

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

Monthly Environmental
Monitoring and Audit Report
(No. 10) – September 2023

2023-10-13

Our Ref.: CL/91823/0736-VES
Date: 13 October 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

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Environment Ltd**
邁進基建環保工程顧問有限公司

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Dear Sir

Re: Contract No. EP/SP/77/15
North-East New Territories Landfill Extension (NENTX)
Monthly Environmental Monitoring and Audit Report (No.10) –
September 2023

I refer to Condition 3.3 under Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007, regarding the submission of a monthly Environmental Monitoring and Audit report. I hereby verify the captioned "Monthly Environmental Monitoring and Audit Report (No.10) – September 2023" dated 13 October 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

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Ref: P521530-0000-REP-NN-0073

By Email

13 October 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.10) – September 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.10) – August 2023" dated 13 October 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

A handwritten signature in blue ink, appearing to read "Fredrick Leong".

Fredrick Leong
Environmental Team Leader

Encl.

1. Monthly Environmental Monitoring and Audit Report (No.10) – September 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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Name	Keith Chau	Name	Fredrick Leong
Title	Associate, Environmental	Title	Environmental Team Leader

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Executive Summary

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

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

This 10th Monthly EM&A Report presents the EM&A works conducted from 1 to 30 September 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	6 times	4, 11, 14, 20, 26 & 28 September 2023
- Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	11, 14, 20 & 26 September 2023
- Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	20 September 2023
- Additional Surface Water Quality Monitoring during normal weekdays at WM2 and GR3 (EPD Monitoring Location)	1 time	28 September 2023
- Landfill Gas Monitoring during normal weekdays for Construction Works	22 times	4 to 9, 11 to 16, 18 to 23, 25 to 29 September 2023
- Post-transplantation monitoring and audit during normal weekdays for transplanted plants and receptor sites	1 time	15 September 2023
- Joint Environmental Site Inspection	4 times	4, 11, 18 & 25 September 2023
- General Site Inspection by EPD-RNG	2 times	7 & 13 September 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/Compliant/Summons and Prosecution

One warning regarding suspected non-compliance event with Condition 1.7 and 2.15(a) of the EP & Condition 1.7 and 2.13(a) of the FEP-01 & FEP-02 was recorded during the reporting period. The related rectified actions are being taken in progress by the contractor.

One complaint received on 14 September 2023 was recorded during the reporting period. The related rectified actions should be conducted by the contractor as soon as possible.

No summons/prosecutions were received in this reporting period.

Reporting Change

There was no reporting change in the reporting period.

Future Key Issues

Works to be undertaken in the next month include:

- | | |
|---|---|
| - | Material loading and unloading, site traffic at Portion A, SBA to alternative disposal ground |
| - | 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	<p>The Project mainly consists of the followings: -</p> <p>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: -</p> <ol style="list-style-type: none"> 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 10th 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 September 2023.

1.4. Structure of the Report

- 1.4.1. The structure of the report is as follows:

Section 1 – Introduction

- details the background, purpose and structure of the report.

Section 2 – Project Information

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

Section 3 – Air Quality Monitoring

- Construction Dust

Section 4 – Noise Monitoring

Section 5 – Water Quality Monitoring

- Groundwater Monitoring
- Surface Water Monitoring

Section 6 – Waste Management

Section 7 – Landfill Gas Monitoring

Section 8 – Landscape and Visual

Section 9 – Cultural Heritage

Section 10 – Ecological Monitoring

Section 11 – Site Inspection and Audit

Section 12 – Environmental Non-Conformance

Section 13 – Implementation Status on Environmental Mitigation Measures

Section 14 – Future Key Issues

2. Project Information

2.1. Construction Activities

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

2.2. Project Organization & Management Structure

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

Table 2-1 Contact Information of Key Personnel

Party	Name	Contact Number
Contractor (Veolia 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 O**.

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

FEP Condition	EP Condition	Submission / Measures	Status
2.1	2.3	Management Organization of Main Construction Companies	Submitted
2.2	2.4	Setting up of Community Liaison Group (CLG)	Community Liaison Group was set up.
2.3	2.5	Submission of EM&A Manual	Submitted
2.5	2.7	Submission of Vegetation Survey (Transplantation Proposal)	Submitted
2.6	2.8	Submission of translocation proposal	Submitted
2.7	2.9	Submission of Transplantation Report and Post-Transplantation Monitoring	Submitted 14 th post-transplantation monitoring (15 Sep 2023)
2.9	2.11	Submission of Detailed Landfill Gas Hazard Assessment Report	Submitted
2.10	2.12	Submission of Waste Management Plan	Submitted
3.2	3.2	Submission of Baseline Monitoring Report	Submitted

2.4. Status of Environmental Approval Document

2.4.1. A summary of the relevant valid permits, licences, and/or notifications on environmental protection for this Project since the granting of the FEP & EP is presented in **Table 2-3**.

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 on 23 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-RN0619-23	22 September 2023	Permit granted on 16 June 2023
Construction Noise Permit	GW-RN1012-23	22 December 2023	Permit granted on 22 September 2023 (Replaced CNP No. GW-RN0619-23)
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 **Table 2-4**.

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	6 times	4, 11, 14, 20, 26 & 28 September 2023
- Construction Noise Monitoring during normal weekdays at each monitoring station	4 times	11, 14, 20 & 26 September 2023
- Surface Water Quality Monitoring during normal weekdays at each monitoring station	1 time	20 September 2023
- Additional Surface Water Quality Monitoring during normal weekdays at WM2 and GR3 (EPD Monitoring Location)	1 time	28 September 2023
- Landfill Gas Monitoring during normal weekdays for Construction Works	22 times	4 to 9, 11 to 16, 18 to 23, 25 to 29 September 2023
- Post-transplantation monitoring and audit during normal weekdays for transplanted plants and receptor sites	1 time	15 September 2023
- Joint Environmental Site Inspection	4 times	4, 11, 18 & 25 September 2023
- General Site Inspection by EPD-RNG	2 times	7 & 13 September 2023

Air Quality

6 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 Limit Level of surface water quality at each monitoring stations was recorded during the reporting period.

1 set of additional surface water quality measurement were carried out at WM2 and GR3 (EPD Monitoring Location) on 28 September 2023 of the reporting period based on the environmental complaint received on 14 September 2023. No exceedance of Limit Level of surface water quality at each monitoring stations was recorded during the reporting period.

Landfill Gas

22 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, LRAs and VSRs have been monitored during the reporting period. No exceedance of Action and Limit Levels of landscape and visual was recorded during the reporting period.

Cultural Heritage

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

Ecology

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

Environmental Site Inspection

4 weekly environmental site inspections were carried out during the reporting period. A joint environmental site inspection was carried out by the representatives of the Employer's Representative (ER), the Contractor, IEC and the ET on 18 September 2023. The Contractor has generally implemented part of the mitigation measures as recommended. Two general site inspection on 7 & 13 September 2023 was conducted by Environmental Protection Department-Regional Office (North) (EPD-RNG).

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)3 to 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 Nov 2023	AM1
	TE-5170X (S/N: 1106)		AM2
	TE-5170X (S/N: 1856)		AM3
Direct Reading Dust Meter	Sibata LD-5R (S/N: 0Z4545)	2 Dec 2023	AM1 to AM3
	Sibata LD-5R (S/N: 882106)		
	Sibata LD-5R (S/N: 882110)		
	Sibata LD-5R (S/N: 942532)		
Calibration Kit (for HVS)	TE-5025A (S/N: 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

Dust Monitoring Station	Average 1-hr TSP Concentration, $\mu\text{g}/\text{m}^3$ (Range)	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	44 (36 – 54)	>285	>500
AM2	39 (36 – 42)	>279	>500
AM3	45 (36 – 53)	>285	>500

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

Dust Monitoring Station	Average 24-hr TSP Concentration, $\mu\text{g}/\text{m}^3$ (Range)	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AM1	40 (32 – 48)	>164	>260
AM2	41 (30 – 53)	>152	>260
AM3	51 (36 – 67)	>163	>260

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

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

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

Remarks: * equal to non-project related

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

3.1.6 Wind Data Monitoring

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

3.1.7 Recommended Mitigation Measures

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

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

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

3.1.8 Event and Action Plan

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

Table 3-7 Event and Action Plan for dust impact

Event	ET	IEC	Contractor
Exceedance of Action Level			
Exceedance for one sample	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Rectify any unacceptable practice Amend working methods if appropriate
Exceedance for two or more consecutive samples	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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
	NTi XL2 (S/N: A2A-17638-E0)	3 Apr 2024
Acoustic Calibrator	Rion NC-75 (S/N: 35124530)	1 Nov 2023
Anemometer	RS PRO RS-90 (S/N: 210722208)	12 Feb 2025

4.4 Monitoring Methodology

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

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

measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.

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

Calibration & Maintenance

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

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

4.5 Monitoring Results

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

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

Noise Monitoring Station	Average Leq, 30min, dB(A) (Range)	Action Level	Limit Level
NM1a	58.3 (56.6 – 59.3)	When one documented complaint is received	>75dB(A)
NM2a	53.6 (49.8 – 54.7)		

Remark:

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

(2) If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit issued by the Noise Control Authority have to be followed.

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

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

4.6 Recommended Mitigation Measures

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

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

4.7 Event and Action Plan

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

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

Event	ET	IEC	Contractor
Exceedance of Action Level	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Submit noise mitigation proposals to IEC Implement the agreed noise mitigation proposals
Exceedance of Limit Level	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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. An Additional impact surface water quality monitoring was carried out at WM2 and GR3 (EPD Monitoring Location) based the environmental complaint received on 14 September.

5.2.2 Monitoring Locations, Parameters and Frequency

5.2.2.1 Impact surface water monitoring was carried out at WM1 and WM2. Additional surface water monitoring was carried out at WM2 and GR3 (EPD Monitoring Location). 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**. The additional parameters, frequency and duration of surface water quality monitoring are summarized in **Table 5-3**. 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
GR3*	Ping Yuen River	835361	844134

Remarks:

“*” The monitoring location only conducted based on the environmental complaint.

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

Table 5-3 Additional surface water quality monitoring Parameters, Frequency and Duration

Parameter	Frequency
pH, Electrical conductivity, DO, Turbidity, SS, COD, BOD ₅ , Ammonia-nitrogen, Chloride, Fe, Zn, and Coliform Count	Based on the case of Environmental Complaint

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 5-4** summarises the equipment used in the impact surface water quality monitoring works. Copies of the calibration certificates are attached in **Appendix D**.

Table 5-4 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: 22K100859)	6 Nov 2023

Remarks:

"TBC" equal to To Be Confirm

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 5-5** 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 5-5**.

Table 5-5 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 NH ₃ G
TKN	0.4 mg/L	0.1 mg/L	APHA 4500Norg: D
Nitrate	0.5 mg/L	0.01 mg/L	APHA 4500 NO ₃ I
Sulphate	5 mg/L	1 mg/L	USEPA 375.4
Sulphite	2 mg/L	2 mg/L	APHA 4500 SO ₃ 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 20 September 2023. The additional surface water quality monitoring was conducted at WM2 and GR3 (EPD Monitoring Location) on 28 September 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 5-6** and **Table 5-7**. 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 5-6 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	7.2	>7.7	>7.8	7.2	>7.6	>7.7
DO in mg/L	7.8	<7.4	<4	7.6	<5	<4
Turbidity in NTU	4.3	>9.2	>9.5	12.0	>108.3	>108.9
Electrical Conductivity in $\mu\text{S}/\text{cm}$	47	---	---	125	---	---
SS in mg/L	3.0	>9.7	>11.4	7.6	>94.5	>94.7
Alkalinity in mg/L	11	---	---	31	---	---
COD in mg/L	9			6		
BOD ₅ in mg/L	<2			<2		
TOC in mg/L	2			2		
Ammonia-nitrogen in mg/L	0.04			0.13		
TKN in mg/L	0.4			0.3		
Nitrate in mg/L	0.05			0.24		
Sulphate in mg/L	4			20		
Sulphite in mg/L	<2			<2		
Phosphorus in mg/L	0.02			<0.01		
Chloride in mg/L	6			4		
Sodium in $\mu\text{g}/\text{L}$	6340			4680		
Magnesium in $\mu\text{g}/\text{L}$	430			1290		
Calcium in $\mu\text{g}/\text{L}$	<0.2			<0.2		
Potassium in $\mu\text{g}/\text{L}$	680			1450		
Iron in $\mu\text{g}/\text{L}$	270			670		
Nickel in $\mu\text{g}/\text{L}$	<1			<1		
Zinc in $\mu\text{g}/\text{L}$	14			10		
Manganese in $\mu\text{g}/\text{L}$	32			563		
Copper in $\mu\text{g}/\text{L}$	1			<1		
Lead in $\mu\text{g}/\text{L}$	<1			1		
Cadmium in $\mu\text{g}/\text{L}$	<0.2			<0.2		
Coliform Count in cfu/100mL	240			290		
Oil and Grease in mg/L	<5			<5		

Table 5-7 Summary of Additional Impact Surface Water Monitoring Results

Monitoring Parameter(s)	Monitoring Station			
	WM2			GR3 (EPD Monitoring Location)
	Monitoring Results	Action Level	Limit Level	Monitoring Results
pH	7.5	>7.6	>7.7	7.4
DO in mg/L	7.8	<5	<4	7.6
Turbidity in NTU	8.8	>108.3	>108.9	13.1
Electrical Conductivity in $\mu\text{S/cm}$	71	---	---	108
SS in mg/L	5.5	>94.5	>94.7	4.9
COD in mg/L	<5			6
BOD ₅ in mg/L	<2			<2
TOC in mg/L	2			2
Ammonia-nitrogen in mg/L	0.12			0.10
Iron in $\mu\text{g/L}$	910			670
Zinc in $\mu\text{g/L}$	13			20
Coliform Count in cfu/100mL	3400			380

5.2.5.4 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**.

5.2.5.5 The Summary of Impact Surface Water Quality Exceedance are shown in **Table 5-8**.

Table 5-8 Summary of Impact Surface Water Quality Exceedance during the reporting period

Water Quality Monitoring Station	Parameter	pH	DO	Turbidity	SS	Exceedance Count
	Level Exceedance					
WM1	Action	0	0	0	0	0
	Limit	0	0	0	0	0
WM2	Action	0	0	0	0	0
	Limit	0	0	0	0	0

Remarks:

(1) # The investigation results will be presented in the report after the investigation.

(2) * equal to non-project related

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 Q**. 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 5-9** shall be carried out.

Table 5-9 Event and Action Plan for Water Quality

Event	ET	IEC	Contractor
Action level being exceeded by one sampling day	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Verify Notification of Exceedance Check monitoring data and Contractor's working methods 	<ul style="list-style-type: none"> Rectify unacceptable practice Amend working methods if appropriate
Action level being exceeded by two or more consecutive sampling days	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 42,676 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 33.38 tonnes of general refuse and No 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:

- CH₄: >10% Lower Explosion Limit (LEL);
- CO₂: >0.5%; and
- O₂: <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 & O ₂	Gas Detector	PS200 (S/N: 373075)	16 Nov 2023
CO 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 CO₂ at 0.5% is set for reference only, assuming no CO₂ emission from a particular location.

Depending on the baseline CO₂ 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 September 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	4 Sep 2023	0	0	0	20.2
	5 Sep 2023	0	0	0	20.1
	6 Sep 2023	0	0	0	20.2
	7 Sep 2023	0	0	0	20.2
	9 Sep 2023	0	0	0	20.2
	11 Sep 2023	0	0	0	20.2
	12 Sep 2023	0	0	0	20.2
	13 Sep 2023	0	0	0	20.2
	14 Sep 2023	0	0	0	20.2
	15 Sep 2023	0	0	0	20.2
	16 Sep 2023	0	0	0	20.2
	18 Sep 2023	0	0	0	20.1
	19 Sep 2023	0	0	0	20.2
	20 Sep 2023	0	0	0	20.1
	21 Sep 2023	0	0	0	20.2
	22 Sep 2023	0	0	0	20.1
	23 Sep 2023	0	0	0	20.1
	25 Sep 2023	0	0	0	20.2
	26 Sep 2023	0	0	0	20.2
	27 Sep 2023	0	0	0	20.1
	28 Sep 2023	0	0	0	20.1
	29 Sep 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 CO₂ at 0.5% is set for reference only, assuming no CO₂ emission from a particular location.

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 was conducted on 15 Sep 2023 based on the requirement of the approved Transplantation Proposal for Plant Species of Conservation Importance (Rev.1). The 14th Post-transplantation Monitoring and Audit Report (15th Sep 2023) presents the details of requirements, monitoring results and site inspection with photos. The site inspection photos are also summarized in **Appendix N**. During the reporting period, the numbers, measurements, and health conditions of the transplanted plant species are recorded.
- 10.1.2** The post-translocation monitoring has 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	1 st	24 Nov 2022
	2 nd	9 Dec 2022
	3 rd	21 Dec 2022
	4 th	13 Jan 2023
	5 th	26 Jan 2023
	6 th	8 Feb 2023
	7 th	24 Feb 2023
	8 th	20 Mar 2023
	9 th	21 Apr 2023
	10 th	12 May 2023
	11 th	16 Jun 2023
	12 th	18 Jul 2023
	13 th	11 Aug 2023
	14 th	15 Sep 2023
Post-translocation Monitoring	1 st (Aug 2022)	29 Aug 2022
	2 nd (Sep 2022)	28 Sep 2022
	3 rd (Oct 2022)	28 Oct 2022
	4 th (Nov 2022)	22 Nov 2022
	5 th (Dec 2022)	29 Dec 2022
	6 th (Jan 2023)	30 Jan 2023
	7 th (Feb 2023)	24 Feb 2023
	8 th (Mar 2023)	20 Mar 2023
	9 th (Apr 2023)	19 Apr 2023
	10 th (May 2023)	17 May 2023
	11 th (Jun 2023)	7 Jun 2023
	12 th (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 04, 11, 18 & 25 August 2023. A joint environmental site inspection was carried out by the representatives of the ER, the Contractor, IEC and the ET on 18 September 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:

04 September 2023

Observation(s):

- Over loading of accumulated waste was found at the waste skip of Portion D. The contractor was recommended to increase the frequency of waste collection and the amount of waste skip to avoid over loading condition of waste skip at Portion D.
- Dust drift was found at the assess road of Portion A when vehicle moving. The contractor was advised to increase the frequency of water spraying at the assess road of Portion A.
- The exposed slope surfaces at Portion B2 were not covered by impervious sheets. The contractor was recommended to cover the exposed slope surfaces at Portion B2 by impervious sheet.

11 September 2023

Observation(s):

- Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3. The Contractor should review the effectiveness of setting up sandbag barriers and modify measures to prevent the discharge of surface runoff in both short term and long term. The Contractor was advised to stop the discharge of surface runoff to channel immediately by using any mitigation measures they found appropriate. In long term, the Contractor has been recommended to construct earth bund along the channel to prevent this situation happening again.
- The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast. The Contractor was advised to cover the stockpiles with impervious sheet when they are idle.
- The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken. The broken or collapsed silt fence should be replaced and properly set up after the heavy rainfall from last week.

18 September 2023

Observation(s):

- The demolished tree, shrub or vegetation in Portion B2 should be covered with impervious sheets or placed within a shelter. The Contractor was reminded to cover the demolished tree, shrub or vegetation with impervious sheets or placed within a shelter.
- The dry PFA in Portion B2 should be covered entirely with impervious sheets. The Contractor was reminded to cover dry PFA entirely with impervious sheets.
- The metal plate at the vehicle entrance in Portion B2 should cover unpaved road surface in Portion B2. Vehicle entrance should be paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials.
- General refuse and non-inert waste should be stored in enclosed bins or compaction unit. General waste generated on-site should be stored in enclosed bins or compaction units separately from the construction and chemical wastes.
- Empty chemical containers in Portion E3 should be properly stored before the disposal. The Contractor was reminded to properly store empty chemical container before disposal.
- Sediment/ silt traps shall be incorporated in the temporary drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions. The Contractor was advised to reconstruct the demolished sedimentation basin to act as silt trap and to achieve 5 minutes of retention time under maximum flow condition.
- The main haul road in Portion E4 was dry and dusty. The Contractor was advised to schedule watering and recommended to install water sprinklers or mist spray in long term.

25 September 2023

Observation(s):

- The main haul road and work site should be wetted regularly to minimize the dust dispersion. The Contractor was reminded to switch on the water sprinklers along the haul road in SBA and to schedule watering for unpaved haul road and work area. The Contractor has been advised to increase the frequency of watering if necessary under the hot weather condition to minimize dust dispersion.
- Chemical spillage was observed at Portion E4 and chemical containers should be placed on the drip tray. The Contractor was reminded to dispose chemical waste and provide drip tray for all chemical containers.
- The exposed slope surface along the channel should be paved to reduce SS level in the wastewater. The Contractor was recommended to shotcrete the exposed slope surface along the channel to reduce SS level in the wastewater.
- The accumulated sand or silt in the outlet of the silt removal facility at Portion A should be removed. The Contractor was advised to clear the accumulated sand or silt in the outlet of the silt removal facility at Portion A.

11.1.4 Two general site inspection on 7 & 13 September 2023 were conducted by Environmental Protection Department-Regional Office (North) (EPD-RNG).

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**.

12.2 Summary of Environmental Non-compliance

- 12.2.1** One warning regarding suspected non-compliance event with Condition 1.7 and 2.15(a) of the EP & Condition 1.7 and 2.13(a) of the FEP-01 & FEP-02 was recorded during the reporting period. The related rectified actions are being taken in progress by the contractor.

12.3 Summary of Environmental Complaint

- 12.3.1** One complaint received on 14 September 2023 was recorded during the reporting period.

Environmental Complaint on 14 September 2023

- 12.3.2** The complaint about the water aspect was received by ET on 14 September 2023 at 17:17 via EPD-RNG email. The main content of the complaint mentioned the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Point from EPD). 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.
- 12.3.3** The cumulative statistics on environmental complaints are presented in **Table 12-1**.

Table 12-1 Cumulative Statistics on Environmental Complaints

Reporting Period	Environmental Aspects					No. of Environmental Complaints
	Air Quality	Noise	Water Quality	Waste	Ecology	
Sep 2023	0	0	1	0	0	0
Accumulate of project	1*	0	5(1*)	0	0	6(2*)

Remarks:

- (1) * equal to non-project related after the investigation
(2) # equal to the investigation results will be presented in the report after the investigation.

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

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 Q**.

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 Q**.

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 Q**.

14 Future Key Issues

15.2 Key Issues for the Coming Month

15.2.1 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)

15.2.2 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.

15.3 Monitoring Schedule for the Next Month

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

15.4 Construction Programme for the Next Month

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

16 Conclusion

- 16.1.1 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.
- 16.1.2 Construction noise monitoring was carried out in the reporting month. No Action / Limit Level exceedance at NM1a & NM2a was recorded during the period.
- 16.1.3 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.
- 16.1.4 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.
- 16.1.5 Landfill Gas Monitoring was carried out in the reporting month. No exceedance of Limit Levels of LFG was recorded during the reporting period.
- 16.1.6 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.
- 16.1.7 Post-transplantation monitoring was carried out in the reporting month. The numbers, measurements and health conditions of the transplanted species are recorded.
- 16.1.8 Four environmental site inspections were carried out in the reporting month. Recommendations on mitigation measures for Permit/ Licenses were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 16.1.9 One complaint received on 14 September 2023 was recorded during the reporting period.

Environmental Complaint on 14 September 2023

- 16.1.10 The complaint about the water aspect was received by ET on 14 September 2023 at 17:17 via EPD-RNG email. The main content of the complaint mentioned the muddy water was observed at River Ganges (GR3) (Water Quality Monitoring Point from EPD). 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.
- 16.1.11 One warning regarding suspected non-compliance event with Condition 1.7 and 2.15(a) of the EP & Condition 1.7 and 2.13(a) of the FEP-01 & FEP-02 was recorded during the reporting period. The related rectified actions are being taken in progress by the contractor.

- 16.1.12 No notification of summons and prosecution was received during the reporting period.
- 16.1.13 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

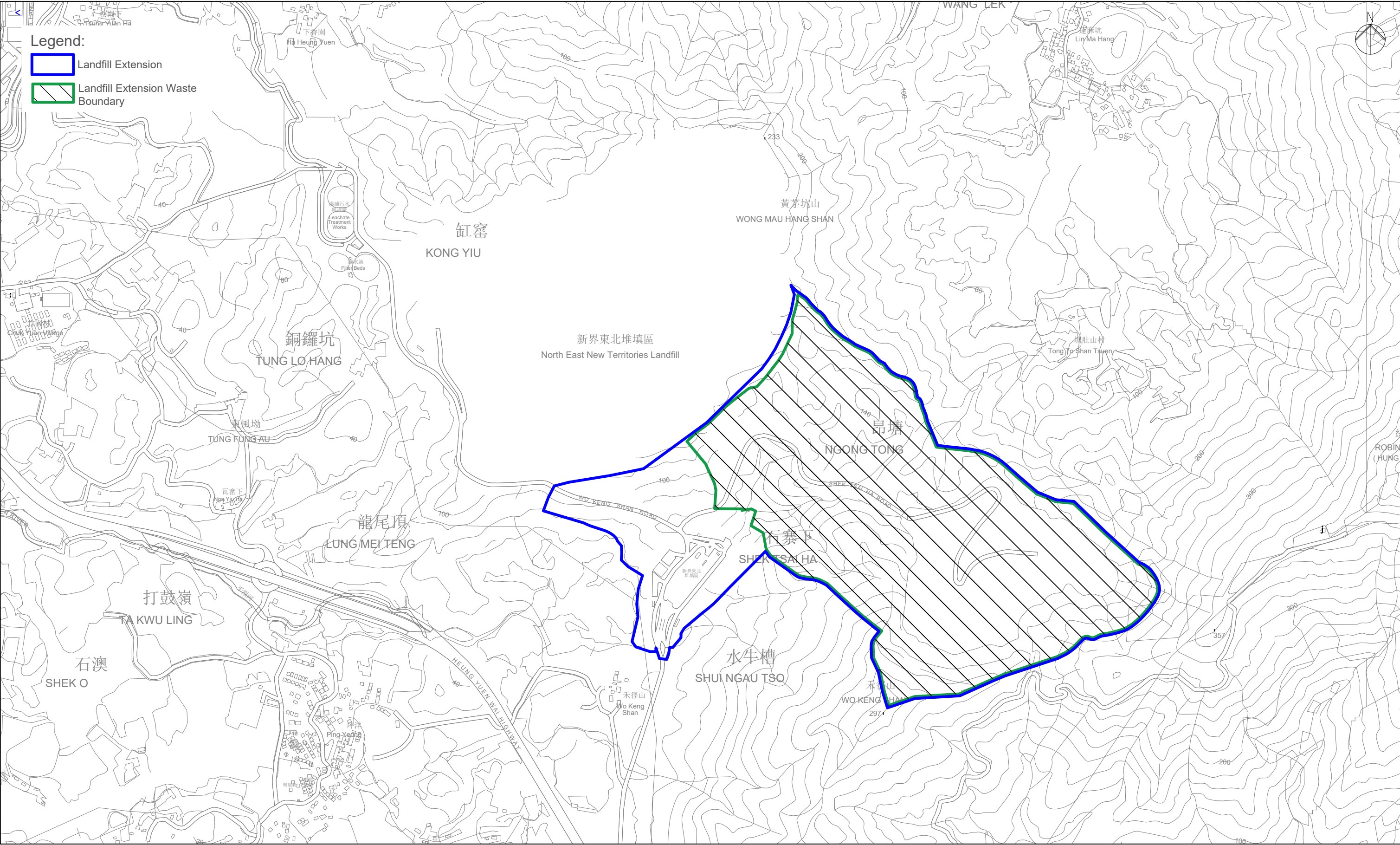


Figure 2 Impact Air Quality, Noise & Surface Water Quality Monitoring Locations

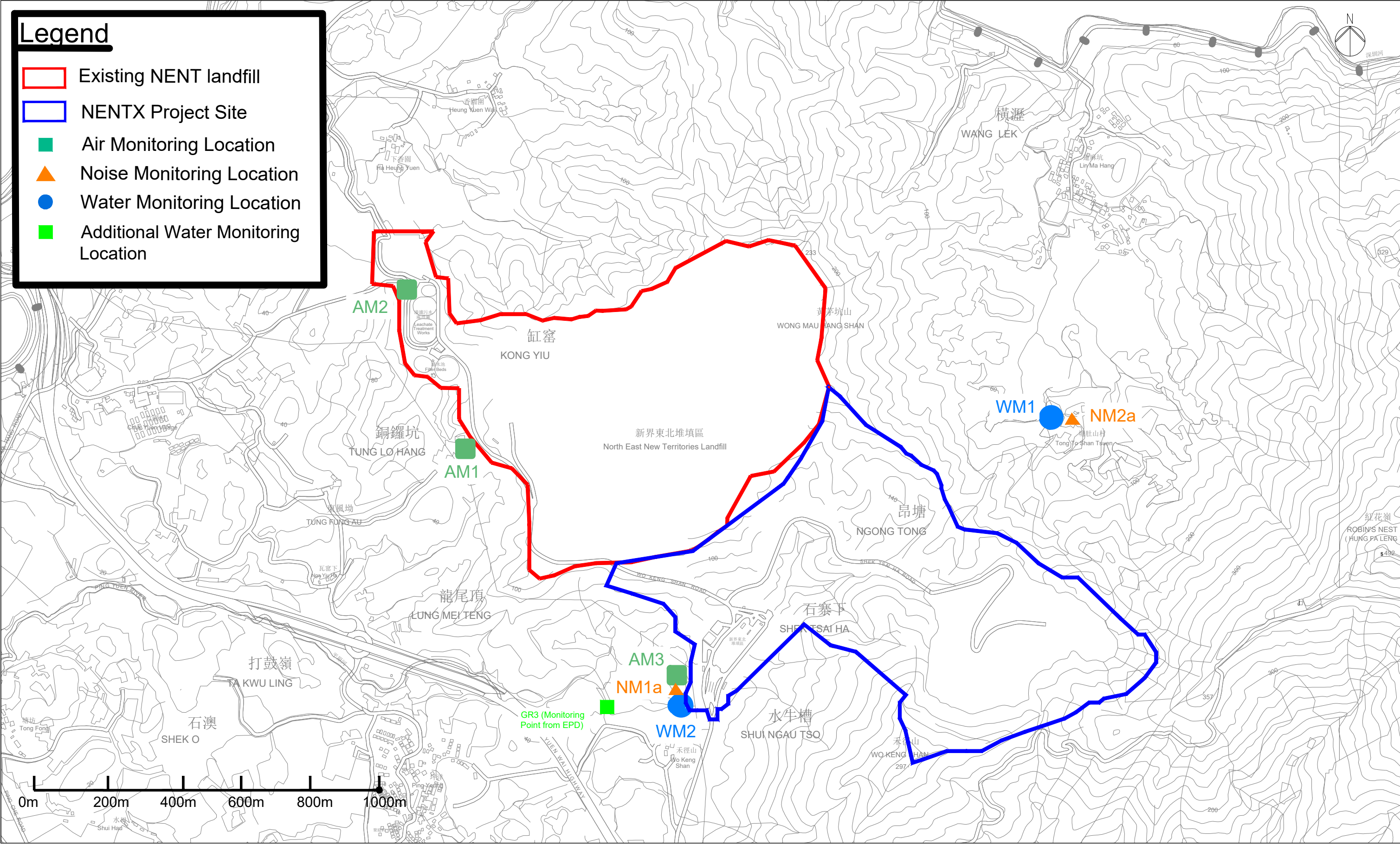


Figure 3 Landfill Gas Monitoring Locations

Gas Monitoring Point ●
Monitoring Frequency: 2 times per day

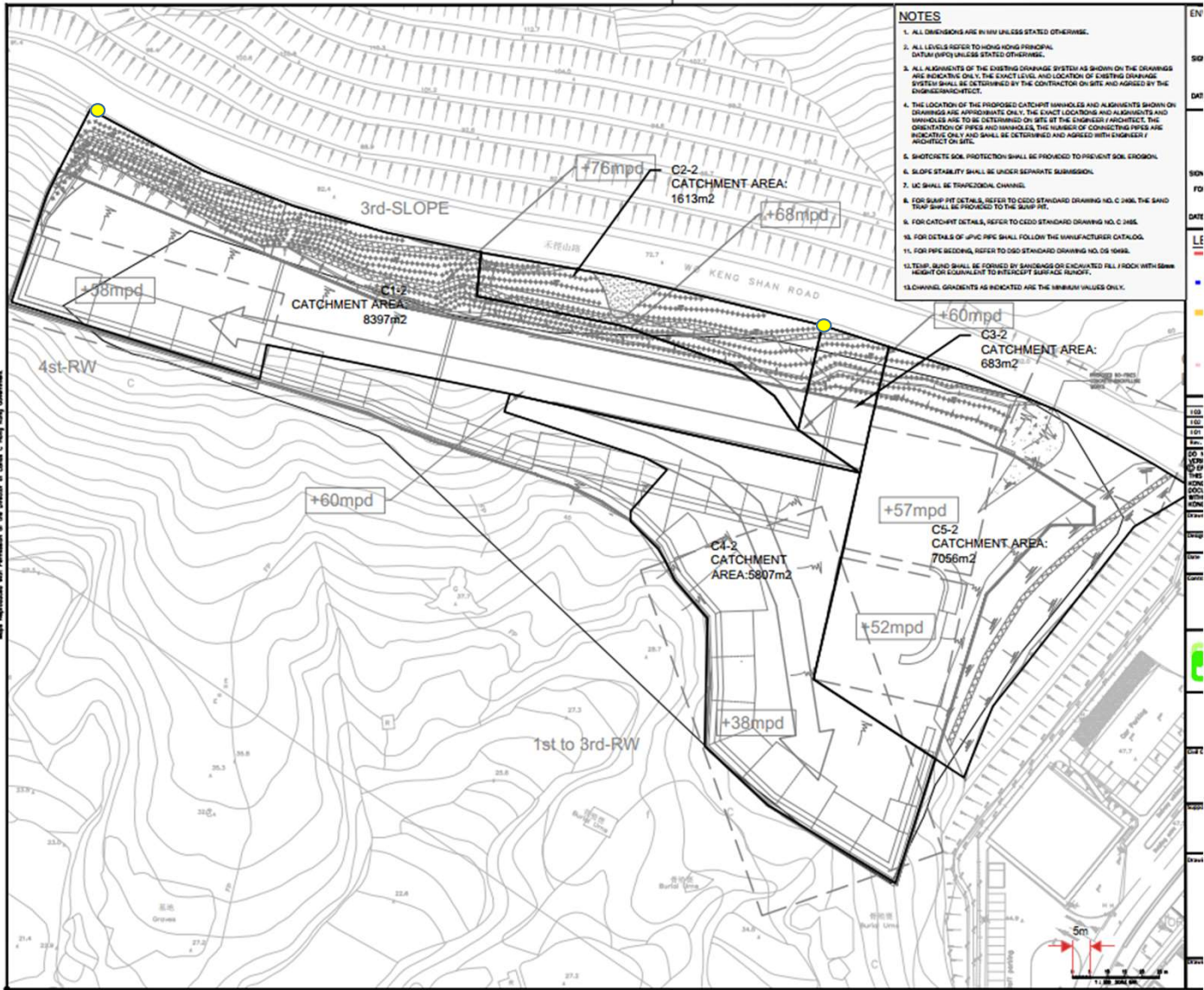
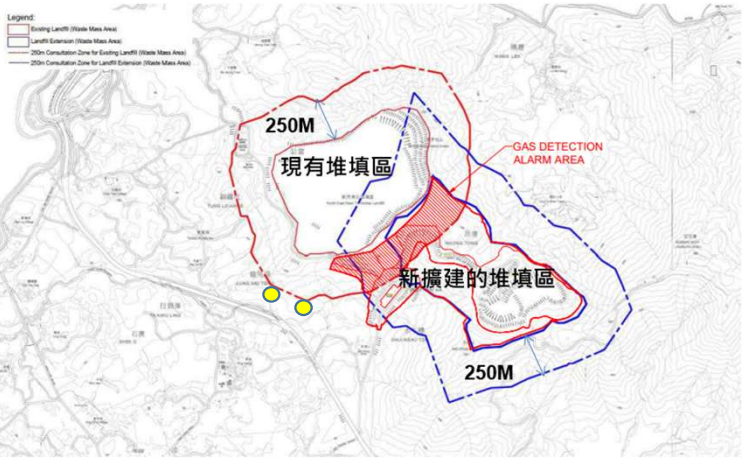



Figure 3 Landfill Gas Monitoring Locations






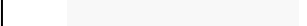
Appendix A Construction Programme



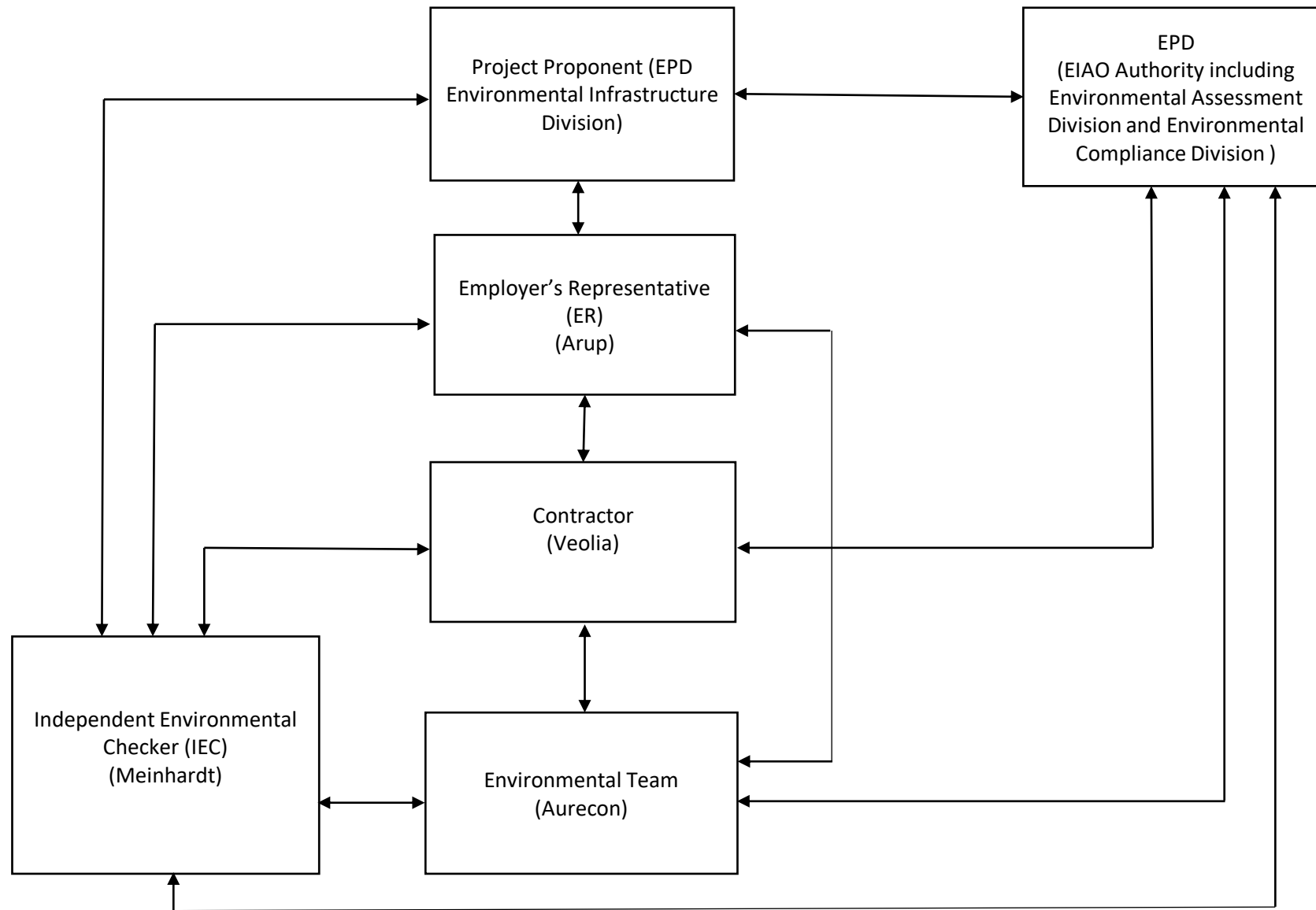
環境保護署
Environmental Protection Department

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[illegible]

	<p>  Remaining Level of Effort Actual Work Remaining Work  Critical Remaining Work  Milestone  Summary </p>	<p align="center"> NORTH EAST NEW TERRITORIES (NENTX) LANDFILL EXTENSION BASELINE PROGRAMME - EXTRACTED (REV.3) INITIAL WORKS (PHASE 1) Page 3 of 4 </p>		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

Appendix C Monitoring Schedule for Reporting Month & Next Month

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

9-2023						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
	28	29	30	31	1	2
3	4 Air quality monitoring at AM1, AM2 and AM3	5	6	7	8	9
10	11 Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	12	13	14 Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	15	16
17	18	19	20 Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a Surface water quality monitoring at WM1 and WM2	21	22	23
24	25	26 Air quality monitoring at AM1, AM2 and AM3 Noise monitoring at NM1a and NM2a	27	28 Air quality monitoring at AM1, AM2 and AM3 Additional Surface water quality monitoring at WM2 and GR3	29	30
1	2	3				

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. Air quality monitoring and noise monitoring on 2 September 2023 was postponed to 4 September 2023 due to the Typhoon Signal No.8.
6. Air quality monitoring and noise monitoring on 8 September 2023 was postponed to 11 September 2023 due to the Black Rainstorm Warning Signal.

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

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

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.**

Appendix D Calibration Certificates

Air Quality

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Representative For Tung Lo Hang	Site ID:	AM1	Date:	06-Jul-2023
Serial No.:	1105	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	754.9	Actual Temperature during Calibration (T_a) (deg K):	294.0
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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	12.60	1.865	52.0	52.18
13	10.20	1.695	46.0	46.16
10	8.00	1.521	42.0	42.14
7	5.00	1.238	34.0	34.12
5	3.00	0.997	26.0	26.09

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

$m = 29.3019$

$b = -2.7348$

Corr. Coeff = 0.9985

Calculations

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

$$IC = I * (\text{Sqrt}(P_a/P_{std}) * (T_{std}/T_a))$$

Q_a = 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

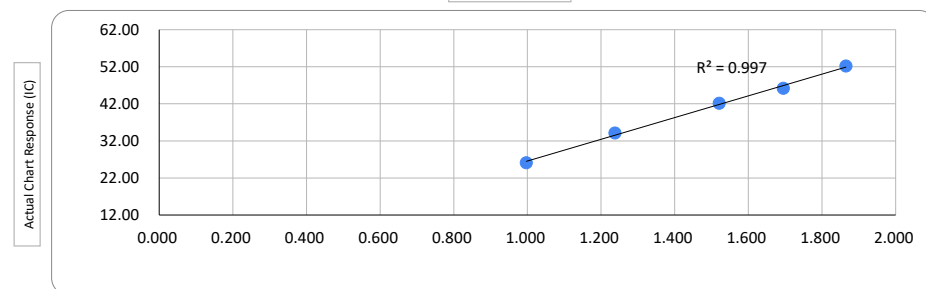
T_{std} = 298 deg K

P_{std} = 760 mm Hg

T_a = actual temperature during calibration (deg K)

P_a = actual pressure during calibration (mm Hg)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse
Senior Consultant, Environmental

Date: 06-Jul-2023

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
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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 Calibration Relationship (Qa on x-axis, IC on y-axis)

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

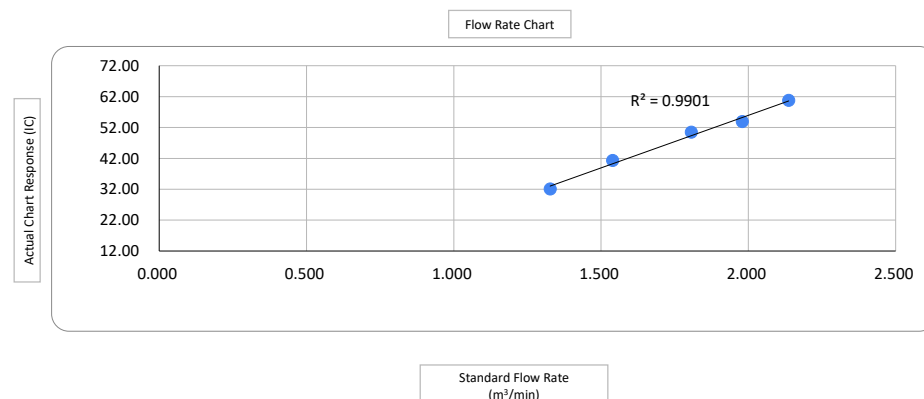
Calculations

$$Q_a = 1/m_c \cdot [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{std}) \cdot (T_{std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{std}) \cdot (T_{std}/T_a))$$

Q_a = 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:	06-Jul-2023
Serial No:	1106	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	754.9	Actual Temperature during Calibration (T_a) (deg K):	294.0
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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	1.824	61.0	61.21
13	10.30	1.702	55.0	55.19
10	8.00	1.521	48.0	48.16
7	5.20	1.259	41.0	41.14
5	3.00	0.997	33.0	33.11

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

$m = 32.9874$

$b = -0.4203$

Corr. Coeff = 0.9946

Calculations

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

$$IC = I * (\text{Sqrt}(P_a/P_{std}) * (T_{std}/T_a))$$

Q_a = 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

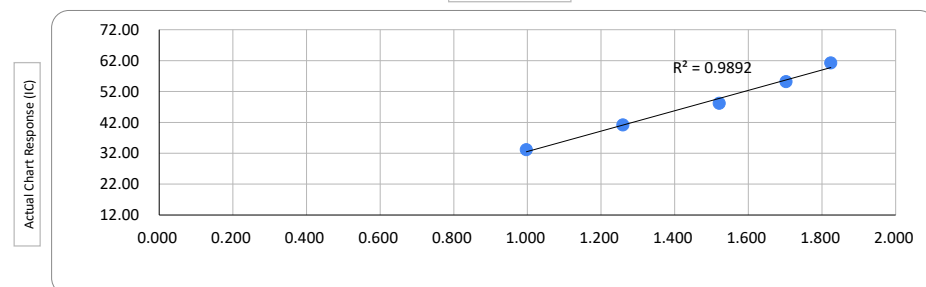
T_{std} = 298 deg K

P_{std} = 760 mm Hg

T_a = actual temperature during calibration (deg K)

P_a = actual pressure during calibration (mm Hg)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse
Senior Consultant, Environmental

Date: 06-Jul-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
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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 Calibration Relationship (Qa on x-axis, IC on y-axis)

$m = 30.2611$ $b = 8.3322$ Corr. Coeff = 0.9963

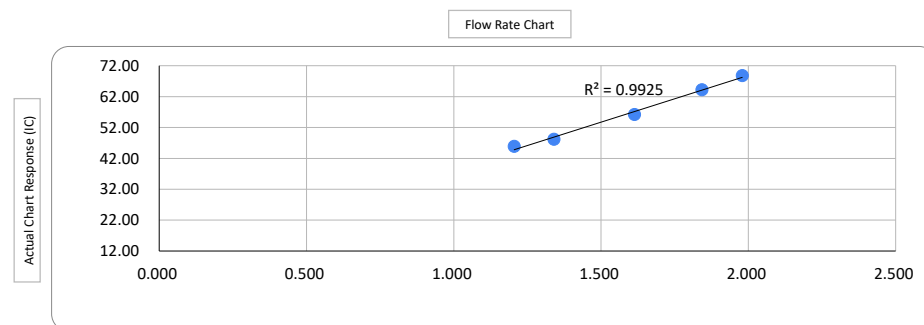
Calculations

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

$$IC = I * (\text{Sqrt}(P_a/P_{std}) * (T_{std}/T_a))$$

Q_a = 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:	06-Jul-2023
Serial No.:	1856	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P_a) (mm Hg):	754.9	Actual Temperature during Calibration (T_a) (deg K):	294.0
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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	12.70	1.872	54.0	54.18
13	10.40	1.710	50.0	50.17
10	8.10	1.529	44.0	44.15
7	5.20	1.259	36.0	36.12
5	3.10	1.011	29.0	29.10

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

$m =$ 29.5749 $b =$ -0.9086 Corr. Coeff = 0.9995

Calculations

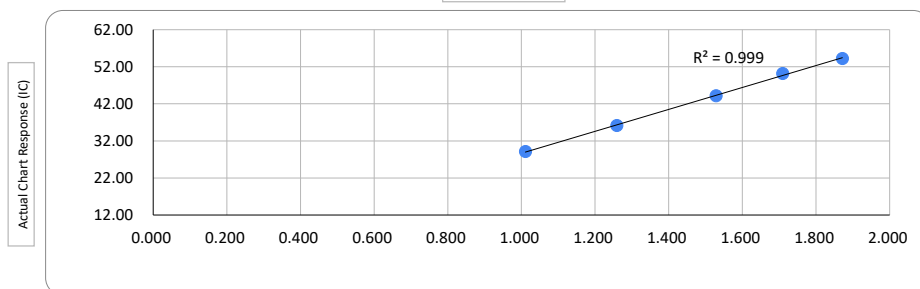
$$Q_a = 1/m_c [\text{Sqrt}(\Delta H_2O * (P_a/P_{std}) * (T_{std}/T_a)) - b_c]$$

$$IC = I * (\text{Sqrt}(P_a/P_{std}) * (T_{std}/T_a))$$

Q_a = 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)

Flow Rate Chart



Standard Flow Rate (m³/min)

Checked by: Tandy Tse
 Senior Consultant, Environmental

Date: 06-Jul-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 Calibration Relationship (Qa on x-axis, IC on y-axis)

$m =$ 21.5825 $b =$ 15.5690 Corr. Coeff = 0.9953

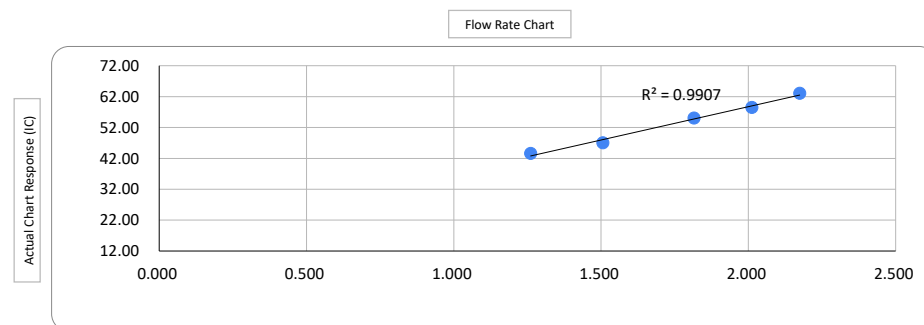
Calculations

$$Q_a = 1/m_c \cdot [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{std}) \cdot (T_{std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{std}) \cdot (T_{std}/T_a))$$

Q_a = 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)



Standard Flow Rate (m³/min)

Checked by: Tandy Tse
 Senior Consultant, Environmental

Date: 04-Sep-2023

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 Reference 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)		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

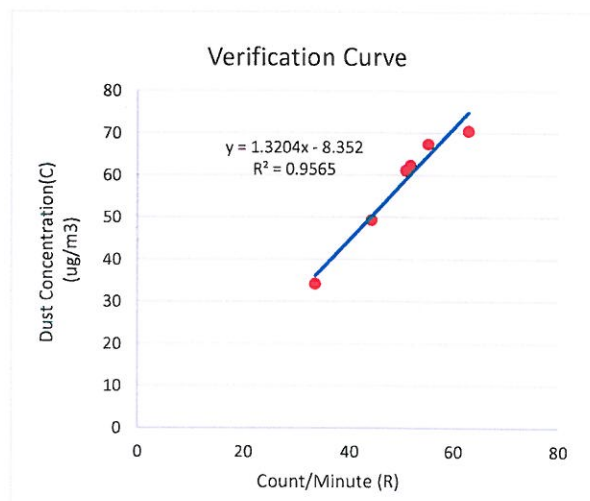
*Correlation Coefficient, R= 0.9780

Verification Test Result: Strong Correlation, Results were accepted.

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

Verified By: 
Technical Manager

Date: 05-12-2022



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 Reference 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)		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

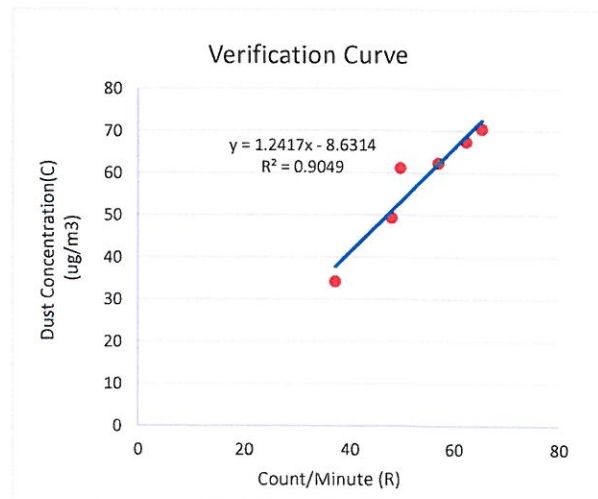
*Correlation Coefficient, R= 0.9513

Verification Test Result: Strong Correlation, Results were accepted.

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

Verified By: IA
Technical Manager

Date: 05-12-2022



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

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

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

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

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

By Linear Regression of y on x:

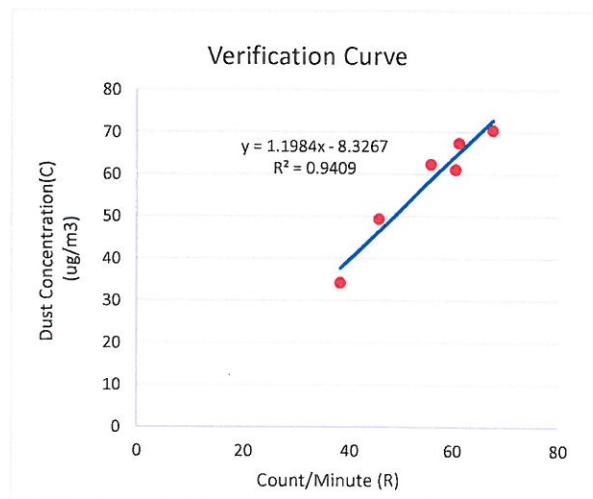
slope, mh= 1.1984

intercept, ch= -8.3267

*Correlation Coefficient, R= 0.9700

Verification Test Result: Strong Correlation, Results were accepted.

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



Verified By: _____

Technical Manager

Date: 05-12-2022

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 Reference 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)		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:

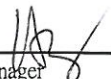
slope, mh= 1.1919

intercept, ch= -5.3851

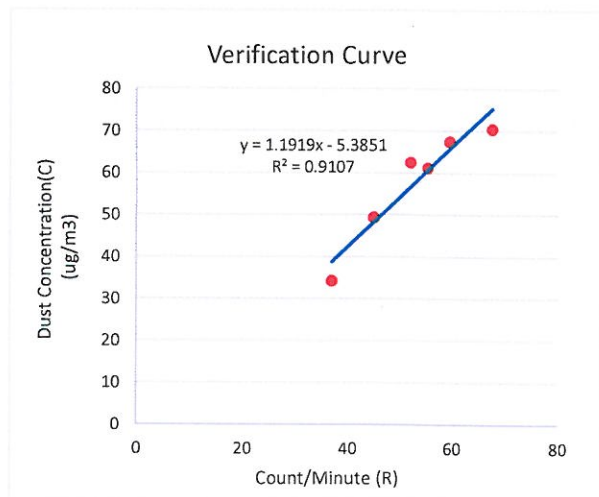
*Correlation Coefficient, R= 0.9543

Verification Test Result: Strong Correlation, Results were accepted.

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

Verified By: 
Technical Manager

Date: 05-12-2022





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)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (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=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	$Vstd/\Delta Time$	Qa=	$Va/\Delta Time$
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= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

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

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	0.995	V	-0.5%	±1.1%	±0.09%
	20 kHz	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.

Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: NTi Audio
Type No.: XL2 (Serial No.: A2A-17638-E0)
Microphone: ACO 7052 (Serial No.:84413)
Preamplifier: NTi Audio M2211 MA220 (Serial No.:7014)

Submitted by:

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

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

- ☒ Within (31.5Hz – 8kHz)
☐ Outside

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:

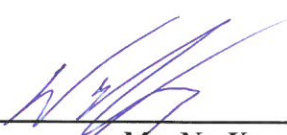
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 30 March 2023

Date of calibration: 04 April 2023

Date of NEXT calibration: 03 April 2024

Calibrated by: 
Calibration Technician

Certified by: 
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 04 April 2023

Certificate No.: APJ22-164-CC001



Page 1 of 4

1. Calibration Precaution:

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

2. Calibration Conditions:

Air Temperature: 21.6 °C
Air Pressure: 1005 hPa
Relative Humidity: 71.6 %

3. Calibration Equipment:

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

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

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

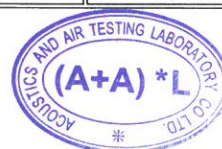
Linearity

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

Time Weighting

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

Certificate No.: APJ22-164-CC001



Page 2 of 4

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB	SPL	94	31.5	94.1	± 2.0
				63	94.1	± 1.5
				125	94.1	± 1.5
				250	94.0	± 1.4
				500	94.1	± 1.4
				1000	94.1	Ref
				2000	94.3	± 1.6
				4000	94.9	± 1.6
				8000	93.9	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA	SPL	94	31.5	54.7	-39.4 ± 2.0
				63	67.9	-26.2 ± 1.5
				125	78.0	-16.1 ± 1.5
				250	85.4	-8.6 ± 1.4
				500	90.9	-3.2 ± 1.4
				1000	94.1	Ref
				2000	95.5	$+1.2 \pm 1.6$
				4000	95.9	$+1.0 \pm 1.6$
				8000	92.8	$-1.1 + 2.1; -3.1$

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC	SPL	94	31.5	91.0	-3.0 ± 2.0
				63	93.3	-0.8 ± 1.5
				125	93.9	-0.2 ± 1.5
				250	94.1	-0.0 ± 1.4
				500	94.2	-0.0 ± 1.4
				1000	94.1	Ref
				2000	94.2	-0.2 ± 1.6
				4000	94.1	-0.8 ± 1.6
				8000	90.9	$-3.0 + 2.1; -3.1$

Certificate No.: APJ22-164-CC001



Page 3 of 4

5. Calibration Results Applied

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

Uncertainties of Applied Value:

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

The uncertainties are evaluated for a 95% confidence level.

Note:

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

Certificate No.: APJ22-164-CC001



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JCSS
JCSS 0197

CALIBRATION CERTIFICATE

Product : SOUND CALIBRATOR
Type : NC-75
Serial number : 35124530
Manufacturer : RION CO., LTD.
Calibration quantities : Sound pressure level (with reference standard microphone)
Calibration method : Measured by specified secondary standard microphone
according to JCSS calibration procedure specified by RION.
Ambient conditions : Temperature 23.9 °C, Relative humidity 49 %,
Static pressure 100.6 kPa
Calibration date : 02/11/2022 (DD/MM/YYYY)
Calibration location : 3-20-41 Higashimotomachi, Kokubunji, Tokyo 185-8533, Japan
RION CO., LTD. Calibration Room

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

Issue date : 09/11/2022 (DD/MM/YYYY)

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



This certificate is based on article 144 of the Measurement Law and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI).

The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).

The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.

The calibration laboratory who issued this calibration certificate conforms to ISO/IEC 17025:2017.

This calibration certificate was issued by the calibration laboratory accredited by IAJapan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). This (These) calibration result(s) may be accepted internationally through ILAC/APAC MRA.

CALIBRATION RESULT

1. Sound pressure level (with reference standard microphone)

Measured value	Expanded uncertainty *1
93.99 dB	0.09 dB

Specified secondary standard microphone:

Type : 4160

Serial number : 2973341

Reference Sound pressure : 2×10^{-5} Pa

*1 Defines an interval estimated to have a level of confidence of approximately 95 %.

Coverage factor $k=2$

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

BE OUT OF JCSS CALIBRATION

1. Frequency

Measured value	Measurement uncertainty ($k=2$)
1000.0 Hz	2.7×10^{-4} Hz

Working measurement standard universal counter:

Type : 53132A

Serial number : MY40005574

(JCSS Calibration Certificate No. 2208001889940)

2. Total distortion

Measured value
0.2 %

Working measurement standard distortion meter:

Type : VA-2230A

Serial number : 11076061

(A2LA Calibration Certificate No. 1502-03109)

- closing -



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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 : $(23 \pm 3)^{\circ}\text{C}$

Relative Humidity : $(50 \pm 25) \%$

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:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
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

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

Date: 13-Feb-23



Calibration Certificate

Certificate No. 300737

Page 2 of 2 Pages

Results :

1. Velocity

Applied Value (m/s)	UUT Reading (m/s)	Mfr's Spec.
0.00	0.00	$\pm (3 \% \text{ of reading} + 0.3 \text{ m/s})$
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	$\pm 2 ^\circ\text{C}$

Remark : 1. UUT: Unit-Under-Test

2. Uncertainty : $\pm (0.9 \% + 0.16 \text{ m/s})$ for Velocity, $\pm 0.1 ^\circ\text{C}$ 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

Page No. : 1 of 2

PART A - CUSTOMER INFORMATION

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

PART B - SAMPLE INFORMATION

Name of Equipment : 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

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
Page No. : 2 of 2

(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 from 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 from relevant international standards.

--- END OF REPORT ---



Calibration Certificate

Certificate No. 210252

Page 1 of 2 Pages

Customer : Acuity Sustainability Consulting Limited

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

Order No. : Q24081

Date of receipt : 31-Oct-22

Item Tested

Description : Flow Probe

Manufacturer : Global Water

Model : FP111

I.D. : --

Serial No. : 22K100859

Test Conditions

Date of Test : 7-Nov-22

Ambient Temperature : 23°C

Supply Voltage : --

Relative Humidity : 78%

Test Specifications

Calibration check.

Ref. Document/Procedure : V12

Test Results

All results were within the manufacturer's specification.

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

Main Test equipment used:

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

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

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

Calibrated by : 
Kin Wong

Approved by : 
Alan Chu

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

Date: 7-Nov-22



Calibration Certificate

Certificate No. 210252

Page 2 of 2 Pages

Results :

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

Remarks : 1. UUT : Unit-Under-Test

2. Uncertainty : ± 1 %, for a confidence probability of not less than 95%.

----- END -----

Landfill Gas

CERTIFICATION OF CALIBRATION



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.

CH₄, CO₂ 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

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance:117 IGC Instance:117

Page 1 of 2 | LP015GIUKAS-2.5

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



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

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Calibration Instance: 117 IGC Instance: 117

Page 2 of 2 | LP015GIUKAS-2.5

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Registered in England and Wales 1898734

PROMAT (HK) LTD

寶時(香港)有限公司

901 New Trend Centre, 704 Prince Edward Road East, San Po Kong, Kowloon, Hong Kong
Tel: (852)2661-2392 Fax: (852)2661-2086 Email: info@promat.hk http://www.promat.hk



Your Solution To Testing Instrument

Calibration Certificate

Customer Name Paul Y Construction Co. Ltd
Model PS200
Serial 373075
Tested On 16 November, 2022
Cal Expires 16 November, 2023

Audible Alarm PASS
Visual Alarm PASS
Calibrated For METHANE
100% LEL Equivalent 4.4% by VOL

Overall Results PASS



Calibration Result

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

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

Calibrated By Ivan Lo :



Appendix E Monitoring Results

Air Quality

1-hour TSP Concentration ($\mu\text{g}/\text{m}^3$) 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/m³	Reading (2) µg/m³	Reading (3) µg/m³	Average µg/m³	Action Level µg/m³	Limit Level µg/m³
4/9/2023	Sibata LD-5R	942532	0.00108	Fine	8:10	9:10	10:10	45	50	49	48	285	500
11/9/2023	Sibata LD-5R	882106	0.00107	Fine	13:12	14:12	15:12	36	39	38	38		
14/9/2023	Sibata LD-5R	942532	0.00108	Fine	8:10	9:10	10:10	36	39	37	37		
20/9/2023	Sibata LD-5R	942532	0.00108	Fine	8:09	9:09	10:09	51	50	54	52		
26/9/2023	Sibata LD-5R	942532	0.00108	Fine	8:06	9:06	10:06	54	50	53	52		
28/9/2023	Sibata LD-5R	942532	0.00108	Fine	8:01	9:01	10:01	39	40	39	39		
Average								44					
Max.								54					
Min.								36					

1-hour TSP Concentration ($\mu\text{g}/\text{m}^3$) at Location AM2

Date	Equipment Brand & Model	Equipment Serial No.	K-factor	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average	Action Level	Limit Level
								µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
4/9/2023	Sibata LD-5R	882106	0.00107	Fine	8:25	9:25	10:25	36	39	38	38	279	500
11/9/2023	Sibata LD-5R	0Z4546	0.00114	Fine	13:22	14:22	15:22	36	37	39	37		
14/9/2023	Sibata LD-5R	882106	0.00107	Fine	8:16	9:16	10:16	40	38	41	40		
20/9/2023	Sibata LD-5R	882106	0.00107	Fine	8:31	9:31	10:31	40	42	41	41		
26/9/2023	Sibata LD-5R	882106	0.00107	Fine	8:16	9:16	10:16	42	40	39	40		
28/9/2023	Sibata LD-5R	882106	0.00107	Fine	8:21	9:21	10:21	40	41	40	40		
Average								39					
Max.								42					
Min.								36					

1-hour TSP Concentration ($\mu\text{g}/\text{m}^3$) at Location AM3

Date	Equipment Brand & Model	Equipment Serial No.	K-factor	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average	Action Level	Limit Level
								µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
4/9/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:40	9:40	10:40	50	51	49	50	285	500
11/9/2023	Sibata LD-5R	942532	0.00108	Fine	13:33	14:33	15:33	41	42	40	41		
14/9/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:30	9:30	10:30	41	44	36	40		
20/9/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:40	9:40	10:40	40	39	41	40		
26/9/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:29	9:29	10:29	51	50	49	50		
28/9/2023	Sibata LD-5R	0Z4545	0.00114	Fine	8:30	9:30	10:30	53	49	50	51		
Average								45					
Max.								53					
Min.								36					

The Summary of TSP 24-hour Concentration (µg/m³) at Location AM1

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time (minutes)	Averaged Flow Rate (cfm)	Averaged Flow Rate (m³/min)	Total Flow Volume (m³)	Filter Weight (g)		Particulate weight (g)	Concentration (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m3)	
		(°C)	(hPa)	Initial	Final					Initial	Final					
4/9/2023	Fine	30.5	1004.6	1597.01	1621.01	1440	41	1.47	2114	2.7155	2.7840	0.0685	32	164	260	
11/9/2023	Fine	28.4	1003.5	1621.01	1645.01	1440	40	1.52	2184	2.6998	2.7769	0.0771	35			
14/9/2023	Fine	31.1	1006.0	1645.01	1669.01	1440	38	1.46	2108	2.7143	2.7942	0.0799	38			
20/9/2023	Fine	30.2	1005.7	1669.01	1693.01	1440	40	1.52	2188	2.7045	2.7943	0.0898	41			
26/9/2023	Fine	29.5	1002.8	1693.01	1717.01	1440	40	1.52	2187	2.6847	2.7844	0.0997	46			
28/9/2023	Fine	29.5	1002.8	1717.01	1741.01	1440	40	1.52	2189	2.6846	2.7898	0.1052	48			
												Average	40			
												Min	32			
												Max	48			

The Summary of 24-hour TSP Concentration (µg/m³) at Location AM2

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time (minutes)	Averaged Flow Rate (cfm)	Flow Rate (m³/min)	Total Flow Volume (m³)	Filter Weight (g)		Particulate weight (g)	Concentration (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m3)	
		(°C)	(hPa)	Initial	Final					Initial	Final					
4/9/2023	Fine	30.5	1004.6	1357.28	1381.28	1440	40	1.20	1734	2.7045	2.7641	0.0596	34	152	260	
11/9/2023	Fine	28.4	1003.5	1381.28	1405.28	1440	40	1.03	1483	2.6744	2.7195	0.0451	30			
14/9/2023	Fine	31.1	1006.0	1405.28	1429.28	1440	40	1.04	1492	2.7046	2.7560	0.0514	34			
20/9/2023	Fine	30.2	1005.7	1429.28	1453.28	1440	39	1.00	1440	2.7099	2.7753	0.0654	45			
26/9/2023	Fine	29.5	1002.8	1453.28	1477.28	1440	40	1.02	1462	2.7251	2.7939	0.0688	47			
28/9/2023	Fine	29.5	1002.8	1477.28	1501.28	1440	42	1.08	1559	2.7180	2.8014	0.0834	53			
												Average	41			
												Min	30			
												Max	53			

The Summary of 24-hour TSP Concentration (µg/m³) at Location AM3

Start Date	Weather Condition	Avg Air Temp	Avg Atmospheric Pressure	Elapse Time		Sampling Time (minutes)	Averaged Flow Rate (cfm)	Flow Rate (m³/min)	Total Flow Volume (m³)	Filter Weight (g)		Particulate weight (g)	Concentration (µg/m³)	Action Level (µg/m³)	Limit Level (µg/m3)	
		(°C)	(hPa)	Initial	Final					Initial	Final					
4/9/2023	Fine	30.5	1004.6	2362.46	2386.46	1440	40	1.36	1957	2.6578	2.7395	0.0817	42	163	260	
11/9/2023	Fine	28.4	1003.5	2386.46	2410.46	1440	40	1.11	1596	2.7194	2.7913	0.0719	45			
14/9/2023	Fine	31.1	1006.0	2410.46	2434.46	1440	40	1.12	1608	2.7074	2.7647	0.0573	36			
20/9/2023	Fine	30.2	1005.7	2434.46	2458.46	1440	38	1.02	1470	2.7201	2.7988	0.0787	54			
26/9/2023	Fine	29.5	1002.8	2458.46	2482.46	1440	42	1.20	1732	2.7049	2.8129	0.1080	62			
28/9/2023	Fine	29.5	1002.8	2482.46	2506.46	1440	41	1.14	1637	2.7202	2.8298	0.1096	67			
												Average	51			
												Min	36			
												Max	67			

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

Noise

Impact Phase Construction Noise Monitoring Data at Location NM1a

Date	Weather	Wind speed	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))										
		m/s			1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th					
11/9/2023	Fine	1.6	13:00	13:30	57.6	58.1	59.6	57.5	56.1	57.2	57.8	59.3	59.9	61.2	59.4	60.3	60.1	46.2	47.2	46.3	46.9	46.4	47.1					
14/9/2023	Fine	2.6	11:00	11:30	58.6	59.1	60.2	59.2	59.1	58.6	59.2	61.7	62.6	60.4	61.2	63.3	63.1	52.6	52.4	51.4	51.6	51.7	52.6					
20/9/2023	Fine	1.6	9:30	10:00	59.1	58.2	60.1	59.2	60.2	58.4	59.3	62.2	61.6	63.6	60.2	62.1	63.3	64.1	55.2	54.4	54.3	54.6	55.4					
26/9/2023	Fine	1.8	8:12	8:42	55.6	56.2	58.1	57.2	55.6	56.1	56.6	57.6	58.3	61.1	61.4	59.1	58.6	46.1	47.1	46.3	47.4	47.6	48.1					
					Average						58.3																	
					Baseline Level						55.4																	
					Action Level						When one valid documented complaint is received																	
					Limit Level						75																	

Impact Phase Construction Noise Monitoring Data at Location NM2a

Date	Weather	Wind speed	Start Time	End Time	L_{eq} (dB(A))							L_{10} (dB(A))						L_{90} (dB(A))						
		m/s			1st	2nd	3rd	4th	5th	6th	Overall (30min)	1st	2nd	3rd	4th	5th	6th	1st	2nd	3rd	4th	5th	6th	
11/9/2023	Fine	1.1	11:00	11:30	50.2	49.3	48.2	50.4	50.6	49.9	49.8	52.3	51.6	51.2	52.6	52.3	51.2	49.6	48.2	47.9	49.2	48.6	48.1	
14/9/2023	Fine	2.1	15:50	16:20	54.5	53.6	55.1	53.4	54.1	53.6	54.1	58.1	57.6	60.1	61.2	60.6	59.1	50.4	61.6	51.7	50.9	52.2	51.7	
20/9/2023	Fine	2.2	14:40	15:10	54.6	53.6	54.4	55.1	54.9	55.3	54.7	58.1	57.2	56.6	58.6	57.7	56.3	50.2	51.6	50.3	51.4	52.2	52.6	
26/9/2023	Fine	1.7	14:06	14:36	53.2	54.3	55.2	54.6	54.6	53.3	54.3	57.1	56.2	57.9	58.1	57.6	56.3	49.1	49.2	49.9	50.2	48.2	49.1	
								Average			53.6													
								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
20-Sep-23	16:49	Fine	0.05	1.0	23.6	7.8	<7.4	<4	7.2	>7.7	>7.8	4.3	>9.2	>9.5	3.0	>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
20-Sep-23	7:45	Fine	0.05	2.0	22.7	7.6	<5	<4	7.2	>7.6	>7.7	12.0	>108.3	>108.9	7.6	>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






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	: HK2337717
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	: 20-Sep-2023
Order number	: ---	Quote number	: HKE/2751/2022_V2	Issue Date	: 05-Oct-2023
C-O-C number	: ---			No. of samples received	: 2
Site	:			No. of samples analysed	: 2

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

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
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 20-Sep-2023 to 05-Oct-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: HK2337717

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 18:15.

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

Sample ID

Sampling date / time

				WM1	WM2	---	---	---
				20-Sep-2023	20-Sep-2023	---	---	---
Compound	CAS Number	LOR	Unit	HK2337717-001	HK2337717-002	-----	-----	-----
EA/ED: Physical and Aggregate Properties								
EA002: pH Value	----	0.1	pH Unit	7.1	7.6	---	---	---
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	50	127	---	---	---
EA025: Suspended Solids (SS)	----	0.1	mg/L	3.0	7.6	---	---	---
ED037: Total Alkalinity as CaCO3	----	1	mg/L	11	31	---	---	---
ED/EK: Inorganic Nonmetallic Parameters								
ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	4	20	---	---	---
ED045K: Chloride	16887-00-6	0.5	mg/L	6	4	---	---	---
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	0.04	0.13	---	---	---
EK058A: Nitrate as N	14797-55-8	0.01	mg/L	0.05	0.24	---	---	---
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.4	0.3	---	---	---
EK071K: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	0.02	<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	9	6	---	---	---
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	1	<1	---	---	---
EG020: Lead	7439-92-1	1	µg/L	<1	1	---	---	---
EG020: Manganese	7439-96-5	1	µg/L	32	563	---	---	---
EG020: Nickel	7440-02-0	1	µg/L	<1	<1	---	---	---
EG020: Zinc	7440-66-6	10	µg/L	14	10	---	---	---
EG032: Calcium	7440-70-2	50	µg/L	2400	16200	---	---	---
EG032: Iron	7439-89-6	10	µg/L	270	670	---	---	---
EG032: Magnesium	7439-95-4	50	µg/L	430	1290	---	---	---
EG032: Potassium	7440-09-7	50	µg/L	680	1450	---	---	---
EG032: Sodium	7440-23-5	50	µg/L	6340	4680	---	---	---



Sub-Matrix: WATER				Sample ID	WM1	WM2	----	----	----
				Sampling date / time	20-Sep-2023	20-Sep-2023	----	----	----
Compound	CAS Number	LOR	Unit		HK2337717-001	HK2337717-002	-----	-----	-----
EM: Microbiological Testing									
EM002: E. coli	----	1	CFU/100mL		160	210	----	----	----
EM003: Total Coliforms	----	1	CFU/100mL		240	290	----	----	----



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 5313143)								
HK2337674-012	Anonymous	EA002: pH Value	----	0.1	pH Unit	7.7	7.8	0.0
HK2337674-018	Anonymous	EA002: pH Value	----	0.1	pH Unit	4.4	4.4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5313144)								
HK2337674-018	Anonymous	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	770	770	0.0
HK2337597-001	Anonymous	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	239	238	0.5
EA/ED: Physical and Aggregate Properties (QC Lot: 5313151)								
HK2337674-007	Anonymous	ED037: Total Alkalinity as CaCO3	----	1	mg/L	232	231	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5321620)								
HK2337717-001	WM1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.0	2.6	13.2
HK2337798-009	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.6	9.7	1.6
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5315990)								
HK2337598-001	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: 5316003)								
HK2337717-001	WM1	ED045K: Chloride	16887-00-6	1	mg/L	6	6	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5316004)								
HK2337717-001	WM1	ED041K: Sulphate as SO4 - Turbidimetric	----	1	mg/L	4	3	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5320391)								
HK2337717-001	WM1	EK086: Sulphite as SO3 2-	14265-45-3	2	mg/L	<2	<2	0.0
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5327553)								
HK2338486-001	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	16.7	16.6	0.3
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5328372)								
HK2337717-001	WM1	EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.4	0.3	0.0
EP: Aggregate Organics (QC Lot: 5329781)								
HK2337717-001	WM1	EP026C: Chemical Oxygen Demand	----	5	mg/L	9	9	0.0
EP: Aggregate Organics (QC Lot: 5337320)								
HK2338711-006	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	<1	<1	0.0
EG: Metals and Major Cations - Total (QC Lot: 5315714)								
HK2337717-001	WM1	EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	<0.2	0.0
		EG020: Copper	7440-50-8	1	µg/L	1	<1	0.0
		EG020: Lead	7439-92-1	1	µg/L	<1	<1	0.0



Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5327553)											
EK055K: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.2	----	89.3	109	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5328372)											
EK061A: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	0.5 mg/L	103	----	89.0	120	----	----
EP: Aggregate Organics (QC Lot: 5315560)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	106	----	77.6	118	----	----
EP: Aggregate Organics (QC Lot: 5329746)											
EP020: Oil & Grease	----	2	mg/L	<2	20 mg/L	83.1	----	81.7	105	----	----
EP: Aggregate Organics (QC Lot: 5329781)											
EP026C: Chemical Oxygen Demand	----	----	mg/L	----	25 mg/L	101	----	92.0	108	----	----
				----	250 mg/L	98.7	----	92.3	106	----	----
EP: Aggregate Organics (QC Lot: 5337320)											
EP005: Total Organic Carbon	----	1	mg/L	<1	5 mg/L	110	----	87.3	120	----	----
				<1	100 mg/L	97.7	----	88.8	120	----	----
EG: Metals and Major Cations - Total (QC Lot: 5315714)											
EG020: Cadmium	7440-43-9	0.2	µg/L	<0.2	5 µg/L	100	----	85.0	109	----	----
EG020: Copper	7440-50-8	1	µg/L	<1	50 µg/L	101	----	90.0	111	----	----
EG020: Lead	7439-92-1	1	µg/L	<1	50 µg/L	104	----	89.0	111	----	----
EG020: Manganese	7439-96-5	1	µg/L	<1	50 µg/L	102	----	85.0	115	----	----
EG020: Nickel	7440-02-0	1	µg/L	<1	50 µg/L	101	----	87.0	110	----	----
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	102	----	86.0	114	----	----
EG: Metals and Major Cations - Total (QC Lot: 5315717)											
EG032: Calcium	7440-70-2	50	µg/L	<50	2000 µg/L	98.8	----	85.0	115	----	----
EG032: Iron	7439-89-6	10	µg/L	<10	2000 µg/L	106	----	85.0	115	----	----
EG032: Magnesium	7439-95-4	50	µg/L	<50	2000 µg/L	105	----	85.0	115	----	----
EG032: Potassium	7440-09-7	50	µg/L	<50	2000 µg/L	102	----	85.0	115	----	----
EG032: Sodium	7440-23-5	50	µg/L	<50	2000 µg/L	106	----	85.0	115	----	----



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

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report							
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)		
Laboratory sample ID	Sample ID	Method: Compound	CAS Number			MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5315990)											
HK2337598-001	Anonymous	EK071K: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	94.6	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5316003)											
HK2337717-001	WM1	ED045K: Chloride	16887-00-6	5 mg/L	93.2	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5316004)											
HK2337717-001	WM1	ED041K: Sulphate as SO4 - Turbidimetric	----	5 mg/L	91.0	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5327553)											
HK2338486-001	Anonymous	EK055K: Ammonia as N	7664-41-7	50 mg/L	105	----	75.0	125	----	----	
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5328372)											
HK2337717-001	WM1	EK061A: Total Kjeldahl Nitrogen as N	----	0.5 mg/L	92.9	----	75.0	125	----	----	
EP: Aggregate Organics (QC Lot: 5329781)											
HK2337592-001	Anonymous	EP026C: Chemical Oxygen Demand	----	10 mg/L	104	----	75.0	125	----	----	
EP: Aggregate Organics (QC Lot: 5337320)											
HK2338711-006	Anonymous	EP005: Total Organic Carbon	----	5 mg/L	101	----	75.0	125	----	----	
EG: Metals and Major Cations - Total (QC Lot: 5315714)											
HK2337598-001	Anonymous	EG020: Cadmium	7440-43-9	5 µg/L	97.2	----	75.0	125	----	----	
		EG020: Copper	7440-50-8	50 µg/L	100	----	75.0	125	----	----	
		EG020: Lead	7439-92-1	50 µg/L	102	----	75.0	125	----	----	
		EG020: Manganese	7439-96-5	50 µg/L	102	----	75.0	125	----	----	
		EG020: Nickel	7440-02-0	50 µg/L	98.9	----	75.0	125	----	----	
		EG020: Zinc	7440-66-6	50 µg/L	99.7	----	75.0	125	----	----	
EG: Metals and Major Cations - Total (QC Lot: 5315717)											
HK2337717-001	WM1	EG032: Calcium	7440-70-2	2000 µg/L	113	----	75.0	125	----	----	
		EG032: Iron	7439-89-6	2000 µg/L	109	----	75.0	125	----	----	
		EG032: Magnesium	7439-95-4	2000 µg/L	108	----	75.0	125	----	----	
		EG032: Potassium	7440-09-7	2000 µg/L	108	----	75.0	125	----	----	



Matrix: WATER

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Sample ID	Method: Compound	CAS Number							
EG: Metals and Major Cations - Total (QC Lot: 5315717) - Continued										
HK2337717-001	WM1	EG032: Sodium	7440-23-5	2000 µg/L	116	----	75.0	125	----	----






CERTIFICATE OF ANALYSIS

Client	: ACUMEN LABORATORY AND TESTING LIMITED	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: HUNTINGTON HUI	Contact	: Richard Fung	Work Order	: HK2338652
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	: 28-Sep-2023
Order number	: ---	Quote number	: HKE/2751/2022_V3	Issue Date	: 09-Oct-2023
C-O-C number	: ---			No. of samples received	: 2
Site	:			No. of samples analysed	: 2

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

<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
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 28-Sep-2023 to 09-Oct-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: HK2338652

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 125mL sterile plastic bottles containing sodium thiosulfate. Sample(s) arrived at the laboratory at 10:05.

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

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

				Sample ID	WM 2	GR 3			
				Sampling date / time	28-Sep-2023	28-Sep-2023			
Compound	CAS Number	LOR	Unit		HK2338652-001	HK2338652-002			
EA/ED: Physical and Aggregate Properties									
EA002: pH Value	----	0.1	pH Unit		7.1	7.2	----	----	----
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm		131	129	----	----	----
EA025: Suspended Solids (SS)	----	0.1	mg/L		5.5	4.9	----	----	----
ED/EK: Inorganic Nonmetallic Parameters									
EK055K: Ammonia as N	7664-41-7	0.01	mg/L		0.12	0.10	----	----	----
EP: Aggregate Organics									
EP005: Total Organic Carbon	----	1	mg/L		2	2	----	----	----
EP026C: Chemical Oxygen Demand	----	5	mg/L		<5	6	----	----	----
EP030: Biochemical Oxygen Demand	----	2	mg/L		<2	<2	----	----	----
EG: Metals and Major Cations - Total									
EG020: Zinc	7440-66-6	10	µg/L		13	20	----	----	----
EG032: Iron	7439-89-6	10	µg/L		910	670	----	----	----
EM: Microbiological Testing									
EM002: E. coli	----	1	CFU/100mL		2100	220	----	----	----
EM003: Total Coliforms	----	1	CFU/100mL		3400	380	----	----	----



Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 5328751)								
HK2338652-001	WM 2	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	131	131	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5328752)								
HK2338652-001	WM 2	EA002: pH Value	----	0.1	pH Unit	7.1	7.1	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 5340160)								
HK2338909-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	1.7	1.5	12.3
HK2338913-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	4.7	4.9	4.7
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5338567)								
HK2339219-001	Anonymous	EK055K: Ammonia as N	7664-41-7	0.01	mg/L	18.9	20.1	6.1
EP: Aggregate Organics (QC Lot: 5337295)								
HK2338652-002	GR 3	EP026C: Chemical Oxygen Demand	----	5	mg/L	6	5	0.0
EP: Aggregate Organics (QC Lot: 5337320)								
HK2338711-006	Anonymous	EP005: Total Organic Carbon	----	1	mg/L	<1	<1	0.0
EG: Metals and Major Cations - Total (QC Lot: 5329872)								
HK2338652-002	GR 3	EG032: Iron	7439-89-6	10	µg/L	670	670	0.0
EG: Metals and Major Cations - Total (QC Lot: 5329873)								
HK2338652-002	GR 3	EG020: Zinc	7440-66-6	10	µg/L	20	19	0.0

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)		
		Method: Compound	CAS Number	LOR		Unit	Result		LCS	DCS	Low	High
EA/ED: Physical and Aggregate Properties (QC Lot: 5328751)												
EA010: Electrical Conductivity @ 25°C		----	1	µS/cm	<1	146.9 µS/cm	98.0	----	93.5	106	----	----
					<1	1412 µS/cm	99.6	----	94.3	105	----	----
EA/ED: Physical and Aggregate Properties (QC Lot: 5340160)												
EA025: Suspended Solids (SS)		----	0.5	mg/L	<0.5	10 mg/L	96.0	----	86.6	113	----	----
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5338567)												
EK055K: Ammonia as N		7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	99.0	----	89.3	109	----	----



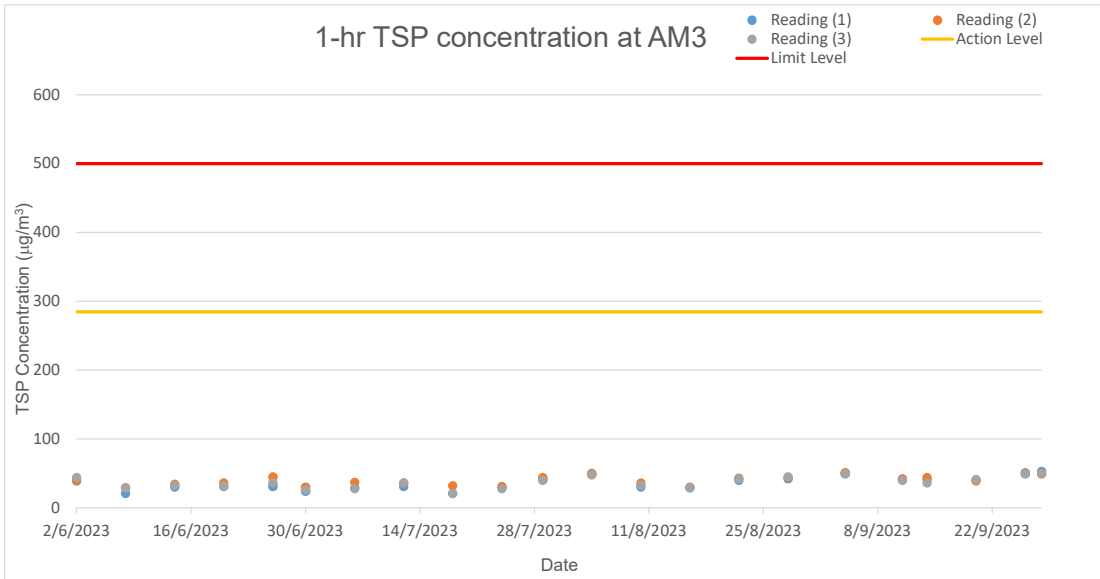
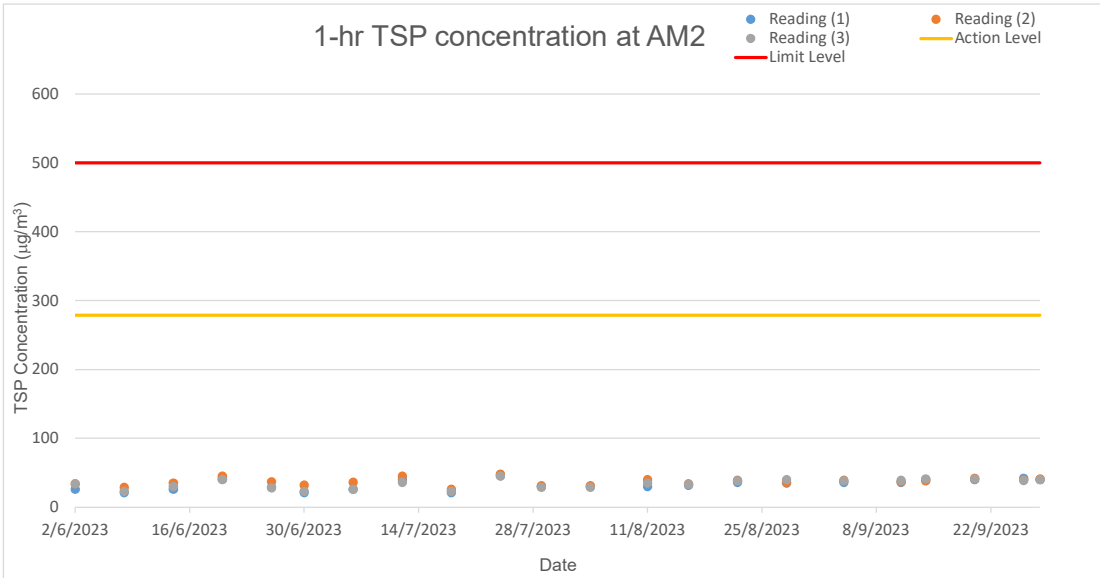
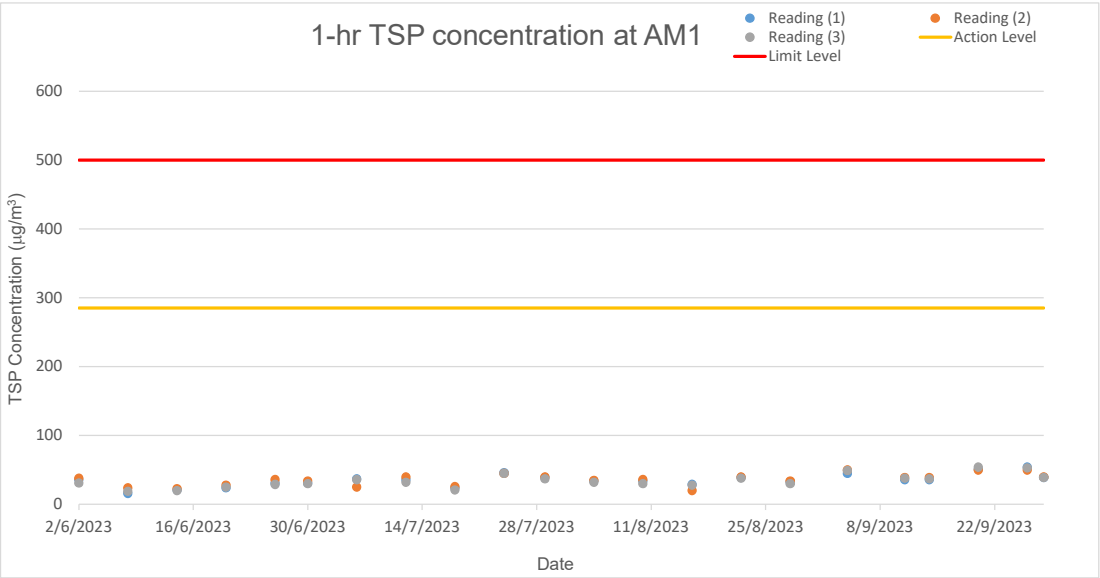
Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	DCS	Low	High	Value	Control Limit
EP: Aggregate Organics (QC Lot: 5328687)											
EP030: Biochemical Oxygen Demand	----	----	mg/L	----	198 mg/L	89.8	----	77.6	118	----	----
EP: Aggregate Organics (QC Lot: 5337295)											
EP026C: Chemical Oxygen Demand	----	----	mg/L	----	25 mg/L	101	----	92.0	108	----	----
				----	250 mg/L	99.6	----	92.3	106	----	----
EP: Aggregate Organics (QC Lot: 5337320)											
EP005: Total Organic Carbon	----	1	mg/L	<1	5 mg/L	110	----	87.3	120	----	----
				<1	100 mg/L	97.7	----	88.8	120	----	----
EG: Metals and Major Cations - Total (QC Lot: 5329872)											
EG032: Iron	7439-89-6	10	µg/L	<10	2000 µg/L	106	----	85.0	115	----	----
EG: Metals and Major Cations - Total (QC Lot: 5329873)											
EG020: Zinc	7440-66-6	10	µg/L	<10	50 µg/L	97.8	----	86.0	114	----	----

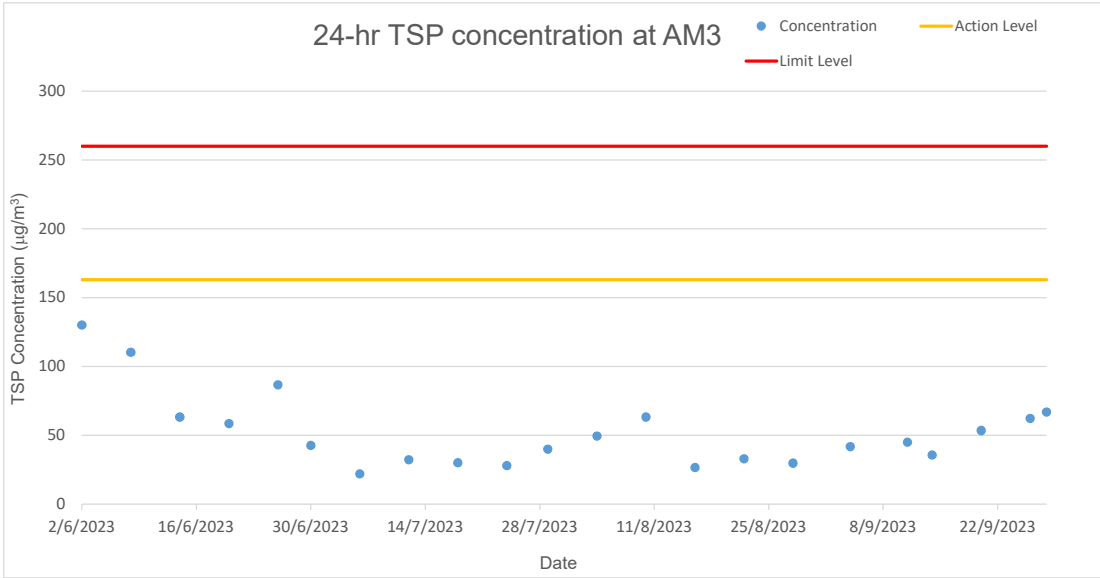
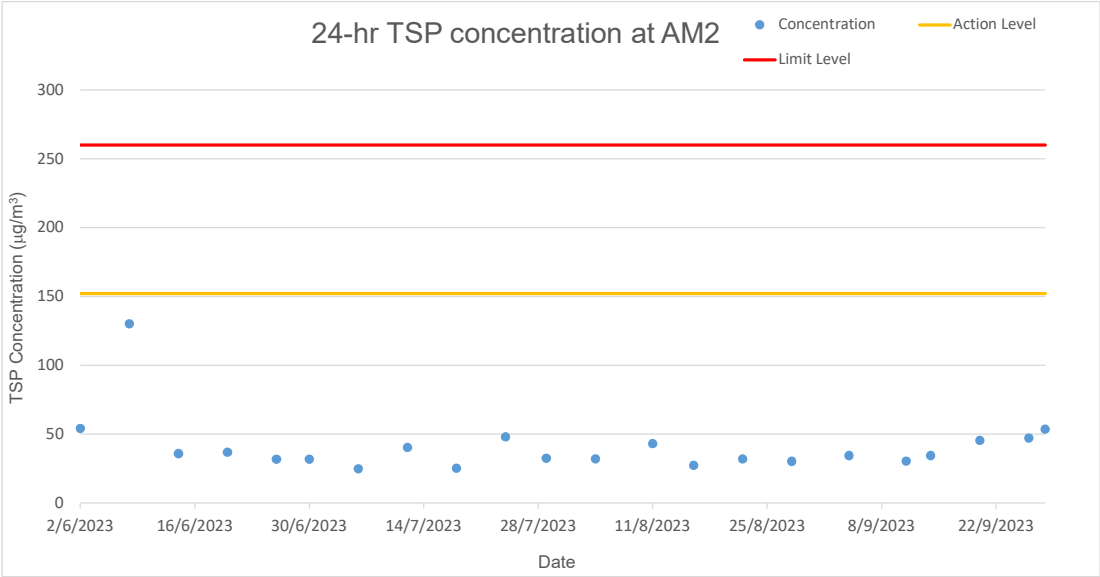
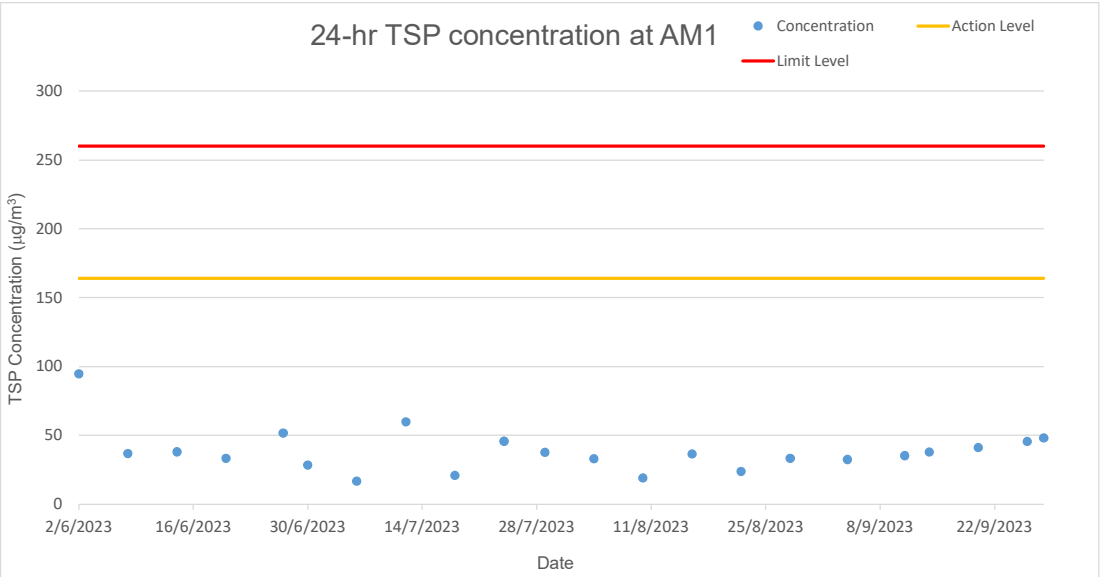
Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPD (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
ED/EK: Inorganic Nonmetallic Parameters (QC Lot: 5338567)										
HK2339219-001	Anonymous	EK055K: Ammonia as N	7664-41-7	50 mg/L	112	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 5337295)										
HK2338652-001	WM 2	EP026C: Chemical Oxygen Demand	----	10 mg/L	99.0	----	75.0	125	----	----
EP: Aggregate Organics (QC Lot: 5337320)										
HK2338711-006	Anonymous	EP005: Total Organic Carbon	----	5 mg/L	101	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 5329872)										
HK2338652-001	WM 2	EG032: Iron	7439-89-6	2000 µg/L	105	----	75.0	125	----	----
EG: Metals and Major Cations - Total (QC Lot: 5329873)										
HK2338652-001	WM 2	EG020: Zinc	7440-66-6	50 µg/L	97.4	----	75.0	125	----	----

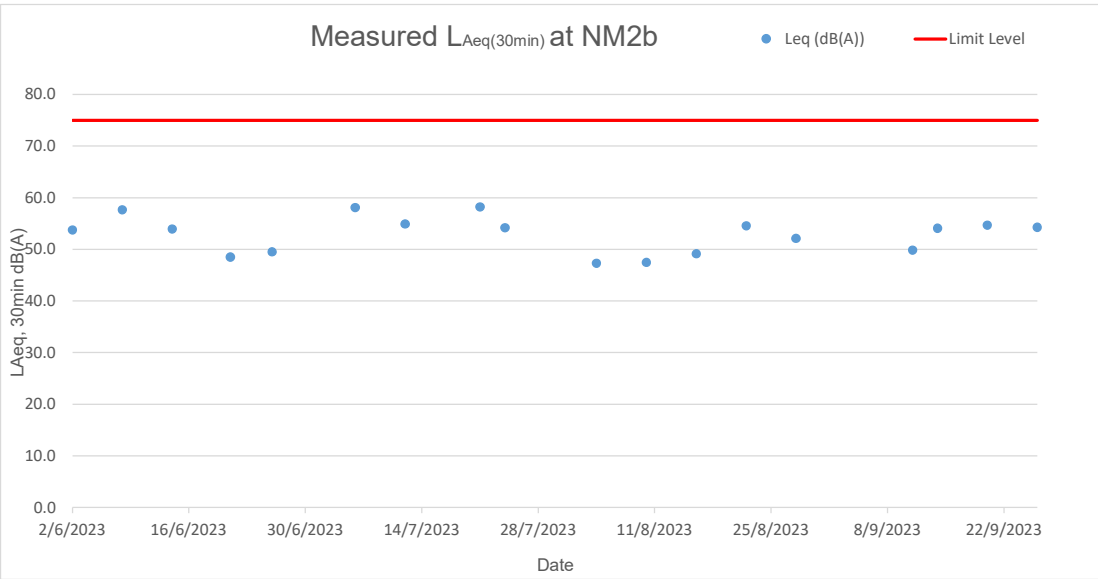
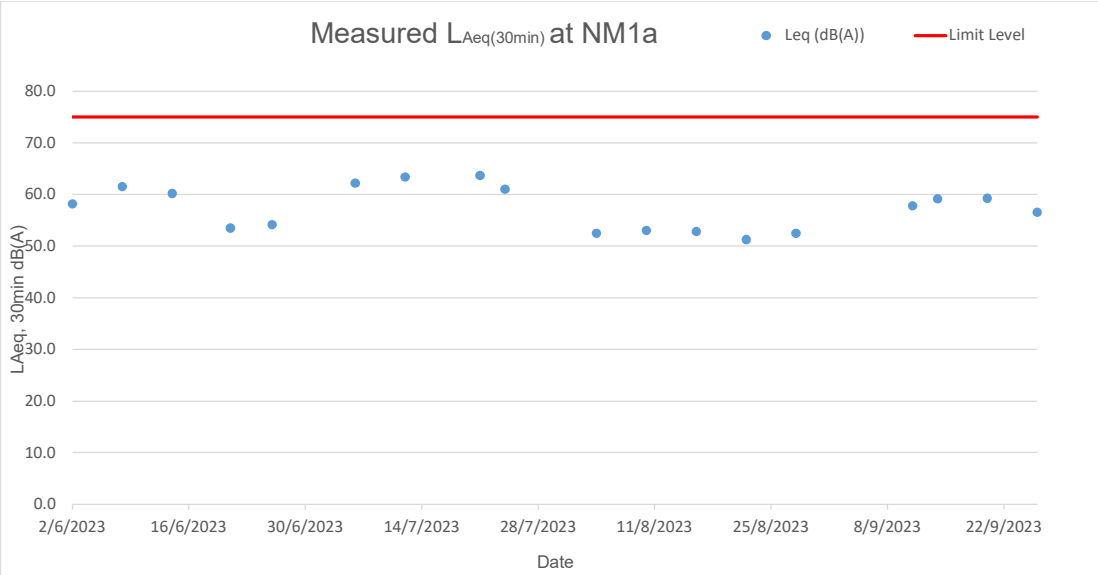
Appendix F Graphical Presentations

Air Quality



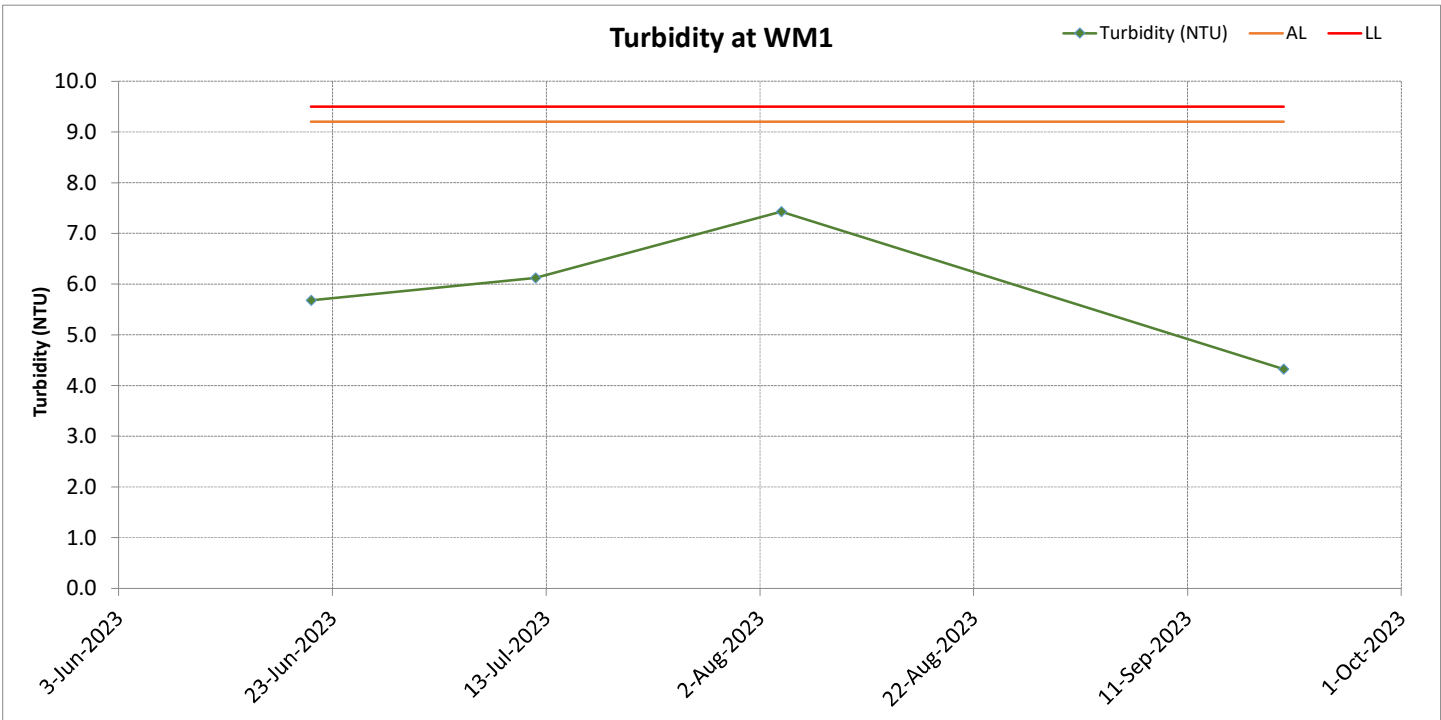
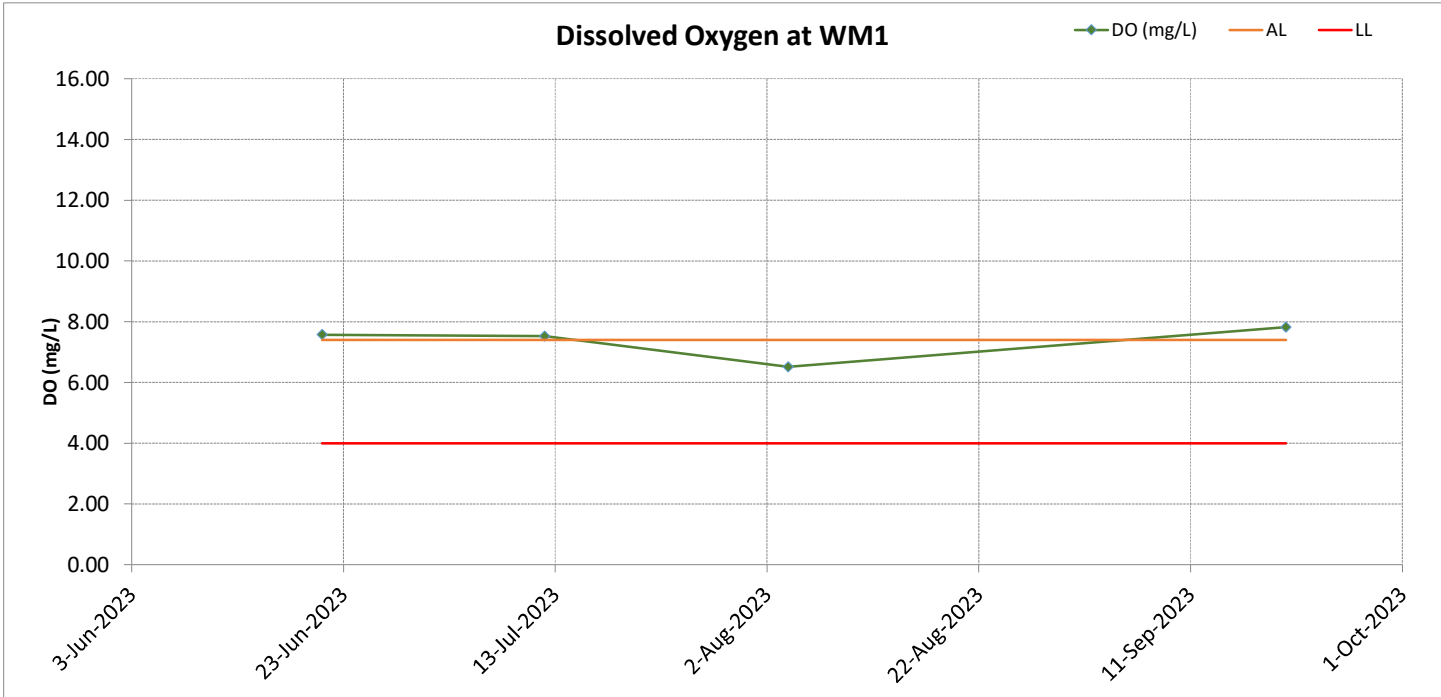


Noise

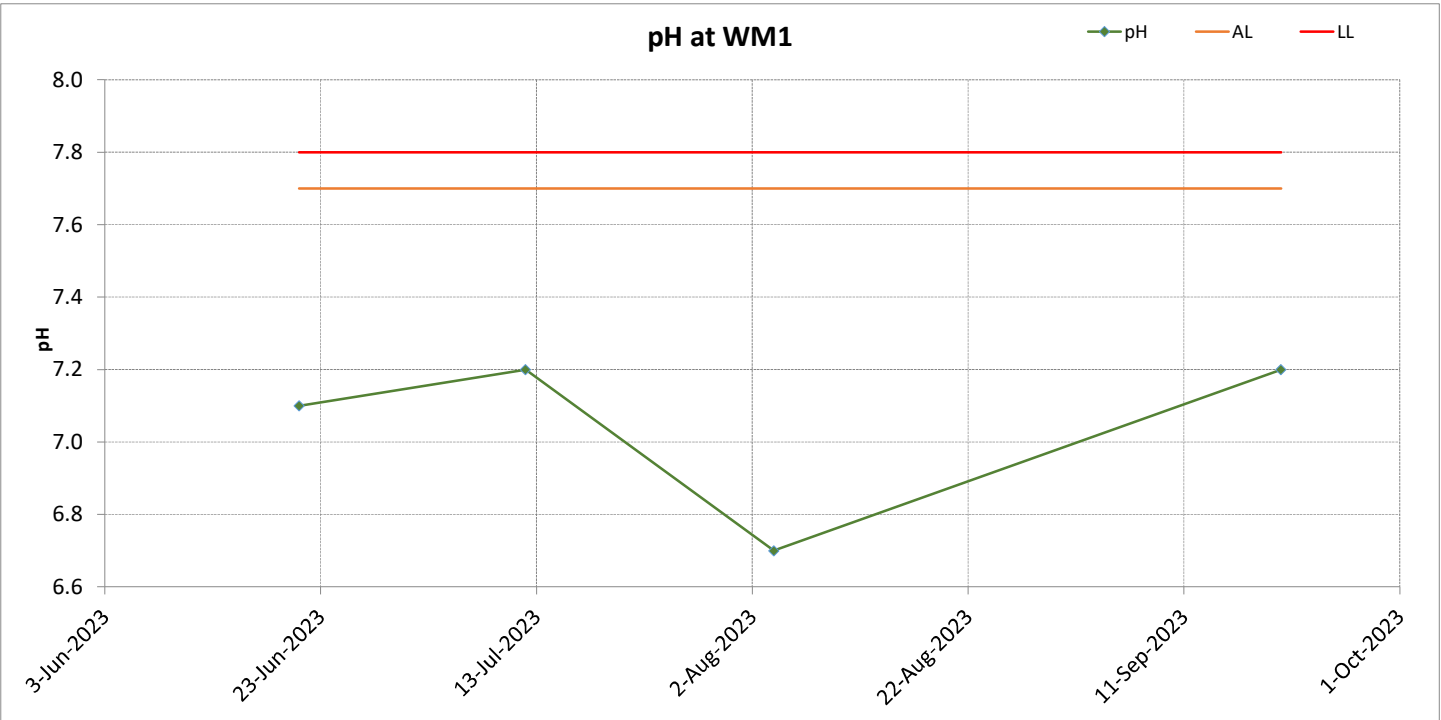
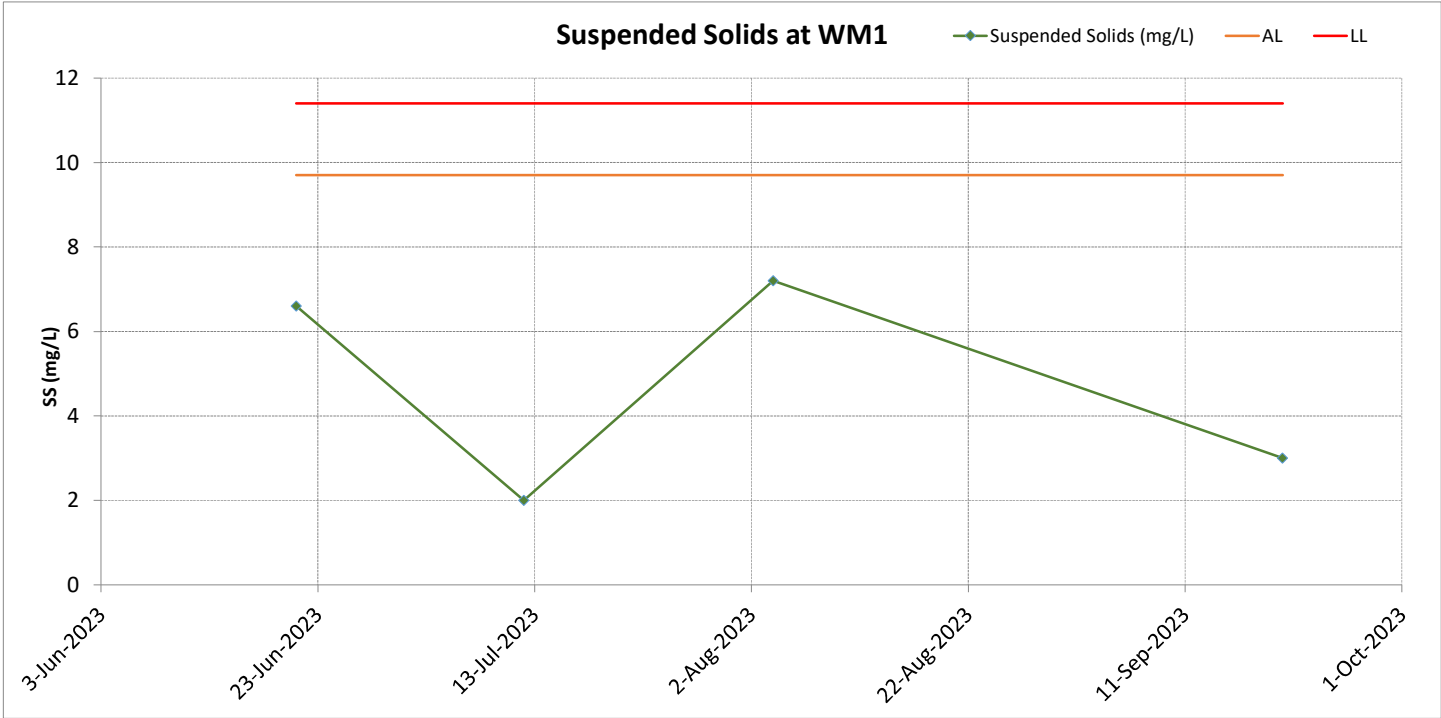


Water Quality

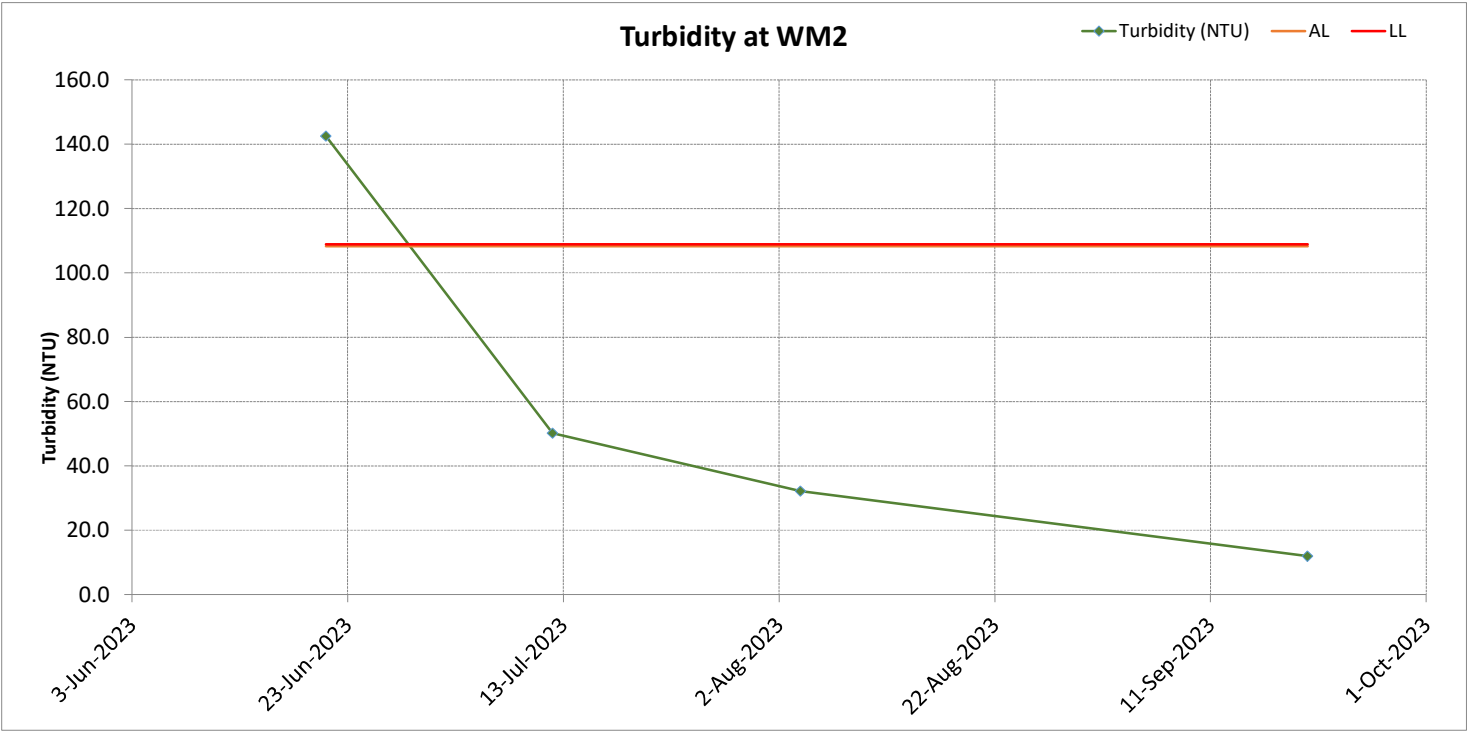
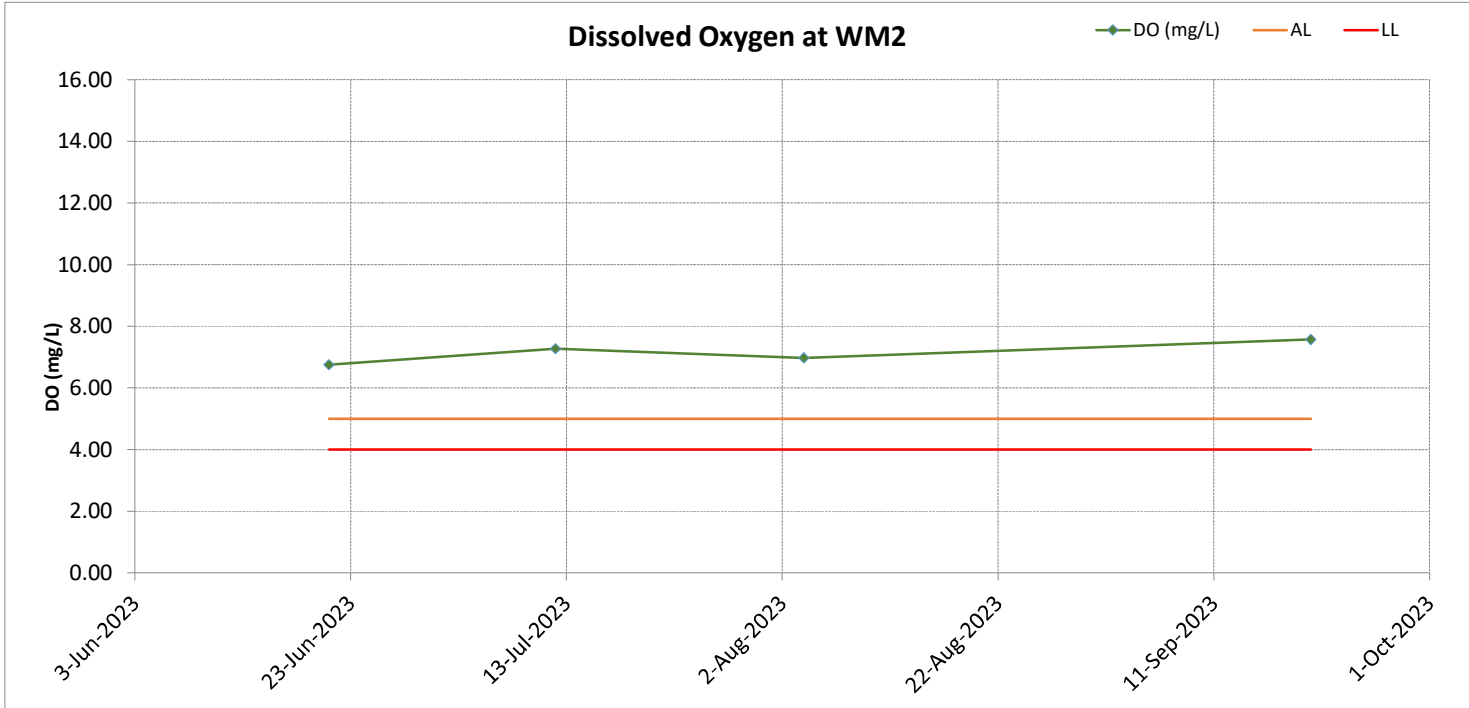
Surface Water Monitoring Results at WM1



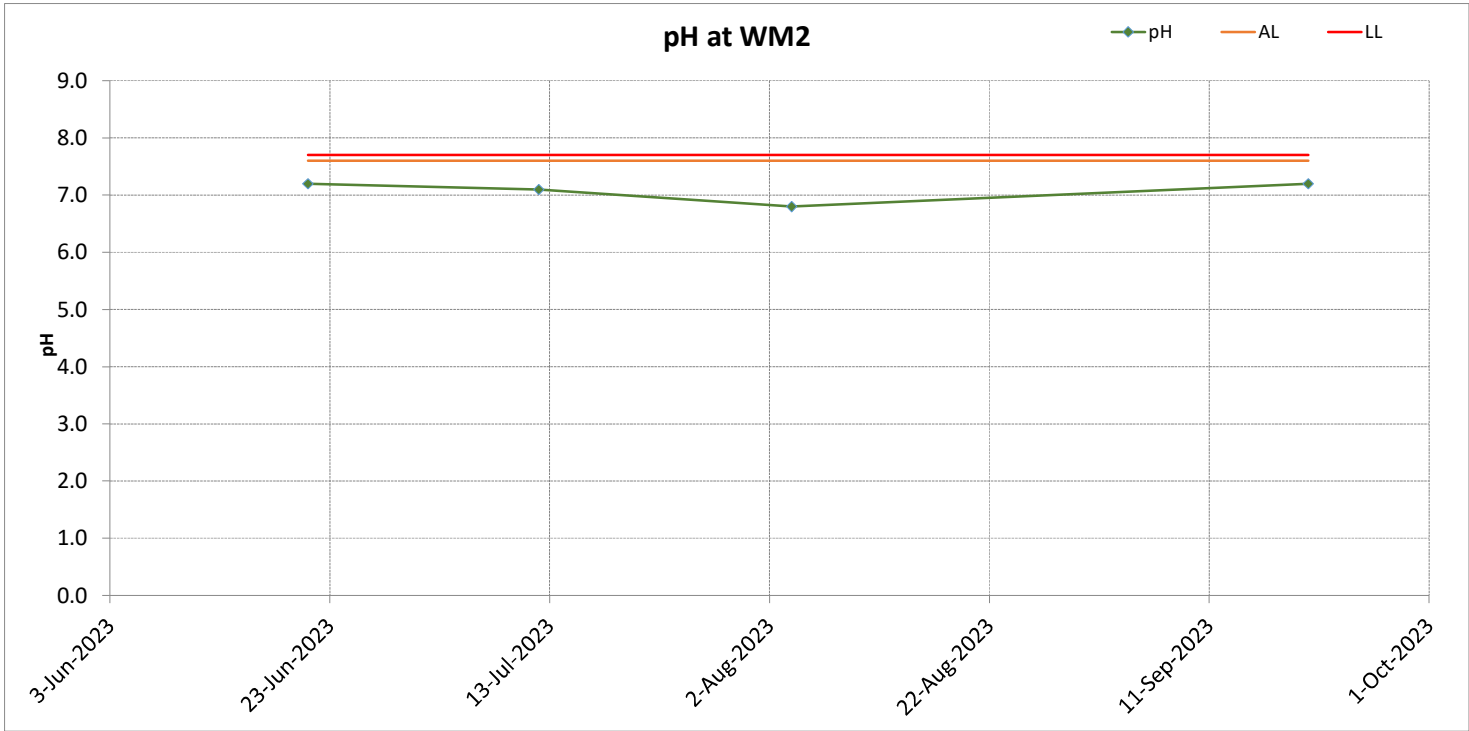
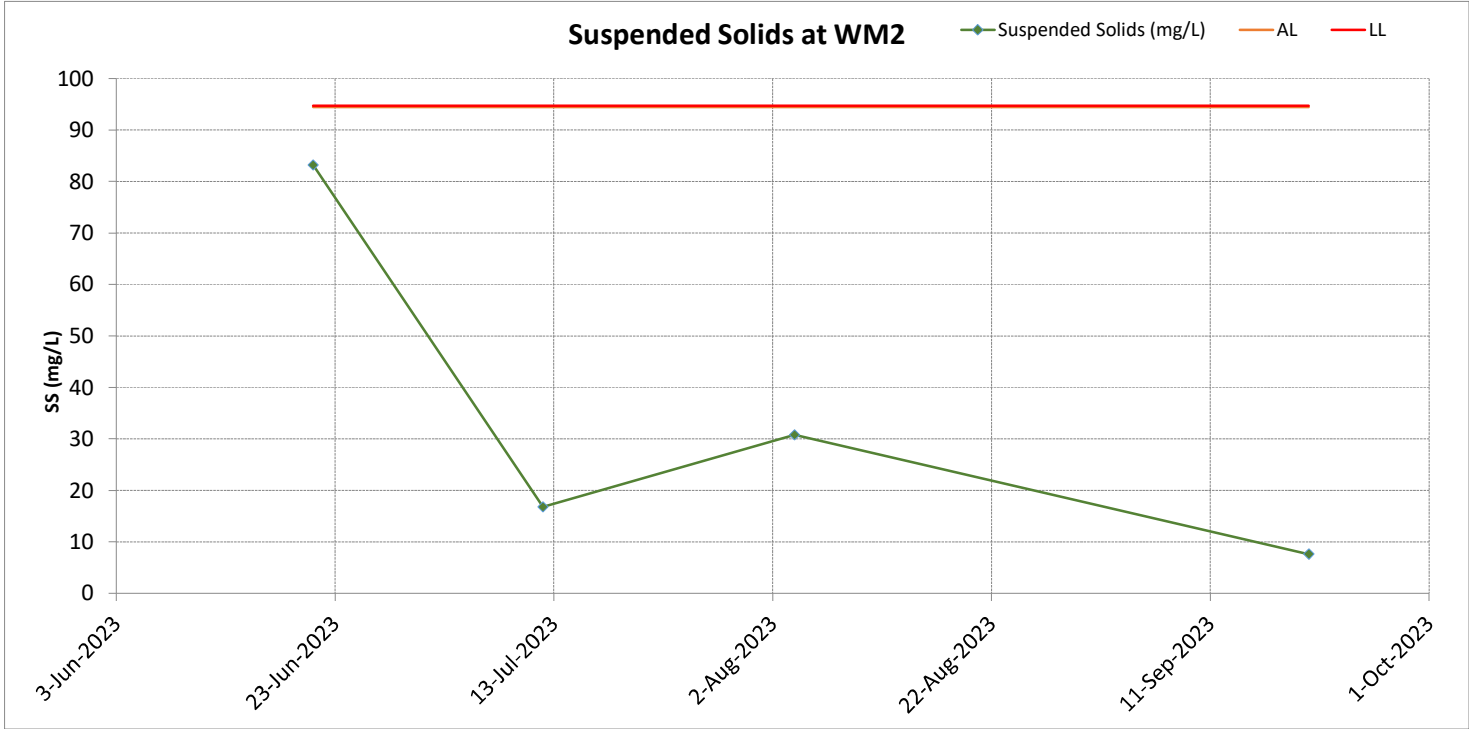
Surface Water Monitoring Results at WM1



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 related
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)
20230901 0000	0.1	310
20230901 0010	0.1	107
20230901 0020	0.1	109
20230901 0030	0.1	73
20230901 0040	0.1	105
20230901 0050	0.1	90
20230901 0100	0.1	243
20230901 0110	0.1	207
20230901 0120	0.1	35
20230901 0130	0.1	119
20230901 0140	0.1	177
20230901 0150	1	94
20230901 0200	0.1	46
20230901 0210	0.1	251
20230901 0220	0.5	173
20230901 0230	0.1	327
20230901 0240	0.1	148
20230901 0250	0.1	161
20230901 0300	0.1	198
20230901 0310	0.1	119
20230901 0320	2.3	202
20230901 0330	0.1	188
20230901 0340	0.2	161
20230901 0350	0.1	145
20230901 0400	0.1	179
20230901 0410	0.1	188
20230901 0420	0.1	124
20230901 0430	0.1	83
20230901 0440	0.9	125
20230901 0450	2.1	154
20230901 0500	0.8	155
20230901 0510	0.1	59
20230901 0520	0.1	117
20230901 0530	0.1	90
20230901 0540	0.1	124
20230901 0550	0.2	162
20230901 0600	0.1	147
20230901 0610	0.1	351
20230901 0620	0.1	153
20230901 0630	0.1	69
20230901 0640	0.1	187
20230901 0650	0.1	219
20230901 0700	0.1	161
20230901 0710	0.6	136
20230901 0720	0.1	128
20230901 0730	0.1	70
20230901 0740	0.1	193
20230901 0750	0.1	96
20230901 0800	0.1	99
20230901 0810	0.1	81
20230901 0820	0.5	118
20230901 0830	0.2	152
20230901 0840	1.8	109
20230901 0850	4.1	98
20230901 0900	0.1	135
20230901 0910	0.5	91
20230901 0920	0.1	37
20230901 0930	0.1	124
20230901 0940	0.1	8
20230901 0950	1.4	246
20230901 1000	3.6	13
20230901 1010	0.3	6
20230901 1020	0.3	83
20230901 1030	2.5	73
20230901 1040	1.1	45
20230901 1050	0.6	104
20230901 1100	1.6	320
20230901 1110	3.6	57
20230901 1120	1.2	111
20230901 1130	0.5	84
20230901 1140	2.6	42
20230901 1150	5.4	25

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230901 1200	6.3	51
20230901 1210	0.3	90
20230901 1220	0.1	121
20230901 1230	0.1	36
20230901 1240	0.6	69
20230901 1250	1.9	38
20230901 1300	7.6	64
20230901 1310	0.1	356
20230901 1320	0.2	5
20230901 1330	0.3	349
20230901 1340	0.2	89
20230901 1350	3.8	41
20230901 1400	0.1	333
20230901 1410	0.1	63
20230901 1420	0.9	50
20230901 1430	0.7	41
20230901 1440	0.1	235
20230901 1450	2.7	60
20230901 1500	0.6	50
20230901 1510	1.8	52
20230901 1520	1.5	120
20230901 1530	1.4	108
20230901 1540	5.7	99
20230901 1550	1.1	100
20230901 1600	1	39
20230901 1610	4.5	93
20230901 1620	0.1	43
20230901 1630	1.3	90
20230901 1640	4.7	130
20230901 1650	0.6	101
20230901 1700	0.3	72
20230901 1710	4.7	39
20230901 1720	2.4	7
20230901 1730	0.1	323
20230901 1740	4.9	335
20230901 1750	8.2	59
20230901 1800	2.4	86
20230901 1810	3.6	15
20230901 1820	3.8	53
20230901 1830	3.1	66
20230901 1840	4.9	13
20230901 1850	4.9	20
20230901 1900	0.7	91
20230901 1910	4.5	8
20230901 1920	1.3	316
20230901 1930	0.6	14
20230901 1940	17.4	322
20230901 1950	10.7	52
20230901 2000	5.8	43
20230901 2010	6.4	347
20230901 2020	3.3	342
20230901 2030	4.1	59
20230901 2040	6.8	44
20230901 2050	2.3	31
20230901 2100	4.1	355
20230901 2110	4.5	135
20230901 2120	3.6	97
20230901 2130	3.8	12
20230901 2140	0.3	193
20230901 2150	10.2	65
20230901 2200	5.1	344
20230901 2210	11.2	354
20230901 2220	9.5	1
20230901 2230	7.8	234
20230901 2240	3.6	102
20230901 2250	9.6	340
20230901 2300	0.2	87
20230901 2310	22.6	42
20230901 2320	7.2	47
20230901 2330	3.2	57
20230901 2340	3.3	63
20230901 2350	2.9	20

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230902 0000	6.6	337
20230902 0010	3.7	352
20230902 0020	2.4	243.5
20230902 0030	0.6	101.6
20230902 0040	0.4	243.4
20230902 0050	8.8	-0.4
20230902 0100	0.4	31.4
20230902 0110	2.3	57.5
20230902 0120	9	10.6
20230902 0130	2.8	2
20230902 0140	5.8	22.8
20230902 0150	1.7	48.1
20230902 0200	13.7	350.6
20230902 0210	0.1	13.7
20230902 0220	9.1	0.3
20230902 0230	3.7	22.5
20230902 0240	0.3	25.7
20230902 0250	0.1	342.6
20230902 0300	6.5	50.9
20230902 0310	0.8	184.3
20230902 0320	5.1	55.7
20230902 0330	3.1	17
20230902 0340	3.2	159.4
20230902 0350	3.8	112.8
20230902 0400	11.1	0
20230902 0410	1.7	182.5
20230902 0420	1.4	45
20230902 0430	1.8	188.8
20230902 0440	2.1	11.8
20230902 0450	2.7	6.7
20230902 0500	0.2	315
20230902 0510	0.4	312
20230902 0520	0.1	262.8
20230902 0530	1.6	30.3
20230902 0540	0.1	68.9
20230902 0550	0.2	104.4
20230902 0600	2.3	29.4
20230902 0610	0.2	42.2
20230902 0620	0.1	190.7
20230902 0630	3	349.5
20230902 0640	3.7	8.6
20230902 0650	1.4	13.5
20230902 0700	0.1	15.2
20230902 0710	8	9.8
20230902 0720	4.3	50
20230902 0730	1.1	159.1
20230902 0740	0.1	21.2
20230902 0750	0.1	333.4
20230902 0800	0.1	46.6
20230902 0810	0.4	291.3
20230902 0820	1.4	28.8
20230902 0830	1.3	150.6
20230902 0840	0.4	195.1
20230902 0850	0.1	340.6
20230902 0900	0.9	307.2
20230902 0910	0.4	27
20230902 0920	0.1	93
20230902 0930	2.3	121.5
20230902 0940	9.4	6.5
20230902 0950	0.5	1.2
20230902 1000	1.2	137.2
20230902 1010	0.2	104
20230902 1020	2.4	353.5
20230902 1030	0.1	280.8
20230902 1040	1.3	302
20230902 1050	0.2	349.2
20230902 1100	0.1	297.1
20230902 1110	1.1	79.9
20230902 1120	0.6	17.9
20230902 1130	5.4	117.4
20230902 1140	0.4	149.6
20230902 1150	0.1	109.7

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230902 1200	0.1	151
20230902 1210	0.3	125
20230902 1220	1.8	328
20230902 1230	0.1	329
20230902 1240	0.4	103
20230902 1250	0.1	181
20230902 1300	1.5	316
20230902 1310	0.6	139
20230902 1320	1.3	83
20230902 1330	0.1	297
20230902 1340	0.4	161
20230902 1350	0.1	310
20230902 1400	0.2	64
20230902 1410	0.7	73
20230902 1420	0.2	103
20230902 1430	0.5	347
20230902 1440	0.1	263
20230902 1450	0.1	110
20230902 1500	7.5	51
20230902 1510	1.5	25
20230902 1520	2.1	86
20230902 1530	0.2	16
20230902 1540	0.4	53
20230902 1550	1.3	5
20230902 1600	0.1	50
20230902 1610	0.1	159
20230902 1620	1.3	154
20230902 1630	0.8	10
20230902 1640	0.1	27
20230902 1650	0.1	11
20230902 1700	0.1	12
20230902 1710	1.4	351
20230902 1720	0.1	325
20230902 1730	0.9	100
20230902 1740	0.1	351
20230902 1750	0.1	25
20230902 1800	0.1	97
20230902 1810	0.1	123
20230902 1820	0.2	114
20230902 1830	1.3	70
20230902 1840	0.1	330
20230902 1850	0.1	294
20230902 1900	0.1	167
20230902 1910	0.1	344
20230902 1920	0.1	43
20230902 1930	0.1	98
20230902 1940	0.1	74
20230902 1950	3.6	13
20230902 2000	0.1	27
20230902 2010	0.1	80
20230902 2020	0.1	343
20230902 2030	0.1	286
20230902 2040	0.1	353
20230902 2050	0.1	354
20230902 2100	0.1	175
20230902 2110	0.1	98
20230902 2120	0.7	74
20230902 2130	0.1	339
20230902 2140	0.2	198
20230902 2150	0.1	5
20230902 2200	0.1	166
20230902 2210	0.1	94
20230902 2220	0.1	42
20230902 2230	0.3	135
20230902 2240	0.1	312
20230902 2250	0.6	57
20230902 2300	0.1	10
20230902 2310	2.6	58
20230902 2320	0.3	129
20230902 2330	0.7	165
20230902 2340	0.1	334
20230902 2350	0.1	285

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230903 0000	0.1	291
20230903 0010	0.1	87
20230903 0020	1.3	27
20230903 0030	4.2	48
20230903 0040	0.1	158
20230903 0050	0.5	227
20230903 0100	0.6	74
20230903 0110	0.8	98
20230903 0120	0.5	52
20230903 0130	0.2	96
20230903 0140	1	8
20230903 0150	1.6	93
20230903 0200	0.1	46
20230903 0210	0.1	152
20230903 0220	0.1	71
20230903 0230	0.1	270
20230903 0240	0.1	116
20230903 0250	0.1	82
20230903 0300	0.1	55
20230903 0310	0.8	352
20230903 0320	0.1	151
20230903 0330	0.1	185
20230903 0340	0.1	169
20230903 0350	0.1	267
20230903 0400	0.4	318
20230903 0410	0.1	67
20230903 0420	0.1	50
20230903 0430	0.1	103
20230903 0440	0.1	137
20230903 0450	0.1	60
20230903 0500	0.3	101
20230903 0510	1	348
20230903 0520	1.4	105
20230903 0530	0.1	136
20230903 0540	0.1	146
20230903 0550	0.1	77
20230903 0600	0.2	144
20230903 0610	0.1	137
20230903 0620	0.1	152
20230903 0630	7.5	103
20230903 0640	0.2	60
20230903 0650	0.1	133
20230903 0700	0.1	86
20230903 0710	0.1	155
20230903 0720	0.5	165
20230903 0730	0.1	233
20230903 0740	0.1	139
20230903 0750	0.3	107
20230903 0800	0.1	173
20230903 0810	0.2	3
20230903 0820	0.1	199
20230903 0830	5	347
20230903 0840	0.3	341
20230903 0850	0.1	100
20230903 0900	0.1	131
20230903 0910	0.4	132
20230903 0920	0.1	199
20230903 0930	1	133
20230903 0940	0.1	65
20230903 0950	0.1	321
20230903 1000	2.6	73
20230903 1010	0.1	112
20230903 1020	0.1	9
20230903 1030	0.1	288
20230903 1040	0.1	24
20230903 1050	3	22
20230903 1100	0.1	2
20230903 1110	0.1	334
20230903 1120	0.1	2
20230903 1130	2.8	177
20230903 1140	1.2	19
20230903 1150	0.1	151

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230903 1200	0.3	64
20230903 1210	2.7	118
20230903 1220	0.4	92
20230903 1230	0.1	88
20230903 1240	0.2	56
20230903 1250	0.2	354
20230903 1300	0.2	326
20230903 1310	1.3	109
20230903 1320	0.1	110
20230903 1330	0.1	18
20230903 1340	0.7	308
20230903 1350	0.3	14
20230903 1400	0.1	356
20230903 1410	0.1	280
20230903 1420	0.1	283
20230903 1430	0.1	45
20230903 1440	0.1	20
20230903 1450	0.1	42
20230903 1500	0.1	138
20230903 1510	1.1	120
20230903 1520	0.6	109
20230903 1530	0.1	203
20230903 1540	1.2	337
20230903 1550	0.1	350
20230903 1600	0.1	149
20230903 1610	0.1	335
20230903 1620	1.6	110
20230903 1630	0.1	339
20230903 1640	0.1	178
20230903 1650	0.6	121
20230903 1700	0.1	58
20230903 1710	0.1	71
20230903 1720	0.2	97
20230903 1730	0.1	116
20230903 1740	0.6	57
20230903 1750	0.1	49
20230903 1800	0.1	54
20230903 1810	0.1	40
20230903 1820	0.1	323
20230903 1830	0.1	231
20230903 1840	0.1	62
20230903 1850	0.1	17
20230903 1900	0.1	18
20230903 1910	0.1	44
20230903 1920	0.1	44
20230903 1930	0.1	44
20230903 1940	0.1	47
20230903 1950	0.1	60
20230903 2000	0.1	41
20230903 2010	0.1	51
20230903 2020	0.1	42
20230903 2030	0.1	53
20230903 2040	0.1	53
20230903 2050	0.1	53
20230903 2100	0.1	51
20230903 2110	0.1	51
20230903 2120	0.1	47
20230903 2130	0.1	46
20230903 2140	0.1	54
20230903 2150	0.1	41
20230903 2200	0.1	9
20230903 2210	0.1	9
20230903 2220	0.1	49
20230903 2230	0.1	39
20230903 2240	0.1	43
20230903 2250	0.1	37
20230903 2300	0.1	38
20230903 2310	0.1	38
20230903 2320	0.1	38
20230903 2330	0.1	201
20230903 2340	0.1	201
20230903 2350	0.1	56

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230904 0000	0.1	56
20230904 0010	0.1	19
20230904 0020	0.1	50
20230904 0030	0.1	50
20230904 0040	0.1	50
20230904 0050	0.1	50
20230904 0100	0.1	50
20230904 0110	0.1	31
20230904 0120	0.1	31
20230904 0130	0.1	31
20230904 0140	0.1	40
20230904 0150	0.1	40
20230904 0200	0.1	38
20230904 0210	0.1	27
20230904 0220	0.1	27
20230904 0230	0.1	33
20230904 0240	0.1	41
20230904 0250	0.1	186
20230904 0300	0.1	20
20230904 0310	0.1	39
20230904 0320	0.1	51
20230904 0330	0.1	51
20230904 0340	0.1	51
20230904 0350	0.1	51
20230904 0400	0.1	51
20230904 0410	0.1	51
20230904 0420	0.1	46
20230904 0430	0.1	325
20230904 0440	0.1	325
20230904 0450	0.1	14
20230904 0500	0.1	33
20230904 0510	0.1	322
20230904 0520	0.1	46
20230904 0530	0.1	337
20230904 0540	0.1	50
20230904 0550	0.1	46
20230904 0600	0.1	46
20230904 0610	0.1	130
20230904 0620	0.1	59
20230904 0630	0.1	208
20230904 0640	0.1	76
20230904 0650	0.1	99
20230904 0700	0.1	210
20230904 0710	0.1	15
20230904 0720	0.1	165
20230904 0730	0.4	186
20230904 0740	0.1	197
20230904 0750	0.9	224
20230904 0800	0.1	129
20230904 0810	2.8	275
20230904 0820	0.1	56
20230904 0830	0.1	297
20230904 0840	0.1	7
20230904 0850	0.1	342
20230904 0900	0.1	4
20230904 0910	0.1	36
20230904 0920	0.1	47
20230904 0930	0.1	347
20230904 0940	1.3	272
20230904 0950	0.1	331
20230904 1000	4.2	89
20230904 1010	2	6
20230904 1020	0.1	28
20230904 1030	0.1	341
20230904 1040	0.1	64
20230904 1050	0.1	282
20230904 1100	0.1	20
20230904 1110	0.1	277
20230904 1120	0.1	73
20230904 1130	0.1	36
20230904 1140	0.2	33
20230904 1150	0.2	295

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230904 1200	0.1	158
20230904 1210	1.1	292
20230904 1220	2.3	216
20230904 1230	0.7	240
20230904 1240	1.5	156
20230904 1250	0.6	80
20230904 1300	3.3	109
20230904 1310	0.1	318
20230904 1320	1	124
20230904 1330	4	218
20230904 1340	2.2	251
20230904 1350	0.1	189
20230904 1400	1.6	230
20230904 1410	1	123
20230904 1420	0.9	274
20230904 1430	0.1	39
20230904 1440	0.1	47
20230904 1450	0.1	60
20230904 1500	0.1	83
20230904 1510	0.1	96
20230904 1520	0.1	136
20230904 1530	0.1	81
20230904 1540	0.1	45
20230904 1550	0.1	74
20230904 1600	0.1	50
20230904 1610	0.1	77
20230904 1620	0.1	106
20230904 1630	0.1	163
20230904 1640	0.7	207
20230904 1650	0.1	126
20230904 1700	0.1	137
20230904 1710	0.1	89
20230904 1720	0.1	38
20230904 1730	0.1	93
20230904 1740	0.1	22
20230904 1750	0.1	3
20230904 1800	0.1	98
20230904 1810	0.1	62
20230904 1820	0.1	70
20230904 1830	0.1	43
20230904 1840	0.1	-1
20230904 1850	0.1	53
20230904 1900	0.1	2
20230904 1910	0.1	40
20230904 1920	0.1	33
20230904 1930	0.1	59
20230904 1940	0.1	120
20230904 1950	0.1	134
20230904 2000	0.1	60
20230904 2010	0.1	170
20230904 2020	0.1	152
20230904 2030	0.1	147
20230904 2040	0.1	85
20230904 2050	0.1	194
20230904 2100	0.1	70
20230904 2110	0.1	112
20230904 2120	0.1	62
20230904 2130	0.1	52
20230904 2140	0.1	43
20230904 2150	0.1	20
20230904 2200	0.1	343
20230904 2210	0.1	50
20230904 2220	0.1	51
20230904 2230	0.1	334
20230904 2240	0.1	12
20230904 2250	0.2	97
20230904 2300	0.3	215
20230904 2310	0.3	334
20230904 2320	0.1	302
20230904 2330	0.1	235
20230904 2340	0.1	34
20230904 2350	0.1	273

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230905 0000	0.1	70
20230905 0010	0.1	62
20230905 0020	0.1	327
20230905 0030	0.1	34
20230905 0040	0.1	34
20230905 0050	0.1	35
20230905 0100	0.1	63
20230905 0110	0.1	63
20230905 0120	0.1	63
20230905 0130	0.1	42
20230905 0140	0.1	46
20230905 0150	0.1	46
20230905 0200	0.1	46
20230905 0210	0.1	46
20230905 0220	0.1	46
20230905 0230	0.1	46
20230905 0240	0.1	46
20230905 0250	0.1	46
20230905 0300	0.1	46
20230905 0310	0.1	51
20230905 0320	0.1	41
20230905 0330	0.1	47
20230905 0340	0.1	57
20230905 0350	0.1	57
20230905 0400	0.1	57
20230905 0410	0.1	57
20230905 0420	0.1	57
20230905 0430	0.1	57
20230905 0440	0.1	57
20230905 0450	0.1	57
20230905 0500	0.1	57
20230905 0510	0.1	57
20230905 0520	0.1	57
20230905 0530	0.1	57
20230905 0540	0.1	57
20230905 0550	0.1	57
20230905 0600	0.1	57
20230905 0610	0.1	57
20230905 0620	0.1	57
20230905 0630	0.1	57
20230905 0640	0.1	57
20230905 0650	0.1	48
20230905 0700	0.1	35
20230905 0710	0.1	103
20230905 0720	0.1	68
20230905 0730	0.1	68
20230905 0740	0.1	64
20230905 0750	0.1	21
20230905 0800	0.1	49
20230905 0810	0.1	76
20230905 0820	0.1	77
20230905 0830	0.1	79
20230905 0840	0.1	79
20230905 0850	0.1	84
20230905 0900	0.1	68
20230905 0910	0.5	161
20230905 0920	0.1	158
20230905 0930	0.9	156
20230905 0940	0.2	98
20230905 0950	0.1	146
20230905 1000	0.1	181
20230905 1010	0.1	178
20230905 1020	0.1	144
20230905 1030	0.1	125
20230905 1040	0.2	77
20230905 1050	0.4	99
20230905 1100	0.5	216
20230905 1110	0.5	219
20230905 1120	0.1	103
20230905 1130	0.4	138
20230905 1140	0.1	97
20230905 1150	0.1	89

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230905 1200	0.1	112
20230905 1210	0.9	162
20230905 1220	0.1	196
20230905 1230	0.2	126
20230905 1240	0.1	184
20230905 1250	0.1	94
20230905 1300	1.2	217
20230905 1310	0.4	213
20230905 1320	0.1	136
20230905 1330	0.1	154
20230905 1340	1.9	150
20230905 1350	1.8	228
20230905 1400	0.1	326
20230905 1410	0.1	188
20230905 1420	1.6	229
20230905 1430	0.4	111
20230905 1440	0.1	79
20230905 1450	1.8	131
20230905 1500	0.3	127
20230905 1510	0.6	228
20230905 1520	0.5	96
20230905 1530	0.1	142
20230905 1540	0.1	54
20230905 1550	0.1	90
20230905 1600	0.1	78
20230905 1610	0.1	79
20230905 1620	0.1	28
20230905 1630	0.1	100
20230905 1640	0.1	127
20230905 1650	0.1	83
20230905 1700	0.1	121
20230905 1710	0.1	57
20230905 1720	0.1	115
20230905 1730	0.1	51
20230905 1740	0.1	313
20230905 1750	0.1	350
20230905 1800	0.1	340
20230905 1810	0.1	56
20230905 1820	0.1	55
20230905 1830	0.1	62
20230905 1840	0.1	57
20230905 1850	0.1	-1
20230905 1900	0.1	49
20230905 1910	0.1	67
20230905 1920	0.1	56
20230905 1930	0.1	101
20230905 1940	0.1	121
20230905 1950	0.1	114
20230905 2000	0.2	51
20230905 2010	0.1	75
20230905 2020	0.1	90
20230905 2030	0.1	66
20230905 2040	0.1	2
20230905 2050	0.1	31
20230905 2100	0.1	41
20230905 2110	0.1	52
20230905 2120	0.1	26
20230905 2130	0.1	29
20230905 2140	0.1	29
20230905 2150	0.1	18
20230905 2200	0.1	60
20230905 2210	0.1	59
20230905 2220	0.1	58
20230905 2230	0.1	31
20230905 2240	0.1	31
20230905 2250	0.1	31
20230905 2300	0.1	31
20230905 2310	0.1	43
20230905 2320	0.1	14
20230905 2330	0.1	32
20230905 2340	0.1	31
20230905 2350	0.1	31

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230906 0000	0.1	31
20230906 0010	0.1	31
20230906 0020	0.1	31
20230906 0030	0.1	22
20230906 0040	0.1	23
20230906 0050	0.1	19
20230906 0100	0.1	32
20230906 0110	0.1	34
20230906 0120	0.1	34
20230906 0130	0.1	7
20230906 0140	0.1	18
20230906 0150	0.1	25
20230906 0200	0.1	22
20230906 0210	0.1	30
20230906 0220	0.1	5
20230906 0230	0.1	63
20230906 0240	0.1	63
20230906 0250	0.1	290
20230906 0300	0.1	101
20230906 0310	0.1	48
20230906 0320	0.1	48
20230906 0330	0.1	50
20230906 0340	0.1	50
20230906 0350	0.1	48
20230906 0400	0.1	48
20230906 0410	0.1	42
20230906 0420	0.1	44
20230906 0430	0.1	40
20230906 0440	0.1	29
20230906 0450	0.1	29
20230906 0500	0.1	29
20230906 0510	0.1	29
20230906 0520	0.1	38
20230906 0530	0.1	38
20230906 0540	0.1	30
20230906 0550	0.1	30
20230906 0600	0.1	31
20230906 0610	0.1	30
20230906 0620	0.1	30
20230906 0630	0.1	31
20230906 0640	0.1	31
20230906 0650	0.1	30
20230906 0700	0.1	30
20230906 0710	0.1	31
20230906 0720	0.1	44
20230906 0730	0.1	81
20230906 0740	0.1	61
20230906 0750	0.1	117
20230906 0800	0.4	96
20230906 0810	0.1	70
20230906 0820	0.1	81
20230906 0830	0.1	75
20230906 0840	0.1	128
20230906 0850	0.2	108
20230906 0900	0.2	147
20230906 0910	0.1	181
20230906 0920	0.1	110
20230906 0930	1.7	128
20230906 0940	0.1	201
20230906 0950	0.1	188
20230906 1000	0.7	305
20230906 1010	0.1	92
20230906 1020	0.1	75
20230906 1030	0.1	93
20230906 1040	0.1	29
20230906 1050	0.1	115
20230906 1100	0.1	90
20230906 1110	0.1	77
20230906 1120	0.4	85
20230906 1130	1.0	100
20230906 1140	0.1	116
20230906 1150	0.1	191

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230906 1200	0.1	22
20230906 1210	0.1	57
20230906 1220	0.4	173
20230906 1230	0.1	279
20230906 1240	0.1	219
20230906 1250	0.1	62
20230906 1300	0.1	81
20230906 1310	0.1	81
20230906 1320	0.1	79
20230906 1330	0.1	91
20230906 1340	0.1	207
20230906 1350	0.3	164
20230906 1400	0.1	177
20230906 1410	0.1	67
20230906 1420	0.1	20
20230906 1430	0.1	121
20230906 1440	0.2	43
20230906 1450	0.1	113
20230906 1500	0.1	100
20230906 1510	0.1	293
20230906 1520	0.1	55
20230906 1530	0.8	44
20230906 1540	0.2	353
20230906 1550	0.1	94
20230906 1600	0.1	279
20230906 1610	0.1	44
20230906 1620	0.1	75
20230906 1630	0.1	27
20230906 1640	0.3	97
20230906 1650	0.1	32
20230906 1700	0.1	89
20230906 1710	0.1	97
20230906 1720	0.1	79
20230906 1730	0.1	7
20230906 1740	0.1	3
20230906 1750	0.1	122
20230906 1800	0.1	51
20230906 1810	0.1	53
20230906 1820	0.1	343
20230906 1830	0.1	343
20230906 1840	0.1	15
20230906 1850	0.1	331
20230906 1900	0.1	10
20230906 1910	1.4	53
20230906 1920	0.1	4
20230906 1930	0.1	8
20230906 1940	0.1	355
20230906 1950	0.1	314
20230906 2000	0.1	314
20230906 2010	0.1	352
20230906 2020	0.1	336
20230906 2030	0.1	336
20230906 2040	0.1	6
20230906 2050	0.1	46
20230906 2100	0.1	50
20230906 2110	0.1	53
20230906 2120	0.1	325
20230906 2130	0.1	45
20230906 2140	0.1	20
20230906 2150	0.1	20
20230906 2200	0.1	28
20230906 2210	0.1	29
20230906 2220	0.1	27
20230906 2230	0.1	276
20230906 2240	0.1	59
20230906 2250	0.1	207
20230906 2300	0.1	207
20230906 2310	0.1	30
20230906 2320	0.1	12
20230906 2330	0.1	329
20230906 2340	0.1	349
20230906 2350	0.1	344

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230907 0000	0.1	3
20230907 0010	0.1	3
20230907 0020	0.1	3
20230907 0030	0.1	3
20230907 0040	0.1	3
20230907 0050	0.2	103
20230907 0100	0.1	267
20230907 0110	0.1	233
20230907 0120	0.1	220
20230907 0130	1.5	331
20230907 0140	0.1	43
20230907 0150	0.3	52
20230907 0200	0.1	36
20230907 0210	0.3	62
20230907 0220	0.1	6
20230907 0230	0.1	59
20230907 0240	0.1	151
20230907 0250	0.1	151
20230907 0300	0.1	151
20230907 0310	0.1	70
20230907 0320	0.1	173
20230907 0330	0.1	187
20230907 0340	0.1	76
20230907 0350	0.1	147
20230907 0400	0.1	42
20230907 0410	0.1	52
20230907 0420	0.1	51
20230907 0430	0.1	51
20230907 0440	0.1	51
20230907 0450	0.1	51
20230907 0500	0.1	51
20230907 0510	0.1	51
20230907 0520	0.1	51
20230907 0530	0.1	51
20230907 0540	0.1	2
20230907 0550	0.1	45
20230907 0600	0.1	299
20230907 0610	0.1	240
20230907 0620	0.1	240
20230907 0630	0.1	15
20230907 0640	0.1	15
20230907 0650	0.1	15
20230907 0700	0.1	15
20230907 0710	0.1	15
20230907 0720	0.1	15
20230907 0730	0.1	342
20230907 0740	0.1	342
20230907 0750	0.1	342
20230907 0800	0.1	346
20230907 0810	0.1	15
20230907 0820	0.1	54
20230907 0830	0.1	0
20230907 0840	0.1	27
20230907 0850	0.1	55
20230907 0900	0.1	78
20230907 0910	0.1	57
20230907 0920	0.1	74
20230907 0930	0.6	131
20230907 0940	0.1	115
20230907 0950	0.1	119
20230907 1000	0.1	107
20230907 1010	0.1	35
20230907 1020	0.1	72
20230907 1030	0.1	51
20230907 1040	0.1	64
20230907 1050	0.1	55
20230907 1100	0.1	35
20230907 1110	0.1	14
20230907 1120	0.1	9
20230907 1130	0.1	46
20230907 1140	0.1	66
20230907 1150	0.1	32

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230907 1200	0.1	96
20230907 1210	0.1	126
20230907 1220	0.1	80
20230907 1230	0.7	101
20230907 1240	0.1	38
20230907 1250	0.4	34
20230907 1300	0.1	54
20230907 1310	0.1	54
20230907 1320	0.1	110
20230907 1330	0.1	331
20230907 1340	0.1	135
20230907 1350	0.1	85
20230907 1400	0.1	12
20230907 1410	0.1	20
20230907 1420	0.1	91
20230907 1430	0.1	0
20230907 1440	0.2	49
20230907 1450	0.2	21
20230907 1500	0.1	126
20230907 1510	0.1	5
20230907 1520	0.2	67
20230907 1530	0.1	95
20230907 1540	0.1	73
20230907 1550	0.1	45
20230907 1600	0.1	122
20230907 1610	0.1	108
20230907 1620	0.1	186
20230907 1630	0.1	216
20230907 1640	0.1	335
20230907 1650	0.1	345
20230907 1700	0.1	210
20230907 1710	1.1	77
20230907 1720	0.1	287
20230907 1730	0.1	208
20230907 1740	0.1	231
20230907 1750	1	335
20230907 1800	0.1	111
20230907 1810	0.1	110
20230907 1820	0.1	100
20230907 1830	0.1	291
20230907 1840	0.1	87
20230907 1850	0.1	231
20230907 1900	0.1	106
20230907 1910	0.1	336
20230907 1920	0.1	74
20230907 1930	0.1	51
20230907 1940	0.3	94
20230907 1950	0.1	254
20230907 2000	0.3	226
20230907 2010	0.1	319
20230907 2020	0.1	354
20230907 2030	0.8	106
20230907 2040	1.3	42
20230907 2050	0.1	349
20230907 2100	2.7	14
20230907 2110	0.1	169
20230907 2120	0.1	355
20230907 2130	0.1	336
20230907 2140	4	100
20230907 2150	0.1	132
20230907 2200	0.1	72
20230907 2210	0.1	247
20230907 2220	0.2	20
20230907 2230	2.8	195
20230907 2240	0.1	240
20230907 2250	0.6	186
20230907 2300	0.1	1
20230907 2310	3.1	36
20230907 2320	1.1	164
20230907 2330	0.1	0
20230907 2340	8.7	28
20230907 2350	0.1	55

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230908 0000	0.6	8
20230908 0010	0.1	0
20230908 0020	0.4	341
20230908 0030	1	337
20230908 0040	0.6	43
20230908 0050	0.5	255
20230908 0100	0.5	29
20230908 0110	0.8	16
20230908 0120	0.1	335
20230908 0130	1.4	233
20230908 0140	0.1	202
20230908 0150	1.1	40
20230908 0200	0.1	50
20230908 0210	0.1	289
20230908 0220	0.1	175
20230908 0230	0.1	37
20230908 0240	2.3	352
20230908 0250	0.1	269
20230908 0300	1.7	158
20230908 0310	0.1	16
20230908 0320	0.1	346
20230908 0330	1.2	89
20230908 0340	0.1	169
20230908 0350	0.3	351
20230908 0400	0.5	260
20230908 0410	0.5	318
20230908 0420	4.1	51
20230908 0430	2	51
20230908 0440	4.9	36
20230908 0450	0.4	100
20230908 0500	0.2	295
20230908 0510	3.3	90
20230908 0520	4.7	120
20230908 0530	0.5	44
20230908 0540	0.3	79
20230908 0550	5	45
20230908 0600	0.3	114
20230908 0610	0.1	333
20230908 0620	9.6	110
20230908 0630	1.1	97
20230908 0640	0.3	144
20230908 0650	6	355
20230908 0700	0.1	4
20230908 0710	0.2	57
20230908 0720	1.1	24
20230908 0730	0.3	78
20230908 0740	0.1	32
20230908 0750	1.1	136
20230908 0800	0.1	191
20230908 0810	0.1	27
20230908 0820	0.1	129
20230908 0830	0.1	17
20230908 0840	1	279
20230908 0850	0.1	22
20230908 0900	0.1	211
20230908 0910	0.1	174
20230908 0920	0.2	146
20230908 0930	0.1	173
20230908 0940	0.1	27
20230908 0950	0.2	77
20230908 1000	0.1	35
20230908 1010	2.6	343
20230908 1020	1.5	22
20230908 1030	1	19
20230908 1040	0.1	153
20230908 1050	0.2	351
20230908 1100	1.4	26
20230908 1110	0.1	30
20230908 1120	0.1	117
20230908 1130	1	25
20230908 1140	0.1	165
20230908 1150	0.1	4

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230908 1200	0.1	188
20230908 1210	0.1	128
20230908 1220	0.1	166
20230908 1230	0.1	186
20230908 1240	0.1	255
20230908 1250	0.1	214
20230908 1300	0.1	59
20230908 1310	0.1	4
20230908 1320	0.1	280
20230908 1330	0.3	269
20230908 1340	0.1	265
20230908 1350	0.1	330
20230908 1400	0.1	234
20230908 1410	0.1	13
20230908 1420	0.1	320
20230908 1430	0.1	21
20230908 1440	0.1	337
20230908 1450	0.1	36
20230908 1500	0.3	58
20230908 1510	0.1	128
20230908 1520	0.1	124
20230908 1530	0.1	206
20230908 1540	0.1	188
20230908 1550	0.1	56
20230908 1600	0.1	77
20230908 1610	0.1	115
20230908 1620	0.1	230
20230908 1630	0.1	274
20230908 1640	0.1	222
20230908 1650	0.1	185
20230908 1700	0.1	191
20230908 1710	0.1	191
20230908 1720	0.1	254
20230908 1730	0.1	141
20230908 1740	0.1	91
20230908 1750	0.1	351
20230908 1800	0.1	51
20230908 1810	0.1	186
20230908 1820	0.1	137
20230908 1830	0.1	251
20230908 1840	0.1	98
20230908 1850	0.1	101
20230908 1900	0.2	95
20230908 1910	0.1	110
20230908 1920	0.8	86
20230908 1930	0.1	85
20230908 1940	0.1	121
20230908 1950	0.3	103
20230908 2000	0.1	147
20230908 2010	0.5	90
20230908 2020	0.1	100
20230908 2030	0.3	313
20230908 2040	0.1	173
20230908 2050	0.7	335
20230908 2100	0.4	190
20230908 2110	0.1	172
20230908 2120	0.1	20
20230908 2130	1.9	326
20230908 2140	0.2	59
20230908 2150	0.1	334
20230908 2200	0.1	90
20230908 2210	0.4	55
20230908 2220	0.1	93
20230908 2230	0.1	352
20230908 2240	0.1	145
20230908 2250	0.1	35
20230908 2300	0.1	344
20230908 2310	1.4	120
20230908 2320	0.8	12
20230908 2330	0.1	66
20230908 2340	0.4	157
20230908 2350	0.1	67

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230909 0000	0.1	174
20230909 0010	0.1	302
20230909 0020	0.2	48
20230909 0030	0.1	15
20230909 0030	1.8	352
20230909 0040	0.1	302
20230909 0050	0.2	44
20230909 0100	4.3	47
20230909 0110	0.1	346
20230909 0120	0.1	13
20230909 0130	1.3	15
20230909 0140	0.1	157
20230909 0150	0.1	74
20230909 0200	0.3	57
20230909 0210	0.1	111
20230909 0220	0.2	50
20230909 0230	0.1	182
20230909 0240	0.1	353
20230909 0250	1.5	29
20230909 0300	0.8	291
20230909 0310	0.1	90
20230909 0320	2.4	2
20230909 0330	4.8	92
20230909 0340	0.3	126
20230909 0350	1.4	3
20230909 0400	0.1	120
20230909 0410	0.1	75
20230909 0420	0.1	136
20230909 0430	0.1	280
20230909 0440	0.3	300
20230909 0450	4.2	340
20230909 0500	0.9	34
20230909 0510	0.1	110
20230909 0520	0.1	-1
20230909 0530	0.1	51
20230909 0540	0.1	97
20230909 0550	0.2	14
20230909 0600	0.3	118
20230909 0610	0.1	2
20230909 0620	2.5	2
20230909 0630	0.9	104
20230909 0640	0.1	50
20230909 0650	0.1	66
20230909 0700	0.1	66
20230909 0710	0.1	130
20230909 0720	0.1	138
20230909 0730	0.7	344
20230909 0740	0.1	299
20230909 0750	0.1	44
20230909 0800	0.4	106
20230909 0810	0.1	310
20230909 0820	0.6	326
20230909 0830	0.1	334
20230909 0840	0.1	34
20230909 0850	0.1	220
20230909 0900	0.1	117
20230909 0910	0.1	63
20230909 0920	0.2	355
20230909 0930	0.1	103
20230909 0940	0.1	260
20230909 0950	0.1	71
20230909 1000	0.1	93
20230909 1010	0.1	39
20230909 1020	0.1	349
20230909 1030	0.1	11
20230909 1040	1.9	132
20230909 1050	0.1	131
20230909 1100	0.1	1
20230909 1110	0.1	4
20230909 1120	0.1	184
20230909 1130	0.1	178
20230909 1140	0.1	23

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230909 1200	0.1	331
20230909 1210	0.2	104
20230909 1220	1.7	10
20230909 1230	1.1	333
20230909 1240	0.1	282
20230909 1250	0.1	349
20230909 1300	0.1	13
20230909 1310	0.1	7
20230909 1320	0.1	146
20230909 1330	0.7	92
20230909 1340	0.4	38
20230909 1350	0.1	39
20230909 1400	0.6	0
20230909 1410	0.1	288
20230909 1420	0.1	4
20230909 1430	0.1	320
20230909 1440	0.1	10
20230909 1450	0.1	14
20230909 1500	0.1	160
20230909 1510	0.1	342
20230909 1520	0.1	86
20230909 1530	0.1	8
20230909 1540	0.1	148
20230909 1550	0.1	175
20230909 1600	0.1	303
20230909 1610	0.1	11
20230909 1620	0.1	114
20230909 1630	0.1	81
20230909 1640	0.3	100
20230909 1650	0.1	56
20230909 1700	0.1	80
20230909 1710	0.1	352
20230909 1720	0.1	2
20230909 1730	0.1	57
20230909 1740	0.1	133
20230909 1750	0.6	43
20230909 1800	0.1	332
20230909 1810	0.1	32
20230909 1820	0.1	87
20230909 1830	0.1	64
20230909 1840	0.1	102
20230909 1850	0.1	320
20230909 1900	0.3	211
20230909 1910	0.2	279
20230909 1920	0.1	270
20230909 1930	0.1	123
20230909 1940	0.1	41
20230909 1950	0.1	335
20230909 2000	0.4	203
20230909 2010	0.1	273
20230909 2020	0.1	40
20230909 2030	0.1	309
20230909 2040	0.1	43
20230909 2050	0.1	343
20230909 2100	0.1	151
20230909 2110	0.1	55
20230909 2120	0.3	94
20230909 2130	0.1	24
20230909 2140	0.1	84
20230909 2150	0.1	67
20230909 2200	0.1	99
20230909 2210	0.1	74
20230909 2220	0.1	114
20230909 2230	0.1	106
20230909 2240	0.1	74
20230909 2250	0.1	262
20230909 2300	0.2	353
20230909 2310	0.1	145
20230909 2320	0.1	66
20230909 2330	0.1	131
20230909 2340	0.1	341
20230909 2350	0.1	18

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230910 0000	0.1	187
20230910 0010	0.1	305
20230910 0020	2.3	8
20230910 0030	0.1	342
20230910 0030	0.6	135
20230910 0040	0.4	115
20230910 0050	1.4	143
20230910 0100	0.2	85
20230910 0110	2.5	110
20230910 0120	0.8	78
20230910 0130	0.1	345
20230910 0140	0.2	129
20230910 0150	0.4	98
20230910 0200	0.1	99
20230910 0210	0.1	177
20230910 0220	0.1	169
20230910 0230	1.9	29
20230910 0240	0.1	329
20230910 0250	8.2	40
20230910 0300	1.6	67
20230910 0300	1.7	25
20230910 0320	0.1	107
20230910 0330	4.5	48
20230910 0340	2	5
20230910 0350	2	134
20230910 0400	0.1	188
20230910 0410	1.2	13
20230910 0420	0.1	51
20230910 0430	2.1	46
20230910 0440	0.9	109
20230910 0450	0.2	317
20230910 0500	0.1	157
20230910 0510	0.1	15
20230910 0520	0.1	218
20230910 0530	1.8	354
20230910 0540	2.5	25
20230910 0550	0.3	173
20230910 0600	1	140
20230910 0610	0.1	8
20230910 0620	0.1	31
20230910 0630	0.3	117
20230910 0640	0.1	116
20230910 0650	2.4	345
20230910 0700	0.1	350
20230910 0710	0.3	19
20230910 0720	1	19
20230910 0730	0.1	16
20230910 0740	1.4	128
20230910 0750	0.1	132
20230910 0800	0.2	86
20230910 0810	0.1	247
20230910 0820	0.1	129
20230910 0830	0.1	149
20230910 0840	0.9	7
20230910 0850	0.1	67
20230910 0900	0.1	180
20230910 0910	0.1	26
20230910 0920	0.1	168
20230910 0930	0.1	335
20230910 0940	0.1	26
20230910 0950	0.1	245
20230910 1000	0.1	18
20230910 1010	0.1	242
20230910 1020	3	317
20230910 1030	3.5	349
20230910 1040	4	7
20230910 1050	0.1	111
20230910 1100	1.9	20
20230910 1110	0.1	287
20230910 1120	0.2	32
20230910 1130	0.6	103
20230910 1140	0.2	344

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230910 1200	0.1	187
20230910 1210	0.1	305
20230910 1220	2.3	8
20230910 1230	0.1	342
20230910 1240	0.6	135
20230910 1250	0.4	115
20230910 1300	1.4	143
20230910 1310	0.2	85
20230910 1320	2.5	110
20230910 1330	0.8	78
20230910 1340	0.1	345
20230910 1350	0.2	129
20230910 1400	0.4	98
20230910 1410	0.1	99
20230910 1420	0.1	177
20230910 1430	0.1	169
20230910 1440	1.9	29
20230910 1450	0.1	329
20230910 1500	8.2	40
20230910 1510	1.6	67
20230910 1520	1.7	25
20230910 1530	0.1	107
20230910 1540	4.5	48
20230910 1550	2	5
20230910 1600	2	134
20230910 1610	0.1	188
20230910 1620	1.2	13
20230910 1630	0.1	51
20230910 1640	2.1	46
20230910 1650	0.9	109
20230910 1700	0.2	317
20230910 1710	0.1	157
20230910 1720	0.1	15
20230910 1730	0.1	218
20230910 1740	1.8	354
20230910 1750	2.5	25
20230910 1800	0.3	173
20230910 1810	1	140
20230910 1820	0.1	8
20230910 1830	0.1	31
20230910 1840	0.3	117
20230910 1850	0.1	116
20230910 1900	2.4	345
20230910 1910	0.1	350
20230910 1920	0.3	19
20230910 1930	1	19
20230910 1940	0.1	16
20230910 1950	1.4	128
20230910 2000	0.1	132
20230910 2010	0.2	86
20230910 2020	0.1	247
20230910 2030	0.1	129
20230910 2040	0.1	149
20230910 2050	0.9	7
20230910 2100	0.1	67
20230910 2110	0.1	180
20230910 2120	0.1	26
20230910 2130	0.1	168
20230910 2140	0.1	335
20230910 2150	0.1	26
20230910 2200	0.1	245
20230910 2210	0.1	18
20230910 2220	0.1	242
20230910 2230	3	317
20230910 2240	3.5	349
20230910 2250	4	7
20230910 2300	0.1	111
20230910 2310	1.9	20
20230910 2320	0.1	287
20230910 2330	0.2	32
20230910 2340	0.6	103
20230910 2350	0.2	344

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230911 0000	0.1	187
20230911 0010	0.1	305
20230911 0020	2.3	8
20230911 0030	0.1	342
20230911 0030	0.6	135
20230911 0040	0.4	115
20230911 0050	1.4	143
20230911 0100	0.2	85
20230911 0110	2.5	110
20230911 0120	0.8	78
20230911 0130	0.1	345
20230911 0140	0.2	129
20230911 0150	0.4	98
20230911 0200	0.1	99
20230911 0210	0.1	177
20230911 0220	0.1	169
20230911 0230	1.9	29
20230911 0240	0.1	329
20230911 0250	8.2	40
20230911 0300	1.6	67
20230911 0310	1.7	25
20230911 0320	0.1	107
20230911 0330	4.5	48
20230911 0340	2	5
20230911 0350	2	134
20230911 0400	0.1	188
20230911 0410	1.2	13
20230911 0420	0.1	51
20230911 0430	2.1	46
20230911 0440	0.9	109
20230911 0450	0.2	317
20230911 0500	0.1	157
20230911 0510	0.1	15
20230911 0520	0.1	218
20230911 0530	1.8	354
20230911 0540	2.5	25
20230911 0550	0.3	173
20230911 0600	1	140
20230911 0610	0.1	8
20230911 0620	0.1	31
20230911 0630	0.3	117
20230911 0640	0.1	116
20230911 0650	2.4	345
20230911 0700	0.1	350
20230911 0710	0.3	19
20230911 0720	1	19
20230911 0730	0.1	16
20230911 0740	1.4	128
20230911 0750	0.1	132
20230911 0800	0.2	86
20230911 0810	0.1	247
20230911 0820	0.1	129
20230911 0830	0.1	149
20230911 0840	0.9	7
20230911 0850	0.1	67
20230911 0900	0.1	180
20230911 0910	0.1	26
20230911 0920	0.1	168
20230911 0930	0.1	335
20230911 0940	0.1	26
20230911 0950	0.1	245
20230911 1000	0.1	18
20230911 1010	0.1	242
20230911 1020	3	317
20230911 1030	3.5	349
20230911 1040	4	7
20230911 1050	0.1	111
20230911 1100	1.9	20
20230911 1110	0.1	287
20230911 1120	0.2	32
20230911 1130	0.6	103
20230911 1140	0.2	344

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230911 1200	1.6	52
20230911 1210	0.1	48
20230911 1220	0.2	104
20230911 1230	0.7	87
20230911 1240	0.1	7
20230911 1250	0.1	273
20230911 1300	0.5	15
20230911 1310	0.1	51
20230911 1320	1.8	19
20230911 1330	0.1	339
20230911 1340	0.2	281
20230911 1350	0.6	57
20230911 1400	0.1	314
20230911 1410	0.7	48
20230911 1420	0.1	347
20230911 1430	0.1	219
20230911 1440	0.1	113
20230911 1450	0.1	278
20230911 1500	0.1	148
20230911 1510	0.1	318
20230911 1520	2.5	104
20230911 1530	1.6	125
20230911 1540	1.5	23
20230911 1550	0.1	33
20230911 1600	0.1	9
20230911 1610	0.1	21
20230911 1620	0.2	99
20230911 1630	0.1	101
20230911 1640	0.1	106
20230911 1650	0.8	282
20230911 1700	0.1	310
20230911 1710	0.5	9
20230911 1720	0.1	49
20230911 1730	0.1	125
20230911 1740	0.1	260
20230911 1750	0.1	153
20230911 1800	0.1	208
20230911 1810	0.1	104
20230911 1820	0.1	120
20230911 1830	0.1	43
20230911 1840	0.1	328
20230911 1850	0.1	15
20230911 1900	1.2	67
20230911 1910	0.1	45
20230911 1920	0.1	347
20230911 1930	0.1	14
20230911 1940	0.1	356
20230911 1950	0.1	7
20230911 2000	0.1	239
20230911 2010	0.1	115
20230911 2020	0.1	163
20230911 2030	0.1	135
20230911 2040	0.1	303
20230911 2050	0.1	12
20230911 2100	0.1	243
20230911 2110	0.1	52
20230911 2120	0.1	134
20230911 2130	0.1	255
20230911 2140	0.1	158
20230911 2150	0.1	110
20230911 2200	0.1	170
20230911 2210	0.1	155
20230911 2220	0.1	229
20230911 2230	0.1	11
20230911 2240	0.6	154
20230911 2250	0.1	351
20230911 2300	1.3	342
20230911 2310	0.4	45
20230911 2320	1	42
20230911 2330	0.1	28
20230911 2340	0.2	144
20230911 2350	0.1	165

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230912 0000	0.3	63
20230912 0010	0.4	83
20230912 0020	0.1	335
20230912 0030	0.1	159
20230912 0030	0.3	156
20230912 0040	2.7	348
20230912 0050	0.1	33
20230912 0100	0.2	87
20230912 0110	0.2	245
20230912 0120	0.1	187
20230912 0130	0.1	78
20230912 0140	0.1	31
20230912 0150	0.1	110
20230912 0200	0.1	129
20230912 0210	0.1	208
20230912 0220	0.1	345
20230912 0230	0.1	284
20230912 0240	0.1	148
20230912 0250	0.1	74
20230912 0300	0.1	190
20230912 0310	1.6	88
20230912 0320	0.1	155
20230912 0330	0.1	146
20230912 0340	0.1	30
20230912 0350	0.2	58
20230912 0400	0.1	298
20230912 0410	0.1	333
20230912 0420	0.1	93
20230912 0430	0.1	113
20230912 0440	0.1	129
20230912 0450	0.1	114
20230912 0500	0.1	26
20230912 0510	0.1	131
20230912 0520	0.1	179
20230912 0530	0.1	266
20230912 0540	0.1	98
20230912 0550	0.1	140
20230912 0600	0.1	133
20230912 0610	0.1	193
20230912 0620	0.1	174
20230912 0630	0.1	351
20230912 0640	0.1	178
20230912 0650	0.1	160
20230912 0700	0.1	128
20230912 0710	0.1	158
20230912 0720	0.1	116
20230912 0730	0.1	141
20230912 0740	0.1	92
20230912 0750	0.1	32
20230912 0800	0.1	41
20230912 0810	0.1	148
20230912 0820	0.1	353
20230912 0830	0.1	334
20230912 0840	0.1	242
20230912 0850	0.1	285
20230912 0900	0.1	162
20230912 0910	0.1	310
20230912 0920	0.4	13
20230912 0930	0.5	77
20230912 0940	0.1	35
20230912 0950	0.1	246
20230912 1000	0.7	131
20230912 1010	0.1	58
20230912 1020	0.4	42
20230912 1030	2.2	330
20230912 1040	0.1	168
20230912 1050	0.8	32
20230912 1100	0.9	348
20230912 1110	0.1	329
20230912 1120	1.5	343
20230912 1130	0.9	151
20230912 1140	2.3	340

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230912 1200	8.3	22
20230912 1210	1.2	46
20230912 1220	0.3	336
20230912 1230	0.1	68
20230912 1240	0.6	5
20230912 1250	0.1	116
20230912 1300	0.1	150
20230912 1310	0.2	49
20230912 1320	0.1	322
20230912 1330	0.1	349
20230912 1340	0.1	30
20230912 1350	0.5	7
20230912 1400	0.1	353
20230912 1410	0.1	45
20230912 1420	0.1	84
20230912 1430	0.4	149
20230912 1440	0.1	11
20230912 1450	0.1	291
20230912 1500	0.1	253
20230912 1510	0.6	272
20230912 1520	0.1	344
20230912 1530	0.1	15
20230912 1540	0.1	179
20230912 1550	0.1	150
20230912 1600	0.1	214
20230912 1610	0.1	28
20230912 1620	0.1	54
20230912 1630	0.2	118
20230912 1640	0.1	97
20230912 1650	0.1	308
20230912 1700	0.1	166
20230912 1710	0.1	144
20230912 1720	0.1	180
20230912 1730	0.1	150
20230912 1740	0.1	127
20230912 1750	0.3	99
20230912 1800	0.1	48
20230912 1810	0.5	21
20230912 1820	0.1	37
20230912 1830	0.7	117
20230912 1840	0.3	69
20230912 1850	0.1	86
20230912 1900	0.2	331
20230912 1910	0.1	80
20230912 1920	0.1	11
20230912 1930	0.1	350
20230912 1940	0.1	174
20230912 1950	0.1	160
20230912 2000	0.1	182
20230912 2010	0.1	135
20230912 2020	0.1	185
20230912 2030	0.1	348
20230912 2040	0.1	6
20230912 2050	0.1	104
20230912 2100	0.1	172
20230912 2110	0.1	319
20230912 2120	1.6	45
20230912 2130	0.1	33
20230912 2140	2.1	129
20230912 2150	0.1	112
20230912 2200	0.1	335
20230912 2210	0.1	107
20230912 2220	0.1	193
20230912 2230	0.1	113
20230912 2240	0.1	102
20230912 2250	0.1	115
20230912 2300	0.1	99
20230912 2310	0.1	11
20230912 2320	0.3	81
20230912 2330	0.1	348
20230912 2340	0.1	9
20230912 2350	0.1	45

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230913 0000	0.1	38
20230913 0010	0.1	99
20230913 0020	0.1	192
20230913 0030	0.1	207
20230913 0040	0.2	40
20230913 0050	0.1	90
20230913 0100	0.1	33
20230913 0110	0.1	338
20230913 0120	0.1	128
20230913 0130	0.5	326
20230913 0140	0.1	345
20230913 0150	1.4	324
20230913 0200	0.1	300
20230913 0210	0.1	310
20230913 0220	0.2	52
20230913 0230	2.8	87
20230913 0240	0.5	356
20230913 0250	0.3	4
20230913 0300	0.1	251
20230913 0310	0.1	155
20230913 0320	0.1	73
20230913 0330	0.1	89
20230913 0340	0.1	280
20230913 0350	0.1	90
20230913 0400	0.1	121
20230913 0410	0.1	243
20230913 0420	0.9	286
20230913 0430	0.3	170
20230913 0440	0.1	14
20230913 0450	0.1	14
20230913 0500	0.1	42
20230913 0510	0.1	39
20230913 0520	0.1	133
20230913 0530	0.1	91
20230913 0540	0.1	118
20230913 0550	0.2	12
20230913 0600	0.1	96
20230913 0610	0.1	273
20230913 0620	0.1	156
20230913 0630	0.1	67
20230913 0640	0.1	344
20230913 0650	0.1	43
20230913 0700	0.1	5
20230913 0710	0.1	41
20230913 0720	0.1	192
20230913 0730	0.1	286
20230913 0740	0.3	3
20230913 0750	0.1	335
20230913 0800	0.1	283
20230913 0810	0.1	13
20230913 0820	0.1	90
20230913 0830	0.1	120
20230913 0840	0.2	303
20230913 0850	0.1	136
20230913 0900	0.1	12
20230913 0910	0.9	351
20230913 0920	0.1	34
20230913 0930	0.2	35
20230913 0940	0.3	15
20230913 0950	0.1	68
20230913 1000	0.6	155
20230913 1010	0.1	19
20230913 1020	0.1	22
20230913 1030	0.1	281
20230913 1040	0.3	354
20230913 1050	0.3	7
20230913 1100	1.5	314
20230913 1110	2.1	105
20230913 1120	0.8	11
20230913 1130	3.9	38
20230913 1140	1.5	58
20230913 1150	0.1	331

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230913 1200	0.1	55
20230913 1210	0.1	119
20230913 1220	0.1	158
20230913 1230	0.1	1
20230913 1240	0.1	238
20230913 1250	1.2	47
20230913 1300	0.2	3
20230913 1310	0.1	340
20230913 1320	0.1	112
20230913 1330	0.2	333
20230913 1340	0.1	348
20230913 1350	0.1	147
20230913 1400	0.1	346
20230913 1410	0.3	191
20230913 1420	0.1	124
20230913 1430	0.1	21
20230913 1440	0.8	90
20230913 1450	2.9	349
20230913 1500	1.9	82
20230913 1510	2.9	46
20230913 1520	0.1	320
20230913 1530	0.1	341
20230913 1540	2.6	14
20230913 1550	3.5	-1
20230913 1600	0.1	339
20230913 1610	0.1	308
20230913 1620	0.1	34
20230913 1630	0.1	271
20230913 1640	0.1	162
20230913 1650	0.1	131
20230913 1700	0.1	239
20230913 1710	0.5	110
20230913 1720	0.1	147
20230913 1730	0.1	119
20230913 1740	0.2	257
20230913 1750	0.1	113
20230913 1800	1	349
20230913 1810	0.1	82
20230913 1820	4.2	150
20230913 1830	0.1	328
20230913 1840	0.1	273
20230913 1850	0.3	303
20230913 1900	0.1	233
20230913 1910	0.1	326
20230913 1920	3	48
20230913 1930	0.1	39
20230913 1940	0.1	33
20230913 1950	0.1	72
20230913 2000	0.1	103
20230913 2010	0.1	284
20230913 2020	0.1	323
20230913 2030	0.9	116
20230913 2040	0.1	132
20230913 2050	1.2	14
20230913 2100	0.8	152
20230913 2110	0.1	32
20230913 2120	0.1	288
20230913 2130	0.1	89
20230913 2140	0.1	80
20230913 2150	0.1	121
20230913 2200	0.1	130
20230913 2210	0.1	305
20230913 2220	0.1	135
20230913 2230	0.1	17
20230913 2240	0.1	81
20230913 2250	0.1	148
20230913 2300	0.1	102
20230913 2310	2.3	343
20230913 2320	0.2	323
20230913 2330	0.1	25
20230913 2340	0.1	49
20230913 2350	0.1	11

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230914 0000	0.1	110
20230914 0010	0.1	91
20230914 0020	0.5	345
20230914 0020	0.9	119
20230914 0030	0.1	152
20230914 0040	0.1	45
20230914 0050	0.1	85
20230914 0100	0.1	28
20230914 0110	0.1	4
20230914 0120	0.3	143
20230914 0130	0.1	-1
20230914 0140	0.1	179
20230914 0150	0.1	48
20230914 0200	0.4	25
20230914 0210	0.1	65
20230914 0220	0.1	115
20230914 0230	0.1	25
20230914 0240	0.5	32
20230914 0250	0.1	17
20230914 0300	0.1	263
20230914 0310	0.1	18
20230914 0320	0.1	78
20230914 0330	0.1	239
20230914 0340	0.1	175
20230914 0350	0.1	350
20230914 0400	0.1	22
20230914 0410	0.1	10
20230914 0420	0.1	257
20230914 0430	0.1	159
20230914 0440	0.1	154
20230914 0450	0.3	150
20230914 0500	0.1	4
20230914 0510	0.1	93
20230914 0520	0.2	103
20230914 0530	0.1	116
20230914 0540	0.1	100
20230914 0550	0.1	212
20230914 0600	0.1	224
20230914 0610	0.1	241
20230914 0620	0.1	225
20230914 0630	0.1	283
20230914 0640	0.1	40
20230914 0650	0.1	260
20230914 0700	0.1	11
20230914 0710	0.1	88
20230914 0720	0.1	172
20230914 0730	0.1	103
20230914 0740	0.1	256
20230914 0750	0.1	105
20230914 0800	0.1	105
20230914 0810	0.1	34
20230914 0820	0.1	277
20230914 0830	0.1	57
20230914 0840	0.1	187
20230914 0850	0.1	247
20230914 0900	0.2	212
20230914 0910	0.1	153
20230914 0920	0.1	241
20230914 0930	0.1	270
20230914 0940	0.1	137
20230914 0950	0.1	203
20230914 1000	0.1	223
20230914 1010	0.1	243
20230914 1020	0.2	217
20230914 1030	0.1	175
20230914 1040	0.1	14
20230914 1050	0.1	231
20230914 1100	0.2	203
20230914 1110	0.1	189
20230914 1120	0.1	184
20230914 1130	0.1	214
20230914 1140	0.1	209

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230914 1200	0.1	234
20230914 1210	0.1	223
20230914 1220	0.1	279
20230914 1230	0.1	217
20230914 1240	0.1	256
20230914 1250	0.1	320
20230914 1300	0.1	300
20230914 1310	0.1	174
20230914 1320	0.1	309
20230914 1330	1.8	-1
20230914 1340	0.1	304
20230914 1350	1	135
20230914 1400	1.2	-1
20230914 1410	1.4	336
20230914 1420	0.1	70
20230914 1430	0.1	25
20230914 1440	0.2	45
20230914 1450	0.1	47
20230914 1500	0.1	55
20230914 1510	0.1	347
20230914 1520	0.1	89
20230914 1530	0.1	94
20230914 1540	0.1	16
20230914 1550	0.8	31
20230914 1600	0.1	108
20230914 1610	0.1	342
20230914 1620	0.1	345
20230914 1630	0.1	138
20230914 1640	0.2	327
20230914 1650	0.4	55
20230914 1700	0.1	115
20230914 1710	0.1	348
20230914 1720	0.1	341
20230914 1730	0.5	104
20230914 1740	0.1	348
20230914 1750	0.1	139
20230914 1800	0.1	321
20230914 1810	0.3	45
20230914 1820	0.1	67
20230914 1830	0.1	4
20230914 1840	0.1	150
20230914 1850	0.1	49
20230914 1900	0.1	69
20230914 1910	0.1	46
20230914 1920	0.1	86
20230914 1930	0.1	118
20230914 1940	0.1	151
20230914 1950	1.5	117
20230914 2000	0.1	143
20230914 2010	0.1	15
20230914 2020	0.1	99
20230914 2030	0.2	164
20230914 2040	0.9	121
20230914 2050	0.1	120
20230914 2100	1.5	102
20230914 2110	0.1	159
20230914 2120	0.1	0
20230914 2130	0.2	177
20230914 2140	0.3	346
20230914 2150	0.1	47
20230914 2200	0.1	50
20230914 2210	0.1	251
20230914 2220	0.1	94
20230914 2230	0.1	17
20230914 2240	0.1	17
20230914 2250	0.1	17
20230914 2300	0.1	17
20230914 2310	0.1	17
20230914 2320	0.1	17
20230914 2330	0.1	17
20230914 2340	0.1	5
20230914 2350	0.1	5

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230915 0000	0.1	5
20230915 0010	0.1	52
20230915 0020	0.1	44
20230915 0020	0.1	13
20230915 0030	0.1	13
20230915 0040	0.1	13
20230915 0050	0.1	9
20230915 0100	0.1	9
20230915 0110	0.1	9
20230915 0120	0.1	9
20230915 0130	0.1	42
20230915 0140	0.1	56
20230915 0150	0.1	20
20230915 0200	0.1	20
20230915 0210	0.1	20
20230915 0220	0.1	20
20230915 0230	0.1	20
20230915 0240	0.1	18
20230915 0250	0.1	17
20230915 0300	0.1	17
20230915 0310	0.1	18
20230915 0320	0.1	40
20230915 0330	0.1	40
20230915 0340	0.1	40
20230915 0350	0.1	43
20230915 0400	0.1	91
20230915 0410	0.1	138
20230915 0420	0.1	140
20230915 0430	0.1	140
20230915 0440	0.1	112
20230915 0450	0.1	49
20230915 0500	0.1	24
20230915 0510	0.1	24
20230915 0520	0.1	311
20230915 0530	0.1	59
20230915 0540	0.1	75
20230915 0550	0.1	82
20230915 0600	0.1	43
20230915 0610	0.1	43
20230915 0620	0.1	43
20230915 0630	0.1	52
20230915 0640	0.1	42
20230915 0650	0.1	123
20230915 0700	0.1	147
20230915 0710	0.1	248
20230915 0720	0.1	241
20230915 0730	0.1	279
20230915 0740	0.6	44
20230915 0750	0.1	23
20230915 0800	0.3	61
20230915 0810	0.1	47
20230915 0820	3.1	30
20230915 0830	0.1	194
20230915 0840	0.1	238
20230915 0850	0.1	10
20230915 0900	0.1	124
20230915 0910	0.3	154
20230915 0920	0.1	155
20230915 0930	0.1	258
20230915 0940	0.6	-1
20230915 0950	0.4	149
20230915 1000	0.1	103
20230915 1010	0.5	36
20230915 1020	0.1	337
20230915 1030	0.1	10
20230915 1040	0.1	178
20230915 1050	0.1	156
20230915 1100	0.1	331
20230915 1110	0.1	162
20230915 1120	2.2	4
20230915 1130	1.9	139
20230915 1140	0.3	87

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230915 1200	0.1	331
20230915 1210	0.1	135
20230915 1220	3.1	345
20230915 1230	1.2	124
20230915 1240	0.1	127
20230915 1250	0.1	129
20230915 1300	0.1	0
20230915 1310	0.2	68
20230915 1320	0.1	335
20230915 1330	1.3	5
20230915 1340	0.1	338
20230915 1350	0.1	47
20230915 1400	0.1	37
20230915 1410	3.6	20
20230915 1420	0.1	11
20230915 1430	0.9	69
20230915 1440	0.1	97
20230915 1450	0.3	52
20230915 1500	0.1	66
20230915 1510	0.1	268
20230915 1520	0.1	110
20230915 1530	0.1	104
20230915 1540	0.1	74
20230915 1550	0.1	160
20230915 1600	0.1	244
20230915 1610	0.1	73
20230915 1620	0.1	43
20230915 1630	0.1	83
20230915 1640	0.1	128
20230915 1650	0.1	46
20230915 1700	0.1	81
20230915 1710	0.1	81
20230915 1720	0.1	81
20230915 1730	0.1	81
20230915 1740	0.1	81
20230915 1750	0.1	103
20230915 1800	0.1	78
20230915 1810	0.1	144
20230915 1820	0.1	65
20230915 1830	0.1	91
20230915 1840	0.1	91
20230915 1850	0.1	91
20230915 1900	0.1	79
20230915 1910	0.1	79
20230915 1920	0.1	79
20230915 1930	0.1	116
20230915 1940	0.4	154
20230915 1950	4.4	32
20230915 2000	0.2	122
20230915 2010	0.1	136
20230915 2020	0.1	340
20230915 2030	0.2	294
20230915 2040	0.1	170
20230915 2050	0.3	345
20230915 2100	1.6	134
20230915 2110	0.5	20
20230915 2120	0.6	104
20230915 2130	0.1	353
20230915 2140	0.2	104
20230915 2150	0.5	105
20230915 2200	0.1	244
20230915 2210	0.1	130
20230915 2220	1.6	133
20230915 2230	0.1	28
20230915 2240	0.1	59
20230915 2250	0.1	174
20230915 2300	0.1	86
20230915 2310	0.1	105
20230915 2320	0.1	139
20230915 2330	0.1	144
20230915 2340	0.1	111
20230915 2350	0.1	62

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230916 0000	0.2	97
20230916 0010	0.1	73
20230916 0020	0.1	333
20230916 0020	0.8	117
20230916 0030	0.3	126
20230916 0040	5	31
20230916 0050	0.1	140
20230916 0100	0.1	284
20230916 0110	0.3	9
20230916 0120	0.1	-1
20230916 0130	0.5	93
20230916 0140	0.3	109
20230916 0150	0.1	18
20230916 0200	0.6	103
20230916 0210	0.2	37
20230916 0220	0.2	103
20230916 0230	2.5	127
20230916 0240	0.1	334
20230916 0250	0.1	60
20230916 0300	0.1	236
20230916 0310	0.1	163
20230916 0320	0.2	4
20230916 0330	0.1	136
20230916 0340	0.1	136
20230916 0350	0.1	136
20230916 0400	0.1	136
20230916 0410	0.1	59
20230916 0420	0.1	352
20230916 0430	0.1	355
20230916 0440	0.1	355
20230916 0450	0.1	203
20230916 0500	0.1	223
20230916 0510	0.1	328
20230916 0520	0.1	113
20230916 0530	0.1	113
20230916 0540	0.1	113
20230916 0550	0.1	206
20230916 0600	0.1	226
20230916 0610	0.1	311
20230916 0620	0.1	311
20230916 0630	0.1	311
20230916 0640	0.1	229
20230916 0650	0.1	229
20230916 0700	0.1	25
20230916 0710	0.1	25
20230916 0720	0.1	25
20230916 0730	0.1	22
20230916 0740	0.1	22
20230916 0750	0.1	104
20230916 0800	0.1	130
20230916 0810	0.1	156
20230916 0820	1.4	354
20230916 0830	0.1	90
20230916 0840	0.3	322
20230916 0850	0.1	2
20230916 0900	0.5	271
20230916 0910	0.5	354
20230916 0920	0.4	325
20230916 0930	0.1	345
20230916 0940	0.2	282
20230916 0950	0.1	331
20230916 1000	0.1	331
20230916 1010	0.1	307
20230916 1020	0.3	130
20230916 1030	0.1	4
20230916 1040	0.2	13
20230916 1050	0.1	313
20230916 1100	0.8	354
20230916 1110	0.3	14
20230916 1120	0.1	319
20230916 1130	0.1	330
20230916 1140	0.1	318

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230916 1200	0.1	124
20230916 1210	0.9	17
20230916 1220	0.3	119
20230916 1230	0.1	19
20230916 1240	0.5	342
20230916 1250	0.1	338
20230916 1300	1.1	98
20230916 1310	0.1	157
20230916 1320	0.1	329
20230916 1330	0.1	247
20230916 1340	3.2	109
20230916 1350	0.1	350
20230916 1400	0.2	312
20230916 1410	0.1	57
20230916 1420	0.1	116
20230916 1430	0.3	143
20230916 1440	0.1	231
20230916 1450	0.1	245
20230916 1500	3.7	4
20230916 1510	0.2	28
20230916 1520	0.2	335
20230916 1530	0.1	42
20230916 1540	0.6	223
20230916 1550	0.2	336
20230916 1600	0.1	31
20230916 1610	0.1	80
20230916 1620	0.2	217
20230916 1630	1.3	24
20230916 1640	0.1	323
20230916 1650	0.1	50
20230916 1700	0.1	-1
20230916 1710	0.1	108
20230916 1720	0.1	75
20230916 1730	0.5	116
20230916 1740	0.1	3
20230916 1750	1.1	297
20230916 1800	0.1	324
20230916 1810	0.1	63
20230916 1820	0.1	109
20230916 1830	0.1	90
20230916 1840	0.4	47
20230916 1850	0.6	317
20230916 1900	0.1	289
20230916 1910	0.1	92
20230916 1920	0.6	40
20230916 1930	1.3	116
20230916 1940	0.1	121
20230916 1950	0.1	30
20230916 2000	0.2	60
20230916 2010	0.5	105
20230916 2020	0.1	88
20230916 2030	0.1	13
20230916 2040	0.1	273
20230916 2050	0.1	191
20230916 2100	0.1	55
20230916 2110	0.6	165
20230916 2120	0.1	10
20230916 2130	0.1	103
20230916 2140	0.1	215
20230916 2150	0.1	92
20230916 2200	0.1	3
20230916 2210	1.7	33
20230916 2220	1.3	301
20230916 2230	0.1	283
20230916 2240	1	15
20230916 2250	0.3	60
20230916 2300	0.1	149
20230916 2310	0.1	126
20230916 2320	0.1	10
20230916 2330	0.1	39
20230916 2340	0.1	311
20230916 2350	0.1	98

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230917 0000	0.1	174
20230917 0010	0.1	1
20230917 0020	0.1	19
20230917 0030	0.1	291
20230917 0040	0.1	168
20230917 0050	0.1	351
20230917 0100	0.1	45
20230917 0110	0.1	53
20230917 0120	0.1	132
20230917 0130	0.1	246
20230917 0140	0.1	279
20230917 0150	0.1	278
20230917 0200	0.1	193
20230917 0210	0.1	345
20230917 0220	0.1	254
20230917 0230	0.1	140
20230917 0240	0.1	310
20230917 0250	0.1	139
20230917 0300	0.1	163
20230917 0310	0.1	108
20230917 0320	0.1	334
20230917 0330	0.1	321
20230917 0340	0.1	53
20230917 0350	0.1	322
20230917 0400	0.1	139
20230917 0410	0.1	101
20230917 0420	0.1	118
20230917 0430	0.1	117
20230917 0440	0.1	224
20230917 0450	0.1	119
20230917 0500	0.1	136
20230917 0510	0.1	136
20230917 0520	0.1	96
20230917 0530	0.1	103
20230917 0540	0.1	129
20230917 0550	0.1	129
20230917 0600	0.1	64
20230917 0610	0.1	64
20230917 0620	0.1	27
20230917 0630	0.1	26
20230917 0640	0.1	26
20230917 0650	0.1	26
20230917 0700	0.1	26
20230917 0710	0.1	26
20230917 0720	0.1	181
20230917 0730	0.1	181
20230917 0740	0.1	181
20230917 0750	0.1	141
20230917 0800	0.1	141
20230917 0810	0.1	134
20230917 0820	0.1	132
20230917 0830	0.1	217
20230917 0840	0.1	122
20230917 0850	0.6	234
20230917 0900	0.1	163
20230917 0910	0.1	294
20230917 0920	0.1	61
20230917 0930	1	180
20230917 0940	0.1	186
20230917 0950	0.1	290
20230917 1000	0.1	35
20230917 1010	0.1	51
20230917 1020	0.9	350
20230917 1030	0.1	329
20230917 1040	2.4	303
20230917 1050	0.1	289
20230917 1100	2.6	315
20230917 1110	0.1	356
20230917 1120	1	347
20230917 1130	0.3	5
20230917 1140	0.1	84
20230917 1150	0.1	86

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230917 1200	2.6	339
20230917 1210	0.1	253
20230917 1220	0.1	275
20230917 1230	0.4	47
20230917 1240	0.3	346
20230917 1250	4.5	196
20230917 1300	0.1	142
20230917 1310	0.6	307
20230917 1320	1	139
20230917 1330	0.1	145
20230917 1340	0.1	66
20230917 1350	0.2	51
20230917 1400	2.1	72
20230917 1410	0.1	38
20230917 1420	2.1	11
20230917 1430	0.1	321
20230917 1440	0.1	222
20230917 1450	0.1	185
20230917 1500	0.1	346
20230917 1510	0.1	7
20230917 1520	0.1	89
20230917 1530	2.3	351
20230917 1540	0.3	115
20230917 1550	0.1	204
20230917 1600	0.9	350
20230917 1610	4	164
20230917 1620	0.1	39
20230917 1630	0.1	14
20230917 1640	0.5	24
20230917 1650	0.4	334
20230917 1700	0.1	342
20230917 1710	0.1	267
20230917 1720	0.1	82
20230917 1730	0.1	16
20230917 1740	0.1	143
20230917 1750	0.2	347
20230917 1800	0.1	83
20230917 1810	0.1	29
20230917 1820	0.1	96
20230917 1830	0.1	344
20230917 1840	0.1	95
20230917 1850	0.1	47
20230917 1900	0.1	149
20230917 1910	0.1	302
20230917 1920	0.1	96
20230917 1930	0.1	142
20230917 1940	0.1	93
20230917 1950	0.1	76
20230917 2000	0.1	41
20230917 2010	0.1	125
20230917 2020	0.1	45
20230917 2030	0.1	142
20230917 2040	0.1	110
20230917 2050	0.1	158
20230917 2100	0.1	287
20230917 2110	0.1	93
20230917 2120	0.1	271
20230917 2130	0.1	232
20230917 2140	0.1	268
20230917 2150	0.1	70
20230917 2200	0.1	123
20230917 2210	0.1	13
20230917 2220	0.1	245
20230917 2230	0.1	329
20230917 2240	0.1	190
20230917 2250	0.1	96
20230917 2300	0.1	258
20230917 2310	0.1	46
20230917 2320	0.1	88
20230917 2330	0.1	61
20230917 2340	0.4	104
20230917 2350	0.1	96

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230918 0000	0.1	45
20230918 0010	0.1	255
20230918 0020	0.1	136
20230918 0030	0.1	347
20230918 0040	0.1	90
20230918 0050	0.1	108
20230918 0100	0.1	346
20230918 0110	0.1	36
20230918 0120	0.1	-1
20230918 0130	0.1	89
20230918 0140	0.1	47
20230918 0150	0.1	81
20230918 0200	0.1	10
20230918 0210	0.1	49
20230918 0220	0.1	42
20230918 0230	0.1	42
20230918 0240	0.1	66
20230918 0250	0.1	66
20230918 0300	0.1	61
20230918 0310	0.1	61
20230918 0320	0.1	63
20230918 0330	0.1	42
20230918 0340	0.1	42
20230918 0350	0.1	9
20230918 0400	0.1	62
20230918 0410	0.1	26
20230918 0420	0.1	125
20230918 0430	0.1	38
20230918 0440	0.1	41
20230918 0450	0.1	135
20230918 0500	0.1	25
20230918 0510	0.1	18
20230918 0520	0.1	323
20230918 0530	0.1	259
20230918 0540	0.1	118
20230918 0550	0.1	118
20230918 0600	0.1	118
20230918 0610	0.1	45
20230918 0620	0.1	55
20230918 0630	0.1	73
20230918 0640	0.1	101
20230918 0650	0.1	20
20230918 0700	0.1	87
20230918 0710	0.1	87
20230918 0720	0.1	119
20230918 0730	0.1	119
20230918 0740	0.1	118
20230918 0750	0.1	100
20230918 0800	0.1	131
20230918 0810	0.1	135
20230918 0820	0.1	232
20230918 0830	0.1	101
20230918 0840	0.1	330
20230918 0850	0.1	85
20230918 0900	0.1	42
20230918 0910	0.1	34
20230918 0920	0.1	102
20230918 0930	0.1	86
20230918 0940	0.1	109
20230918 0950	0.1	91
20230918 1000	0.1	315
20230918 1010	0.1	124
20230918 1020	0.2	116
20230918 1030	0.1	132
20230918 1040	0.5	123
20230918 1050	0.1	346
20230918 1100	1.1	185
20230918 1110	0.2	31
20230918 1120	0.1	27
20230918 1130	2.5	256
20230918 1140	0.5	45
20230918 1150	2.3	37

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230918 1200	3.1	91
20230918 1210	0.1	109
20230918 1220	0.2	46
20230918 1230	0.1	40
20230918 1240	0.1	316
20230918 1250	0.2	2
20230918 1300	0.3	117
20230918 1310	2.2	135
20230918 1320	0.1	354
20230918 1330	1.1	317
20230918 1340	2.5	310
20230918 1350	0.2	353
20230918 1400	0.1	52
20230918 1410	0.1	332
20230918 1420	3.5	-1
20230918 1430	0.4	37
20230918 1440	1.8	147
20230918 1450	0.2	81
20230918 1500	1.3	40
20230918 1510	0.1	67
20230918 1520	0.9	132
20230918 1530	0.1	170
20230918 1540	0.3	348
20230918 1550	0.1	77
20230918 1600	1.3	134
20230918 1610	0.1	329
20230918 1620	1	109
20230918 1630	0.1	222
20230918 1640	0.1	85
20230918 1650	0.1	95
20230918 1700	0.1	177
20230918 1710	0.2	88
20230918 1720	0.1	103
20230918 1730	0.1	39
20230918 1740	0.1	100
20230918 1750	0.1	100
20230918 1800	0.1	7
20230918 1810	0.1	72
20230918 1820	0.2	37
20230918 1830	0.1	65
20230918 1840	0.1	54
20230918 1850	0.1	76
20230918 1900	0.3	99
20230918 1910	0.1	115
20230918 1920	0.1	142
20230918 1930	0.7	105
20230918 1940	0.1	107
20230918 1950	0.1	12
20230918 2000	0.1	45
20230918 2010	0.1	175
20230918 2020	0.1	31
20230918 2030	0.1	155
20230918 2040	0.1	323
20230918 2050	0.1	354
20230918 2100	0.1	68
20230918 2110	0.1	134
20230918 2120	0.1	98
20230918 2130	0.1	200
20230918 2140	0.1	329
20230918 2150	0.1	246
20230918 2200	0.1	127
20230918 2210	0.1	117
20230918 2220	0.1	135
20230918 2230	0.1	25
20230918 2240	0.1	25
20230918 2250	0.1	25
20230918 2300	0.1	25
20230918 2310	0.1	25
20230918 2320	0.1	99
20230918 2330	0.1	178
20230918 2340	0.1	263
20230918 2350	0.1	284

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230919 0000	0.1	23
20230919 0010	0.1	50
20230919 0020	0.1	50
20230919 0030	0.1	50
20230919 0040	0.1	50
20230919 0050	0.1	298
20230919 0100	0.1	96
20230919 0110	0.1	32
20230919 0120	0.1	37
20230919 0130	0.1	56
20230919 0140	0.1	56
20230919 0150	0.1	44
20230919 0200	0.1	47
20230919 0210	0.1	58
20230919 0220	0.1	51
20230919 0230	0.1	14
20230919 0240	0.1	57
20230919 0250	0.1	57
20230919 0300	0.1	152
20230919 0310	0.1	84
20230919 0320	0.1	55
20230919 0330	0.1	44
20230919 0340	0.1	186
20230919 0350	0.1	80
20230919 0400	0.1	80
20230919 0410	0.1	73
20230919 0420	0.1	73
20230919 0430	0.1	56
20230919 0440	0.1	56
20230919 0450	0.1	56
20230919 0500	0.1	34
20230919 0510	0.1	155
20230919 0520	0.1	155
20230919 0530	0.1	155
20230919 0540	0.1	155
20230919 0550	0.1	155
20230919 0600	0.1	54
20230919 0610	0.1	54
20230919 0620	0.1	49
20230919 0630	0.1	25
20230919 0640	0.1	25
20230919 0650	0.1	25
20230919 0700	0.1	25
20230919 0710	0.1	242
20230919 0720	0.1	242
20230919 0730	0.1	161
20230919 0740	0.1	173
20230919 0750	0.1	124
20230919 0800	0.1	105
20230919 0810	0.1	190
20230919 0820	0.1	173
20230919 0830	0.1	106
20230919 0840	0.1	249
20230919 0850	0.1	180
20230919 0900	0.1	169
20230919 0910	0.1	62
20230919 0920	0.1	130
20230919 0930	0.1	273
20230919 0940	0.2	172
20230919 0950	0.1	92
20230919 1000	0.1	8
20230919 1010	0.1	7
20230919 1020	0.1	274
20230919 1030	0.1	217
20230919 1040	0.2	81
20230919 1050	0.8	20
20230919 1100	0.2	227
20230919 1110	0.1	106
20230919 1120	0.4	68
20230919 1130	0.4	32
20230919 1140	0.1	307
20230919 1150	2	44

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230919 1200	0.1	31
20230919 1210	1.4	71
20230919 1220	0.3	337
20230919 1230	0.1	124
20230919 1240	0.1	49
20230919 1250	0.1	342
20230919 1300	4.9	173
20230919 1310	0.3	251
20230919 1320	0.1	20
20230919 1330	0.1	189
20230919 1340	0.4	150
20230919 1350	0.1	328
20230919 1400	1.7	119
20230919 1410	4.2	151
20230919 1420	1.8	165
20230919 1430	3.6	166
20230919 1440	1.8	114
20230919 1450	2.2	125
20230919 1500	1.1	110
20230919 1510	1.2	94
20230919 1520	0.1	181
20230919 1530	2.5	45
20230919 1540	0.1	53
20230919 1550	0.5	5
20230919 1600	0.9	55
20230919 1610	0.2	-1
20230919 1620	0.1	135
20230919 1630	0.3	209
20230919 1640	0.4	2
20230919 1650	0.5	15
20230919 1700	0.1	306
20230919 1710	0.1	138
20230919 1720	0.1	191
20230919 1730	0.1	28
20230919 1740	0.1	174
20230919 1750	2.6	130
20230919 1800	0.1	46
20230919 1810	0.1	228
20230919 1820	0.3	126
20230919 1830	0.8	163
20230919 1840	0.3	145
20230919 1850	0.4	115
20230919 1900	1.3	109
20230919 1910	0.3	105
20230919 1920	1.7	111
20230919 1930	1.4	73
20230919 1940	0.7	76
20230919 1950	0.1	58
20230919 2000	1.2	236
20230919 2010	0.1	321
20230919 2020	0.1	276
20230919 2030	0.1	24
20230919 2040	0.1	5
20230919 2050	0.1	295
20230919 2100	0.6	335
20230919 2110	0.2	143
20230919 2120	0.1	331
20230919 2130	0.1	314
20230919 2140	0.1	319
20230919 2150	0.1	126
20230919 2200	0.1	34
20230919 2210	0.1	250
20230919 2220	0.1	3
20230919 2230	0.1	326
20230919 2240	0.1	10
20230919 2250	0.1	40
20230919 2300	0.1	98
20230919 2310	0.1	339
20230919 2320	0.1	101
20230919 2330	0.1	148
20230919 2340	0.1	179
20230919 2350	0.1	179

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230920 0000	0.1	266
20230920 0010	0.1	97
20230920 0020	0.1	10
20230920 0030	0.2	313
20230920 0040	0.1	93
20230920 0050	0.1	74
20230920 0100	0.4	108
20230920 0110	0.1	106
20230920 0120	0.1	115
20230920 0130	0.1	316
20230920 0140	0.1	326
20230920 0150	0.1	175
20230920 0200	0.1	103
20230920 0210	0.1	23
20230920 0220	0.1	326
20230920 0230	0.1	74
20230920 0240	0.1	6
20230920 0250	0.1	32
20230920 0300	0.1	32
20230920 0310	0.1	61
20230920 0320	0.1	45
20230920 0330	0.1	35
20230920 0340	0.1	35
20230920 0350	0.1	9
20230920 0400	0.1	9
20230920 0410	0.1	16
20230920 0420	0.1	352
20230920 0430	0.1	2
20230920 0440	0.1	2
20230920 0450	0.1	2
20230920 0500	0.1	1
20230920 0510	0.1	23
20230920 0520	0.1	23
20230920 0530	0.1	23
20230920 0540	0.1	23
20230920 0550	0.1	27
20230920 0600	0.1	38
20230920 0610	0.1	12
20230920 0620	0.1	12
20230920 0630	0.1	18
20230920 0640	0.1	17
20230920 0650	0.1	17
20230920 0700	0.1	39
20230920 0710	0.1	39
20230920 0720	0.1	39
20230920 0730	0.1	39
20230920 0740	0.1	39
20230920 0750	0.1	39
20230920 0800	0.1	45
20230920 0810	0.1	73
20230920 0820	0.1	96
20230920 0830	0.1	138
20230920 0840	0.1	118
20230920 0850	0.1	179
20230920 0900	0.1	80
20230920 0910	0.1	86
20230920 0920	0.1	69
20230920 0930	0.1	48
20230920 0940	0.1	70
20230920 0950	0.1	90
20230920 1000	0.1	54
20230920 1010	0.1	99
20230920 1020	0.1	63
20230920 1030	0.2	125
20230920 1040	0.1	78
20230920 1050	0.1	79
20230920 1100	0.1	50
20230920 1110	0.2	233
20230920 1120	0.1	137
20230920 1130	0.1	86
20230920 1140	0.1	48
20230920 1150	0.1	56

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230920 1200	0.2	9
20230920 1210	0.1	158
20230920 1220	0.8	10
20230920 1230	0.1	50
20230920 1240	2	114
20230920 1250	0.7	108
20230920 1300	1.8	84
20230920 1310	0.1	259
20230920 1320	1.6	112
20230920 1330	0.2	104
20230920 1340	0.1	187
20230920 1350	0.7	198
20230920 1400	2.8	151
20230920 1410	0.1	85
20230920 1420	0.8	188
20230920 1430	1.4	225
20230920 1440	0.3	267
20230920 1450	0.4	125
20230920 1500	0.1	76
20230920 1510	0.2	99
20230920 1520	0.1	66
20230920 1530	0.1	77
20230920 1540	0.3	86
20230920 1550	0.1	118
20230920 1600	0.2	143
20230920 1610	0.7	196
20230920 1620	0.1	265
20230920 1630	0.1	242
20230920 1640	0.1	305
20230920 1650	0.1	145
20230920 1700	0.1	79
20230920 1710	0.1	-1
20230920 1720	0.1	42
20230920 1730	0.1	111
20230920 1740	0.1	93
20230920 1750	0.1	112
20230920 1800	0.1	292
20230920 1810	0.1	343
20230920 1820	0.1	46
20230920 1830	0.1	46
20230920 1840	0.1	19
20230920 1850	0.1	37
20230920 1900	0.1	345
20230920 1910	0.1	1
20230920 1920	0.1	24
20230920 1930	0.1	338
20230920 1940	0.1	338
20230920 1950	0.1	338
20230920 2000	0.1	338
20230920 2010	0.1	33
20230920 2020	0.1	16
20230920 2030	0.1	16
20230920 2040	0.1	90
20230920 2050	0.1	90
20230920 2100	0.1	89
20230920 2110	0.1	64
20230920 2120	0.1	33
20230920 2130	0.1	36
20230920 2140	0.1	352
20230920 2150	0.1	352
20230920 2200	0.1	73
20230920 2210	0.1	72
20230920 2220	0.1	72
20230920 2230	0.1	72
20230920 2240	0.1	72
20230920 2250	0.1	72
20230920 2300	0.1	72
20230920 2310	0.1	122
20230920 2320	0.1	29
20230920 2330	0.1	29
20230920 2340	0.1	2
20230920 2350	0.1	11

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230921 0000	0.1	352
20230921 0010	0.1	12
20230921 0020	0.1	275
20230921 0030	0.1	275
20230921 0040	0.1	41
20230921 0050	0.1	41
20230921 0100	0.1	33
20230921 0110	0.1	33
20230921 0120	0.1	33
20230921 0130	0.1	24
20230921 0140	0.1	7
20230921 0150	0.1	41
20230921 0200	0.1	14
20230921 0210	0.1	17
20230921 0220	0.1	24
20230921 0230	0.1	27
20230921 0240	0.1	48
20230921 0250	0.1	31
20230921 0300	0.1	7
20230921 0310	0.1	38
20230921 0320	0.1	42
20230921 0330	0.1	13
20230921 0340	0.1	35
20230921 0350	0.1	34
20230921 0400	0.1	39
20230921 0410	0.1	38
20230921 0420	0.1	26
20230921 0430	0.1	38
20230921 0440	0.1	28
20230921 0450	0.1	31
20230921 0500	0.1	163
20230921 0510	0.1	109
20230921 0520	0.1	102
20230921 0530	0.1	82
20230921 0540	0.1	58
20230921 0550	0.1	58
20230921 0600	0.1	58
20230921 0610	0.1	58
20230921 0620	0.1	58
20230921 0630	0.1	58
20230921 0640	0.1	25
20230921 0650	0.1	43
20230921 0700	0.1	43
20230921 0710	0.1	43
20230921 0720	0.1	159
20230921 0730	0.1	165
20230921 0740	0.1	166
20230921 0750	0.1	190
20230921 0800	0.1	188
20230921 0810	0.1	132
20230921 0820	0.1	114
20230921 0830	0.1	179
20230921 0840	0.5	187
20230921 0850	0.1	136
20230921 0900	0.1	172
20230921 0910	0.1	175
20230921 0920	0.3	161
20230921 0930	0.1	207
20230921 0940	0.9	194
20230921 0950	0.1	211
20230921 1000	0.2	112
20230921 1010	0.1	253
20230921 1020	1.1	103
20230921 1030	0.1	346
20230921 1040	0.5	246
20230921 1050	0.1	96
20230921 1100	0.8	99
20230921 1110	0.2	230
20230921 1120	0.6	254
20230921 1130	0.2	37
20230921 1140	0.4	253
20230921 1150	0.3	181

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230921 1200	0.2	214
20230921 1210	0.1	33
20230921 1220	1.2	187
20230921 1230	0.1	266
20230921 1240	0.1	91
20230921 1250	0.1	71
20230921 1300	0.1	172
20230921 1310	0.2	147
20230921 1320	0.1	105
20230921 1330	0.1	116
20230921 1340	0.3	81
20230921 1350	0.2	118
20230921 1400	0.1	121
20230921 1410	0.3	162
20230921 1420	0.1	95
20230921 1430	0.1	221
20230921 1440	0.1	246
20230921 1450	0.5	175
20230921 1500	0.2	176
20230921 1510	0.1	143
20230921 1520	0.2	217
20230921 1530	0.4	206
20230921 1540	0.1	60
20230921 1550	0.5	106
20230921 1600	0.1	86
20230921 1610	1.1	73
20230921 1620	1	49
20230921 1630	0.1	54
20230921 1640	0.1	217
20230921 1650	0.1	263
20230921 1700	0.5	213
20230921 1710	0.1	216
20230921 1720	1.3	155
20230921 1730	0.1	233
20230921 1740	2.3	215
20230921 1750	0.1	198
20230921 1800	0.1	5
20230921 1810	0.1	145
20230921 1820	0.1	69
20230921 1830	0.1	69
20230921 1840	0.1	14
20230921 1850	0.1	21
20230921 1900	0.1	8
20230921 1910	0.1	14
20230921 1920	0.1	11
20230921 1930	0.1	77
20230921 1940	0.1	73
20230921 1950	0.1	347
20230921 2000	0.1	49
20230921 2010	0.1	114
20230921 2020	0.1	114
20230921 2030	0.1	30
20230921 2040	0.1	34
20230921 2050	0.1	14
20230921 2100	0.1	14
20230921 2110	0.1	37
20230921 2120	0.1	51
20230921 2130	0.1	80
20230921 2140	0.1	50
20230921 2150	0.1	102
20230921 2200	0.1	103
20230921 2210	0.1	123
20230921 2220	0.1	249
20230921 2230	0.1	251
20230921 2240	0.1	251
20230921 2250	0.1	245
20230921 2300	0.1	245
20230921 2310	0.1	90
20230921 2320	0.1	288
20230921 2330	0.1	142
20230921 2340	0.1	104
20230921 2350	0.1	105

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230922 0000	0.1	114
20230922 0010	0.1	134
20230922 0020	0.1	134
20230922 0030	0.1	116
20230922 0040	0.1	109
20230922 0050	0.6	112
20230922 0100	0.1	87
20230922 0110	0.1	75
20230922 0120	0.1	53
20230922 0130	0.1	35
20230922 0140	0.1	48
20230922 0150	0.1	48
20230922 0200	0.1	48
20230922 0210	0.1	86
20230922 0220	0.1	50
20230922 0230	0.1	58
20230922 0240	0.1	77
20230922 0250	0.1	45
20230922 0300	0.1	84
20230922 0310	0.1	44
20230922 0320	0.1	40
20230922 0330	0.1	84
20230922 0340	0.1	36
20230922 0350	0.1	97
20230922 0400	0.1	47
20230922 0410	0.1	47
20230922 0420	0.1	105
20230922 0430	0.1	37
20230922 0440	0.1	47
20230922 0450	0.1	47
20230922 0500	0.1	238
20230922 0510	0.1	154
20230922 0520	0.1	150
20230922 0530	0.1	9
20230922 0540	0.1	67
20230922 0550	0.1	67
20230922 0600	0.1	84
20230922 0610	0.1	84
20230922 0620	0.1	20
20230922 0630	0.1	25
20230922 0640	0.1	7
20230922 0650	0.1	20
20230922 0700	0.1	20
20230922 0710	0.1	254
20230922 0720	0.1	128
20230922 0730	0.1	128
20230922 0740	0.1	204
20230922 0750	0.1	223
20230922 0800	0.1	123
20230922 0810	0.1	123
20230922 0820	0.1	159
20230922 0830	0.3	186
20230922 0840	0.2	172
20230922 0850	0.2	136
20230922 0900	0.1	175
20230922 0910	0.1	285
20230922 0920	0.2	87
20230922 0930	0.1	87
20230922 0940	0.1	80
20230922 0950	0.1	69
20230922 1000	0.1	94
20230922 1010	0.3	92
20230922 1020	0.4	135
20230922 1030	0.1	44
20230922 1040	0.2	329
20230922 1050	0.1	234
20230922 1100	1	180
20230922 1110	0.2	99
20230922 1120	0.7	58
20230922 1130	1.5	91
20230922 1140	0.1	71
20230922 1150	0.1	202

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230922 1200	0.5	339
20230922 1210	0.1	17
20230922 1220	0.1	325
20230922 1230	0.7	9
20230922 1240	2.2	211
20230922 1250	0.5	46
20230922 1300	1.9	80
20230922 1310	0.3	245
20230922 1320	2.9	146
20230922 1330	0.1	201
20230922 1340	1	301
20230922 1350	0.2	320
20230922 1400	0.1	35
20230922 1410	0.1	5
20230922 1420	0.2	14
20230922 1430	1.4	3
20230922 1440	0.1	97
20230922 1450	0.4	14
20230922 1500	0.2	0
20230922 1510	0.3	278
20230922 1520	0.2	107
20230922 1530	0.1	110
20230922 1540	0.2	192
20230922 1550	0.1	51
20230922 1600	0.2	324
20230922 1610	0.1	17
20230922 1620	0.1	320
20230922 1630	0.1	90
20230922 1640	0.1	137
20230922 1650	0.1	195
20230922 1700	0.9	340
20230922 1710	0.7	329
20230922 1720	0.1	2
20230922 1730	0.6	45
20230922 1740	0.9	287
20230922 1750	0.1	186
20230922 1800	0.1	196
20230922 1810	0.1	254
20230922 1820	0.1	4
20230922 1830	0.1	142
20230922 1840	1.1	46
20230922 1850	0.1	102
20230922 1900	0.1	347
20230922 1910	0.1	103
20230922 1920	0.1	183
20230922 1930	0.5	326
20230922 1940	0.1	76
20230922 1950	0.1	100
20230922 2000	0.1	67
20230922 2010	0.1	300
20230922 2020	0.1	163
20230922 2030	0.1	238
20230922 2040	0.7	228
20230922 2050	0.1	183
20230922 2100	0.1	123
20230922 2110	0.1	165
20230922 2120	0.1	84
20230922 2130	0.1	148
20230922 2140	0.1	132
20230922 2150	0.1	88
20230922 2200	0.1	226
20230922 2210	0.1	339
20230922 2220	0.2	230
20230922 2230	0.1	178
20230922 2240	0.1	195
20230922 2250	0.1	97
20230922 2300	0.1	97
20230922 2310	0.1	97
20230922 2320	0.1	61
20230922 2330	0.1	50
20230922 2340	0.1	250
20230922 2350	0.1	202

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230923 0000	0.1	168
20230923 0010	0.1	101
20230923 0020	0.1	288
20230923 0030	0.1	136
20230923 0040	0.1	354
20230923 0050	0.1	354
20230923 0100	0.1	132
20230923 0110	0.1	223
20230923 0120	0.1	30
20230923 0130	0.1	21
20230923 0140	0.1	206
20230923 0150	0.1	184
20230923 0200	0.1	150
20230923 0210	0.1	143
20230923 0220	0.1	238
20230923 0230	0.1	164
20230923 0240	0.1	125
20230923 0250	0.1	105
20230923 0300	0.1	141
20230923 0310	0.1	141
20230923 0320	0.1	141
20230923 0330	0.1	141
20230923 0340	0.1	99
20230923 0350	0.1	54
20230923 0400	0.1	54
20230923 0410	0.1	56
20230923 0420	0.1	56
20230923 0430	0.1	170
20230923 0440	0.1	130
20230923 0450	0.1	138
20230923 0500	0.1	215
20230923 0510	0.1	135
20230923 0520	0.1	116
20230923 0530	0.1	234
20230923 0540	0.1	209
20230923 0550	0.1	174
20230923 0600	0.1	102
20230923 0610	0.1	102
20230923 0620	0.1	102
20230923 0630	0.1	83
20230923 0640	0.1	39
20230923 0650	0.1	74
20230923 0700	0.1	89
20230923 0710	0.1	114
20230923 0720	0.1	198
20230923 0730	0.1	134
20230923 0740	0.1	144
20230923 0750	0.1	124
20230923 0800	0.1	130
20230923 0810	0.1	96
20230923 0820	0.1	145
20230923 0830	3.5	109
20230923 0840	0.1	29
20230923 0850	0.1	96
20230923 0900	5.7	116
20230923 0910	1.1	332
20230923 0920	0.1	166
20230923 0930	0.5	28
20230923 0940	1.4	115
20230923 0950	2.9	148
20230923 1000	0.5	129
20230923 1010	1	181
20230923 1020	3.4	103
20230923 1030	0.6	121
20230923 1040	0.9	311
20230923 1050	0.2	171
20230923 1100	1.6	91
20230923 1110	0.1	335
20230923 1120	0.1	334
20230923 1130	0.7	131
20230923 1140	0.1	122
20230923 1150	1.1	64

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230923 1200	1.6	111
20230923 1210	2.3	78
20230923 1220	0.2	120
20230923 1230	1.3	169
20230923 1240	0.1	324
20230923 1250	0.5	32
20230923 1300	5.2	9
20230923 1310	0.5	31
20230923 1320	2.4	113
20230923 1330	1.3	139
20230923 1340	3.3	12
20230923 1350	0.4	290
20230923 1400	1.8	77
20230923 1410	0.6	81
20230923 1420	0.4	103
20230923 1430	1.7	62
20230923 1440	0.1	310
20230923 1450	0.2	119
20230923 1500	1.8	10
20230923 1510	0.4	348
20230923 1520	3.4	116
20230923 1530	1.6	146
20230923 1540	0.1	243
20230923 1550	0.1	336
20230923 1600	0.2	85
20230923 1610	1.1	75
20230923 1620	0.3	4
20230923 1630	0.2	6
20230923 1640	0.2	48
20230923 1650	0.5	334
20230923 1700	0.2	68
20230923 1710	0.1	149
20230923 1720	0.6	33
20230923 1730	1.3	132
20230923 1740	0.2	77
20230923 1750	0.1	58
20230923 1800	0.1	5
20230923 1810	0.1	96
20230923 1820	2.1	111
20230923 1830	0.5	127
20230923 1840	0.7	97
20230923 1850	2.3	116
20230923 1900	0.6	339
20230923 1910	0.4	48
20230923 1920	0.2	114
20230923 1930	0.5	134
20230923 1940	3.4	5
20230923 1950	4.9	13
20230923 2000	0.1	209
20230923 2010	0.8	121
20230923 2020	0.1	52
20230923 2030	0.3	344
20230923 2040	1.9	347
20230923 2050	2.1	353
20230923 2100	0.4	15
20230923 2110	0.3	51
20230923 2120	0.1	44
20230923 2130	0.6	103
20230923 2140	0.1	350
20230923 2150	0.6	67
20230923 2200	2.1	53
20230923 2210	2.1	106
20230923 2220	0.1	199
20230923 2230	0.1	168
20230923 2240	0.2	89
20230923 2250	0.2	181
20230923 2300	0.3	340
20230923 2310	0.1	26
20230923 2320	0.1	120
20230923 2330	1.1	139
20230923 2340	0.8	79
20230923 2350	0.1	63

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230924 0000	0.2	34
20230924 0010	1.2	118
20230924 0020	0.6	101
20230924 0030	0.1	175
20230924 0040	0.1	89
20230924 0050	0.1	60
20230924 0100	0.5	101
20230924 0110	0.1	101
20230924 0120	0.6	102
20230924 0130	0.1	130
20230924 0140	0.1	126
20230924 0150	0.1	127
20230924 0200	2.2	125
20230924 0210	0.8	33
20230924 0220	0.2	92
20230924 0230	0.1	21
20230924 0240	0.2	97
20230924 0250	0.6	52
20230924 0300	0.1	93
20230924 0310	0.1	128
20230924 0320	0.2	343
20230924 0330	0.2	158
20230924 0340	0.2	103
20230924 0350	0.1	191
20230924 0400	0.1	198
20230924 0410	0.1	142
20230924 0420	0.1	296
20230924 0430	0.1	242
20230924 0440	0.1	167
20230924 0450	0.1	158
20230924 0500	0.1	137
20230924 0510	0.2	57
20230924 0520	0.1	17
20230924 0530	6.2	338
20230924 0540	0.1	97
20230924 0550	0.1	106
20230924 0600	0.1	7
20230924 0610	1.2	281
20230924 0620	0.1	216
20230924 0630	0.1	159
20230924 0640	0.1	78
20230924 0650	0.2	47
20230924 0700	0.1	-1
20230924 0710	0.1	33
20230924 0720	0.1	23
20230924 0730	0.1	347
20230924 0740	0.3	171
20230924 0750	0.1	316
20230924 0800	0.1	82
20230924 0810	0.1	70
20230924 0820	0.1	165
20230924 0830	0.8	255
20230924 0840	0.1	25
20230924 0850	0.2	109
20230924 0900	0.5	327
20230924 0910	0.1	283
20230924 0920	4.1	183
20230924 0930	0.2	41
20230924 0940	1.2	114
20230924 0950	0.1	21
20230924 1000	1.2	45
20230924 1010	0.4	42
20230924 1020	0.1	193
20230924 1030	1.8	2
20230924 1040	0.1	71
20230924 1050	0.8	237
20230924 1100	1.8	29
20230924 1110	0.1	33
20230924 1120	2.7	287
20230924 1130	0.1	178
20230924 1140	0.8	146
20230924 1150	1.5	82

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230924 1200	2.7	16
20230924 1210	0.1	257
20230924 1220	0.5	66
20230924 1230	0.2	196
20230924 1240	2.9	178
20230924 1250	0.6	267
20230924 1300	0.3	42
20230924 1310	0.1	204
20230924 1320	1.9	117
20230924 1330	0.1	51
20230924 1340	1.2	3
20230924 1350	3	337
20230924 1400	2.4	157
20230924 1410	4	352
20230924 1420	0.1	50
20230924 1430	0.1	224
20230924 1440	0.2	293
20230924 1450	1.1	183
20230924 1500	0.4	32
20230924 1510	2	24
20230924 1520	0.2	223
20230924 1530	0.2	153
20230924 1540	0.7	336
20230924 1550	0.1	114
20230924 1600	4	349
20230924 1610	0.4	128
20230924 1620	2.9	109
20230924 1630	1.7	144
20230924 1640	0.1	167
20230924 1650	0.4	346
20230924 1700	0.1	252
20230924 1710	0.1	146
20230924 1720	0.5	19
20230924 1730	2.1	34
20230924 1740	1.5	39
20230924 1750	0.5	345
20230924 1800	0.1	177
20230924 1810	0.1	327
20230924 1820	0.1	152
20230924 1830	0.1	85
20230924 1840	0.1	67
20230924 1850	0.1	37
20230924 1900	0.5	53
20230924 1910	0.1	117
20230924 1920	0.4	12
20230924 1930	0.5	41
20230924 1940	0.4	110
20230924 1950	0.8	89
20230924 2000	0.8	84
20230924 2010	0.1	109
20230924 2020	0.2	272
20230924 2030	0.4	279
20230924 2040	0.5	349
20230924 2050	0.3	125
20230924 2100	0.5	71
20230924 2110	0.1	323
20230924 2120	1.3	348
20230924 2130	0.9	116
20230924 2140	0.3	181
20230924 2150	1.2	12
20230924 2200	1	111
20230924 2210	1.8	49
20230924 2220	0.7	5
20230924 2230	0.2	68
20230924 2240	0.2	335
20230924 2250	0.6	89
20230924 2300	0.4	78
20230924 2310	0.4	130
20230924 2320	0.1	352
20230924 2330	4.3	168
20230924 2340	0.3	131
20230924 2350	3.7	15

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230925 0000	0.1	38
20230925 0010	1.6	32
20230925 0020	1.2	16
20230925 0030	0.1	98
20230925 0040	2.4	2
20230925 0050	0.2	93
20230925 0100	1.1	147
20230925 0110	6.7	319
20230925 0120	1.4	51
20230925 0130	1.8	24
20230925 0140	0.2	110
20230925 0150	0.1	7
20230925 0200	0.1	282
20230925 0210	0.1	54
20230925 0220	0.9	50
20230925 0230	0.1	166
20230925 0240	2.6	346
20230925 0250	0.5	46
20230925 0300	0.1	259
20230925 0310	0.1	260
20230925 0320	1.3	115
20230925 0330	1.1	110
20230925 0340	0.2	22
20230925 0350	0.1	85
20230925 0400	2.9	128
20230925 0410	0.1	346
20230925 0420	0.7	334
20230925 0430	0.1	220
20230925 0440	0.1	107
20230925 0450	0.1	21
20230925 0500	0.1	196
20230925 0510	0.8	335
20230925 0520	0.6	131
20230925 0530	1.7	93
20230925 0540	0.2	158
20230925 0550	1.1	65
20230925 0600	0.1	90
20230925 0610	0.1	187
20230925 0620	0.2	159
20230925 0630	0.1	11
20230925 0640	0.8	309
20230925 0650	0.5	304
20230925 0700	0.2	110
20230925 0710	0.4	30
20230925 0720	0.2	343
20230925 0730	0.1	54
20230925 0740	0.2	304
20230925 0750	0.1	123
20230925 0800	0.1	16
20230925 0810	3.8	56
20230925 0820	2.4	337
20230925 0830	3.8	22
20230925 0840	0.6	72
20230925 0850	0.2	178
20230925 0900	0.1	126
20230925 0910	1.8	78
20230925 0920	4.6	163
20230925 0930	0.1	150
20230925 0940	0.5	141
20230925 0950	1.6	35
20230925 1000	0.7	142
20230925 1010	0.4	290
20230925 1020	0.2	218
20230925 1030	0.1	140
20230925 1040	0.8	355
20230925 1050	1.2	291
20230925 1100	1	336
20230925 1110	0.1	356
20230925 1120	1.4	142
20230925 1130	2.3	142
20230925 1140	0.1	352
20230925 1150	0.1	98

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230925 1200	1.3	46
20230925 1210	0.6	131
20230925 1220	0.8	229
20230925 1230	0.5	12
20230925 1240	0.3	355
20230925 1250	0.7	6
20230925 1300	7.1	149
20230925 1310	3.8	52
20230925 1320	1.5	226
20230925 1330	0.1	279
20230925 1340	0.1	5
20230925 1350	0.1	336
20230925 1400	0.2	136
20230925 1410	2.5	96
20230925 1420	1.5	15
20230925 1430	4.3	307
20230925 1440	0.1	142
20230925 1450	2.4	5
20230925 1500	3.7	319
20230925 1510	3.2	118
20230925 1520	0.1	96
20230925 1530	0.4	36
20230925 1540	8.7	57
20230925 1550	1.5	345
20230925 1600	1	55
20230925 1610	5.1	10
20230925 1620	5.3	315
20230925 1630	5.3	350
20230925 1640	5.3	56
20230925 1650	2.6	79
20230925 1700	0.9	203
20230925 1710	3.9	53
20230925 1720	0.5	105
20230925 1730	0.1	72
20230925 1740	0.8	80
20230925 1750	0.1	309
20230925 1800	0.1	337
20230925 1810	0.2	281
20230925 1820	0.4	93
20230925 1830	0.1	338
20230925 1840	0.3	72
20230925 1850	0.8	347
20230925 1900	0.1	26
20230925 1910	0.3	48
20230925 1920	0.8	84
20230925 1930	1.1	156
20230925 1940	0.1	79
20230925 1950	1.4	122
20230925 2000	1.7	5
20230925 2010	1.9	16
20230925 2020	2.5	122
20230925 2030	2.4	42
20230925 2040	1.5	80
20230925 2050	0.1	143
20230925 2100	0.4	144
20230925 2110	0.3	90
20230925 2120	0.3	60
20230925 2130	0.1	60
20230925 2140	0.2	352
20230925 2150	2	9
20230925 2200	1.1	105
20230925 2210	0.6	76
20230925 2220	1.1	132
20230925 2230	0.3	94
20230925 2240	0.2	101
20230925 2250	0.5	119
20230925 2300	1.1	37
20230925 2310	0.1	48
20230925 2320	0.4	188
20230925 2330	0.7	125
20230925 2340	0.1	96
20230925 2350	0.9	116

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230926 0000	0.9	113
20230926 0010	0.8	109
20230926 0020	0.3	61
20230926 0030	0.3	57
20230926 0040	0.1	154
20230926 0050	0.1	28
20230926 0100	0.1	59
20230926 0110	0.1	136
20230926 0120	0.2	139
20230926 0130	0.1	289
20230926 0140	1	96
20230926 0150	0.2	83
20230926 0200	0.3	151
20230926 0210	0.1	-1
20230926 0220	0.5	117
20230926 0230	0.1	154
20230926 0240	3.5	340
20230926 0250	1.6	22
20230926 0300	0.4	250
20230926 0310	0.2	61
20230926 0320	0.5	86
20230926 0330	0.9	333
20230926 0340	0.1	210
20230926 0350	0.4	28
20230926 0400	2.2	24
20230926 0410	0.5	116
20230926 0420	0.1	122
20230926 0430	2.1	157
20230926 0440	0.1	151
20230926 0450	2.2	110
20230926 0500	0.5	153
20230926 0510	3.7	17
20230926 0520	0.4	140
20230926 0530	0.5	132
20230926 0540	0.3	89
20230926 0550	0.1	70
20230926 0600	0.1	106
20230926 0610	0.1	352
20230926 0620	4.2	354
20230926 0630	0.8	59
20230926 0640	0.1	71
20230926 0650	0.1	87
20230926 0700	1.1	130
20230926 0710	0.5	125
20230926 0720	3	34
20230926 0730	3.9	118
20230926 0740	0.7	36
20230926 0750	0.9	315
20230926 0800	0.1	113
20230926 0810	0.6	159
20230926 0820	3.1	335
20230926 0830	4.9	43
20230926 0840	0.6	99
20230926 0850	1.2	31
20230926 0900	1.5	62
20230926 0910	1.2	71
20230926 0920	0.7	351
20230926 0930	3.2	0
20230926 0940	0.3	17
20230926 0950	2.7	40
20230926 1000	0.8	88
20230926 1010	2.2	128
20230926 1020	5.1	31
20230926 1030	0.2	44
20230926 1040	0.8	81
20230926 1050	0.3	65
20230926 1100	1.4	332
20230926 1110	0.9	4
20230926 1120	0.7	228
20230926 1130	0.7	160
20230926 1140	0.2	79
20230926 1150	2.9	343

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230926 1200	0.5	280
20230926 1210	0.3	25
20230926 1220	2.2	92
20230926 1230	1.5	32
20230926 1240	0.6	112
20230926 1250	0.2	343
20230926 1300	1.6	3
20230926 1310	9.7	133
20230926 1320	0.8	6
20230926 1330	2.9	75
20230926 1340	1.5	47
20230926 1350	0.2	59
20230926 1400	1.1	180
20230926 1410	0.2	332
20230926 1420	3.6	139
20230926 1430	1	120
20230926 1440	1.3	340
20230926 1450	0.1	354
20230926 1500	5.2	338
20230926 1510	2.4	128
20230926 1520	1.1	168
20230926 1530	0.2	311
20230926 1540	2.7	95
20230926 1550	5.2	143
20230926 1600	3.2	110
20230926 1610	0.1	65
20230926 1620	2.4	158
20230926 1630	0.1	161
20230926 1640	1	62
20230926 1650	1.2	109
20230926 1700	1.1	148
20230926 1710	4.5	144
20230926 1720	2.6	105
20230926 1730	1.2	65
20230926 1740	0.2	354
20230926 1750	2.3	35
20230926 1800	0.4	110
20230926 1810	1.6	354
20230926 1820	0.3	86
20230926 1830	2	14
20230926 1840	6.3	48
20230926 1850	4.5	30
20230926 1900	8	31
20230926 1910	0.2	39
20230926 1920	0.2	86
20230926 1930	0.2	183
20230926 1940	1	98
20230926 1950	0.1	229
20230926 2000	2.3	337
20230926 2010	1.6	59
20230926 2020	0.1	104
20230926 2030	1.7	169
20230926 2040	0.7	116
20230926 2050	2.3	142
20230926 2100	2.8	134
20230926 2110	0.1	187
20230926 2120	0.1	170
20230926 2130	0.1	221
20230926 2140	0.1	162
20230926 2150	0.1	105
20230926 2200	0.5	150
20230926 2210	0.6	80
20230926 2220	0.3	98
20230926 2230	0.6	85
20230926 2240	2.4	336
20230926 2250	1.8	130
20230926 2300	0.4	113
20230926 2310	0.2	68
20230926 2320	0.6	124
20230926 2330	0.2	149
20230926 2340	0.1	351
20230926 2350	0.1	101

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230927 0000	0.2	126
20230927 0010	0.1	72
20230927 0020	0.1	155
20230927 0030	0.9	146
20230927 0040	0.8	351
20230927 0050	0.5	135
20230927 0100	0.1	48
20230927 0110	0.2	103
20230927 0120	0.1	133
20230927 0130	0.1	118
20230927 0140	0.6	28
20230927 0150	1.9	170
20230927 0200	0.1	183
20230927 0210	0.7	39
20230927 0220	1.1	116
20230927 0230	0.8	100
20230927 0240	0.2	82
20230927 0250	0.1	19
20230927 0300	1.3	80
20230927 0310	0.1	138
20230927 0320	0.1	205
20230927 0330	0.5	194
20230927 0340	0.4	110
20230927 0350	0.1	91
20230927 0400	0.1	164
20230927 0410	0.1	307
20230927 0420	0.1	146
20230927 0430	0.1	72
20230927 0440	0.1	245
20230927 0450	0.1	158
20230927 0500	0.1	117
20230927 0510	0.1	212
20230927 0520	0.1	35
20230927 0530	1.1	80
20230927 0540	0.3	134
20230927 0550	1	336
20230927 0600	0.1	330
20230927 0610	0.1	96
20230927 0620	0.8	66
20230927 0630	0.2	347
20230927 0640	0.2	98
20230927 0650	0.6	140
20230927 0700	0.1	154
20230927 0710	0.1	17
20230927 0720	0.1	145
20230927 0730	0.1	180
20230927 0740	0.1	76
20230927 0750	0.1	35
20230927 0800	0.8	92
20230927 0810	0.1	72
20230927 0820	0.1	72
20230927 0830	0.5	184
20230927 0840	0.1	65
20230927 0850	1.3	104
20230927 0900	0.2	27
20230927 0910	0.3	316
20230927 0920	0.5	303
20230927 0930	0.1	142
20230927 0940	1.8	93
20230927 0950	5.7	1
20230927 1000	1.6	68
20230927 1010	0.8	133
20230927 1020	0.4	85
20230927 1030	0.1	54
20230927 1040	0.1	67
20230927 1050	0.4	144
20230927 1100	0.1	281
20230927 1110	1	151
20230927 1120	0.2	254
20230927 1130	0.1	147
20230927 1140	0.3	119
20230927 1150	0.3	322

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230927 1200	1.6	58
20230927 1210	2.5	51
20230927 1220	3.2	165
20230927 1230	0.2	74
20230927 1240	1.9	310
20230927 1250	1.7	26
20230927 1300	0.1	221
20230927 1310	2.9	64
20230927 1320	3.1	163
20230927 1330	2.5	85
20230927 1340	0.1	14
20230927 1350	0.6	272
20230927 1400	0.1	330
20230927 1410	0.1	350
20230927 1420	2.5	353
20230927 1430	1.4	57
20230927 1440	0.1	4
20230927 1450	0.1	86
20230927 1500	0.4	129
20230927 1510	0.1	5
20230927 1520	0.2	21
20230927 1530	0.2	24
20230927 1540	2.5	142
20230927 1550	3.8	149
20230927 1600	2.1	11
20230927 1610	2.3	34
20230927 1620	0.7	333
20230927 1630	0.2	179
20230927 1640	0.3	177
20230927 1650	2.6	345
20230927 1700	0.6	52
20230927 1710	0.5	79
20230927 1720	0.3	160
20230927 1730	1.7	118
20230927 1740	0.7	79
20230927 1750	0.1	330
20230927 1800	0.1	187
20230927 1810	0.1	171
20230927 1820	0.1	209
20230927 1830	0.1	64
20230927 1840	0.1	283
20230927 1850	0.1	288
20230927 1900	0.1	304
20230927 1910	0.1	163
20230927 1920	0.1	310
20230927 1930	0.1	99
20230927 1940	0.2	12
20230927 1950	1.4	3
20230927 2000	0.1	336
20230927 2010	0.1	65
20230927 2020	0.1	53
20230927 2030	0.1	91
20230927 2040	0.5	122
20230927 2050	0.7	349
20230927 2100	0.3	142
20230927 2110	0.1	335
20230927 2120	0.3	273
20230927 2130	0.1	22
20230927 2140	0.1	50
20230927 2150	0.4	128
20230927 2200	0.1	68
20230927 2210	0.1	50
20230927 2220	0.1	122
20230927 2230	0.1	322
20230927 2240	0.1	159
20230927 2250	0.1	159
20230927 2300	0.1	179
20230927 2310	0.1	279
20230927 2320	0.1	116
20230927 2330	0.5	127
20230927 2340	0.1	63
20230927 2350	0.2	4

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230928 0000	0.1	96
20230928 0010	0.5	352
20230928 0020	3.1	356
20230928 0030	0.1	137
20230928 0040	1.7	0
20230928 0050	0.1	347
20230928 0100	0.1	349
20230928 0110	1.4	3
20230928 0120	0.1	164
20230928 0130	2.4	71
20230928 0140	0.1	229
20230928 0150	0.2	141
20230928 0200	2.9	347
20230928 0210	0.1	25
20230928 0220	0.5	87
20230928 0230	1.3	31
20230928 0240	1.7	330
20230928 0250	0.3	56
20230928 0300	0.1	50
20230928 0310	0.1	150
20230928 0320	0.1	156
20230928 0330	0.6	90
20230928 0340	0.3	346
20230928 0350	0.4	95
20230928 0400	0.1	85
20230928 0410	0.1	49
20230928 0420	1.3	55
20230928 0430	0.1	341
20230928 0440	0.1	163
20230928 0450	0.1	83
20230928 0500	0.1	147
20230928 0510	0.1	58
20230928 0520	0.1	114
20230928 0530	0.6	37
20230928 0540	0.3	112
20230928 0550	2.8	56
20230928 0600	0.1	100
20230928 0610	0.1	86
20230928 0620	0.1	108
20230928 0630	0.1	169
20230928 0640	0.1	145
20230928 0650	0.1	37
20230928 0700	0.1	27
20230928 0710	0.1	150
20230928 0720	0.1	165
20230928 0730	0.1	116
20230928 0740	0.9	109
20230928 0750	0.4	33
20230928 0800	0.9	20
20230928 0810	0.1	347
20230928 0820	0.1	15
20230928 0830	2.9	93
20230928 0840	0.5	347
20230928 0850	0.1	352
20230928 0900	0.1	213
20230928 0910	1	141
20230928 0920	0.1	191
20230928 0930	0.3	41
20230928 0940	3.9	17
20230928 0950	3	2
20230928 1000	0.4	151
20230928 1010	2.8	113
20230928 1020	0.6	144
20230928 1030	0.2	290
20230928 1040	1.8	119
20230928 1050	0.8	58
20230928 1100	0.3	24
20230928 1110	0.3	13
20230928 1120	0.1	145
20230928 1130	0.4	299
20230928 1140	0.2	350
20230928 1150	4	163

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230928 1200	0.3	224
20230928 1210	1.2	34
20230928 1220	0.3	90
20230928 1230	1.7	332
20230928 1240	0.1	190
20230928 1250	0.6	313
20230928 1300	0.5	5
20230928 1310	0.7	211
20230928 1320	0.1	13
20230928 1330	0.1	285
20230928 1340	0.1	345
20230928 1350	2.1	124
20230928 1400	0.3	99
20230928 1410	1.3	41
20230928 1420	4	11
20230928 1430	0.1	102
20230928 1440	4.5	11
20230928 1450	1.1	11
20230928 1500	1.3	155
20230928 1510	1.9	172
20230928 1520	1.5	8
20230928 1530	1.6	339
20230928 1540	1.3	334
20230928 1550	2.1	2
20230928 1600	0.3	77
20230928 1610	0.5	330
20230928 1620	5	41
20230928 1630	4	277
20230928 1640	0.8	26
20230928 1650	7.6	5
20230928 1700	0.3	132
20230928 1710	0.9	92
20230928 1720	1.6	331
20230928 1730	0.3	123
20230928 1740	0.1	34
20230928 1750	0.4	0
20230928 1800	0.1	256
20230928 1810	0.1	182
20230928 1820	0.1	306
20230928 1830	0.1	275
20230928 1840	0.7	164
20230928 1850	0.6	161
20230928 1900	0.1	310
20230928 1910	0.3	10
20230928 1920	0.1	5
20230928 1930	0.1	241
20230928 1940	1.3	5
20230928 1950	0.1	245
20230928 2000	0.4	281
20230928 2010	1.4	111
20230928 2020	4.1	29
20230928 2030	0.4	132
20230928 2040	0.2	52
20230928 2050	0.1	48
20230928 2100	0.2	41
20230928 2110	0.1	58
20230928 2120	0.5	67
20230928 2130	0.1	350
20230928 2140	0.1	133
20230928 2150	0.2	20
20230928 2200	0.1	290
20230928 2210	1	88
20230928 2220	0.4	60
20230928 2230	0.1	324
20230928 2240	0.1	84
20230928 2250	1.9	26
20230928 2300	0.4	78
20230928 2310	0.1	6
20230928 2320	0.6	1
20230928 2330	0.2	5
20230928 2340	0.4	352
20230928 2350	0.1	36

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230929 0000	0.1	117
20230929 0010	0.1	137
20230929 0020	0.1	111
20230929 0030	0.1	117
20230929 0040	0.1	178
20230929 0050	0.1	93
20230929 0100	1.1	32
20230929 0110	1.8	307
20230929 0120	0.1	64
20230929 0130	0.8	99
20230929 0140	0.1	111
20230929 0150	0.1	33
20230929 0200	0.1	56
20230929 0210	0.1	5
20230929 0220	0.1	98
20230929 0230	0.1	124
20230929 0240	0.1	104
20230929 0250	0.3	310
20230929 0300	0.1	107
20230929 0310	0.1	43
20230929 0320	0.1	33
20230929 0330	0.1	7
20230929 0340	0.8	111
20230929 0350	0.1	355
20230929 0400	0.1	52
20230929 0410	0.1	173
20230929 0420	0.1	260
20230929 0430	0.8	66
20230929 0440	0.1	182
20230929 0450	0.1	179
20230929 0500	0.2	131
20230929 0510	0.1	29
20230929 0520	0.1	330
20230929 0530	0.1	114
20230929 0540	0.1	197
20230929 0550	0.1	40
20230929 0600	0.1	157
20230929 0610	0.1	174
20230929 0620	1	88
20230929 0630	0.1	88
20230929 0640	0.1	211
20230929 0650	0.1	280
20230929 0700	0.1	73
20230929 0710	1	124
20230929 0720	1	138
20230929 0730	0.1	118
20230929 0740	0.1	91
20230929 0750	0.4	71
20230929 0800	0.1	118
20230929 0810	0.1	109
20230929 0820	1.9	39
20230929 0830	0.2	328
20230929 0840	0.7	311
20230929 0850	2.6	96
20230929 0900	0.1	194
20230929 0910	0.3	75
20230929 0920	0.2	1
20230929 0930	0.1	54
20230929 0940	0.4	18
20230929 0950	0.8	34
20230929 1000	1.7	36
20230929 1010	0.1	258
20230929 1020	0.2	57
20230929 1030	0.2	24
20230929 1040	0.3	332
20230929 1050	0.1	242
20230929 1100	2.6	50
20230929 1110	1.1	97
20230929 1120	0.1	18
20230929 1130	0.6	328
20230929 1140	0.1	90
20230929 1150	3.3	342

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230929 1200	2.1	73
20230929 1210	1.9	96
20230929 1220	2.6	288
20230929 1230	0.8	29
20230929 1240	0.3	246
20230929 1250	0.2	271
20230929 1300	2.8	18
20230929 1310	0.1	126
20230929 1320	2.1	129
20230929 1330	5.1	161
20230929 1340	0.5	49
20230929 1350	1.7	89
20230929 1400	2.1	177
20230929 1410	0.7	67
20230929 1420	0.1	95
20230929 1430	1.1	35
20230929 1440	0.1	55
20230929 1450	2.9	232
20230929 1500	0.8	162
20230929 1510	0.1	62
20230929 1520	1	114
20230929 1530	1.8	4
20230929 1540	0.1	339
20230929 1550	0.3	68
20230929 1600	0.1	277
20230929 1610	0.1	146
20230929 1620	1.1	348
20230929 1630	0.1	5
20230929 1640	0.1	353
20230929 1650	0.1	3
20230929 1700	0.3	20
20230929 1710	0.1	39
20230929 1720	0.4	283
20230929 1730	0.1	39
20230929 1740	0.1	111
20230929 1750	0.1	42
20230929 1800	0.2	55
20230929 1810	0.2	307
20230929 1820	0.1	62
20230929 1830	0.3	304
20230929 1840	0.2	350
20230929 1850	0.1	42
20230929 1900	0.1	349
20230929 1910	0.1	165
20230929 1920	0.2	334
20230929 1930	0.1	312
20230929 1940	0.1	333
20230929 1950	0.1	327
20230929 2000	0.1	65
20230929 2010	0.1	64
20230929 2020	0.1	330
20230929 2030	0.1	2
20230929 2040	0.1	98
20230929 2050	0.1	83
20230929 2100	0.1	351
20230929 2110	0.1	202
20230929 2120	0.1	88
20230929 2130	0.1	35
20230929 2140	0.1	127
20230929 2150	0.4	9
20230929 2200	0.2	12
20230929 2210	0.1	20
20230929 2220	0.3	16
20230929 2230	0.5	62
20230929 2240	0.1	258
20230929 2250	0.1	36
20230929 2300	0.6	161
20230929 2310	0.1	245
20230929 2320	0.1	187
20230929 2330	0.1	354
20230929 2340	0.1	64
20230929 2350	0.1	178

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230930 0000	0.1	352
20230930 0010	0.1	310
20230930 0020	0.1	342
20230930 0030	0.1	297
20230930 0040	0.1	61
20230930 0050	0.1	156
20230930 0100	0.1	156
20230930 0110	0.1	156
20230930 0120	0.1	52
20230930 0130	0.1	52
20230930 0140	0.1	52
20230930 0150	0.1	60
20230930 0200	0.1	60
20230930 0210	0.1	52
20230930 0220	0.1	54
20230930 0230	0.1	17
20230930 0240	0.1	25
20230930 0250	0.1	25
20230930 0300	0.1	40
20230930 0310	0.1	54
20230930 0320	0.1	55
20230930 0330	0.1	55
20230930 0340	0.1	55
20230930 0350	0.1	55
20230930 0400	0.1	55
20230930 0410	0.1	60
20230930 0420	0.1	58
20230930 0430	0.1	51
20230930 0440	0.1	52
20230930 0450	0.1	55
20230930 0500	0.1	55
20230930 0510	0.1	55
20230930 0520	0.1	55
20230930 0530	0.1	55
20230930 0540	0.1	40
20230930 0550	0.1	8
20230930 0600	0.1	34
20230930 0610	0.1	32
20230930 0620	0.1	41
20230930 0630	0.1	19
20230930 0640	0.1	19
20230930 0650	0.1	19
20230930 0700	0.1	63
20230930 0710	0.1	62
20230930 0720	0.1	60
20230930 0730	0.1	144
20230930 0740	0.1	144
20230930 0750	0.1	157
20230930 0800	0.1	139
20230930 0810	0.1	123
20230930 0820	0.1	123
20230930 0830	0.1	115
20230930 0840	0.1	117
20230930 0850	0.1	99
20230930 0900	0.3	120
20230930 0910	1	295
20230930 0920	0.1	17
20230930 0930	0.1	202
20230930 0940	0.3	96
20230930 0950	0.1	106
20230930 1000	0.1	72
20230930 1010	0.1	78
20230930 1020	0.1	51
20230930 1030	0.1	345
20230930 1040	0.7	134
20230930 1050	0.2	92
20230930 1100	0.1	30
20230930 1110	0.1	73
20230930 1120	0.1	347
20230930 1130	1.3	99
20230930 1140	0.1	113
20230930 1150	0.1	142

Date & Time (YYYYMMBB HHMM)	Wind Speed (m/s)	Wind Direction (Degree)
20230930 1200	0.1	3
20230930 1210	0.1	87
20230930 1220	2	152
20230930 1230	0.2	150
20230930 1240	0.7	29
20230930 1250	0.1	13
20230930 1300	0.1	90
20230930 1310	0.1	215
20230930 1320	0.2	101
20230930 1330	0.1	4
20230930 1340	0.2	92
20230930 1350	2.4	200
20230930 1400	1.8	190
20230930 1410	1.2	145
20230930 1420	0.1	259
20230930 1430	0.5	151
20230930 1440	0.1	195
20230930 1450	0.4	180
20230930 1500	0.1	183
20230930 1510	0.1	145
20230930 1520	0.1	8
20230930 1530	0.1	333
20230930 1540	0.1	13
20230930 1550	0.1	269
20230930 1600	0.1	168
20230930 1610	0.5	230
20230930 1620	0.2	220
20230930 1630	0.1	269
20230930 1640	0.1	153
20230930 1650	0.1	267
20230930 1700	0.1	106
20230930 1710	0.1	106
20230930 1720	0.1	105
20230930 1730	0.1	105
20230930 1740	0.1	105
20230930 1750	0.1	62
20230930 1800	0.1	64
20230930 1810	0.1	55
20230930 1820	0.1	47
20230930 1830	0.1	28
20230930 1840	0.1	9
20230930 1850	0.1	34
20230930 1900	0.1	37
20230930 1910	0.1	336
20230930 1920	0.1	10
20230930 1930	0.1	140
20230930 1940	0.1	78
20230930 1950	0.1	2
20230930 2000	0.1	331
20230930 2010	0.1	68
20230930 2020	0.1	5
20230930 2030	0.1	71
20230930 2040	0.1	1
20230930 2050	0.1	59
20230930 2100	0.1	96
20230930 2110	0.1	60
20230930 2120	0.1	52
20230930 2130	0.1	3
20230930 2140	0.1	349
20230930 2150	0.1	22
20230930 2200	0.1	22
20230930 2210	0.1	22
20230930 2220	0.1	22
20230930 2230	0.1	349
20230930 2240	0.1	7
20230930 2250	0.1	29
20230930 2300	0.1	353
20230930 2310	0.1	63
20230930 2320	0.1	63
20230930 2330	0.1	63
20230930 2340	0.1	63
20230930 2350	0.1	65

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
Total	225,677.21	0.00	0.00	223,396.37	0.00	0.00	0.00	0.00	0.00	22.69	0.00	162.49	2,095.66

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:	04 September 2023	Inspected By:	Jason Man
Time:	14:00	Weather Condition:	Fine
Participants:	Sylvia Ho (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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A3	Is wastewater discharge licence available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B2	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B3	Any remedial action undertaken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B4	Are the worksites wetted with water regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observation 2
B5	Are NRMM labels properly affixed on the PMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 4
B6	Observed dust source(s)				
	<input type="checkbox"/> Wind erosion				
	<input checked="" type="checkbox"/> Vehicle/ Equipment Movements				
	<input type="checkbox"/> Loading/ unloading of materials				
	<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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Construction of the superstructure of a building

B8	Is scaffolding erected around the perimeter of a building under construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B10	Is the skip for materials transport enclosed by impervious sheeting ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 hardcores?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B13	Are the hoarding $\geq 2.4\text{m}$ tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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, hardcores or metal plates, and kept clear of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B15	Are every main haul road sprayed with water or a dust suppression chemical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B17	Are appropriate speed limit sign displayed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B18	Is unpaved main haul road wet by water spraying?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 3 Observation 2
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B21	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by <u>impervious sheeting</u> or (b) placed in an <u>area sheltered on the top and the 3 sides</u> or (c) <u>sprayed with water</u> 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 <u>excavation or unloading</u> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 5
B24	Is the stockpile of dusty materials avoid to be extend beyond the <u>pedestrian barriers, fencing or traffic cones</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials <u>sprayed with water</u> or a dust suppression chemical immediately <u>prior to any loading, unloading or transfer operation</u> so as to maintain the dusty materials wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B26	Are <u>all trucks loaded</u> to a level within the side and tail boards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Use of vehicles					
B27	Are <u>every vehicle washed immediately</u> to remove any dusty materials from its body and wheels before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B28	Are <u>loaded dump trucks</u> covered by impervious sheeting appropriately before leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B29	Are site <u>vehicle movements</u> confined to designated roads?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pneumatic or power-driven drilling, cutting and polishing					
B30	Are <u>surfaces</u> where any <u>pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations</u> 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Debris handling					
B31	Are any debris covered entirely by <u>impervious sheeting</u> or stored in a <u>debris collection area</u> sheltered on the top and the 3 sides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B32	Are every <u>debris chute</u> shall be enclosed by impervious sheeting or similar materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B33	Are the watering spray or a dust suppression chemical conducted before <u>debris is dumped</u> into a debris chute?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

C	Construction Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C2	Are vehicles and equipment switched off or throttled down while not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C3	Is the noise directed away from nearby NSRs ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C6	Are material stockpiles , mobile container office and other structures utilised to screen noisy activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
C9	Is the sequencing operation of construction plants where practicable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C10	Is the hoarding maintained properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C12	Are compressor operated with doors closed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C13	QPME used with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C14	Major noise source(s)				
		<input checked="" type="checkbox"/> Traffic			
		<input checked="" type="checkbox"/> Construction activities inside of site			
		<input type="checkbox"/> Construction activities outside of site			
		<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D1b	Are channels , earth bunds or sandbag barriers provided on site to properly direct stormwater to silt removal facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 24 Jul 2023 Observation 2 Refer to 31 Jul 2023 Observation 1 Refer to 21 August 2023 Observation 1 Refer to 28 Aug 2023 Observation 7
D2a	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D2b	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 1
D2c	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D3	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D4a	Are surface excavation works minimised during rainy seasons (April to September), as possible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D4c	Are exposed slope surfaces covered by tarpaulin sheets?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	To be treated with shotcrete at part of slope surface. Refer to 10 Jul 2023 Observation 5 Refer to 28 Aug 2023 Observation 1 Observation 3
D5a	Have the overall slope of the site should be kept a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D5b	Are all trafficked areas and access roads protected by coarse stone ballast?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D6a	Are all drainage facilities and erosion and sediment control structures inspected regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D6c	Is the deposited silt and grit removed regularly and disposed of by spreading evenly over stable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 6
D7a	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D7b	Is rainwater pumped out from trenches discharged into storm drains via silt system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9a	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9b	Are the discharges of surface run-off into foul sewer always prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D10a	Are particular attention paid to the control of silty surface runoff during storm event ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7
D10c	Are the actions to be taken when a rainstorm is imminent or forecast ? (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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

D11a	Are all vehicles and plant cleaned before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11b	Is the wheel washing bay provided at every site exit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11c	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11d	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D11e	Is the section of construction road between the wheel washing bay and the public road paved with backfill?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11f	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D12a	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D12c	Has a bypass provided to prevent flushing during heavy rain?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D13	Are the construction solid waste, debris and rubbish on site collected, handled and disposed of properly? (same with waste item)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D15	Is Intercepting bund or barrier along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D16	Are site drainage systems provided over the entire project site with sediment control facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D17	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D18	Is there any sediment plume observed in nearby watercourses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are portable chemical toilets and sewage holding tanks provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D19b	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D20	Are the notices posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D21b	Are all maintenance of equipment involving activities with potential for leakage and spillage undertaken within the areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O

D21c	Is <u>chemical leakage</u> or <u>spillages</u> contained and cleaned up immediately?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
Surface Water Drainage System					
D22a	Is the <u>temporary surface water drainage system</u> provided to manage runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22b	Does the system consist of <u>channel</u> as constructed around the perimeter of the site area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22c	Does the system collect surface water from the <u>areas of higher elevations</u> to those of <u>lower elevations</u> and ultimately to the discharge point?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22d	Is the <u>erosion</u> minimised?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D23a	Does the system include the <u>use of a silt fence</u> around the <u>soil stockpile areas</u> to prevent sediment from entering the system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D23b	Is the regular <u>cleaning</u> carried out to prevent blockage of the passage of waste flow in silt fence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2a	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2b	Does accumulation of waste avoid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observation 1
E2c	Is waste disposed regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Observation 1
E2d	Regular waste collection by approved waste collector in purpose-built vehicles?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E3	Burning of refuse on construction site prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C&D Materials					
E4a	Are there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E4b	Are the C&D materials sorted and recycled on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5a	Is the durable formwork or plastic facing for construction works used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5b	Do the wooden hoardings avoid to be used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5c	Is metal hoarding used to enhance the possibility of recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6a	Are the concrete and masonry used as general fill ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6b	Are the steel reinforcement bars used by scrap steel mills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6c	Is the segregation and storage of C&D wastes undertaken in designated area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6d	Does the use of reusable steel formwork maximise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7a	Are the temporary stockpiles maintained regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7b	Is the excavated fill material reused for backfilling and reinstatement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8a	Are the excavated slope , stockpile material and bund walls covered by tarpaulin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 10 Jul 2023 Observation 5
E8b	Are covering trucks or transporting wastes in enclosed containers when transportation of waste ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8c	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E9	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E12	Are the regular cleaning and maintenance programme for drainage systems, sumps, oil interceptors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13a	Are wood, steel and other metals separated for re-use and/or recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E13b	Do the excavated materials appear contaminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13c	If suspected contaminated, appropriate procedures followed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E14	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Chemical Waste / Waste Oil													
E16	Are chemicals and waste oil recycled or disposed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 21 August 2023 Observation 5								
Chemical Packaging													
E17a	Have the containers a capacity of <450 L unless the specification has been approved by EPD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E17b	Are the containers (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for storage of chemical wastes ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
Chemical Labelling													
E18	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area? <table border="1" data-bbox="220 1261 746 1429"> <tr> <td>Capacity of Container</td> <td>Dimensions of Label</td> </tr> <tr> <td>< 50L</td> <td>No less than 90 x 100mm</td> </tr> <tr> <td>50 to 450L</td> <td>No less than 120 x 150mm</td> </tr> <tr> <td>> 450L</td> <td>No less than 180 x 200mm</td> </tr> </table>	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19c	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering and reduce heat from sunlight?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19d	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E20	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									

Records					
E21	Is a licensed waste hauler used for waste collection ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E22	Are the records of quantities of wastes generated, recycled and disposed properly kept?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E23	For the demolition material / waste, is the number of loads for each day recorded as appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F3	Is no smoking or burning permitted on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F4	Are prominent 'No smoking' and 'No Naked Flames' signs erected on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F6	Is adequate fire fighting equipment provided on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F9	Is 'Permit to Work' system implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F11a	For pipng assembly or conduit construction , are all valves and seals closed immediately after installation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11c	Is forced ventilation implemented prior to operation of installed pipeline ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17c	Are all measurements in excavations made with monitoring tube located < 10mm from exposed ground surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F19	For excavations 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F20	For excavations < 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G2	Is damage to surrounding areas avoided ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at strategic locations within site implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G4b	Are the roadside planter and shrub planting implemented in front of Cheung Sha Temple ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Boundary Green Belt planting					
G5	Are the fast growing and fire-resistant plant species planted around the site perimeter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a temporary slope cover ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Existing tree preservation					
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Follow up action for previous Site Inspection:




1. 24 July 2023 Observation 2 – The earth bunds at Portion A were constructed by contractor.
2. 31 July 2023 Observation 1 – The earth bunds at Portion A were constructed by contractor.
3. 21 August 2023 Observation 1 – The sandbag barriers and the trench were established by contractor.
4. 21 August 2023 Observation 4 – The slope protection at Portion E4 was conducted by contractor.
5. 28 August 2023 Observation 1 – The slope protection at Portion A & E4 was implemented by contractor.
6. 28 August 2023 Observation 3 – The accumulated sand on the outlet tray of silt removal facility in Portion A was cleared off by contractor.
7. 28 August 2023 Observation 4 – The drip tray was provided for the air compressor in Portion A.
8. 28 August 2023 Observation 6 – The accumulated silt in the sedimentation basin at Portion E4 as cleared off by contractor.
9. 28 August 2023 Observation 7 – The earth bunds at the outlet of branch from Portion E4 was established and the channel at Portion E4 was paved by contractor.
10. 4 September 2023 Observation 1 – The accumulated waste at Portion D was collected by approved waste collector.

Observation(s):

1. Over loading of accumulated waste is found at the waste skip of Portion D.
2. Dust drift is found at the assess road of Portion A when vehicle moving.
3. The exposed slope surfaces at Portion B2 are not covered by impervious sheets.

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

1. The contractor has been recommended to increase the frequency of waste collection and the amount of waste skip to avoid over loading condition of waste skip at Portion D.
2. The contractor has been advised to increase the frequency of water spraying at the assess road of Portion A.
3. The contractor has been recommended to cover the exposed slope surfaces at Portion B2 by impervious sheet.

	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:	4 September 2023	/	4 September 2023	4 September 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
<p><u>10 July 2023 Observation 5</u></p>  <p>The exposed slope surfaces were not covered by tarpaulin sheets or treated with shotcrete at the Portion E3-1. The contractor has been recommended to implement the cover works of exposed slope surfaces by tarpaulin sheets or shotcrete at the Portion E3-1 to minimise the potential high concentration construction runoff to silt removal facilities.</p>	 <p>The exposed slopes were covered with impervious sheets temporarily at the left side of Portion E3-1.</p> <p>Waiting for Contractor's Input (Right side slope at Portion E3-1)</p>
<p><u>24 July 2023 Observation 2</u></p>  <p>Earth bund shall be constructed at the edge of the slope to prevent surface runoff flowing outside the site in Portion A. The Contractor was recommended to construction earth bund along the edge of the slope in Portion A.</p>	  <p>The earth bunds at Portion A were reconstructed by contractor.</p>

Observation and Recommendation	Follow-up status
<p data-bbox="132 248 395 271"><u>31 July 2023 Observation 1</u></p> <div data-bbox="132 286 705 1142">  </div> <p data-bbox="132 1160 783 1346">Earth bunds and ditches should be established at the boundary of the +52 mpd Platform of the Portion A. The contractor has been advised that the earth bunds and ditches should be constructed at the boundary of the +52 mpd Platform of the Portion A. The sandbags barriers or other control of surface runoff measures should be provided at the boundary in short term to avoid the surface runoff flow to the earth bunds at the boundary of the +38 mpd platform directly.</p>	<div data-bbox="844 338 1417 1209">  </div> <p data-bbox="810 1227 1401 1249">The earth bunds at Portion A were reconstructed by contractor.</p>
<p data-bbox="132 1368 395 1391"><u>31 July 2023 Observation 3</u></p> <div data-bbox="132 1406 678 1812">  </div> <p data-bbox="132 1830 783 1960">The assess road at the Portion E4 was dry. The contractor has been advised that the assess road at the Portion E4 should be sprayed with water when the assess road is dry to minimize the dust suppression. The water sprinkler should be considered to establish at the assess road of the Portion E4.</p>	<p data-bbox="997 1653 1268 1675">Waiting for Contractor' Input</p>

Observation and Recommendation	Follow-up status
<p>14 August 2023 Observation 6:</p>  <p>The accumulated silt in the sedimentation basin at Portion E3 should be regularly removed, especially before and after rainstorm.</p>	<p>Lower part of the sedimentation basin: <u>Waiting for Contractor's Input</u></p>  <p>The Contractor arranged silt removal work on the upper part of the sedimentation basin.</p>
<p>14 August 2023 Observation 8:</p> 	



The untreated wastewater was leaked into the channel at Portion E3. The channel should be kept away from untreated wastewater and general waste.



The silt along and inside the existing channel has been removed and the Contractor has placed sandbag barriers to seal the leakage points. The Contractor has been recommended to construct paved earth bund along the existing channel to prevent the leakage from happening again.

21 August 2023 Observation 1:



The edge of site boundary should be properly sealed to prevent leakage of surface runoff flowing out of the site.



The sandbag barriers and the trench were established by contractor.

21 August 2023 Observation 4:



Implementation of slope protection should be enhanced at Portion E4.



The slope protection at Portion E4 was conducted by contractor.



21 August 2023 Observation 5:




Chemical containers should be placed within the drip trays in Portion E4.

Waiting for Contractor's Input

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 1:</u></p> <p><u>Portion A</u></p>   <p><u>Portion B2</u></p> 	<p><u>Portion A</u></p>  <p><u>Portion E4</u></p>  <p>The slope protection at Portion A & E4 was implemented by contractor.</p> <p><u>Portion B2</u></p> <p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p><u>Portion E4</u></p>  <p>The slope protection measures should be enhanced in Portion A, B2 and E4 prior the rainfall and the tropical cyclone. The Contractor should cover the exposed slope with the impervious sheet as temporary measure or pave slope surface for long term.</p>	
<p><u>28 August 2023 Observation 2:</u></p>  <p>NRMM label should be fixated on the generator in Portion A.</p>	<p>Waiting for contractor input</p>


Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 3:</u></p>  <p>Accumulated sand on the outlet tray of the silt removal facility in Portion A should be regularly cleared off. Dusts are observed at the surface of the wastewater.</p>	 <p>The accumulated sand on the outlet tray of silt removal facility in Portion A was cleared off by contractor.</p>
<p><u>28 August 2023 Observation 4:</u></p>  <p>Drip tray should be provided for the air compressor in Portion A.</p>	 <p>The drip tray was provided for the air compressor in Portion A.</p>

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 5:</u></p>  <p>Dusty stickpiles should be covered with impervious sheet prior rainfall and tropical cyclone.</p>	<p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 6:</u></p>  <p>Accumulated silt in the sedimentation basin should be cleared off regularly and prior rainfall and tropical cyclone.</p>	  <p>The accumulated silt in the sedimentation basin at Portion E4 as cleared off by contractor.</p>
<p><u>28 August 2023 Observation 7:</u></p>  <p>The channel in Portion E4 should be properly paved to ensure accumulated sand or silt can be regularly removed.</p>	 <p>The earth bunds at the outlet of branch from Portion E4 was established and the channel at Portion E4 was paved by contractor.</p>

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
<p><u>4 September 2023 Observation 1</u></p>  <p>Over loading of accumulated waste is found at the waste skip of Portion D.</p>	 <p>The accumulated waste at Portion D was collected by approved waste collector.</p>
<p><u>4 September 2023 Observation 2</u></p>  <p>Dust drift is found at the access road of Portion A when vehicle moving.</p>	<p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p data-bbox="132 248 451 275">4 September 2023 Observation 3</p>  <p data-bbox="132 786 783 840">The exposed slope surfaces at Portion B2 are not covered by impervious sheets.</p>	<p data-bbox="1002 530 1260 557">Waiting for contractor input</p>

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

Submersible pump at Portion D	Bunds at Portion D
	
Bunds at Portion D	Existing channel at Portion A
	
Silt removal facility at Portion B2	Sediment Basin at SBA
	

Sediment Basin at SBA	Cut-off Drain at SBA
	

Inspection Date:	11 September 2023	Inspected By:	Andy Ng
Time:	14:00	Weather Condition:	Rainy
Participants:	Kim Tang (ER), Matt Choy (Contractor), Andy Ng (ET)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A3	Is wastewater discharge licence available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is <u>open burning</u> avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B2	Are <u>plant and equipment</u> well maintained (i.e. without black smoke from powered plant)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B3	Any remedial action undertaken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B4	Are the <u>worksites</u> wetted with water regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 2
B5	Are <u>NRMM labels</u> properly affixed on the PMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 4
B6	Observed dust source(s)				
		<input type="checkbox"/> Wind erosion			
		<input checked="" type="checkbox"/> Vehicle/ Equipment Movements			
		<input type="checkbox"/> Loading/ unloading of materials			
		<input type="checkbox"/> Others: _____			
Air Pollution Control (Construction Dust) Regulation					
Part I Control Requirements for Notifiable Works					
Demolition of building					
B7	Is the area involved demolition activities <u>sprayed with water</u> or a dust suppression chemical immediately prior to, during and immediately after the activities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Construction of the superstructure of a building					
B8	Is <u>scaffolding</u> erected around the perimeter of a building under construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B10	Is the skip for materials transport enclosed by impervious sheeting ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 hardcores?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B13	Are the hoarding $\geq 2.4\text{m}$ tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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, hardcores or metal plates, and kept clear of dusty materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B15	Are every main haul road sprayed with water or a dust suppression chemical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B17	Are appropriate speed limit sign displayed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B18	Is unpaved main haul road wet by water spraying?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 3 Refer to 4 Sep 2023 Observation 2
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B21	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by <u>impervious sheeting</u> or (b) placed in an <u>area sheltered on the top and the 3 sides</u> or (c) <u>sprayed with water</u> 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 <u>excavation or unloading</u> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 5
B24	Is the stockpile of dusty materials avoid to be extend beyond the <u>pedestrian barriers, fencing or traffic cones</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials <u>sprayed with water</u> or a dust suppression chemical immediately <u>prior to any loading, unloading or transfer operation</u> so as to maintain the dusty materials wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B26	Are <u>all trucks loaded</u> to a level within the side and tail boards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Use of vehicles					
B27	Are <u>every vehicle washed immediately</u> to remove any dusty materials from its body and wheels before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B28	Are <u>loaded dump trucks</u> covered by impervious sheeting appropriately before leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B29	Are site <u>vehicle movements</u> confined to designated roads?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pneumatic or power-driven drilling, cutting and polishing					
B30	Are <u>surfaces</u> where any <u>pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations</u> 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Debris handling					
B31	Are any debris covered entirely by <u>impervious sheeting</u> or stored in a <u>debris collection area</u> sheltered on the top and the 3 sides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B32	Are every <u>debris chute</u> shall be enclosed by impervious sheeting or similar materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B33	Are the watering spray or a dust suppression chemical conducted before <u>debris is dumped</u> into a debris chute?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

C	Construction Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C2	Are vehicles and equipment switched off or throttled down while not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C3	Is the noise directed away from nearby NSRs ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C6	Are material stockpiles , mobile container office and other structures utilised to screen noisy activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
C9	Is the sequencing operation of construction plants where practicable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C10	Is the hoarding maintained properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C12	Are compressor operated with doors closed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C13	QPME used with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C14	Major noise source(s)				
		<input checked="" type="checkbox"/> Traffic			
		<input checked="" type="checkbox"/> Construction activities inside of site			
		<input type="checkbox"/> Construction activities outside of site			
		<input type="checkbox"/> Others: _____			

D	Water Quality	N/A or Not Observed	Yes	No	Remarks / Photo
Construction Runoff					
D1a	At the start of site establishment, are perimeter <u>cut-off drains</u> constructed to direct off-site water around the site with internal drainage works and erosion and sedimentation control facilities implemented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D1b	Are <u>channels</u> , <u>earth bunds</u> or <u>sandbag barriers</u> provided on site to properly direct stormwater to silt removal facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 24 Jul 2023 Observation 2 Refer to 31 Jul 2023 Observation 1 Refer to 21 August 2023 Observation 1 Refer to 28 Aug 2023 Observation 7
D2a	Have <u>dikes</u> or <u>embankments</u> for <u>flood protection</u> implemented around the boundaries of earthwork areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D2b	Have <u>temporary ditches</u> provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 1
D2c	Are the <u>sediment/ silt traps</u> incorporated in the permanent drainage channels to enhance deposition rate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D3	Are the <u>retention time for silt/s and traps</u> of the silt removal facilities be <u>5 minutes</u> under maximum flow conditions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D4a	Are <u>surface excavation works</u> minimised during rainy seasons (April to September), as possible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D4b	Are <u>all exposed earth areas</u> completed or vegetated as soon as possible after earthworks completed, or alternatively, <u>within 14 days</u> of the <u>cessation</u> of <u>earthworks</u> where practicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D4c	Are <u>exposed slope surfaces</u> covered by tarpaulin sheets?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	To be treated with shotcrete at part of slope surface. Refer to 10 Jul 2023 Observation 5 Refer to 28 Aug 2023 Observation 1 Refer to 4 Sep 2023 Observation 3
D5a	Have the <u>overall slope</u> of the site should be kept a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D5b	Are <u>all trafficked areas</u> and <u>access roads</u> protected by coarse stone ballast?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D6a	Are <u>all drainage facilities</u> and <u>erosion</u> and <u>sediment control structures</u> inspected regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

D6b	Are <u>all drainage facilities</u> and <u>erosion</u> and <u>sediment control structures</u> maintained to ensure proper and efficient operation at all times and particularly following rainstorms?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D6c	Is the <u>deposited silt</u> and <u>grit</u> removed regularly and disposed of by spreading evenly over stable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 6
D7a	Have the <u>excavation</u> of <u>trenches</u> in wet periods be dug and backfilled in short sections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D7b	Is rainwater pumped out from <u>trenches</u> discharged into storm drains via silt system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D8	Are <u>open stockpiles</u> of <u>construction materials</u> e.g. aggregates and sand of more than 50m ³ on site covered with tarpaulin or similar fabric during rainstorms?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9a	Are <u>manholes</u> adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9b	Are the <u>discharges</u> of <u>surface run-off</u> into foul sewer always prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D10a	Are particular attention paid to the control of <u>silty surface runoff</u> during <u>storm event</u> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7 Refer to Observation 1 and Reminder 1
D10b	Are the precautions to be taken at <u>any time</u> of year when rainstorms are likely? (Appendix A2 of ProPECC PN 1/94) i. <u>Silt removal facilities, channels</u> and <u>manholes</u> should be maintained and the <u>deposited silt</u> and <u>grit</u> should be removed regularly. ii. <u>Temporarily exposed slope surfaces</u> should be cover by tarpaulin. iii. <u>Temporary access roads</u> should be protected by crushed stone or gravel. iv. <u>Intercepting channels</u> should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces. v. <u>Trenches</u> should be dug and backfilled in short sections. Measures should be taken to minimize the ingress of rainwater into trenches.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7 Refer to Reminder 1
D10c	Are the actions to be taken when a <u>rainstorm</u> is <u>imminent</u> or <u>forecast</u> ? (Appendix A2 of ProPECC PN 1/94) i. <u>Silt removal facilities, channels</u> and <u>manholes</u> should be checked to ensure that they can function properly. ii. <u>Open stockpiles</u> of <u>construction materials</u> (e.g. aggregates, sand and fill materials) on site should be covered with tarpaulin or similar fabric. iii. <u>All temporary covers to slopes and stockpiles</u> should be secured.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7 Refer to Observation 2 and Reminder 1
D10d	Are the actions to be taken <u>during</u> or <u>after rainstorms</u> ? (Appendix A2 of ProPECC PN 1/94) i. <u>Silt removal facilities, channels</u> and <u>manholes</u> should be checked and maintained to ensure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Reminder 1

	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11b	Is the wheel washing bay provided at every site exit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11c	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11d	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D11e	Is the section of construction road between the wheel washing bay and the public road paved with backfill?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11f	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D12a	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D12c	Has a bypass provided to prevent flushing during heavy rain?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D13	Are the construction solid waste, debris and rubbish on site collected, handled and disposed of properly? (same with waste item)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D15	Is Intercepting bund or barrier along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D16	Are site drainage systems provided over the entire project site with sediment control facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D17	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D18	Is there any sediment plume observed in nearby watercourses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are portable chemical toilets and sewage holding tanks provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D19b	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D20	Are the notices posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O

D21b	Are all <u>maintenance of equipment</u> involving activities with potential for leakage and spillage undertaken within the areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D21c	Is <u>chemical leakage</u> or <u>spillages</u> contained and cleaned up immediately?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
Surface Water Drainage System					
D22a	Is the <u>temporary surface water drainage system</u> provided to manage runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22b	Does the system consist of <u>channel</u> as constructed around the perimeter of the site area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22c	Does the system collect surface water from the <u>areas of higher elevations</u> to those of <u>lower elevations</u> and ultimately to the discharge point?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22d	Is the <u>erosion</u> minimised?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D23a	Does the system include the <u>use of a silt fence</u> around the <u>soil stockpile areas</u> to prevent sediment from entering the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 3
D23b	Is the regular <u>cleaning</u> carried out to prevent blockage of the passage of waste flow in silt fence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2a	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2b	Does accumulation of waste avoid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 1
E2c	Is waste disposed regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 1
E2d	Regular waste collection by approved waste collector in purpose-built vehicles?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E3	Burning of refuse on construction site prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C&D Materials					
E4a	Are there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E4b	Are the C&D materials sorted and recycled on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5a	Is the durable formwork or plastic facing for construction works used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5b	Do the wooden hoardings avoid to be used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5c	Is metal hoarding used to enhance the possibility of recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6a	Are the concrete and masonry used as general fill ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6b	Are the steel reinforcement bars used by scrap steel mills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6c	Is the segregation and storage of C&D wastes undertaken in designated area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6d	Does the use of reusable steel formwork maximise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7a	Are the temporary stockpiles maintained regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7b	Is the excavated fill material reused for backfilling and reinstatement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8a	Are the excavated slope , stockpile material and bund walls covered by tarpaulin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 10 Jul 2023 Observation 5
E8b	Are covering trucks or transporting wastes in enclosed containers when transportation of waste ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8c	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E9	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E12	Are the regular cleaning and maintenance programme for drainage systems, sumps, oil interceptors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13a	Are wood, steel and other metals separated for re-use and/or recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E13b	Do the excavated materials appear contaminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13c	If suspected contaminated, appropriate procedures followed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E14	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Chemical Waste / Waste Oil													
E16	Are chemicals and waste oil recycled or disposed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 21 August 2023 Observation 5								
Chemical Packaging													
E17a	Have the containers a capacity of <450 L unless the specification has been approved by EPD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E17b	Are the containers (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for storage of chemical wastes ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
Chemical Labelling													
E18	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area? <table border="1" style="margin-left: 20px;"> <tr> <td>Capacity of Container</td> <td>Dimensions of Label</td> </tr> <tr> <td>< 50L</td> <td>No less than 90 x 100mm</td> </tr> <tr> <td>50 to 450L</td> <td>No less than 120 x 150mm</td> </tr> <tr> <td>> 450L</td> <td>No less than 180 x 200mm</td> </tr> </table>	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19c	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering and reduce heat from sunlight?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19d	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E20	Is chemical waste collected by licensed waste collectors and disposed of at licensed facility eg. Chemical Waste Treatment Centre?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									

Records					
E21	Is a licensed waste hauler used for waste collection ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E22	Are the records of quantities of wastes generated, recycled and disposed properly kept?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E23	For the demolition material / waste, is the number of loads for each day recorded as appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F3	Is no smoking or burning permitted on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F4	Are prominent 'No smoking' and 'No Naked Flames' signs erected on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F6	Is adequate fire fighting equipment provided on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F9	Is 'Permit to Work' system implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F11a	For pipng assembly or conduit construction , are all valves and seals closed immediately after installation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11c	Is forced ventilation implemented prior to operation of installed pipeline ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F15a	Are LFG precautionary measures involved in excavation and pipng works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17c	Are all measurements in excavations made with monitoring tube located < 10mm from exposed ground surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F19	For excavations 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F20	For excavations < 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G2	Is damage to surrounding areas avoided ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at strategic locations within site implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G4b	Are the roadside planter and shrub planting implemented in front of Cheung Sha Temple ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Boundary Green Belt planting					
G5	Are the fast growing and fire-resistant plant species planted around the site perimeter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a temporary slope cover ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Existing tree preservation					
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Follow up action for previous Site Inspection:

1. 24 July 2023 Observation 2 – The earth bunds at Portion A were constructed by contractor.
2. 31 July 2023 Observation 1 – The earth bunds at Portion A were constructed by contractor.
3. 21 August 2023 Observation 1 – The sandbag barriers and the trench were established by contractor.
4. 21 August 2023 Observation 4 – The slope protection at Portion E4 was conducted by contractor.
5. 28 August 2023 Observation 1 – The slope protection at Portion A & E4 was implemented by contractor.
6. 28 August 2023 Observation 3 – The accumulated sand on the outlet tray of silt removal facility in Portion A was cleared off by contractor.
7. 28 August 2023 Observation 4 – The drip tray was provided for the air compressor in Portion A.
8. 28 August 2023 Observation 6 – The accumulated silt in the sedimentation basin at Portion E4 as cleared off by contractor.
9. 28 August 2023 Observation 7 – The earth bunds at the outlet of branch from Portion E4 was established and the channel at Portion E4 was paved by contractor.
10. 4 September 2023 Observation 1 – The accumulated waste at Portion D was collected by approved waste collector.

Observation(s):

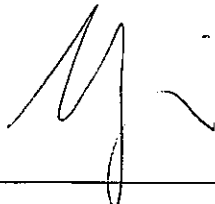
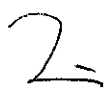

1. Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3. The Contractor should review the effectiveness of setting up sandbag barriers and modify measures to prevent the discharge of surface runoff in both short term and long term.
2. The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast.
3. The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken.

Reminder(s):

1. The Contractor has been reminded to review the condition of silt removal facilities and channels to ensure they are functioning properly when the rainfall is forecast in the coming days.

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


1. The Contractor has been advised to stop the discharge of surface runoff to channel immediately by using any mitigation measures they found appropriate. In long term, the Contractor has been recommended to construct earth bund along the channel to prevent this situation happening again.
2. The Contractor has been advised to cover the stockpiles with impervious sheet when they are idle.
3. The broken or collapsed silt fence should be replaced and properly set up after the heavy rainfall from last week.

	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Jason Man Hing Ng	/	Matt Choy/Kristy Wong	Sylvia Ho
Date:	11 September 2023	/	11 September 2023	11 September 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
<p><u>10 July 2023 Observation 5</u></p>  <p>The exposed slope surfaces were not covered by tarpaulin sheets or treated with shotcrete at the Portion E3-1. The contractor has been recommended to implement the cover works of exposed slope surfaces by tarpaulin sheets or shotcrete at the Portion E3-1 to minimise the potential high concentration construction runoff to silt removal facilities.</p>	 <p>The exposed slopes were covered with impervious sheets temporarily at the left side of Portion E3-1.</p> <p>Waiting for Contractor's Input (Right side slope at Portion E3-1)</p>
<p><u>31 July 2023 Observation 3</u></p>  <p>The assess road at the Portion E4 was dry. The contractor has been advised that the assess road at the Portion E4 should be sprayed with water when the assess road is dry to minimize the dust suppression. The water sprinkler should be considered to establish at the assess road of the Portion E4.</p>	<p>Waiting for Contractor' Input</p>

Observation and Recommendation	Follow-up status
<p><u>21 August 2023 Observation 5:</u></p>  <p>Chemical containers should be placed within the drip trays in Portion E4.</p>	<p>Waiting for Contractor's Input</p>
<p><u>28 August 2023 Observation 1:</u></p> <p><u>Portion B2</u></p>  <p>The slope protection measures should be enhanced in Portion A, B2 and E4 prior the rainfall and the tropical cyclone. The Contractor should cover the exposed slope with the impervious sheet as temporary measure or pave slope surface for long term.</p>	<p><u>Portion B2</u></p> <p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 2:</u></p>  <p>NRMM label should be fixated on the generator in Portion A.</p>	<p>Waiting for contractor input</p>
<p><u>28 August 2023 Observation 5:</u></p>   <p>Dusty stickpiles should be covered with impervious sheet prior rainfall and tropical cyclone.</p>	<p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p><u>4 September 2023 Observation 2</u></p>  <p>Dust drift is found at the access road of Portion A when vehicle moving.</p>	<p>Waiting for contractor input</p>
<p><u>4 September 2023 Observation 3</u></p>  <p>The exposed slope surfaces at Portion B2 are not covered by impervious sheets.</p>	<p>Waiting for contractor input</p>

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
 <p>Observation 1:</p> <p>Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3. The Contractor should review the effectiveness of setting up sandbag barriers and modify measures to prevent the discharge of surface runoff in both short term and long term.</p>	

Observation and Recommendation	Follow-up status
 <p>Observation 2:</p> <p>The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast.</p>	
 <p>Observation 3:</p> <p>The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken.</p>	

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

Sump pit in Portion A	Earth bund in Portion A
	
Cut-off drain channel in Portion E entrance	Channel in SBA
	
Silt fence in SBA	Sedimentation basin in SBA
	

Inspection Date:	18 September 2023	Inspected By:	Andy Ng, Jason Man
Time:	14:00	Weather Condition:	Sunny
Participants:	Sylvia Ho (ER), Matt Choy (Contractor), Kristy Wong (Contractor), Andy Ng (ET), Jason Man (ET), Echo Hung (IEC)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A3	Is wastewater discharge licence available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B2	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B3	Any remedial action undertaken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B4	Are the worksites wetted with water regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 2
B5	Are NRMM labels properly affixed on the PMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 2
B6	Observed dust source(s)				
	<input type="checkbox"/> Wind erosion				
	<input checked="" type="checkbox"/> Vehicle/ Equipment Movements				
	<input type="checkbox"/> Loading/ unloading of materials				
	<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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Construction of the superstructure of a building

B8	Is scaffolding erected around the perimeter of a building under construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B10	Is the skip for materials transport enclosed by impervious sheeting ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 3
B13	Are the hoarding $\geq 2.4\text{m}$ tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B15	Are every main haul road sprayed with water or a dust suppression chemical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B17	Are appropriate speed limit sign displayed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B18	Is unpaved main haul road wet by water spraying?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 3 Refer to 4 Sep 2023 Observation 2 Refer to Observation 7
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 2
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B21	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

	within 6 months after last construction activity on the construction site or part of the construction site where the exposed earth lies?				
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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 ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 5
B24	Is the stockpile of dusty materials avoid to be extend beyond the pedestrian barriers, fencing or traffic cones ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B26	Are all trucks loaded to a level within the side and tail boards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Use of vehicles					
B27	Are every vehicle washed immediately to remove any dusty materials from its body and wheels before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B28	Are loaded dump trucks covered by impervious sheeting appropriately before leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B29	Are site vehicle movements confined to designated roads?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B32	Are every debris chute shall be enclosed by impervious sheeting or similar materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

B33	Are the watering spray or a dust suppression chemical conducted before <u>debris is dumped</u> into a debris chute?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Refer to Observation 1		

C	Construction Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C2	Are vehicles and equipment switched off or throttled down while not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C3	Is the noise directed away from nearby NSRs ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C6	Are material stockpiles , mobile container office and other structures utilised to screen noisy activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
C9	Is the sequencing operation of construction plants where practicable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C10	Is the hoarding maintained properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C12	Are compressor operated with doors closed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C13	QPME used with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C14	Major noise source(s)				
		<input checked="" type="checkbox"/> Traffic			
		<input checked="" type="checkbox"/> Construction activities inside of site			
		<input type="checkbox"/> Construction activities outside of site			
		<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D1b	Are channels , earth bunds or sandbag barriers provided on site to properly direct stormwater to silt removal facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 24 Jul 2023 Observation 2 Refer to 31 Jul 2023 Observation 1 Refer to 21 August 2023 Observation 1 Refer to 28 Aug 2023 Observation 7
D2a	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D2b	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 31 Jul 2023 Observation 1
D2c	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D3	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 6
D4a	Are surface excavation works minimised during rainy seasons (April to September), as possible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D4c	Are exposed slope surfaces covered by tarpaulin sheets?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shotcrete in progress. Refer to 10 Jul 2023 Observation 5 Refer to 28 Aug 2023 Observation 1 Refer to 4 Sep 2023 Observation 3
D5a	Have the overall slope of the site should be kept a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D5b	Are all trafficked areas and access roads protected by coarse stone ballast?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D6a	Are all drainage facilities and erosion and sediment control structures inspected regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D6c	Is the deposited silt and grit removed regularly and disposed of by spreading evenly over stable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 6
D7a	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D7b	Is rainwater pumped out from trenches discharged into storm drains via silt system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9a	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9b	Are the discharges of surface run-off into foul sewer always prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D10a	Are particular attention paid to the control of silty surface runoff during storm event ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7
D10c	Are the actions to be taken when a rainstorm is imminent or forecast ? (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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 28 Aug 2023 Observation 3, 6 & 7 Refer to 11 Sep 2023 Observation 2
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

D11a	Are <u>all vehicles</u> and <u>plant</u> cleaned before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11b	Is the <u>wheel washing bay</u> provided at every site exit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11c	Are the <u>vehicle wash-water</u> have sand and silt settled out and removed at least on a weekly basis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11d	Is the <u>wheel wash</u> overflow directed to silt removal facilities before being discharged to the storm drain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D11e	Is the section of <u>construction road between the wheel washing bay and the public road</u> paved with backfill?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11f	Is the treated wastewater reused for <u>vehicle washing</u> , <u>dust suppression</u> and <u>general cleaning</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D12a	Are <u>oil interceptors</u> provided in the site drainage system downstream of any oil/ fuel pollution sources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D12b	Are the <u>oil interceptors</u> are emptied and cleaned regularly to prevent the release of O&G into the storm water drainage system after accidental spillage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D12c	Has a <u>bypass</u> provided to prevent flushing during heavy rain?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D13	Are the <u>construction solid waste</u> , <u>debris</u> and <u>rubbish</u> on site collected, handled and disposed of properly? (same with waste item)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D14	Are <u>all fuel tanks</u> and <u>storage areas</u> provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D15	Is <u>Intercepting bund</u> or <u>barrier</u> along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D16	Are <u>site drainage systems</u> provided over the entire project site with sediment control facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D17	Are <u>sedimentation tanks</u> provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D18	Is there any <u>sediment plume</u> observed in nearby watercourses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Sewage Effluent from Workforce (On-site sanitary facilities)</u>					
D19a	Are <u>portable chemical toilets</u> and <u>sewage holding tanks</u> provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D19b	Is the <u>sewage generated from toilets</u> collected by licensed contractor and responsible for disposal and maintenance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D20	Are the <u>notices</u> posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
<u>Accidental Spillage of Chemical (Service workshop and maintenance facilities)</u>					
D21a	Are the <u>service workshop</u> and <u>maintenance facilities</u> located within a bunded area, and sumps and oil interceptors?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D21b	Are all <u>maintenance of equipment</u> involving activities with potential for leakage and spillage undertaken within the areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O

D21c	Is <u>chemical leakage</u> or <u>spillages</u> contained and cleaned up immediately?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
Surface Water Drainage System					
D22a	Is the <u>temporary surface water drainage system</u> provided to manage runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22b	Does the system consist of <u>channel</u> as constructed around the perimeter of the site area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22c	Does the system collect surface water from the <u>areas of higher elevations</u> to those of <u>lower elevations</u> and ultimately to the discharge point?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22d	Is the <u>erosion</u> minimised?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D23a	Does the system include the <u>use of a silt fence</u> around the <u>soil stockpile areas</u> to prevent sediment from entering the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 11 Sep 2023 Observation 3
D23b	Is the regular <u>cleaning</u> carried out to prevent blockage of the passage of waste flow in silt fence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 4
E2a	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2b	Does accumulation of waste avoid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 1
E2c	Is waste disposed regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 4 Sep 2023 Observation 1
E2d	Regular waste collection by approved waste collector in purpose-built vehicles?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E3	Burning of refuse on construction site prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C&D Materials					
E4a	Are there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E4b	Are the C&D materials sorted and recycled on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5a	Is the durable formwork or plastic facing for construction works used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5b	Do the wooden hoardings avoid to be used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5c	Is metal hoarding used to enhance the possibility of recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6a	Are the concrete and masonry used as general fill ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6b	Are the steel reinforcement bars used by scrap steel mills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6c	Is the segregation and storage of C&D wastes undertaken in designated area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6d	Does the use of reusable steel formwork maximise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7a	Are the temporary stockpiles maintained regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7b	Is the excavated fill material reused for backfilling and reinstatement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8a	Are the excavated slope , stockpile material and bund walls covered by tarpaulin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 10 Jul 2023 Observation 5
E8b	Are covering trucks or transporting wastes in enclosed containers when transportation of waste ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8c	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E9	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E12	Are the regular cleaning and maintenance programme for drainage systems, sumps, oil interceptors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13a	Are wood , steel and other metals separated for re-use and/or recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E13b	Do the excavated materials appear contaminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13c	If suspected contaminated, appropriate procedures followed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E14	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Chemical Waste / Waste Oil													
E16	Are chemicals and waste oil recycled or disposed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 21 August 2023 Observation 5 Refer to Observation 5								
Chemical Packaging													
E17a	Have the containers a capacity of <450 L unless the specification has been approved by EPD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E17b	Are the containers (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for storage of chemical wastes ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
Chemical Labelling													
E18	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Capacity of Container</td> <td style="width: 70%;">Dimensions of Label</td> </tr> <tr> <td>< 50L</td> <td>No less than 90 x 100mm</td> </tr> <tr> <td>50 to 450L</td> <td>No less than 120 x 150mm</td> </tr> <tr> <td>> 450L</td> <td>No less than 180 x 200mm</td> </tr> </table>	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19c	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering and reduce heat from sunlight?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19d	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								

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

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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F3	Is no smoking or burning permitted on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F4	Are prominent 'No smoking' and 'No Naked Flames' signs erected on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F6	Is adequate fire fighting equipment provided on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F9	Is 'Permit to Work' system implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F11a	For pipng assembly or conduit construction , are all valves and seals closed immediately after installation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11c	Is forced ventilation implemented prior to operation of installed pipeline ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F15a	Are LFG precautionary measures involved in excavation and pipng works provided in accordance with LFG Guidance Note and included in Safety Plan of construction phase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17c	Are all measurements in excavations made with monitoring tube located < 10mm from exposed ground surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F19	For excavations 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F20	For excavations < 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G2	Is damage to surrounding areas avoided ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at strategic locations within site implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G4b	Are the roadside planter and shrub planting implemented in front of Cheung Sha Temple ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Boundary Green Belt planting					
G5	Are the fast growing and fire-resistant plant species planted around the site perimeter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a temporary slope cover ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Existing tree preservation					
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Follow up action for previous Site Inspection:



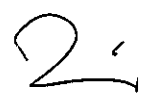

1. 21 August 2023 Observation 5 - The chemical containers were removed by contractor.
2. 28 August 2023 Observation 1 & 4 September 2023 Observation 3 - The slope surface protection was conducted by contractor at Portion B2.
3. 11 September 2023 Observation 1 - The Contractor used sandbag barriers to intercept surface runoff entering to the channel, constructed small sump pit to gather surface runoff and pumped out for wastewater treatment.

Observation(s):

1. The demolished tree, shrub or vegetation in Portion B2 should be covered with impervious sheets or placed within a shelter.
2. The dry PFA in Portion B2 should be covered entirely with impervious sheets.
3. The metal plate at the vehicle entrance in Portion B2 should cover unpaved road surface in Portion B2.
4. General refuse and non-inert waste should be stored in enclosed bins or compaction unit.
5. Empty chemical containers in Portion E3 should be properly stored before the disposal.
6. Sediment/ silt traps shall be incorporated in the temporary drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions.
7. The main haul road in Portion E4 is dry ad dusty.

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



1. The Contractor has been reminded to cover the demolished tree, shrub or vegetation with impervious sheets or placed within a shelter.
2. The Contractor has been reminded to cover dry PFA entirely with impervious sheets.
3. Vehicle entrance should be paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials.
4. General waste generated on-site should be stored in enclosed bins or compaction units separately from the construction and chemical wastes.
5. The Contractor has been reminded to properly store empty chemical container before disposal.
6. The Contractor has been advised to reconstruct the demolished sedimentation basin to act as silt trap and to achieve 5 minutes of retention time under maximum flow condition.
7. The Contractor has been advised to schedule watering and recommended to install water sprinklers or mist spray in long term.

	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:	18 September 2023	18 September 2023	18 September 2023	18 September 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
<p><u>10 July 2023 Observation 5</u></p>  <p>The exposed slope surfaces were not covered by tarpaulin sheets or treated with shotcrete at the Portion E3-1. The contractor has been recommended to implement the cover works of exposed slope surfaces by tarpaulin sheets or shotcrete at the Portion E3-1 to minimise the potential high concentration construction runoff to silt removal facilities.</p>	 <p>The exposed slopes were covered with impervious sheets temporarily at the left side of Portion E3-1.</p> <p>Waiting for Contractor's Input (Right side slope at Porttion E3-1)</p>
<p><u>31 July 2023 Observation 3</u></p>  <p>The assess road at the Portion E4 was dry. The contractor has been advised that the assess road at the Portion E4 should be sprayed with water when the assess road is dry to minimize the dust suppression. The water sprinkler should be considered to establish at the assess road of the Portion E4.</p>	<p>Waiting for Contractor' Input</p>

Observation and Recommendation	Follow-up status
<p><u>21 August 2023 Observation 5</u></p>  <p>Chemical containers should be placed within the drip trays in Portion E4.</p>	 <p>The chemical containers were removed by contractor.</p>
<p><u>28 August 2023 Observation 1:</u></p> <p><u>Portion B2</u></p>  <p>The slope protection measures should be enhanced in Portion A, B2 and E4 prior the rainfall and the tropical cyclone. The Contractor should cover the exposed slope with the impervious sheet as temporary measure or pave slope surface for long term.</p>	<p><u>Portion B2</u></p>  <p>The slope surface protection was conducted by contractor at Portion B2.</p>

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 2</u></p>  <p>NRMM label should be fixated on the generator in Portion A.</p>	<p>Waiting for contractor input</p>
<p><u>28 August 2023 Observation 5</u></p>   <p>Dusty stickpiles should be covered with impervious sheet prior rainfall and tropical cyclone.</p>	<p>Waiting for contractor input</p>

Observation and Recommendation	Follow-up status
<p><u>4 September 2023 Observation 2</u></p>  <p>Dust drift is found at the access road of Portion A when vehicle moving.</p>	<p>Waiting for contractor input</p>
<p><u>4 September 2023 Observation 3</u></p>  <p>The exposed slope surfaces at Portion B2 are not covered by impervious sheets.</p>	 <p>The slope surface protection was conducted by contractor at Portion B2.</p>

Observation and Recommendation	Follow-up status
<p>11 September 2023 Observation 1</p>  <p>Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3. The Contractor should review the effectiveness of setting up sandbag barriers and modify measures to prevent the discharge of surface runoff in both short term and long term.</p>	 <p>The Contractor used sandbag barriers to intercept surface runoff entering to the channel, constructed small sump pit to gather surface runoff and pumped out for wastewater treatment.</p>

Observation and Recommendation	Follow-up status
<p><u>11 September 2023 Observation 2</u></p>  <p>The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast.</p>	<p>Waiting for contractor input</p>
<p><u>11 September 2023 Observation 3</u></p>  <p>The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken.</p>	<p>Waiting for contractor input</p>

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
 <p>Observation 1:</p> <p>The demolished tree, shrub or vegetation in Portion B2 should be covered with impervious sheets or placed within a shelter.</p>	
 <p>Observation 2:</p> <p>The dry PFA in Portion B2 should be covered entirely with impervious sheets.</p>	
 <p>Observation 3:</p> <p>The metal plate at the vehicle entrance in Portion B2 should cover unpaved road surface.</p>	

Observation and Recommendation	Follow-up status
<p><u>SBA</u></p>  <p><u>Portion E4</u></p>  <p>Observation 4: General refuse and non-inert waste should be stored in enclosed bins or compacte unit.</p>	
 <p>Observation 5: Empty chemical containers in Portion E3 should be properly stored before the disposal.</p>	

Observation and Recommendation	Follow-up status
 <p>Observation 6:</p> <p>Sediment/ silt traps shall be incorporated in the temporary drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions.</p>	
 <p>Observation 7:</p> <p>The main haul road in Portion E4 is dry and dusty.</p>	

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

Silt Removal Facility and Sedimentation Tank in Portion E4	Slope Protection in Portion E4
	
Silt Fencing in SBA	Silt Fencing and Channel in SBA
	
Slope Protection in SBA	Silt Removal Facility and Sedimentation Tank in Portion E3
	

Silt Removal Facility and Sedimentation Tank in Portion E3	Earth Bund in Portion D
	
Slope Protection in Portion A	Silt Removal Facility and Sedimentation Tank in Portion A
	
Slope Protection in Portion A	Slope Protection and Silt Removal Facility in Portion B2
	

Inspection Date:	25 September 2023	Inspected By:	Andy Ng
Time:	14:00	Weather Condition:	Sunny
Participants:	Kim Tang (ER), Matt Choy (Contractor), Kristy Wong (Contractor), Andy Ng (ET)		

A	Permits/Licenses	N/A or Not Observed	Yes	No	Remarks / Photo
A1	Are Environmental Permit, license/ other permit displayed at major site exit and vehicle access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A2	Are Construction Noise Permits/ Environmental license/ other permit available for inspection/posted at site entrance.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A3	Is wastewater discharge licence available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A4	Are trip tickets for chemical waste and construction waste disposal available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
A5	Are relevant licence/permit for disposal of construction waste or excavated materials available for inspection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

B	Air Quality	N/A or Not Observed	Yes	No	Remarks / Photo
B1	Is open burning avoided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B2	Are plant and equipment well maintained (i.e. without black smoke from powered plant)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B3	Any remedial action undertaken?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B4	Are the worksites wetted with water regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 1
B5	Are NRMM labels properly affixed on the PMEs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B6	Observed dust source(s)				
	<input checked="" type="checkbox"/> Wind erosion				
	<input checked="" type="checkbox"/> Vehicle/ Equipment Movements				
	<input checked="" type="checkbox"/> Loading/ unloading of materials				
	<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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Construction of the superstructure of a building

B8	Is scaffolding erected around the perimeter of a building under construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B10	Is the skip for materials transport enclosed by impervious sheeting ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B13	Are the hoarding $\geq 2.4\text{m}$ tall provided at the site boundary near a road, street, service lane or other area accessible to the public?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B15	Are every main haul road sprayed with water or a dust suppression chemical?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B17	Are appropriate speed limit sign displayed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B18	Is unpaved main haul road wet by water spraying?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B21	Is any vent or exhaust fitted with an effective fabric filter or equipment air pollution control system ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A

Part IV Control Requirements for Individual Activities					
Stockpiling of dusty materials					
B23	Are the stockpiling of dusty materials (a) covered entirely by <u>impervious sheeting</u> or (b) placed in an <u>area sheltered on the top and the 3 sides</u> or (c) <u>sprayed with water</u> 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 <u>excavation or unloading</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B24	Is the stockpile of dusty materials avoid to be extend beyond the <u>pedestrian barriers, fencing or traffic cones</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Loading, unloading or transfer of dusty materials					
B25	Are all dusty materials <u>sprayed with water</u> or a dust suppression chemical immediately <u>prior to any loading, unloading or transfer operation</u> so as to maintain the dusty materials wet?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B26	Are <u>all trucks loaded</u> to a level within the side and tail boards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Use of vehicles					
B27	Are <u>every vehicle washed immediately</u> to remove any dusty materials from its body and wheels before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B28	Are <u>loaded dump trucks</u> covered by impervious sheeting appropriately before leaving the site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
B29	Are site <u>vehicle movements</u> confined to designated roads?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pneumatic or power-driven drilling, cutting and polishing					
B30	Are <u>surfaces</u> where any <u>pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operations</u> 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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
Debris handling					
B31	Are any debris covered entirely by <u>impervious sheeting</u> or stored in a <u>debris collection area</u> sheltered on the top and the 3 sides?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B32	Are every <u>debris chute</u> shall be enclosed by impervious sheeting or similar materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
B33	Are the watering spray or a dust suppression chemical conducted before <u>debris is dumped</u> into a debris chute?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

C	Construction Noise	N/A or Not Observed	Yes	No	Remarks / Photo
C1	Is well-maintained plant operated on-site and plant served regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C2	Are vehicles and equipment switched off or throttled down while not in use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C3	Is the noise directed away from nearby NSRs ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C4	Are the silencers or mufflers properly fitted on construction equipment and maintained regularly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C6	Are material stockpiles , mobile container office and other structures utilised to screen noisy activities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C7	Is temporary hoarding installed located on the site boundaries between noisy construction activities and NSRs?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
C9	Is the sequencing operation of construction plants where practicable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C10	Is the hoarding maintained properly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C11	Air compressors (500 kPa or above) and hand held percussive breaker (mass of above 10 kg) with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C12	Are compressor operated with doors closed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C13	QPME used with valid noise labels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C14	Major noise source(s)				
		<input checked="" type="checkbox"/> Traffic			
		<input checked="" type="checkbox"/> Construction activities inside of site			
		<input type="checkbox"/> Construction activities outside of site			
		<input type="checkbox"/> 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D1b	Are channels , earth bunds or sandbag barriers provided on site to properly direct stormwater to silt removal facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D2a	Have dikes or embankments for flood protection implemented around the boundaries of earthwork areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D2b	Have temporary ditches provided to facilitate the runoff discharge into an appropriate watercourse, through a site/ sediment trap?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D2c	Are the sediment/ silt traps incorporated in the permanent drainage channels to enhance deposition rate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D3	Are the retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 18 Sep 2023 Observation 6
D4a	Are surface excavation works minimised during rainy seasons (April to September), as possible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D4c	Are exposed slope surfaces covered by tarpaulin sheets?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shotcrete in progress. Refer to 10 Jul 2023 Observation 5
D5a	Have the overall slope of the site should be kept a minimum?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D5b	Are all trafficked areas and access roads protected by coarse stone ballast?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D6a	Are all drainage facilities and erosion and sediment control structures inspected regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D6c	Is the deposited silt and grit removed regularly and disposed of by spreading evenly over stable?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D7a	Have the excavation of trenches in wet periods be dug and backfilled in short sections?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D7b	Is rainwater pumped out from trenches discharged into storm drains via silt system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/O

D9a	Are manholes adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D9b	Are the discharges of surface run-off into foul sewer always prevented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D10a	Are particular attention paid to the control of silty surface runoff during storm event ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to Observation 3 and 4
D10c	Are the actions to be taken when a rainstorm is imminent or forecast ? (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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 11 Sep 2023 Observation 2
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11a	Are all vehicles and plant cleaned before leaving a construction site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11b	Is the wheel washing bay provided at every site exit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11c	Are the vehicle wash-water have sand and silt settled out and removed at least on a weekly basis?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11d	Is the wheel wash overflow directed to silt removal facilities before being discharged to the storm drain?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D11e	Is the section of construction road between the wheel washing bay and the public road paved with backfill?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D11f	Is the treated wastewater reused for vehicle washing, dust suppression and general cleaning ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D12a	Are oil interceptors provided in the site drainage system downstream of any oil/ fuel pollution sources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
D12c	Has a bypass provided to prevent flushing during heavy rain?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D13	Are the construction solid waste, debris and rubbish on site collected, handled and disposed of properly? (same with waste item)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D15	Is Intercepting bund or barrier along the roadside constructed to prevent pollution risk arising from work area (waste reception area)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D16	Are site drainage systems provided over the entire project site with sediment control facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D17	Are sedimentation tanks provided to treat the large amount of sediment-laden wastewater generated from wheel washing, site runoff and construction works?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D18	Is there any sediment plume observed in nearby watercourses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Sewage Effluent from Workforce (On-site sanitary facilities)					
D19a	Are portable chemical toilets and sewage holding tanks provided?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D19b	Is the sewage generated from toilets collected by licensed contractor and responsible for disposal and maintenance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D20	Are the notices posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D21b	Are all maintenance of equipment involving activities with potential for leakage and spillage undertaken within the areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
D21c	Is chemical leakage or spillages contained and cleaned up immediately?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
Surface Water Drainage System					
D22a	Is the temporary surface water drainage system provided to manage runoff?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22b	Does the system consist of channel as constructed around the perimeter of the site area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22c	Does the system collect surface water from the areas of higher elevations to those of lower elevations and ultimately to the discharge point?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D22d	Is the erosion minimised?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
D23a	Does the system include the use of a silt fence around the soil stockpile areas to prevent sediment from entering the system?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 11 Sep 2023 Observation 3

D23b	Is the regular <u>cleaning</u> carried out to prevent blockage of the passage of waste flow in silt fence?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2a	Is the general waste collected properly by using the waste separation facilities for paper, aluminium cans, plastic bottles etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2b	Does accumulation of waste avoid?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2c	Is waste disposed regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E2d	Regular waste collection by approved waste collector in purpose-built vehicles?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E3	Burning of refuse on construction site prohibited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
C&D Materials					
E4a	Are there any contract documents provided to allow and promote the use of recycled aggregates where appropriate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E4b	Are the C&D materials sorted and recycled on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5a	Is the durable formwork or plastic facing for construction works used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5b	Do the wooden hoardings avoid to be used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E5c	Is metal hoarding used to enhance the possibility of recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6a	Are the concrete and masonry used as general fill ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6b	Are the steel reinforcement bars used by scrap steel mills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6c	Is the segregation and storage of C&D wastes undertaken in designated area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E6d	Does the use of reusable steel formwork maximise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7a	Are the temporary stockpiles maintained regularly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E7b	Is the excavated fill material reused for backfilling and reinstatement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8a	Are the excavated slope , stockpile material and bund walls covered by tarpaulin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 10 Jul 2023 Observation 5
E8b	Are covering trucks or transporting wastes in enclosed containers when transportation of waste ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E8c	Are waste storage area properly cleaned and do not cause windblown litter and dust nuisance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
E9	Is hydroseeding of the topsoil on the stockpile implemented to improve visual appearance and prevent soil erosion?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E12	Are the regular cleaning and maintenance programme for drainage systems, sumps, oil interceptors?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13a	Are wood, steel and other metals separated for re-use and/or recycling?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
E13b	Do the excavated materials appear contaminated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
E13c	If suspected contaminated, appropriate procedures followed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E14	Is the disposal of C&D materials avoided onto any sensitive locations e.g. agricultural lands etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>									
Chemical Waste / Waste Oil													
E16	Are chemicals and waste oil recycled or disposed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Refer to 18 Sep 2023 Observation 5 Refer to Observation 2								
Chemical Packaging													
E17a	Have the containers a capacity of <450 L unless the specification has been approved by EPD?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
E17b	Are the containers (holding, resistant to corrosion, maintained in a good condition, and securely closed) used for storage of chemical wastes ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A								
Chemical Labelling													
E18	Is chemical waste or waste oil stored and labelled in English and Chinese properly in designated area? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Capacity of Container</td> <td style="width: 70%;">Dimensions of Label</td> </tr> <tr> <td>< 50L</td> <td>No less than 90 x 100mm</td> </tr> <tr> <td>50 to 450L</td> <td>No less than 120 x 150mm</td> </tr> <tr> <td>> 450L</td> <td>No less than 180 x 200mm</td> </tr> </table>	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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19c	Do the storage areas have adequate ventilation and be covered to prevent rainfall entering and reduce heat from sunlight?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								
E19d	Are the fuel tanks and chemical storage areas provided with locks and sited on sealed areas?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O								

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

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)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F2	Are prominent safety warning signs erected on-site to alert all personnel and visitors of LFG hazards during excavation works.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F3	Is no smoking or burning permitted on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F4	Are prominent 'No smoking' and 'No Naked Flames' signs erected on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F5	Is no worker allowed to work alone at any time in excavated trenches or confined areas on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F6	Is adequate fire fighting equipment provided on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F7	Are construction equipment equipped with vertical exhaust at least 0.6m above ground installed with spark arrestors?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F8	Are electrical motors and extension cords explosion-proof and intrinsically safe for use on-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/O
F9	Is 'Permit to Work' system implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F11a	For pipng assembly or conduit construction , are all valves and seals closed immediately after installation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11b	Are the pipe ends sealed on one side during installation if installation of large diameter pipes (diameter > 600mm) is required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11c	Is forced ventilation implemented prior to operation of installed pipeline ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A
F11d	Is forced ventilation implemented for works inside trenches deeper than 1m ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17b	Is routine monitoring carried out in all excavations, manholes, created by temporary storage of building materials on-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F17c	Are all measurements in excavations made with monitoring tube located < 10mm from exposed ground surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F19	For excavations 300mm to 1m, are measurements conducted? • Directly after excavation has been completed; and • Periodic all whilst excavation remains open.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
F20	For excavations < 300mm, are monitoring omitted at the discretion of Safety Officer or appropriately qualified person?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

G	Landscape and Visual Impacts	N/A or Not Observed	Yes	No	Remarks / Photo
G1	Is the work site confined within site boundaries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G2	Is damage to surrounding areas avoided ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G3	Are the protective fencing erected along or beyond the perimeter of the tree protection zone of each individual tree?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Advanced screening tree planting					
G4a	Is early planting using fast growing plants and tall shrubs at strategic locations within site implemented?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
G4b	Are the roadside planter and shrub planting implemented in front of Cheung Sha Temple ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Boundary Green Belt planting					
G5	Are the fast growing and fire-resistant plant species planted around the site perimeter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Temporary landscape treatment as green surface cover					
G6	Are grass hydroseeding or synthetic covering material of green colour used as a temporary slope cover ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Existing tree preservation					
G7	Are existing and affected tree which identified as ecological significant preserved whenever possible?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

I	Environmental Complaint	N/A or Not Observed	Yes	No	Remarks / Photo
I1	Environmental Complaint received during this week?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
J2	Are the portable toilets maintained in a state, which will not deter the workers from utilizing these portable toilets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Follow up action for previous Site Inspection:

1. 31 July 2023 Observation 3 and 18 September 2023 Observation 7 - The Contractor arranged watering in Portion E4 to minimize dust dispersion.
2. 21 August 2023 Observation 5 - The chemical containers were removed by contractor.
3. 28 August 2023 Observation 1 & 4 September 2023 Observation 3 - The slope surface protection was conducted by contractor at Portion B2.
4. 28 August 2023 Observation 2 - The NRMM label was fixated on the generator at the Portion A by the contractor.
5. 28 August 2023 Observation 5 - The dusty stockpile was removed by the contractor.
6. 11 September 2023 Observation 1 - The Contractor used sandbag barriers to intercept surface runoff entering to the channel, constructed small sump pit to gather surface runoff and pumped out for wastewater treatment.
7. 18 September 2023 Observation 1 - The demolished tree at Portion B2 was covered with impervious sheets by the contractor.
8. 18 September 2023 Observation 2 - The dry PFA was removed.
9. 18 September 2023 Observation 3 - The unpaved road surface at the entrance of Portion B2 was covered with the metal plate by the contractor.
10. 18 September 2023 Observation 4 - The accumulated waste at SBA and at and near the enclosed bin of Portion E4 were removed by the contractor.
11. 25 September 2023 Observation 1 - The Contractor arranged watering in Portion E3 and E4 to minimize dust dispersion.
12. 25 September 2023 Observation 4 - The accumulated sand and silt in the outlet of the silt removal facility at Portion A was removed by the contractor.

Observation(s):

1. The main haul road and work site should be wetted regularly to minimize the dust dispersion.
2. Chemical spillage is observed at Portion E4 and chemical containers should be placed on the drip tray.
3. The exposed slope surface along the channel should be paved to reduce SS level in the wastewater.
4. The accumulated sand or silt in the outlet of the silt removal facility at Portion A should be removed.

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






1. The Contractor has been reminded to switch on the water sprinklers along the haul road in SBA and to schedule watering for unpaved haul road and work area. The Contractor has been advised to increase the frequency of watering if necessary under the hot weather condition to minimize dust dispersion.
2. The Contractor has been reminded to dispose chemical waste and provide drip tray for all chemical containers.
3. The Contractor has been recommended to shotcrete the exposed slope surface along the channel to reduce SS level in the wastewater.
4. The Contractor has been advised to clear the accumulated sand or silt in the outlet of the silt removal facility at Portion A.

	Environmental Team's Representative:	Independent Environmental Checker's Representative:	Contractor's Representative:	Employee's Representative
Signature:		/		
Name:	Andy Ng	/	Matt Choy/Kristy Wong	Sylvia Ho
Date:	25 September 2023	/	25 September 2023	25 September 2023

PART I Follow-up status of the previous site inspection

Observation and Recommendation	Follow-up status
<p><u>10 July 2023 Observation 5</u></p>  <p>The exposed slope surfaces were not covered by tarpaulin sheets or treated with shotcrete at the Portion E3-1. The contractor has been recommended to implement the cover works of exposed slope surfaces by tarpaulin sheets or shotcrete at the Portion E3-1 to minimise the potential high concentration construction runoff to silt removal facilities.</p>	 <p>The exposed slopes were covered with impervious sheets temporarily at the left side of Portion E3-1.</p> <p>Waiting for Contractor's Input (Right side slope at Portion E3-1)</p>
<p><u>31 July 2023 Observation 3</u></p>  <p>The assess road at the Portion E4 was dry. The contractor has been advised that the assess road at the Portion E4 should be sprayed with water when the assess road is dry to minimize the dust suppression. The water sprinkler should be considered to establish at the assess road of the Portion E4.</p>	<p><u>Portion E4</u></p>  <p>The Contractor arranged watering in Portion E4 to minimize dust dispersion.</p>

Observation and Recommendation	Follow-up status
<p><u>21 August 2023 Observation 5</u></p>  <p>Chemical containers should be placed within the drip trays in Portion E4.</p>	 <p>The chemical containers were removed by contractor.</p>
<p><u>28 August 2023 Observation 1:</u></p> <p><u>Portion B2</u></p>  <p>The slope protection measures should be enhanced in Portion A, B2 and E4 prior the rainfall and the tropical cyclone. The Contractor should cover the exposed slope with the impervious sheet as temporary measure or pave slope surface for long term.</p>	<p><u>Portion B2</u></p>  <p>The slope surface protection was conducted by contractor at Portion B2.</p>

Observation and Recommendation	Follow-up status
<p><u>28 August 2023 Observation 2</u></p>  <p>NRMM label should be fixated on the generator in Portion A.</p>	 <p>The NRMM label was fixated on the generator at the Portion A by the contractor.</p>
<p><u>28 August 2023 Observation 5</u></p>   <p>Dusty stickpiles should be covered with impervious sheet prior rainfall and tropical cyclone.</p>	 <p>The dusty stockpile was removed by the contractor.</p>


Observation and Recommendation	Follow-up status
<p data-bbox="132 248 451 275"><u>4 September 2023 Observation 2</u></p>  <p data-bbox="132 770 783 824">Dust drift is found at the assess road of Portion A when vehicle moving.</p>	 <p data-bbox="807 748 1458 801">The water spraying was conducted by the contractor at the assess road of Portion A.</p>
<p data-bbox="132 848 451 875"><u>4 September 2023 Observation 3</u></p>  <p data-bbox="132 1366 783 1420">The exposed slope surfaces at Portion B2 are not covered by impervious sheets.</p>	 <p data-bbox="807 1344 1458 1397">The slope surface protection was conducted by contractor at Portion B2.</p>

Observation and Recommendation	Follow-up status
<p>11 September 2023 Observation 1</p>  <p>Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3. The Contractor should review the effectiveness of setting up sandbag barriers and modify measures to prevent the discharge of surface runoff in both short term and long term.</p>	 <p>The Contractor used sandbag barriers to intercept surface runoff entering to the channel, constructed small sump pit to gather surface runoff and pumped out for wastewater treatment.</p>

Observation and Recommendation	Follow-up status
<p><u>11 September 2023 Observation 2</u></p>  <p>The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast.</p>	<p>Waiting for contractor input</p>
<p><u>11 September 2023 Observation 3</u></p>  <p>The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken.</p>	<p>Waiting for contractor input</p>
<p><u>18 September 2023 Observation 1</u></p>  <p>The demolished tree, shrub or vegetation in Portion B2 should be covered with impervious sheets or placed within a shelter.</p>	 <p>The demolished tree at Portion B2 was covered with impervious sheets by the contractor.</p>

Observation and Recommendation	Follow-up status
<p>18 September 2023 Observation 2</p>  <p>The dry PFA in Portion B2 should be covered entirely with impervious sheets.</p>	 <p>The dry PFA was removed.</p>
<p>18 September 2023 Observation 3</p>  <p>The metal plate at the vehicle entrance in Portion B2 should cover unpaved road surface.</p>	 <p>The unpaved road surface at the entrance of Portion B2 was covered with the metal plate by the contractor</p>

Observation and Recommendation	Follow-up status
<p><u>18 September 2023 Observation 4</u></p> <p><u>SBA</u></p>  <p><u>Portion E4</u></p>  <p>General refuse and non-inert waste should be stored in enclosed bins or compact unit.</p>	<p><u>SBA</u></p>  <p>The accumulated waste at SBA was removed by the contractor.</p> <p><u>Portion E4</u></p>  <p>The accumulated waste at and near the enclosed bin of Portion E4 was cleared by the contractor.</p>
<p><u>18 September 2023 Observation 5</u></p>  <p>Empty chemical containers in Portion E3 should be properly stored before the disposal.</p>	<p>Waiting for contractor input</p>

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

18 September 2023 Observation 7



Observation 7:

The main haul road in Portion E4 was dry and dusty.

Portion E4



The Contractor arranged watering in Portion E4 to minimize dust dispersion.

SBA

Waiting for Contractor's Input

Portion E3



The Contractor arranged watering in Portion E3 and E4 to minimize dust dispersion.

PART II Observation and recommendation identified during the environmental site inspection

Observation and Recommendation	Follow-up status
<p><u>SBA</u></p>   <p><u>Portion E4</u></p> 	<p><u>Portion E4</u></p>  <p>The Contractor arranged watering in Portion E4 to minimize dust dispersion.</p> <p><u>SBA</u></p> <p>Waiting for Contractor's Input</p> <p><u>Portion E3</u></p>  <p>The Contractor arranged watering in Portion E3 and E4 to minimize dust dispersion.</p>

Portion E3



Observation 1.

The main haul road and work site should be wetted regularly to minimize the dust dispersion.



Observation 2.

Chemical spillage is observed at Portion E4 and chemical containers should be placed on the drip tray.



Observation 3

The exposed slope surface along the channel should be paved to reduce SS level in the wastewater.



Observation 4







The accumulated sand or silt in the outlet of the silt removal facility at Portion A should be removed.





The accumulated sand and silt in the outlet of the silt removal facility at Portion A was removed by the contractor.

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

Slope Protection in SBA	Silt Fencing in SBA
	
Slope Protection in SBA	Sedimentation Basin in SBA
	
Silt Removal Facility and Sedimentation tank in Portion E4	Silt Removal Facility and Sedimentation tank in Portion E4
	

<p>Slope Protection in Portion A</p> 	<p>Slope Protection in Portion A</p> 
<p>Silt Removal Facility in Portion A</p> 	<p>Sedimentation Tanks in Portion A</p> 
<p>Slope Protection and silt removal facility in Portion B2</p> 	<p>Sedimentation basin in Portion E3</p> 

Silt Removal Facility and Sedimentation tank in Portion E3	Slope Protection in Portion E3
 A photograph showing a large blue and red industrial structure, likely a silt removal facility or sedimentation tank, situated at the base of a steep, exposed earth slope. A worker in a yellow safety vest is visible near the structure. The ground in the foreground is muddy and uneven.	 A photograph showing a steep, exposed earth slope with a concrete retaining wall at its base. The slope is covered with a layer of white material, possibly lime or cement, for stabilization. The sky is blue with scattered white clouds.

Appendix K Environmental Mitigation Implementation Schedule (EMIS)

North East New Territories (NENT) Landfill Extension
Environmental Mitigation Implementation Schedule (EMIS) Construction Phase

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 (1) 25 Sep 2023 Weekly site inspection Observation 1)
		B4, B15 & B18	<ul style="list-style-type: none">Dust emission from construction vehicle movement is confined within the worksites area.					✓
		B11 – B12	<ul style="list-style-type: none">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 & E4
		-	<ul style="list-style-type: none">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, related measure will be implemented before or on 31 Oct 2023. (b) ✓
	D2	<ul style="list-style-type: none">(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	<ul style="list-style-type: none">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.	# (Refer to Appendix J (1) 18 Sep 2023 Weekly site inspection Observation 6)					
	D4	<ul style="list-style-type: none">(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) # (Refer to Appendix J 10 Jul 2023 Weekly site inspection Observation 5)					

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	<ul style="list-style-type: none"> (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 Water Pollution Control Ordinance	(a) N/A (b) N/A
		D6	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> 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. 					# (Refer to Appendix J (1) 25 Sep 2023 Weekly site inspection Observation 3 (2) 11 Sep 2023 Weekly site inspection Observation 2)
		D11	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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:

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North East New Territories (NENT) Landfill Extension
Environmental Mitigation Implementation Schedule (EMIS) Construction Phase

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> <ul style="list-style-type: none"> (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	✓
		D20	<ul style="list-style-type: none"> 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. 				Water Pollution Control Ordinance	N/A
		-	<ul style="list-style-type: none"> 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. 				Waste Disposal Ordinance	✓
S5.8.1	S5.2.1	D21	<u>Accidental Spillage of Chemical</u> <ul style="list-style-type: none"> (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	(a) N/A
							Water Pollution Control Ordinance	(b) N/A
							Waste Disposal Ordinance	
Erosion Control Measures								
S5.8.2	S5.2.2	-	<u>Erosion Control /Measures</u> <p>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.</p>	Erosion control	Contractor	Drainage system	ProPECC PN 1/94	To be implemented
		-	<p>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.</p>				Water Pollution Control Ordinance	✓
		-	<p>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.</p>					✓
		-	<p>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.</p>					To be implemented
		-	<p>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.</p>					To be implemented
			<p>f. Sod Establishes permanent turf for immediate erosion protection and stabilizes rainageways.</p>					To be implemented
			<p>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.</p>					To be implemented

Remarks:

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North East New Territories (NENT) Landfill Extension
Environmental Mitigation Implementation Schedule (EMIS) Construction Phase

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 Sheetting Plastic Sheetting 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	✓
		-	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.				Water Pollution Control Ordinance	✓
Surface Water Drainage System								
S5.8.2	S5.2.2	D22	<ul style="list-style-type: none">(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	(a) ✓ (b) ✓ (c) ✓ (d) ✓
		D23	<ul style="list-style-type: none">(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.				TM-water	(a) # (Refer to Appendix J 11 Sep 2023 Weekly site inspection Observation 3) (b) ✓
		-	<ul style="list-style-type: none">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
		-	<ul style="list-style-type: none">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> <ul style="list-style-type: none">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	✓
		-	<ul style="list-style-type: none">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.				ETWB TC(W) No. 19/2005	✓
		-	<ul style="list-style-type: none">Appropriate waste management should be implemented in accordance with the ETWB TC(W) No. 19/2005.				DEVB TC(W) No. 6/2010	✓
		E4	<ul style="list-style-type: none">(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	<ul style="list-style-type: none">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	<ul style="list-style-type: none">(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:

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North East New Territories (NENT) Landfill Extension
Environmental Mitigation Implementation Schedule (EMIS) Construction Phase

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Waste Management (Cont'd)								
S6	WM1	E7	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> (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) # (Refer to Appendix J 10 Jul 2023 Weekly site inspection Observation 5) (b) ✓ (c) ✓
		E9	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Training of site personnel for cleanliness, proper waste management procedures including chemical waste handling, and waste reduction, reuse and recycling concepts. 					✓
		E12	<ul style="list-style-type: none"> Regular cleaning and maintenance programme systems, sumps and oil interceptors. 					✓
		E13	<ul style="list-style-type: none"> (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
			<ul style="list-style-type: none"> 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> <ul style="list-style-type: none"> 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	# (Refer to Appendix J (1) 18 Sep 2023 Weekly site inspection Observation 5 (2) 25 Sep 2023 Weekly site inspection Observation 2)
		-	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> (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	<ul style="list-style-type: none"> 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> <ul style="list-style-type: none">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	✓
		E2	<ul style="list-style-type: none">(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) ✓ (c) ✓ (d) ✓
		-	<ul style="list-style-type: none">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.					✓
		-	<ul style="list-style-type: none">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.					✓
		-	<ul style="list-style-type: none">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.					✓
	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.					✓
	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.

North East New Territories (NENT) Landfill Extension
Environmental Mitigation Implementation Schedule (EMIS) Construction Phase

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	✓
	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.				Code of Practice on Safety and Health at Work in Confined Spaces	(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)	✓
	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.				Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, EPD (1992)	✓
	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.				ETWB TC(W)) No. 33/2002 Management of Construction and Demolition Material Including Rock	✓
	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.				DEVB TC(W) No. 6/2010 Trip Ticket System for Disposal of Construction and Demolition Materials	✓
	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.				ETWB TC(W)No.19/2005 Environmental Management on Construction Sites	✓
	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 repositied 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/ANot 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

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.
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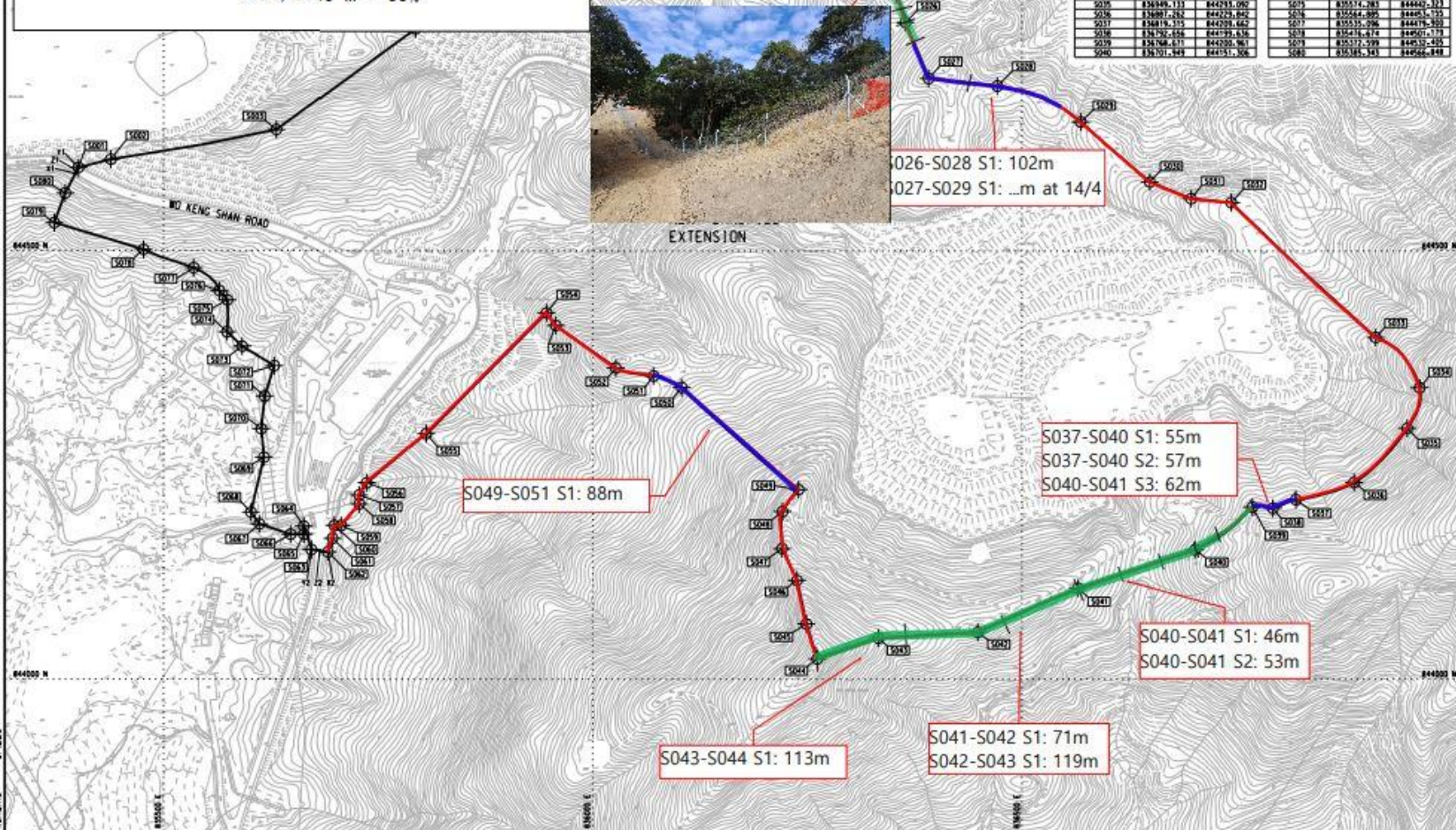


SB Fencing Progress Report as @ 13.3.2023

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%



CO-ORDINATES FOR SITE BOUNDARY

SETTING OUT POINT	EASTING	NORTHING
S001	835400.761	844596.681
S002	835436.439	844606.128
S003	835451.400	844641.024
S004	835791.642	844752.456
S005	835875.959	844831.775
S006	835936.245	844936.566
S007	835971.518	844949.837
S008	836012.253	845045.827
S009	836021.429	845071.077
S010	836012.253	845115.203
S011	836015.332	845120.132
S012	836021.429	845082.456
S013	836093.064	845049.446
S014	836098.244	845036.234
S015	836121.408	845053.991
S016	836146.485	844883.801
S017	836176.396	844961.955
S018	836211.621	844947.723
S019	836236.014	844932.717
S020	836254.713	844912.675
S021	836296.337	844882.156
S022	836312.248	844875.467
S023	836336.358	844846.516
S024	836359.365	844876.425
S025	836353.384	844833.700
S026	836364.427	844766.873
S027	836361.414	844731.454
S028	836471.540	844832.580
S029	836464.625	844852.735
S030	836469.129	844780.623
S031	836461.724	844841.038
S032	836464.096	844756.490
S033	836412.133	844739.086
S034	836396.655	844749.724
S035	836449.133	844753.062
S036	836461.282	844722.852
S037	836416.325	844729.663
S038	836452.656	844792.636
S039	836468.671	844700.961
S040	836451.449	844751.306

SETTING OUT POINT	EASTING	NORTHING
S041	836585.887	844706.358
S042	836448.443	844854.335
S043	836332.773	844848.000
S044	836461.595	844821.718
S045	836449.541	844864.518
S046	836438.241	844715.480
S047	836420.405	844752.006
S048	836421.174	844767.788
S049	836429.876	844721.358
S050	836403.489	844746.647
S051	836401.893	844754.689
S052	836404.843	844744.517
S053	836396.335	844713.726
S054	836446.240	844671.791
S055	836465.390	844676.435
S056	836436.415	844629.425
S057	836421.382	844615.710
S058	836428.112	844604.453
S059	836406.351	844716.572
S060	836468.935	844719.738
S061	836478.112	844704.453
S062	836467.580	844746.762
S063	836471.732	844811.783
S064	836465.825	844816.817
S065	836461.443	844826.397
S066	836448.526	844816.327
S067	836441.414	844811.428
S068	836467.144	844834.767
S069	836416.871	844728.437
S070	836412.896	844722.852
S071	836412.896	844722.852
S072	836412.896	844722.852
S073	836412.896	844722.852
S074	836412.896	844722.852
S075	836412.896	844722.852
S076	836412.896	844722.852
S077	836412.896	844722.852
S078	836412.896	844722.852
S079	836412.896	844722.852
S080	836412.896	844722.852

CO-ORDINATES FOR VEHICULAR ACCESS

SETTING OUT POINT	EASTING	NORTHING
V1	835597.108	844589.614
V2	835450.761	844596.681
V3	835598.934	844553.147
V4	835641.382	844746.762
V5	835642.322	844751.163
V6	835647.320	844749.365

LEGEND

- SITE BOUNDARY
- SETTING OUT POINT

0	ISSUE FOR TENDER	SS	12/20
Rev	Description	By	Date
Consultant ARUP 奧雅納工程顧問 One Arup & Partners Hong Kong Limited			
Project title Contract No. EP/SP/77/15 North East New Territories Landfill Extension			
Drawing title SETTING OUT DETAILS OF SITE BOUNDARY			
Drawing No.	215523/01/016	Rev.	0
Drawn By	Date 06/20	Checked By	Approved By
Scale 1:2500	Scale	Status	TENDER
COPYRIGHT RESERVED			



Appendix N Ecological Monitoring Record

B.1 Incense Tree *Aquilaria sinensis*



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



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



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



Photo B.1.4 : Broken stem of the transplanted individual AS-02.

B.2 Lamb of Tartary *Cibotium barometz*



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



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



Photo B.2.3. : View of the transplanted individual CB-01.

B.3 Bottlebrush Orchid *Goodyera procera*



Photo B.3.1: Individual GP-01.



Photo B.3.2: Individual GP-06.



Photo B.3.3: Individual GP-07.



Photo B.3.4: Individual GP-08.



Photo B.3.5: Individual GP-10.



Photo B.3.6: Individual GP-16.



Photo B.3.7: Individual GP-17.

Appendix O Detail Status of EP Submission

Detail Status of Submissions required under the FEP & EP

FEP Condition	EP Condition	Submission / Measures	Status
2.1	2.3	Management Organization of Main Construction Companies	Submission Date (12 Oct 2022)
2.2	2.4	Setting up of Community Liaison Group (CLG)	Submission Date (12 Oct 2022) 1 st CLG meeting (12 Jan 2023)
2.3	2.5	Submission of EM&A Manual	Submission Date (12 Oct 2022)
2.4	2.6	Submission of Preservation of Cultural Landscape Features	Survey and Preservation of Grave Records: Submission Date (15 Oct 2022) Survey and Preservation of Boulder Paths: Submission Date (12 Oct 2022)
2.5	2.7	Submission of Vegetation Survey (Transplantation Proposal)	Submission Date (2 September 2022)
2.6	2.8	Submission of translocation proposal	Submission Date (8 July 2022)
2.7	2.9	Submission of Transplantation Report and Post-Transplantation Monitoring	Submission Date (19 Jan 2023) 1 st monitoring (24 Nov 2022) 2 nd monitoring (9 Dec 2022) 3 rd monitoring (21 Dec 2022) 4 th monitoring (13 Jan 2023) 5 th monitoring (26 Jan 2023) 6 th monitoring (8 Feb 2023) 7 th monitoring (24 Feb 2023) 8 th monitoring (20 Mar 2023) 9 th monitoring (21 Apr 2023) 10 th monitoring (17 May 2023) 11 th monitoring (16 Jun 2023) 12 th monitoring (12 Jul 2023) 13 th monitoring (11 Aug 2023) 14 th monitoring (15 Sep 2023)

FEP Condition	EP Condition	Submission / Measures	Status
2.8	2.10	Submission of Translocation Report and Post-Translocation Monitoring	<p>Translocation was carried out in July 2022</p> <p>Submission Date (27 December 2022)</p> <p>1st monitoring (29 Aug 2022)</p> <p>2nd monitoring (28 Sep 2022)</p> <p>3rd monitoring (28 Oct 2022)</p> <p>4th monitoring (28 Oct 2022)</p> <p>5th monitoring (29 Dec 2022)</p> <p>6th monitoring (30 Jan 2023)</p> <p>7th monitoring (24 Feb 2023)</p> <p>8th monitoring (20 Mar 2023)</p> <p>9th monitoring (19 Apr 2023)</p> <p>10th monitoring (12 May 2023)</p> <p>11th monitoring (7 Jun 2023)</p> <p>12th monitoring (18 Jul 2023)</p>
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 P 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 at 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	0	1	5
Waste Management	0	0	0
Total	1	1	6

Environmental Complaint/ Enquiry Form

Complaint/ Enquiry Received	
Date:	14 September 2023
Time:	17:17
From:	EPD-RNG
Via:	Email
Complainant/ Enquirer*:	
Name:	Undisclosed
Tel.:	Undisclosed
Address:	Undisclosed
E-mail:	Undisclosed
Complaint/ Enquiry*:	
Date of complaint/ enquiry:	11 September 2023
Time of complaint/ enquiry:	--:--
Aspect:	Dust / Noise / Water / Other*
1. Description	
1.1	<p>It was noted from EPD-RNG's email to the Environmental Team on 14 September 2023 that EPD received information regarding the muddy water was observed at River Ganges (GR3). The content of the complainant email is appended below.</p> <p>"Further to my email on 18.08.2023, this office once more received a complaint by EPD\WQMG on the exceptionally highest turbidity (627 NTU) detected at GR3 of River Ganges on 11 September 2023, which exceeded the 95%tile of the ten-year baseline for turbidity (i.e. 95 NTU). Please refer below the photos taken and the table for easy reference."</p>
1.2	<p>The photos and information by WQMG were extracted as below."</p> <div data-bbox="237 1075 1099 1693" data-label="Figure"> <p>The graph displays the monthly turbidity levels at GR3 from January 2018 to September 2023. The Y-axis represents Turbidity in NTU, ranging from 0 to 4500. The X-axis shows the timeline from 1/2018 to 1/2023. A red dotted line marks the 95%tile baseline at 95 NTU. The blue line representing monthly turbidity remains consistently low, mostly below 500 NTU, until late 2022. In September 2023, there is a significant spike in turbidity, reaching 627 NTU, which is highlighted by a red dot and a label. The spike is much higher than the 95%tile baseline.</p> </div>
Source from EPD-RNG	

GR3 (monitoring location from EPD)

GR3



Source from EPD-RNG

Location of river monitoring station at River Ganges (monitoring locations from EPD):



Source from EPD-RNG

Location of river water monitoring stations					
Watercourse	No	Station	Subzone	Latitude	Longitude
River Ganges	1	GR1	Ganges Subzone	22° 32' 20.4"	114° 08' 42.8"
	2	GR2		22° 31' 41.0"	114° 09' 16.0"
	3	GR3		22° 32' 13.0"	114° 10' 05.7"
River Indus	4	IN1	Indus Subzone	22° 31' 03.6"	114° 06' 54.3"
	5	IN2		22° 30' 27.3"	114° 08' 07.1"
	6	IN3		22° 31' 11.3"	114° 10' 33.5"
River Beas	7	RB1	Beas Subzone	22° 29' 07.7"	114° 06' 10.3"
	8	RB2		22° 30' 12.2"	114° 06' 19.2"
	9	RB3		22° 30' 38.3"	114° 06' 40.1"

Source from EPD-RNG

1.3 The detailed layout with Monitoring Point from EPD, Surface Water Monitoring Location WM2 & related natural stream is presented in **Figure 1**.

Investigation Results & Response:

IEC notified on: 14 September 2023

2. Surface Water Monitoring Results in September 2023

2.1 The Monthly Surface WQM was conducted on 20 September 2023 at WM2. It measured no exceedance at WM2. The detailed layout of Surface WQM location with the related streams are presented in **Figure 1**.

1. Details monitoring of results are shown in **Table 2.1**.

Table 2.1 Surface WQM Results on 20 September 2023

Monitoring Location	WM2		
Date	20 September 2023		
Time	07:45		
Weather	Fine		
Water Depth (m)	0.05		
Water Flow (L/s)	2.0		
Water Temperature (°C)	22.7	Action Level	Limit Level
DO (mg/L)	7.6	<5.0	<4.0
pH	7.2	>7.6	>7.7
Turbidity (NTU)	12.0	>108.3	>108.9
SS (mg/L)	7.6	>94.5	>94.7

3. Construction Activities & Related Mitigation Measures

3.1 Based on the contractor's record, construction activities and mitigation measures conducted by contractor, use of machineries & potential water quality impact on 11 September 2023 were listed in **Table 3.1**.

Table 3.1 Construction Activities & Mitigation Measures on 11 September 2023

Construction Activities	Use of Machineries	Potential Water Quality impact	Mitigation Measures
1. Site formation at Portion A & E3-1	Excavators Dump trucks	- Wastewater generated from vehicle washing before leaving the site	- Wastewater collected to sedimentation basins/tanks and treat before discharge
2. Construction of Permanent Site office at Portion D		- Wastewater generated from surface runoff through excavated area during rainfall	
3. Tree removal at Portion B2, E1-1 & E4		- Wastewater generated from dust suppression measures	
4. Material transportation			

3.2 The Layout of construction activities & use of Machineries is presented in **Figure 2**.

4. Rainfall Recorded from Hong Kong Observatory Automatic Weather Station

4.1 According to the HKO's record (Hong Kong Observatory Automatic Weather Station – North District), the hourly rainfall recorded from 7 to 11 September 2023 is listed in **Table 4.1**.

Table 4.1 Hourly Rainfall Recorded at HKO Weather Station – North District

Date	Time Period	Rainfall (mm)
7 Sep 2023	03:00 to 04:00	0 to 6
	04:00 to 05:00	0 to 8
	05:00 to 06:00	0 to 1
	06:00 to 07:00	0 to 2
	08:00 to 09:00	0 to 1
	09:00 to 10:00	0 to 1
	10:00 to 11:00	0 to 2
	11:00 to 12:00	0 to 2
	16:00 to 17:00	0 to 9
	17:00 to 18:00	0 to 22
	18:00 to 19:00	8 to 30
	19:00 to 20:00	0 to 79
	20:00 to 21:00	0 to 150
	21:00 to 22:00	10 to 84
	22:00 to 23:00	27 to 69
	23:00 to 00:00	21 to 89
8 Sep 2023	00:00 to 01:00	16 to 103
	01:00 to 02:00	16 to 83
	02:00 to 03:00	14 to 52
	03:00 to 04:00	12 to 47
	04:00 to 05:00	8 to 22
	05:00 to 06:00	4 to 14
	06:00 to 07:00	7 to 10
	07:00 to 08:00	6 to 20
	08:00 to 09:00	14 to 29
	09:00 to 10:00	8 to 51
	10:00 to 11:00	10 to 27
	11:00 to 12:00	3 to 15
	12:00 to 13:00	1 to 5
	13:00 to 14:00	1 to 2
	14:00 to 15:00	1 to 2
	15:00 to 16:00	0 to 1
9 Sep 2023	11:00 to 12:00	0 to 2
	13:00 to 14:00	0 to 1
	14:00 to 15:00	0 to 1
	15:00 to 16:00	0 to 5
10 Sep 2023	04:00 to 05:00	0 to 3
	05:00 to 06:00	0 to 1
	07:00 to 08:00	4 to 12
	08:00 to 09:00	11 to 24
	09:00 to 10:00	1 to 5
	14:00 to 15:00	1 to 12
	15:00 to 16:00	0 to 19
	21:00 to 22:00	0 to 1

Date	Time Period	Rainfall (mm)
11 Sep 2023	04:00 to 05:00	0 to 1
	05:00 to 06:00	0 to 1
	06:00 to 07:00	0 to 6
	08:00 to 09:00	0 to 1
	09:00 to 10:00	0 to 4
	11:00 to 12:00	0 to 2
	12:00 to 13:00	0 to 14
	13:00 to 14:00	0 to 3
	14:00 to 15:00	1 to 11
	15:00 to 16:00	0 to 1

- 4.2 According to the hourly rainfall records, it resulted there are much rainfall that affected the water quality of GR3 past 5 days, especially the time periods which rainfall were more than 10 mm (Including from 17:00 to 00:00 on 7 Sep 2023, 00:00 to 12:00 on 8 Sep 2023, 07:00 to 09:00, 14:00 to 16:00 on 10 Sep 2023, 12:00 to 13:00 on 11 Sep 2023). The extreme weather maintained from 7 to 10 September 2023. The extreme weather increased the risk of landslips, finally increasing the concentration of suspended solids for surface runoff. Most rivers/streams/channels were affected by high amount of rainfall. The Hourly and Daily Rainfall Distribution from HKO is shown in **Appendix A**.
- 4.3 The GR3 is located downstream of the water quality monitoring station WM2 of the NENTX project. The WM2 is situated at the outfall of the box culvert, which collects the water from Portion A, Portion E3-1 of the project, the natural stream, and other areas.



Source from ET

5. Environmental Mitigation Implementation Status**5.1 Temporary Surface Water Drainage System (TSWDS)**

5.1.1 Based on the Contractor's TSWDS (Version updated to 12 August 2023 & version updated to 20 September 2023), the TSWDS were implemented and kept enhancing by contractor. The detail of TSWDS (Version updated to 12 August 2023 & version updated to 20 September 2023)) are presented in **Appendix B**.

5.1.2 The Enhancement items of TSWDS (updated to 20 September 2023) are listed below:

1. Increasing 1 Wetsep at Portion E3-1 & 1 WetSep at Portion E4
2. Establishing more 2 Sedimentation Basins at Portion B2 & 1 Sedimentation Basin near Portion E4.
3. Increasing 3 cut-off drain channels at the assess road between Portion A to SBA.

5.2 Hydroseeding

5.2.1 Hydroseeding is conducted by the Contractor along the Project site boundary for the purpose of minimizing exposed slopes and is in progress. The below figure indicates the location and estimate time for hydroseeding.

Slope protection layout (hydroseeding at site boundary)



Source from Contractor (Received from ET on 3 August 2023)

6. Joint Weekly Site Inspection on 4 September 2023

6.1 Joint weekly site inspection was carried out with ER, IC, Contractor and ET on 4 September 2023. The observations involving Environmental Mitigation for Construction Runoff & Surface Water Drainage System are listed below:

1. The exposed slope surfaces at Portion B2 were not covered by impervious sheets (See Photo 6-1).

Photo 6-1 Observation 1



Taken by ET

6.2 The recommendation of corrective actions for the weekly site inspection on 4 September 2023 are listed below:

1. The Contractor was recommended to cover the exposed slope surfaces at Portion B2 by impervious sheet.

7. Follow up Action taken by Contractor (After Site Inspection on 4 September 2023)

7.1 The further actions taken by contractor are listed below:

1. The slope surface protection was conducted by contractor at Portion B2 (See Photo 7-1).

Photo 7-1 Slope Surface Protection at Portion B2



Provided by Contractor

8. Joint Weekly Site Inspection on 11 September 2023

8.1 Joint weekly site inspection was carried out with ER, IC, Contractor and ET on 11 September 2023. The observations involving Environmental Mitigation for Construction Runoff & Surface Water Drainage System are listed below:

1. Surface runoff should be intercepted to avoid direct discharge into the channel at Portion E3 (See Photo 8-1 to 8-2).
2. The dusty stockpile in SBA should be covered with impervious sheet when the rainfall is forecast (See Photo 8-3).
3. The condition of silt fence in SBA should be reviewed after the heavy rainfall over the few days and should be replaced when it is broken (See Photo 8-4).

<p>Photo 8-1 Observation 1</p>  <p>Taken by ET</p>	<p>Photo 8-2 Observation 1</p>  <p>Taken by ET</p>
<p>Photo 8-3 Observation 2</p>  <p>Taken by ET</p>	<p>Photo 8-4 Observation 3</p>  <p>Taken by ET</p>
<p>8.2 The recommendation of corrective actions for the weekly site inspection on 11 September 2023 are listed below:</p> <ol style="list-style-type: none"> 1. The Contractor was advised to stop the discharge of surface runoff to channel immediately by using any mitigation measures they found appropriate. In long term, the Contractor was recommended to construct earth bund along the channel to prevent this situation happening again. 2. The Contractor was advised to cover the stockpiles with impervious sheet when they are idle. 3. The Contractor was advised that the broken or collapsed silt fence should be replaced and properly set up after the heavy rainfall from last week. 	
<p>9. Follow up Action taken by Contractor (After Site Inspection on 11 September 2023)</p>	
<p>9.1 The further actions taken by contractor are listed below:</p> <ol style="list-style-type: none"> 1. The Contractor used sandbag barriers to intercept surface runoff entering to the channel, constructed small sump pit to gather surface runoff and pumped out for wastewater treatment (See Photo 9-1). 	

Photo 9-1 Rectified action for Observation 1



Provided by Contractor

10. Joint Weekly Site Inspection on 18 September 2023

10.1 Joint weekly site inspection was carried out with ER, IC, ET, Contractor and IEC on 18 September 2023. The observations involving Environmental Mitigation for Construction Runoff & Surface Water Drainage System are listed below:

1. The dry PFA in Portion B2 should be covered entirely with impervious sheets.³ (See Photo 10-1).
2. The metal plate at the vehicle entrance in Portion B2 should cover unpaved road surface. (See Photo 10-2).
3. Sediment/ silt traps shall be incorporated in the temporary drainage system to enhance retention time for silt/s and traps of the silt removal facilities be 5 minutes under maximum flow conditions. (See Photo 10-3).
4. The main haul road in Portion E4 is dry and dusty (See Photo 10-4 to 10-5).

Photo 10-1 Observation 1



Taken by ET

Photo 10-2 Observation 2



Taken by ET

Photo 10-3 Observation 3	Photo 10-4 Observation 4
 <p>Taken by ET</p>	 <p>Taken by ET</p>
Photo 10-5 Observation 4	
 <p>Taken by ET</p>	
<p>10.2 The recommendation of corrective actions for the weekly site inspection on 18 September 2023 are listed below:</p> <ol style="list-style-type: none"> 1. The Contractor has been reminded to cover dry PFA entirely with impervious sheets. 2. Vehicle entrance should be paved with concrete, bituminous materials, hardcore or metal plates, and kept clear of dusty materials. 3. The Contractor has been advised to reconstruct the demolished sedimentation basin to act as silt trap and to achieve 5 minutes of retention time under maximum flow condition. 4. The Contractor has been advised to schedule watering and recommended to install water sprinklers or mist spray in long term. 	

11. Follow up Action taken by Contractor (After Site Inspection on 18 September 2023)

11.1 The further actions taken by contractor are listed below:

1. The dry PFA was removed by contractor (See Photo 11-1).
2. The dust control measure was conducted by contractor at Portion E3 & E4 (See Photo 11-2 to 11-3).

Photo 11-1 Rectified action for Observation 1



Provided by Contractor

Photo 11-2 Rectified action for Observation 4



Provided by Contractor

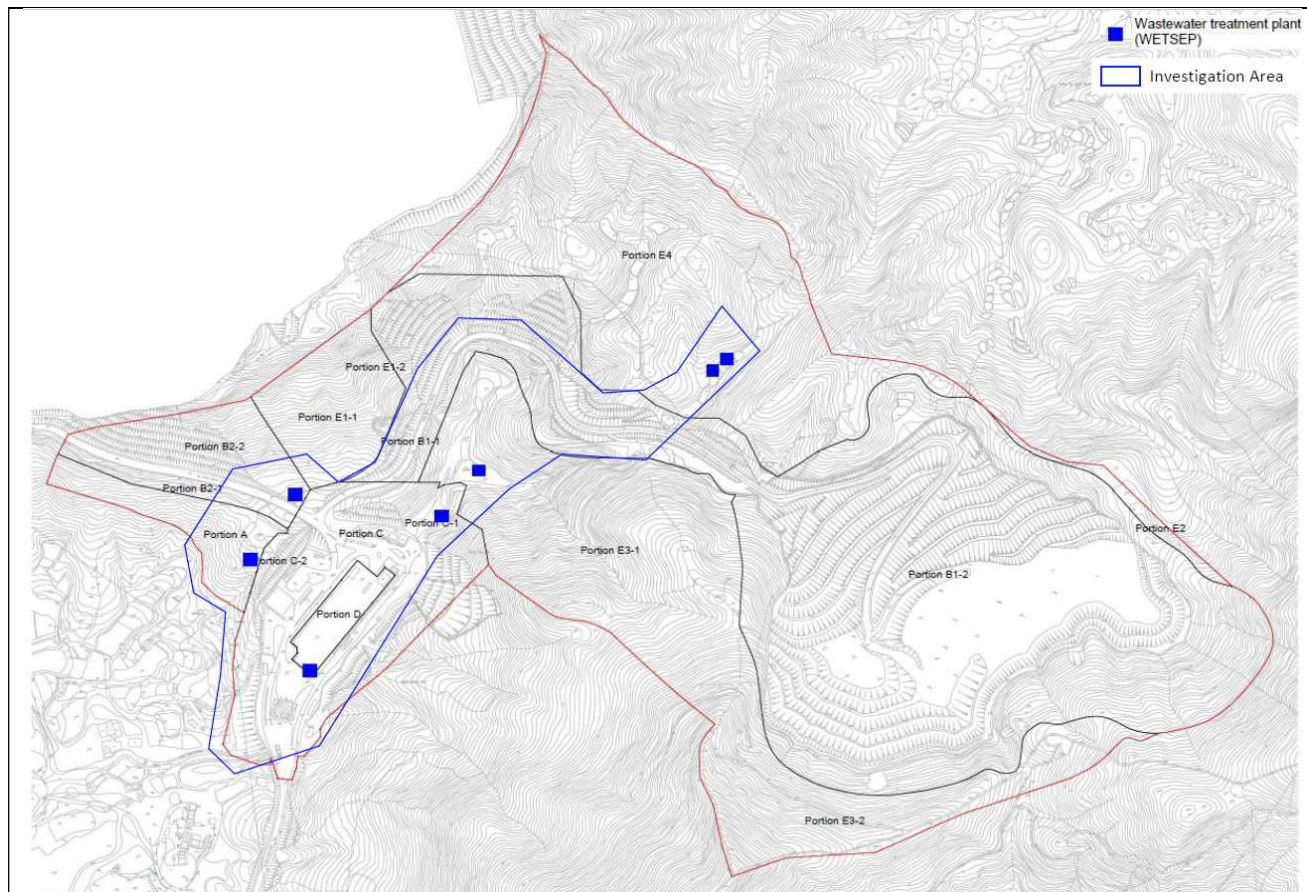
Photo 11-3 Rectified action for Observation 4



Provided by Contractor

12. Additional Site investigation / Audit by IC, ET & IEC on 18 September 2023

- 12.1 An additional site investigation & audit by IC, ET & IEC was conducted on 18 September 2023 under sunny weather. The investigation area involved the Surface Water Monitoring Location WM2, the channel between the site boundary of Portion A and WM2, Portion A, the Existing Channel near Portion C, the Outlet of the Box Culvert under Portion C and the inlet of the Box Culvert under Wo Keng Shan Road, Portion E3-1, Existing Channel & Manhole near Portion B2, Portion B2 & Portion E4. The Daily Rainfall Distribution from HKO is shown in **Appendix A**.



Source from ET

Surface WQM Location WM2

- 12.2 The photo record of the investigation for surface WQM Location WM2 is presented from Photo 12-1 to 12-4.
- 12.3 According to the investigation, it was observed that muddy water flows through Surface WQM Location WM2 (See Photo 12-1 to 12-3).
- 12.4 The clearing work of deposited silt and grit at the outlet of the box culvert was conducted during the investigation (See Photo 12-4). The Contractor has been recommended to establish the fixed silt curtain near the Surface WQM Location WM2 to minimise the impact of the clearing work of deposited silt and grit when the clearing work is conducted.
- 12.5 The detailed location of the photo record is presented in **Figure 3**.

<p>Photo 12-1 Surface WQM Location WM2 (Face to upstream)</p>	<p>Photo 12-2 Surface WQM Location WM2 (Face to downstream)</p>
	
<p>Taken by ET</p>	<p>Taken by ET</p>
<p>Photo 12-3 Surface WQM Location WM2 (Face to upstream)</p>	<p>Photo 12-4 Clearing Work of Deposited Silt and Grit at the Outlet of Box Culvert</p>
	
<p>Taken by ET</p>	<p>Taken by ET</p>
<p>Branch of Existing Channel from Portion A</p>	
<p>12.6 The photo record of the investigation for the Branch of Existing Channel from Portion A are presented from Photo 12-5 to 12-26.</p> <p>12.7 According to the investigation, it was observed that the high earth bunds with shotcrete can countercheck the construction runoff from Portion A to avoid the runoff discharge directly to outside the low elevation of site boundary (See Photo 12-5 to 12-11). The slope surface protection had been implemented at Portion A by contractor (See Photo 12-12).</p> <p>12.8 To minimise the concentration of the construction runoff, the Contractor has been recommended to enhance strengthen the slope surface protection area (e.g. shotcrete) for long term and cover the exposed slope at non-construction working period for short term at Portion A. (See Photo 12-13).</p> <p>12.9 In addition, The Contractor was advised that the channels should be established near the site boundary of earth bunds and the low elevation of the slope (See Photo 12-6, 12-8 to 12-13). The construction runoff should be collected by the channels to silt removal facilities for treatment.</p> <p>12.10 During the investigation, the potential sources were found by IC, ET and IEC.</p> <p><u>Under Heavy Rain: Potential Source 1 – Existing Channel from Portion A (Runoff from Wo Keng Shan Road near Northing (m): 844511, Easting (m): 835655, discharge water from the silt removal facilities at Portion A & other runoff from stormwater drain)</u></p>	

12.11 The muddy water was not found at the existing channel near NENT Landfill Carpark (See Photo 12-14 to 12-15).

12.12 Although the muddy water was not found under investigation, it cannot be excluded that the muddy water may come from the surface runoff of the Wo Keng Shan Road (Northing (m): 844511, Easting (m): 835655), discharge water from the silt removal facilities at Portion A & other runoff from stormwater drain etc. under heavy rain. The Contractor has been reminded that the precautions should be taken at any time of year when rainstorms are likely, actions to be when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms area in accordance with Appendix A2 of ProPECC PN1/94.

Under Heavy Rain: Potential Source 2 – Runoff from NENT Landfill Carpark, Water Tank & other stormwater drains

12.13 The branch of the existing channel was found near the gate of the assess road to WM2. The muddy water was not found at the branch of the existing channel near the car park (See Photo 12-16). To track the potential source of this branch, it can be found that there is one stormwater hole near the gate (runoff from the car park of NENT Landfill can flow directly to the branch of the existing channel (See Photo 12-16 & 12-17). The stormwater drain & water tank at the car park of NENT Landfill were found (See Photo 12-18 & 12-19). The potential sources of runoff at the branch included the runoff from the car park of NENT Landfill, the stormwater drain & water tank near the car park. Although the muddy water was not found under investigation, it cannot exclude the runoff flow to the existing channel under heavy rain (See Photo 12-20).

12.14 The colour of runoff at the existing channel near construction dust monitoring location AM3 is shown in Photo 12-21 to 12-22.

12.15 The photo record of existing channel (Runoff from Wo Keng Shan Road (Northing (m): 844511, Easting (m): 835655), Discharge water from the silt removal facilities at Portion A, other runoff from stormwater drain the car park flow to the channel, NENT Landfill Carpark, Water Tank & other stormwater drains) is shown in Photo 12-23 to 12-24.

Under Heavy Rain: Potential Source 3 – Outlet of stormwater drain (Runoff from Wo Keng Shan Road can be flowed directly to the existing channel)

12.16 The outlet of the stormwater drain (runoff from Wo Keng Shan Road can flow directly to the existing channel) was found near the outlet of the branch of the existing channel from Portion A (See Photo 5-25 to 5-26. The water quality of runoff at the outlet of the branch of the existing channel from Portion A was clean.

12.17 In summary, it can viewed that the runoff from the branch of the existing channel from Portion A is not the main source of the high turbidity concentration of muddy water. But it may affect the concentration of the runoff under heavy rain.

12.18 The detailed location of the photo record is presented in **Figure 3**.

<p>Photo 12-5 Site boundary at Portion A</p>  <p>Taken by ET</p>	<p>Photo 12-6 Site boundary at Portion A</p>  <p>Taken by ET</p>
<p>Photo 12-7 Site boundary at Portion A</p>  <p>Taken by ET</p>	<p>Photo 12-8 Site boundary at Portion A</p>  <p>Taken by ET</p>
<p>Photo 12-9 Site boundary at Portion A</p>  <p>Taken by ET</p>	<p>Photo 12-10 Site boundary at Portion A</p>  <p>Taken by ET</p>

<p>Photo 12-11 Site boundary at Portion A</p>  <p>Taken by ET</p>	<p>Photo 12-12 Slope Surface Protection at Portion A</p>  <p>Taken by ET</p>
<p>Photo 12-13 Portion A</p>  <p>Taken by ET</p>	<p>Photo 12-14 Existing Channel near Car Park of NENT Landfill</p>  <p>Taken by ET</p>
<p>Photo 12-15 Existing Channel near Car Park of NENT Landfill</p>  <p>Taken by ET</p>	<p>Photo 12-16 Branch of the Existing Channel near the gate of the assess road to WM2</p>  <p>Taken by ET</p>

Photo 12-17 Stormwater hole near the gate (Runoff from Car park of NENT Landfill can be flowed directly to the existing channel)



Taken by ET

Photo 12-18 Stormwater drain at the Car park of NENT Landfill



Taken by ET

Photo 12-19 Another side of Car Park of NENT Landfill



Taken by ET

Photo 12-20 Existing Channel near the gate (Runoff from carpark flow to the channel.)



Taken by ET

Photo 12-21 Existing channel (Runoff from carpark flow to the channel.)



Taken by ET

Photo 12-22 Existing channel (Runoff from carpark flow to the channel.)



Taken by ET





<p>Photo 12-23 Existing channel (Runoff from carpark flow to the channel.)</p>	<p>Photo 12-24 Existing channel (Runoff from carpark flow to the channel.)</p>
 <p>Taken by ET</p>	 <p>Taken by ET</p>
<p>Photo 12-25 Outlet of Stormwater Drain (Runoff from Wo Keng Shan Road can be flowed directly to the existing channel)</p>	<p>Photo 12-26 Exit of Existing Channel from Portion A (Runoff from Wo Keng Shan Road flow to the channel.)</p>
 <p>Taken by ET</p>	 <p>Taken by ET</p>
<p>Existing Channel near Portion C, Outlet of Box Culvert under Portion C & Inlet of Box Culvert under Wo Keng Shan Road</p>	
<p>12.19 The photo record of the investigation for the Outlet of the Box Culvert under Portion C & the inlet of the Box Culvert under Wo Keng Shan Road is presented from Photo 12-27 to 12-32.</p> <p>12.20 According to the investigation, the muddy water was found at the existing channel near Portion C (Inlet of the Box Culvert under Wo Keng Shan Road & Outlet of the Box Culvert under Portion C) (See Photo 12-27, 12-28 & 12-30).</p> <p>12.21 It can be observed that a high amount of muddy water came from the outlet of the Box Culvert under Portion C (See Photo 12-31).</p> <p><u>Under Heavy Rain: Potential Source 4 – Branch of Natural Stream near Wo Keng Shan and;</u> <u>Under Heavy Rain: Potential Source 5 – Branch of stormwater drain near the boundary of NENT Landfill</u></p> <p>12.22 In addition, the branches of the natural stream from Wo Keng Shan (See Photo 12-29, Outlet see Photo 12-28) & branch of stormwater drain near the boundary of NENT Landfill (See Photo 12-32, Outlet see Photo 12-30) were found under investigation. But it can be viewed that the water quality of the branch of the natural stream from Wo Keng Shan was clear while there is not any runoff that came from the branch of the stormwater drain near the boundary of NENT Landfill. Although the muddy water was not found under investigation, it cannot be excluded that the muddy water may come from two branches under heavy rain.</p>	

Photo 12-27 Inlet of Box Cuvlert under Wo Keng Shan Raod



Taken by ET

Photo 12-28 Existing Channel near Portion C



Taken by ET

Photo 12-29 Branch of natural stream from Wo Keng Shan



Taken by ET

Photo 12-30 Outlet of Box Culvert under Portion C



Taken by ET

Photo 12-31 Outlet of Box Culvert under Portion C



Taken by ET

Photo 12-32 Branch of stormwater drain near the boundary of NENT Landfill



Taken by ET

Portion E3-1

12.23 The photo record of the investigation for the Portion E3-1 are presented from Photo 12-33 to 12-42.

Potential Source 6 – Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1

12.24 According to the investigation, the sedimentation basins with Geotextile & rock bunds were broken during extreme weather from 8 to 9 September 2023. The repair of sedimentation basins & rock bunds was conducted by the contractor (See Photo 12-33 to 12-35). It was viewed that the retention time for silts and sediment traps was not enough for silt and sediment deposition (See Photo 12-33 to 12-34).

12.25 In addition, the slope surface protection was implemented at part of the exposed slope near the existing channel & silt removal facilities at Portion E3-1 to minimise the high suspended solids runoff created by the slope area near the existing channel (See Photo 12-35).

12.26 According to the observation of the silt removal facilities at Portion E3-1, one of the silt removal facilities was broken during the extreme weather from 8 to 9 September 2023. The silt removal facility was repaired by the contractor under investigation. The Contractor has been advised to repair the sedimentation basins, rock bunds & silt removal facilities at Portion E3-1 as soon as possible. Moreover, the Contractor has been recommended to review the design of silt removal facilities whether following the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediments traps should be 5 minutes under maximum flow conditions.

12.27 Another silt removal facility at Portion E3-1 was functional. After the check of another silt removal facility at Portion E3-1, it was observed that the muddy water was kept to discharge to the existing channel after being treated by the facility (See Photo 12-41). The condition of the silt removal facility at Portion E3-1 is shown in Photo 12-36 to 12-39). It reflected that the silt removal facilities at Portion E3-1 may involve non-compliance with the requirement of the WPCO Licenses. The Contractor has been recommended to review the capacity of silt removal facilities and sedimentation basins enough to handle the construction runoff under heavy rain to avoid the construction runoff discharge into the existing channel.

12.28 Although the discharge water from the silt removal facilities at Portion E3-1 did not affect the water quality in the existing channel between the boundary of the sedimentation basin at Portion E3-1 and the silt curtain near the inlet of the box culvert (upstream of the discharge point), the water quality of the existing channel was muddy (See Photo 12-36, 12-40 & 12-41). The runoff from the existing channel near Portion E3-1 was used for other use by NENT Landfill (See Photo 12-38 & 12-40). It showed that runoff at the existing channel near Portion E3-1 is the potential source. The Contractor has been advised to ensure the boundary of the sedimentation basin near the existing channel is fully blocked to avoid the construction runoff discharge directly to the existing channel (See Photo 12-34). The Contractor has been recommended to consolidate the silt curtain to ensure the effectiveness of the silt curtain.

12.29 On the other hand, the Contractor was advised to minimize surface excavation works during the rainy seasons. All exposed earth areas should be completed and vegetated as soon as possible after earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means at Portion E3-1. The Contractor was recommended to pay attention to the control of silty surface runoff at any time including:

- (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 covered by a tarpaulin.
- (iii) Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces.

12.30 The stormwater drain near the inlet of box culvert under Portion C was found under the investigation. Most of muddy water came from the branch of stormwater drain near the inlet of box culvert under

Portion C. The colour of the muddy water appeared dark brown colour and cannot look the bottom of the existing channel.

12.31 The detail location of the photo record are presented in **Figure 3**.

Photo 12-33 Repairation of Sedimentation Basins at Portion E3-1



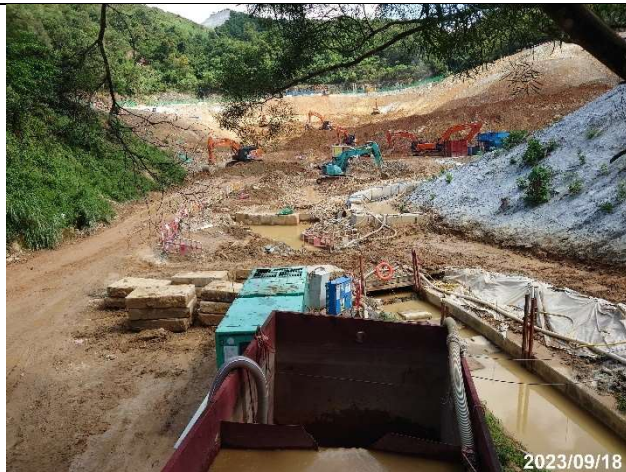
Taken by ET

Photo 12-34 Repairation of Sedimentation Basins at Portion E3-1



Taken by ET

Photo 12-35 Portion E3-1



Taken by ET

Photo 12-36 Sedimentation Tank at Portion E3-1



Taken by ET

Photo 12-37 Silt Removal Facility at Portion E3-1



Taken by ET

Photo 12-38 Silt Removal Facility at Portion E3-1



Taken by ET

<p>Photo 12-39 Silt Removal Facility at Portion E3-1</p>	<p>Photo 12-40 Existing Channel near the entrance of Portion E3-1</p>
 <p>Taken by ET</p>	 <p>Taken by ET</p>
<p>Photo 12-41 Silt Curtain at Portion E3-1</p>	<p>Photo 12-42 Stormwater drain near Inlet of Box Culvert under Portion C</p>
 <p>Taken by ET</p>	 <p>Taken by ET</p>
<p>Existing Channel & Manhole near Portion B2</p>	
<p>12.32 The photo record of the investigation for the Existing Channel & Manhole near Portion B2 is presented from Photo 12-43 to 12-48.</p> <p>12.33 According to the investigation, It can observed there are high amount of muddy water flowing to the manhole near Portion B2 (See Photo 12-43 to 12-44). There are two branches of the manhole which are the Branch of the Existing Channel near Portion B2 (Face to the Entrance of Portion B2) (See Photo 12-45 to 12-46) & the Branch of the Existing Channel near Portion B2 (Face to Portion B1 & E4) (See Photo 12-47 to 12-48).</p> <p>12.34 The muddy water came from the Branch of Existing Channel near Portion B2 (Face to Portion B1 & E4). The runoff from the manhole near Portion B2 flow to the stormwater drain near inlet of box culvert under Portion C directly (See Photo 12-42).</p> <p>12.35 The detailed location of the photo record is presented in Figure 3.</p>	

<p>Photo 12-43 Manhole near Portion B2</p>  <p>Taken by ET</p>	<p>Photo 12-44 Manhole near Portion B2</p>  <p>Taken by ET</p>
<p>Photo 12-45 Branch of Existing Channel near Portion B2</p>  <p>Taken by ET</p>	<p>Photo 12-46 Branch of Existing Channel near Portion B2 (Face to Entrance of Portion B2)</p>  <p>Taken by ET</p>
<p>Photo 12-47 Branch of Existing Channel near Portion B2 (Face to Manhole near Portion B2)</p>  <p>Taken by ET</p>	<p>Photo 12-48 Branch of Existing Channel near Portion B2 (Face to Portion B1 & E4)</p>  <p>Taken by ET</p>

Portion B2

12.36 The photo record of the investigation for Portion B2 is presented from Photo 12-49 to 12-56.

Under Heavy Rain: Potential Source 7 – Runoff from Wo Keng Shan Road near Portion B2 & Upstream point near Northing (m): 844586, Easting (m): 835427

12.37 According to the investigation, It can observed there are two branches of Existing Channel near Portion B2 (Face to the Entrance of Portion B2) which one collected the runoff from Wo Keng Shan Road and another one collected from upstream point near Northing (m): 844586, Easting (m): 835427 (See Photo 12-49 to 12-50). Although the muddy water was not found under investigation, it cannot exclude the muddy water may be came from two branches under heavy rain.

Potential Source 8 – Discharge water from the silt removal facilities at Portion B2

12.38 It was observed that the measures for control of construction runoff at the entrance at Portion B2 were not enough (See Photo 12-51). The Contractor has been advised that all vehicles and plants should be cleared before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing bay should be provided at the construction site exit of Portion B2. 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 silty water to public roads and drains.

12.39 Although the slope surface protection was implemented by the contractor at Portion B2 (See Photo 12-52), the contractor has been recommended to enhance the measures for the collection of high amounts of surface runoff to silt removal facilities at Portion B2.

12.40 After the check of the silt removal facility at Portion B2, it was observed that the muddy water was discharged outside the facility (See Photo 12-54). The condition of the silt removal facility at Portion B2 is shown in Photo 12-53 to 12-56). It reflected that the silt removal facilities at Portion B2 may involve non-compliance with the requirement of the WPCO Licenses. The contractor has been reminded to increase the maintenance & inspection frequency for the Temporary Surface Water Drainage System (TSWDS). Moreover, the Contractor has been recommended to review the design of efficient silt removal facilities and follow the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediments traps should be 5 minutes under maximum flow conditions.

12.41 The detailed location of the photo record is presented in **Figure 3**.

Photo 12-49 Branch of Existing Channel near Portion B2 (Face to Manhole near Portion B2)



Taken by ET

Photo 12-50 Wo Keng Shan Road near the Entrance at Portion B2



Taken by ET

<p>Photo 12-51 Entrance at Portion B2</p>  <p>Taken by ET</p>	<p>Photo 12-52 Slope Surface Protection at Portion B2</p>  <p>Taken by ET</p>
<p>Photo 12-53 Silt Removal facility at Portion B2</p>  <p>Taken by ET</p>	<p>Photo 12-54 Silt Removal facility at Portion B2</p>  <p>Taken by ET</p>
<p>Photo 12-55 Silt Removal facility at Portion B2</p>  <p>Taken by ET</p>	<p>Photo 12-56 Sedimentation Tank at Portion B2</p>  <p>Taken by ET</p>

Portion E4

12.42 The photo record of the investigation for Portion E4 is presented from Photo 12-57 to 12-75.

Potential Source 9 – Wheel washing water from the site entrance at Portion E4

12.43 According to the investigation, slope surface protection at the part of the exposed slope at Portion E4 was implemented by contractor (See Photo 12-57). However, the condition of the main access road at Portion E4 was the presence of a high risk of causing a high concentration of muddy water under heavy rain (See Photo 12-58). The Contractor has been advised to pave the main access road with concrete, bituminous materials, hardcores or metal plates to minimise above risk and establish suitable channels to collect the runoff from the access road and the slope at Portion E4 final to silt removal facilities for treatment.

12.44 Two sedimentation basins at Portion E4 were established by the contractor (See Photo 12-59 to 12-60). The sedimentation basins mainly collected the construction runoff from the high elevation at Portion E4. After flowing through two sedimentation basins, the construction runoff has been treated by two silt removal facilities at Portion E4 (See Photo 12-61 to 12-64).

12.45 It was observed that the discharge water from silt removal facilities at Portion E4 was clear, and then the discharge water was used for wheel washing at the wheel washing facility (See Photo 12-65). Although the wheel washing facility at the entrance of Portion E4 and the paved access road was established by the contractor, the high pressure water jet and speed limit sign were not found under investigation. The Contractor has been recommended to improve the design of the entrance at Portion E4 which includes the high pressure water jet, and speed limit sign at the wheel washing and consider to increase the speed bump at the entrance of Portion E4.

12.46 Due to the high amount of loaded dump trucks using the wheel washing bay at Portion E4 (See Photo 12-66), and lack of the traffic control at the entrance of Portion E4, a high amount of muddy water which mixed with the runoff from upstream area (including Portion B1-2 & Portion E2(See Photo 12-70)) flowed from the TSWDS final to the manhole near Portion B2 directly (High amount of loaded dump trucks without the adequate design of wheel washing facility & traffic control left the entrance of Portion E4 which cause that the muddy water from the wheel washing facility at Portion E4 flowed to the TSWDS via the movement from loaded dump trucks.) (See Photo 12-66 to 12-75).

12.47 The contractor has been advised to increase the sedimentation tank & silt removal facility at the entrance of Portion E4 (Location near Photo 12-74) and establish the proper channel to collect the runoff from the wheel washing final to the silt removal facility for treatment to minimise the load of the silt removal facilities at Portion B2 (To treat high concentration of muddy water from Portion E4).

12.48 In addition, the Contractor has been recommended to revise the design of TSWDS to avoid the untreated runoff directly flowing to the manhole near Portion B2 final to the stormwater drain near Inlet of Box Culvert under Portion C.

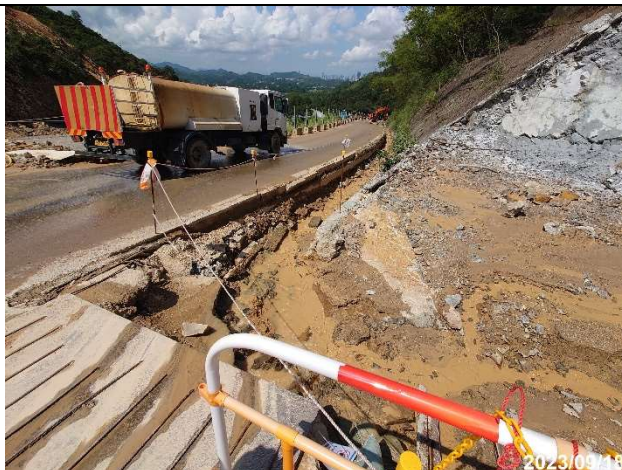
12.49 The detailed location of the photo record is presented in **Figure 3**.

<p>Photo 12-57 Slope Surface Protection at Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-58 Assess Road at Portion E4</p>  <p>Taken by ET</p>
<p>Photo 12-59 Sedimentation Basin at Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-60 Sedimentation Basin at Portion E4</p>  <p>Taken by ET</p>
<p>Photo 12-61 Silt Removal facility at Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-62 Silt Removal facility at Portion E4</p>  <p>Taken by ET</p>

<p>Photo 12-63 Silt Removal facility at Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-64 Silt Removal facility at Portion E4</p>  <p>Taken by ET</p>
<p>Photo 12-65 Wheel Washing Facility at Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-66 Wheel Washing Facility at Portion E4</p>  <p>Taken by ET</p>
<p>Photo 12-67 TSWDS at Entrance of Portion E4</p>  <p>Taken by ET</p>	<p>Photo 12-68 TSWDS at Entrance of Portion E4</p>  <p>Taken by ET</p>

Photo 12-69 TSWDS at Entrance of Portion E4	Photo 12-70 TSWDS at Entrance of Portion E4
	
Taken by ET	Taken by ET
Photo 12-71 Entrance at Portion E4	Photo 12-72 Entrance at Portion E4
	
Taken by ET	Taken by ET
Photo 12-73 Entrance at Portion E4	Photo 12-74 Entrance at Portion E4
	
Taken by ET	Taken by ET

Photo 12-75 TSWDS at Entrance of Portion E4



Taken by ET

13. Further Action taken by Contractor

- 13.1 After the investigation and audit 18 September 2023, the related rectification work are conducted by the contractor. The detailed rectified actions & photo records will be presented in further report.

14. Additional Surface Water Monitoring Results

- 14.1 The Additional Surface WQM was conducted on 28 September 2023 at WM2 and GR3 (EPD Monitoring Location). It measured no exceedance at WM2 and no high turbidity level at GR3. The detailed layout of Surface WQM location with the related streams are presented in **Figure 1**. Details monitoring of results are shown in **Table 14.1**.

Table 14.1 Surface WQM Results on 28 September 2023

Monitoring Location	WM2			GR3
Date	28 September 2023			
Time	08:08			08:28
Weather	Fine			Fine
Water Depth (m)	1.0			1.0
Water Flow (L/s)	1.0			1.0
Water Temperature (°C)	27.2	Action Level	Limit Level	27.0
DO (mg/L)	7.8	<5.0	<4.0	7.6
pH	7.5	>7.6	>7.7	7.4
Turbidity (NTU)	8.8	>108.3	>108.9	13.1
SS (mg/L)	5.5	>94.5	>94.7	4.9

Remarks: "TBC" equal to To Be Confirm

15. Conclusion	
<p>15.1 Based on the surface water monitoring results, construction activities & related mitigation measures, weather record, environmental mitigation implementation status, joint weekly site inspections on 4, 11 & 18 September 2023 and additional site investigation / audit on 18 September 2023, the potential source of impact are listed below:</p> <ol style="list-style-type: none"> Potential Source 1 – Existing Channel from Portion A (Runoff from Wo Keng Shan Road near Northing (m): 844511, Easting (m): 835655, discharge water from the silt removal facilities at Portion A & other runoff from stormwater drain) Potential Source 2 – Runoff from NENT Landfill Carpark, Water Tank & other stormwater drains Potential Source 3 – Outlet of stormwater drain (Runoff from Wo Keng Shan Road can be flowed directly to the existing channel) Potential Source 4 – Branch of Natural Stream near Wo Keng Shan Potential Source 5 – Branch of stormwater drain near the boundary of NENT Landfill Potential Source 6 – Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 Potential Source 7 – Runoff from Wo Keng Shan Road near Portion B2 & Upstream point near Northing (m): 844586, Easting (m): 835427 Potential Source 8 – Discharge water from the silt removal facilities at Portion B2 Potential Source 9 – Wheel washing water from the site entrance at Portion E4 <p>15.2 The potential source of impact under non-rainy weather are listed below:</p> <ol style="list-style-type: none"> Potential Source 6 – Runoff from Existing Channel near Portion E3-1 & discharge water from the silt removal facilities at Portion E3-1 Potential Source 8 – Discharge water from the silt removal facilities at Portion B2 Potential Source 9 – Wheel washing water from the site entrance at Portion E4 <p>15.3 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.</p>	16. Recommendations/ Mitigation Measures/ Actions if necessary
<p>16.1 In summary the results of investigation, the high turbidity concentration muddy water may involve 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 under the investigation. To avoid the potential impact of construction runoff from the project, some mitigation measures are recommended & reminded to implemented & review by the contractor. The detail mitigation measures are listed below:</p> <p><u>Clearing work of deposited silt and grit near surface WQM location WM2</u></p> <ol style="list-style-type: none"> The Contractor has been recommended to establish the fixed silt curtain near the Surface WQM Location WM2 to minimise the impact of the clearing work of deposited silt and grit when the clearing work is conducted. <p><u>Portion A</u></p> <ol style="list-style-type: none"> The Contractor has been recommended to enhance strengthen the slope surface protection area for long term and cover the exposed slope at non-construction working period for short term at Portion A. 	

3. The Contractor was advised that the channels should be established near the site boundary of earth bunds and the low elevation of the slope. The construction runoff should be collected by the channels to silt removal facilities for treatment.
4. The Contractor has been reminded that the precautions should 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 area in accordance with Appendix A2 of ProPECC PN1/94.

Portion E3-1

5. The Contractor has been advised to repair the sedimentation basins, rock bunds & silt removal facilities at Portion E3-1 as soon as possible.
6. The Contractor has been recommended to review the design of silt removal facilities whether following the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediments traps should be 5 minutes under maximum flow conditions.
7. The Contractor has been recommended to review the capacity of silt removal facilities and sedimentation basins enough to handle the construction runoff under heavy rain to avoid the construction runoff discharge into the existing channel.
8. The Contractor has been advised to ensure the boundary of the sedimentation basin near the existing channel is fully blocked to avoid the construction runoff discharge directly to the existing channel.
9. The Contractor has been recommended to consolidate the silt curtain to ensure the effectiveness of the silt curtain.
10. The Contractor was advised to minimize surface excavation works during the rainy seasons. All exposed earth areas should be completed and vegetated as soon as possible after earthworks where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means at Portion E3-1.
11. The Contractor was recommended to pay attention to the control of silty surface runoff at any time including:
 - (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 covered by a tarpaulin.
 - (iii) Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces.

Portion B2

12. The Contractor has been advised that all vehicles and plants should be cleared before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing bay should be provided at the construction site exit of Portion B2. 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 silty water to public roads and drains.
13. The Contractor has been recommended to enhance the measures for the collection of high amounts of surface runoff to silt removal facilities at Portion B2.
14. The Contractor has been reminded to increase the maintenance & inspection frequency for the Temporary Surface Water Drainage System (TSWDS).
15. The Contractor has been recommended to review the design of efficient silt removal facilities and follow the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silts and sediments traps should be 5 minutes under maximum flow conditions.

Portion E4

16. The Contractor has been advised to pave the main access road with concrete, bituminous materials, hardcores or metal plates to minimise above risk and establish suitable channels to collect the runoff from the access road and the slope at Portion E4 final to silt removal facilities for treatment.
17. The Contractor has been recommended to improve the design of the entrance at Portion E4 which includes the high pressure water jet, and speed limit sign at the wheel washing and consider to increase the speed bump at the entrance of Portion E4.
18. The Contractor has been advised to increase the sedimentation tank & silt removal facility at the entrance of Portion E4 (Location near Photo 12-74) and establish the proper channel to collect the runoff from the wheel washing final to the silt removal facility for treatment to minimise the load of the silt removal facilities at Portion B2 (To treat high concentration of muddy water from Portion E4).
19. The Contractor has been recommended to revise the design of TSWDS to avoid the untreated runoff directly flowing to the manhole near Portion B2 final to the stormwater drain near Inlet of Box Culvert under Portion C.

Others

20. The Contractor has been reminded to keep reviewing whether the capacity of silt removal facilities and sedimentation basins are enough to handle the construction runoff under heavy rain to avoid the construction runoff discharge into the existing channel.
21. The Contractor has been recommended increase the maintenance frequency of the silt removal facilities after the heavy rain.
22. The Contractor has been reminded follow the requirements of EP and FEP conditions strictly, in particular condition 1.7 of EP & FEP, EP condition 2.15 (a) and (b) and FEP condition 2.13(a) and (b), to avoid any non-compliance of EP and FEP.
23. The Contractor was recommended to pay attention to the control of silty surface runoff at any time including:
 - (iv) Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly.
 - (v) Temporarily exposed slope surfaces should be covered by a tarpaulin.
 - (vi) Intercepting channels should be provided (e.g. along the crest/edge of excavation) to prevent storm runoff from washing across exposed soil surfaces.

Also, the contractor has been reminded to maintain and supervise continuously related mitigation measures at the south boundary to ensure the effectiveness of the related measures, especially if the rainstorm is imminent or forecast, during or after rainstorms & to implement the mitigation measures such as the provision of the temporary surface water drainage system to manage runoff, hydroseeding to minimise slope surface runoff and other measures specified and required in the EIA Report, the EM&A Manual and the EP/FEP.

Prepared by : Keith Chau

Date : 3 October 2023

Reviewed by : Fredrick Leong

Date : 3 October 2023

Figure 1

Layout Plan of Environmental Complaint on 14 September 2023

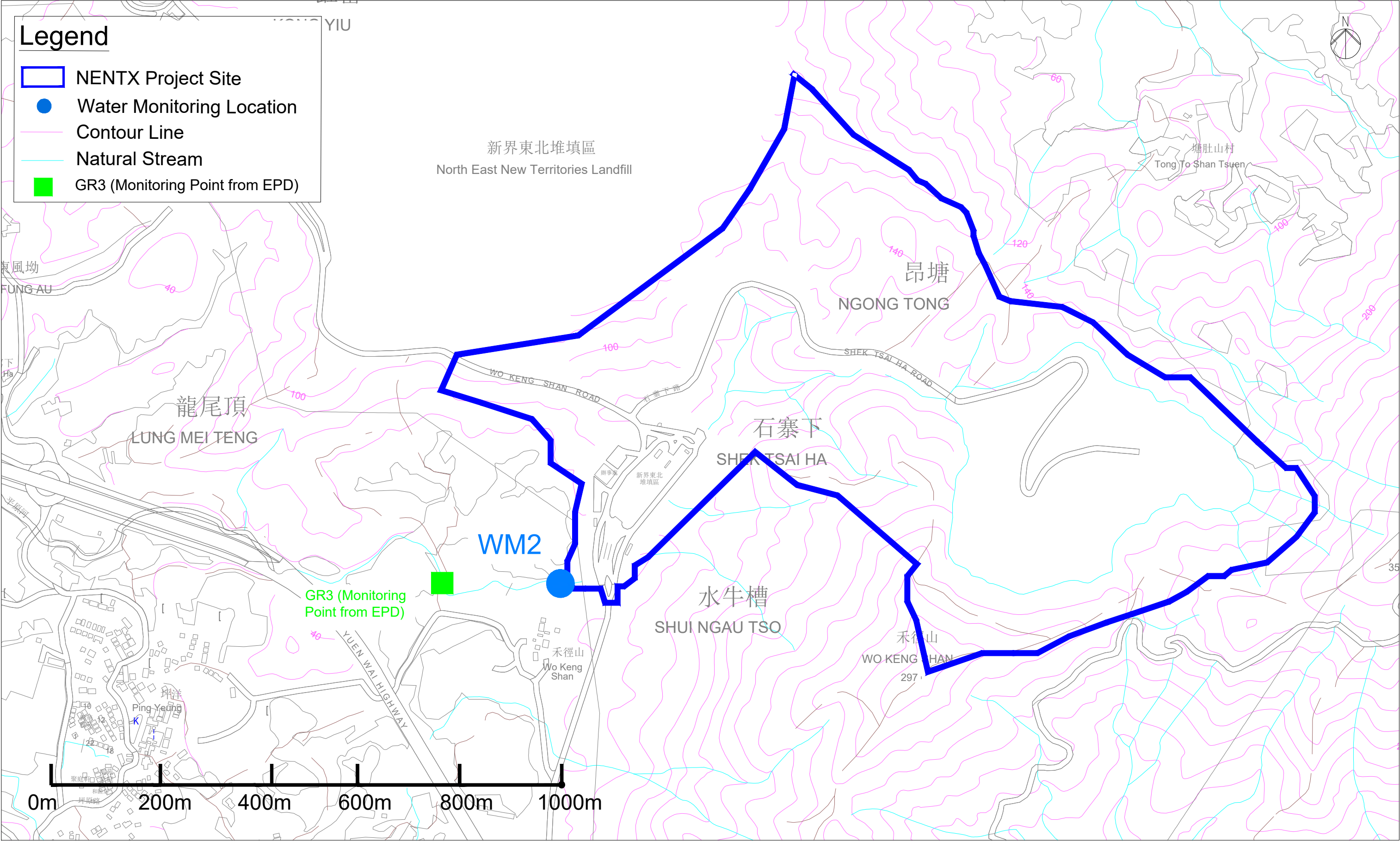
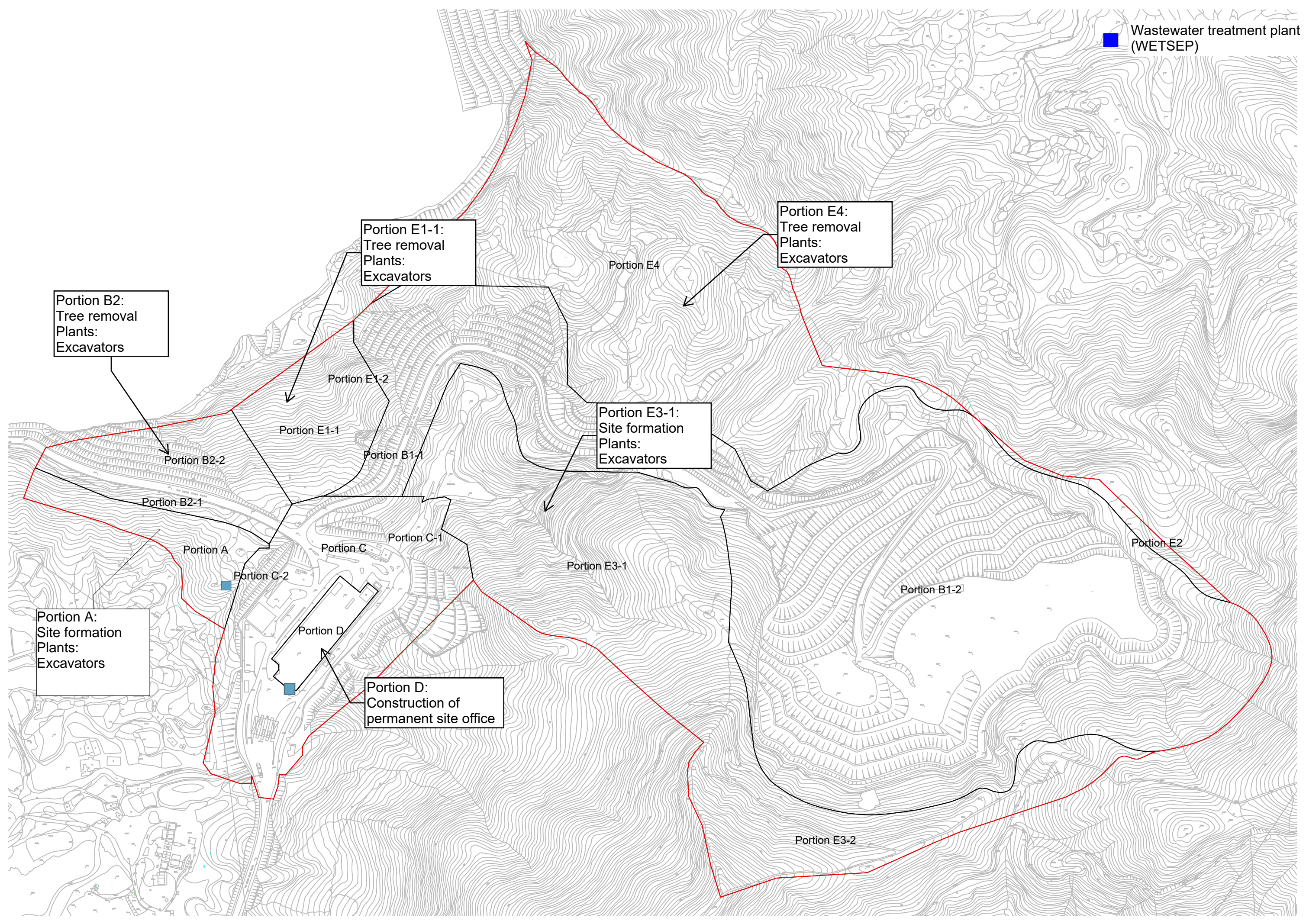


Figure 2

Layout Plan of Construction Activities on 11 September 2023



Wastewater treatment plant (WETSEP)

Portion E4:
Tree removal
Plants:
Excavators

Portion E4

Portion E3-1:
Site formation
Plants:
Excavators

Portion E3-1

Portion E3-2

Portion E2

Portion B1-2

Portion E1-1:
Tree removal
Plants:
Excavators

Portion E1-2

Portion E1-1

Portion B1-1

Portion B2:
Tree removal
Plants:
Excavators

Portion B2-2

Portion B2-1

Portion A

Portion C-2

Portion C

Portion C-1

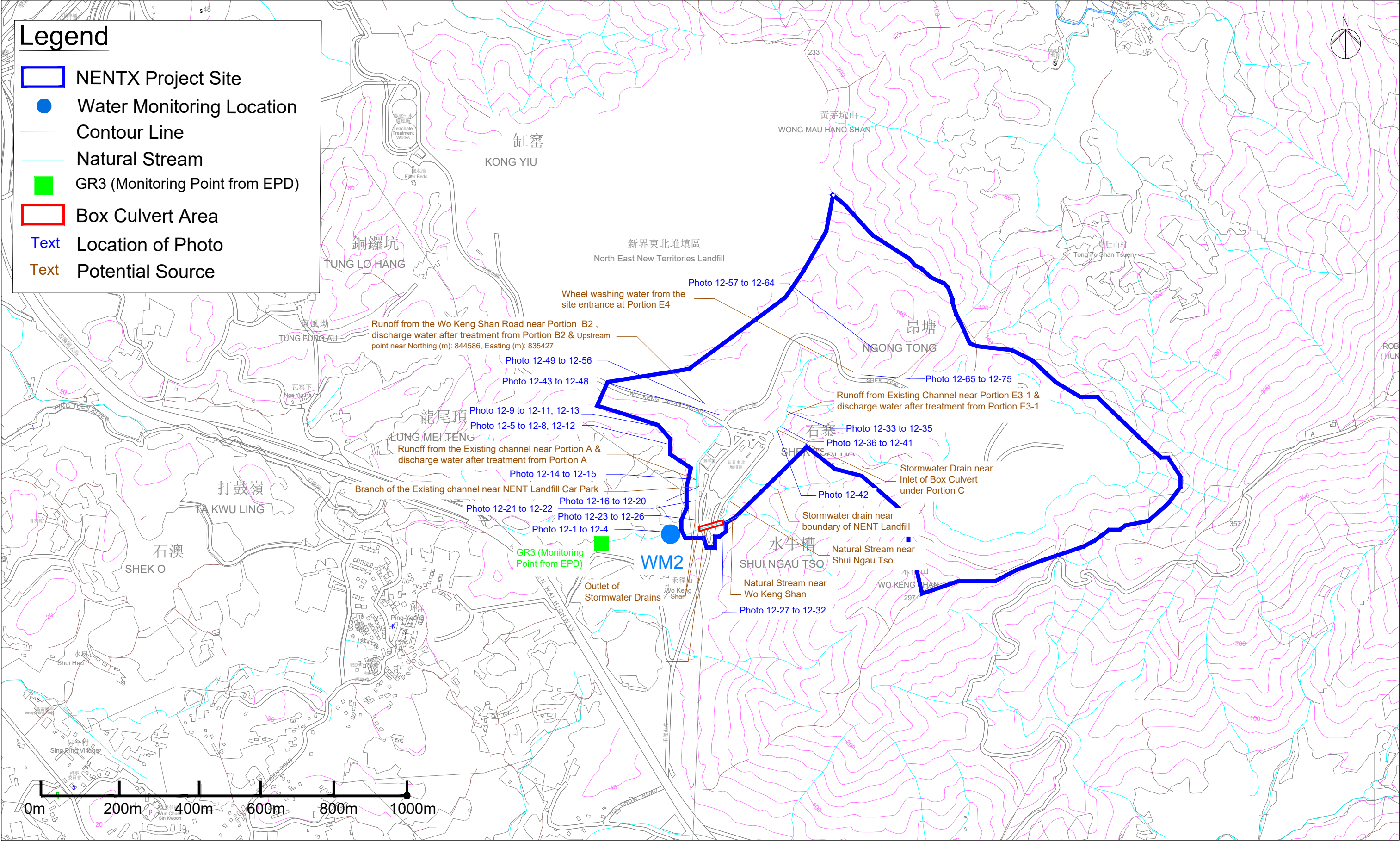
Portion D

Portion D:
Construction of
permanent site office

Portion A:
Site formation
Plants:
Excavators

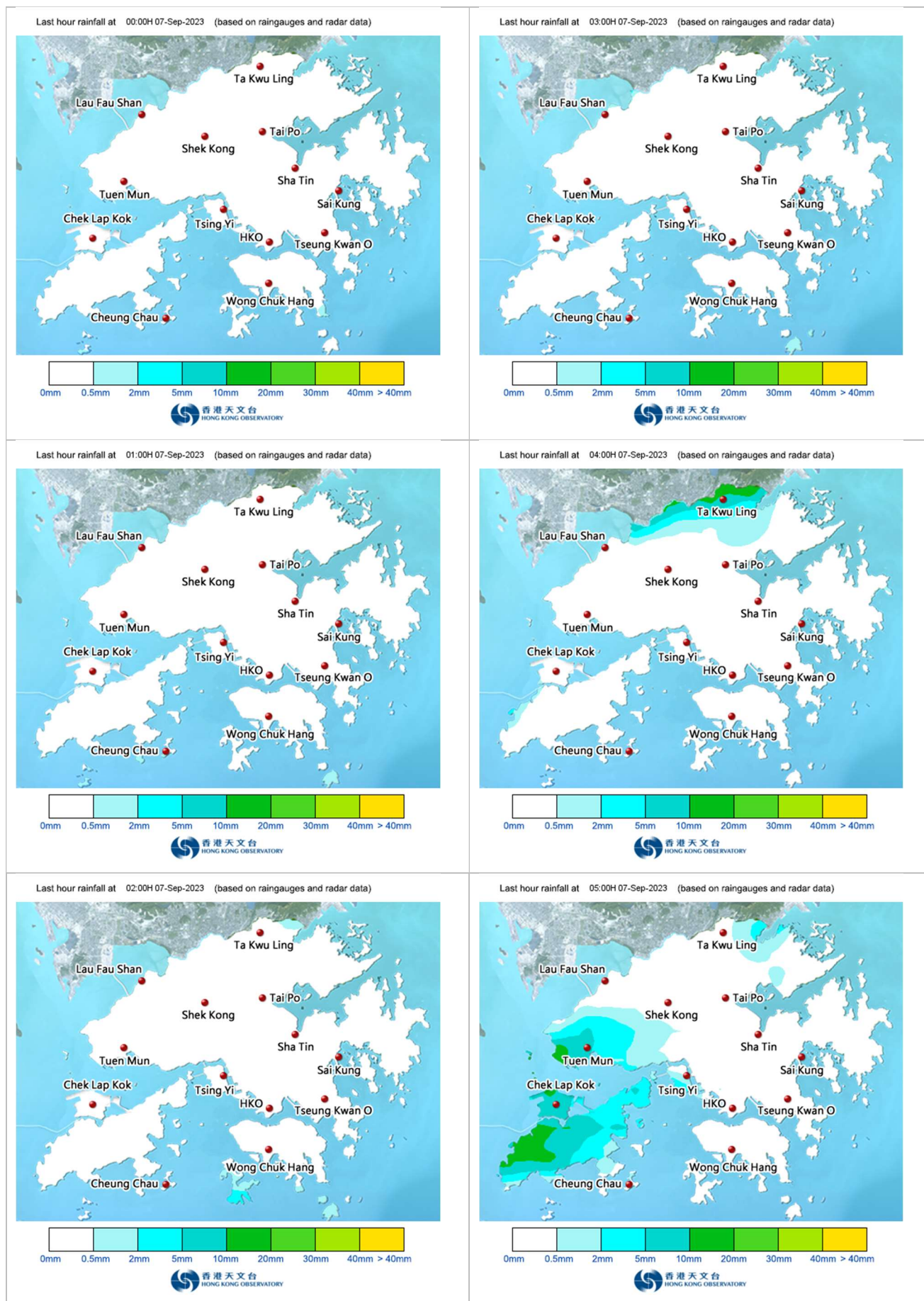
Figure 3

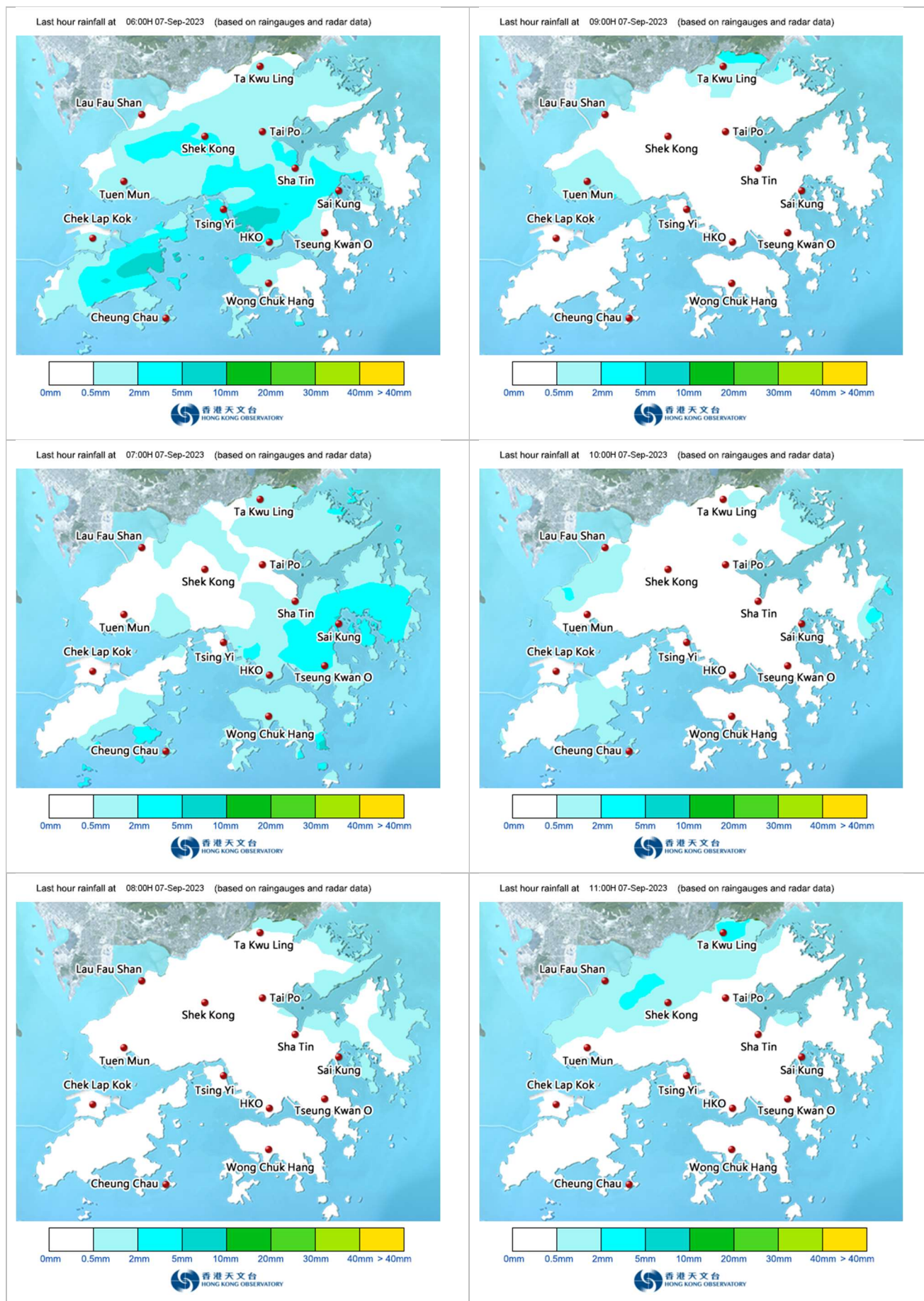
Layout Plan of Location of Photo Record and Potential Sources

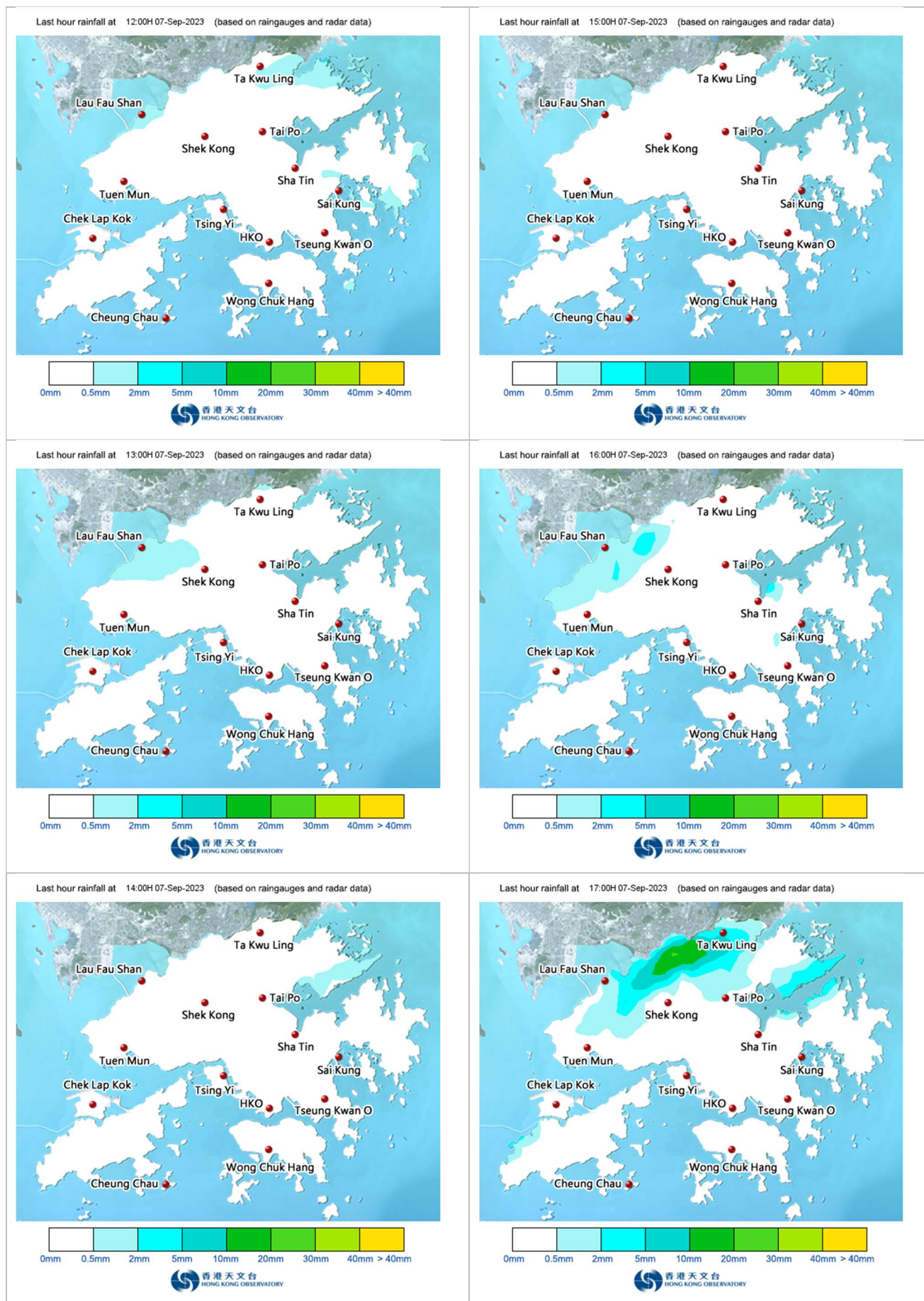


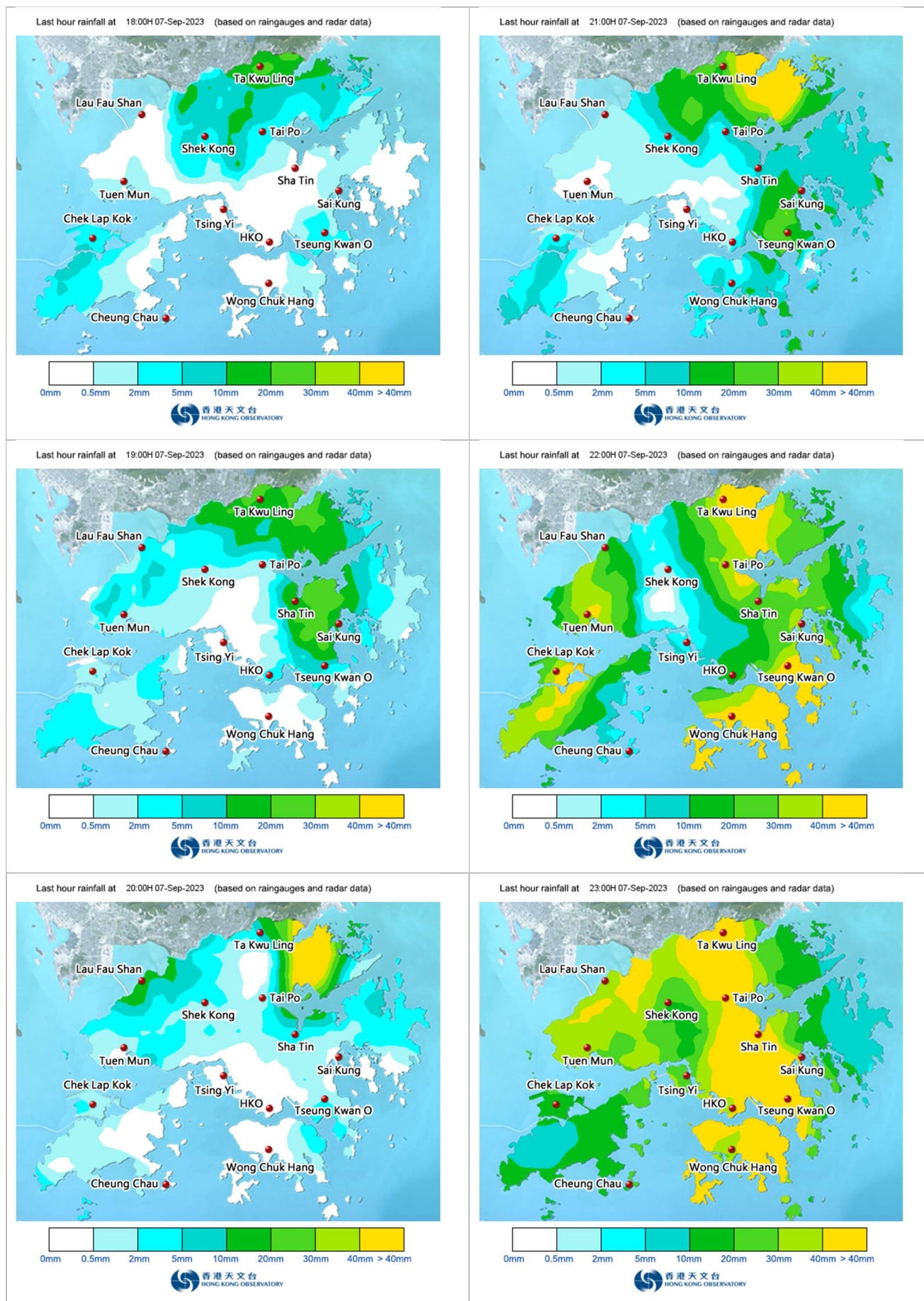
Appendix A

Daily Rainfall Distribution from HKO

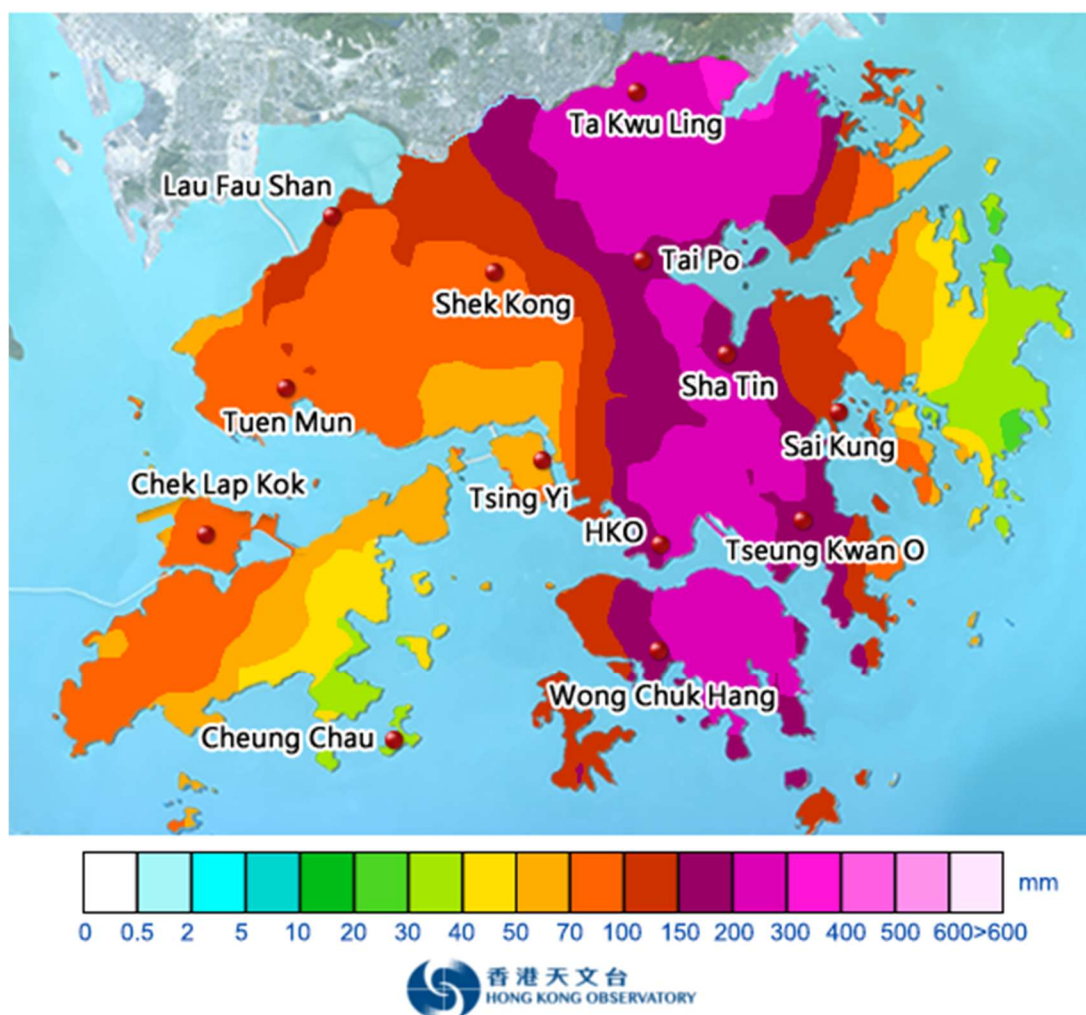


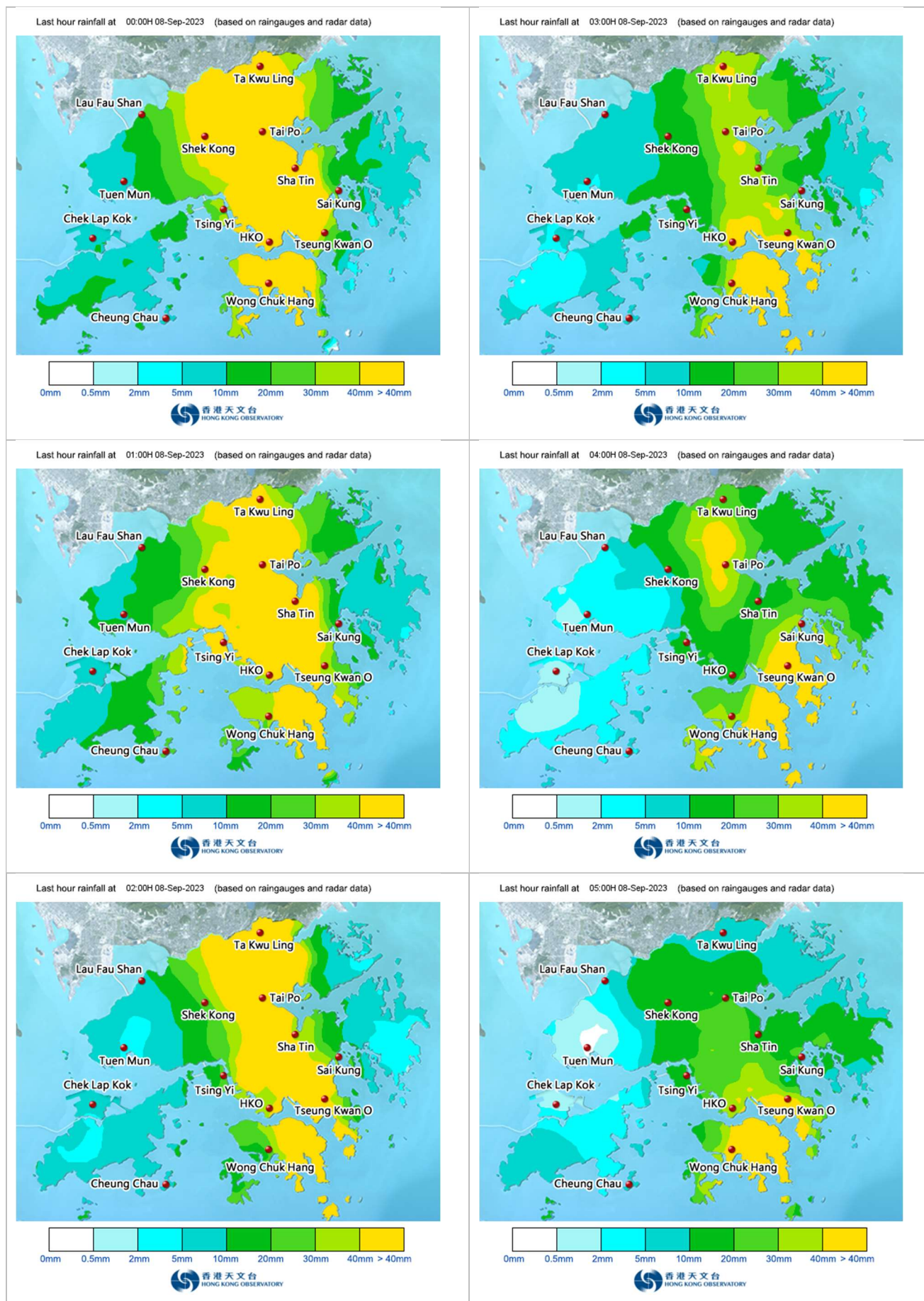


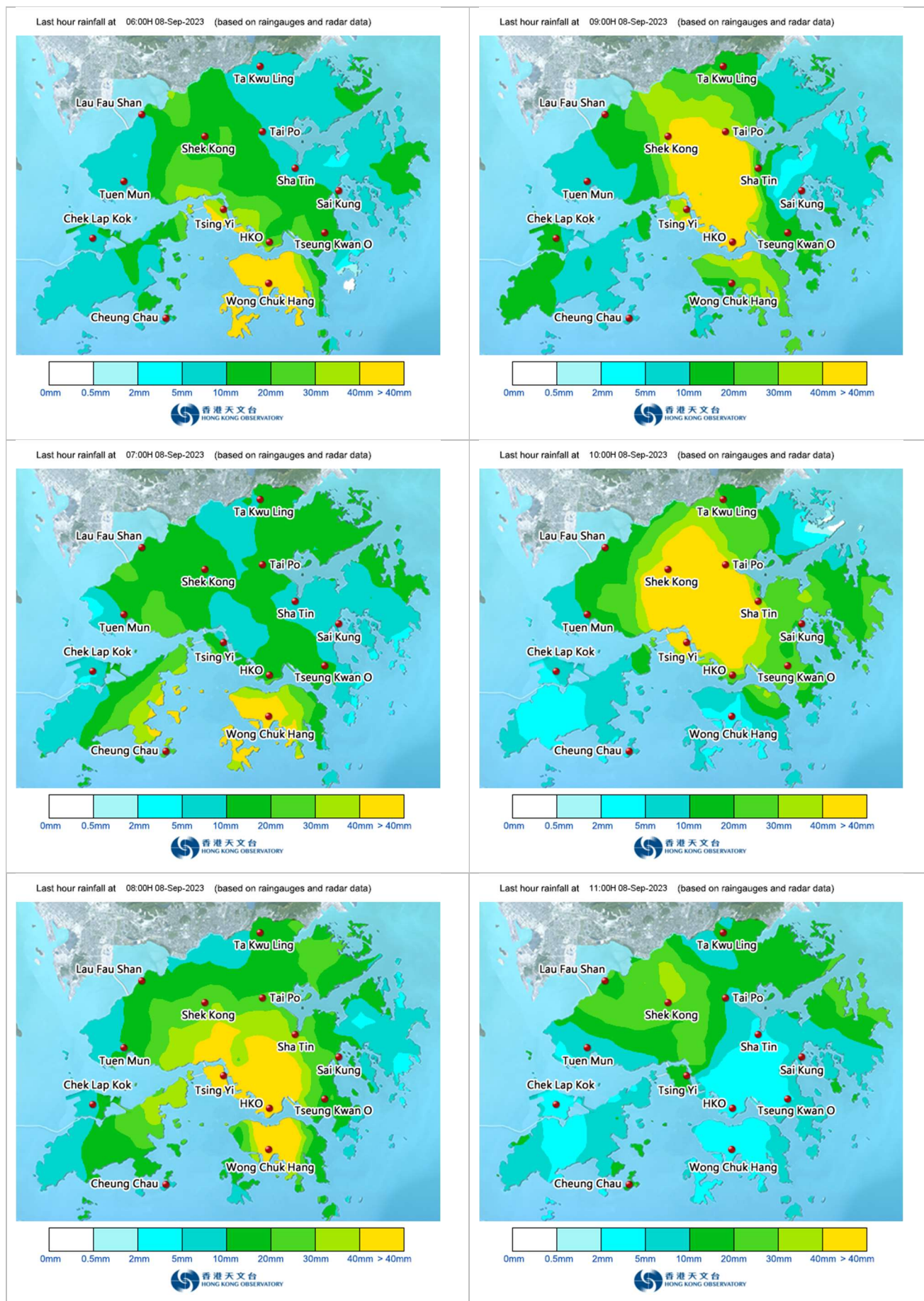


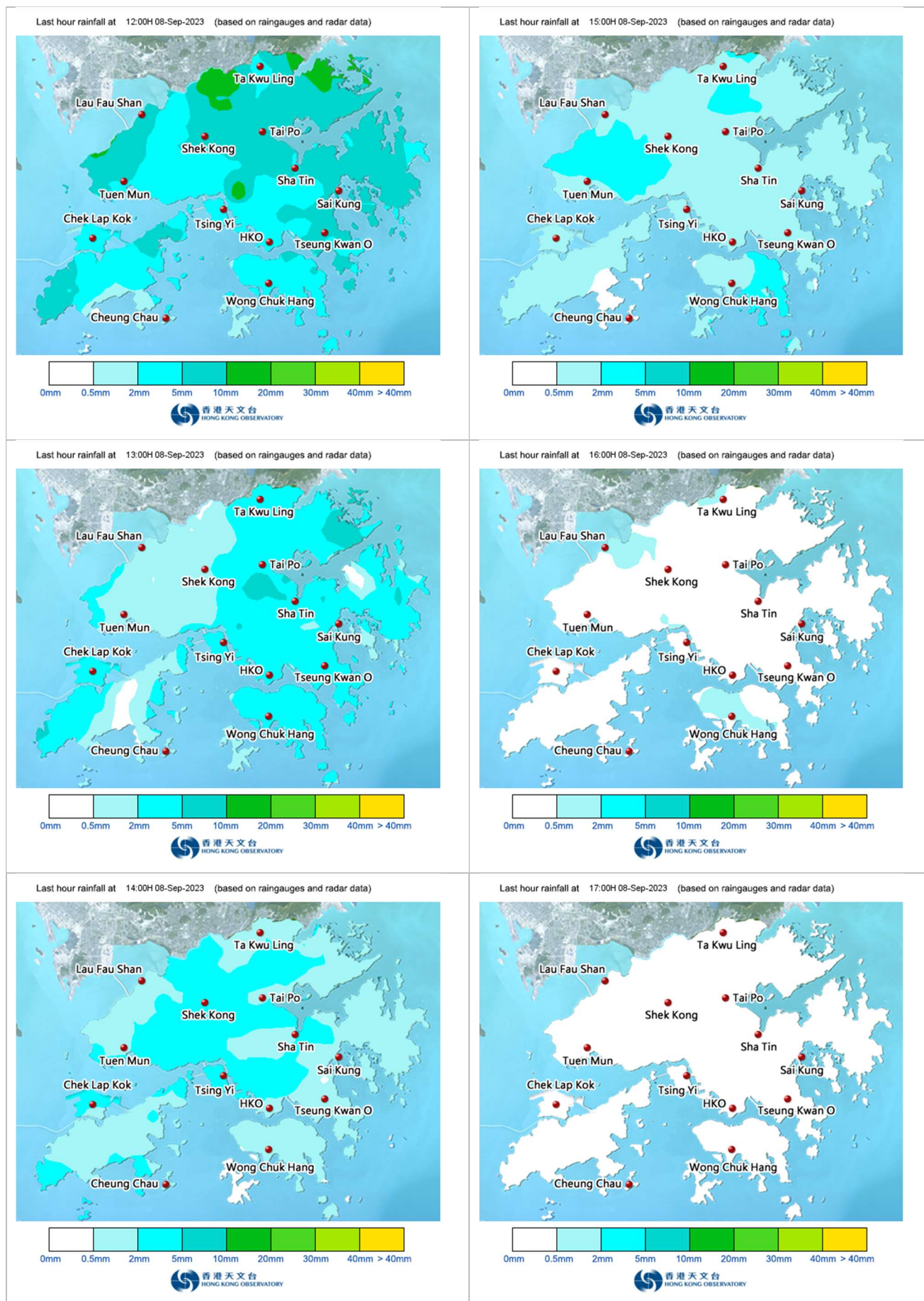


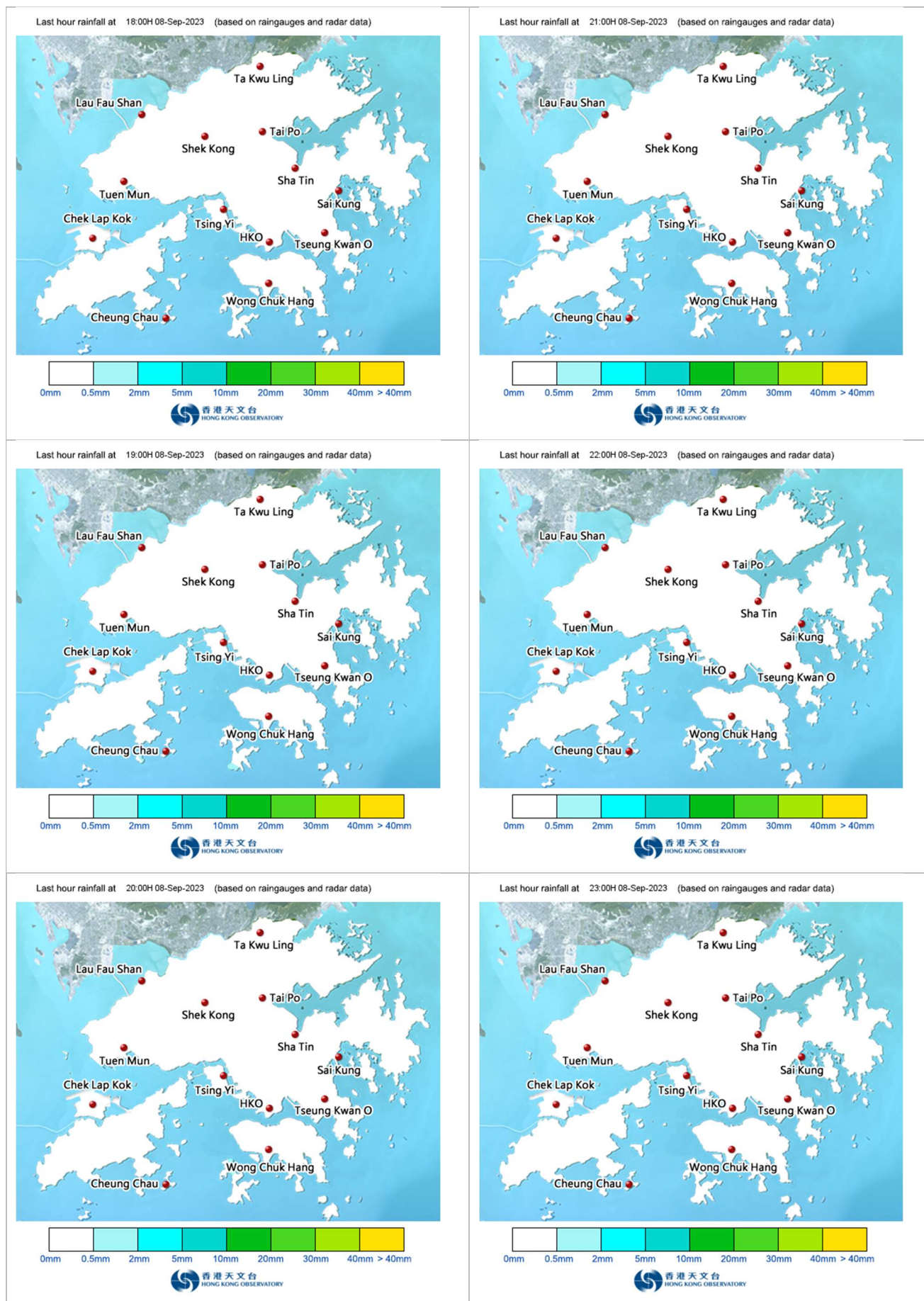
Total rainfall on 7-Sep-2023 (based on raingauges and radar data)



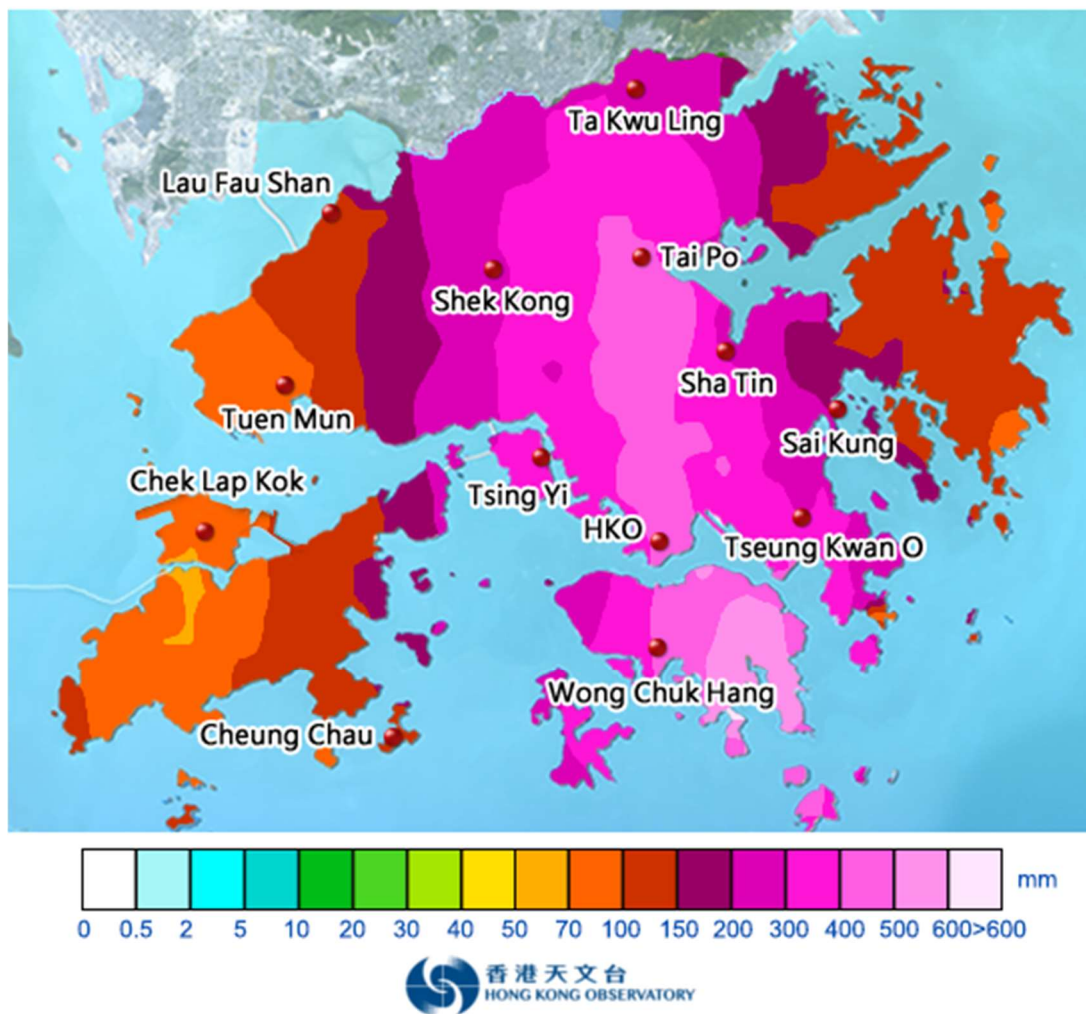


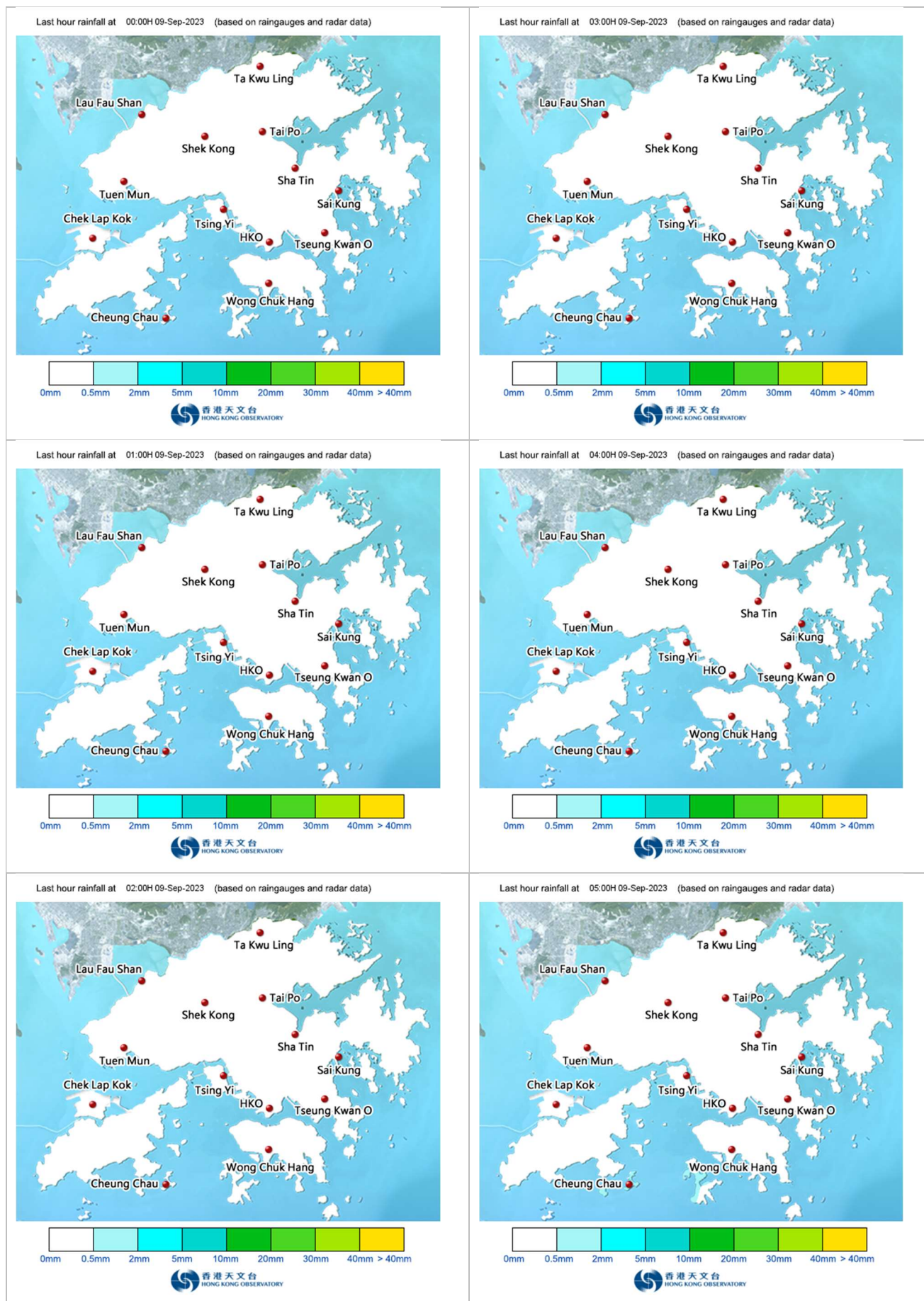


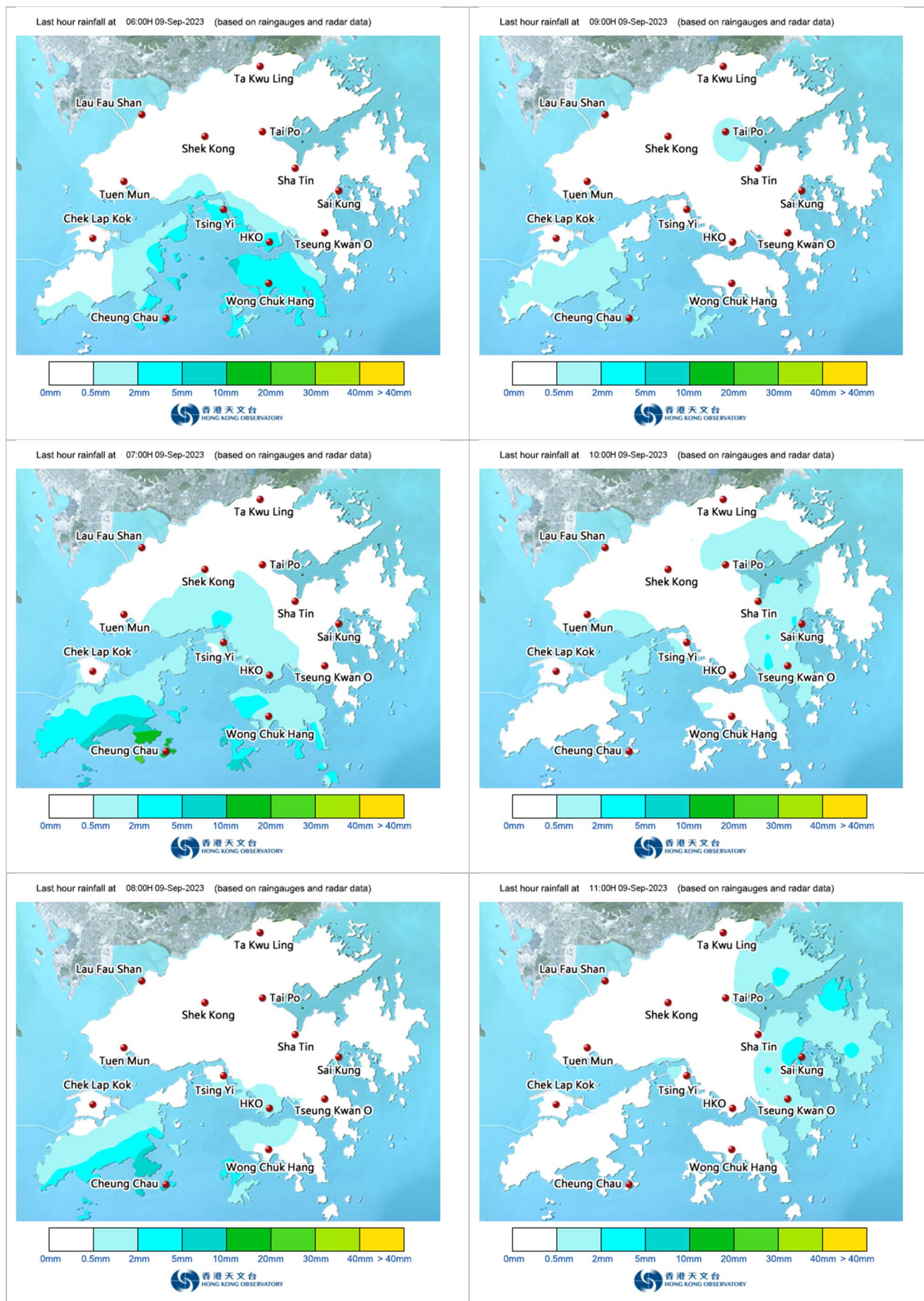


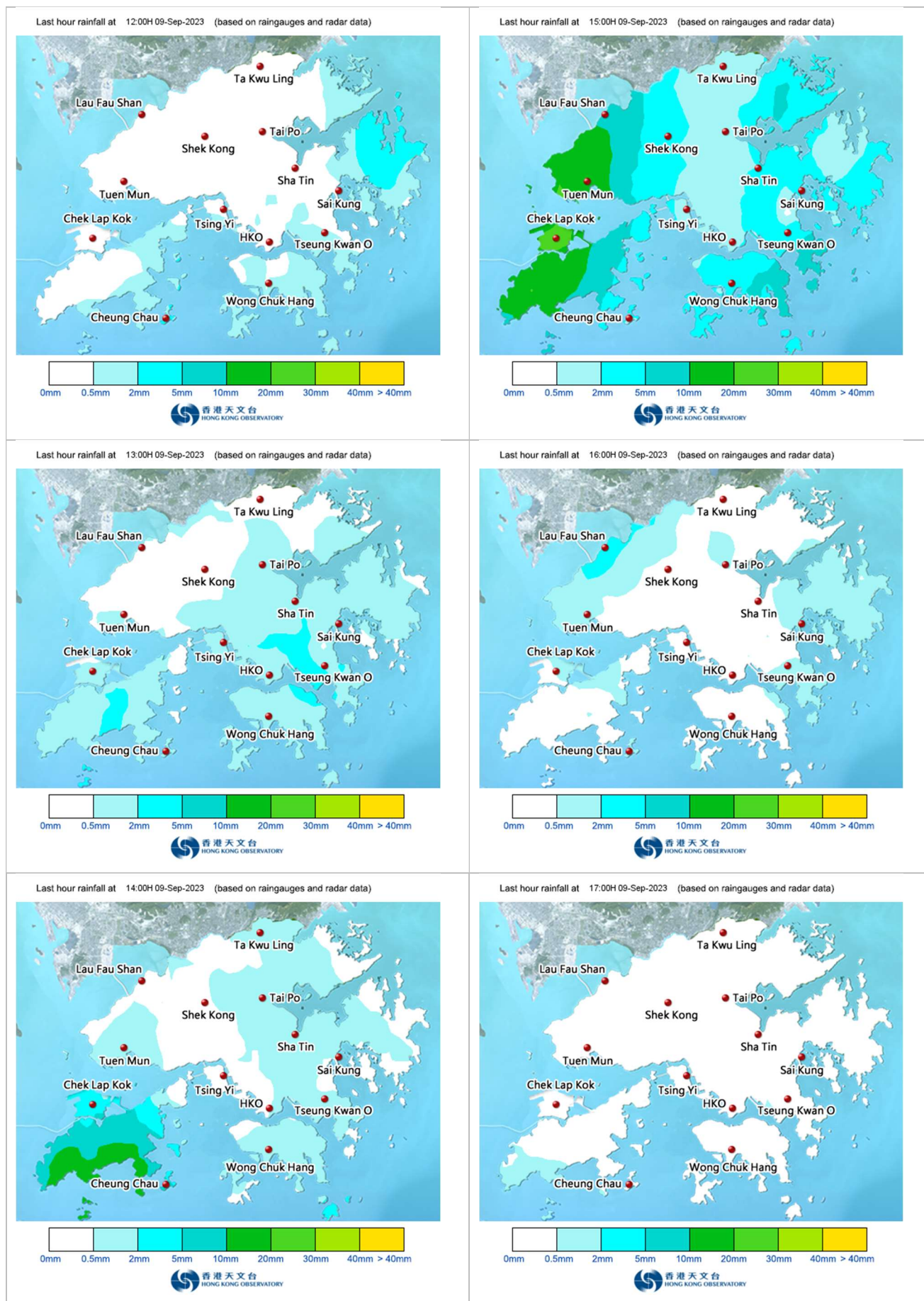


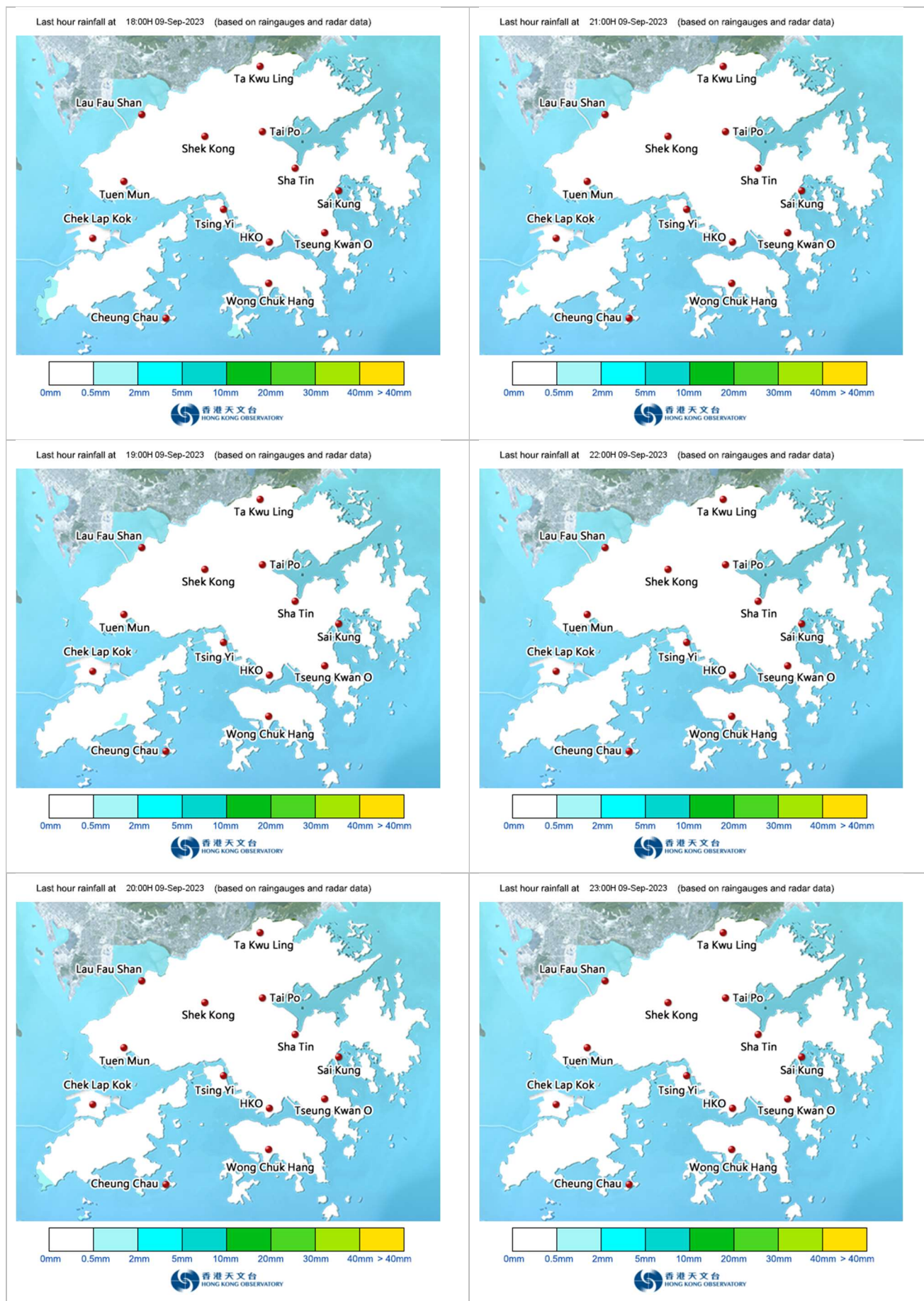
Total rainfall on 8-Sep-2023 (based on raingauges and radar data)



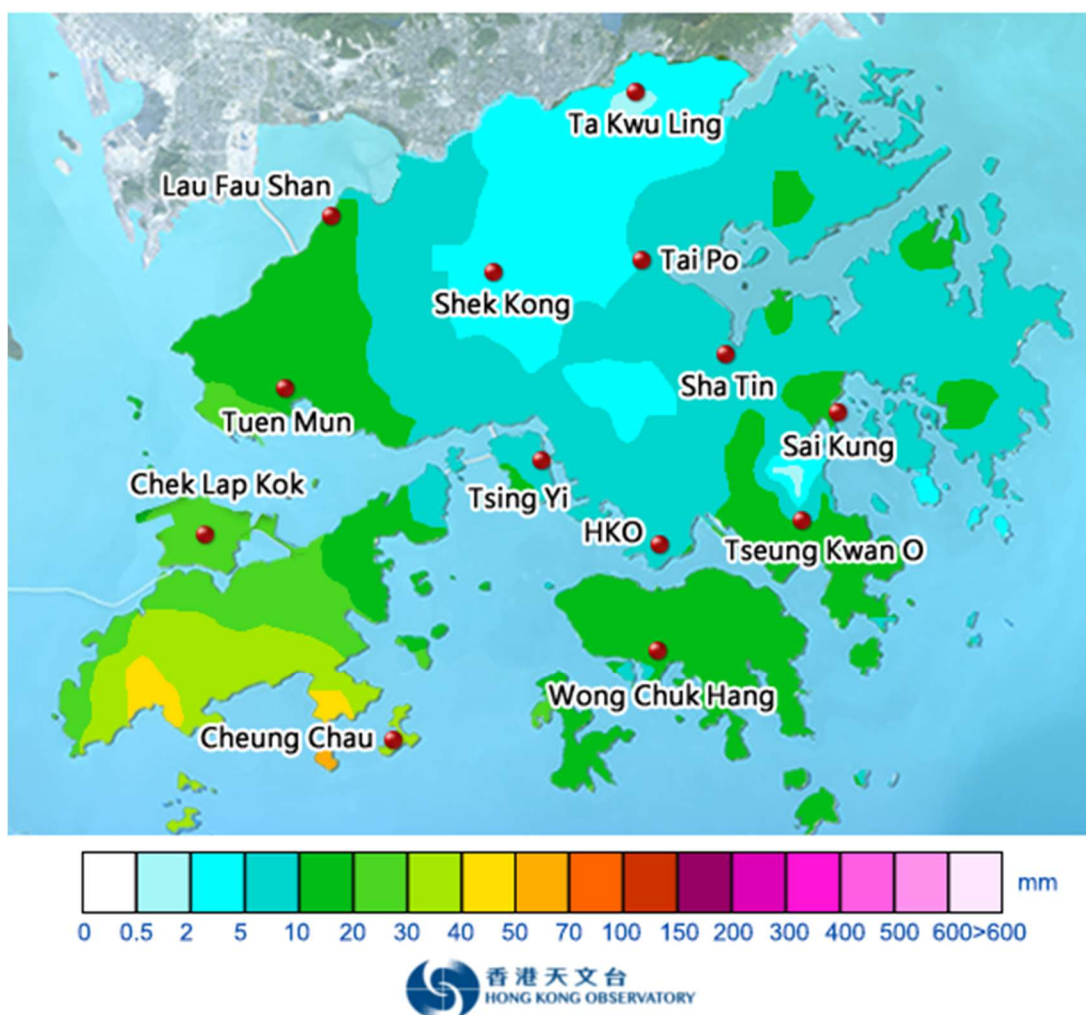


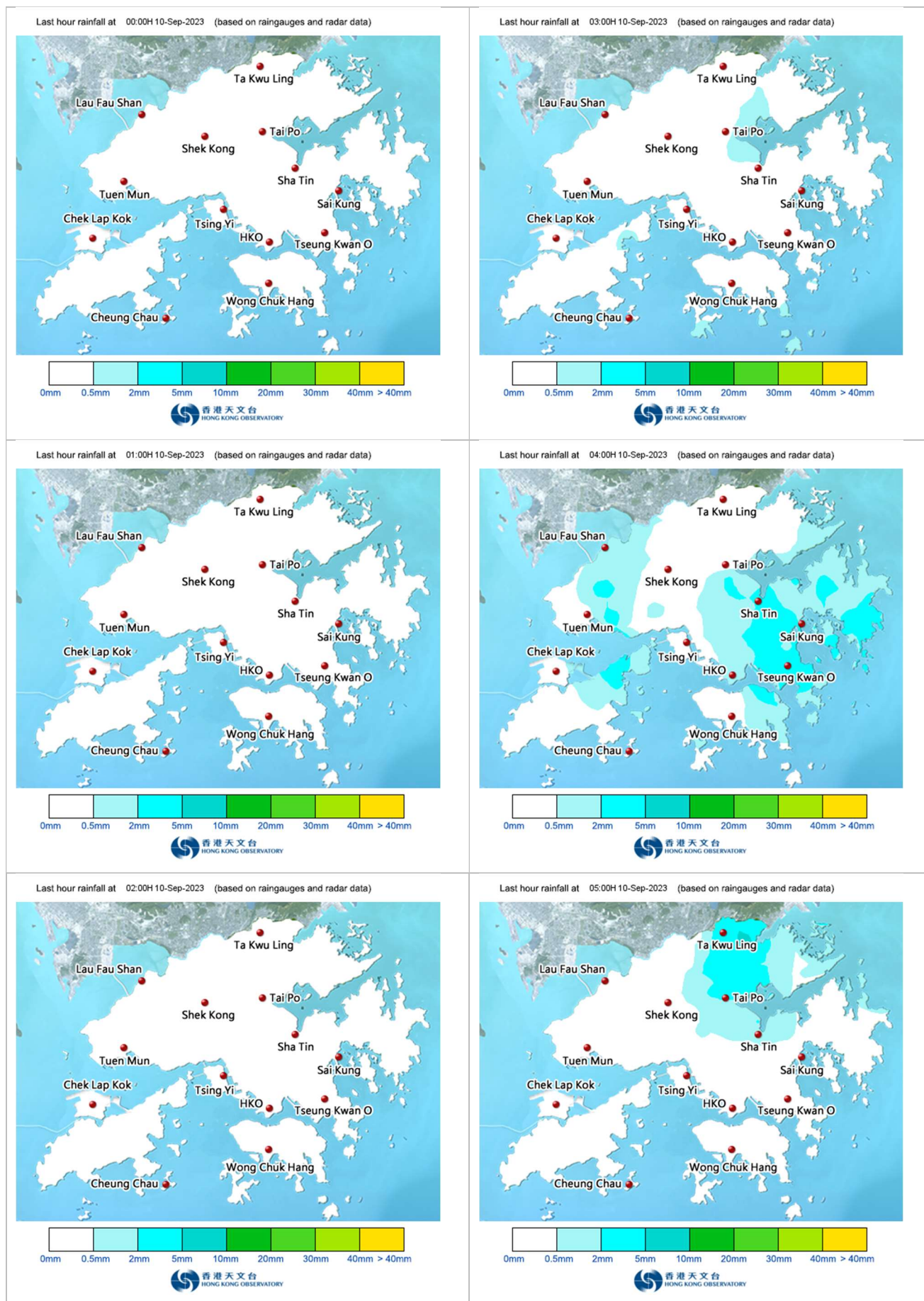


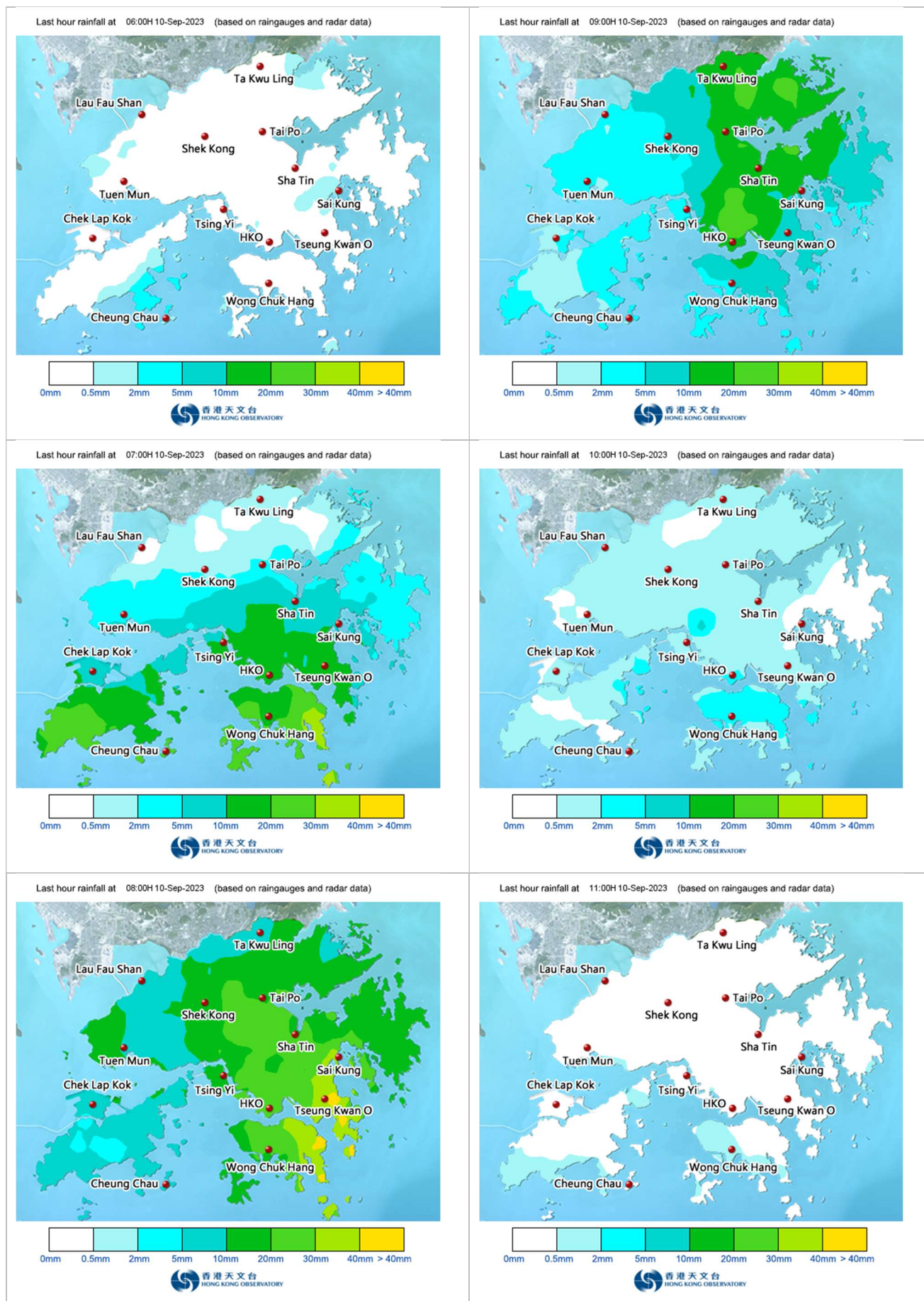


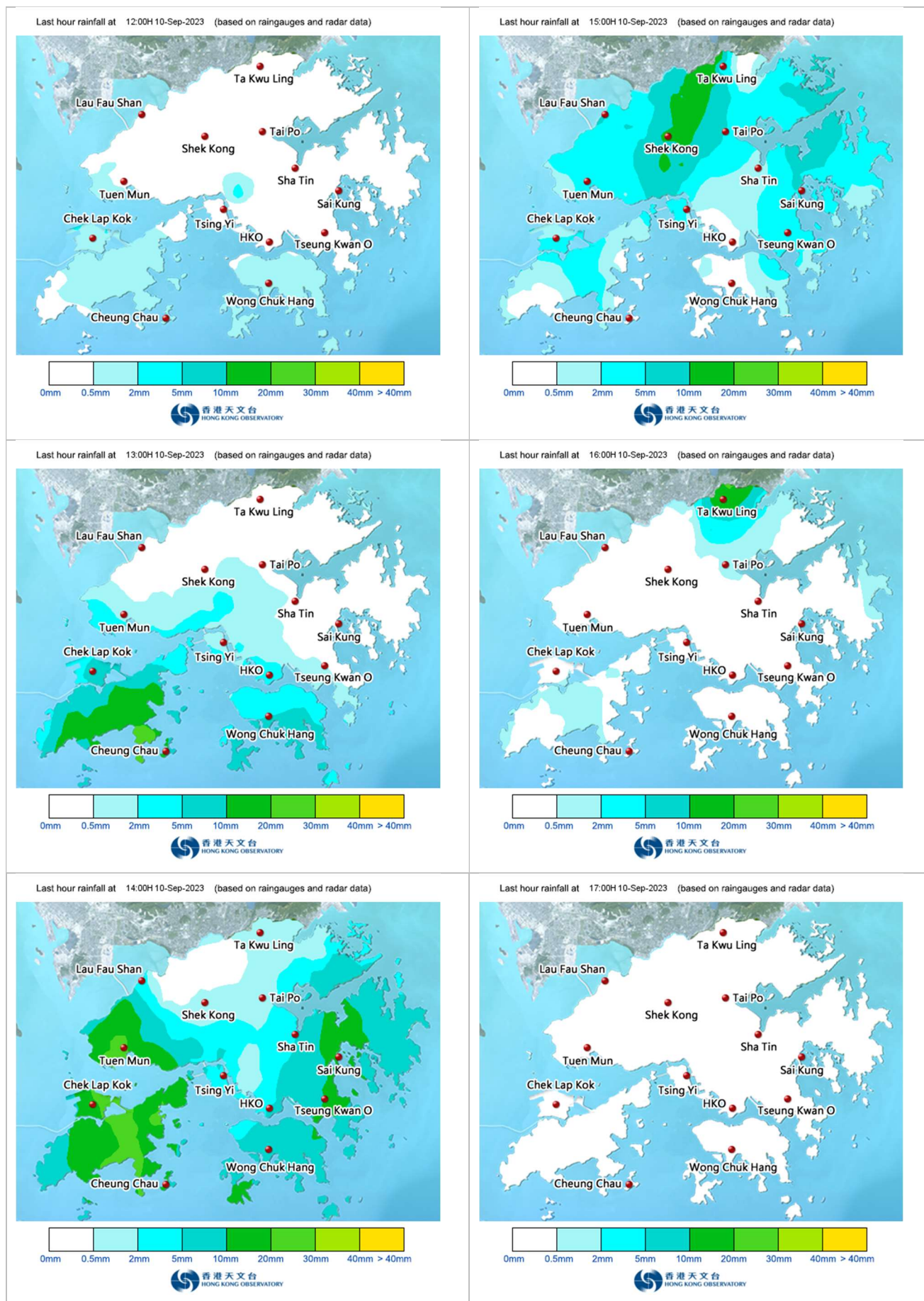


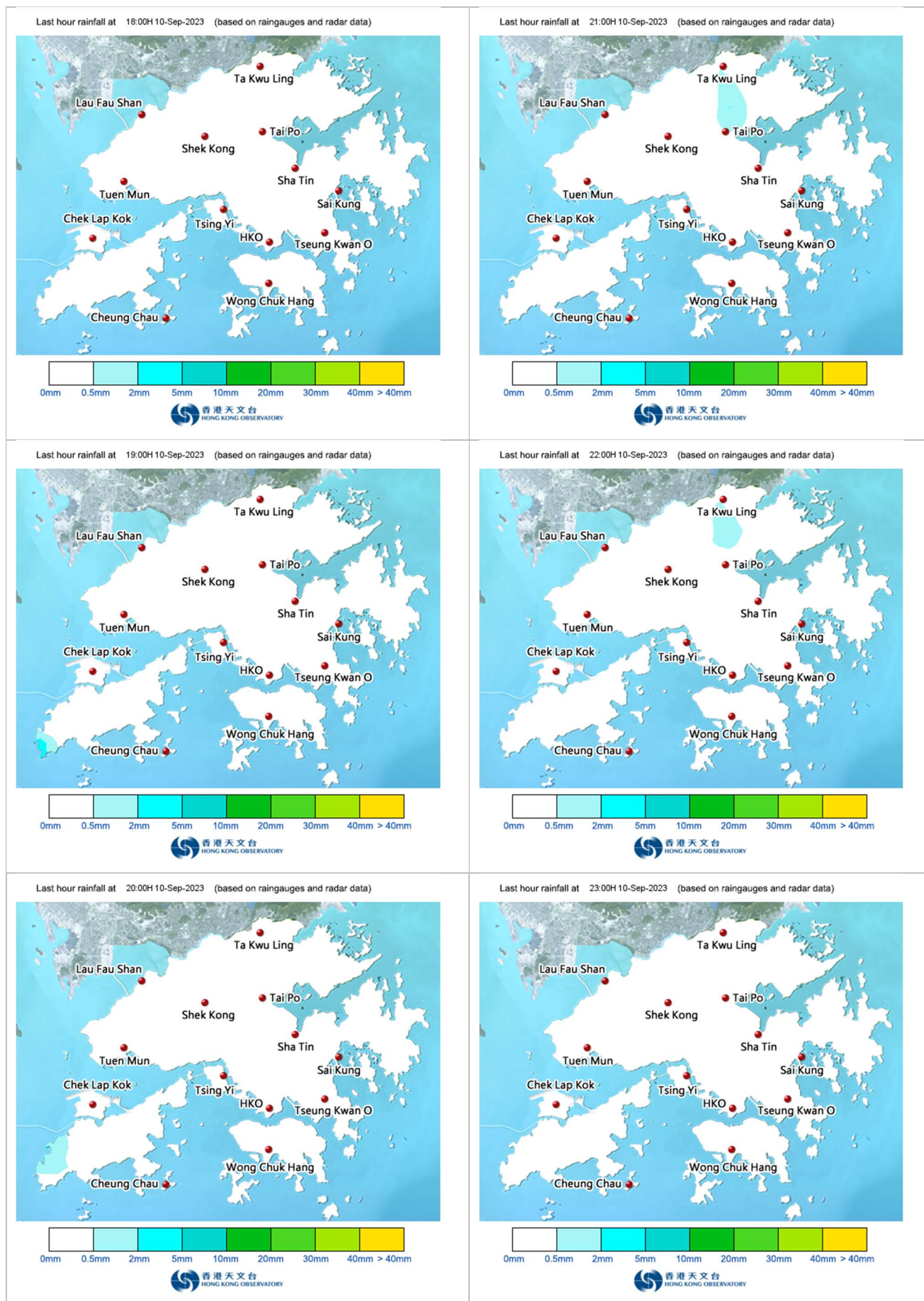
Total rainfall on 9-Sep-2023 (based on raingauges and radar data)



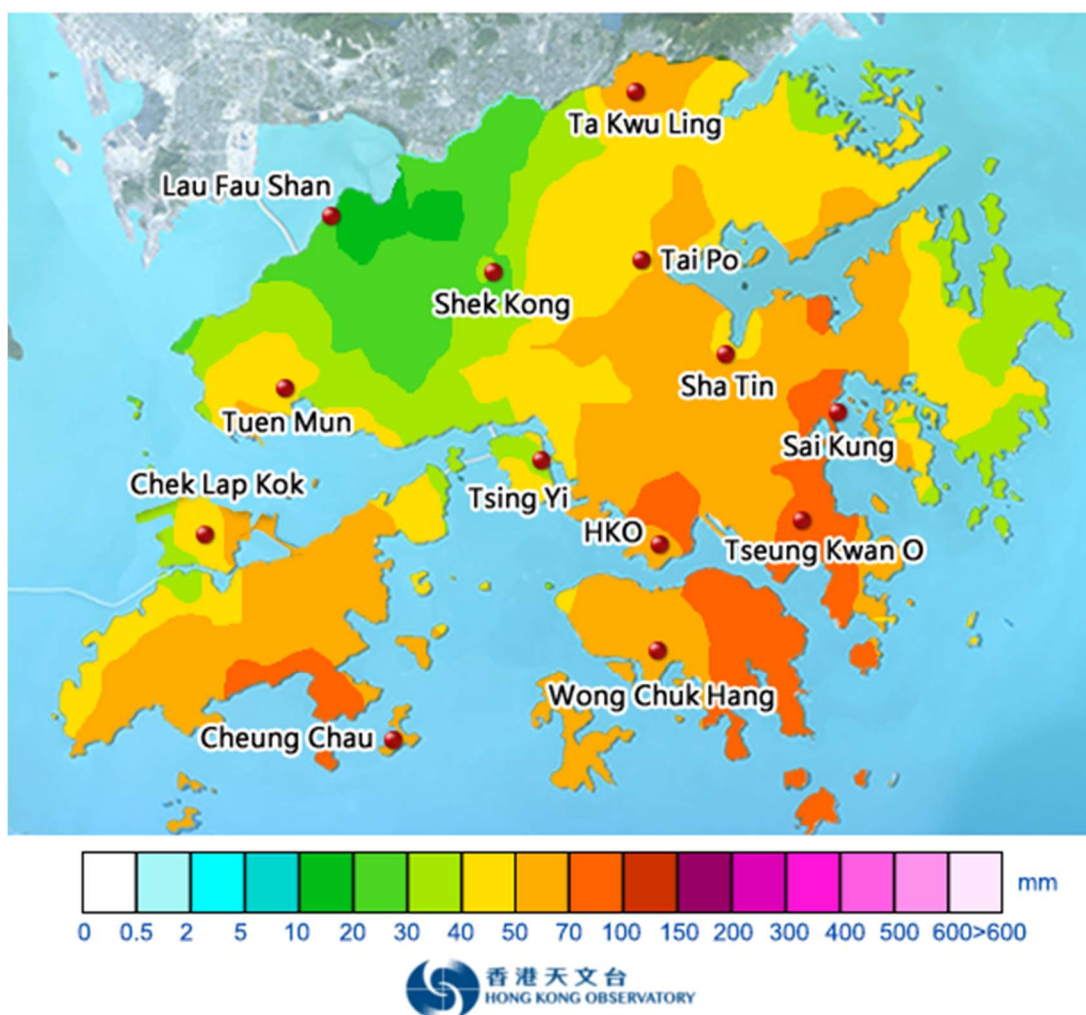


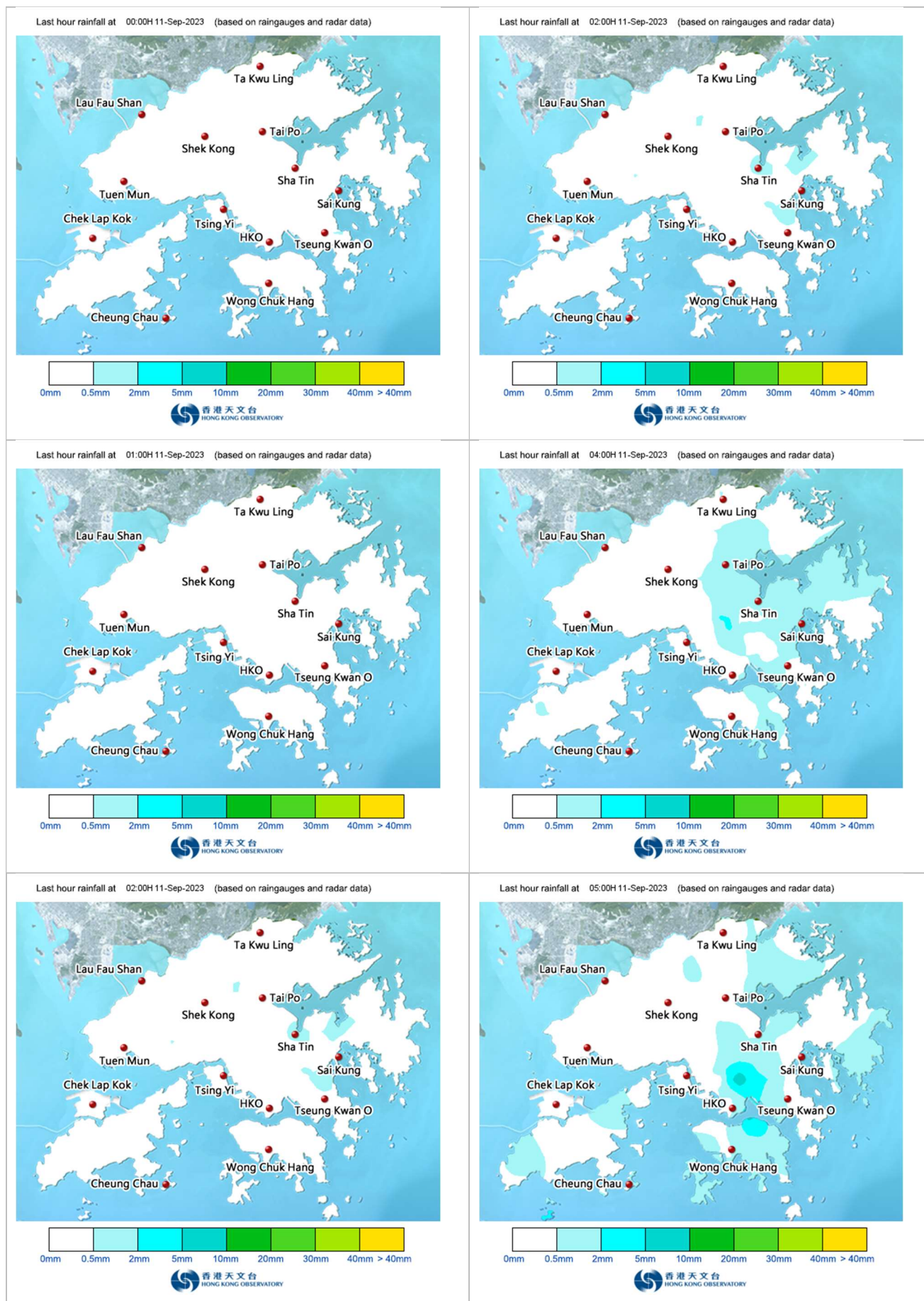


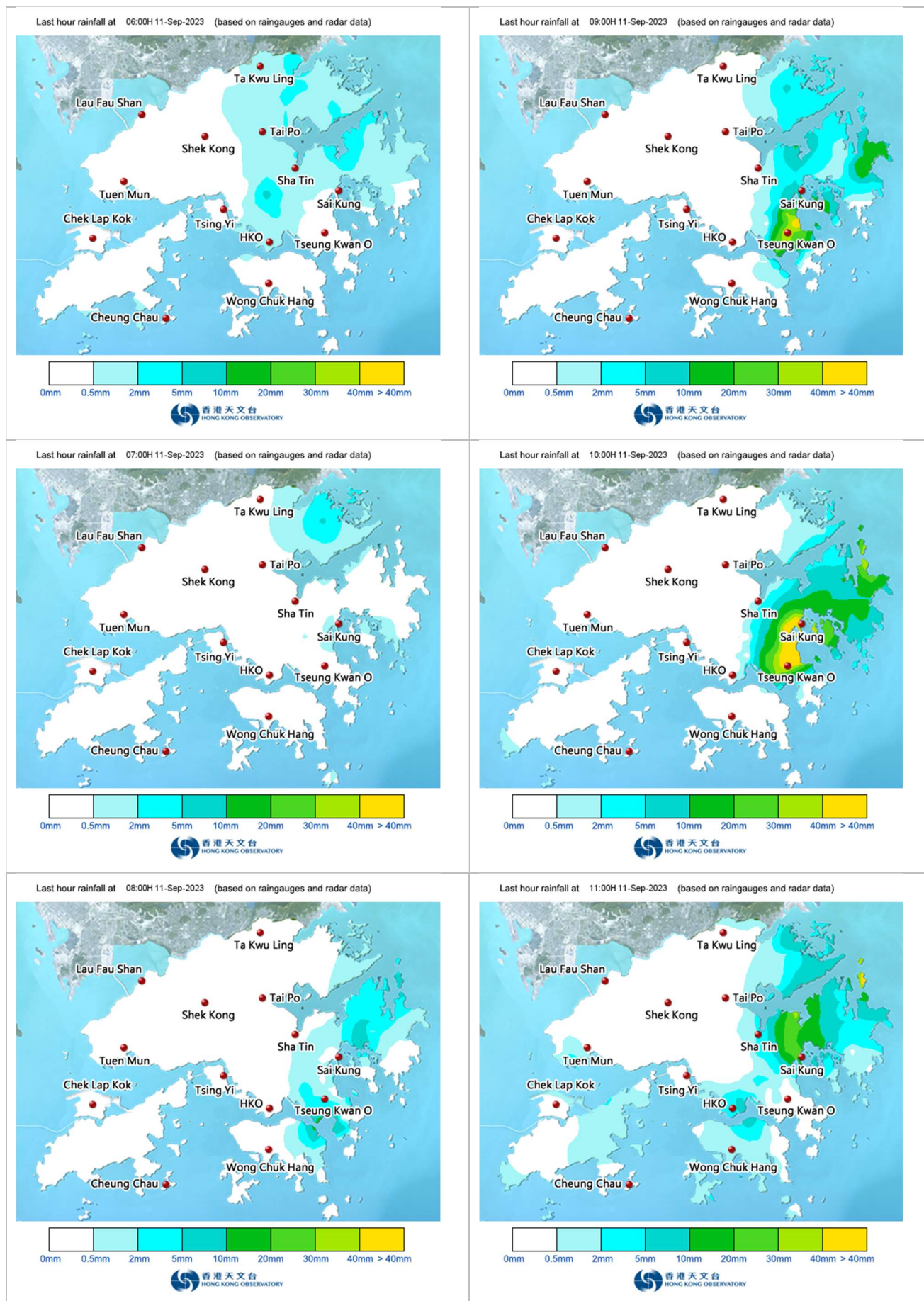


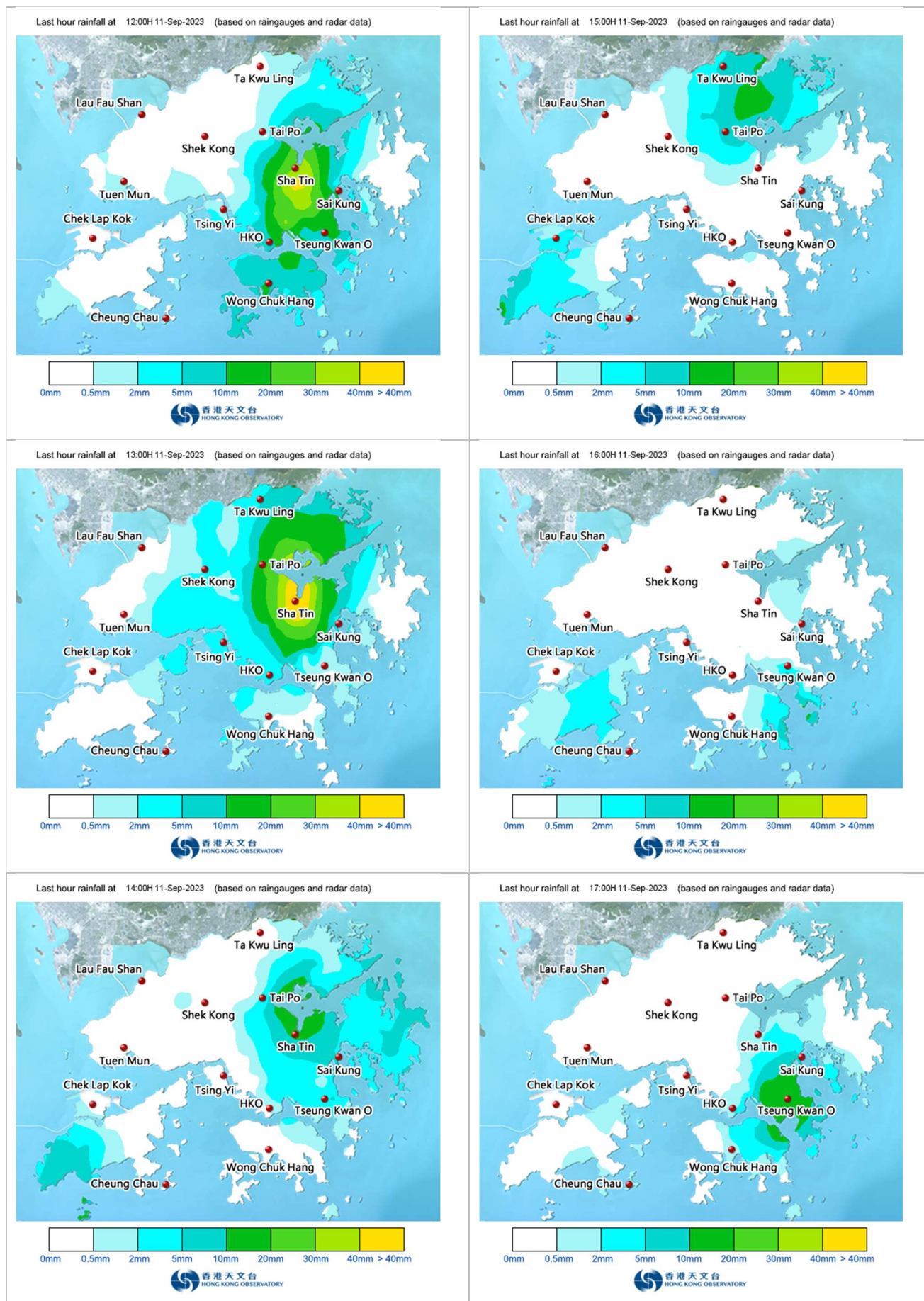


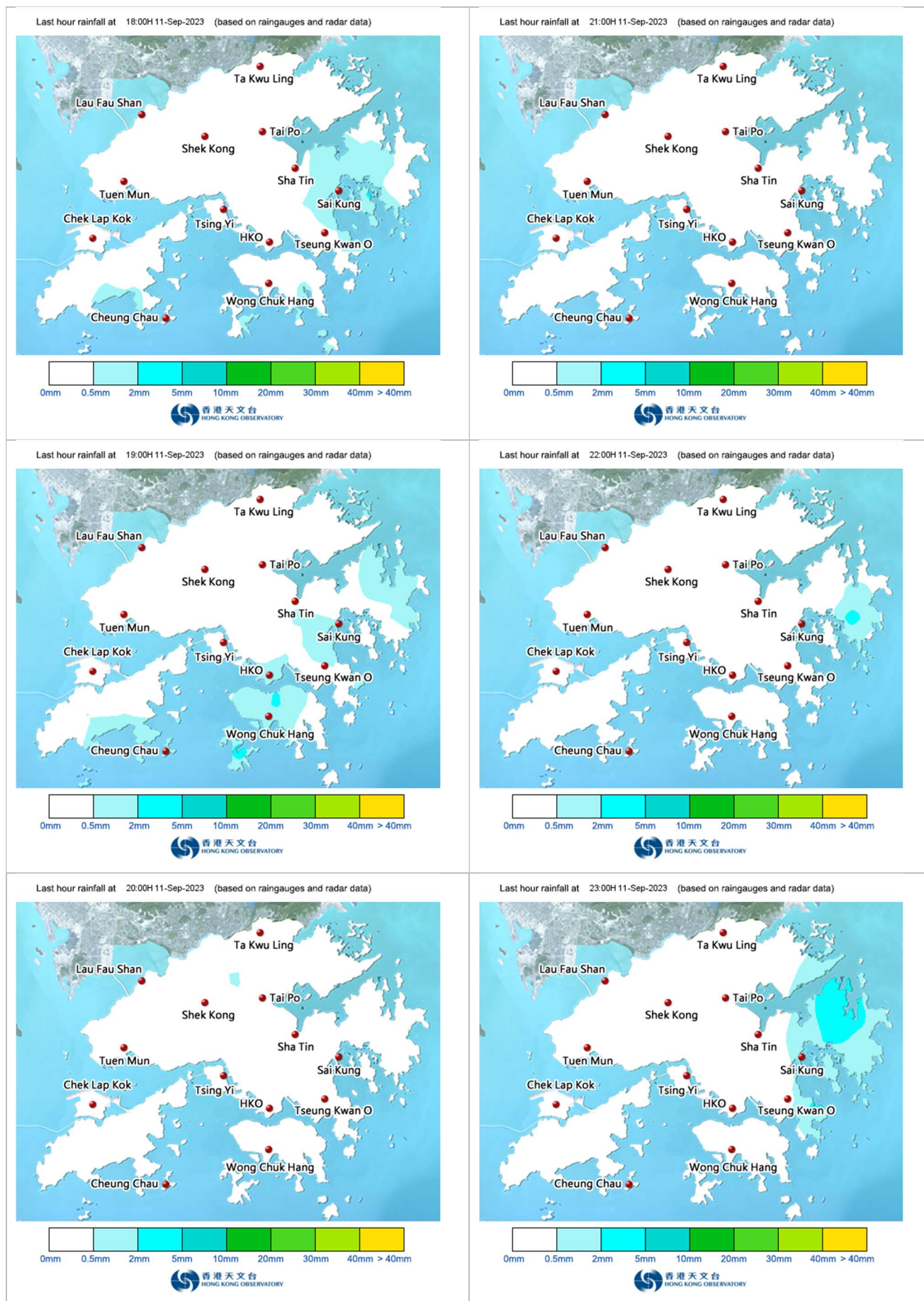
Total rainfall on 10-Sep-2023 (based on raingauges and radar data)



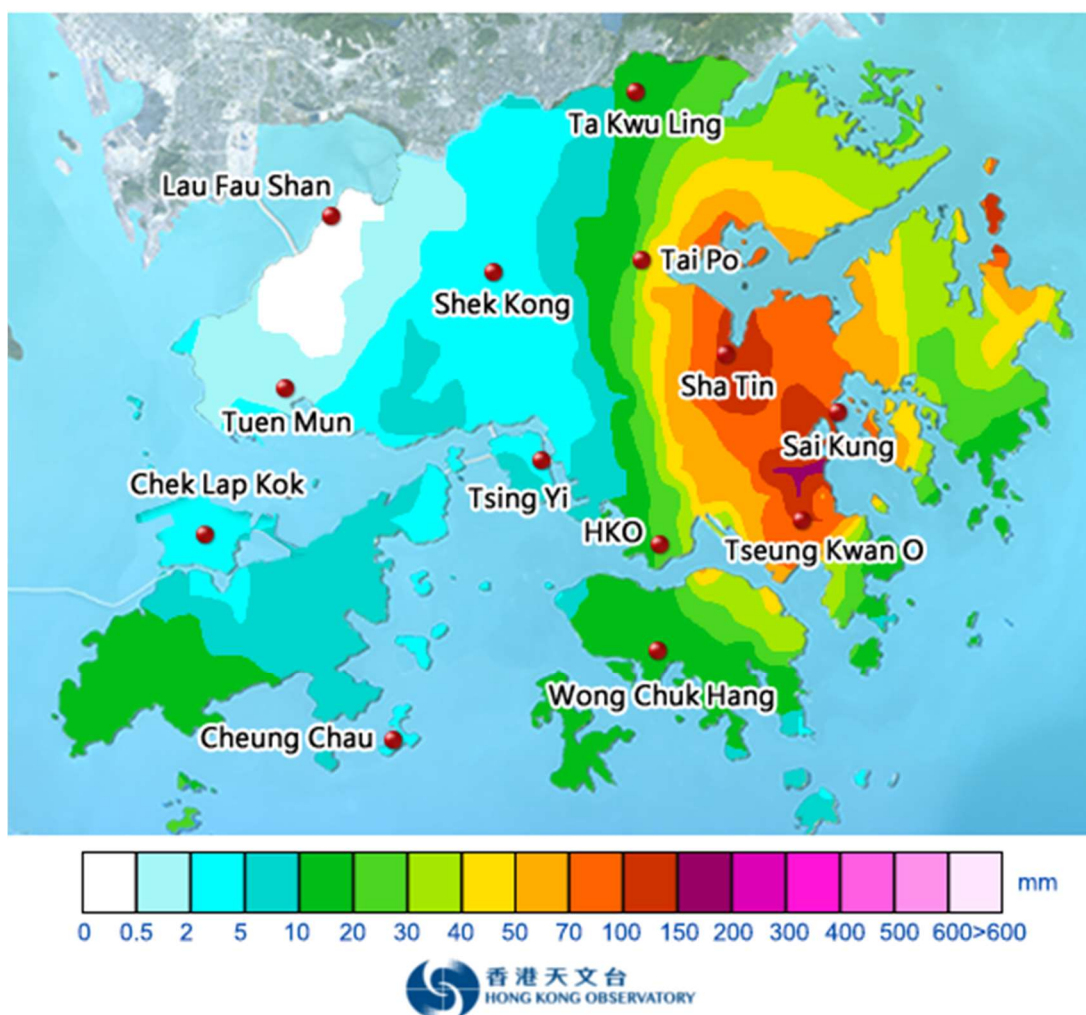




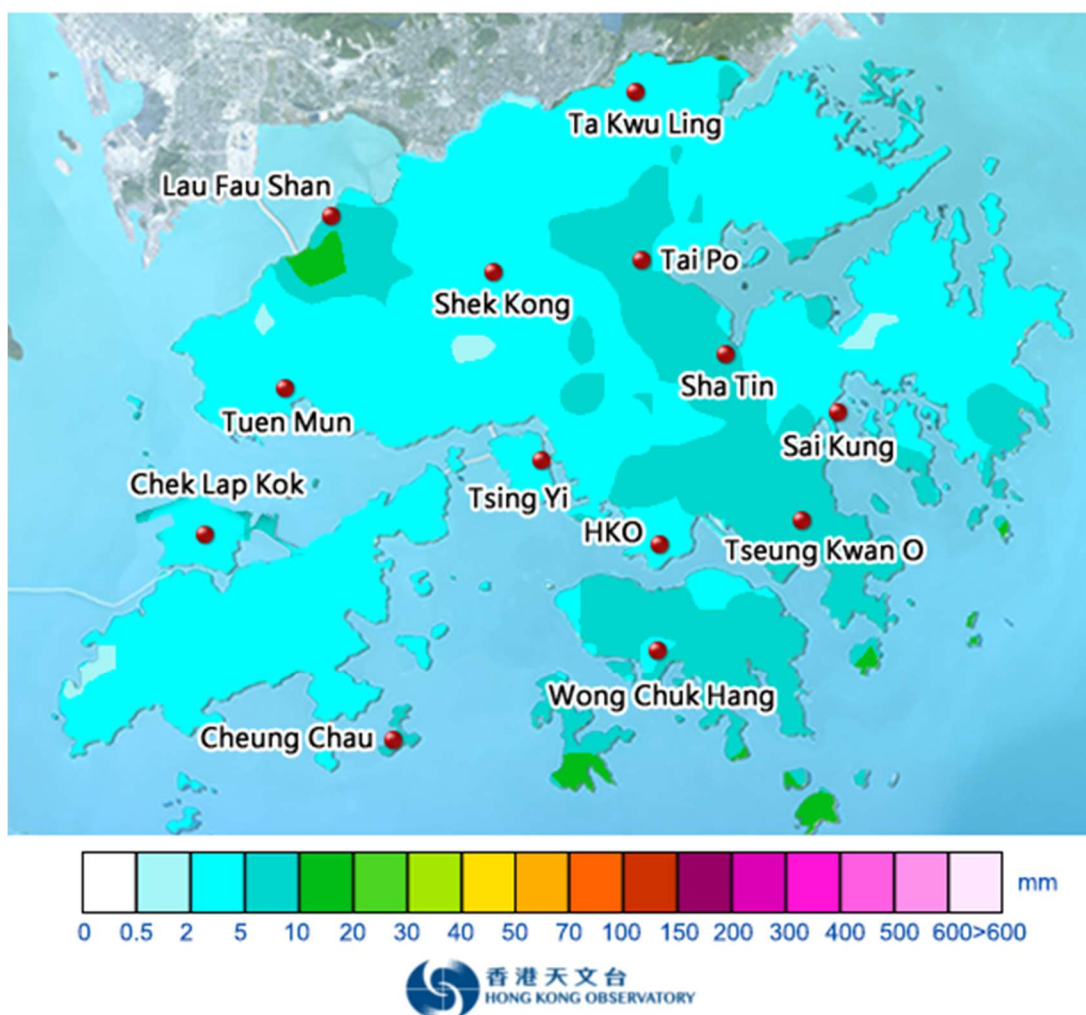




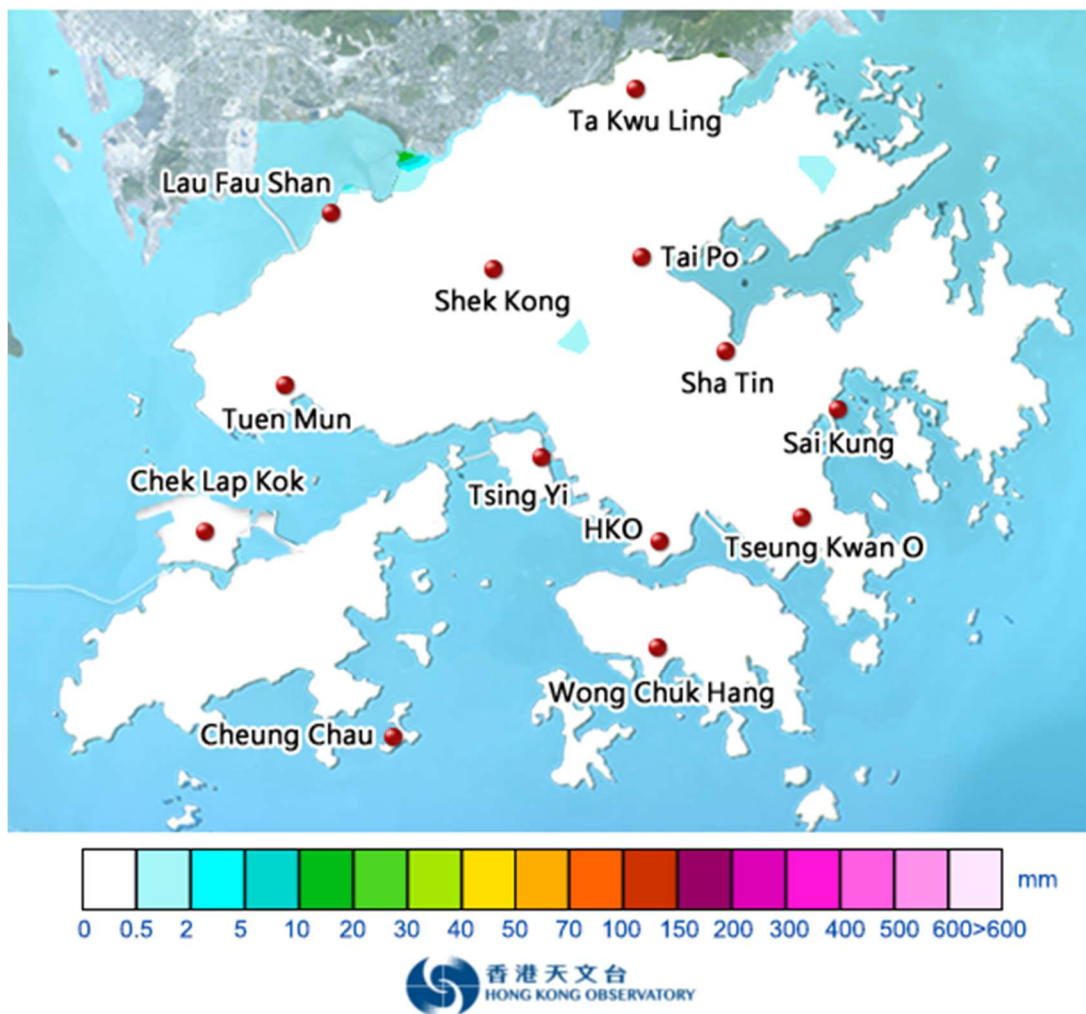
Total rainfall on 11-Sep-2023 (based on raingauges and radar data)



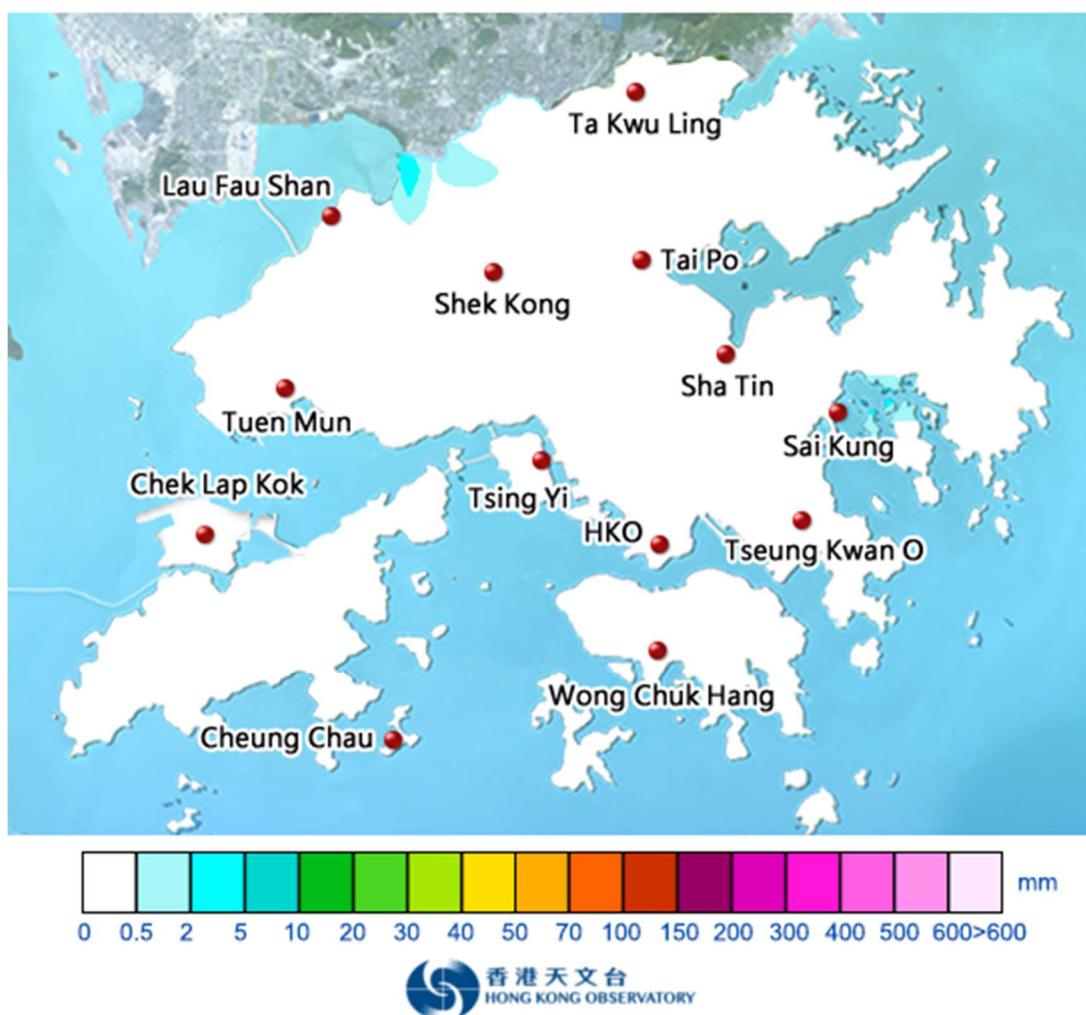
Total rainfall on 16-Sep-2023 (based on raingauges and radar data)



Total rainfall on 17-Sep-2023 (based on raingauges and radar data)

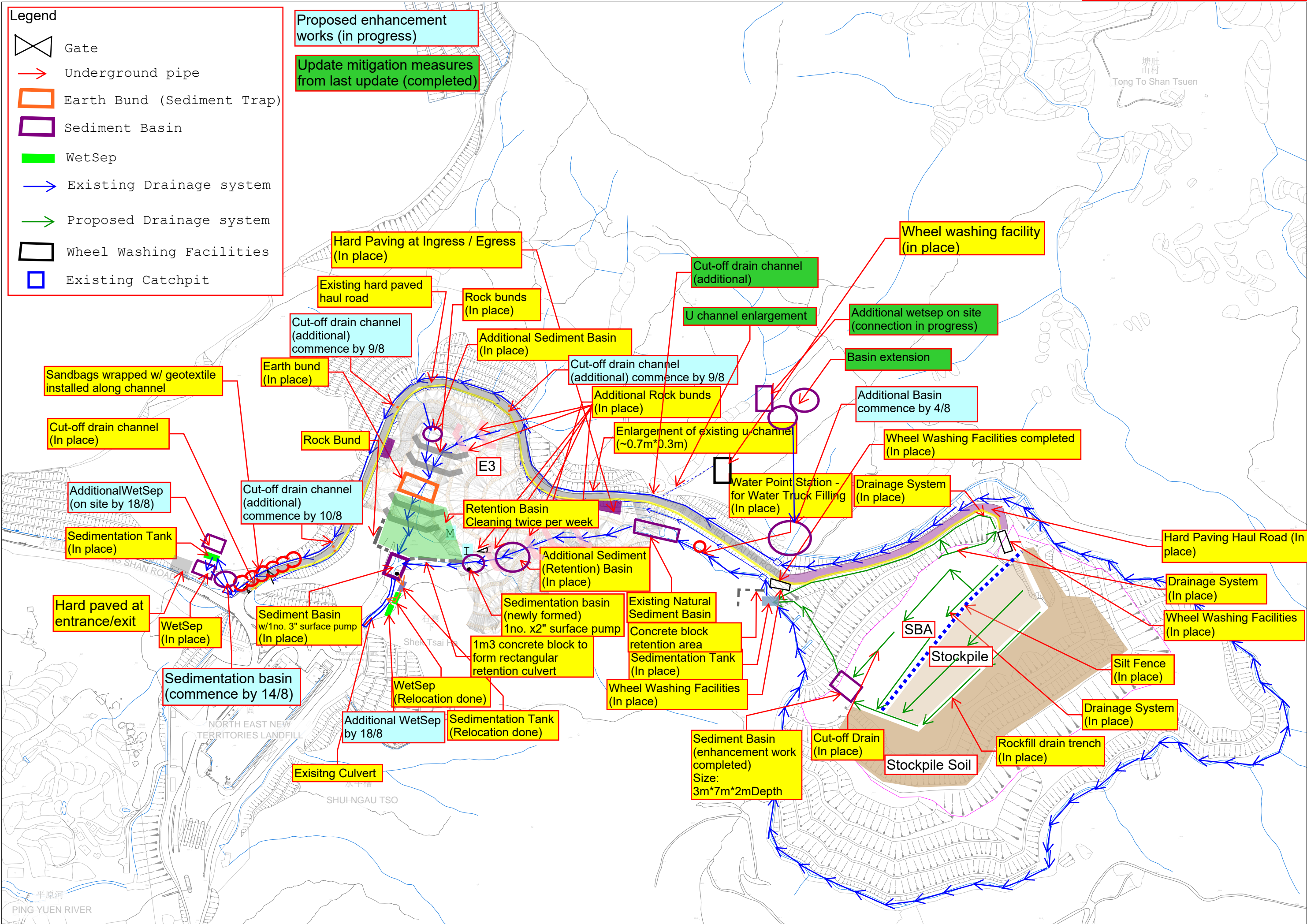


Total rainfall on 18-Sep-2023 (based on raingauges and radar data)



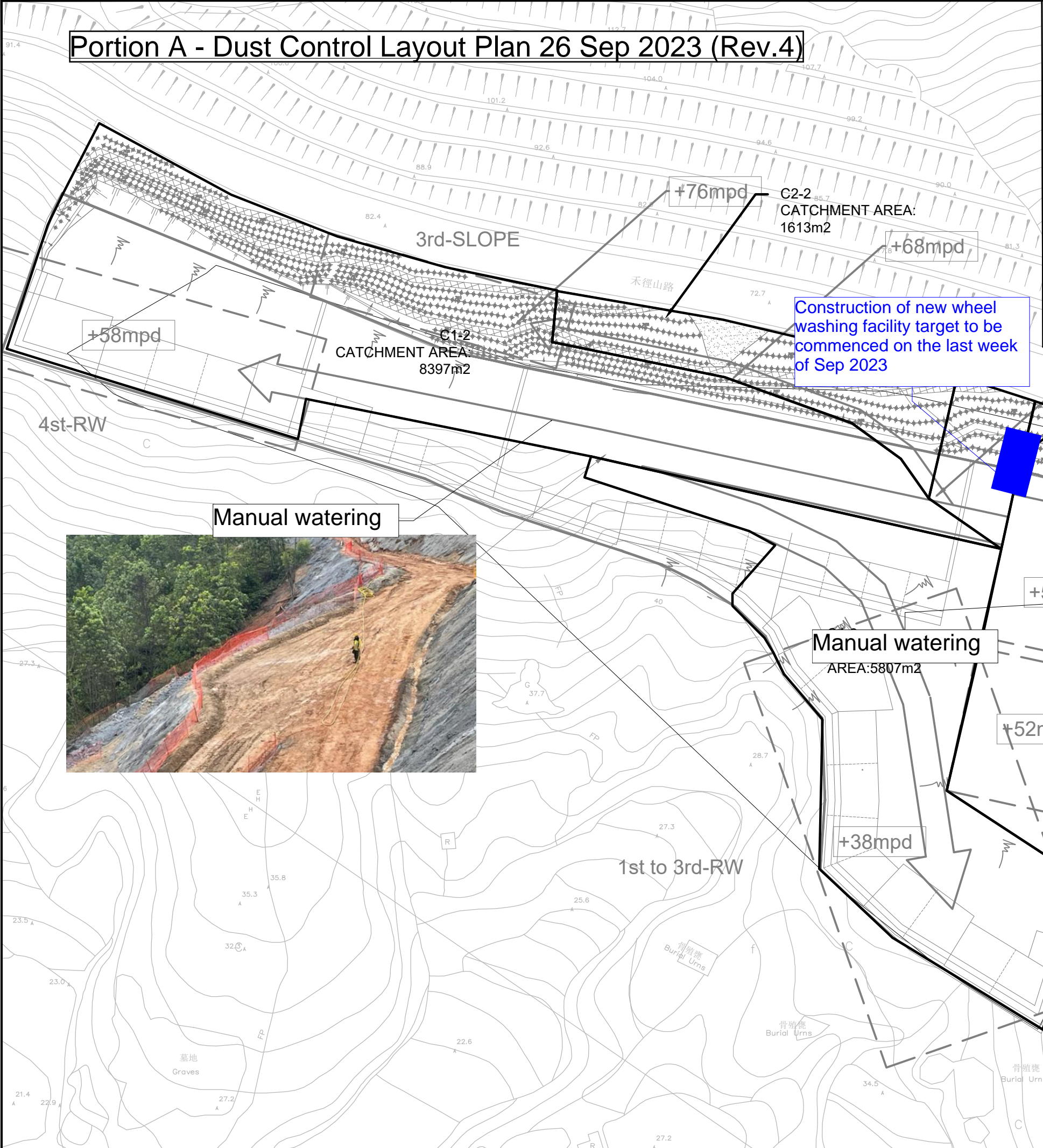
Appendix B

Temporary Surface Water Drainage System (TSWDS)



Appendix Q Implementation Status on Environmental Mitigation Measures

Portion A - Dust Control Layout Plan 26 Sep 2023 (Rev.4)



- NOTES**
1. ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE.
 2. ALL LEVELS REFER TO HONG KONG PRINCIPAL DATUM (MPD) UNLESS STATED OTHERWISE.
 3. ALL ALIGNMENTS OF THE EXISTING DRAINAGE SYSTEM AS SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE EXACT LEVEL AND LOCATION OF EXISTING DRAINAGE SYSTEM SHALL BE DETERMINED BY THE CONTRACTOR ON SITE AND AGREED BY THE ENGINEER/ARCHITECT.
 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 BY 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
 11. FOR PIPE BED
 12. TEMP. BUND S
 13. CHANNEL GRA



Installed sprinkler along main entrance haul road



Manual watering

Manual watering
AREA:5807m2

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

DO NOT SCALE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED ON SITE.
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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

PM Level Sensor (in trial)

Paul Y. Engineering

Reported 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

Outside Perimeter Fence Green Netting :

1. Yellow Mark: as of 25/09/2023

- Date start 19/09/2023

2. Red mark still not done

3. Green Mark - Undisturbed



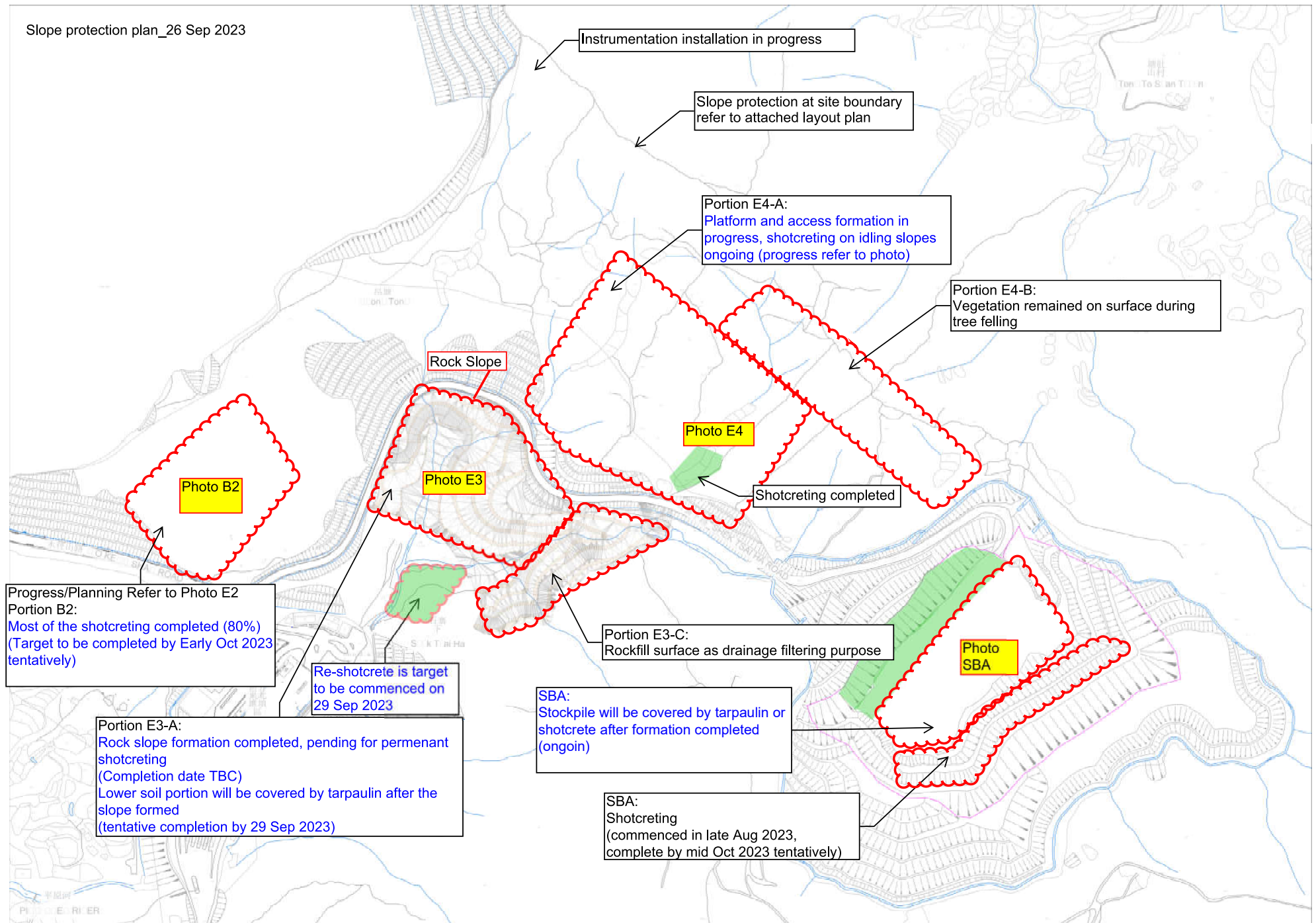




Photo B2



Photo E3



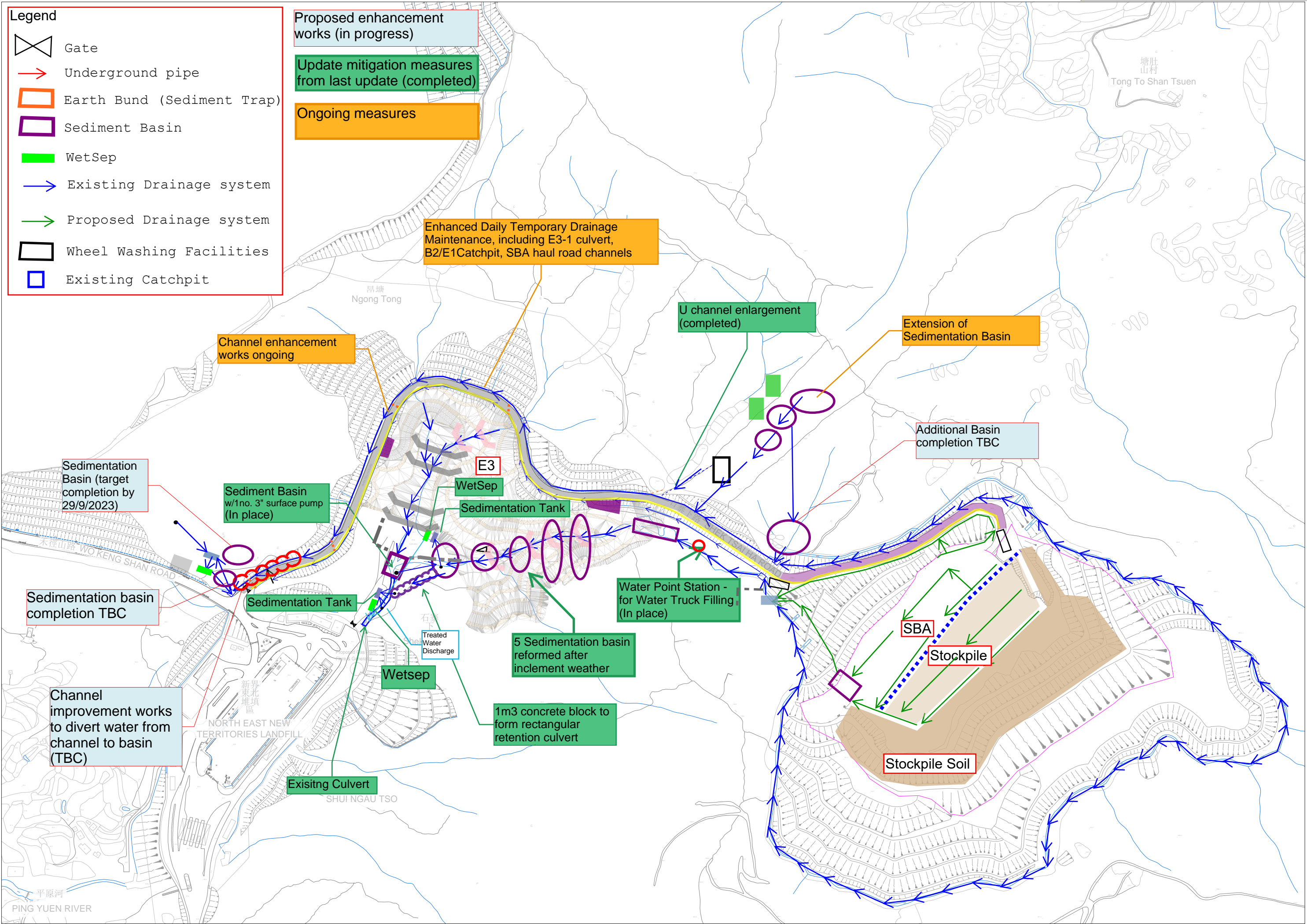
Photo E4



Photo SBA



Ongoing enhancement measures



Prepared by:

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aurecon

*Bringing ideas
to life*

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E:

