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	☐	☒	☐	
D16	Are **site drainage systems** provided over the entire project site with sediment control facilities?	☐	☒	☐	
D17	Are **sedimentation tanks** provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D18	Is there any **sediment plume** observed in nearby watercourses?	☐	☐	☒	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are **portable chemical toilets** and **sewage holding tanks** provided?	☐	☒	☐	
D19b	Is the **sewage generated from toilets** collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D20	Are the **notices** posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	☒	☐	☐	N/O
Accidental Spillage of Chemical (Service workshop and maintenance facilities)					
D21a	Are the **service workshop** and **maintenance facilities** located within a bunded area, and sumps and oil interceptors?	☒	☐	☐	N/O
D21b	Are all **maintenance of equipment** involving activities with potential for leakage and spillage undertaken within the areas?	☒	☐	☐	N/O
D21c	Is **chemical leakage** or **spillages** contained and cleaned up immediately?	☒	☐	☐	N/O
Surface Water Drainage System					
D22a	Is the **temporary surface water drainage system** provided to manage runoff?	☐	☒	☐	
D22b	Does the system consist of **channel** as constructed around the perimeter of the site area?	☐	☒	☐	
D22c	Does the system collect surface water from the **areas of higher elevations** to those of **lower elevations** and ultimately to the discharge point?	☐	☒	☐	
D22d	Is the **erosion** minimised?	☐	☒	☐	
D23a	Does the system include the **use of a silt fence** around the **soil stockpile areas** to prevent sediment from entering the system?	☐	☒	☐	

D23b	Is the regular **cleaning** carried out to prevent blockage of the passage of waste flow in silt fence?	☐	☒	☐	

E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Waste Management					
General Waste					
E1	Is the general waste generated on-site stored in **enclosed bins** or compaction units separately from the construction and chemical wastes?	☐	☐	☒	Refer to 6 Nov 2023 Observation 3
E2a	Is the general waste collected properly by using the **waste separation facilities** for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E2b	Does **accumulation** of **waste** avoid?	☐	☒	☐	
E2c	Is **waste disposed** regularly?	☐	☒	☐	
E2d	Regular **waste collection** by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E3	**Burning of refuse** on construction site prohibited?	☐	☒	☐	
C&D Materials					
E4a	Are there any **contract documents** provided to allow and promote the **use of recycled aggregates** where appropriate?	☐	☒	☐	
E4b	Are the **C&D materials** sorted and recycled on-site?	☐	☒	☐	
E5a	Is the **durable formwork** or **plastic facing** for construction works used?	☐	☒	☐	
E5b	Do the **wooden hoardings** avoid to be used?	☐	☒	☐	
E5c	Is **metal hoarding** used to enhance the possibility of recycling?	☐	☒	☐	
E6a	Are the concrete and masonry used as **general fill**?	☐	☒	☐	
E6b	Are the **steel reinforcement bars** used by scrap steel mills?	☐	☒	☐	
E6c	Is the **segregation** and **storage** of C&D wastes undertaken in designated area?	☐	☒	☐	
E6d	Does the **use of reusable steel formwork** maximise?	☐	☒	☐	
E7a	Are the **temporary stockpiles** maintained regularly?	☐	☒	☐	
E7b	Is the **excavated fill material** reused for backfilling and reinstatement?	☐	☒	☐	
E8a	Are the **excavated slope**, **stockpile material** and **bund walls** covered by tarpaulin?	☐	☒	☐	
E8b	Are covering trucks or transporting wastes in enclosed containers when **transportation of waste**?	☐	☒	☐	
E8c	Are **waste storage area** properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E9	Is **hydroseeding** of the topsoil on the **stockpile** implemented to improve visual appearance and prevent soil erosion?	☐	☒	☐	
E10	Is the **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 implemented?	☐	☒	☐	

E11	Are the **training** of **site personnel** for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concept implemented?	☐	☒	☐	
E12	Are the **regular cleaning** and **maintenance programme** for drainage systems, sumps, oil interceptors?	☐	☒	☐	
E13a	Are **wood**, **steel** and **other metals** separated for re-use and/or recycling?	☐	☒	☐	
E13b	Do the **excavated materials** appear contaminated?	☐	☐	☒	
E13c	If suspected contaminated, appropriate **procedures** followed?	☒	☐	☐	N/A
E14	Is the **disposal** of **C&D materials** avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E15	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?	☐	☒	☐	
Chemical Waste / Waste Oil					
E16	Are **chemicals** and **waste oil** recycled or disposed properly?	☐	☐	☒	Refer to 3 Oct 2023 Observation 1 Refer to 30 Oct 2023 Observation 1
Chemical Packaging					
E17a	Have the **containers** a capacity of **<450 L** unless the specification has been approved by EPD?	☒	☐	☐	N/A
E17b	Are the **containers** (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for **storage of chemical wastes**?	☐	☐	☒	Refer to 30 Oct 2023 Observation 1
Chemical Labelling					
E18	Is chemical waste or waste oil **stored** and **labelled** in **English and Chinese** properly in designated area? Capacity of Container: Dimensions of Label < 50L: No less than 90 x 100mm 50 to 450L: No less than 120 x 150mm > 450L: No less than 180 x 200mm	☐	☒	☐	
Chemical Waste / Fuel Storage Area					
E19a	Are the **storage area** are clearly labelled and separated (if needed)?	☒	☐	☐	N/O
E19b	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**?	☒	☐	☐	N/O
E19c	Do the **storage areas** have adequate **ventilation** and be covered to prevent rainfall entering and reduce heat from sunlight?	☒	☐	☐	N/O
E19d	Are the **fuel tanks** and **chemical storage areas** provided with locks and sited on sealed areas?	☒	☐	☐	N/O

E20	Is chemical waste collected by **licensed waste collectors** and disposed of at **licensed facility** eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E21	Is a licensed waste hauler used for **waste collection**?	☐	☒	☐	
E22	Are the **records of quantities of wastes** generated, recycled and disposed properly kept?	☐	☒	☐	
E23	For the demolition material / waste, is the **number of loads** for each day recorded as appropriate?	☐	☒	☐	

F	Landfill Gas (LFG)	N/A or Not Observed	Yes	No	Remarks / Photo
Within NENT Landfill Extension					
F1	Are **special LFG precautions** taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	N/O
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?	☒	☐	☐	N/O
F4	Are prominent **'No smoking'** and **'No Naked Flames' signs** erected on-site?	☒	☐	☐	N/O
F5	Is no worker allowed to **work alone** at any time in excavated trenches or confined areas on-site?	☐	☒	☐	
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?	☐	☒	☐	
F8	Are **electrical motors** and **extension cords** explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	N/O
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?	☒	☐	☐	N/A
F11b	Are the **pipe ends** sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	☒	☐	☐	N/A
F11c	Is **forced ventilation** implemented prior to **operation of installed pipeline**?	☒	☐	☐	N/A
F11d	Is **forced ventilation** implemented for **works inside trenches deeper than 1m**?	☒	☐	☐	N/A
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 < 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.	☐	☒	☐	
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?	☐	☒	☐	
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?	☐	☒	☐	
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%	☐	☒	☐	
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.	☐	☒	☐	
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 < 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations > 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 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations < 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?	☐	☒	☐	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at **strategic locations** within site implemented?	☐	☒	☐	
G4b	Are the roadside planter and shrub planting implemented in front of **Cheung Sha Temple**?	☐	☒	☐	
Boundary Green Belt planting					
G5	Are the **fast growing** and **fire-resistant plant species** planted around the site perimeter?	☐	☒	☐	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a **temporary slope cover**?	☐	☒	☐	
Existing tree preservation					
G7	Are **existing** and **affected tree** which identified as ecological significant preserved whenever possible?	☐	☒	☐	

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?	☐	☒	☐	

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:

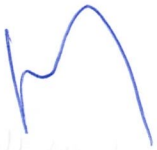
1. 25 September 2023 Observation 1 – The water spraying by the water truck was arranged from the contractor at the assess road of SBA.

Observation(s):

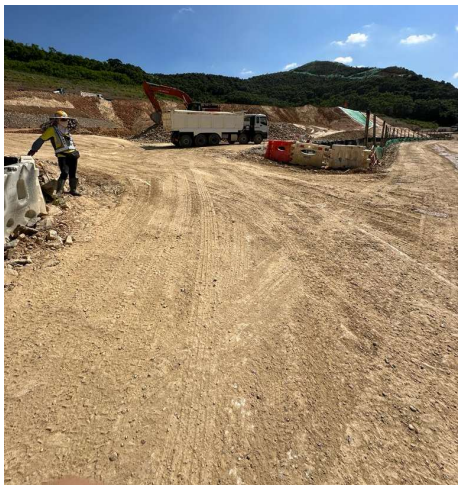
1. The outside surrounding of the scaffolding without dust screen, sheeting or netting is found at the Portion D.
2. The muddy water which is caused from the water spraying by the water sprinkler at the Portion A is found. The deposited silt and grit are found under the tower crane at the Portion A.
3. The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins.
4. The slope surface at the Portion E4 should be covered by impervious sheet properly.

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

1. The contractor has been advised that the effective dust screens, sheeting or netting should be 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.
2. The contractor has been recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.
3. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.
4. The contractor has been advised to cover the exposed slope surface by impervious sheet properly.

	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Jason Man	/	Matt Choy/Kristy Wong	Sylvia Ho
Date:	6 November 2023	/	6 November 2023	6 November 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
18 September 2023 Observation 6  Sediment/ silt traps shall be incorporated in the temproray drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions.	Waiting for contractor input
25 September 2023 Observation 1 SBA   The main haul road and work site should be wetted regularly to minimize the dust dispersion.	SBA  The water spraying by the water truck was arranged from the contractor at the assess road of SBA.

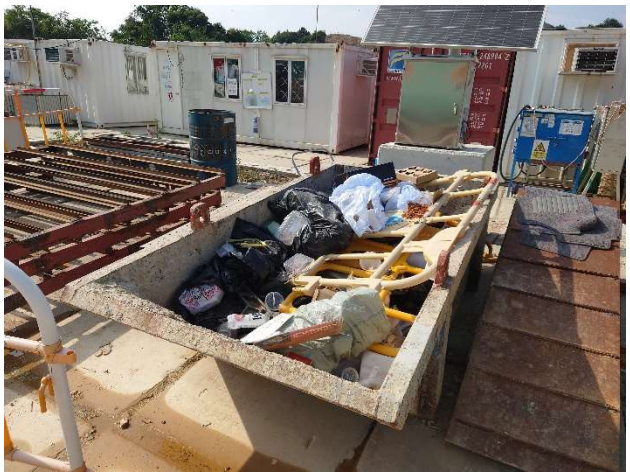
Observation and Recommendation	Follow-up status
3 October 2023 Observation 1  The stagnant water in drip tray should be cleared of in Portion E4.	Waiting for Contractor's Input

Observation and Recommendation	Follow-up status
30 October 2023 Observation 1   The storage area of chemical containers at Portion E3-1 is without drip tray and other properly setup etc. to prevent the chemicals rainfall entering and reduce heat from sunlight and avoid the risk of land contamination.	Waiting for Contractor Input

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
6 November 2023 Observation 1  The outside surrounding of the scaffolding without dust screen, sheeting or netting is found at the Portion D. The contractor has been advised that the effective dust screens, sheeting or netting should be 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.	Waiting for Contractor Input

Observation and Recommendation	Follow-up status
6 November 2023 Observation 2   The muddy water which is caused from the water spraying by the water sprinkler at the Portion A is found. The deposited silt and grit are found under the tower crane at the Portion A. The contractor has been recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.	Waiting for Contractor Input

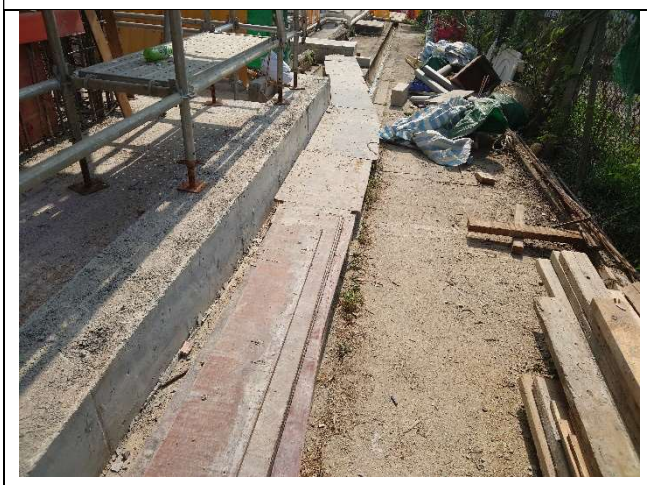
Observation and Recommendation	Follow-up status
6 November 2023 Observation 3   The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The "type of waste" label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	Waiting for Contractor Input

Observation and Recommendation	Follow-up status
6 November 2023 Observation 4  The slope surface at the Portion E4 should be covered by impervious sheet properly.	Waiting for Contractor Input

PART III Temporary Surface Water Drainage System (TSWDS) Photo Record during the environmental site inspection

Portion A	Portion A
	
Silt Fence with temporary ditches at SBA	Sedimentation Basin at SBA
	
Channel at SBA	Silt Fence with temporary ditches at SBA
	

Channel at SBA	Channel at SBA
	
Existing Channel at Portion E3	Concret block & Sedimentation Basin at Portion E3
	
Existing Channel at Portion E3	TSWDS at Portion D
	

TSWDS at Portion D	Sedimentation Basin at Portion E4
	

Inspection Date:	13 November 2023	Inspected By:	Jason Man
Time:	14:00	Weather Condition:	Sunny
Participants:	Kim Tang (ER), Matt Choy (Contractor), 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?	☐	☒	☐	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	
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 **plant and equipment** well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B3	Any remedial action undertaken?	☒	☐	☐	N/A
B4	Are the **worksites** wetted with water regularly?	☐	☒	☐	
B5	Are **NRMM labels** properly affixed on the PMEs?	☐	☒	☐	
B6	Observed dust source(s)				
		☐ Wind erosion			
		☒ Vehicle/ Equipment Movements			
		☒ Loading/ unloading of materials			
		☐ Others: _____			
Air Pollution Control (Construction Dust) Regulation					
Part I Control Requirements for Notifiable Works					
Demolition of building					
B7	Is the area involved demolition activities **sprayed with water** or a dust suppression chemical immediately prior to, during and immediately after the activities?	☒	☐	☐	N/A
Construction of the superstructure of a building					
B8	Is **scaffolding** erected around the perimeter of a building under construction?	☐	☒	☐	

B9	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?	☐	☐	☒	Refer to 6 Nov 2023 Observation 1
B10	Is the **skip** for materials transport enclosed by **impervious sheeting**?	☐	☒	☐	
Part III General Control Requirements					
Site boundary and entrance					
B11	Are **wheel washing facilities** with **high pressure water jet** provided at all site exits if practicable?	☐	☒	☐	
B12	Are the **areas of washing facilities** and the **road section between the washing facilities** and the **exit point** paved with concrete, bituminous materials or hardcore?	☐	☒	☐	
B13	Are the **hoarding** ≥ 2.4m tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	☐	☒	☐	
Assess road					
B14	Are every **main haul road** (having a vehicle passing rate of higher than 4 in any 30 minutes) paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials?	☐	☒	☐	
B15	Are every **main haul road** sprayed with water or a dust suppression chemical?	☐	☒	☐	
B16	Is the portion of any road leading only to construction site (within **30m of a vehicle entrance or exit**) kept clear of dusty materials?	☐	☒	☐	
B17	Are appropriate **speed limit sign** displayed?	☐	☒	☐	
B18	Is **unpaved main haul road** wet by water spraying?	☐	☒	☐	
Cement and dry pulverized fuel ash (PFA)					
B19	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?	☒	☐	☐	N/O
B20	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
B21	Is any vent or exhaust fitted with an **effective fabric filter or equipment air pollution control system**?	☒	☐	☐	N/A
Exposed earth					
B22	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 6 months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by **impervious sheeting** or (b) placed in an **area sheltered on the top and the 3 sides** or (c) **sprayed with water** or a dust suppression chemical to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the **excavation or unloading**?	☒	☐	☐	N/O
B24	Is the stockpile of dusty materials avoid to be extend beyond the **pedestrian barriers, fencing or traffic cones**?	☐	☒	☐	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials **sprayed with water** or a dust suppression chemical immediately **prior to any loading, unloading or transfer operation** so as to maintain the dusty materials wet?	☐	☒	☐	
B26	Are **all trucks loaded** to a level within the side and tail boards?	☐	☒	☐	
Use of vehicles					
B27	Are **every vehicle washed Immediately** to remove any dusty materials from its body and wheels before leaving a construction site?	☐	☒	☐	
B28	Are **loaded dump trucks** covered by impervious sheeting appropriately before leaving the site?	☐	☐	☒	Refer to 13 Nov 2023 Observation 1
B29	Are site **vehicle movements** confined to designated roads?	☐	☒	☐	
Pneumatic or power-driven drilling, cutting and polishing					
B30	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? *Unless the process is accompanied by the operation of an effective dust extraction and filtering device.	☒	☐	☐	N/A
Debris handling					
B31	Are any debris covered entirely by **impervious sheeting** or stored in a **debris collection area** sheltered on the top and the 3 sides?	☒	☐	☐	N/A
B32	Are every **debris chute** shall be enclosed by impervious sheeting or similar materials?	☒	☐	☐	N/A
B33	Are the watering spray or a dust suppression chemical conducted before **debris is dumped** into a debris chute?	☒	☐	☐	N/A

Excavation or earth moving					
B34	Are the working area of any excavation or earth moving operation **sprayed with water** or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
Site clearance					
B35	Are the working area for the **uprooting of trees**, **shrubs**, or **vegetation** or for the **removal of boulders**, **poles**, **pillars** or **temporary** or **permanent structures** sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
B36	Are **all demolished items** (including **trees**, **shrubs**, **vegetation**, **boulders**, **poles**, **pillars**, **structures**, **debris**, **rubbish** and **other items arising from site clearance**) that may dislodge dust particles covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition?	☐	☒	☐	

C	Construction 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/O
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?	☐	☒	☐	
C7	Is **temporary hoarding** installed located on the site boundaries between noisy construction activities and NSRs?	☐	☒	☐	
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/O
C9	Is the sequencing **operation** of **construction plants** where practicable?	☐	☒	☐	
C10	Is the **hoarding** maintained properly?	☐	☒	☐	
C11	**Air compressors** (500 kPa or above) and **hand held percussive breaker** (mass of above 10 kg) with valid noise labels?	☐	☒	☐	
C12	Are **compressor** operated with doors closed?	☐	☒	☐	
C13	**QPME** used with valid noise labels?	☐	☒	☐	
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 Runoff					
D1a	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?	☒	☐	☐	N/O
D1b	Are **channels**, **earth bunds** or **sandbag barriers** provided on site to properly direct stormwater to silt removal facilities?	☐	☐	☒	Refer to 6 Nov 2023 Observation 2
D2a	Have **dikes** or **embankments** for **flood protection** implemented around the boundaries of earthwork areas?	☒	☐	☐	N/A
D2b	Have **temporary ditches** provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D2c	Are the **sediment/ silt traps** incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D3	Are the **retention time for silt/s and traps** of the silt removal facilities be **5 minutes** under maximum flow conditions?	☐	☒	☐	
D4a	Are **surface excavation works** minimised during rainy seasons (April to September), as possible?	☒	☐	☐	N/A
D4b	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
D4c	Are **exposed slope surfaces** covered by tarpaulin sheets?	☐	☐	☒	Shotcrete in progress. Refer to 6 Nov 2023 Observation 4
D5a	Have the **overall slope** of the site should be kept a minimum?	☒	☐	☐	N/A
D5b	Are **all trafficked areas** and **access roads** protected by coarse stone ballast?	☒	☐	☐	N/A
D6a	Are **all drainage facilities** and **erosion** and **sediment control structures** inspected regularly?	☐	☒	☐	
D6b	Are **all drainage facilities** and **erosion** and **sediment control structures** maintained to ensure proper and efficient operation at all times and particularly following rainstorms?	☐	☒	☐	
D6c	Is the **deposited silt** and **grit** removed regularly and disposed of by spreading evenly over stable?	☐	☒	☐	
D7a	Have the **excavation** of **trenches** in wet periods be dug and backfilled in short sections?	☐	☒	☐	
D7b	Is rainwater pumped out from **trenches** discharged into storm drains via silt system?	☐	☒	☐	
D8	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?	☐	☒	☐	

D9a	Are **manholes** adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D9b	Are the **discharges** of **surface run-off** into foul sewer always prevented?	☐	☒	☐	
D10a	Are particular attention paid to the control of **silty surface runoff** during **storm event**?	☐	☒	☐	
D10b	Are the precautions to be taken at **any time** of year when rainstorms are likely? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be maintained and the **deposited silt** and **grit** should be removed regularly. ii. **Temporarily exposed slope surfaces** should be cover by tarpaulin. iii. **Temporary access roads** should be protected by crushed stone or gravel. iv. **Intercepting channels** should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. v. **Trenches** should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.	☐	☒	☐	
D10c	Are the actions to be taken when a **rainstorm** is **imminent** or **forecas**t? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked to ensure that they can function properly. ii. **Open stockpiles** of **construction materials** (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric. iii. **All temporary covers to slopes and stockpiles** should be secured.	☐	☒	☐	
D10d	Are the actions to be taken **during** or **after rainstorms**? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.	☐	☒	☐	
D11a	Are **all vehicles** and **plant** cleaned before leaving a construction site?	☐	☒	☐	
D11b	Is the **wheel washing bay** provided at every site exit?	☐	☒	☐	
D11c	Are the **vehicle wash-water** have sand and silt settled out and removed at least on a weekly basis?	☐	☒	☐	
D11d	Is the **wheel wash** overflow directed to silt removal facilities before being discharged to the storm drain?	☒	☐	☐	N/O
D11e	Is the section of **construction road between the wheel washing bay and the public road** paved with backfill?	☐	☒	☐	
D11f	Is the treated wastewater reused for **vehicle washing**, **dust suppression** and **general cleaning**?	☐	☒	☐	
D12a	Are **oil interceptors** provided in the site drainage system downstream of any oil/ fuel pollution sources?	☒	☐	☐	N/A

D12b	Are the **oil interceptors** are emptied and cleaned regularly to prevent the release of O&G into the storm water drainage system after accidental spillage?	☒	☐	☐	N/A
D12c	Has a **bypass** provided to prevent flushing during heavy rain?	☐	☒	☐	
D13	Are the **construction solid waste**, **debris** and **rubbish** on site collected, handled and disposed of properly? (same with waste item)	☐	☒	☐	
D14	Are **all fuel tanks** and **storage areas** provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank?	☐	☐	☒	Refer to 30 Oct 2023 Observation 1
D15	Is **Intercepting bund** or **barrier** along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	☐	☒	☐	
D16	Are **site drainage systems** provided over the entire project site with sediment control facilities?	☐	☒	☐	
D17	Are **sedimentation tanks** provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D18	Is there any **sediment plume** observed in nearby watercourses?	☐	☐	☒	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are **portable chemical toilets** and **sewage holding tanks** provided?	☐	☒	☐	
D19b	Is the **sewage generated from toilets** collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D20	Are the **notices** posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	☒	☐	☐	N/O
Accidental Spillage of Chemical (Service workshop and maintenance facilities)					
D21a	Are the **service workshop** and **maintenance facilities** located within a bunded area, and sumps and oil interceptors?	☒	☐	☐	N/O
D21b	Are all **maintenance of equipment** involving activities with potential for leakage and spillage undertaken within the areas?	☒	☐	☐	N/O
D21c	Is **chemical leakage** or **spillages** contained and cleaned up immediately?	☒	☐	☐	N/O
Surface Water Drainage System					
D22a	Is the **temporary surface water drainage system** provided to manage runoff?	☐	☒	☐	
D22b	Does the system consist of **channel** as constructed around the perimeter of the site area?	☐	☒	☐	
D22c	Does the system collect surface water from the **areas of higher elevations** to those of **lower elevations** and ultimately to the discharge point?	☐	☒	☐	
D22d	Is the **erosion** minimised?	☐	☒	☐	
D23a	Does the system include the **use of a silt fence** around the **soil stockpile areas** to prevent sediment from entering the system?	☐	☒	☐	

D23b	Is the regular **cleaning** carried out to prevent blockage of the passage of waste flow in silt fence?	☐	☒	☐	

E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Waste Management					
General Waste					
E1	Is the general waste generated on-site stored in **enclosed bins** or compaction units separately from the construction and chemical wastes?	☐	☐	☒	Refer to 6 Nov 2023 Observation 3
E2a	Is the general waste collected properly by using the **waste separation facilities** for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E2b	Does **accumulation** of **waste** avoid?	☐	☒	☐	
E2c	Is **waste disposed** regularly?	☐	☒	☐	
E2d	Regular **waste collection** by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E3	**Burning of refuse** on construction site prohibited?	☐	☒	☐	
C&D Materials					
E4a	Are there any **contract documents** provided to allow and promote the **use of recycled aggregates** where appropriate?	☐	☒	☐	
E4b	Are the **C&D materials** sorted and recycled on-site?	☐	☒	☐	
E5a	Is the **durable formwork** or **plastic facing** for construction works used?	☐	☒	☐	
E5b	Do the **wooden hoardings** avoid to be used?	☐	☒	☐	
E5c	Is **metal hoarding** used to enhance the possibility of recycling?	☐	☒	☐	
E6a	Are the concrete and masonry used as **general fill**?	☐	☒	☐	
E6b	Are the **steel reinforcement bars** used by scrap steel mills?	☐	☒	☐	
E6c	Is the **segregation** and **storage** of C&D wastes undertaken in designated area?	☐	☒	☐	
E6d	Does the **use of reusable steel formwork** maximise?	☐	☒	☐	
E7a	Are the **temporary stockpiles** maintained regularly?	☐	☒	☐	
E7b	Is the **excavated fill material** reused for backfilling and reinstatement?	☐	☒	☐	
E8a	Are the **excavated slope**, **stockpile material** and **bund walls** covered by tarpaulin?	☐	☒	☐	
E8b	Are covering trucks or transporting wastes in enclosed containers when **transportation of waste**?	☐	☒	☐	
E8c	Are **waste storage area** properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E9	Is **hydroseeding** of the topsoil on the **stockpile** implemented to improve visual appearance and prevent soil erosion?	☐	☒	☐	
E10	Is the **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 implemented?	☐	☒	☐	

E11	Are the **training** of **site personnel** for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concept implemented?	☐	☒	☐	
E12	Are the **regular cleaning** and **maintenance programme** for drainage systems, sumps, oil interceptors?	☐	☒	☐	
E13a	Are **wood**, **steel** and **other metals** separated for re-use and/or recycling?	☐	☒	☐	
E13b	Do the **excavated materials** appear contaminated?	☐	☐	☒	
E13c	If suspected contaminated, appropriate **procedures** followed?	☒	☐	☐	N/A
E14	Is the **disposal** of **C&D materials** avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E15	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?	☐	☒	☐	
Chemical Waste / Waste Oil					
E16	Are **chemicals** and **waste oil** recycled or disposed properly?	☐	☐	☒	Refer to 3 Oct 2023 Observation 1 Refer to 30 Oct 2023 Observation 1
Chemical Packaging					
E17a	Have the **containers** a capacity of **<450 L** unless the specification has been approved by EPD?	☒	☐	☐	N/A
E17b	Are the **containers** (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for **storage of chemical wastes**?	☐	☐	☒	Refer to 30 Oct 2023 Observation 1
Chemical Labelling					
E18	Is chemical waste or waste oil **stored** and **labelled** in **English and Chinese** properly in designated area? Capacity of Container: Dimensions of Label < 50L: No less than 90 x 100mm 50 to 450L: No less than 120 x 150mm > 450L: No less than 180 x 200mm	☐	☒	☐	
Chemical Waste / Fuel Storage Area					
E19a	Are the **storage area** are clearly labelled and separated (if needed)?	☒	☐	☐	N/O
E19b	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**?	☒	☐	☐	N/O
E19c	Do the **storage areas** have adequate **ventilation** and be covered to prevent rainfall entering and reduce heat from sunlight?	☒	☐	☐	N/O
E19d	Are the **fuel tanks** and **chemical storage areas** provided with locks and sited on sealed areas?	☒	☐	☐	N/O

E20	Is chemical waste collected by **licensed waste collectors** and disposed of at **licensed facility** eg. Chemical Waste Treatment Centre?	☐	☒	☐	
Records					
E21	Is a licensed waste hauler used for **waste collection**?	☐	☒	☐	
E22	Are the **records of quantities of wastes** generated, recycled and disposed properly kept?	☐	☒	☐	
E23	For the demolition material / waste, is the **number of loads** for each day recorded as appropriate?	☐	☒	☐	

F	Landfill Gas (LFG)	N/A or Not Observed	Yes	No	Remarks / Photo
Within NENT Landfill Extension					
F1	Are **special LFG precautions** taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	N/O
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?	☒	☐	☐	N/O
F4	Are prominent **'No smoking'** and **'No Naked Flames' signs** erected on-site?	☒	☐	☐	N/O
F5	Is no worker allowed to **work alone** at any time in excavated trenches or confined areas on-site?	☐	☒	☐	
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?	☐	☒	☐	
F8	Are **electrical motors** and **extension cords** explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	N/O
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?	☒	☐	☐	N/A
F11b	Are the **pipe ends** sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	☒	☐	☐	N/A
F11c	Is **forced ventilation** implemented prior to **operation of installed pipeline**?	☒	☐	☐	N/A
F11d	Is **forced ventilation** implemented for **works inside trenches deeper than 1m**?	☒	☐	☐	N/A
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 < 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.	☐	☒	☐	
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?	☐	☒	☐	
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?	☐	☒	☐	
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%	☐	☒	☐	
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.	☐	☒	☐	
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 < 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations > 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 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations < 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?	☐	☒	☐	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at **strategic locations** within site implemented?	☐	☒	☐	
G4b	Are the roadside planter and shrub planting implemented in front of **Cheung Sha Temple**?	☐	☒	☐	
Boundary Green Belt planting					
G5	Are the **fast growing** and **fire-resistant plant species** planted around the site perimeter?	☐	☒	☐	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a **temporary slope cover**?	☐	☒	☐	
Existing tree preservation					
G7	Are **existing** and **affected tree** which identified as ecological significant preserved whenever possible?	☐	☒	☐	

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?	☐	☒	☐	

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. 18 September 2023 Observation 6 – The Temporary Surface Water Drainage System was enhanced and updated by the contractor. The sedimentation basins, concrete block, sedimentation tank and silt removal facility at Portion E3-1 were repaired and established by the contractor.
2. 6 November 2023 Observation 2 – The bunds near the safety barriers at the Portion A had been established by the contractor.
3. 6 November 2023 Observation 3 – The waste at the waste skip of SBA was removed by the contractor.

Observation(s):

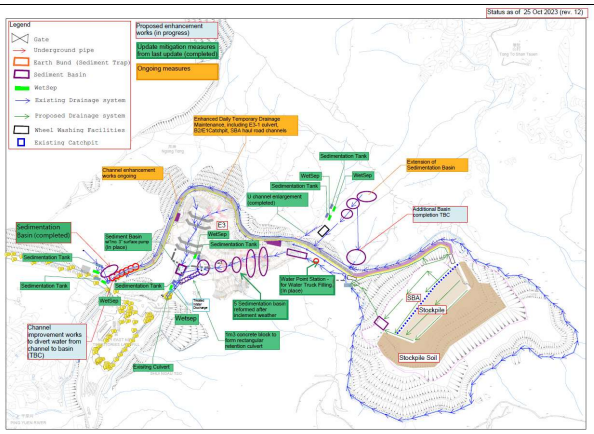
1. The loaded dup truck without covering impervious sheet is found at the assess road between Portion A and E4.

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

1. The contractor has been recommended to ensure all of loaded dump trucks should be covered by impervious sheeting.

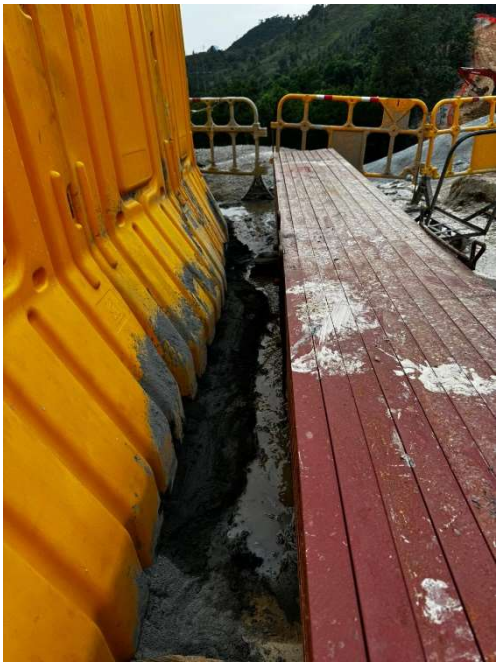
	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Jason Man	/	Matt Choy/Kristy Wong	Sylvia Ho
Date:	13 November 2023	/	13 November 2023	13 November 2023

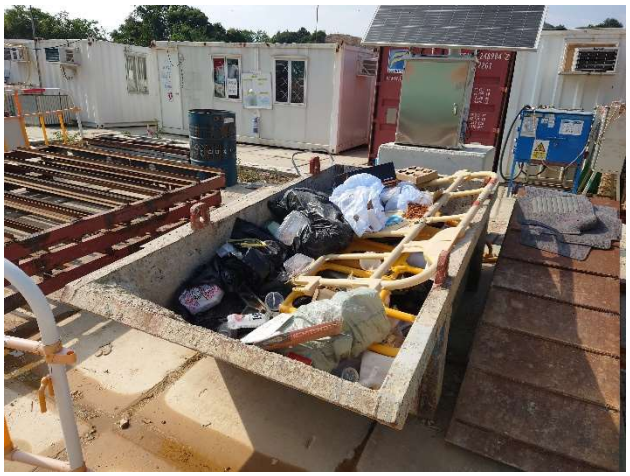
PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
18 September 2023 Observation 6  Sediment/ silt traps shall be incorporated in the temproray drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions.	  

Observation and Recommendation	Follow-up status
	 The Temporary Surface Water Drainage System was enhanced and updated by the contractor. The sedimentation basins, concrete block, sedimentation tank and silt removal facility at Portion E3-1 were repaired and established by the contractor.
3 October 2023 Observation 1  The stagnant water in drip tray should be cleared of in Portion E4.	Waiting for Contractor's Input

Observation and Recommendation	Follow-up status
30 October 2023 Observation 1   The storage area of chemical containers at Portion E3-1 is without drip tray and other properly setup etc. to prevent the chemicals rainfall entering and reduce heat from sunlight and avoid the risk of land contamination.	Waiting for Contractor Input
6 November 2023 Observation 1  The outside surrounding of the scaffolding without dust screen, sheeting or netting was found at the Portion D.	Waiting for Contractor Input

Observation and Recommendation	Follow-up status
6 November 2023 Observation 2   The muddy water which is caused from the water spraying by the water sprinkler at the Portion A is found. The deposited silt and grit are found under the tower crane at the Portion A. The contractor has been recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.	 The bunds near the safety barriers at the Portion A had been established by the contractor. Waiting for Contractor Input: Photo record for cleaning deposited silt and grit under the tower crane at the Portion A

Observation and Recommendation	Follow-up status
6 November 2023 Observation 3   The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The "type of waste" label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	 The waste at the waste skip of SBA was removed by the contractor. Waiting for Contractor Input: Photo record for increasing the enclosed bins at SBA and labelling the "type of waste" at the surrounding of the enclosed bins or waste skip at SBA.

Observation and Recommendation	Follow-up status
6 November 2023 Observation 4  The slope surface at the Portion E4 should be covered by impervious sheet properly.	Waiting for Contractor Input

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
14 November 2023 Observation 1  The loaded dup truck without covering impervious sheet is found at the assess road between Portion A and E4. The contractor has been recommended to ensure all of loaded dump trucks should be covered by impervious sheeting.	Waiting for Contractor Input

PART III Temporary Surface Water Drainage System (TSWDS) Photo Record during the environmental site inspection

TSWDS at Portion D	TSWDS at Portion D
	
Sedimentation tank at Portion A	Portion A
	
Portion A	Sedimentation basin at Portion E4
	

Sedimentation basin at Portion E4


Inspection Date:	20 November 2023	Inspected By:	Jason Man
Time:	14:00	Weather Condition:	Sunny
Participants:	Sylvia Ho (ER), Matt Choy (Contractor), Echo Hung (IEC), Jason Man (ET), Joan Lo (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?	☐	☒	☐	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	
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 **plant and equipment** well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B3	Any remedial action undertaken?	☒	☐	☐	N/A
B4	Are the **worksites** wetted with water regularly?	☐	☒	☐	
B5	Are **NRMM labels** properly affixed on the PMEs?	☐	☒	☐	
B6	Observed dust source(s)				
		☒ Wind erosion			
		☒ Vehicle/ Equipment Movements			
		☒ Loading/ unloading of materials			
		☐ Others: _____			
Air Pollution Control (Construction Dust) Regulation					
Part I Control Requirements for Notifiable Works					
Demolition of building					
B7	Is the area involved demolition activities **sprayed with water** or a dust suppression chemical immediately prior to, during and immediately after the activities?	☒	☐	☐	N/A
Construction of the superstructure of a building					
B8	Is **scaffolding** erected around the perimeter of a building under construction?	☐	☒	☐	

B9	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?	☐	☐	☒	Refer to 6 Nov 2023 Observation 1
B10	Is the **skip** for materials transport enclosed by **impervious sheeting**?	☒	☐	☐	N/O
Part III General Control Requirements					
Site boundary and entrance					
B11	Are **wheel washing facilities** with **high pressure water jet** provided at all site exits if practicable?	☐	☒	☐	
B12	Are the **areas of washing facilities** and the **road section between the washing facilities** and the **exit point** paved with concrete, bituminous materials or hardcore?	☐	☒	☐	
B13	Are the **hoarding** ≥ 2.4m tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	☐	☒	☐	
Assess road					
B14	Are every **main haul road** (having a vehicle passing rate of higher than 4 in any 30 minutes) paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials?	☐	☒	☐	
B15	Are every **main haul road** sprayed with water or a dust suppression chemical?	☐	☒	☐	
B16	Is the portion of any road leading only to construction site (within **30m of a vehicle entrance or exit**) kept clear of dusty materials?	☐	☒	☐	
B17	Are appropriate **speed limit sign** displayed?	☐	☒	☐	
B18	Is **unpaved main haul road** wet by water spraying?	☐	☒	☐	
Cement and dry pulverized fuel ash (PFA)					
B19	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?	☒	☐	☐	N/O
B20	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
B21	Is any vent or exhaust fitted with an **effective fabric filter or equipment air pollution control system**?	☒	☐	☐	N/A
Exposed earth					
B22	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 6 months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by **impervious sheeting** or (b) placed in an **area sheltered on the top and the 3 sides** or (c) **sprayed with water** or a dust suppression chemical to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the **excavation or unloading**?	☒	☐	☐	N/O
B24	Is the stockpile of dusty materials avoid to be extend beyond the **pedestrian barriers, fencing or traffic cones**?	☐	☒	☐	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials **sprayed with water** or a dust suppression chemical immediately **prior to any loading, unloading or transfer operation** so as to maintain the dusty materials wet?	☐	☒	☐	
B26	Are **all trucks loaded** to a level within the side and tail boards?	☐	☒	☐	
Use of vehicles					
B27	Are **every vehicle washed Immediately** to remove any dusty materials from its body and wheels before leaving a construction site?	☐	☒	☐	
B28	Are **loaded dump trucks** covered by impervious sheeting appropriately before leaving the site?	☐	☐	☒	Refer to 13 Nov 2023 Observation 1
B29	Are site **vehicle movements** confined to designated roads?	☐	☒	☐	
Pneumatic or power-driven drilling, cutting and polishing					
B30	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? *Unless the process is accompanied by the operation of an effective dust extraction and filtering device.	☒	☐	☐	N/A
Debris handling					
B31	Are any debris covered entirely by **impervious sheeting** or stored in a **debris collection area** sheltered on the top and the 3 sides?	☒	☐	☐	N/A
B32	Are every **debris chute** shall be enclosed by impervious sheeting or similar materials?	☒	☐	☐	N/A
B33	Are the watering spray or a dust suppression chemical conducted before **debris is dumped** into a debris chute?	☒	☐	☐	N/A

Excavation or earth moving					
B34	Are the working area of any excavation or earth moving operation **sprayed with water** or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
Site clearance					
B35	Are the working area for the **uprooting of trees**, **shrubs**, or **vegetation** or for the **removal of boulders**, **poles**, **pillars** or **temporary** or **permanent structures** sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
B36	Are **all demolished items** (including **trees**, **shrubs**, **vegetation**, **boulders**, **poles**, **pillars**, **structures**, **debris**, **rubbish** and **other items arising from site clearance**) that may dislodge dust particles covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition?	☐	☒	☐	

C	Construction 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/O
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?	☐	☒	☐	
C7	Is **temporary hoarding** installed located on the site boundaries between noisy construction activities and NSRs?	☐	☒	☐	
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/O
C9	Is the sequencing **operation** of **construction plants** where practicable?	☐	☒	☐	
C10	Is the **hoarding** maintained properly?	☐	☒	☐	
C11	**Air compressors** (500 kPa or above) and **hand held percussive breaker** (mass of above 10 kg) with valid noise labels?	☐	☒	☐	
C12	Are **compressor** operated with doors closed?	☐	☒	☐	
C13	**QPME** used with valid noise labels?	☐	☒	☐	
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 Runoff					
D1a	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?	☒	☐	☐	N/O
D1b	Are **channels**, **earth bunds** or **sandbag barriers** provided on site to properly direct stormwater to silt removal facilities?	☐	☐	☒	Refer to 6 Nov 2023 Observation 2
D2a	Have **dikes** or **embankments** for **flood protection** implemented around the boundaries of earthwork areas?	☒	☐	☐	N/A
D2b	Have **temporary ditches** provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D2c	Are the **sediment/ silt traps** incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D3	Are the **retention time for silt/s and traps** of the silt removal facilities be **5 minutes** under maximum flow conditions?	☐	☒	☐	
D4a	Are **surface excavation works** minimised during rainy seasons (April to September), as possible?	☒	☐	☐	N/A
D4b	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
D4c	Are **exposed slope surfaces** covered by tarpaulin sheets?	☐	☐	☒	Shotcrete in progress. Refer to 20 Nov 2023 Observation 3
D5a	Have the **overall slope** of the site should be kept a minimum?	☒	☐	☐	N/A
D5b	Are **all trafficked areas** and **access roads** protected by coarse stone ballast?	☒	☐	☐	N/A
D6a	Are **all drainage facilities** and **erosion** and **sediment control structures** inspected regularly?	☐	☒	☐	
D6b	Are **all drainage facilities** and **erosion** and **sediment control structures** maintained to ensure proper and efficient operation at all times and particularly following rainstorms?	☐	☒	☐	
D6c	Is the **deposited silt** and **grit** removed regularly and disposed of by spreading evenly over stable?	☐	☒	☐	
D7a	Have the **excavation** of **trenches** in wet periods be dug and backfilled in short sections?	☐	☒	☐	
D7b	Is rainwater pumped out from **trenches** discharged into storm drains via silt system?	☐	☒	☐	
D8	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?	☐	☒	☐	

D9a	Are **manholes** adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D9b	Are the **discharges** of **surface run-off** into foul sewer always prevented?	☐	☒	☐	
D10a	Are particular attention paid to the control of **silty surface runoff** during **storm event**?	☐	☒	☐	
D10b	Are the precautions to be taken at **any time** of year when rainstorms are likely? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be maintained and the **deposited silt** and **grit** should be removed regularly. ii. **Temporarily exposed slope surfaces** should be cover by tarpaulin. iii. **Temporary access roads** should be protected by crushed stone or gravel. iv. **Intercepting channels** should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. v. **Trenches** should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.	☐	☒	☐	
D10c	Are the actions to be taken when a **rainstorm** is **imminent** or **forecas**t? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked to ensure that they can function properly. ii. **Open stockpiles** of **construction materials** (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric. iii. **All temporary covers to slopes and stockpiles** should be secured.	☐	☒	☐	
D10d	Are the actions to be taken **during** or **after rainstorms**? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.	☐	☒	☐	
D11a	Are **all vehicles** and **plant** cleaned before leaving a construction site?	☐	☒	☐	
D11b	Is the **wheel washing bay** provided at every site exit?	☐	☒	☐	
D11c	Are the **vehicle wash-water** have sand and silt settled out and removed at least on a weekly basis?	☐	☒	☐	
D11d	Is the **wheel wash** overflow directed to silt removal facilities before being discharged to the storm drain?	☒	☐	☐	N/O
D11e	Is the section of **construction road between the wheel washing bay and the public road** paved with backfill?	☐	☒	☐	
D11f	Is the treated wastewater reused for **vehicle washing**, **dust suppression** and **general cleaning**?	☐	☒	☐	
D12a	Are **oil interceptors** provided in the site drainage system downstream of any oil/ fuel pollution sources?	☒	☐	☐	N/A

D12b	Are the **oil interceptors** are emptied and cleaned regularly to prevent the release of O&G into the storm water drainage system after accidental spillage?	☒	☐	☐	N/A
D12c	Has a **bypass** provided to prevent flushing during heavy rain?	☐	☒	☐	
D13	Are the **construction solid waste**, **debris** and **rubbish** on site collected, handled and disposed of properly? (same with waste item)	☐	☒	☐	
D14	Are **all fuel tanks** and **storage areas** provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank?	☒	☐	☐	N/O
D15	Is **Intercepting bund** or **barrier** along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	☐	☒	☐	
D16	Are **site drainage systems** provided over the entire project site with sediment control facilities?	☐	☒	☐	
D17	Are **sedimentation tanks** provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D18	Is there any **sediment plume** observed in nearby watercourses?	☐	☐	☒	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are **portable chemical toilets** and **sewage holding tanks** provided?	☐	☒	☐	
D19b	Is the **sewage generated from toilets** collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D20	Are the **notices** posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	☒	☐	☐	N/O
Accidental Spillage of Chemical (Service workshop and maintenance facilities)					
D21a	Are the **service workshop** and **maintenance facilities** located within a bunded area, and sumps and oil interceptors?	☒	☐	☐	N/O
D21b	Are all **maintenance of equipment** involving activities with potential for leakage and spillage undertaken within the areas?	☒	☐	☐	N/O
D21c	Is **chemical leakage** or **spillages** contained and cleaned up immediately?	☒	☐	☐	N/O
Surface Water Drainage System					
D22a	Is the **temporary surface water drainage system** provided to manage runoff?	☐	☒	☐	
D22b	Does the system consist of **channel** as constructed around the perimeter of the site area?	☐	☒	☐	
D22c	Does the system collect surface water from the **areas of higher elevations** to those of **lower elevations** and ultimately to the discharge point?	☐	☒	☐	
D22d	Is the **erosion** minimised?	☐	☒	☐	
D23a	Does the system include the **use of a silt fence** around the **soil stockpile areas** to prevent sediment from entering the system?	☐	☒	☐	

D23b	Is the regular **cleaning** carried out to prevent blockage of the passage of waste flow in silt fence?	☐	☒	☐	

E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Waste Management					
General Waste					
E1	Is the general waste generated on-site stored in **enclosed bins** or compaction units separately from the construction and chemical wastes?	☐	☐	☒	Refer to 20 Nov 2023 Observation 2
E2a	Is the general waste collected properly by using the **waste separation facilities** for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E2b	Does **accumulation** of **waste** avoid?	☐	☐	☒	Refer to 20 Nov 2023 Observation 1
E2c	Is **waste disposed** regularly?	☐	☒	☐	
E2d	Regular **waste collection** by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E3	**Burning of refuse** on construction site prohibited?	☐	☒	☐	
C&D Materials					
E4a	Are there any **contract documents** provided to allow and promote the **use of recycled aggregates** where appropriate?	☐	☒	☐	
E4b	Are the **C&D materials** sorted and recycled on-site?	☐	☒	☐	
E5a	Is the **durable formwork** or **plastic facing** for construction works used?	☐	☒	☐	
E5b	Do the **wooden hoardings** avoid to be used?	☐	☒	☐	
E5c	Is **metal hoarding** used to enhance the possibility of recycling?	☐	☒	☐	
E6a	Are the concrete and masonry used as **general fill**?	☐	☒	☐	
E6b	Are the **steel reinforcement bars** used by scrap steel mills?	☐	☒	☐	
E6c	Is the **segregation** and **storage** of C&D wastes undertaken in designated area?	☐	☒	☐	
E6d	Does the **use of reusable steel formwork** maximise?	☐	☒	☐	
E7a	Are the **temporary stockpiles** maintained regularly?	☐	☒	☐	
E7b	Is the **excavated fill material** reused for backfilling and reinstatement?	☐	☒	☐	
E8a	Are the **excavated slope**, **stockpile material** and **bund walls** covered by tarpaulin?	☐	☒	☐	
E8b	Are covering trucks or transporting wastes in enclosed containers when **transportation of waste**?	☐	☒	☐	
E8c	Are **waste storage area** properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E9	Is **hydroseeding** of the topsoil on the **stockpile** implemented to improve visual appearance and prevent soil erosion?	☐	☒	☐	
E10	Is the **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 implemented?	☐	☒	☐	

E11	Are the **training** of **site personnel** for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concept implemented?	☐	☒	☐	
E12	Are the **regular cleaning** and **maintenance programme** for drainage systems, sumps, oil interceptors?	☐	☒	☐	
E13a	Are **wood**, **steel** and **other metals** separated for re-use and/or recycling?	☐	☒	☐	
E13b	Do the **excavated materials** appear contaminated?	☐	☐	☒	
E13c	If suspected contaminated, appropriate **procedures** followed?	☒	☐	☐	N/A
E14	Is the **disposal** of **C&D materials** avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E15	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?	☐	☒	☐	
Chemical Waste / Waste Oil					
E16	Are **chemicals** and **waste oil** recycled or disposed properly?	☐	☒	☐	
Chemical Packaging					
E17a	Have the **containers** a capacity of **<450 L** unless the specification has been approved by EPD?	☒	☐	☐	N/A
E17b	Are the **containers** (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for **storage of chemical wastes**?	☐	☒	☐	
Chemical Labelling					
E18	Is chemical waste or waste oil **stored** and **labelled** in **English and Chinese** properly in designated area? Capacity of Container: Dimensions of Label < 50L: No less than 90 x 100mm 50 to 450L: No less than 120 x 150mm > 450L: No less than 180 x 200mm	☐	☒	☐	
Chemical Waste / Fuel Storage Area					
E19a	Are the **storage area** are clearly labelled and separated (if needed)?	☒	☐	☐	N/O
E19b	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**?	☒	☐	☐	N/O
E19c	Do the **storage areas** have adequate **ventilation** and be covered to prevent rainfall entering and reduce heat from sunlight?	☒	☐	☐	N/O
E19d	Are the **fuel tanks** and **chemical storage areas** provided with locks and sited on sealed areas?	☒	☐	☐	N/O
E20	Is chemical waste collected by **licensed waste collectors** and disposed of at **licensed facility** eg. Chemical Waste Treatment Centre?	☐	☒	☐	

Records					
E21	Is a licensed waste hauler used for **waste collection**?	☐	☒	☐	
E22	Are the **records of quantities of wastes** generated, recycled and disposed properly kept?	☐	☒	☐	
E23	For the demolition material / waste, is the **number of loads** for each day recorded as appropriate?	☐	☒	☐	

F	Landfill Gas (LFG)	N/A or Not Observed	Yes	No	Remarks / Photo
Within NENT Landfill Extension					
F1	Are **special LFG precautions** taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	N/O
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?	☒	☐	☐	N/O
F4	Are prominent **'No smoking'** and **'No Naked Flames' signs** erected on-site?	☒	☐	☐	N/O
F5	Is no worker allowed to **work alone** at any time in excavated trenches or confined areas on-site?	☐	☒	☐	
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?	☐	☒	☐	
F8	Are **electrical motors** and **extension cords** explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	N/O
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?	☒	☐	☐	N/A
F11b	Are the **pipe ends** sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	☒	☐	☐	N/A
F11c	Is **forced ventilation** implemented prior to **operation of installed pipeline**?	☒	☐	☐	N/A
F11d	Is **forced ventilation** implemented for **works inside trenches deeper than 1m**?	☒	☐	☐	N/A
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 < 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.	☐	☒	☐	
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?	☐	☒	☐	
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?	☐	☒	☐	
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%	☐	☒	☐	
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.	☐	☒	☐	
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 < 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations > 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 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations < 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?	☐	☒	☐	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at **strategic locations** within site implemented?	☐	☒	☐	
G4b	Are the roadside planter and shrub planting implemented in front of **Cheung Sha Temple**?	☐	☒	☐	
Boundary Green Belt planting					
G5	Are the **fast growing** and **fire-resistant plant species** planted around the site perimeter?	☐	☒	☐	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a **temporary slope cover**?	☐	☒	☐	
Existing tree preservation					
G7	Are **existing** and **affected tree** which identified as ecological significant preserved whenever possible?	☐	☒	☐	

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?	☐	☒	☐	

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. 3 October 2023 Observation 1 – The stagnant water in drip tray has been removed in Portion E4.
2. 30 October 2023 Observation 1 – The chemical containers at Portion E3-1 were covered by the impervious sheet and the impervious sheet was placed under the storage area of chemical containers.
3. 6 November 2023 Observation 4 – the exposed slope was covered by impervious sheet properly by the contractor.

Observation(s):

1. The overloading of accumulated waste at portion A is found.
2. The general waste at the waste skip of SBA is found.
3. The slope surface at SBA without covering impervious sheets properly is found.

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

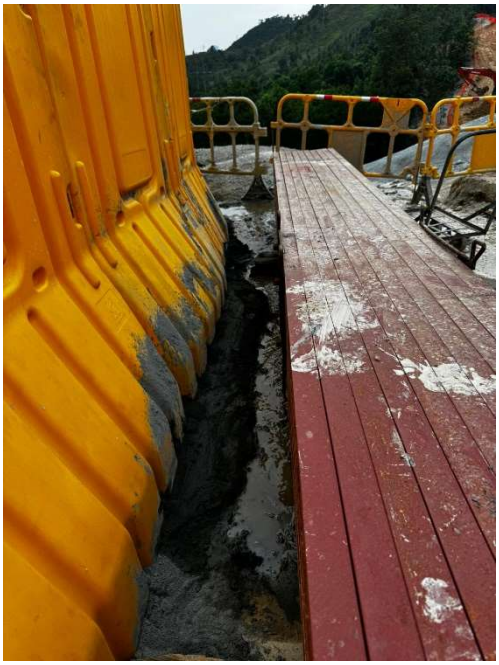
1. The contractor has been advised that the enough waste skip should be provided, and the waste should be clean regularly at portion A to prevent and avoid accumulated waste place on the floor.
2. The contractor has been reminded that the general waste includes food waste should be stored at the enclosed bins. The enclosed bin with clear label should be provided at SBA near the waste skip.
3. The contractor has been recommended that the exposed slope should be covered by impervious sheet.

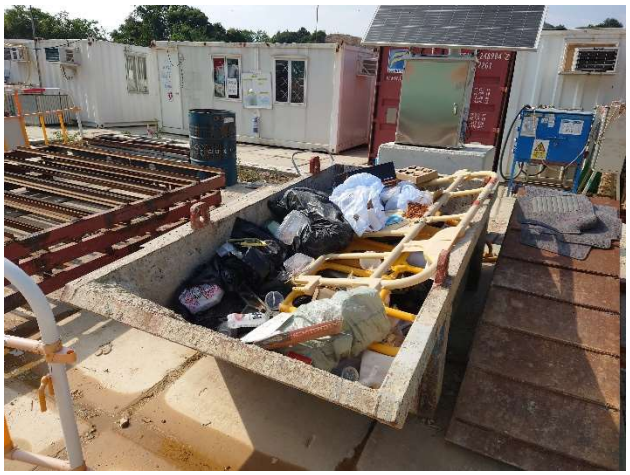
	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:				
Name:	Jason Man	Echo Hung	Matt Choy/Kristy Wong	Sylvia Ho
Date:	20 November 2023	20 November 2023	20 November 2023	20 November 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	**Follow-up status**
3 October 2023 Observation 1  The stagnant water in drip tray should be cleared of in Portion E4.	 The stagnant water in drip tray has been removed in Portion E4.

Observation and Recommendation	**Follow-up status**
30 October 2023 Observation 1   The storage area of chemical containers at Portion E3-1 is without drip tray and other properly setup etc. to prevent the chemicals rainfall entering and reduce heat from sunlight and avoid the risk of land contamination.	 The chemical containers at Portion E3-1 were covered by the impervious sheet and the impervious sheet was placed under the storage area of chemical containers .
6 November 2023 Observation 1  The outside surrounding of the scaffolding without dust screen, sheeting or netting was found at the Portion D.	Waiting for Contractor Input

Observation and Recommendation	Follow-up status
6 November 2023 Observation 2   The muddy water which is caused from the water spraying by the water sprinkler at the Portion A is found. The deposited silt and grit are found under the tower crane at the Portion A. The contractor has been recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.	 The bunds near the safety barriers at the Portion A had been established by the contractor. Waiting for Contractor Input: Photo record for cleaning deposited silt and grit under the tower crane at the Portion A

Observation and Recommendation	**Follow-up status**
6 November 2023 Observation 3   The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	 The waste at the waste skip of SBA was removed by the contractor. Waiting for Contractor Input: Photo record for increasing the enclosed bins at SBA and labelling the “type of waste” at the surrounding of the enclosed bins or waste skip at SBA.

Observation and Recommendation	**Follow-up status**
6 November 2023 Observation 4  The slope surface at the Portion E4 should be covered by impervious sheet properly.	 The exposed slope was covered by impervious sheet properly by the contractor.
14 November 2023 Observation 1  The loaded dup truck without covering impervious sheet is found at the assess road between Portion A and E4. The contractor has been recommended to ensure all of loaded dump trucks should be covered by impervious sheeting.	Waiting for Contractor Input

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
20 November 2023 Observation 1  The overloading of accumulated waste is found at portion A. The waste should be stored in waste skip properly and clean regularly.	Waiting for Contractor Input
20 November 2023 Observation 2  The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	Waiting for Contractor Input

Observation and Recommendation	**Follow-up status**
20 November 2023 Observation 3  The slope surface at SBA without covering impervious sheets properly is found. The contractor has been recommended that the exposed slope should be covered by impervious sheet.	Waiting for Contractor Input

PART III Temporary Surface Water Drainage System (TSWDS) Photo Record during the environmental site inspection

Sedimentation tank at Portion A	TSWDS at Portion A
	
Shotcrete surface channel and earth bunds at Portion A	Sedimentation basin at Portion E4
	
Sedimentation basin at Portion E4	Cut-off drain with silt fence at Portion B1
	

Cut-off drain with silt fence at Portion B1	Cut-off drain with silt fence at Portion B1
	
Surface Channel at Poirtion B1	Surface Channel at Poirtion B1
	
Surface Channel at Poirtion B1	Sedimentation Basin at Portion B1
	

Surface Channel at Poirtion B1	Surface Channel with silt fence at Poirtion B1
	
Existing Channel at Portion E3-1	Sedimentation Basin at Portion E3-1
	
Cut-off drain with silt fence at Portion B1	Sedimentation Basin at Portion B1
	

Inspection Date:	27 November 2023	Inspected By:	Joan Lo
Time:	14:00	Weather Condition:	Sunny
Participants:	Sylvia Ho (ER), Matt Choy (Contractor), Jason Man (ET), Joan Lo (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?	☐	☒	☐	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	☐	☒	☐	
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 **plant and equipment** well maintained (i.e. without black smoke from powered plant)?	☐	☒	☐	
B3	Any remedial action undertaken?	☒	☐	☐	N/A
B4	Are the **worksites** wetted with water regularly?	☐	☒	☐	
B5	Are **NRMM labels** properly affixed on the PMEs?	☐	☒	☐	
B6	Observed dust source(s)				
		☒ Wind erosion			
		☒ Vehicle/ Equipment Movements			
		☐ Loading/ unloading of materials			
		☐ Others: _____			
Air Pollution Control (Construction Dust) Regulation					
Part I Control Requirements for Notifiable Works					
Demolition of building					
B7	Is the area involved demolition activities **sprayed with water** or a dust suppression chemical immediately prior to, during and immediately after the activities?	☒	☐	☐	N/A
Construction of the superstructure of a building					
B8	Is **scaffolding** erected around the perimeter of a building under construction?	☐	☒	☐	

B9	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?	☐	☐	☒	Refer to 6 Nov 2023 Observation 1
B10	Is the **skip** for materials transport enclosed by **impervious sheeting**?	☒	☐	☐	N/O
Part III General Control Requirements					
Site boundary and entrance					
B11	Are **wheel washing facilities** with **high pressure water jet** provided at all site exits if practicable?	☐	☒	☐	
B12	Are the **areas of washing facilities** and the **road section between the washing facilities** and the **exit point** paved with concrete, bituminous materials or hardcore?	☐	☒	☐	
B13	Are the **hoarding** ≥ 2.4m tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	☐	☒	☐	
Assess road					
B14	Are every **main haul road** (having a vehicle passing rate of higher than 4 in any 30 minutes) paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials?	☐	☒	☐	
B15	Are every **main haul road** sprayed with water or a dust suppression chemical?	☐	☒	☐	
B16	Is the portion of any road leading only to construction site (within **30m of a vehicle entrance or exit**) kept clear of dusty materials?	☐	☒	☐	
B17	Are appropriate **speed limit sign** displayed?	☐	☒	☐	
B18	Is **unpaved main haul road** wet by water spraying?	☐	☒	☐	
Cement and dry pulverized fuel ash (PFA)					
B19	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?	☒	☐	☐	N/O
B20	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
B21	Is any vent or exhaust fitted with an **effective fabric filter or equipment air pollution control system**?	☒	☐	☐	N/A
Exposed earth					
B22	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 6 months after last construction activity on the construction site or part of the construction site where the exposed earth lies?	☐	☒	☐	

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by **impervious sheeting** or (b) placed in an **area sheltered on the top and the 3 sides** or (c) **sprayed with water** or a dust suppression chemical to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the **excavation or unloading**?	☐	☒	☐	
B24	Is the stockpile of dusty materials avoid to be extend beyond the **pedestrian barriers, fencing or traffic cones**?	☐	☒	☐	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials **sprayed with water** or a dust suppression chemical immediately **prior to any loading, unloading or transfer operation** so as to maintain the dusty materials wet?	☐	☒	☐	
B26	Are **all trucks loaded** to a level within the side and tail boards?	☐	☒	☐	
Use of vehicles					
B27	Are **every vehicle washed Immediately** to remove any dusty materials from its body and wheels before leaving a construction site?	☐	☒	☐	
B28	Are **loaded dump trucks** covered by impervious sheeting appropriately before leaving the site?	☐	☒	☐	
B29	Are site **vehicle movements** confined to designated roads?	☐	☒	☐	
Pneumatic or power-driven drilling, cutting and polishing					
B30	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? *Unless the process is accompanied by the operation of an effective dust extraction and filtering device.	☒	☐	☐	N/A
Debris handling					
B31	Are any debris covered entirely by **impervious sheeting** or stored in a **debris collection area** sheltered on the top and the 3 sides?	☒	☐	☐	N/A
B32	Are every **debris chute** shall be enclosed by impervious sheeting or similar materials?	☒	☐	☐	N/A
B33	Are the watering spray or a dust suppression chemical conducted before **debris is dumped** into a debris chute?	☒	☐	☐	N/A

Excavation or earth moving					
B34	Are the working area of any excavation or earth moving operation **sprayed with water** or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
Site clearance					
B35	Are the working area for the **uprooting of trees**, **shrubs**, or **vegetation** or for the **removal of boulders**, **poles**, **pillars** or **temporary** or **permanent structures** sprayed with water or a dust suppression chemical immediately before, during and immediately after the operation?	☐	☒	☐	
B36	Are **all demolished items** (including **trees**, **shrubs**, **vegetation**, **boulders**, **poles**, **pillars**, **structures**, **debris**, **rubbish** and **other items arising from site clearance**) that may dislodge dust particles covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides within a day of demolition?	☐	☒	☐	

C	Construction 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/O
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?	☐	☒	☐	
C7	Is **temporary hoarding** installed located on the site boundaries between noisy construction activities and NSRs?	☐	☒	☐	
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/O
C9	Is the sequencing **operation** of **construction plants** where practicable?	☐	☒	☐	
C10	Is the **hoarding** maintained properly?	☐	☒	☐	
C11	**Air compressors** (500 kPa or above) and **hand held percussive breaker** (mass of above 10 kg) with valid noise labels?	☐	☒	☐	
C12	Are **compressor** operated with doors closed?	☐	☒	☐	
C13	**QPME** used with valid noise labels?	☐	☒	☐	
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 Runoff					
D1a	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?	☒	☐	☐	N/O
D1b	Are **channels**, **earth bunds** or **sandbag barriers** provided on site to properly direct stormwater to silt removal facilities?	☐	☐	☒	Refer to 6 Nov 2023 Observation 2
D2a	Have **dikes** or **embankments** for **flood protection** implemented around the boundaries of earthwork areas?	☒	☐	☐	N/A
D2b	Have **temporary ditches** provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	☐	☒	☐	
D2c	Are the **sediment/ silt traps** incorporated in the permanent drainage channels to enhance deposition rate?	☐	☒	☐	
D3	Are the **retention time for silt/s and traps** of the silt removal facilities be **5 minutes** under maximum flow conditions?	☐	☒	☐	
D4a	Are **surface excavation works** minimised during rainy seasons (April to September), as possible?	☒	☐	☐	N/A
D4b	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
D4c	Are **exposed slope surfaces** covered by tarpaulin sheets?	☐	☒	☐	
D5a	Have the **overall slope** of the site should be kept a minimum?	☒	☐	☐	N/A
D5b	Are **all trafficked areas** and **access roads** protected by coarse stone ballast?	☒	☐	☐	N/A
D6a	Are **all drainage facilities** and **erosion** and **sediment control structures** inspected regularly?	☐	☒	☐	
D6b	Are **all drainage facilities** and **erosion** and **sediment control structures** maintained to ensure proper and efficient operation at all times and particularly following rainstorms?	☐	☒	☐	
D6c	Is the **deposited silt** and **grit** removed regularly and disposed of by spreading evenly over stable?	☐	☒	☐	
D7a	Have the **excavation** of **trenches** in wet periods be dug and backfilled in short sections?	☐	☒	☐	
D7b	Is rainwater pumped out from **trenches** discharged into storm drains via silt system?	☐	☒	☐	
D8	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?	☐	☒	☐	
D9a	Are **manholes** adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	☐	☒	☐	
D9b	Are the **discharges** of **surface run-off** into foul sewer always prevented?	☐	☒	☐	

D10a	Are particular attention paid to the control of **silty surface runoff** during **storm event**?	☐	☒	☐	
D10b	Are the precautions to be taken at **any time** of year when rainstorms are likely? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be maintained and the **deposited silt** and **grit** should be removed regularly. ii. **Temporarily exposed slope surfaces** should be cover by tarpaulin. iii. **Temporary access roads** should be protected by crushed stone or gravel. iv. **Intercepting channels** should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. v. **Trenches** should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.	☐	☒	☐	
D10c	Are the actions to be taken when a **rainstorm** is **imminent** or **forecas**t? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked to ensure that they can function properly. ii. **Open stockpiles** of **construction materials** (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric. iii. **All temporary covers to slopes and stockpiles** should be secured.	☐	☒	☐	
D10d	Are the actions to be taken **during** or **after rainstorms**? (Appendix A2 of ProPECC PN 1/94) i. **Silt removal facilities**, **channels** and **manholes** should be checked and maintained to ensure satisfactory working conditions. Attention should be given to safety when carrying out this work.	☐	☒	☐	
D11a	Are **all vehicles** and **plant** cleaned before leaving a construction site?	☐	☒	☐	
D11b	Is the **wheel washing bay** provided at every site exit?	☐	☒	☐	
D11c	Are the **vehicle wash-water** have sand and silt settled out and removed at least on a weekly basis?	☐	☒	☐	
D11d	Is the **wheel wash** overflow directed to silt removal facilities before being discharged to the storm drain?	☒	☐	☐	N/O
D11e	Is the section of **construction road between the wheel washing bay and the public road** paved with backfill?	☐	☒	☐	
D11f	Is the treated wastewater reused for **vehicle washing**, **dust suppression** and **general cleaning**?	☐	☒	☐	
D12a	Are **oil interceptors** provided in the site drainage system downstream of any oil/ fuel pollution sources?	☒	☐	☐	N/A
D12b	Are the **oil interceptors** are emptied and cleaned regularly to prevent the release of O&G into the storm water drainage system after accidental spillage?	☒	☐	☐	N/A
D12c	Has a **bypass** provided to prevent flushing during heavy rain?	☐	☒	☐	

D13	Are the **construction solid waste**, **debris** and **rubbish** on site collected, handled and disposed of properly? (same with waste item)	☐	☒	☐	
D14	Are **all fuel tanks** and **storage areas** provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank?	☒	☐	☐	N/O
D15	Is **Intercepting bund** or **barrier** along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	☐	☒	☐	
D16	Are **site drainage systems** provided over the entire project site with sediment control facilities?	☐	☒	☐	
D17	Are **sedimentation tanks** provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	☐	☒	☐	
D18	Is there any **sediment plume** observed in nearby watercourses?	☐	☐	☒	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are **portable chemical toilets** and **sewage holding tanks** provided?	☐	☒	☐	
D19b	Is the **sewage generated from toilets** collected by licensed contractor and responsible for disposal and maintenance?	☐	☒	☐	
D20	Are the **notices** posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	☒	☐	☐	N/O
Accidental Spillage of Chemical (Service workshop and maintenance facilities)					
D21a	Are the **service workshop** and **maintenance facilities** located within a bunded area, and sumps and oil interceptors?	☒	☐	☐	N/O
D21b	Are all **maintenance of equipment** involving activities with potential for leakage and spillage undertaken within the areas?	☒	☐	☐	N/O
D21c	Is **chemical leakage** or **spillages** contained and cleaned up immediately?	☒	☐	☐	N/O
Surface Water Drainage System					
D22a	Is the **temporary surface water drainage system** provided to manage runoff?	☐	☒	☐	
D22b	Does the system consist of **channel** as constructed around the perimeter of the site area?	☐	☒	☐	
D22c	Does the system collect surface water from the **areas of higher elevations** to those of **lower elevations** and ultimately to the discharge point?	☐	☒	☐	
D22d	Is the **erosion** minimised?	☐	☒	☐	
D23a	Does the system include the **use of a silt fence** around the **soil stockpile areas** to prevent sediment from entering the system?	☐	☒	☐	
D23b	Is the regular **cleaning** carried out to prevent blockage of the passage of waste flow in silt fence?	☐	☒	☐	

E	Waste / Chemical Management	N/A or Not Observed	Yes	No	Remarks / Photo
Waste Management					
General Waste					
E1	Is the general waste generated on-site stored in **enclosed bins** or compaction units separately from the construction and chemical wastes?	☐	☐	☒	Refer to 20 Nov 2023 Observation 2
E2a	Is the general waste collected properly by using the **waste separation facilities** for paper, aluminium cans, plastic bottles etc.?	☐	☒	☐	
E2b	Does **accumulation** of **waste** avoid?	☐	☐	☒	Refer to 20 Nov 2023 Observation 2
E2c	Is **waste disposed** regularly?	☐	☒	☐	
E2d	Regular **waste collection** by approved waste collector in purpose-built vehicles?	☐	☒	☐	
E3	**Burning of refuse** on construction site prohibited?	☐	☒	☐	
C&D Materials					
E4a	Are there any **contract documents** provided to allow and promote the **use of recycled aggregates** where appropriate?	☐	☒	☐	
E4b	Are the **C&D materials** sorted and recycled on-site?	☐	☒	☐	
E5a	Is the **durable formwork** or **plastic facing** for construction works used?	☐	☒	☐	
E5b	Do the **wooden hoardings** avoid to be used?	☐	☒	☐	
E5c	Is **metal hoarding** used to enhance the possibility of recycling?	☐	☒	☐	
E6a	Are the concrete and masonry used as **general fill**?	☐	☒	☐	
E6b	Are the **steel reinforcement bars** used by scrap steel mills?	☐	☒	☐	
E6c	Is the **segregation** and **storage** of C&D wastes undertaken in designated area?	☐	☒	☐	
E6d	Does the **use of reusable steel formwork** maximise?	☐	☒	☐	
E7a	Are the **temporary stockpiles** maintained regularly?	☐	☒	☐	
E7b	Is the **excavated fill material** reused for backfilling and reinstatement?	☐	☒	☐	
E8a	Are the **excavated slope**, **stockpile material** and **bund walls** covered by tarpaulin?	☐	☒	☐	
E8b	Are covering trucks or transporting wastes in enclosed containers when **transportation of waste**?	☐	☒	☐	
E8c	Are **waste storage area** properly cleaned and do not cause windblown litter and dust nuisance?	☐	☒	☐	
E9	Is **hydroseeding** of the topsoil on the **stockpile** implemented to improve visual appearance and prevent soil erosion?	☐	☒	☐	
E10	Is the **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 implemented?	☐	☒	☐	

E11	Are the **training** of **site personnel** for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concept implemented?	☐	☒	☐	
E12	Are the **regular cleaning** and **maintenance programme** for drainage systems, sumps, oil interceptors?	☐	☒	☐	
E13a	Are **wood**, **steel** and **other metals** separated for re-use and/or recycling?	☐	☒	☐	
E13b	Do the **excavated materials** appear contaminated?	☐	☐	☒	
E13c	If suspected contaminated, appropriate **procedures** followed?	☒	☐	☐	N/A
E14	Is the **disposal** of **C&D materials** avoided onto any sensitive locations e.g. agricultural lands etc.?	☐	☒	☐	
E15	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?	☐	☒	☐	
Chemical Waste / Waste Oil					
E16	Are **chemicals** and **waste oil** recycled or disposed properly?	☐	☒	☐	
Chemical Packaging					
E17a	Have the **containers** a capacity of **<450 L** unless the specification has been approved by EPD?	☒	☐	☐	N/A
E17b	Are the **containers** (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for **storage of chemical wastes**?	☐	☒	☐	
Chemical Labelling					
E18	Is chemical waste or waste oil **stored** and **labelled** in **English and Chinese** properly in designated area? Capacity of Container: Dimensions of Label < 50L: No less than 90 x 100mm 50 to 450L: No less than 120 x 150mm > 450L: No less than 180 x 200mm	☐	☒	☐	
Chemical Waste / Fuel Storage Area					
E19a	Are the **storage area** are clearly labelled and separated (if needed)?	☒	☐	☐	N/O
E19b	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**?	☒	☐	☐	N/O
E19c	Do the **storage areas** have adequate **ventilation** and be covered to prevent rainfall entering and reduce heat from sunlight?	☒	☐	☐	N/O
E19d	Are the **fuel tanks** and **chemical storage areas** provided with locks and sited on sealed areas?	☒	☐	☐	N/O
E20	Is chemical waste collected by **licensed waste collectors** and disposed of at **licensed facility** eg. Chemical Waste Treatment Centre?	☐	☒	☐	

Records					
E21	Is a licensed waste hauler used for **waste collection**?	☐	☒	☐	
E22	Are the **records of quantities of wastes** generated, recycled and disposed properly kept?	☐	☒	☐	
E23	For the demolition material / waste, is the **number of loads** for each day recorded as appropriate?	☐	☒	☐	

F	Landfill Gas (LFG)	N/A or Not Observed	Yes	No	Remarks / Photo
Within NENT Landfill Extension					
F1	Are **special LFG precautions** taken to avoid potential hazards of LFG exposure (ignition, explosion, asphyxiation, toxicity)?	☒	☐	☐	N/O
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?	☒	☐	☐	N/O
F4	Are prominent **'No smoking'** and **'No Naked Flames' signs** erected on-site?	☒	☐	☐	N/O
F5	Is no worker allowed to **work alone** at any time in excavated trenches or confined areas on-site?	☐	☒	☐	
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?	☐	☒	☐	
F8	Are **electrical motors** and **extension cords** explosion-proof and intrinsically safe for use on-site?	☒	☐	☐	N/O
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?	☒	☐	☐	N/A
F11b	Are the **pipe ends** sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	☒	☐	☐	N/A
F11c	Is **forced ventilation** implemented prior to **operation of installed pipeline**?	☒	☐	☐	N/A
F11d	Is **forced ventilation** implemented for **works inside trenches deeper than 1m**?	☒	☐	☐	N/A
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 < 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.	☐	☒	☐	
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?	☐	☒	☐	
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?	☐	☒	☐	
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%	☐	☒	☐	
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.	☐	☒	☐	
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 < 10mm from exposed ground surface?	☐	☒	☐	
F18	For excavations > 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 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	☐	☒	☐	
F20	For excavations < 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?	☐	☒	☐	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at **strategic locations** within site implemented?	☐	☒	☐	
G4b	Are the roadside planter and shrub planting implemented in front of **Cheung Sha Temple**?	☐	☒	☐	
Boundary Green Belt planting					
G5	Are the **fast growing** and **fire-resistant plant species** planted around the site perimeter?	☐	☒	☐	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a **temporary slope cover**?	☐	☒	☐	
Existing tree preservation					
G7	Are **existing** and **affected tree** which identified as ecological significant preserved whenever possible?	☐	☒	☐	

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?	☐	☒	☐	

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. 14 October 2023 Observation 1 - The loaded dump truck was covered by impervious sheet.
2. 20 October 2023 Observation 1 - The accumulated of waste in waste skip at portion A was removed.
3. 20 October 2023 Observation 3 - The slope surface at SBA was covered by imprevious sheets properly.

Observation(s):

N/O

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

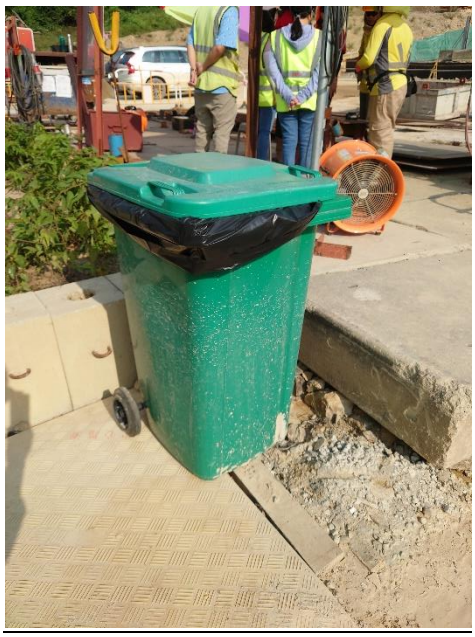
The contractor has been reminded that water spraying shall be provided regularly for dust control.

	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Joan Lo	/	Matt Choy/Kristy Wong	Sylvia Ho
Date:	27 November 2023	/	27 November 2023	27 November 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	**Follow-up status**
6 November 2023 Observation 1  The outside surrounding of the scaffolding without dust screen, sheeting or netting was found at the Portion D.	Waiting for Contractor Input

Observation and Recommendation	Follow-up status
6 November 2023 Observation 2   The muddy water which is caused from the water spraying by the water sprinkler at the Portion A is found. The deposited silt and grit are found under the tower crane at the Portion A. The contractor has been recommended that the sandbag barriers or bunds should be provided and established along the water safety barriers at the Portion A. The muddy water should be collected from the proper channel, final to the silt removal facility for treatment. The deposited silt and grit under the tower crane at the Portion A should be removed.	 The bunds near the safety barriers at the Portion A had been established by the contractor. Waiting for Contractor Input: Photo record for cleaning deposited silt and grit under the tower crane at the Portion A

Observation and Recommendation	**Follow-up status**
6 November 2023 Observation 3   The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	 The waste at the waste skip of SBA was removed by the contractor. Waiting for Contractor Input: Photo record for increasing the enclosed bins at SBA and labelling the “type of waste” at the surrounding of the enclosed bins or waste skip at SBA.

Observation and Recommendation	**Follow-up status**
14 November 2023 Observation 1  The loaded dump truck without covering impervious sheet is found at the assess road between Portion A and E4. The contractor has been recommended to ensure all of loaded dump trucks should be covered by impervious sheeting.	 The loaded dump truck was covered by impervious sheet.
20 November 2023 Observation 1  The overloading of accumulated waste is found at portion A. The waste should be stored in waste skip properly and clean regularly.	 The accumulated of waste in waste skip at portion A was removed.

Observation and Recommendation	**Follow-up status**
20 November 2023 Observation 2  The food waste is found at the waste skip of SBA. The general waste should be stored in the enclosed bins. The contractor has been advised that the additional enclosed bin should be increased at the SBA. The “type of waste” label should be labelled at the surrounding of the enclosed bins or waste skip for easily identify for on-site workers.	Waiting for Contractor Input
20 November 2023 Observation 3  The slope surface at SBA without covering impervious sheets properly is found. The contractor has been recommended that the exposed slope should be covered by impervious sheet.	 The slope surface at SBA was covered by imprevious sheets properly.

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
N/O	N/O

PART III Temporary Surface Water Drainage System (TSWDS) Photo Record during the environmental site inspection

Box culvert near WM2	Branch from Portion A
	
Sedimentation Pond at Portion B1	Surface channel at Portion B2
	

Surface channel at Portion B2	Surface channel at Portion B2
	
Surface channel at Portion B2	Catpit at Portion B2
	
Wo Keng Shan Road near Portion B2	Sedimentation basin at Portion B2
	

Existing channel at Protion E3-1	Sedimentation basin near Protion E4
	

Appendix K Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Log Ref.	Weekly Site Inspection Item	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	B7 – B36	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation.	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 criteria of EIA Report (Register No. AEIAR-111/2007)	# (Refer to Appendix J 6 Nov 2023 Weekly site inspection Observation 1)
		B4, B15 & B18	• Dust emission from construction vehicle movement is confined within the worksites area.					✓
		B11 – B12	• Watering facilities will be provided at every designated vehicular exit point.					✓ Vehicle washing facilities provided at vehicular exit point in Portion A, B1-2, D, E3-1 & E4
		-	• Good site practice is recommended during construction phase.					✓
Construction Noise								
S4	S4.9	C1	1) Use of good site practices to limit noise emissions by considering the following: (a) Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;	Control construction airborne noise by means of good site practices	Contractor	Entire construction site	Noise Control Ordinance	✓
		C2	(b) 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;					✓
		C3	(c) Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;					✓
		C4	(d) Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;					N/A
		C5	(e) Mobile plant should be sited as far away from NSRs as possible and practicable;					✓
		C6	(f) Material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					✓
S4	S4.9	C11 – C13	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	✓
Construction Runoff								
S5.8.1	S5.2.1	D1	<u>Construction on Site Runoff</u> (a) 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. (b) 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.	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	(a) The perimeter cut-off drains are establishing in progress. (b) # (Refer to Appendix J 6 Nov 2023 Weekly site inspection Observation 2)
		D2	• (a) The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. (b) Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/sediment trap. (c) The sediment/silt traps should be incorporated in the permanent drainage channels to enhance deposition rates.					(a) N/A (b) N/A
		D3	• 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.					✓
		D4	• (a) Construction works should be programmed to minimize surface excavation works during the rainy seasons (April to September). (b) 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. (c) 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.					(a) N/A (b) ✓ (c) ✓

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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 (Cont'd)								
S5.8.1	S5.2.1	D5	• (a) 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. (b) 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.	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 DSD Technical Circular TC01/2017 Water Pollution Control Ordinance	(a) N/A (b) N/A
		D6	• (a) All drainage facilities and erosion and sediment control structures should be regularly inspected and (b) maintained to ensure proper and efficient operation at all times and particularly following rainstorms. (c) Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.					(a) ✓ (b) ✓ (c) ✓
		D7	• (a) 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. (b) Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.					(a) N/A (b) N/A
		D8	• Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m3 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.					N/A
		D9	• (a) Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as (b) to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.					(a) ✓ (b) ✓
		D10	• 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.					✓
		D11	• (a) 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. (b) An adequately designed and sited wheel washing bay should be provided at every construction site exit. (c) Wash-water should have sand and silt settled out and removed at least on a weekly basis (d) to ensure the continued efficiency of the process. (e) 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.					(a) ✓ (b) ✓ (c) ✓ (d) ✓ (c) ✓
		D12	• (a) Oil interceptors should be provided in the site drainage system downstream of any oil/fuel pollution sources. (b) 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. (c) A bypass should be provided for the oil interceptors to prevent flushing during heavy rain.					(a) N/A (b) N/A (c) N/A
		D13	• 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.					✓
		D14	• 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.					N/A
		D15	• To prevent pollution risks arising from works area (waste reception area) and haul roads, intercepting bund or barrier along the roadside should be constructed.					N/A

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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 (Cont'd)								
S5.8.1	S5.2.1	D19	<u>Sewage Effluent from Workforce</u> • (a) Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. (b) A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	Control sewage effluent arising from the sanitary facilities provided for the on-site construction workforce	Contractor	On-site sanitary facilities	ProPECC PN 1/94 DSD Technical Circular TC01/2017 Water Pollution Control Ordinance Waste Disposal Ordinance	✓
		D20	• 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.					N/A
		-	• 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.					✓
S5.8.1	S5.2.1	D21	<u>Accidental Spillage of Chemical</u> • (a) Any service workshop and maintenance facilities shall be located within a bunded area, and sumps and oil interceptors shall be provided. (b) 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	(a) N/A (b) N/A
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.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	To be implemented
		-	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.					To be implemented
		-	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.					To be implemented
			f. Sod Establishes permanent turf for immediate erosion protection and stabilizes rainageways.					To be implemented
			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.					To be implemented

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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
Erosion Control Measures (Cont'd)								
S5.8.2	S5.2.2		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.	Erosion control	Contractor	Drainage system	ProPECC PN 1/94 Water Pollution Control Ordinance	✓
		-	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.					✓
Surface Water Drainage System								
S5.8.2	S5.2.2	D22	• (a) Temporary surface water drainage system will be provided to manage runoff during construction and operation. (b) This system will consist of channels as constructed around the perimeter of the site area. (c) This system will collect surface water from the areas of higher elevations to those of lower elevations and ultimately to the point of discharge. (d) Erosion will therefore be minimised.	Surface Water Management/ Control run off	Contractor	Surface water system Construction	Water Pollution Control Ordinance TM-water	(a) ✓ (b) ✓ (c) ✓ (d) ✓
		D23	• (a) 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. (b) Regular cleaning will be carried out to prevent blockage of the passage of water flow in silt fence.					(a) ✓ (b) ✓
		-	• 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.					N/A
		-	• 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.					N/A
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.	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	✓
		-	• 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.					✓
		E4	• (a) 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. (b) The contract specifications should specify no excavated materials should be removed from the landfill extension site, but should be fully reused.					(a) ✓ (b) ✓
		E5	• Careful design, planning and good site management to minimise over-ordering and waste materials such as concrete, mortars and cement grouts. (a)(b) The design of formwork should maximise the use of standard wooden panels so that high reuse levels can be achieved. (c) Alternatives such as steel formwork or plastic fencing should be considered to increase the potential for reuse.					(a) ✓ (b) ✓ (c) ✓
		E6	• (a) The Contractor should recycle as much as possible the C&D waste on-site through proper waste segregation on-site. (b) Concrete and masonry should be used as general fill and steel reinforcement bars can be used by scrap steel mills. (c) Proper areas should be designated for waste segregation and storage wherever site conditions permit. (d) Maximise the use of reusable steel formwork to reduce the amount of C&D material.					(a) ✓ (b) ✓ (c) ✓ (d) ✓

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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
Waste Management (Cont'd)								
S6	WM1	E7	• (a) 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. (b) 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	(a) ✓ (b) ✓
		E8	• (a) 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. (b)(c) Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers					(a) ✓ (b) ✓ (c) ✓
		E9	• 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.					N/A
		E10	• 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.					✓
		E11	• Training of site personnel for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concepts.					✓
		E12	• Regular cleaning and maintenance programme systems, sumps and oil interceptors.					✓
		E13	• (a) 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. (b)(c) Proper storage and site practices should be implemented to minimise the potential for damage or contamination of construction materials.					(a) ✓ (b) ✓ (c) N/A
			• 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.					✓
S6	WM2	E16 – E23	<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.	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	✓
		-	• 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					✓
		E17 & E18	• 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.					✓
		E19	• (a) The storage area for chemical wastes should be clearly labelled and used solely for storage of chemical waste, (b) 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, (c)(d) whichever is the greatest, having adequate ventilation, being covered to prevent rainfall entering, and being arranged so that incompatible materials are adequately separated.					(a) ✓ (b) N/A (c) N/A (d) N/A
		E20	• Chemical waste should be collected by licensed waste collectors and disposed of at licensed facility, e.g. Chemical Waste Treatment Centre.					✓

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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
Waste Management (Cont'd)								
S6	WM3	E1	<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.	Minimise generation of general refuse to avoid odour, pest and visual nuisance	Contractor	Entire construction site	Waste Disposal Ordinance	# (Refer to Appendix J 20 Nov 2023 Weekly site inspection Observation 2)
		E2	• (a) 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. (b)(c)(d) Regular collection should be arranged by an approved waste collector in purpose-built vehicles that minimise environmental impacts during transportation					(a) ✓ (b) # (Refer to Appendix J 20 Nov 2023 Weekly site inspection Observation 2) (c) ✓ (d) ✓
		-	• 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.					✓
		-	• 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.					✓
LFG								
Within NENT Landfill Extension								
S7	LFG1	F1	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)	N/A
	LFG2	F2	Prominent safety warning signs should be erected on-site to alert all personnel and visitors of LFG hazards during excavation works.					✓
	LFG3	F3	No smoking or burning should be permitted on-site.				F&IU (Confined Spaces) Regulations	✓
	LFG4	F4	Prominent 'No smoking' and 'No Naked Flames' signs should be erected on-site.					✓
	LFG5	F5	No worker should be allowed to work alone at any time in excavated trenches or confined areas on-site.				Code of Practice on Safety and Health at Work in Confined Spaces	✓
	LFG6	F6	Adequate fire fighting equipment should be provided on-site.					✓
	LFG7	F7	Construction equipment should be equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors.					✓
	LFG8	F8	Electrical motors and extension cords should be explosion-proof and intrinsically safe for use on-site.					✓
	LFG9	F9	'Permit to Work' system should be implemented.					✓
	LFG10	F10	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.					✓
	LFG11	F11	(a) For piping assembly or conduit construction, all valves and seals should be closed immediately after installation to avoid accumulation and migration of LFG. (b) If installation of large diameter pipes (diameter >600mm) is required, the pipe ends should be sealed on one side during installation. (c) Forced ventilation is required prior to operation of installed pipeline. (d) Forced ventilation should also be required for works inside trenches deeper than 1m.					(a) N/A (b) N/A (c) N/A (d) N/A
	LFG12	F12	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.					✓
	LFG13	F13	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.					✓
	LFG14	F14	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.					✓
	LFG15	F15	(a) 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. (b) 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.					(a) N/A (b) N/A

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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
LFG (Cont'd)								
Within NENT Landfill Extension								
S7	LFG16	F16	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%	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	✓
	LFG17	F17	(a) 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. (b) Routine monitoring should be carried out in all excavations, manholes, created by temporary storage of building materials on-site. (c) All measurements in excavations should be made with monitoring tube located not more than 10mm from exposed ground surface.					(a) N/A (b) N/A (c) N/A
	LFG18	F18	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.					✓
	LFG19	F19	For excavations between 300mm and 1m, measurements should be conducted: • Directly after excavation has been completed; and Periodic all whilst excavation remains open.					✓
	LFG20	F20	For excavations less than 300mm, monitoring may be omitted at the discretion of Safety Officer or appropriately qualified person.					✓
Landscape and Visual Phases								
S8	LV1	G4	<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	✓
S8	LV2	G5	<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	G6	<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.					✓
S8	LV4	G7	<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.					✓

Remarks:

✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

EIA Ref.	EM&A Log Ref	Weekly Site Inspection Item	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
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	✓
	E2	-	Reinstatement of the work areas immediately after completion of the works.					✓
	E3	-	Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme.					✓
	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.					✓
	E5	-	Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs.					✓
	E6	-	Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works.					N/A
	E7	-	Mobile plant should be sited as far away from NSRs as possible and practicable.					✓
	E8	-	Material stockpiles, site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.					✓
	E9	-	Use of “quiet” plant and working methods.					✓
	E10	-	Construction phase mitigation measures in the Practice Note for Professional Persons on Construction Site Drainage.					✓
	E11	-	Design and set up of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction.					✓
	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.					✓
	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.					N/A
	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.					✓
	E15	-	Provision of oil interceptors in the drainage system downstream of any oil/fuel pollution sources					N/A

Remarks:

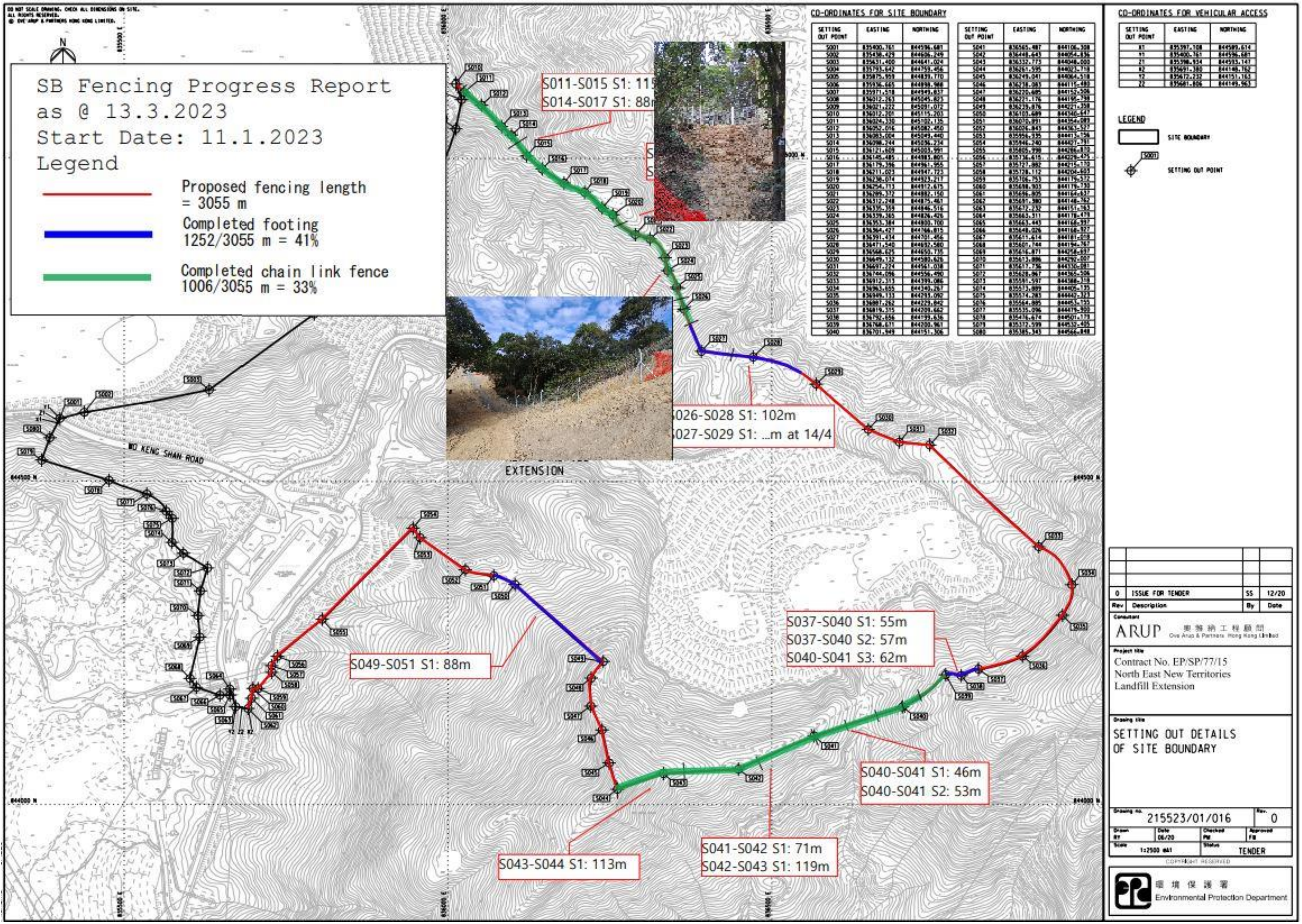
✓	Compliance of mitigation measure
*	Recommendation was made during site audit but improved/rectified by the contractor
#	Recommendation was made during site audit but not yet improved/rectified by the contractor.
N/A	Not Applicable at this stage were conducted in the reporting period.
@ (Which measure)	Alternative measure was made by the contractor.

Appendix L Construction Site Activities

Construction Activities	Where	Who	What - ENV Impacts	Mitigation Measures
Material loading and unloading, site traffic	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
Construction of Site buildings	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	Portion A, Portion E3-1, Portion E4, Portion E1/B2	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	Portion A, Portion B1, Portion E4	PYE	Dust	Covering of cement storage area, enclosure of mixing area
Site formation	Portion A, Portion E3-1	PYE	Generation of C&D waste	Implementation of trip ticket system, waste recycling, internal waste transfer
Tree Felling	Portion E3-1, E4, E1/B2	PYE	Generation of yard waste	Implementation of trip ticket system, waste recycling, internal waste transfer
Shotcreting (permanent and temporary)	Whole site	PYE	Dust	Covering of cement storage area, enclosure of mixing area

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
ISSUE FOR TENDER
ARUP
Contract No. EP/SP/77/15
North East New Territories
Landfill Extension
SETTING OUT DETAILS
OF SITE BOUNDARY
215523/01/016
TENDER
環境保護署
Environmental Protection Department

Appendix N 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 (3 Aug 2023)
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) 10th monitoring (17 May 2023) 11th monitoring (16 Jun 2023) 12th monitoring (12 Jul 2023) 13th monitoring (11 Aug 2023) 14th monitoring (15 Sep 2023) 15th monitoring (13 Oct 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) 10th monitoring (12 May 2023) 11th monitoring (7 Jun 2023) 12th monitoring (18 Jul 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 Dec 2022)
3.2	3.2	Submission of Baseline Monitoring Report	Submission Date (30 Nov 2022)

Appendix O Cumulative complaint / enquiry log, Summaries of complaints and enquiries & Environmental complaint reports

Environmental Complaints Log

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C001_20221220	21 Dec 2022	Veolia (Contractor)	ET	Air Quality (Construction Dust)	5, 12 & 19 Dec 2022	It was noted from Veolia's email to the ET on 20 December 2022 that Veolia received complaint lodged regarding presenting much dusty materials at roundabout at Wo Keng Shan Road & dusty flying problem at Kowloon-bound traffic at Lung Shan Tunnel. No dusty materials and wastes were transported out from the NENTX site during the complaint period. During the regular weekly site inspection on 5, 12 & 19 December 2022, it was observed that the wheel washing facilities with high-pressure water jets have been provided at all site exits of NENTX and cleaned all vehicles before allowing them to leave the construction site to ensure that no mud or debris would be brought to the public area. All site vehicles of NENTX are also required to go through the auto wheel washing facility, which is managed by the operator of the NENT landfill, before entering the public area. The road section between the washing facilities and the exit point was paved with concrete, or bituminous materials were implemented in all site entrances. No mud generated from vehicles under the NENTX project after exiting the site entrance was observed. In conclusion, there is no direct evidence showing that the complaint is likely related to the NENTX project.	5 Jan 2023
C002_20230614	14 Jun 2023	EPD-RNG	ET	Water Quality	16, 21 Jun, 24, 25 Jul & 2 Aug 2023	It was noted from EPD-RNG's email to the ET on 14 Jun 2023 that EPD received complaint lodged regarding the muddy water was observed at Lin MA Hang International Bridge. In summary of the investigation, the pollutant water appeared crimson colour with bubbles ay the LMH-OP01 (Monitoring Point from EPD). The colour and pattern of pollutant water is different from the runoff at surface WQM monitoring location WM1. Hence, the project is not the major source causing the pollutant water. To minimise the potential impact of the project, the enhancement of mitigation measures at north boundary were advised to implement by contractor.	29 Jun & 21 Aug 2023

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C003_20230615	15 Jun 2023	EPD-RNG	ET	Water Quality	16, 19, 21 Jun, 18 Jul 2023	It was noted from EPD-RNG's email to the ET on 15 June 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD). In summary of the investigation, the muddy water caused from multi-potential sources while the runoff from the box culvert under the Wo Keng Shan Road is the major source including runoff from Existing channel near Portion E3-1, discharge water from the silt removal facilities at Portion E3-1 of the project, runoff from branch near the entrance of Portion E3-1, runoff from weighting plaza of NENT Landfill & natural stream near Wo Keng Shan & Shui Ngau Tso etc.. Hence, the project is a part of factor causing the high turbidity muddy water. To minimise the potential impact of construction runoff from the project, the further mitigation measures and enhancement of the temporary surface water drainage system were advised to implement by contractor.	15 Jun, 21 Aug 2023
C004_20230803	3 Aug 2023	EPD-RNG	ET	Water Quality	18 Jul 2023	It was noted from EPD-RNG's email to the ET on 3 Aug 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD). In summary of the investigation, the muddy water caused from multi-potential sources while the runoff from the box culvert under the Wo Keng Shan Road is the major source including runoff from Existing channel near Portion E3-1, discharge water from the silt removal facilities at Portion E3-1 of the project, runoff from branch near the entrance of Portion E3-1, runoff from weighting plaza of NENT Landfill & natural stream near Wo Keng Shan & Shui Ngau Tso etc.. Hence, the project is a part of factor causing the high turbidity muddy water. To minimise the potential impact of construction runoff from the project, the further mitigation measures and enhancement of the temporary surface water drainage system were advised to implement by contractor.	14 Aug 2023

Complaint Ref. No.	Date of Complaint Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
C005_20230818	18 Aug 2023	EPD-RNG	ET	Water Quality	18 Sep 2023	It was noted from EPD-RNG's email to the ET on 18 August 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD) on 14 August 2023. In summary of the investigation, the complaint is project related. It viewed that muddy water arising from wheel washing water from the site entrance at Portion E4 & Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 eventually flows into the box culvert under Wo Keng Shan Road, WM2 and ultimately to GR3. The related rectified actions should be conducted by the contractor as soon as possible.	13 October 2023
C006_20230914	14 Sep 2023	EPD-RNG	ET	Water Quality	18 Sep 2023	It was noted from EPD-RNG's email to the ET on 14 September 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Location from EPD) on 11 September 2023. In summary of the investigation, the complaint is project related. It viewed that muddy water arising from wheel washing water from the site entrance at Portion E4 & Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 eventually flows into the box culvert under Wo Keng Shan Road, WM2 and ultimately to GR3. The related rectified actions should be conducted by the contractor as soon as possible.	13 October 2023

Remarks:

1. "ET" equal to "Environmental Team"
2. "EPD-RNG" equal to "Environmental Protection Department-Regional Office (North)"
3. "TBC" equal to "To Be Confirm"

Environmental Enquiries Log

Enquiry Ref. No.	Date of Enquiry Received	Received from	Received by	Aspect of Complaint	Date of Investigation	Investigation Summary & Conclusion	Date of Reply
NA	NA	NA	NA	NA	NA	NA	NA

Remarks:

1. "ET" equal to "Environmental Team"
2. "EPD-RNG" equal to "Environmental Protection Department-Regional Office (North)"
3. "NA" equal to "Not Applicable"

Cumulative Statistics on Complaints

Aspects	Cumulative No. Brought Forward	No. of Complaints This Month	Cumulative Project-to-Date
Air Quality	1	0	1
Noise	0	0	0
Water Quality	5	0	5
Waste Management	0	0	0
Total	6	0	6

Appendix P Implementation Status on Environmental Mitigation Measures

Dust Control

Portion A - Dust Control Layout Plan 22 Nov 2023 (Rev.5)

Construction of new wheel washing facility completed

Installed sprinkler along main entrance haul road

Manual watering

Manual watering

1st to 3rd-RW

PM Level Sensor (in trial)

3rd-SLOPE

4st-RW

+76m

+58mpd

C1-2
CATCHMENT AREA:
8397m2

+57mpd

C5-2
CA
70
AREA:

+52mpd

C4-2
CATCHMENT
AREA:5807m2

+38mpd

NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE.
2. ALL LEVELS REFER TO HONG KONG PRINCIPAL DATUM (MPD) UNLESS STATED OTHERWISE.
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4. THE LOCATION DRAWINGS AR MANHOLES AR ORIENTATION INDICATIVE ON ARCHITECT O
5. SHOTCRETE S
6. SLOPE STABIL
7. UC SHALL BE T
8. FOR SUMP PIT TRAP SHALL B
9. FOR CATCHPI
10. FOR DETAILS
11. FOR PIPE BE
12. TEMP. BUND S HEIGHT OR EC
13. CHANNEL GRA

ENVIRONMENTAL PROTECTION DEPARTMENT

SIGNED: _____
( )
FOR ENVIRONMENTAL PROTECTION DEPARTMENT

DATE: _____

MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD
VERIFICATION BY INDEPENDENT CONSULTANTS

SIGNED: _____
( )
FOR MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD

DATE: _____

LEGEND

Sprinkler alignment

Rev.	Description	By	Date	Approved
I 03	THIRD SUBMISSION ISSUED	JT	JAN 2023	DSJS
I 02	SECOND SUBMISSION ISSUED	CC	NOV 2022	DSJS
I 01	FIRST SUBMISSION ISSUED	CC	JUN 2022	DSJS

Drawn	Check
JT	TL
Design	Approved
TL	DSJS
Date	Scale
19 JAN 2023	1:500 @ A3

Contract

CONTRACT EP/SP/77/15
NORTH EAST NEW TERRITORIES
LANDFILL EXTENSION (NENTX)

Environmental Protection Department
The Government of the Hong Kong Special Administrative Region

VEOLIA

Civil Contractor

Paul Y. Engineering

Supported by

ATKINS
Member of the SNC-Lavalin Group

Drawing Title

Portion A
Dust Control Layout Plan

Drawing No.	Rev.
NENTX-ATKI-DW-C-A-182	I 03

Dust Control Layout for Landfilling Area 22 Nov 2023 (rev.4)

Routing of water truck

Sprinkler

Water truck routing
(Frequency depends on weather; approx. 6 times per day)

Dust control sprinklers all installed along the Haul Road

Set up of sprinklers completed.
Recycle water system set up for manual spraying completed.

Wheel Washing Facility (SBA)
(2" pump standby for cleaning)
(Cleaning frequency depends on usage and site situation; approx. once per week)

Hard paving of haul road

Set up of sprinklers completed

Damaged sprinkler will be reinstall after slope surface reinstate.

Wheel Washing Facility (E3)
(2" pump standby for cleaning)
(Cleaning frequency depends on usage and site situation; approx. once per week)

Set up of sprinklers scheduled completed for main haul road

昂塘
Ngong Tong

石寨下
Shek Tsai Ha

水牛槽
SHUI NGAU TSO

平原河
PING YUEN RIVER

Temporary Surface Water Drainage System (TSWDS)

NENTX Landfill Area Site Boundary Perimeter Drainage Arrangement

Drainage	U-channel Arrangement
UC1	150mm half pipe
UC2	150mm half pipe
UC3	150mm half pipe
UC4	150mm half pipe
UC5	3 x 150mm half pipe in parallel
UC6	3 x 150mm half pipe in parallel
UC7	150mm half pipe
UC8	150mm half pipe
UC9	2 x 150mm half pipe in parallel
UC10	2 x 150mm half pipe in parallel
UC11	150mm half pipe

Legends

- Surface runoff going outside site boundary
- Surface runoff going inside site boundary
- Proposed perimeter drain for surface runoff within site area and discharge location
- Proposed perimeter drain for surface runoff outsite site area and discharge location
- Perimeter drain connecting to nearest existing stream or drainage system

(Finished)

25, 27-30 Nov 2023: Channel Plastering

02, 04 Dec 2023: Channel Plastering

Completion: 75%
(Not including fencing reinstatement and channel plastering works)

1-9/12/23

26-30/11/23

21-25/11/23

23 Nov 2023 (Finished)

22 Nov 2023 (Finished)

21 Nov 2023 (Finished)

24 Nov 2023 (Finished)

23-24 Nov 2023: Fencing Reinstatement

WO KENG SHAN ROAD

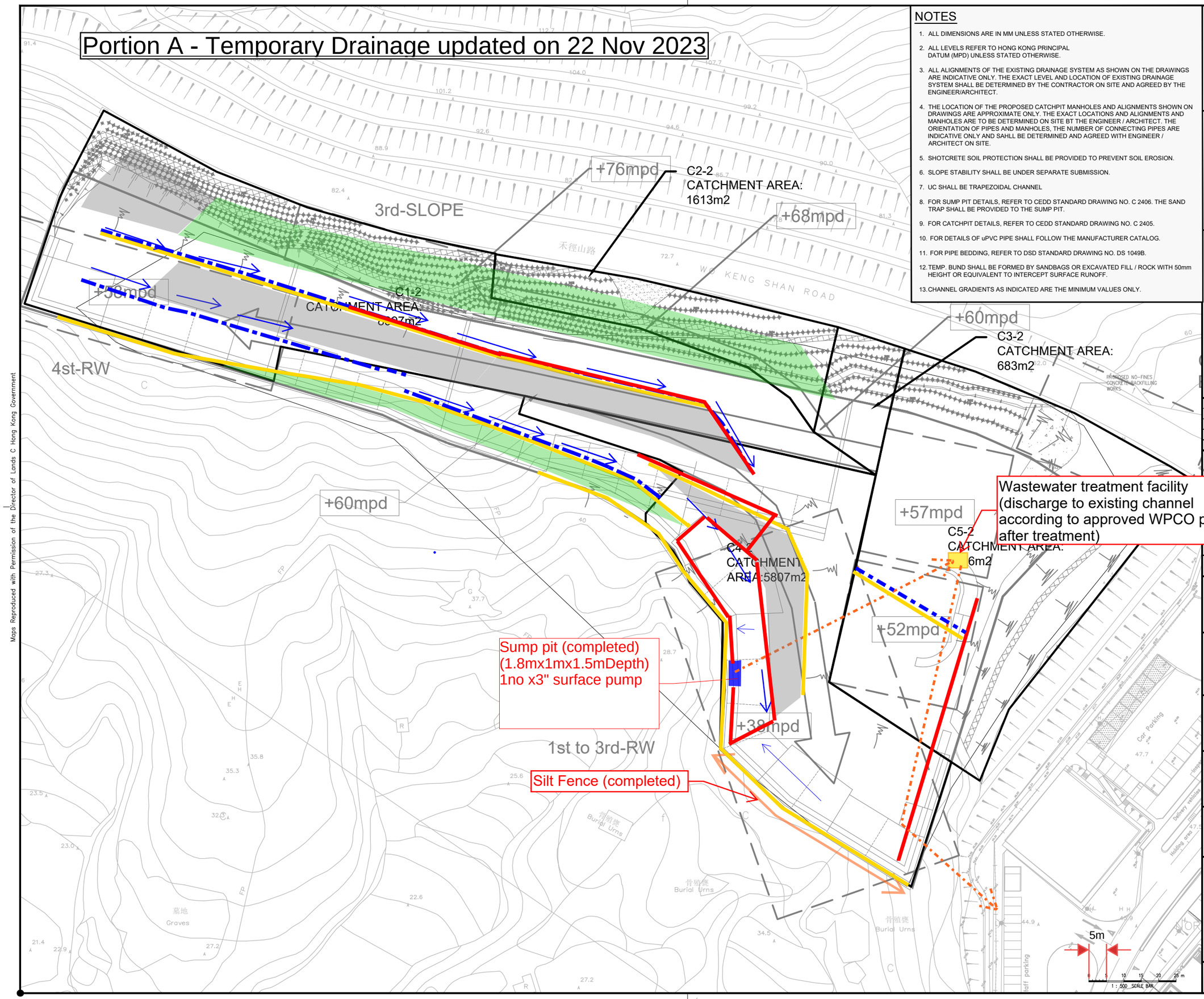
NENT LANDFILL EXTENSION

Completed

Fencing Reinstatement Area

02-04 Dec 2023

Portion A - Temporary Drainage updated on 22 Nov 2023



NOTES

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4. THE LOCATION OF THE PROPOSED CATCHPIT MANHOLES AND ALIGNMENTS SHOWN ON DRAWINGS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS AND ALIGNMENTS AND MANHOLES ARE TO BE DETERMINED ON SITE BT THE ENGINEER / ARCHITECT. THE ORIENTATION OF PIPES AND MANHOLES, THE NUMBER OF CONNECTING PIPES ARE INDICATIVE ONLY AND SAHLL BE DETERMINED AND AGREED WITH ENGINEER / ARCHITECT ON SITE.
5. SHOTCRETE SOIL PROTECTION SHALL BE PROVIDED TO PREVENT SOIL EROSION.
6. SLOPE STABILITY SHALL BE UNDER SEPARATE SUBMISSION.
7. UC SHALL BE TRAPEZOIDAL CHANNEL
8. FOR SUMP PIT DETAILS, REFER TO CEDD STANDARD DRAWING NO. C 2406. THE SAND TRAP SHALL BE PROVIDED TO THE SUMP PIT.
9. FOR CATCHPIT DETAILS, REFER TO CEDD STANDARD DRAWING NO. C 2405.
10. FOR DETAILS OF uPVC PIPE SHALL FOLLOW THE MANUFACTURER CATALOG.
11. FOR PIPE BEDDING, REFER TO DSD STANDARD DRAWING NO. DS 1049B.
12. TEMP. BUND SHALL BE FORMED BY SANDBAGS OR EXCAVATED FILL / ROCK WITH 50mm HEIGHT OR EQUIVALENT TO INTERCEPT SURFACE RUNOFF.
13. CHANNEL GRADIENTS AS INDICATED ARE THE MINIMUM VALUES ONLY.

ENVIRONMENTAL PROTECTION DEPARTMENT

SIGNED: _____
( )
FOR ENVIRONMENTAL PROTECTION DEPARTMENT

DATE: _____

MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD
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DATE: _____

LEGEND

- Finished Temporary Drainage
- Proposed Temporary Drainage
- Finished Temporary Bund
- Slope Surface Protection (Visual mitigation)
- Slope Surface Protection (Cement slurry)
- Pumping route

Rev.	Description	By	Date	Approved
I 03	THIRD SUBMISSION ISSUED	JT	JAN 2023	DSJS
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TL	Approved DSJS
Date 19 JAN 2023	Scale 1:500 @ A3

Contract

CONTRACT EP/SP/77/15
NORTH EAST NEW TERRITORIES
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Environmental Protection Department
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Drawing Title

PORTION A TEMPORARY DRAINAGE CATCHMENT PLAN - STAGE 2

Drawing No.	Rev.
NENTX-ATKI-DW-C-A-182	I 03

Status as of 22 Nov 2023 (rev. 14)

Legend
- Gate
- Underground pipe
- Works Area
- Sediment Basin
- WetSep
- Existing Drainage system
- Proposed Drainage system
- Wheel Washing Facilities
- Existing Catchpit
- Treated Water Flow

Proposed enhancement works (in progress)

Update mitigation measures from last update (completed)

Ongoing measures

Enhance and protect water barrier bund and pond

Recycle water system set up in E4

Enhanced Daily Temporary Drainage Maintenance, including E3-1 culvert, B2/E1Catchpit, SBA haul road channels

Sedimentation Tank

Reuse water tank in place, pending pump set up

WetSep

Extension of Sedimentation Basin

Additional Basin Started completion TBC

Channel enhancement works ongoing, channel base shotcrete completed

Sedimentation Tank

WetSep

U channel enlargement (completed)

1200mm pipe trench with water pump

E3

Additional WetSep and sedimentation tank for water reuse

Sedimentation Basin (completed)

WetSep

Sedimentation Tank

Sedimentation Tank

Sedimentation Tank

Sedimentation Tank

WetSep

Channel improvement works to divert water from channel to basin (TBC)

Treated Water Discharge

Wetsep

Water Point Station - for Water Truck Filling (In place)

SBA

Stockpile

1m3 concrete block to form rectangular retention culvert

Recycle water system scheduled

Exisitng Culvert

Stockpile Soil

WO KENG SHAN ROAD

NORTH EAST NEW

SHUI NGAU TSO

PING YUEN RIVER

Tong To Shan Tsuen

Hydroseeding & Green Netting

22 Nov 2023:
Located two small water tanks for water transmission to high level locations

2 Dec 2023: Hydroseeding

22 Nov 2023:
Set up water tank

25 Nov 2023: Located four small water tanks for water transmission to high level locations

Access maintain for slope stabilization works

Access maintain for transportation of excavated soil from Portion E4 to SBA

23 Nov 2023:
Located three small water tanks for water transmission to high level locations

30/11/23-4/12/23

25 Nov 2023: Placed green net on top of the slope surface

Proposed blasting area - rock surface and cover by green net only

27 Nov 2023:
Water spraying test

28 Nov 2023: Located four small water tanks for water transmission to high level locations

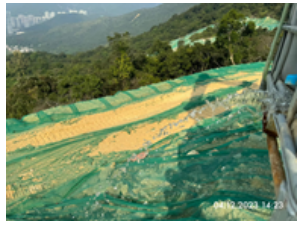
11-15/12/23

24-29/11/23

24 Nov 2023: Located two small water tanks for water transmission to high level locations

29 Nov 2023: Hydroseeding
30 Nov - 4 Dec 2023: Watering

5-10/12/23



Re-green area

Re-greened area

02-04 Dec 2023

Slope Surface Protection

Slope protection plan_22 Nov 2023

Other exposed area also carrying out protection by means of hydroseeding and green netting, please refer to seperate layout

Portion E4-A:
Platform and access formation in progress, shotcreting/cover with tarpaulin on idling slopes ongoing

Portion E1:
Completed

Portion E4-B:
Vegetation remained on surface during tree felling

Photo E1

Photo E3

Photo E4

Shotcreting completed

Photo SBA

Stockpile will be covered by tarpaulin/shotcrete/hydroseed after formation completed (ongoing)

Portion E3-A:
Rock slope formation completed, pending for permenant shotcreting (Target completion date refer to attached)
Works area will be covered by tarpaulin or cement slurry when heavy rainfall is forecasted

Portion A:
Ongoing cover exposed earth by cement slurry or green net after works
Higher Portion with Visual Impact if no planning works for month will cover with green net after shotcrete (Completed)

21 Nov 23: Set up water tank and generator for watering

Proposed blasting area - rock surface and cover by green net only

Access maintain for slope stabilization works

24-29/11/23

11-15/12/23

30/11/23-4/12/23

5-10/12/23

Access maintain for transportation of excavated soil from Portion E4 to SBA

Re-green area

21 Nov 2023

Prepared by:

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