

**Service Contract No.  
WD/03/2023 Hung Shui  
Kiu/Ha Tsuen New  
Development Area  
Second Phase  
Development -  
Environmental Team**

3rd Monthly Environmental  
Monitoring and Audit (EM&A) Report  
(January 2025)

Revision: 2

2025-02-13

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to life*

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**Agreement No. CE 63/2023 (EP)**

**Independent Environmental Checker for Hung Shui Kiu / Ha Tsuen New Development Area Second Phase Development – Investigation**

**3<sup>rd</sup> Monthly Environmental Monitoring and Audit (EM&A) Report (January 2025)**

13 February 2025

**BY EMAIL**

Dear Sir,

We refer to email of 13 February 2025 attaching the 3<sup>rd</sup> Monthly Environmental Monitoring and Audit (EM&A) Report (January 2025) prepared by the Environmental Team (ET) of the captioned.

We would like to inform you that we have no adverse comment on the captioned submission. Therefore, we write to verify the captioned submission in accordance with the requirement stipulated in Section 15.1.1 of the Updated Environmental Monitoring and Audit Manual.

Should you have any queries, please contact the undersigned at 2828 5967.

Yours faithfully,  
For and on behalf of the  
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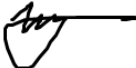

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# Executive Summary

- A1. This is the 3<sup>rd</sup> Monthly Environment Monitoring and Audit (EM&A) Report for Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development (the Project). This report was prepared by Aurecon Hong Kong Limited (Aurecon) under Service Contract No. WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team (hereinafter called the “Service Contract”). This report documents the findings of EM&A works at Contract No. YL/2023/01 (hereinafter called the “Contract 1”) and Contract No. YL/2023/02 (hereinafter called the “Contract 2”) under the Project during the reporting period from 1 to 31 January 2025.
- A2. The construction phase EM&A programme started on 1 November 2024.

## Key Construction Works in the Reporting Period

- A3. A summary of construction activities undertaken during the reporting period is presented below:

### Contract 1

- Caring Visit;
- Tree Survey;
- Site Appraisal;
- Underground Utility Detection;
- Ground Investigation Works.

### Contract 2

- Tree Felling;
- Ground Investigation;
- Earthworks;
- Piezometer / Standpipe Installation.

## Environmental Monitoring and Audit Programme

- A4. The monthly EM&A programme was undertaken by the ET in accordance with the Updated EM&A Manual (Apr 2022). A summary of the monitoring and audit activities during the reporting period is presented in **Table A1**.

**Table A1 Summary of EM&A activities in the Reporting Period**

EM&A Activities	Date
Air Quality Monitoring	2, 4, 8, 10, 14, 16, 20, 22, 25, 27 and 28 January 2025
Noise Monitoring	7, 13, 21 and 28 January 2025
Water Quality Monitoring	2, 4, 6, 8, 10, 13, 15, 17, 20, 22, 24 and 27 January 2025
Weekly Environmental Site Inspection (Contract 1)	3, 10, 15, 24 and 27 January 2025
Weekly Environmental Site Inspection (Contract 2)	3, 10, 16, 24 and 27 January 2025

## Breaches of Action and Limit Levels

- A5. Summary of the environmental exceedances of the reporting period is tabulated in **Table A2**.

**Table A2 Summary of Exceedances in the Reporting Period**

Environmental Monitoring	Parameter	No. of Exceedances		Total No. of Exceedances	No. of Non-project Related Exceedances		Total No. of Non-project Related Exceedances	No. of Exceedances Related to the Project		Total No. of Exceedances Related to the Project
		AL	LL		AL	LL		AL	LL	
Air Quality	1-hour TSP	0	0	0	0	0	0	0	0	0
Noise	L <sub>eq</sub> (30mins)	0	0	0	0	0	0	0	0	0
Water Quality	DO	0	0	0	0	0	0	0	0	0
	Turbidity	0	0	0	0	0	0	0	0	0
	SS	0	0	0	0	0	0	0	0	0
	pH	0	0	0	0	0	0	0	0	0

#### Air Quality

A6. No Action Level or Limit Level exceedance was recorded for air quality monitoring in the reporting period.

#### Noise

A7. No Action Level or Limit Level exceedance was recorded for construction noise monitoring in the reporting period.

#### Water Quality

A8. All water quality monitoring was conducted as scheduled in the reporting period. No Action or Limit Level exceedance was recorded during impact water quality monitoring in the reporting period.

### **Complaint Log**

A9. No environmental complaint was received in the reporting period.

### **Notification of Summons and Successful Prosecutions**

A10. No notification of summons or successful prosecutions was received in the reporting period.

### **Reporting Changes**

A11. There was no reporting change in the reporting period.

### **Future Key Issues**

A12. The major site activities for the next reporting period are summarized below:

#### Contract 1

- Caring Visit;
- Tree Survey;
- Site Appraisal;
- Underground Utility Detection;

- Ground Investigation Works;
- Realign of Bar Fencing;
- Demolition Works;
- Utilities Laying Works;
- Construction of CLC Footing;
- Demolition of Existing Height Restriction Gantry and Footing at Part T.

#### Contract 2

- Tree Felling;
- Ground Investigation Works;
- Tree Transplant;
- Earthworks;
- Piezometer / Standpipe Installation;
- Site Clearance and Tree Felling at part E;
- Site Office Setup;
- Preparation of TTA for pipe laying;
- Pipe laying.

# 1 Introduction

## 1.1 Project Background

- 1.1.1 The HSK/HT NDA occupies an area of approximately 714 hectares and is located at the north-western part of the New Territories, midway between the Tuen Mun and Tin Shui Wai New Towns. The sites included scattered land pieces in the area near-by the proposed HSK Station, bounded by Castle Peak Road (Hung Shui Kiu) Castle Peak Road to the south, Kong Sham Western Highway to the west and Tin Shui Wai MTR Station. The HSK/HT NDA will provide associated engineering infrastructure and supply land for subsequent development of public and private housing, community facilities, commercial and industrial premises, the Green Transit Corridor (comprising the Environmentally Friendly Transport Services, footpaths and cycle tracks) and other uses, and for construction of the proposed infrastructure works such as district distributor roads, local roads, revitalisation of existing channels, sewerage (including pumping stations), drainage (including pumping stations), water supply, landscaping, electrical and mechanical (E&M), and associated works.
- 1.1.2 Currently, the HSK/HT NDA development will be implemented in three phases, comprising First Phase, Second Phase and Remaining Phase development. The First Phase development which comprises the site information and engineering infrastructure works under Advance Works Phases 1 and 2 and Stage 1 Works has commenced construction in 2020.
- 1.1.3 The HSK/HT NDA Advance Works Phase 3 and Stage 2 Works are collectively called Second Phase development (also known as HSK/HT NDA Second Phase Development – the Project). The HSK/HT NDA Advance Works Phase 3 includes site formation and engineering infrastructure works for the site for Dedicated Rehousing Estate (DRE), residential and industrial uses and Government/Institution or Community (G/IC) developments. It also comprises construction of engineering infrastructure works, including a primary distributor road, district distributor roads, local roads, drainage, sewerage (including pumping stations), water supply, landscaping, E&M and associated works as environmental mitigation measures and EM&A programme. The HSK/HT NDA Stage 2 Works includes site information and engineering infrastructure works for the commercial, residential and G/IC developments in the proposed town centre around the proposed HSK Station, logistics, industrial corporate and technology zones village resite, and the remaining batch of multi-storey buildings.
- 1.1.4 The Project will be delivered under seven works contracts as below and the general layout plan of the works contracts, except Contract 7 of which the exact extent and scope of works are subject to review, is shown in **Figure 1.1**.

### Contract 1

- Site clearance and formation (including land decontamination works) for about 30 hectares of lands, together with provision of associated engineering infrastructure
- Construction of Local Roads L6, L7 and L8
- Construction of associated works including footpaths, cycle tracks, drainage, sewerage, landscaping works and other ancillary works
- Relocation and provision of Community Liaison Centre (CLC)
- Implementation of environmental mitigation measures (including noise barriers and low-noise road surfacing)



### Contract 2

- Site clearance and formation for about 8.5 hectares of lands
- Construction of Tan Kwai Tsuen East Fresh Water Service Reservoir and associated roadworks, power supply and landscaping works
- Laying of about 4.5 km long freshwater mains and about 3.5 km long flushing water mains
- Implementation of environmental mitigation measures and related environmental monitoring and audit programme for the works mentioned above

### Contract 3

- Site clearance and formation (including land decontamination works) for about 60 hectares of lands, together with provision of associated engineering infrastructure
- Construction of Roads D6, D8, L5, L9, L10, L12, L13, L14, L15, L16, road connection between Road P1 and D6 and road connection between Road P1 and Castle Peak Road and relocation of parking area of MTR Emergency Access Point (EAP) 26 in Tuen Mun
- Construction of Footbridge FB13
- Construction of Underpass UP1
- Realignment of Tin Sam Channel
- Construction of Sewage Pumping Station SPS1
- Construction of associated works including footpaths, cycle tracks, drainage, sewerage, water supply, box culvert, district cooling mains, Common Utility Tunnel, landscaping, E&M works and other ancillary works
- Implementation of environmental mitigation measures (including noise barriers and low-noise road surfacing)

### Contract 4

- Site clearance and formation (including land decontamination works) for about 57 hectares of lands, together with provision of associated engineering infrastructure
- Construction of Roads D6, D7, L1, L17, L18, L21, L22, L23, L25 and L35
- Construction of river crossing footbridge FB5, FB9, FB8, FB8A, FB8B, FB8C and FB10 and Pedestrian Subway SW6
- River Revitalisation of Tin Sam Channel
- Construction of Sewage Pumping Station SPS3
- Construction of associated works including footpaths, cycle tracks, drainage, sewerage, water supply, box culvert, district cooling mains, landscaping, E&M works and other ancillary works
- Implementation of environmental mitigation measures (including noise barriers and low noise road surfacing)

### Contract 5

- Site clearance and formation (including land decontamination works) for about 60 hectares of lands, together with provision of associated engineering infrastructure
- Construction of primary distributor, district distributor and local roads connecting Hung Shui Kiu/Ha Tsuen New Development Area to Ping Ha Road, Ha Tsuen Road and Castle Peak Road
- Construction of vehicular bridges
- Construction of pedestrian footbridges and subways
- Construction of a sewage pumping station
- Construction of nature terrain hazard mitigation measures

- Construction of associated works including water mains, drainage and sewerage works, district cooling mains, cycle tracks, footpaths, box culverts, junction improvement works, slope works, retaining walls, street furniture, landscaping works, electrical and mechanical works and other ancillary works

#### Contract 6

- Site clearance and formation (including land decontamination works) for about 70 hectares of lands, together with provision of associated engineering infrastructure
- Construction of Roads D3, D5, L30 and L31 and associated connections
- Construction of Sewage Pumping Station SPS4
- Construction of floodable open spaces and the associated drainage works
- Construction of associated works including footpaths, cycle tracks, drainage, sewerage, water supply, landscaping, E&M works and ancillary works

#### Contract 7

- All remaining landscaping works to regional, district and local open space, landscape within the streetscape, landscape to the floodable open spaces and landscape to river revitalization or polder areas

- 1.1.5 Aurecon was commissioned by CEDD to provide EM&A services for the works contracts in relation to the Project pursuant to the requirements as specified in relevant EP, the Updated EM&A Manual (Apr 2022) and the approved EIA Report for the Project to discharge the duties of the ET for the Project, including the baseline monitoring works for various monitoring parameters (e.g. AQM, CNM, WQM, etc.).
- 1.1.6 This is the 3<sup>rd</sup> Monthly EM&A Report summarizing the key findings of the construction phase EM&A programme at Contract 1 and Contract 2 from 1 January to 31 January 2025 (the reporting period) and is submitted to fulfil the requirements in Condition 3.3 of the EPs (i.e. EP-531/2017, EP-530/2017, EP-529/2017, EP-528/2017 & EP-527/2017) and Section 15.3 of the Updated EM&A Manual (Apr 2022) of the Project.

## 1.2 Project Organisation

- 1.2.1 Parties with different levels of involvement in the Project organisation are summarized in **Table 1.1**.

**Table 1.1 Parties Involved in Project Organisation**

Parties	Organization / Company	
Project Proponent	Civil Engineering and Development Department (CEDD)	
Supervisor / Engineer's Representative (ER)	Ove Arup & Partners Hong Kong Limited	
Contractor	Contract No. YL/2023/01 (Contract 1)	Sang Hing – Kuly Joint Venture (SKJV)
	Contract No. YL/2023/02 (Contract 2)	Chun Wo - Build king - Yee Hop Joint Venture (CWBKYH JV)
Environmental Team (ET)	Aurecon Hong Kong Limited	
Independent Environmental Checker (IEC)	Mott MacDonald Hong Kong Limited	

1.2.2 The key personnel contact names and numbers are summarized in **Appendix 1.2**.

## 1.3 Construction Works Programme and Construction Works Area

- 1.3.1 The construction phase EM&A programme commenced on 1 November 2024. The construction works programme, and the construction works area of the Project are shown in **Appendix 1.1** and **Figure 1.1** respectively. A summary of construction activities undertaken at Contract 1 and Contract 2 during this reporting period is presented below, and in **Figure 1.2** and **Figure 1.3** respectively:

### Contract 1

- Caring Visit;
- Tree Survey;
- Site Appraisal;
- Underground Utility Detection;
- Ground Investigation Works

### Contract 2

- Tree Felling;
- Ground Investigation;
- Earthworks;
- Piezometer / Standpipe Installation.

## 1.4 Summary of Environmental Status

- 1.4.1 A summary of the relevant permits, licences, and/or notifications on environmental protection for the work contracts that are involved in this reporting period is presented in **Table 1.2** and **Table 1.3** respectively.

**Table 1.2 Status of Environmental License, Notifications and Permits for Contract 1**

Permit / License Name/No.	Valid Period		Status
	From	To	
Environmental Permit			
EP-527/2017	21/02/2017	N/A	Valid
EP-528/2017	21/02/2017	N/A	Valid
EP-529/2017	21/02/2017	N/A	Valid
EP-530/2017	21/02/2017	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation			
N/A	N/A	N/A	Under application
Billing Account for Disposal of Construction Waste			
7051388	24/06/2024	N/A	Valid
Registration of Chemical Waste Producer			
N/A	N/A	N/A	Under application

Permit / License Name/No.	Valid Period		Status
	From	To	
Effluent Discharge License under Water Pollution Control Ordinance			
N/A	N/A	N/A	Under application (Part T, Part E4)
Construction Noise Permit (CNP)			
N/A	N/A	N/A	Under application (Demolition of Existing Gantry at Part T)

**Table 1.3 Status of Environmental License, Notifications and Permits for Contract 2**

Table 1.5 Status of Environmental License, Notifications and Permits for Contract 2			
Permit / License Name/No.	Valid Period		Status
	From	To	
Notification pursuant to Air Pollution Control (Construction Dust) Regulation			
Notification that notifiable works are anticipated to commence (Area A) (EPD Ref. number: 10005847)	13/06/2024	N/A	Valid
Notification that notifiable works are anticipated to commence (Area B) (EPD Ref. number: 10006337)	26/06/2024	N/A	Valid
Notification that notifiable works are anticipated to commence (Area C) (EPD Ref. number: 10006331)	26/06/2024	N/A	Valid
Notification that notifiable works are anticipated to commence (Area D) (EPD Ref. number: 10006336)	26/06/2024	N/A	Valid
Billing Account for Disposal of Construction Waste			
7051428	26/06/2024	N/A	Valid
Account for Registration of Chemical Waste Producer			
WPN: 5213519C498001	13/08/2024	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance			
N/A	N/A	N/A	Under application (Site Area B)
Construction Noise Permit (CNP)			
N/A	N/A	N/A	N/A

## 2 Air Quality Monitoring

### 2.1 Monitoring Requirement

- 2.1.1 In accordance with the Updated EM&A Manual (Apr 2022), the ET shall carry out impact monitoring during the construction phase of the Project. 1-hour Total Suspended Particulates (TSP) should be conducted at a frequency of at least three times in every six days when the highest dust impact occurs.

### 2.2 Monitoring Location

- 2.2.1 According to the Updated EM&A Manual (Apr 2022), the designated locations for impact air quality monitoring in related to the works contracts in the reporting period are listed in **Table 2.1** and their locations are shown in **Figure 2.1**.

**Table 2.1 Summary of Impact Air Quality Monitoring Stations in related to the works contracts in the reporting period**

Station(s)	EIA ID	Monitoring Location
AM1	A204	Kam Cheong Garden
AM2	A208	Oaklands Court
AM3	A209	Ling Liang Church Primary School
AM4	A310	Tin Ha Road Playground
AM5	A415	Tin Sum Tsuen
AM6	A410	Galore Garden
AM7	A414	Shek Po Tusen
AM8a <sup>(1)</sup> (2)	A813	Block J, Tin Shing Court
AM10	A802	Kiu Tau Wai
AM11	A703	Sha Chau Lei Tsuen
AM12	A704	Ha Tsuen Shi
AM14	A601	Tseung Kong Wai
AM22	P240	Planned Village Resite at Site 4-20
AM24	P1501	Planned Port Back-up, Storage and Workshop at Site 3-8
AM25a	-	San Wai Sewage Treatment Works

Notes:

- (1) AM8a is the alternative noise monitoring stations proposed to replace AM8.
- (2) As the Owners' Corporation for Tin Shing Court refused to grant the permission to access to carry out the set-up of monitoring equipment at the proposed location for subsequent impact monitoring period, a new location, which is at a short distance from the original location (25m), has been then identified and submitted through the proposal of the alternative monitoring location for the impact monitoring. Agreement has been obtained from IEC upon proposal of the alternative monitoring location for the impact monitoring at AM8a.

- 2.2.2 In accordance with the Table A2.4 in Appendix A of the Updated EM&A Manual (Apr 2022), impact air quality monitoring will be carried out at monitoring stations AM22, AM24 and AM25a after the occupation of the planned port back-up, storage and workshop, and the planned village resite.

- 2.2.3 As confirmed with ER, the planned port back-up, storages and workshops at Site 3-8, Site 3-14 and the planned village resite Site 4-20 are not constructed yet. Thus, the impact air quality monitoring will be carried out at AM22, AM24 and AM25a after the construction and occupation of these planned port back-up, storages and workshops, and the planned village resite. No air quality monitoring of the mentioned stations was carried out in this reporting period.

## 2.3 Monitoring Parameter and Frequency and Duration

- 2.3.1 In accordance to the requirements for placement of equipment, as set out in Section 4.7.1 of the Updated EM&A Manual (Apr 2022) of the Project, the monitoring parameter, frequency and duration of impact air quality monitoring are listed in **Table 2.2**.

**Table 2.2 Parameters measured in the Impact Air Quality Monitoring**

Parameter	Frequency	Duration
1-hour TSP	3 times for every 6 days	Throughout the construction phase

- 2.3.2 Monitoring location, time and weather conditions and any special phenomena or work underway nearby are recorded during the impact monitoring.

## 2.4 Monitoring Equipment

- 2.4.1 Upon approval of the IEC, 1-hour TSP levels can be measured by direct reading method with using handheld dust meter, which is capable of producing comparable results as that by the high-volume sampling method, to indicate short event impacts.
- 2.4.2 The proposed use of handheld dust meter was submitted to the IEC and agreement was obtained from the IEC in accordance with Section 4.5.5 of the Updated EM&A Manual (Apr 2022).
- 2.4.3 **Table 2.3** summarizes the equipment used in the air quality monitoring programme. Copies of the calibration certificates of multi-parameter air quality monitoring system are shown in **Appendix 2.1**.

**Table 2.3 Air Quality Monitoring Equipment**

Equipment	Manufacturer	Model	Quantity	Serial No.
Direct Reading Dust Meter	Sibata	LD-5R	6	467356
				467357
				467358
				467359
				467360
				467361

## 2.5 Monitoring Methodology

- 2.5.1 The 1-hr TSP was sampled by drawing air into the portable dust monitor where particular concentrations were measured instantaneously with an in-built silicon detector sensing light scattered by the particulates in the sampled air. Continuous TSP levels were indicated and logged by a built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.
- 2.5.2 The measuring procedures of the 1-hour dust meter was undertaken in accordance with the Manufacturer's Instruction Manual as follows:
- Placed the 1-hour dust meter at least 1.5m above ground;
  - Set POWER to "ON" and make sure that the battery level was not flashed or in low level;
  - Pulled the air sampling inlet cover up;
  - Pushed the knob at MEASURE position;
  - Set time/mode setting to [BG] by pushing the time setting switch. Then, started the background measurement by pushing the start/stop switch once. It took 6 sec. to complete the background measurement;
  - Turned knob to SENSI. ADJ position and pressed in;
  - Pushed Start/Stop switch once;
  - Gently returned knob to the MEASURE position;
  - Pushed the time setting switch to change the time setting display to [LOG] at the bottom left of the liquid crystal display;
  - Removed the cap and started measurement; and
  - Information such as sampling date, time, count value and site condition were recorded during the monitoring period

## 2.6 Maintenance/Calibration

- 2.6.1 The following maintenance/calibration was required for the direct dust meters:
- 2.6.2 Check and calibrate the dust meter by high volume sampler (HVS) to check the validity and accuracy of the results measured by direct reading method. Calibration of dust meter should be carried out every twelve months throughout all stages of the air quality monitoring. The calibration certificates of the monitoring equipment are presented in **Appendix 2.1**.
- 2.6.3 The correlation coefficient was checked to establish the correlation relationship between the handheld dust meter and HVS. The correlation factor was determined by comparing the results of HVS and handheld dust meter.



- 2.6.4 Checking is made prior to air quality monitoring commencing to ensure all equipment is in good working condition with necessary power supply. Zero count test were conducted before and after each monitoring event.

## 2.7 Action and Limit Level for Air Quality Monitoring

- 2.7.1 The baseline monitoring results formed the basis for determining the air quality criteria for the impact monitoring. The ET shall compare the impact monitoring results with air quality criteria set up for 1-hour TSP. Based on the baseline dust monitoring data and the derivation criteria specified above, the Action/Limit Levels are presented in **Table 2.5**.

**Table 2.5 Action and Limit Levels for Air Quality Monitoring**

Monitoring Station	Action Level (µg/m <sup>3</sup> )	Limit Level (µg/m <sup>3</sup> )
AM1	266	500
AM2	271	
AM3	273	
AM4	268	
AM5	272	
AM6	271	
AM7	282	
AM8a	267	
AM10	271	
AM11	276	
AM12	273	
AM14	280	
AM22	274	
AM24 <sup>(1)</sup>	290	
AM25a <sup>(1)</sup>	300	

Note:

- (1) The Action Level of AM24 and AM25a was determined in the baseline monitoring under the baseline air quality monitoring of HSK/HT NDA Stage 1 Works in December 2021.

## 2.8 Results and Observations

- 2.8.1 All air quality monitoring was conducted as scheduled in the reporting period. The air quality monitoring schedule for this reporting period is shown in **Appendix 1.4**.
- 2.8.2 The air quality monitoring results in related to the works contracts in the reporting period are summarized in **Table 2.6**. No Action or Limit levels exceedance was recorded in the reporting period. Details of the results and graphical presentation are shown in **Appendix 2.2**.

**Table 2.6 Summary of Air Quality Monitoring Results in related to the works contracts in the reporting period**

Monitoring Station	Averaged Measured Value ( $\mu\text{g}/\text{m}^3$ )	Minimum Measured Value ( $\mu\text{g}/\text{m}^3$ )	Maximum Measured Value ( $\mu\text{g}/\text{m}^3$ )	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level, ( $\mu\text{g}/\text{m}^3$ )
AM1	30	9	67	266	500
AM2	26	7	69	271	
AM3	25	9	57	273	
AM4	38	7	70	268	
AM5	42	8	72	272	
AM6	39	11	70	271	
AM7	28	15	45	282	
AM8a	40	14	70	267	
AM10	29	19	36	271	
AM11	31	13	63	276	
AM12	38	14	73	273	
AM14	31	13	61	280	

- 2.8.3 The major dust source at AM1, AM3, AM6, AM7, AM8a and AM11 included vehicle emission and dust from traffic. At AM2 and AM14, major dust sources included vehicle emission observed nearby. No other sources dust emission was observed at AM4, AM5, AM10, AM12 during air quality monitoring.
- 2.8.4 Weather condition of the whole baseline monitoring period varied from sunny to rainy. Wind data during the period of baseline monitoring from the Hong Kong Observatory Lau Fau Shan Wind Station (22.46889N, 113.98361E), which is located about 1.25 km from the nearest site boundary of Contract 6. The weather information during the reporting period is summarized in **Appendix 2.3**.

## 2.9 Event and Action Plan

- 2.9.1 Should any non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix 2.4** shall be followed. Investigation of the exceedances of environmental quality performance limits should be conducted, and the ET will immediately notify the IEC and EPD, as appropriate. The notification should be followed up with advice to the IEC and EPD on the results of the investigation, proposed actions and success of the action taken, with any necessary follow-up proposals.

## 3 Construction Noise Monitoring

### 3.1 Monitoring Requirements

- 3.1.1 In accordance with the Updated EM&A Manual (Apr 2022), the ET shall carry out impact monitoring during the construction phase of the Project in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ) to monitor the construction noise arising from the construction activities. The regular monitoring frequency for each monitoring station was on a weekly basis and one set of measurements between 0700 and 1900 hours on normal weekdays shall be conducted.

### 3.2 Monitoring Locations

- 3.2.1 According to the Updated EM&A Manual (Apr 2022), the monitoring designated locations for construction noise monitoring in related to the works contracts in the reporting period are listed in **Table 3.1** and shown in **Figure 3.1**.

**Table 3.1 Construction Noise Monitoring Stations near in related to the works contracts in the reporting period**

Monitoring Station	EIA ID	Location	Nature of Uses	Type of Measurement
CM1 <sup>(2)</sup>	ETCW02	No. 739, Oaklands Court	Residential	Free-Field
CM2 <sup>(2)</sup>	ESFW01	No. 332, Chung Uk Tsuen	Residential	Free-Field
CM3 <sup>(2)</sup>	ESFW02	Village house, Nai Wai	Residential	Free-Field
CM4a <sup>(1) (2)</sup>		Village Representative Building at Chung Uk Tsuen	Residential	Free-Field
CM10	ETSW11	YLPMSAA Tang Siu Tong Secondary School	Educational Institution	Façade
CM13	ESLUT01	No. 46A San Lee Uk Tsuen	Residential	Façade
CM14 <sup>(2)</sup>		No. 62, San Lee Uk Tsuen	Residential	Free Field
CM15a <sup>(1) (2)</sup>		Block 15, Bellevue Court	Residential	Free Field
CM16	E52505	Hung Yan House, Hung Fuk Estate	Residential	Façade
CM18 <sup>(2)</sup>	ESPT06	No. 201, Shek Po Tsuen	Residential	Free Field
CM20 <sup>(2)</sup>	ESCL03	No. 45, Sha Chau Lei Tsuen	Residential	Free-Field
CM28 <sup>(2)</sup>	42001	Planned Residential Development in Site 4-20	Residential	Free-Field
CM29 <sup>(2)</sup>	42251	Planned Residential Development in Site 4-22	Residential	Free-Field
CM31 <sup>(2)</sup>	52408	Planned Residential Development in Site 5-24	Residential	Free-Field
CM32 <sup>(2)</sup>	52151	Planned School in Site 5-21	Educational Institution	Free-Field

Notes:

- (1) Alternative noise monitoring stations to replace the original noise monitoring stations in accordance with the Proposal of Alternative Monitoring Locations approved by EPD.
- (2) For Free Field measurement, +3 dB(A) should be added to the measured results.

- 3.2.2 As confirmed with ER, the planned residential development at Site 4-20, Site 5-22 and Site 5-24, and the planned school at Site 5-21 are not constructed yet. Thus, the impact noise monitoring will be carried out at monitoring stations CM28, CM29, CM31 and CM32 after the construction and occupation of these planned residential development and the planned school. No noise monitoring of the mentioned stations was carried out in this reporting period.

### 3.3 Noise Monitoring Parameter, Frequency and Duration

- 3.3.1 Construction noise level was measured by the ET and measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ).  $L_{eq(30mins)}$  used as the monitoring parameter for the construction noise monitoring.
- 3.3.2 As supplementary information for data auditing, statistical results such as  $L_{10}$  and  $L_{90}$  were also obtained for reference.
- 3.3.3 **Table 3.2** summarizes the monitoring parameters, duration, and frequency of construction noise monitoring.

**Table 3.2 Construction Noise Monitoring Parameter, Frequency and Duration**

Monitoring Station	Parameter	Frequency and Duration
CM1, CM2, CM3, CM4a, CM10, CM13, CM14, CM15a, CM16, CM18 and CM20	$L_{eq(30mins)}$ , $L_{10}$ and $L_{90}$	Once every week throughout the construction phase

### 3.4 Monitoring Equipment, Methodology and QA / QC Procedure

- 3.4.1 As referred to the technical memorandum issued under the Noise Control Ordinance (NCO), sound level meters in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications were used for carrying out the construction noise monitoring.
- 3.4.2 Noise measurements were not made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed was checked with a portable wind speed meter capable of measuring the wind speed in m/s.
- 3.4.3 Sufficient numbers of noise measuring equipment and associated instrumentation were prepared by the ET. All the equipment and associated instrumentation were clearly labelled.
- 3.4.4 The monitoring procedures are as follows:
- For façade measurement, the monitoring station was set at a point 1 m from the exterior of the sensitive receivers building façade and set at a position 1.2 m above the ground. For free-field measurement, the monitoring station was set at a position 1.2 m above the ground.
  - The battery condition was checked to ensure good functioning of the meter.
  - Parameters such as frequency weighting, the time weighting and the interval were set as follows:

- Frequency weighting: A
- Time weighting: Fast
- Interval: 30 minutes ( $L_{eq(30mins)}$ )
- Prior to and after each noise measurement, the meter was calibrated using an acoustic calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement is more than 1.0 dB, the measurement was considered invalid and repeat of noise measurement will be required after re-calibration or repair of the equipment.
- At the end of the monitoring period, the values of  $L_{eq}$ ,  $L_{10}$  and  $L_{90}$  were recorded. In addition, noise sources were recorded on a standard record sheet.

3.4.5 **Table 3.3** summarizes the noise monitoring equipment used during the construction noise monitoring. Calibration certificates for the impact noise monitoring equipment are attached in **Appendix 3.1**.

**Table 3.3 Construction Noise Monitoring Equipment**

Equipment	Manufacturer	Model	No. of Equipment	Serial No.
Sound Level Meter	Nti Audio	XL3	2	A3A-01229-F0 A3A-01230-F0
Acoustic Calibrator	Rion	NC-75	2	34724244 34724245

## 3.5 Maintenance and Calibration

3.5.1 Maintenance and calibration procedures are as follows:

- The microphone head of the sound level meter and calibrator were regularly cleaned with a soft cloth; and
- The sound level meter and acoustic calibrator were calibrated annually; and
- The accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency immediately prior to and following each noise measurement. Measurements were accepted as valid only if the calibration level from before and after the noise measurement agree to within 1.0 dB.

## 3.6 Action and Limit Levels

3.6.1 The Action and Limit levels were established in accordance with the Updated EM&A Manual (Apr 2022). **Table 3.4** presents the Action and Limit Levels for construction noise. Should non-compliance of the criteria occur, action in accordance with the Event and Action Plan presented in **Appendix 3.3** shall be carried out.

**Table 3.4 Action and Limit Levels for Construction Noise Monitoring**

Time Period	Action	Limit Level
07:00 – 19:00 on normal weekdays	When one or more documented complaints are received	75 dB(A) <sup>(1)</sup>

Notes:

- (1) Between 07:00 and 19:00, construction noise limit for school during normal term time is 70 dB(A) and 65 dB(A) during examination period.

## 3.7 Results and Observations

3.7.1 All air quality monitoring was conducted as scheduled in the reporting period. The air quality monitoring schedule for this reporting period is shown in **Appendix 1.4**.

3.7.2 No Action or Limit levels exceedance was recorded in the reporting period. Details of the results and graphical presentation are shown in **Appendix 3.2**. The construction noise monitoring results are summarized in **Table 3.5**.

**Table 3.5 Summary of Construction Noise Monitoring Results in related to the works contracts in the reporting period**

Date	Measured Noise Level: $L_{eq(30min)}$ , dB(A)	Measured Noise Level with façade correction: $L_{eq(30min)}$ , dB(A) <sup>(1)</sup>	Baseline Level, dB(A)	Construction Noise Level: $L_{eq(30min)}$ , dB(A) <sup>(3)</sup>
CM1 <sup>(1)</sup>				
07/01/2025	56.3	59.3	58.7	50.1
13/01/2025	53.4	56.4	58.7	56.4 measured level ≤ baseline level
21/01/2025	53.1	56.1	58.7	56.1 measured level ≤ baseline level
28/01/2025	53.0	56.0	58.7	56.0 measured level ≤ baseline level
CM2 <sup>(1)</sup>				
07/01/2025	71.4	74.4	64.2	73.9
13/01/2025	71.0	74.0	64.2	73.5
21/01/2025	70.9	73.9	64.2	73.4
28/01/2025	71.8	74.8	64.2	74.4
CM3 <sup>(1)</sup>				
07/01/2025	66.1	69.1	71.5	69.1 measured level ≤ baseline level
13/01/2025	65.8	68.8	71.5	68.8 measured level ≤ baseline level
21/01/2025	65.5	68.5	71.5	68.5 measured level ≤ baseline level
28/01/2025	65.5	68.5	71.5	68.5 measured level ≤ baseline level
CM4a <sup>(1)</sup>				
07/01/2025	66.0	69.0	75.0	69.0 measured level ≤ baseline level
13/01/2025	64.9	67.9	75.0	67.9 measured level ≤ baseline level
21/01/2025	63.5	66.5	75.0	66.5 measured level ≤ baseline level
28/01/2025	65.2	68.2	75.0	68.2 measured level ≤ baseline level
CM10 <sup>(2)</sup>				
07/01/2025	57.0	N/A	60.9	57.0 measured level ≤ baseline level
13/01/2025	57.1	N/A	60.9	57.1 measured level ≤ baseline level
21/01/2025	54.9	N/A	60.9	54.9 measured level ≤ baseline level
28/01/2025	58.3	N/A	60.9	58.3 measured level ≤ baseline level

Date	Measured Noise Level: $L_{eq(30min)}$ , dB(A)	Measured Noise Level with façade correction: $L_{eq(30min)}$ , dB(A) <sup>(1)</sup>	Baseline Level, dB(A)	Construction Noise Level: $L_{eq(30min)}$ , dB(A) <sup>(3)</sup>
CM13				
07/01/2025	50.6	N/A	54.4	50.6 measured level ≤ baseline level
13/01/2025	50.4	N/A	54.4	50.4 measured level ≤ baseline level
21/01/2025	50.7	N/A	54.4	50.7 measured level ≤ baseline level
28/01/2025	54.4	N/A	54.4	54.4 measured level ≤ baseline level
CM14 <sup>(1)</sup>				
07/01/2025	55.4	58.4	47.4	58.1
13/01/2025	54.7	57.7	47.4	57.2
21/01/2025	54.8	57.8	47.4	57.4
28/01/2025	61.9	64.9	47.4	64.8
CM15a <sup>(1)</sup>				
07/01/2025	68.4	71.4	64.7	70.3
13/01/2025	68.3	71.3	64.7	70.2
21/01/2025	69.1	72.1	64.7	71.2
28/01/2025	68.3	71.3	64.7	70.2
CM16				
07/01/2025	59.5	N/A	71.9	59.5 measured level ≤ baseline level
13/01/2025	59.4	N/A	71.9	59.4 measured level ≤ baseline level
21/01/2025	64.4	N/A	71.9	64.4 measured level ≤ baseline level
28/01/2025	60.0	N/A	71.9	60.0 measured level ≤ baseline level
CM18 <sup>(1)</sup>				
07/01/2025	60.8	63.8	56.6	62.9
13/01/2025	64.4	67.4	56.6	67.1
21/01/2025	63.3	66.3	56.6	65.8
28/01/2025	65.0	68.0	56.6	67.7
CM20 <sup>(1)</sup>				
07/01/2025	53.5	56.5	57.8	56.5 measured level ≤ baseline level
13/01/2025	52.9	55.9	57.8	55.9 measured level ≤ baseline level
21/01/2025	54.5	57.5	57.8	57.5 measured level ≤ baseline level
28/01/2025	58.5	61.5	57.8	59.0

Note:

- (1) For Free Field measurement, +3 dB(A) was added to the measured results.
- (2) Between 07:00 and 19:00, construction noise limit for school during normal term time is 70 dB(A) and 65 dB(A) during examination period. The examination period was between 13 January 2025 and 24 January 2025.
- (3) The measured noise level was corrected with the corresponding baseline noise level erasing any non-project related noise from the background (e.g. traffic noise, etc.) recorded during the monitoring periods.

3.7.3 During the construction noise monitoring period, road traffic noise may potentially affect the results obtained from CM1, CM2, CM3, CM4a, CM10, CM13 CM14, CM15a CM16, CM18 and CM20.

## 3.8 Event and Action Plan

3.8.1 Should non-compliance of the noise monitoring criteria occur, actions in accordance with the Event and Action Plan in **Appendix 3.3** shall be carried out.

## 4 Water Quality

### 4.1 Monitoring Requirement

- 4.1.1 In accordance with the Updated EM&A Manual (Apr 2022), impact water quality monitoring should be carried out three days per week at all designated monitoring stations during the construction period. The interval between two sets of monitoring should not be less than 36 hours.
- 4.1.2 Replicate *in-situ* measurements of dissolved oxygen (DO), temperature, turbidity, pH, and suspended solids (SS) for each independent sampling event shall be collected to ensure a robust statistically interpretable database.

### 4.2 Monitoring Location

- 4.2.1 Impact water quality monitoring in related to the works contracts in the reporting period was conducted at 12 monitoring stations which is summarized in **Table 4.1**. The location of water quality monitoring stations is shown in **Figure 4.1**.

**Table 4.1 Summary of Impact Water Quality Monitoring Stations in related to the works contracts in the reporting period**

Fresh Water System	Monitoring Station ID	Coordinates (HK Grid)		Description <sup>(1)</sup>
		Easting	Northing	
TSW Main Channel and its tributaries	U2	816240	834009	U
	U5a <sup>(2)</sup>	816212	832138	U
	U6a <sup>(2)</sup>	817666	832421	U
	TS1	816815	832297	G
	TS2a <sup>(2)</sup>	817278	833493	G
	TSR1a <sup>(2)</sup>	817786	834125	G
	HT	816866	834314	G
	LUTa <sup>(2)</sup>	817547	834717	G
	D2a <sup>(2)</sup>	817483	835855	I
Tuen Mun River	D3	816437	831500	I
Upstream / Tributaries of Shan Pui River <sup>(3)</sup>	D5a <sup>(2)</sup>	819054	832288	I
	D6a <sup>(2)</sup>	818934	832032	I

Notes:

- (1) G: Gradient Station; I: Impact Station; U: Upstream Station.
- (2) U5a, U6a, TS2a, TSR1a, LUTa, D2a, D5a and D6a are the alternative water quality monitoring stations to replace U5, U6, TS2, TSR1, LUT, D2, D5 and D6, respectively, in accordance with the agreed Proposal of Alternative Monitoring Locations.
- (3) The original monitoring station (i.e. U7) had been cancelled owing to the location was on a steep slope within densely vegetated area in which no water flowing through in wet season in accordance with the Proposal of Alternative Monitoring Locations.



## 4.3 Monitoring Parameter and Frequency

- 4.3.1 The monitoring parameters, frequency and duration of impact water quality monitoring are listed in **Table 4.2**.

**Table 4.2 Parameters measured in the Impact Water Quality Monitoring**

Parameter	Frequency	Duration
Dissolved oxygen (DO), temperature, turbidity, pH, stream water depth and suspended solids (SS)	3 days in a week	Throughout the construction phase

- 4.3.2 Monitoring location and position, time, sampling depth, weather conditions and any special phenomena or work underway nearby are recorded during the impact monitoring.

## 4.4 Sampling Depths & Replication

- 4.4.1 During impact water quality monitoring, each station was sampled. Due to a shallow water depth (less than 3 m) with low flow rates in rivers, all the monitoring would be located at mid-depth level.
- 4.4.2 Duplicate water samples were collected at each sampling depth for laboratory measurement of SS. Samples were stored in high density polythene bottles, packed in ice (cooled to 4 °C without being frozen), and delivered to the laboratory on the same day of collection for analysis.

## 4.5 Monitoring Equipment

- 4.5.1 The measurement of DO, temperature, turbidity, pH and stream water depth were undertaken *in-situ*. *In-situ* monitoring instruments in compliance with the specifications listed under Section 6.8 of the Updated EM&A Manual (Apr 2022) were adopted to undertake the water quality monitoring for the Project. Water quality monitoring equipment with the following specifications shall be supplied and maintained by the ET.

### Dissolved Oxygen and Temperature Measuring Equipment

- 4.5.2 The instrument for measuring dissolved oxygen and temperature should be portable and weatherproof complete with cable, sensor, and use DC power source. The equipment was capable of measuring:
- A dissolved oxygen level in the range of 0 – 50 mg/L and 0 – 500% saturation; and
  - The temperature within -5 – 50 °C.
- 4.5.3 It should have a membrane electrode with automatic temperature compensation connected with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary (e.g. YSI ProDSS (multi-parameters) or an approved similar instrument).

## pH

- 4.5.4 pH meter (e.g. YSI ProDSS (multi-parameters) or equivalent) should be used to measure pH value of water samples *in-situ*. It should be readable in a range of 0 to 14. Standard buffer solutions of at least pH 7 to pH 10 shall be used for calibration of the instrument before and after use.

## Turbidity Measurement Equipment

- 4.5.5 The instrument should be a portable, weatherproof turbidity-measuring instrument with a comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0 – 4000 NTU and be equipped with a cable (e.g. YSI ProDSS (multi-parameters) or an approved similar instrument).

## Suspended Solids

- 4.5.6 A water sampler should comprise a transparent PVC cylinder, with a capacity of not less than 2 litres, and should be effectively sealed with latex cups at both ends. The sampler should have a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler is at the selected water depth (e.g. Wildco 2.2L Water Sampler or an approved similar instrument).
- 4.5.7 Water samples for suspended solids measurement shall be collected in high density polythene bottles, packed in ice (chilled to 4 °C without being frozen), and delivered to the laboratory as soon as possible after collection.

## Water Depth Detector

- 4.5.8 A portable, battery-operated echo sounder should be used for determining water depth at each designated monitoring station.
- 4.5.9 For shallow water (less than 1 m deep), a portable water depth ruler in a range 0 – 7m should be used to measure water depth.

## Monitoring Position Equipment

- 4.5.10 A hand-held or boat-fixed digital Global Positioning System (GPS) or other equivalent instrument of similar accuracy shall be provided and used during water quality monitoring to ensure the water sampling locations are correct during water quality monitoring work.

### Water Sampling Equipment

- 4.5.11 A transparent PVC or glass cylinder, which has a volume of not less than 2 litres and can be sealed at both ends with cups, should be equipped with a positive latching system. During the water sampling, a messenger is released to trigger the closure of the water sampler at suitable water depth.
- 4.5.12 For sampling location with shallow water depth, plastic bucket would be used instead.

### Calibration of *In-situ* Instruments

- 4.5.13 All *in-situ* monitoring instruments should be checked, calibrated and certified by a laboratory accredited under HOKLAS or another international accreditation scheme before use, and subsequently re-calibrated at 3-monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter should be carried out before measurement at each monitoring location.

### Back-up Equipment

- 4.5.14 Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment shall also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 4.5.15 **Table 4.3** summarizes the equipment used in the water quality monitoring programme. Copies of the calibration certificates of multi-parameter water quality monitoring system are shown in **Appendix 4.1**.

**Table 4.3 Water Quality Monitoring Equipment**

Equipment	Model	Quantity	Serial No.	Parameter	Range	Accuracy
Water Sampler	Wildco 2.2L Water Sampler with messenger or plastic bucket (used in shallow water depth)	1	N/A	N/A	N/A	N/A
Multi-functional Water Quality Meter	YSI ProDSS (multi-parameters)	3	15M101091 22C106561 22D100436	Dissolved Oxygen (DO)	0 to 500%	<ul style="list-style-type: none"> <li>0 to 200%: <math>\pm 1\%</math> of reading</li> <li>200 to 500%: <math>\pm 8\%</math> of reading</li> </ul>
					0 to 50 mg/L	<ul style="list-style-type: none"> <li>0 to 20 mg/L: <math>\pm 0.1</math> mg/L or 1% of reading, whichever is greater</li> <li>20 to 50 mg/L: <math>\pm 8\%</math> of reading</li> </ul>
				Temperature	-5 to 50 °C	$\pm 0.2$ °C

Equipment	Model	Quantity	Serial No.	Parameter	Range	Accuracy
				pH	0 to 14 pH units	±0.2 pH units
				Turbidity	0 to 4000 NTU	<ul style="list-style-type: none"> <li>0 to 999 NTU: 0.3 NTU or ±2% of reading, whichever is greater</li> <li>1000 to 4000 NTU: ±5% of reading</li> </ul>
Water Depth Ruler	鼎峯 0708	1	NA*	Water depth	0 – 7 m (Used for water depth less than 1 m)	±0.01 m
Positioning Equipment	Garmin (GPSmap 78s)	1	1WL223754	Positioning	N/A	GPS: ±1m

## 4.6 Monitoring Methodology

- 4.6.1 Water samples were collected at an appropriate water depth using a sealable transparent PVC or glass cylinder. For locations with shallow water depth, a plastic bucket was used as an alternative. 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.
- 4.6.2 Multi-functional water quality meters were checked, calibrated and certified by Quality Pro Test-Consult Limited (HOKLAS reg no. 259) before use, and would be subsequently re-calibrated at 3-monthly intervals throughout all stages of the water quality monitoring. Responses of sensors and electrodes should be checked with certified standard solutions before each use. Wet bulb calibration for a DO meter should be carried out before measurement at each monitoring location. Sufficient stocks of spare parts should be maintained for replacements when necessary. Backup monitoring equipment should also be made available so that monitoring can proceed uninterrupted even when some equipment is under maintenance, calibration, etc.
- 4.6.3 Water samples for suspended solids measurement were collected in high density polythene bottles, packed in ice (chilled to 4 °C being frozen), and delivered to the laboratory as soon as possible after collection.
- 4.6.4 Water sampling equipment deployed during the monitoring programme was decontaminated by manual washing and rinsed with clean distilled water after each sampling location.
- 4.6.5 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.

## Laboratory Analytical Methods

- 4.6.6 Analysis of SS was carried out by a HOKLAS accredited laboratory (Acumen Laboratory and Testing Limited). At least two replicate samples from each independent sampling event were collected for the SS measurement. Sufficient water samples (about 3,000 mL) were collected at the monitoring stations for carrying out the laboratory SS determination. The analytical method for suspended solids is presented in **Table 4.4**.

**Table 4.4 Method for Laboratory Analysis for Water Samples**

Parameters	Analytical Method	Detection Limit
Suspended Solid (SS)	APHA 2540D <sup>(1)</sup>	1 mg/L

Note:

(1) APHA American Public Health Association Standard Methods for the Examination of Water and Wastewater.

## **4.7 QA/QC Requirements**

### Decontamination Procedures

- 4.7.1 Water sampling equipment used during the course of the monitoring process was decontaminated by manual washing and rinsed with distilled water after each sampling event. All of the disposable components/ accessories were discarded after sampling.

### Sampling Management and Supervision

- 4.7.2 All sampling bottles were labelled with the sample ID numbers (including the sampling station), and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible. All the collected samples were stored in a cool box to keep the temperature less than 4 °C 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.

### Quality Control Measures for Sample Testing

- 4.7.3 Quality control of laboratory analysis of water samples was performed by Acumen Laboratory and Testing Limited for every batch of 20 samples:
- A minimum of 1 laboratory method blank was analyzed;
  - A minimum of 1 sample duplicate was analyzed; and
  - A minimum of 1 sample matrix spike was analyzed.

## **4.8 Action and Limit Level for Water Quality Monitoring**

- 4.8.1 The criteria of action and limit levels for water quality monitoring are defined in **Table 4.5**.

**Table 4.5 Action and Limit Levels for Water Quality**

Parameters	Action Level	Limit Level
DO in mg/L	< 5%-ile of baseline data	< 4 mg/L or < 1%-ile of baseline data
SS in mg/L	> 95%-ile of baseline data	> 99%-ile of baseline data
Turbidity in NTU	> 95%-ile of baseline data	> 99%-ile of baseline data
pH	Beyond the range 6.6 to 8.4	Beyond the range of 6.5 to 8.5

Notes:

- (1) For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limit.
- (2) For SS and turbidity, non-compliance of the water quality limit occurs when monitoring result is higher than the limit.
- (3) All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.

4.8.2 Based on the criteria listed in **Table 4.5**, the action and limit levels for water quality are determined in **Table 4.6**.

**Table 4.6 Action and Limit Levels of Water Quality**

Fresh Water System	Monitoring Station ID	Parameters	Action	Limit
TSW Main Channel and its tributaries	D2a	DO in mg/L	5.4	4 <sup>(1)</sup>
		SS in mg/L	14.0	15.6
		Turbidity in NTU	11.6	11.7
		pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
Tuen Mun River	D3	DO in mg/L	4.9	4 <sup>(2)</sup>
		SS in mg/L	59.4	67.4
		Turbidity in NTU	10.8	11.1
		pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
Upstream / Tributaries of Shan Pui River <sup>(4)</sup>	D5a	DO in mg/L	5.2	4 <sup>(3)</sup>
		SS in mg/L	27.5	264.3
		Turbidity in NTU	19.3	19.4
		pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
	D6a	DO in mg/L	6.9	4 <sup>(4)</sup>
		SS in mg/L	16.3	18.3
		Turbidity in NTU	14.8	14.9
		pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5

Notes:

- (1) The 1%-ile of baseline DO data at D2a is 5.4 mg/L, which is higher than 4 mg/L. Thus, DO concentration of 4 mg/L, which is in line with the Water Quality Objectives, is adopted as the limit level.
- (2) The 1%-ile of baseline DO data at D3 is 4.8 mg/L, which is higher than 4 mg/L. Thus, DO concentration of 4 mg/L, which is in line with the Water Quality Objectives, is adopted as the limit level.
- (3) The 1%-ile of baseline DO data at D5a is 5.1 mg/L, which is higher than 4 mg/L. Thus, DO concentration of 4 mg/L, which is in line with the Water Quality Objectives, is adopted as the limit level.
- (4) The 1%-ile of baseline DO data at D6a is 6.9 mg/L, which is higher than 4 mg/L. Thus, DO concentration of 4 mg/L, which is in line with the Water Quality Objectives, is adopted as the limit level.

## 4.9 Results and Observations

- 4.9.1 All water quality monitoring was conducted as scheduled in the reporting period. The water quality monitoring schedule for this reporting period is shown in **Appendix 1.4**. The monitoring results and graphical presentation of water quality monitoring at the monitoring stations are shown in **Appendix 4.2**.
- 4.9.2 All water quality monitoring was conducted as scheduled in the reporting period. No Action or Limit Level exceedance was recorded during impact water quality monitoring in the reporting period. Summary of exceedance records are shown in **Table 4.7**.

**Table 4.7 Summary of Exceedance Records of Water Quality Monitoring in related to the works contracts in the reporting period**

Parameter	No. of exceedances		Total No. exceedances	No. of non-project related exceedances		Total No. of non-project related exceedances	No. of exceedance related to the Project		Total No. of exceedance related to the Project
	AL	LL		AL	LL		AL	LL	
Dissolved Oxygen	0	0	0	0	0	0	0	0	0
Turbidity	0	0	0	0	0	0	0	0	0
Suspended Solids	0	0	0	0	0	0	0	0	0
pH	0	0	0	0	0	0	0	0	0

## 4.10 Event and Action Plan

- 4.10.1 Should any non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix 4.4** shall be followed. Investigation of the exceedances of environmental quality performance limits should be conducted, and the ET will immediately notify the IEC and EPD, as appropriate. The notification should be followed up with advice to the IEC and EPD on the results of the investigation, proposed actions and success of the action taken, with any necessary follow-up proposals.

## 5 Waste Management

5.1.1 Waste generated from the Project include inert construction and demolition (C&D) materials and non-inert C&D wastes in the reporting period. The summarized amount of waste generated by the construction works in related to the works contracts in the reporting period is shown in **Table 5.1** respectively. The cumulative waste flow table of the Project was presented in in **Appendix 5.1**.

**Table 5.1 Summary of Waste Generated by the Construction Works in related to the Works Contracts in the Reporting Period**

Month	Total Quantity Generated	Actual Quantalities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly				
		Hard Rock and Lage Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Carboard Packing	Plastics	Chemical Waste	Others e.g., general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
November 2024 <sup>(1)</sup>	59.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.21
December 2024 <sup>(2)</sup>	11.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.65
January 2025	0.26	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.04

Notes:

- (1) As the amount of Others e.g., general refuse generated by Contract 1 in November 2024 has been updated, the total quantity of waste generated by Contract 1 and Contract 2 in November 2024 has been updated accordingly.
- (2) As the amount of Others e.g., general refuse generated by Contract 1 and Contract 2 in December 2024 have been updated, the total quantity of waste generated by Contract 1 and Contract 2 in December 2024 have been updated accordingly.

5.1.2 Sorting of construction and demolition (C&D) materials was carried out on site. Sufficient numbers of receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were reused to minimize the disposal of C&D waste to public fill.

5.1.3 The Contractor is advised to minimize the wastes generated through recycling or reusing. All applicable mitigation measures stipulated in the Updated EM&A Manual (Apr 2022) and waste management plans will be fully implemented.



## 6 Ecology

### 6.1 Audit Requirements

- 6.1.1 With reference to the approved EIA Report, all sites of conservation importance are either located outside the proposed development area or retained in situ under the “Green Belt” (“GB”) zoning, except a small strip of “CA” comprising of 0.1 ha would be affected under the construction of slip road under DP12. Mitigation measures recommended in the EIA Report as the audit requirements including, preservation of existing bat species, installation of decorative screen hoarding and management of construction activities and facilities are summarized in **Appendix 1.3**.

### 6.2 Results and Observations

- 6.2.1 As the reporting period does not fall in the breeding season (i.e. between March and August) of the ardeids, no site inspection on ecological impact was carried out at Sites 3-32, 3-33, 3-37, 3-39 and 3-40.
- 6.2.2 During the reporting period, bat roost survey for precautionary check were carried out for the works contracts. In the reporting period, bat roost survey for Contract 2 was carried out on 10 and 24 January 2025. The details of the bat roost survey at Contract 2 during the reporting period are summarized in **Table 6.1**.

**Table 6.1 Schedule for Bat Roost Survey at Contract 2 during the Reporting Period**

Survey Date	Findings observed during the survey
10-Jan-25	No bat roost was identified.
24-Jan-25	No bat roost was identified.

- 6.2.3 The schedule of the upcoming bat roost survey at Contract 2 in the next reporting period are summarized in **Table 6.2**.

**Table 6.2 Upcoming Schedule for Bat Roost Survey at Contract 2 in the Next Reporting Period**

	Survey Date <sup>(1)</sup>
1 <sup>st</sup> Survey	5-Feb-25
2 <sup>nd</sup> Survey	17-Feb-25

Notes:

- (1) The schedule may be updated depends on tell-felling progress or adverse weather condition.

## 7 Landscape and Visual

### 7.1 Audit Requirements

- 7.1.1 According to the Updated EM&A Manual (Apr 2022), site audits should be undertaken at least once every two weeks during the construction period, by a Registered Landscape Architect (RLA). Particularly, to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. Mitigation measures recommended in the EIA Report as the audit requirements including, preservation of existing vegetation, transplanting of affected trees, compensatory tree planting, control of night-time lighting glare, erection of decorative screen hoarding and management of construction activities and facilities are summarized in **Appendix 1.3**.

### 7.2 Results and Observations

- 7.2.1 Bi-weekly landscape and visual site audits at Contract 1 were carried out by a Registered Landscape Architect (RLA) on 6, 15 and 27 January 2025. Bi-weekly landscape and visual site audits at Contract 2 were carried out by a Registered Landscape Architect (RLA) on 6, 16 and 27 January 2025. No particular observation was recorded in this reporting period.

### 7.3 Event and Action Plan

- 7.3.1 Should any non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix 7.1** shall be followed.

## 8 Environmental Site Inspection and Audit

### 8.1 Implementation Status of Environmental Mitigation Measures

8.1.1 Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections at Contract 1 were carried out on 3, 10, 15, 24 and 27 January 2025. Site inspections at Contract 2 were carried out on 3, 10, 16, 24 and 27 January 2025.

8.1.2 Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections at Contract 1 and during the reporting period are summarized in **Table 8.1**.

**Table 8.1 Site Observations at Contract 1 during the reporting period**

Date	Key Observations/ Reminders	Follow-up Action
3 January 2025	No major environmental deficiency was observed during the site inspection.	Nil
10 January 2025	Observation: 1. Water spraying should be regularly provided on haul road. 2. Dusty materials should be properly covered.	Rectified Measure(s) for Observation: 1. Water spraying had been regularly provided on haul road. 2. Dusty materials had been properly covered.
15 January 2025	Reminder: 1. The NRMM label should be replaced with a proper one. Observation: 1. Stockpile of over 20 bags of cement should be covered by impervious sheeting.	Rectified Measure(s) for Observation: 1. Stockpile of over 20 bags of cement had been covered by impervious sheeting.
24 January 2025	No major environmental deficiency was observed during the site inspection.	Nil
27 January 2025	Reminder: 1. Water spraying should be regularly provided on haul road for dust suppression.	Nil

8.1.3 Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections at Contract 2 and during the reporting period are summarized in **Table 8.2**.

**Table 8.2 Site Observations at Contract 2 during the reporting period**

Date	Key Observations/ Reminders	Follow-up Action
3 January 2025	No major environmental deficiency was observed during the site inspection.	Nil
10 January 2025	Reminder: 1. Water spraying should be regularly provided. Observation: 1. Dusty materials should be properly covered.	Rectified Measure(s) for Observation: 1. Dusty materials had been properly covered.
16 January 2025	Reminder: 1. Water spraying should be regularly provided on haul road.	Nil
24 January 2025	No major environmental deficiency was observed during the site inspection.	Nil

27 January 2025

No major environmental deficiency was observed during the site inspection. Nil

- 8.1.4 According to the EIA Study Report, Environmental Permit, contract documents and Updated EM&A Manual (Apr 2022), the mitigation measures detailed in the documents should be implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix 1.3**.

## 9 Summary of Monitoring Exceedance, Complaints, Notification of Summons and Prosecutions

### 9.1 Summary of Exceedance

- 9.1.1 No Action Level or Limit Level exceedance was recorded for air quality monitoring in the reporting period.
- 9.1.2 No Action Level or Limit Level exceedance was recorded for construction noise monitoring in the reporting period.
- 9.1.3 All water quality monitoring was conducted as scheduled in the reporting period. No Action or Limit Level exceedance was recorded during impact water quality monitoring in the reporting period.

### 9.2 Summary of Environmental Non-Compliance

- 9.2.1 No environmental non-compliance was recorded in the reporting period.

### 9.3 Summary of Environmental Complaint

- 9.3.1 No environmental complaint was received in the reporting period. The Cumulative Complaint Log is presented in **Appendix 9.1**.

### 9.4 Summary of Environmental Summon and Successful Prosecution

- 9.4.1 There was no successful environmental prosecution or notification of summons received since the Project commencement. The Cumulative Log for environmental summon and successful prosecution is presented in **Appendix 9.1**.

# 10 Future Key Issues

## 10.1 Works and Potential Environmental Issues in the next Reporting Period

10.1.1 The Impact Monitoring Schedule for the Project for the next reporting period is presented in **Appendix 10.1**.

10.1.2 Works to be undertaken in the next reporting period are summarized below, and in **Figure 1.2** and **Figure 1.3** respectively:

### Contract 1

- Caring Visit;
- Tree Survey;
- Site Appraisal;
- Underground Utility Detection;
- Ground Investigation Works;
- Realign of Bar Fencing;
- Demolition Works;
- Utilities Laying Works;
- Construction of CLC Footing;
- Demolition of Existing Height Restriction Gantry and Footing at Part T.

### Contract 2

- Tree Felling;
- Ground Investigation Works;
- Tree Transplant;
- Earthworks;
- Piezometer / Standpipe Installation;
- Site Clearance and Tree Felling at part E;
- Site Office Setup;
- Preparation of TTA for pipe laying;
- Pipe laying.

10.1.3 Potential environmental impacts arising from the above construction activities are mainly associated with construction noise impact, water quality impact, ecological impact, waste management, and landscape and visual.

## 10.2 Recommendation

10.2.1 The key environmental mitigation measures for the Project in the coming reporting period expected to be associated with the construction activities include:

### Dust

- Regular watering to reduce dust emissions from exposed site surface;
- Stockpile of dusty materials shall be covered entirely by impervious sheeting;
- Provide vehicles washing facilities at all site exits to wash away any dusty materials from vehicle body;
- NRMM Labels should be displayed on the applicable equipment on site by the Contractor;
- Provision of water sprinklers along the haul road for dust suppression.

### Noise

- Only well-maintained plant should be operated on-site, and plant should be maintained regularly during the construction programme; and
- Quality Powered Mechanical Equipment (QPME) should be adopted as far as possible.

### Water Quality

- No effluent discharge would be allowed before acquired the effluent discharge license;
- Surface run-off from construction sites should be discharged into dedicated discharge point via adequately designed sand/ silt removal facilities;
- Channels/ earth bunds/ sandbags barriers should be provided on site to properly direct stormwater to silt removal facilities;
- Silt removal facilities, channels and manholes should be maintained, and the deposited silt and grit should be removed regularly;
- Open stockpiles of construction materials on sites should be covered with tarpaulin or similar fabric during rainstorms; and
- Perimeter channels should be provided on site boundaries where necessary to intercept stormwater run-off from outside the site so that it will not wash across the site.

### Waste Management

- Provision of sufficient waste disposal points and regular collection of waste;
- Regular cleaning and maintenance programme for drainage system; and
- Chemical containers shall be stored with drip tray underneath.

### Landscape and Visual

- Construction activities shall be carefully designed to minimize impact on existing retained trees

10.2.2 The tentative schedule of regular air quality, construction noise and water quality monitoring in the next reporting period is presented in **Appendix 10.1**. The regular impact air quality, noise and water quality monitoring will be conducted at the same monitoring locations in the next reporting period.

# 11 Conclusions

## 11.1 Conclusion

- 11.1.1 This 3<sup>rd</sup> Monthly EM&A Report presents the EM&A works at Contract 1 and Contract 2 under the Project during the reporting period from 1 to 31 January 2025 in accordance with the Updated EM&A Manual (Apr 2022).
- 11.1.2 No Action Level or Limit Level exceedance was recorded for air quality monitoring in the reporting period.
- 11.1.3 All water quality monitoring was conducted as scheduled in the reporting period. No Action or Limit Level exceedance was recorded during impact water quality monitoring in the reporting period.
- 11.1.4 Environmental site inspections were conducted at Contract 1 on 3, 10, 15, 24 and 27 January 2025. Environmental site inspections were conducted at Contract 2 out on 3, 10, 16, 24 and 27 January 2025.
- 11.1.5 No environmental complaint was received in the reporting period.
- 11.1.6 No notification of summons and prosecution was received in the reporting period.
- 11.1.7 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.
- 11.1.8 No change to the EM&A programme was made in this reporting period.

## 11.2 Comments/ Recommendations

- 11.2.1 The proposed mitigation measures were properly implemented and were considered effective and efficient in pollution control.

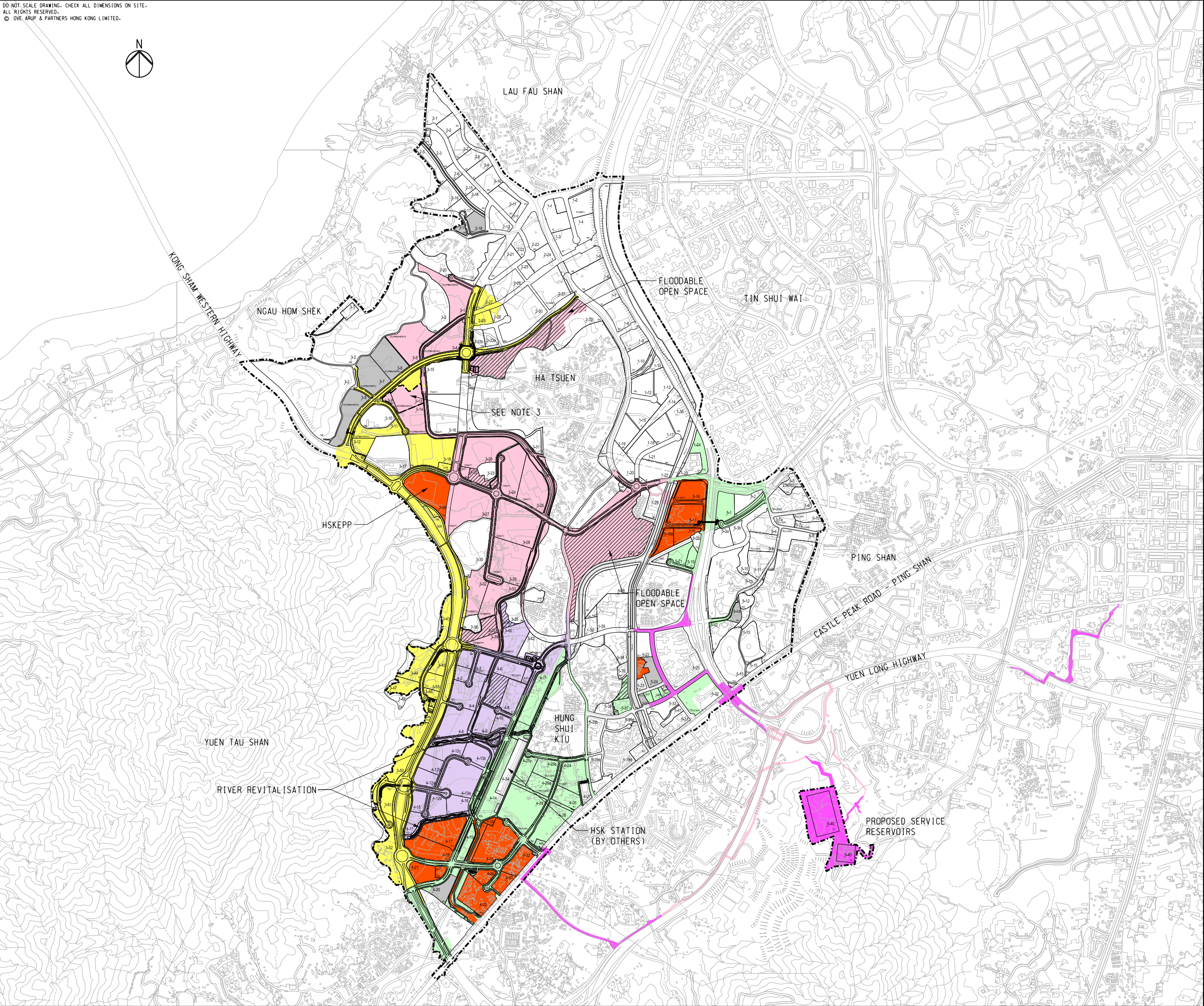


## Figures

**Figure 1.1      General Site Location Plan**



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LEGEND

- CONTRACT PACKAGE 1
- CONTRACT PACKAGE 2
- CONTRACT PACKAGE 3
- CONTRACT PACKAGE 4
- CONTRACT PACKAGE 5
- CONTRACT PACKAGE 6
- STAGE 1 WORKS /  
ADVANCE WORKS PHASE 1 & 2  
(BY OTHERS)
- OPEN SPACE WORKS /  
FLOODABLE OPEN SPACE WORKS  
UNDER CONTRACT PACKAGE 7

NOTES

- EXTENT ARE INDICATIVE ONLY AND EXACT BOUNDARIES  
FOR EACH CONTRACT ARE SUBJECT TO REFINEMENT.
- SITE FORMATION WORKS FOR SITE 4-19, SITE 4-35,  
ROAD L12 (PART), ROAD L13, ROAD L14, ROAD L15,  
ROAD D6 AND ROAD D8 TO BE IMPLEMENTED UNDER  
CONTRACT 1.
- INTERIM DRAINAGE DETENTION POND IN SITE 3-13  
TO BE IMPLEMENTED UNDER CONTRACT 5 AND THE ENTIRE  
SITE 3-13 WILL BE FORMED BY CONTRACT 6.

G	SEVENTH ISSUE	PY	09/24
F	SIXTH ISSUE	SL	08/24
E	FIFTH ISSUE	PY	07/24
D	FOURTH ISSUE	PY	06/24
C	THIRD ISSUE	PY	02/24
B	SECOND ISSUE	PY	01/24
A	FIRST ISSUE	PY	11/22
Rev	Description	By	Date

Consultant

**ARUP**

Project Title

Agreement No. CE 1/2020 (CE)  
Hung Shui Kiu / Ha Tsuen  
New Development Area Package A  
Works for Second Phase Development  
– Design and Construction

Drawing title

HSK / HT NDA  
SECOND PHASE DEVELOPMENT  
OVERALL INFRASTRUCTURE  
LAYOUT PLAN

Drawing no.	278463/GEN/031	Rev.	G
Drawn	Date	Checked	Approved
RY	11/22	KKC	DOP
Scale	1:10000 @ A1	Status	PRELIMINARY

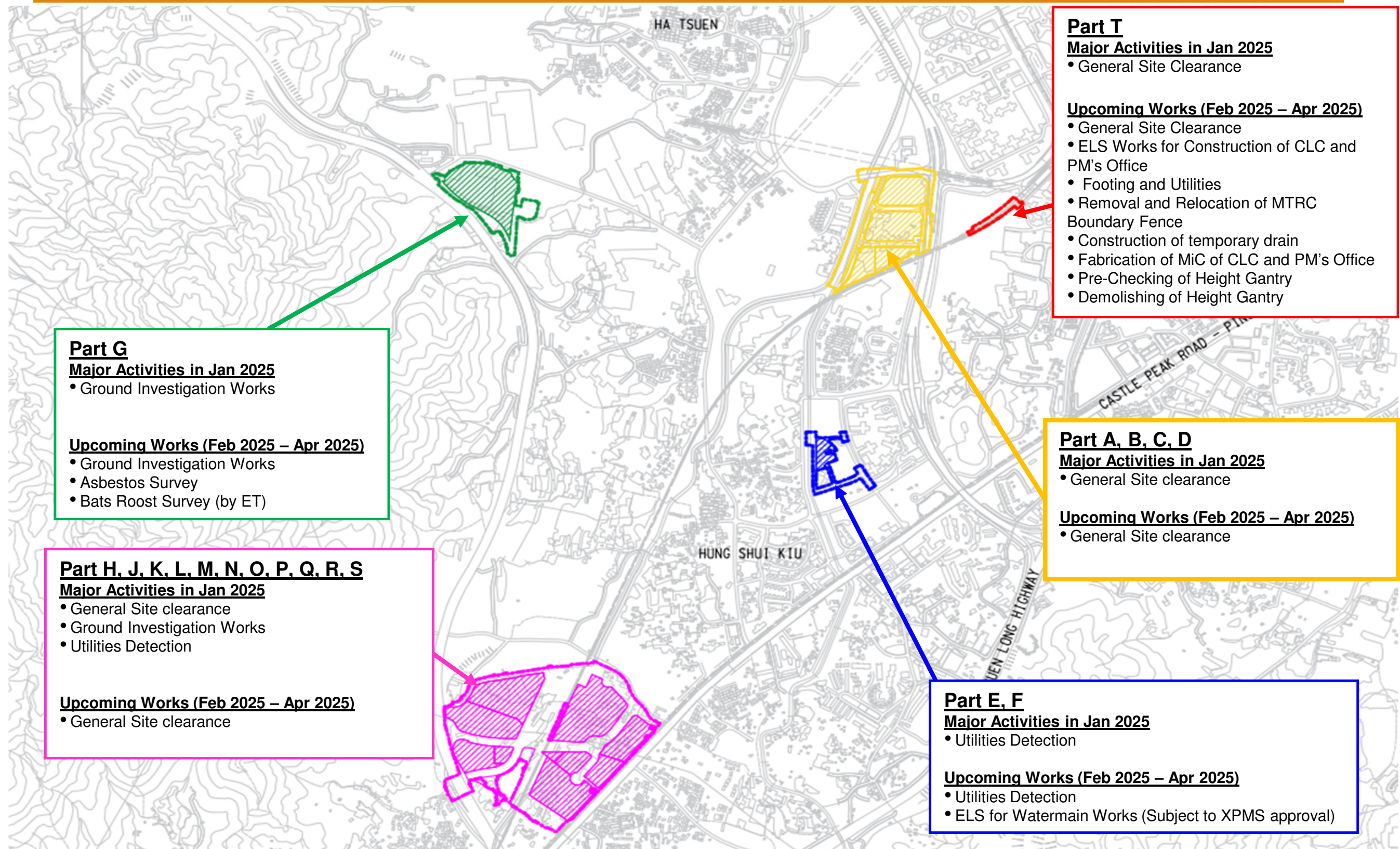
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Civil Engineering and  
Development Department



**Figure 1.2      Annotated Site Drawing Presenting the Construction Activities Conducted at Contract 1 in the Reporting Period**

Contract No. YL/2023/01  
Hung Shui Kiu / Ha Tsuen New Development Area Second Phase Development – Contract 1 -  
Site Formation and Engineering Infrastructure Works



**Figure 1.3      Annotated Site Drawing Presenting the Construction Activities Conducted at Contract 2 in the Reporting Period**



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836000 N

816000 E

LAU FAU SHAN

TIN SHUI WAI

NGAU HOM SHEK

HA TSUEN

Handover-ed Site area are highlighted in Pink

834000 N

Construction activities undertaken in  
February 2025 - April 2025

- General Site Clearance
- Tree Felling
- Ground Investigation
- Site Office Setup

SHEET 16

SHEET 11

SHEET 10

SHEET 9

SHEET 8

SHEET 7

PING SHAN

CASTLE PEAK ROAD - PING SHAN

INSET A  
(SEE SHEET 2)

SHEET 2

SHEET 1

YUEN TAU SHAN

HUNG SHUI KIU

Tentative Handover Date:  
6 Nov 2025

SHEET 15

SHEET 14

SHEET 13

Construction activities undertaken in  
February 2025 - April 2025

- Tree Felling
- Earthworks
- Piezometer / Standpipe Installation
- Ground Investigation

SHEET 12

Construction activities undertaken in  
February 2025 - April 2025

- Preparation of TTA for pipe laying
- Pipe laying

Tentative Handover Date:  
7 Jul 2026

SHEET 6

SHEET 3

SHEET 4

Construction activities undertaken in  
January 2025

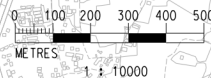
- Tree Felling
- Earthworks
- Piezometer / Standpipe Installation
- Ground Investigation

832000 N

816000 E

816000 E

820000 E



LEGEND

--- BOUNDARIES OF THE SITE

00	TENDER ISSUE	DT	08/23
Rev	Description	By	Date

Consultant

ARUP

Project Title  
Contract No. YL/2023/02  
Hung Shui Kiu/Ha Tsuen  
New Development Area  
Second Phase Development - Contract 2 -  
Fresh Water Service Reservoir and  
Associated Mainlaying Works

Drawing title  
OVERALL LAYOUT PLAN

Drawing no.	282748/C2/GEN/1100	Rev.	00
Drawn MAN	Date 05/23	Checked	Approved DVC
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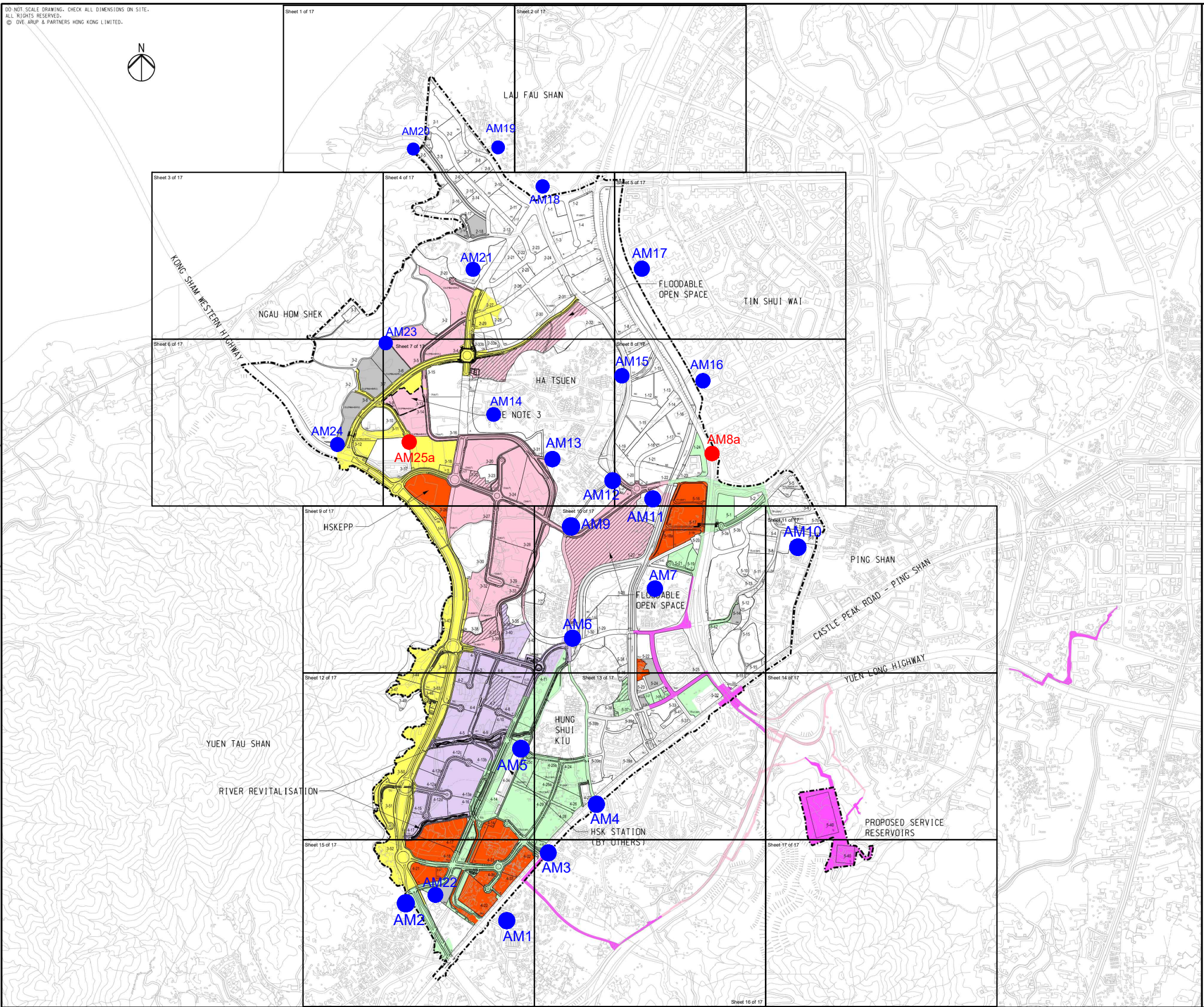
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Civil Engineering and  
Development Department



**Figure 2.1      Impact Air Quality Monitoring Locations**



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Legends:

- Contract 1
- Contract 2
- Contract 3
- Contract 4
- Contract 5
- Contract 6
- Stage 1 Works / Advance Works Phase 1&2 (By others)

Note:  
The Layout of Contract 7 is subject to review and is not shown in this drawing

- Designated Monitoring Location
- Alternative Monitoring Location

No.	Revision/Issue	Date

Project Name:  
WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team



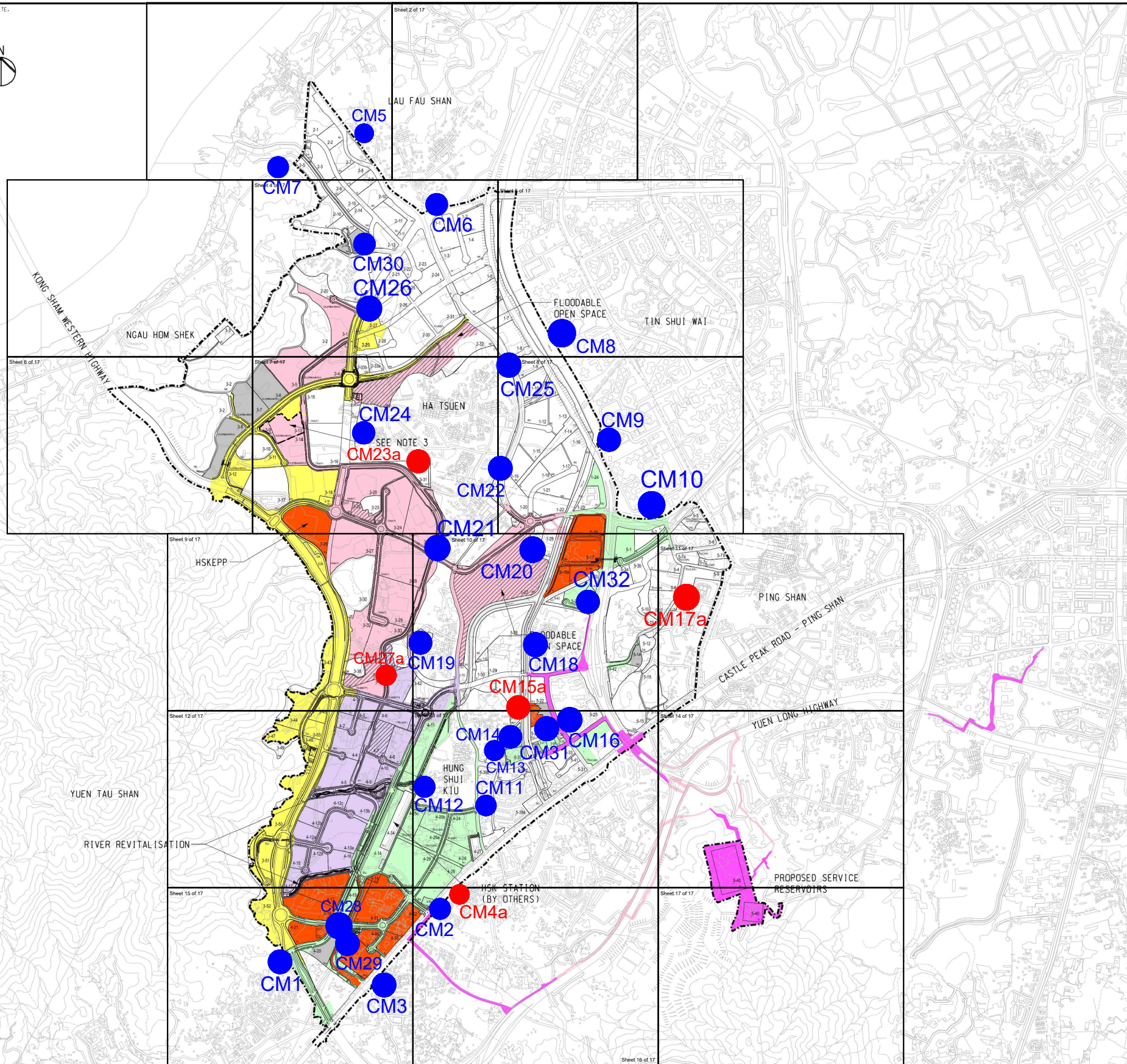
Drawing Title:  
Layout Plan of Air Quality Monitoring Locations (Overall)  
Date:  
30 July 2024  
Scale:  
Not to Scale



**Figure 3.1      Impact Noise Monitoring Locations**



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Legends:

- Contract 1
- Contract 2
- Contract 3
- Contract 4
- Contract 5
- Contract 6
- Stage 1 Works / Advance Works Phase 1&2 (By others)

Note:  
The Layout of Contract 7 is subject to review and is not shown in this drawing

- Designated Monitoring Location
- Proposed Alternative Monitoring Location

No.	Revision/Issue	Date

Project Name:  
WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team



Drawing Title:  
Layout Plan of Noise Monitoring Locations

Date:  
30 July 2024

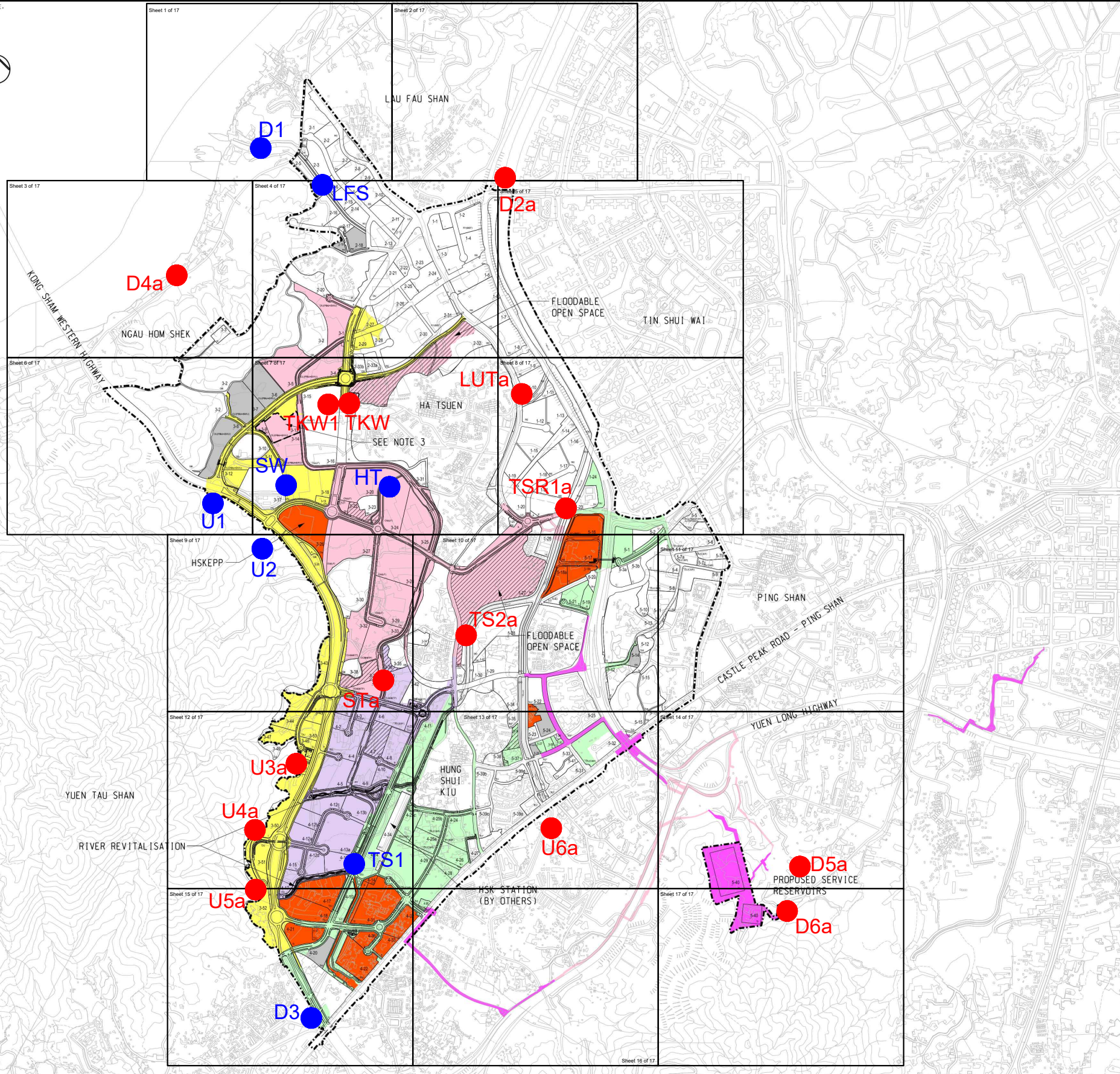
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**Figure 4.1      Impact Water Quality Monitoring Locations**



DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.  
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#### Legends:

- Contract 1
- Contract 2
- Contract 3
- Contract 4
- Contract 5
- Contract 6
- Stage 1 Works / Advance Works Phase 1&2 (By others)

#### Note:

The Layout of Contract 7 is subject to review and is not shown in this drawing

- Designated Monitoring Locations
- Proposed Alternative Monitoring Locations

No.	Revision/Issue	Date

Project Name:  
**WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team**



Drawing Title:  
Layout Plan of Water Quality Monitoring Locations (Overall)  
Date:  
30 July 2024  
Scale:  
Not to Scale

Printed by : rema vick  
Filename : J:\278000\278463 CE 1-2020 HSK-HT NDA-DC-05 InL Proj Data\05-03\_BMN02-Drawing\Civil\278463\_GEN\_031-A.dgn  
Date : 9/10/2024



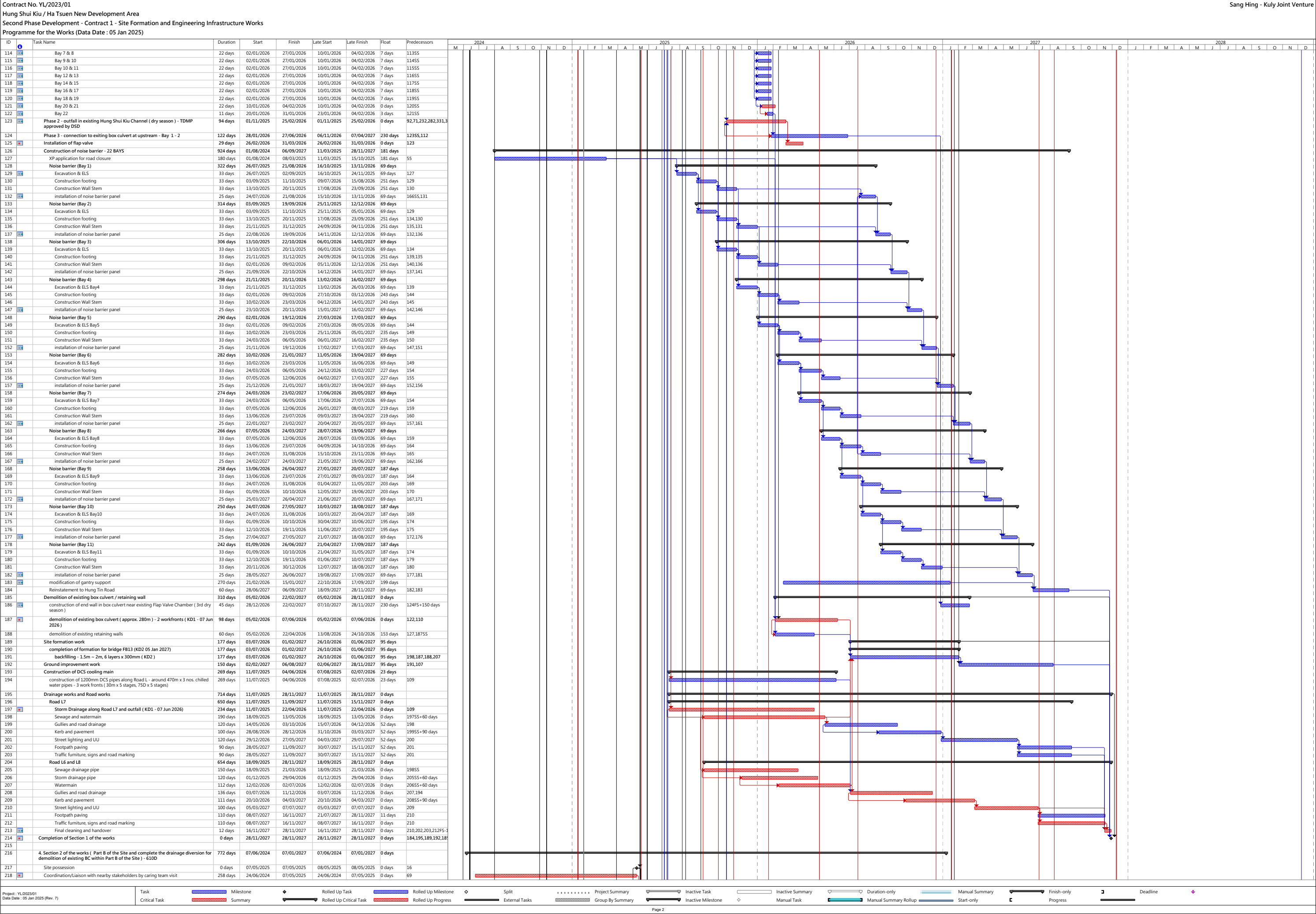
## **Appendices**

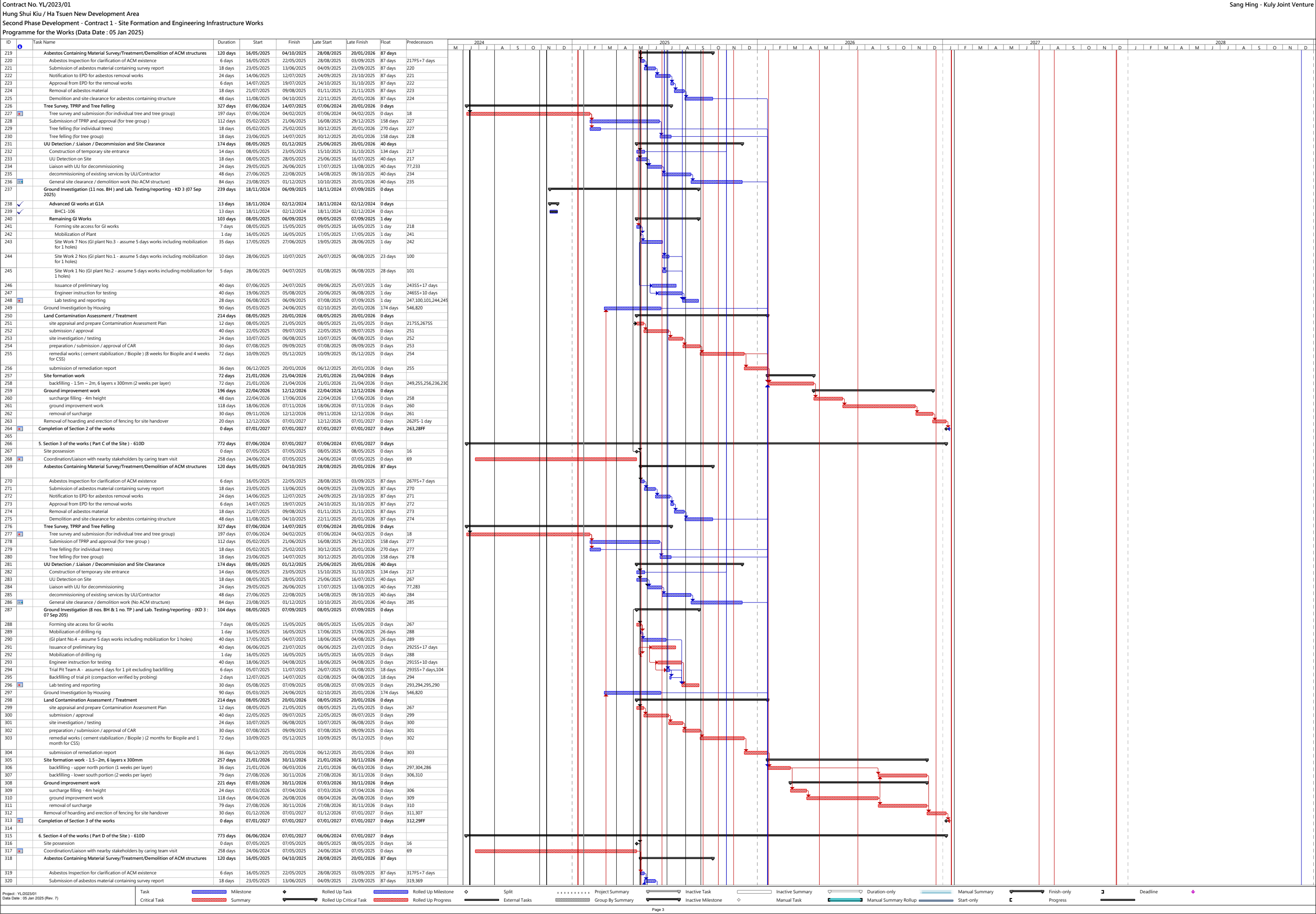
## **Appendix 1.1 Construction Programme**

## **Construction Programme for Contract 1**

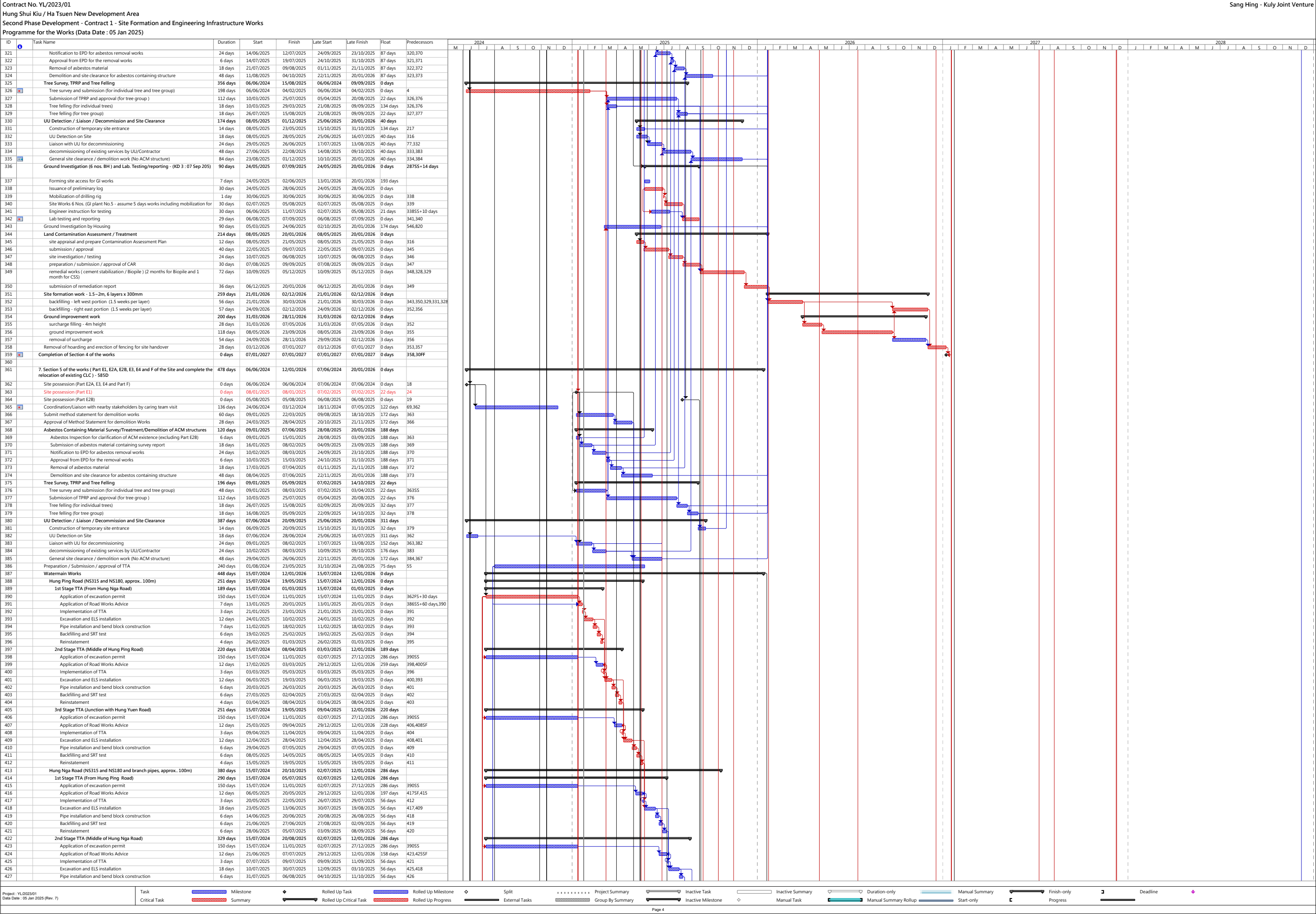


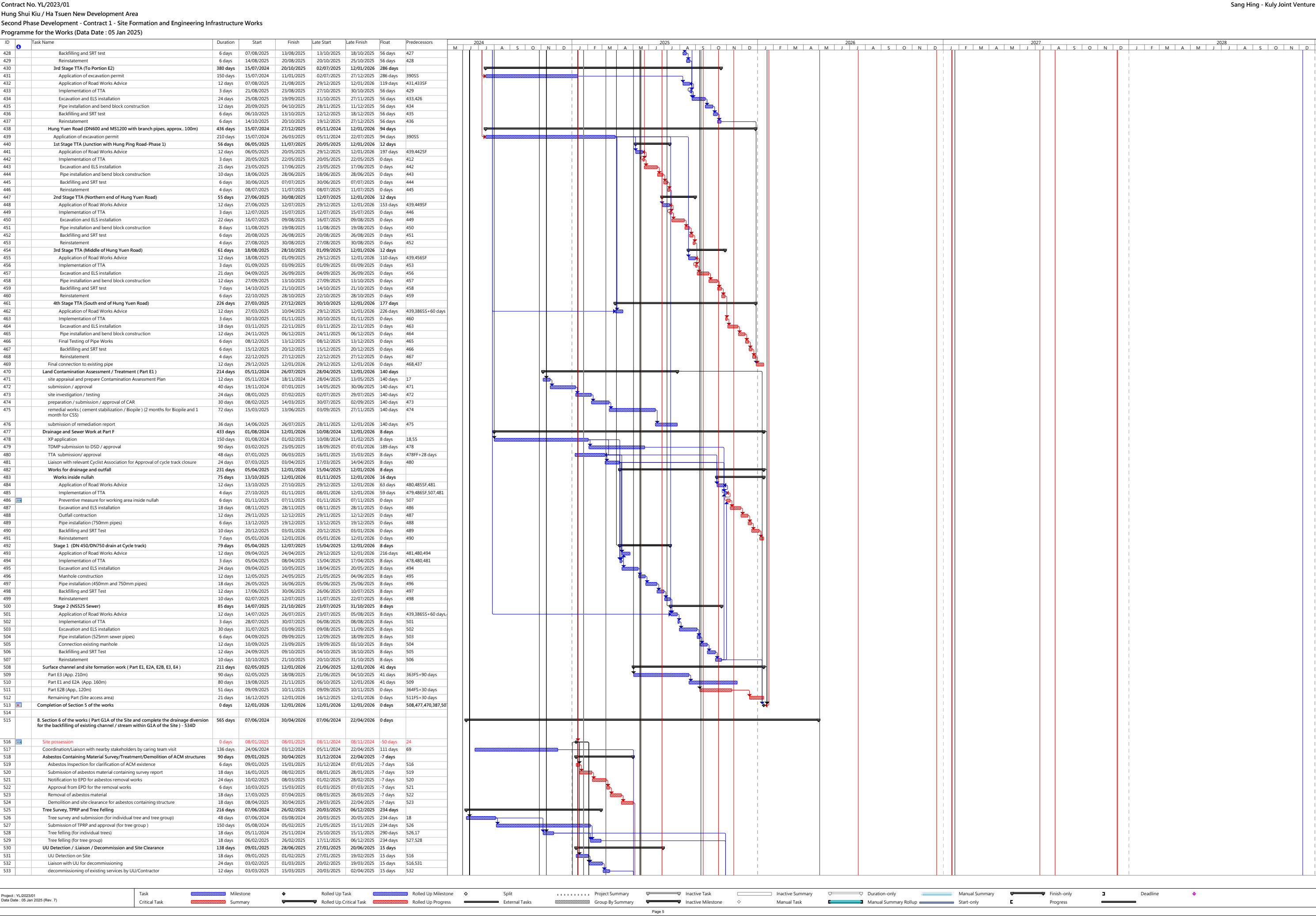
Project: VL2023/01 Data Date: 05 Jan 2025 (Rev. 7)	Task		Milestone		Rolled Up Task		Rolled Up Milestone		Split		Project Summary		Inactive Task		Inactive Summary		Duration-only		Manual Summary		Finish-only		Deadline	
	Critical Task		Summary		Rolled Up Critical Task		Rolled Up Progress		External Tasks		Group By Summary		Inactive Milestone		Manual Task		Manual Summary Rollup		Start-only		Progress			

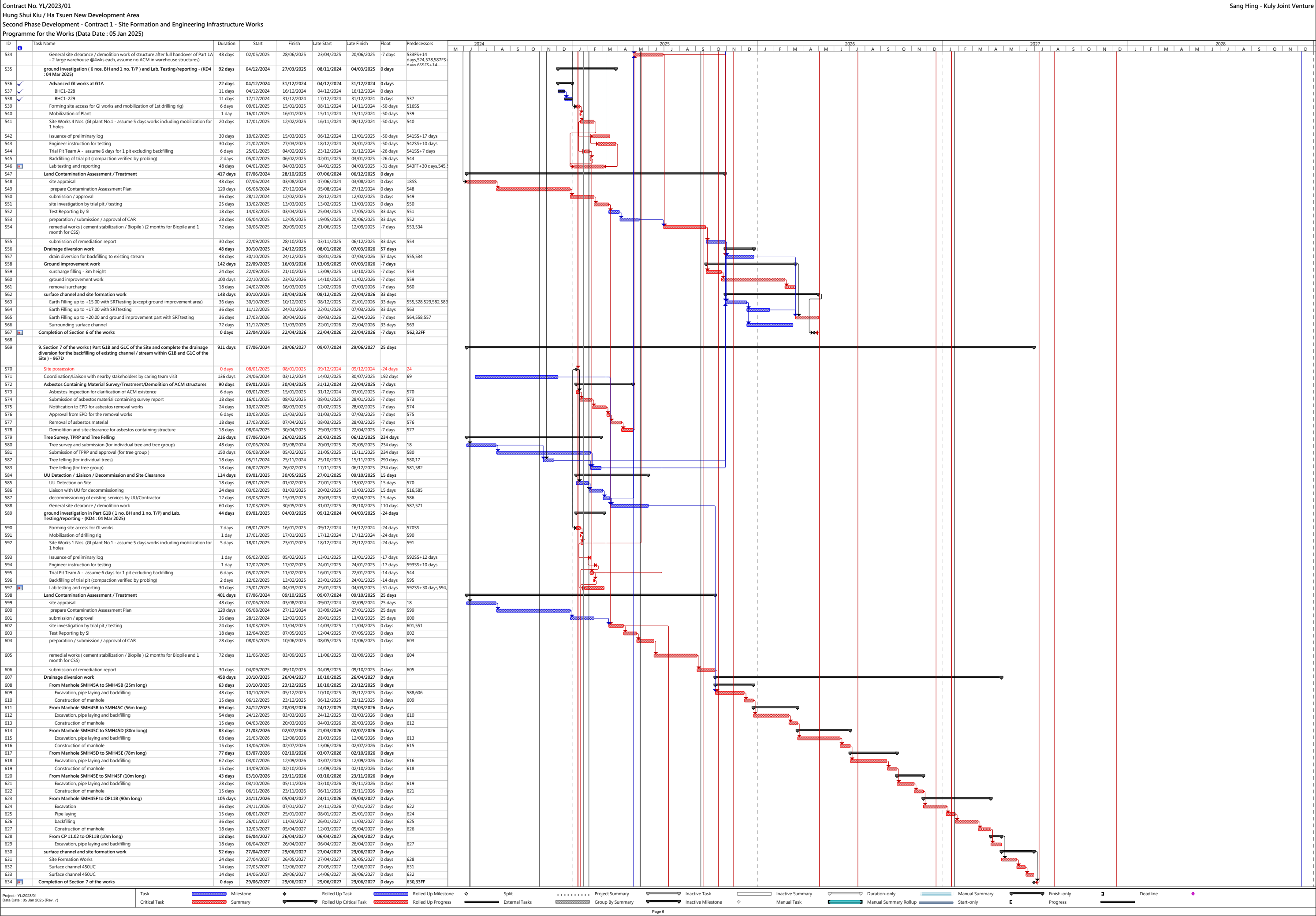


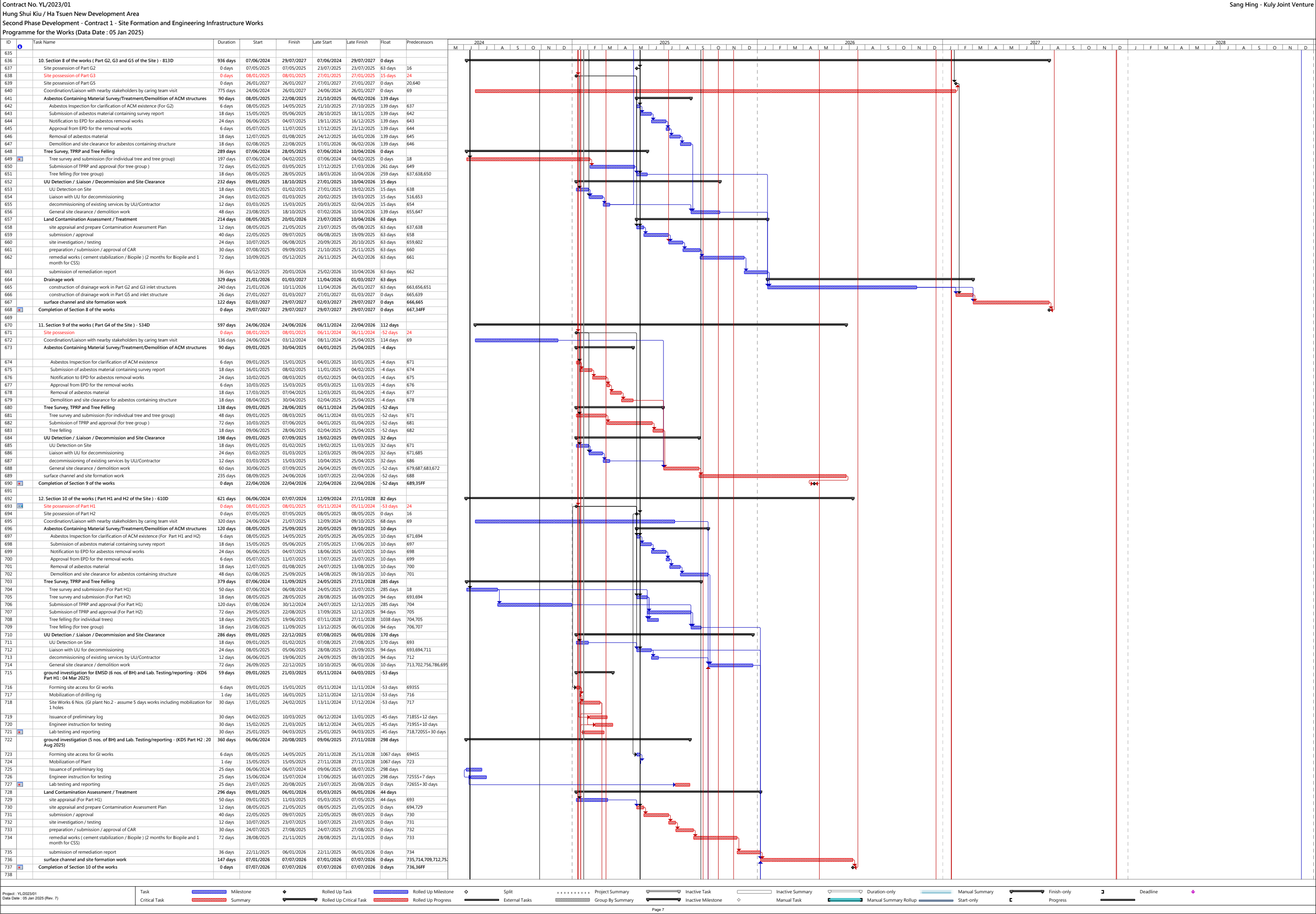




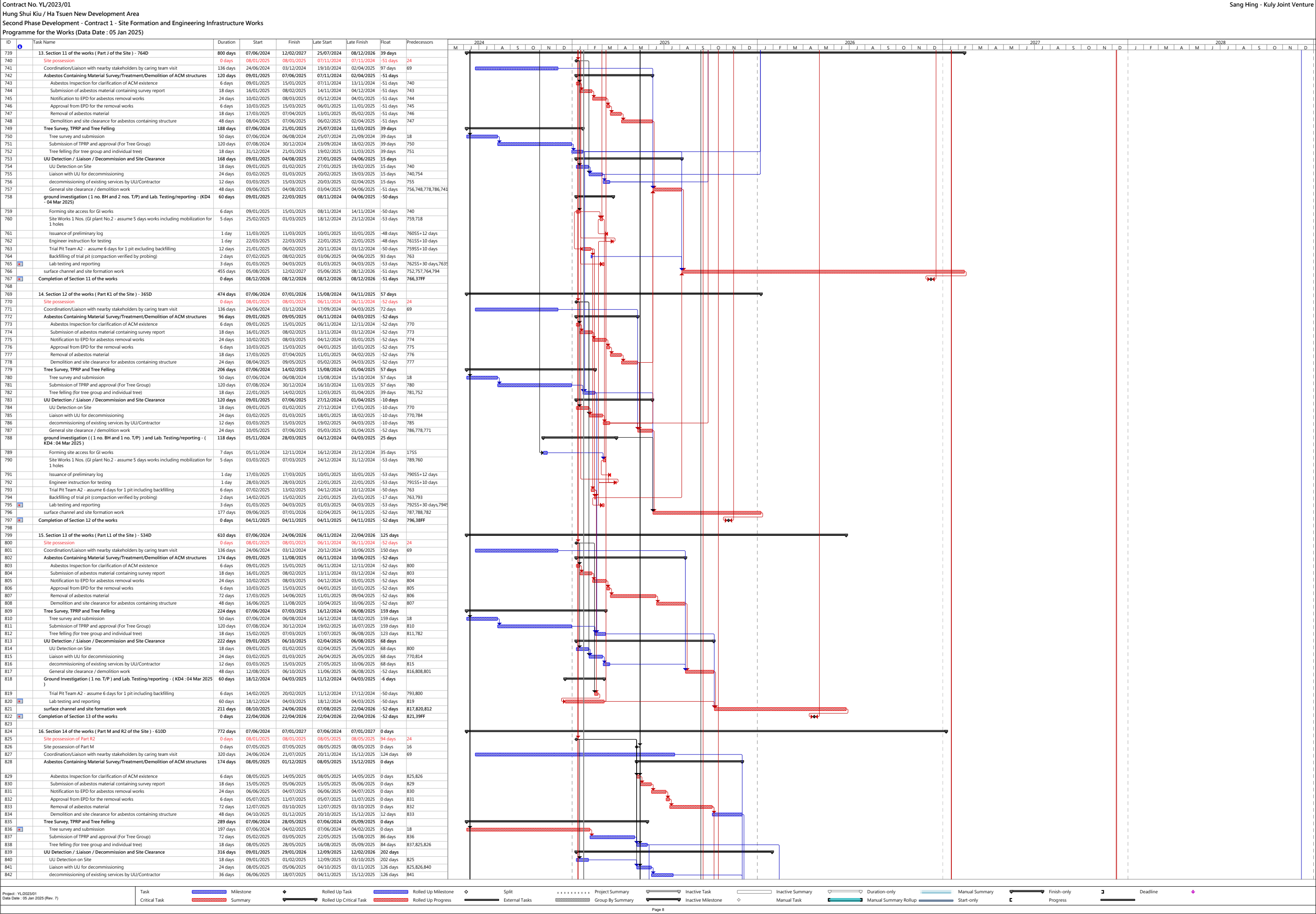














Contract No. YL/2023/01

Hung Shui Kiu / Ha Tsuen New Development Area

Second Phase Development - Contract 1 - Site Formation and Engineering Infrastructure Works

Programme for the Works (Data Date : 05 Jan 2025)

ID	Task Name	Duration	Start	Finish	Late Start	Late Finish	Float	Predecessors
843	General site clearance / demolition work	48 days	02/12/2025	29/01/2026	16/12/2025	12/02/2026	12 days	842,834,827
844	Land Contamination Assessment / Treatment	505 days	07/06/2024	12/02/2026	07/06/2024	12/02/2026	0 days	
845	site appraisal	197 days	07/06/2024	04/02/2025	07/06/2024	04/02/2025	0 days	18
846	Prepare of Contamination Assessment Plan	36 days	05/02/2025	18/03/2025	10/03/2025	23/04/2025	28 days	845
847	submission / approval	40 days	19/03/2025	09/05/2025	24/04/2025	12/06/2025	28 days	846,917,948,987
848	site investigation / testing	12 days	10/05/2025	23/05/2025	13/06/2025	26/06/2025	28 days	847,826
849	preparation / submission / approval of CAR	30 days	24/05/2025	28/06/2025	30/08/2025	03/10/2025	82 days	848
850	remedial works ( cement stabilization / Biopile ) ( 2 months for Biopile and 1 month for CSS)	72 days	04/10/2025	31/12/2025	04/10/2025	31/12/2025	0 days	849,833
851	submission of remediation report	36 days	02/01/2026	12/02/2026	02/01/2026	12/02/2026	0 days	850
852	surface channel and site formation work	267 days	13/02/2026	07/01/2027	13/02/2026	07/01/2027	0 days	851,843,838
853	Completion of Section 14 of the works	0 days	07/01/2027	07/01/2027	07/01/2027	07/01/2027	0 days	852,40FF
854								
855	17. Section 15 of the works ( Part N of the Site ) - 610D	772 days	07/06/2024	07/01/2027	07/06/2024	07/01/2027	0 days	
856	Site possession	0 days	07/05/2025	07/05/2025	08/05/2025	08/05/2025	0 days	16
857	Coordination/Liaison with nearby stakeholders by caring team visit	320 days	24/06/2024	21/07/2025	03/08/2024	29/08/2025	34 days	69
858	Asbestos Containing Material Survey/Treatment/Demolition of ACM structures	96 days	08/05/2025	29/08/2025	08/05/2025	29/08/2025	0 days	
859	Asbestos inspection for clarification of ACM existence	6 days	08/05/2025	14/05/2025	08/05/2025	14/05/2025	0 days	856
860	Submission of asbestos material containing survey report	18 days	15/05/2025	05/06/2025	15/05/2025	05/06/2025	0 days	859
861	Notification to EPD for asbestos removal works	24 days	06/06/2025	04/07/2025	06/06/2025	04/07/2025	0 days	860
862	Approval from EPD for the removal works	6 days	05/07/2025	11/07/2025	05/07/2025	11/07/2025	0 days	861
863	Removal of asbestos material	18 days	12/07/2025	01/08/2025	12/07/2025	01/08/2025	0 days	862
864	Demolition and site clearance for asbestos containing structure	24 days	02/08/2025	29/08/2025	02/08/2025	29/08/2025	0 days	863
865	Tree Survey, TPRP and Tree Felling	289 days	07/06/2024	28/05/2025	07/06/2024	25/09/2025	0 days	
866	Tree survey and submission	197 days	07/06/2024	04/02/2025	07/06/2024	04/02/2025	0 days	18
867	Submission of TPRP and approval (For Tree Group)	48 days	05/02/2025	01/04/2025	12/07/2025	05/09/2025	128 days	866
868	Tree felling (for tree group and individual tree)	18 days	08/05/2025	28/05/2025	06/09/2025	25/09/2025	102 days	867,856
869	UU Detection / Liaison / Decommission and Site Clearance	120 days	08/05/2025	25/09/2025	27/06/2025	25/09/2025	42 days	
870	UU Detection on Site	18 days	08/05/2025	28/05/2025	27/06/2025	18/07/2025	42 days	856
871	Liaison with UU for decommissioning	24 days	29/05/2025	26/06/2025	19/07/2025	15/08/2025	42 days	856,870
872	decommissioning of existing services by UU/Contractor	12 days	27/06/2025	11/07/2025	16/08/2025	29/08/2025	42 days	871
873	General site clearance / demolition work	24 days	30/08/2025	25/09/2025	30/08/2025	25/09/2025	0 days	872,864,909,943,975
874	Ground Investigation ( 1 no. BH and 1 no. T/P ) and Lab. Testing/reporting - ( KD3 : 07 Sep 2025)	104 days	08/05/2025	07/09/2025	11/06/2025	07/09/2025	28 days	
875	Forming site access for GI works	6 days	08/05/2025	14/05/2025	11/06/2025	17/06/2025	28 days	856
876	Mobilization of Plant	1 day	15/05/2025	15/05/2025	18/06/2025	18/06/2025	28 days	875
877	Site Works 1 Nos. (GI plant No.7 - assume 5 days works including mobilization for 1 holes	5 days	28/05/2025	03/06/2025	05/07/2025	10/07/2025	31 days	884
878	Issuance of preliminary log	5 days	12/06/2025	17/06/2025	21/07/2025	25/07/2025	32 days	877SS+12 days
879	Engineer instruction for testing	5 days	24/06/2025	28/06/2025	01/08/2025	06/08/2025	32 days	878SS+10 days
880	Trial Pit Team A3 - assume 6 days for 1 pit including backfilling	6 days	03/06/2025	09/06/2025	10/07/2025	16/07/2025	31 days	877SS+4 days
881	Backfilling of trial pit (compaction verified by probing)	2 days	10/06/2025	11/06/2025	03/09/2025	04/09/2025	72 days	880
882	Lab testing and reporting	3 days	05/09/2025	07/09/2025	05/09/2025	07/09/2025	0 days	879SS+30 days,881
883	Ground Investigation for EMSD ( 2 nos. BH ) and Lab. Testing/reporting - ( KD 5 : 20 Aug 2025)	53 days	16/05/2025	18/07/2025	19/06/2025	20/08/2025	28 days	
884	Site Works 1 Nos. (GI plant No.7 - assume 5 days works including mobilization for 1 holes	10 days	16/05/2025	27/05/2025	19/06/2025	30/06/2025	28 days	876
885	Issuance of preliminary log	1 day	30/05/2025	30/05/2025	04/07/2025	04/07/2025	28 days	884SS+12 days
886	Engineer instruction for testing	1 day	12/06/2025	12/06/2025	16/07/2025	16/07/2025	28 days	885SS+10 days
887	Lab testing and reporting	1 day	18/07/2025	18/07/2025	20/08/2025	20/08/2025	28 days	886SS+30 days
888	surface channel and site formation work	381 days	26/09/2025	07/01/2027	26/09/2025	07/01/2027	0 days	874,873,868,905,935
889	Completion of Section 15 of the works	0 days	07/01/2027	07/01/2027	07/01/2027	07/01/2027	0 days	888,41FF
890								
891	18. Section 16 of the works ( Part O and R3 of the Site ) - 610D	772 days	07/06/2024	07/01/2027	07/06/2024	07/01/2027	0 days	
892	Site possession of Part O	0 days	07/05/2025	07/05/2025	08/05/2025	08/05/2025	0 days	16
893	Site possession of Part R3	0 days	08/01/2025	08/01/2025	08/05/2025	08/05/2025	94 days	24
894	Coordination/Liaison with nearby stakeholders by caring team visit	320 days	24/06/2024	21/07/2025	31/08/2024	25/09/2025	58 days	69
895	Asbestos Containing Material Survey/Treatment/Demolition of ACM structures	120 days	08/05/2025	25/09/2025	08/05/2025	25/09/2025	0 days	
896	Asbestos inspection for clarification of ACM existence	6 days	08/05/2025	14/05/2025	08/05/2025	14/05/2025	0 days	892,893
897	Submission of asbestos material containing survey report	18 days	15/05/2025	05/06/2025	15/05/2025	05/06/2025	0 days	896
898	Notification to EPD for asbestos removal works	24 days	06/06/2025	04/07/2025	06/06/2025	04/07/2025	0 days	897
899	Approval from EPD for the removal works	6 days	05/07/2025	11/07/2025	05/07/2025	11/07/2025	0 days	898
900	Removal of asbestos material	18 days	12/07/2025	01/08/2025	12/07/2025	01/08/2025	0 days	899
901	Demolition and site clearance for asbestos containing structure	48 days	02/08/2025	25/09/2025	02/08/2025	25/09/2025	0 days	900
902	Tree Survey, TPRP and Tree Felling	307 days	07/06/2024	19/06/2025	07/06/2024	25/09/2025	0 days	
903	Tree survey and submission	197 days	07/06/2024	04/02/2025	07/06/2024	04/02/2025	0 days	18
904	Submission of TPRP and approval (For Tree Group)	72 days	05/02/2025	03/05/2025	13/06/2025	05/09/2025	104 days	903
905	Tree felling (for tree group and individual tree)	18 days	29/05/2025	19/06/2025	06/09/2025	25/09/2025	84 days	904,892,893,838
906	UU Detection / Liaison / Decommission and Site Clearance	286 days	09/01/2025	22/12/2025	13/06/2025	22/12/2025	124 days	
907	UU Detection on Site	18 days	09/01/2025	01/02/2025	13/06/2025	04/07/2025	124 days	893
908	Liaison with UU for decommissioning	24 days	08/05/2025	05/06/2025	05/07/2025	01/08/2025	48 days	892,893,907
909	decommissioning of existing services by UU/Contractor	24 days	06/06/2025	04/07/2025	02/08/2025	29/08/2025	48 days	908
910	General site clearance / demolition work	72 days	26/09/2025	22/12/2025	26/09/2025	22/12/2025	0 days	901,894
911	Ground Investigation ( 1 no. T/P ) and Lab. Testing/reporting - ( KD3 : 07 Sep 2025)	39 days	10/06/2025	25/07/2025	17/07/2025	07/09/2025	31 days	874SS+10 days
912	Trial Pit Team A3 - assume 6 days for 1 pit including backfilling	6 days	10/06/2025	16/06/2025	17/07/2025	23/07/2025	31 days	880
913	Backfilling of trial pit (compaction verified by probing)	2 days	17/06/2025	18/06/2025	03/09/2025	04/09/2025	66 days	912
914	Lab testing and reporting	3 days	23/07/2025	25/07/2025	05/09/2025	07/09/2025	38 days	912FS+30 days,913
915	Land Contamination Assessment / Treatment	435 days	07/06/2024	19/11/2025	07/06/2024	22/12/2025	0 days	
916	site appraisal	197 days	07/06/2024	04/02/2025	07/06/2024	04/02/2025	0 days	903SS
917	Prepare of Contamination Assessment Plan	36 days	05/02/2025	18/03/2025	10/03/2025	23/04/2025	28 days	916
918	submission / approval	40 days	19/03/2025	09/05/2025	10/05/2025	26/06/2025	40 days	917,948,987
919	site investigation / testing	12 days	24/05/2025	07/06/2025	27/06/2025	11/07/2025	28 days	918,848
920	preparation / submission / approval of CAR	30 days	09/06/2025	14/07/2025	12/07/2025	15/08/2025	28 days	919
921	remedial works ( cement stabilization / Biopile ) ( 2 months for Biopile and 1 month for CSS)	72 days	15/07/2025	06/10/2025	16/08/2025	10/11/2025	28 days	920
922	submission of remediation report	36 days	08/10/2025	19/11/2025	11/11/2025	22/12/2025	28 days	921
923	surface channel and site formation work	309 days	23/12/2025	07/01/2027	23/12/2025	07/01/2027	0 days	922,910,911
924	Completion of Section 16 of the works	0 days	07/01/2027	07/01/2027	07/01/2027	07/01/2027	0 days	923,42FF
925								
926	19. Section 17 of the works ( Part P of the Site ) - 610D	772 days	07/06/2024	07/01/2027	07/06/2024	07/01/2027	0 days	
927	Site possession	0 days	07/05/2025	07/05/2025	08/05/2025	08/05/2025	0 days	16
928	Coordination/Liaison with nearby stakeholders by caring team visit	320 days	24/06/2024	21/07/2025	07/09/2024	03/10/2025	64 days	69
929	Asbestos Containing Material Survey/Treatment/Demolition of ACM structures	126 days	08/05/2025	03/10/2025	08/05/2025	03/10/2025	0 days	
930	Asbestos inspection for clarification of ACM existence	6 days	08/05/2025	14/05/2025	08/05/2025	14/05/2025	0 days	927
931	Submission of asbestos material containing survey report	18 days	15/05/2025	05/06/2025	15/05/2025	05/06/2025	0 days	930
932	Notification to EPD for asbestos removal works	24 days	06/06/2025	04/07/2025	06/06/2025	04/07/2025	0 days	931
933	Approval from EPD for the removal works	6 days	05/07/2025	11/07/2025	05/07/2025	11/07/2025	0 days	932
934	Removal of asbestos material	18 days	12/07/2025	01/08/2025	12/07/2025	01/08/2025	0 days	933
935	Demolition and site clearance for asbestos containing structure	54 days	02/08/2025	03/10/2025	02/08/2025	03/10/2025	0 days	934
936	Tree Survey, TPRP and Tree Felling	287 days	07/06/2024	26/05/2025	07/06/2024	05/09/2025	0 days	
937	Tree survey and submission	197 days	07/06/2024	04/02/2025	07/06/2024	04/02/2025	0 days	18
938	Submission of TPRP and approval (For Tree Group)	72 days	05/02/2025	03/05/2025	22/05/2025	15/08/2025	86 days	937
939	Tree felling (for tree group and individual tree)	18 days	06/05/2025	26/05/2025	16/08/2025	05/09/2025	86 days	938
940	UU Detection / Liaison / Decommission and Site Clearance	182 days	08/05/2025	10/12/2025	13/06/2025	10/12/2025	30 days	
941	UU Detection on Site	18 days	08/05/2025	28/05/2025	13/06/2025	04/07/2025	30 days	927
942	Liaison with UU for decommissioning	24 days	29/05/2025	26/06/2025	05/07/2025	01/08/2025	30 days	892,893,941
943	decommissioning of existing services by UU/Contractor	24 days	27/06/2025	25/07/2025	02/08/2025	29/08/2025	30 days	942
944	General site clearance / demolition work	56 days	04/10/2025	10/12/2025	04/10/2025	10/12/2025	0 days	943,935,967,975,928
945	Land Contamination Assessment / Treatment	561 days	07/06/2024	25/04/2026	07/06/2024	25/04/2026	0 days	
946	Land Contamination Assessment / Treatment	561 days	07/06/2024	25/04/2026	07/06/2024	25/04/2026	0 days	

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Project : YL/2023/01

Data Date : 05 Jan 2025 (Rev. 7)

Task

Milestone

Critical Task

Summary

Roller Up Task

Roller Up Critical Task

Roller Up Milestone

Roller Up Progress

Split

External Tasks

Project Summary

Group By Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary

Manual Summary Rollup

Start-only

Finish-only

Progress

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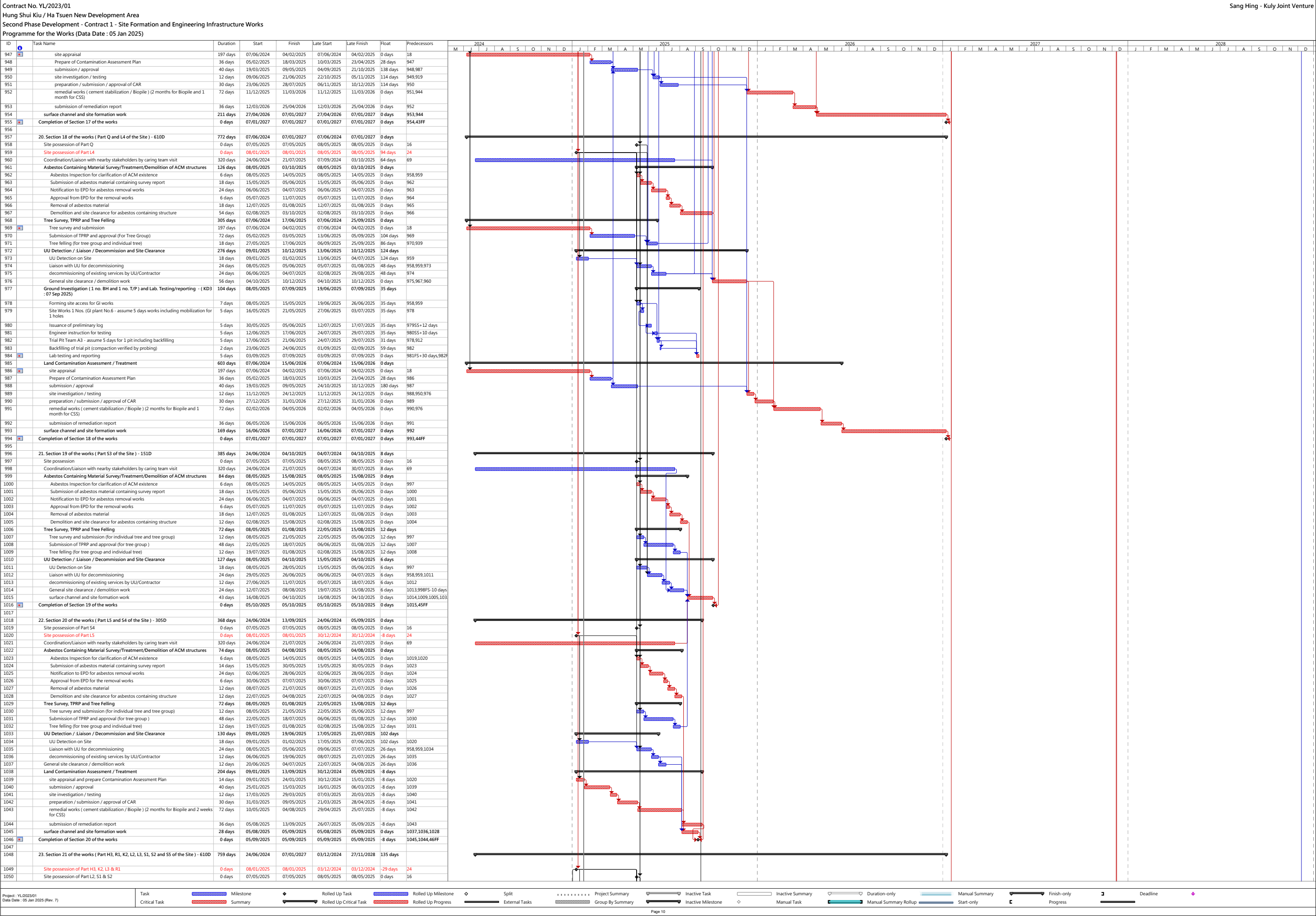
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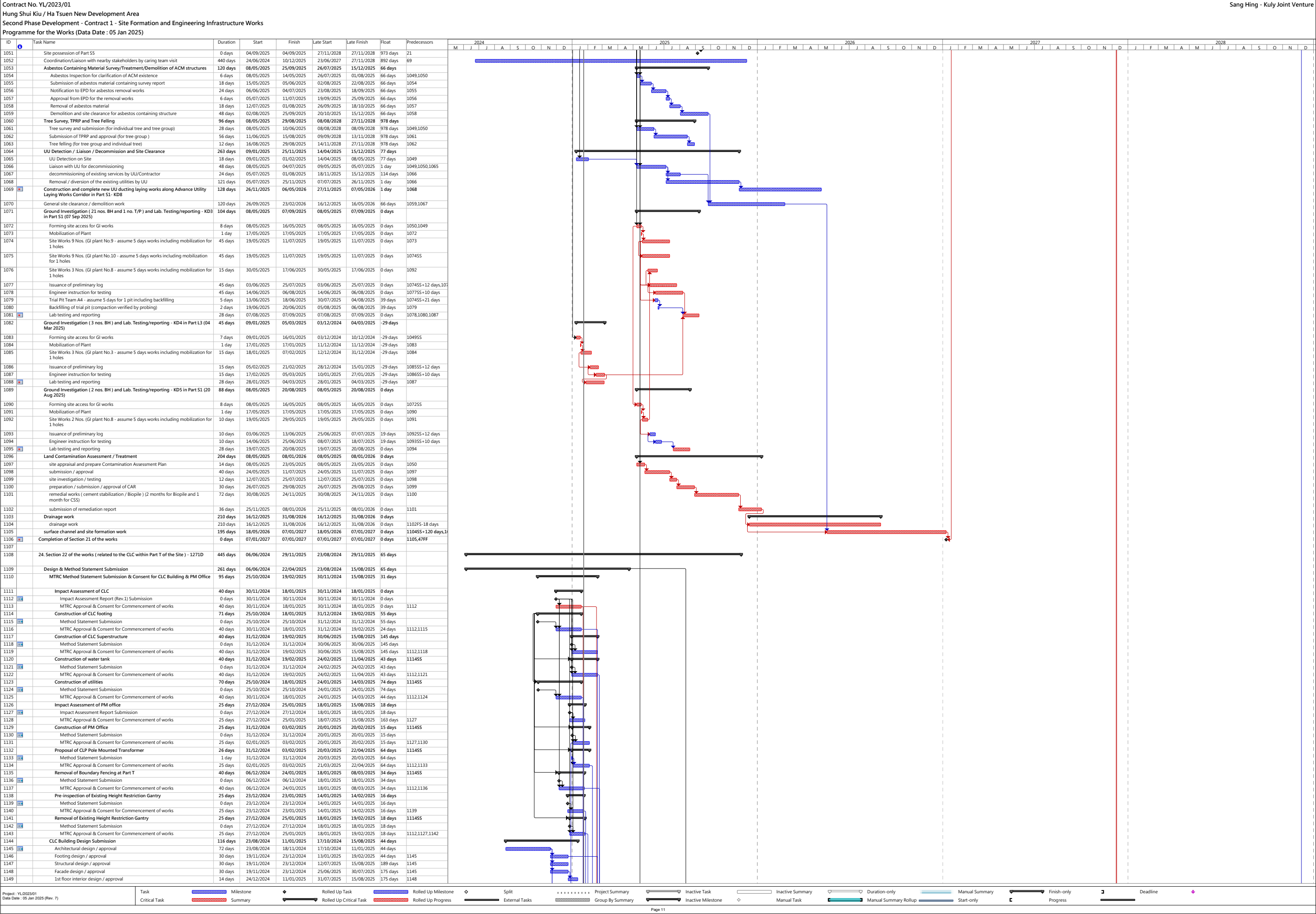
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Project : VL2023/01  
 Data Date : 05 Jan 2025 (Rev: 7)

Task  
 Critical Task

Milestone  
 Summary

Roll Up Task  
 Rolled Up Critical Task

Roll Up Milestone  
 Rolled Up Progress

Split  
 External Tasks

Project Summary  
 Group By Summary

Inactive Task  
 Inactive Milestone

Inactive Summary  
 Manual Task

Duration-only  
 Manual Summary Rollup

Manual Summary  
 Start-only

Finish-only  
 Progress

Deadline

Page 12

Contract No. YL/2023/01									Sang Hing - Kuly Joint Venture																																															
Hung Shui Kiu / Ha Tsuen New Development Area																																																								
Second Phase Development - Contract 1 - Site Formation and Engineering Infrastructure Works																																																								
Programme for the Works (Data Date : 05 Jan 2025)																																																								
ID	Task Name	Duration	Start	Finish	Late Start	Late Finish	Float	Predecessors																																																
1259	Internal finishing	42 days	06/06/2024	26/07/2024	08/05/2025	26/06/2025	272 days																																																	
1260	Fabrication of exhibits	28 days	09/04/2025	15/05/2025	24/05/2025	26/06/2025	35 days	1258																																																
1261	Installation of exhibits (Dust free)	42 days	16/05/2025	05/07/2025	27/06/2025	15/08/2025	35 days	1259,1260																																																
1262	Testing and commissioning	7 days	07/07/2025	14/07/2025	28/10/2025	05/11/2025	96 days	1261																																																
1263	PM Office Construction Works	217 days	23/08/2024	19/05/2025	16/09/2024	19/05/2025	20 days																																																	
1264	Architectural design / approval	72 days	23/08/2024	18/11/2024	16/09/2024	11/12/2024	20 days																																																	
1265	Footing design / approval	40 days	19/11/2024	07/01/2025	12/12/2024	03/02/2025	20 days	1264																																																
1266	Structural design / approval	40 days	19/11/2024	07/01/2025	28/03/2025	19/05/2025	105 days	1264																																																
1267	Construction of PM Office Footing	21 days	14/01/2025	10/02/2025	04/02/2025	27/02/2025	15 days	1157,1265,113155+																																																
1268	MIC off-site fabrication	14 days	12/02/2025	27/02/2025	12/02/2025	27/02/2025	0 days	1160																																																
1269	MIC Installation	24 days	28/02/2025	27/03/2025	28/02/2025	27/03/2025	0 days	1268,1267																																																
1270	UU Works for PM office	20 days	28/03/2025	23/04/2025	24/04/2025	19/05/2025	20 days	1269																																																
1271	Internal Finishing for PM office	30 days	28/03/2025	07/05/2025	28/03/2025	07/05/2025	0 days	1269																																																
1272	E&M, Plumbing & Water Supply works for PM office and internal furniture	35 days	03/04/2025	19/05/2025	03/04/2025	19/05/2025	0 days	1271SS+5 days																																																
1273	Footing for hoarding	40 days	20/05/2025	07/07/2025	07/07/2025	21/08/2025	39 days	1272																																																
1274	Footway / planter	30 days	08/07/2025	11/08/2025	22/08/2025	24/09/2025	39 days	1273																																																
1275	Completion of New CLC	0 days	15/08/2025	15/08/2025	15/08/2025	15/08/2025	0 days	1245,1252,1261,110																																																
1276	Completion of PM office	0 days	19/05/2025	19/05/2025	19/05/2025	19/05/2025	0 days	1272,1263																																																
1277	Relocation of existing CLC building	308 days	19/11/2024	29/11/2025	17/01/2025	29/11/2025	48 days																																																	
1278	Relocation of CLT Office to New CLC	2 days	20/06/2025	21/06/2025	20/06/2025	21/06/2025	0 days	1233																																																
1279	Structural design / approval	60 days	02/12/2024	15/02/2025	27/01/2025	10/04/2025	45 days																																																	
1280	Subletting	14 days	17/02/2025	04/03/2025	11/04/2025	29/04/2025	45 days	1279																																																
1281	Fabrication of retrofitting part of CLC	45 days	05/03/2025	29/04/2025	30/04/2025	24/06/2025	45 days	1280																																																
1282	ELS Works for CLT office & Corridors	30 days	26/03/2025	03/05/2025	10/04/2025	19/05/2025	12 days	1201																																																
1283	Construction of Footings for CLT office & Corridors	30 days	06/05/2025	10/06/2025	20/05/2025	24/06/2025	12 days	1282																																																
1284	Dismantling of internal furniture / fixtures	2 days	23/06/2025	24/06/2025	23/06/2025	24/06/2025	0 days	1278																																																
1285	Relocation to new CLC location	21 days	25/06/2025	19/07/2025	25/06/2025	19/07/2025	0 days	1281,1283,1284																																																
1286	Installation of Corridor Steel Frame	21 days	16/08/2025	08/09/2025	06/11/2025	29/11/2025	68 days	1285,1187,1191																																																
1287	Installation of retrofitting part	24 days	21/07/2025	16/08/2025	21/07/2025	16/08/2025	0 days	1285																																																
1288	External wall	15 days	18/08/2025	03/09/2025	18/08/2025	03/09/2025	0 days	1287																																																
1289	Facade installation	60 days	04/09/2025	14/11/2025	18/09/2025	29/11/2025	13 days	1288																																																
1290	Toilet fixture installation	40 days	04/09/2025	21/10/2025	25/09/2025	13/11/2025	19 days	1288,1274																																																
1291	Plumbing and drainage service installation	14 days	22/10/2025	07/11/2025	14/11/2025	29/11/2025	19 days	1290																																																
1292	Installation of E&M work	30 days	04/09/2025	09/10/2025	04/09/2025	09/10/2025	0 days	1288																																																
1293	Installation of FS	30 days	04/09/2025	09/10/2025	04/09/2025	09/10/2025	0 days	1288																																																
1294	FSI testing and commissioning	14 days	10/10/2025	25/10/2025	20/10/2025	05/11/2025	8 days	1293																																																
1295	FSD inspection	21 days	27/10/2025	20/11/2025	06/11/2025	29/11/2025	8 days	1294																																																
1296	Installation of Exhibits / internal finishing	53 days	26/09/2025	29/11/2025	26/09/2025	29/11/2025	0 days	1292FS-10 days,129																																																
1297	Landscaping work	265 days	19/11/2024	09/10/2025	17/01/2025	29/11/2025	48 days																																																	
1298	Landscape design	60 days	19/11/2024	03/02/2025	17/01/2025	31/03/2025	48 days	1145																																																
1299	Fabrication of landscape hard work	60 days	04/02/2025	15/04/2025	01/04/2025	16/06/2025	48 days	1298,1176																																																
1300	Installation / construction of planter	70 days	24/04/2025	18/07/2025	17/06/2025	06/09/2025	43 days	1299,130555																																																
1301	Landscape soft work	70 days	19/07/2025	09/10/2025	07/09/2025	29/11/2025	43 days	1300																																																
1302	Miscellaneous Civil Works	96 days	17/03/2025	14/07/2025	12/05/2025	29/11/2025	43 days																																																	
1303	Footing for hoarding	30 days	17/03/2025	23/04/2025	12/05/2025	16/06/2025	43 days	1247																																																
1304	hoarding / feature wall erection	45 days	24/04/2025	18/06/2025	08/10/2025	29/11/2025	138 days	1303																																																
1305	Footway / planter	66 days	24/04/2025	14/07/2025	17/06/2025	02/09/2025	43 days	1303																																																
1306	External Facilities & Lighting	35 days	15/07/2025	23/08/2025	20/10/2025	29/11/2025	82 days																																																	
1307	EV Charger, Street Furniture & Lighting	30 days	15/07/2025	18/08/2025	20/10/2025	24/11/2025	82 days	1305,1177																																																
1308	WR1 Form Inspection by CP	5 days	19/08/2025	23/08/2025	25/11/2025	29/11/2025	82 days	1307																																																
1309	Completion of Relocation of existing CLC	0 days	29/11/2025	29/11/2025	29/11/2025	29/11/2025	0 days	1296																																																
1310	Complete and commissioning of relocated CLC Building - KD7	0 days	29/11/2025	29/11/2025	29/11/2025	29/11/2025	0 days	1277,1309																																																
1311	Completion of Key Date 7A of the works (06 Jun 2025)	0 days	15/08/2025	15/08/2025	15/08/2025	15/08/2025	0 days	1275FF																																																
1312	Maintenance after Key Date 7A	684 days	16/08/2025	29/11/2027	16/08/2025	29/11/2027	0 days	1311																																																
1313	Completion of Defect Liability Period od Section 22 of the Works	0 days	29/11/2027	29/11/2027	29/11/2027	29/11/2027	0 days	1312,48FF																																																
1314																																																								
1315	25. Section 23 of the works ( all landscape softworks ) - 935D	767 days	08/05/2025	28/11/2027	08/05/2025	28/11/2027	0 days																																																	
1316	Landscaping softworks	767 days	08/05/2025	28/11/2027	08/05/2025	28/11/2027	0 days	16																																																
1317	26. Section 24 of the works ( establishment works ) - 365D	307 days	28/11/2027	27/11/2028	28/11/2027	27/11/2028	0 days																																																	
1318	Completion of Section 23 of the works	0 days	28/11/2027	28/11/2027	28/11/2027	28/11/2027	0 days	1316,49FF																																																
1319	Establishment Works for landscaping softworks	307 days	29/11/2027	27/11/2028	29/11/2027	27/11/2028	0 days	1318																																																
1320	Completion of Section 23 of the works	0 days	27/11/2028	27/11/2028	27/11/2028	27/11/2028	0 days	1319,50FF																																																

## **Construction Programme for Contract 2**

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025			
							Dec	Jan	Feb	Mar	
YL/2023/02 Monthly Programme for Dec 2024		823	03-Jun-24 A	06-May-27	477						
Contract Date		29	06-Dec-24 A	02-Feb-25	0	06-Dec-24 A 02-Feb-25, Contract Date					
Contract Key Date Completion		29	04-Jan-25	02-Feb-25	0	04-Jan-25 02-Feb-25, Contract Key Date Completion					
KD-030	KD3 - Complete all tree survey/submit the tree survey reports/TPRP for Part B1 (90d after each access date)	0		04-Jan-25*	0	P for Part B1 (90d after each access date) ⚡					
KD-010	KD1 - Complete all GI works for boreholes including laboratory testing and GI report (Drg 2121 to 2124) (240d after SD)	0		02-Feb-25*	0	s including laboratory testing and GI report (Drg 2121 to 2124) (240d after SD) ⚡					
Planned Key Date Completion		0	06-Dec-24 A	06-Dec-24 A		06-Dec-24 A 06-Dec-24 A, Planned Key Date Completion					
KD-035	KD3 - Complete all tree survey/submit the tree survey reports/Tree Preservation/Removal Proposal for Part B1	0		06-Dec-24 A		t B1 ⚡					
Delay Event		182	07-Jun-24 A	05-Mar-25	257	05-Mar-25, Delay Event					
Late access to some areas of Part C3		15	07-Jun-24 A	26-Dec-24	327	26-Dec-24, Late access to some areas of Part C3					
DE01-100	Late access to some areas of Part C3 (Sha Ha Road) up to this datadate	15	07-Jun-24 A	26-Dec-24	327						
Crop assessment by Lands department		90	06-Dec-24 A	05-Mar-25	-141	06-Dec-24 A 05-Mar-25, Crop asses					
DE06-100	Crop assessment by Lands department [Assume 3 months]	90	06-Dec-24 A	05-Mar-25	-141	months]					
Subletting		51	19-Dec-24 A	28-Feb-25	1293	19-Dec-24 A 28-Feb-25, Subletting					
Consultancy		21	21-Dec-24 A	30-Jan-25	577	21-Dec-24 A 30-Jan-25, Consultancy					
Design Consultant		21	21-Dec-24 A	30-Jan-25	577	21-Dec-24 A 30-Jan-25, Design Consultant					
S-270	Accpeted by PM [Design Consultant]	21	21-Dec-24 A	30-Jan-25	577	by PM [Design Consultant]					
Early Commence Works		24	19-Dec-24 A	30-Jan-25	1322	19-Dec-24 A 30-Jan-25, Early Commence Works					
Hoarding, Temporary Fences, Signboards and Gates Works at Part B2, C1 & E of the Site		21	19-Dec-24 A	30-Jan-25	1322	19-Dec-24 A 30-Jan-25, Hoarding, Temporary Fences, Signboards and Gates					
S-350	Accpeted by PM [Hoarding/Fencing]	21	19-Dec-24 A	30-Jan-25	1322	y PM [Hoarding/Fencing]					
Road, Open Trench Pipe Works and associated TTA implementation		21	19-Dec-24 A	30-Dec-24	35	19-Dec-24 A 30-Dec-24, Road, Open Trench Pipe Works and associated TTA implementation					
S-430	Accpeted by PM [Road and Open Trench Pipe Works]	21	19-Dec-24 A	30-Dec-24	35	pen Trench Pipe Works]					
Major Works		51	09-Jan-25	28-Feb-25	76	09-Jan-25 28-Feb-25, Major Works					
Piling Works		51	09-Jan-25	28-Feb-25	76	09-Jan-25 28-Feb-25, Piling Works					

Summary	Critical Remaining Work	Finish C...
Actual LOE	Milestone	No Pred...
Remaining LOE	Crit Milestone	No Suc...
Actual Work	Actual Milestone	
Remaining Work	Start Constraint	

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025		
							Dec	Jan	Feb	Mar
S-150	Preparation, tender out and tender opening [Piling Works]	30	09-Jan-25	07-Feb-25	76		ation, tender out and tender opening [Piling Works]			
S-480	Accpeted by PM [Piling Works]	21	08-Feb-25	28-Feb-25	76			Accpeted by PM [Piling Works]		
Major Submission / Statutory Approval		333	03-Jun-24 A	21-Jun-25	353					
SP-160	Request UU drawings	120	03-Jun-24 A	31-Jan-25	1					
SP-130	Coordination with MTRC regarding construction works within MTR's protection zone (Castle Peak Road)	180	12-Jul-24 A	03-Feb-25	426					
SP-100	Discharge License	30	05-Aug-24 A	30-Jan-25	38					
SP-110	Application of XP [normal XP, assume with wavier]	180	09-Aug-24 A	26-Feb-25	16					
SP-120	Submission and Approval of TTA scheme/ assume during 2 TMLG (monthly interval) engage RMO/TD	60	31-Oct-24 A	26-Feb-25	16					
SP-140	Submission and Approval of Constrution Drainage Impact Assessment (CDIA)	180	24-Dec-24 A	21-Jun-25	353		e Impact Assessment (CDIA)			
SP-150	Submission and Approval of Constrution Noise Permit (ONP)	60	02-Jan-25*	02-Mar-25	0		roval of Construction Noise Permit (ONP)			
Major Contractor's Design		90	14-Jan-25	13-Apr-25	32			14-Jan-25		
D-130	Submit & Approve - Cathodic Protection System for the water trunk main (PS 22.108/ 22.109/ 22.110)	90	14-Jan-25	13-Apr-25	32		n for the water trunk main (PS 22.108/ 22.109/ 22.110)			
D-120	Submit & Approve - Water Intelligent Network (WIN) system for the water trunk main (PS 22.112)	90	14-Jan-25	13-Apr-25	32		ork (WIN) system for the water trunk main (PS 22.112)			
Method Statement		156	28-Aug-24 A	28-Feb-25	1293					28-Feb-25, Method Stateme
Survey		21	28-Aug-24 A	10-Jan-25	-87					10-Jan-25, Survey
Trial pit excavation		21	28-Aug-24 A	10-Jan-25	-87					10-Jan-25, Trial pit excavation
MST-200	Review without objection of Method Statement [Trial pit excavation]	21	28-Aug-24 A	10-Jan-25	-87					
Early Commence Works		156	25-Oct-24 A	28-Feb-25	1293					28-Feb-25, Early Commence
Hoarding/Fencing		49	11-Jan-25	28-Feb-25	1293					11-Jan-25 28-Feb-25, Hoarding/Fencin
MST-320	Preparation and submission of Method Statement [Hoarding/Fencing]	28	11-Jan-25	07-Feb-25	1293		submission of Method Statement [Hoarding/Fencing]			
MST-330	Review without objection of Method Statement [Hoarding/Fencing]	21	08-Feb-25	28-Feb-25	1293			Review without objection of Method Statement [Hoarding/Fencing]		
Project Signboard		49	11-Jan-25	28-Feb-25	1293					11-Jan-25 28-Feb-25, Project Signboar
MST-340	Preparation and submission of Method Statement [Project Signboard]	28	11-Jan-25	07-Feb-25	1293		submission of Method Statement [Project Signboard]			



Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025			
							Dec	Jan	Feb	Mar	
MST-350	Review without objection of Method Statement [Project Signboard]	21	08-Feb-25	28-Feb-25	1293		Review without objection of Method Statement [Project Signboard]				
Implementation of TTA Works		21	28-Jan-25	17-Feb-25	35			28-Jan-25	17-Feb-25, Implementation of TTA Works		
MST-590	Review without objection of Method Statement [Implementation of TTA Works]	21	28-Jan-25	17-Feb-25	35		Review without objection of Method Statement [Implementation of TTA Works]				
Road and Open Trench Pipe Works		21	28-Jan-25	17-Feb-25	35			28-Jan-25	17-Feb-25, Road and Open Trench Pipe V		
MST-400	Review without objection of Method Statement [Road and Open Trench Pipe Works]	21	28-Jan-25	17-Feb-25	35		Review without objection of Method Statement [Road and Open Trench Pipe Works]				
PMs and Contractor's site office works		60	25-Oct-24 A	11-Jan-25	1327				11-Jan-25, PMs and Contractor's site office works		
MST-630	Review without objection of Method Statement [both RSS and MTRC]	60	25-Oct-24 A	11-Jan-25	1327						
Major Works		89	25-Nov-24 A	28-Feb-25	232						28-Feb-25, Major Works
Site formation works		21	13-Dec-24 A	30-Dec-24	109		13-Dec-24 A		30-Dec-24, Site formation works		
MST-510b	Review without objection of Method Statement Rev.A [Site formation works]	21	13-Dec-24 A	30-Dec-24	109		formation works]				
Temporary slope works		32	25-Nov-24 A	23-Dec-24 A					23-Dec-24 A, Temporary slope works		
MST-650	Preparation and submission of Method Statement [Temporary slope works]	28	25-Nov-24 A	02-Dec-24 A							
MST-660	Review without objection of Method Statement [Temporary slope works]	21	03-Dec-24 A	23-Dec-24 A			ks]				
Piling Works		51	09-Jan-25	28-Feb-25	76			09-Jan-25			28-Feb-25, Piling Works
MST-120	Preparation and submission of Method Statement [Piling Works]	30	09-Jan-25	07-Feb-25	76		nd submission of Method Statement [Piling Works]				
MST-450	Review without objection of Method Statement [Piling Works]	21	08-Feb-25	28-Feb-25	76			Review without objection of Method Statement [Piling Works]			
Pipe Jacking		49	03-Jan-25	20-Feb-25	240			03-Jan-25			20-Feb-25, Pipe Jacking
MST-130	Preparation and submission of Method Statement [Pipe Jacking]	28	03-Jan-25	30-Jan-25	240		ission of Method Statement [Pipe Jacking]				
MST-580	Review without objection of Method Statement [[Pipe Jacking]	21	31-Jan-25	20-Feb-25	240			Review without objection of Method Statement [[Pipe Jacking]			
Site Works		771	13-Sep-24 A	06-May-27	477						
Preliminary Works for Fresh Water Service Reservoir (within Part A, B1, B2)		156	11-Nov-24 A	24-Jun-25	88						
S0-350	PM review of GI report for B2/A and design review of geotechnical structure (i.e. slope works/ retaining wall) (for KD1)	36	08-Apr-25	13-May-25	148				PM review of GI report for B2/A and design review of geotechnical structure (i.e. slope works/ retaining wall) (		
Ground Investigation Works (under KD1)		156	11-Nov-24 A	24-Jun-25	-115						

Summary	Critical Remaining Work	Finish C...
Actual LOE	Milestone	No Pred...
Remaining LOE	Crit Milestone	No Suc...
Actual Work	Actual Milestone	
Remaining Work	Start Constraint	

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025				
							Dec	Jan	Feb	Mar		
1	Part B2		75	11-Nov-24 A	13-Mar-25	-34	13-Mar-25, 13-Mar					

	Summary		Critical Remaining Work		Finish C...
	Actual LOE		Milestone		No Pred...
	Remaining LOE		Crit Milestone		No Suc...
	Actual Work		Actual Milestone		
	Remaining Work		Start Constraint		

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025		
							Dec	Jan	Feb	Mar
Construction Works under Section 1 - All works within Part A (Soil= 75,437m3; Rock=189,258m3)		144	10-Oct-24 A	26-May-25	116					
S1-100	Tree Felling, Protection to preserved trees, Survey - non tree group surveyed area	60	10-Oct-24 A	05-Jan-25	129					
S1-100b	Site Clearance - non tree group surveyed area	42	06-Jan-25	16-Feb-25	129	Site Clearance - non tree group surveyed area				
S1-110	Formation of haul road connecting Part B2 and A to a +59mPD platform	21	17-Feb-25	12-Mar-25	104	Formation of haul road connecting Part B2 and A to a +59mPD platform				
S1-120	Tree Felling, transplant, Protection to preserved trees, Site Clearance, Survey - in tree group surveyed area	75	13-Mar-25	26-May-25	131	Tree Felling, transplant, Protection to preserved trees, Site Clearance, Survey - in tree group surveyed area				
S1-130	Site setup, Preparation works at lower part for establishing stockpile area at +59mPD platform	48	25-Mar-25	26-May-25	110			Site setup, Preparation works at lower part for establishing stockpile area at +59mPD platform		
S1-200	Site setup, Preparation works at upper part for establishing stockpile area at +103mPD platform	48	25-Mar-25	26-May-25	116			Site setup, Preparation works at upper part for establishing stockpile area at +103mPD platform		
Construction Works under Section 2 -All works within Part B1 and B2		262	20-Sep-24 A	20-Aug-25	128					
Site Formation Works in Part B2 (Soil=25,511m3; Rock=2,293m3; Soil Fill for Temp Road=4,900m3)		240	20-Sep-24 A	25-Jul-25	68					
East Side of Part B2 (A2 Road: From 1100 to 1250)		240	20-Sep-24 A	25-Jul-25	66					
S2-1-100	Tree felling and site clearance along haul road	60	20-Sep-24 A	28-Dec-24	86					
S2-1-100a	Site Clearance at Part B2 Site	60	02-Dec-24 A	30-Jan-25	159	Site				
S2-1-120	Trial Pit works, Field tests, Sampling & Backfill within Part B2 Site (Total: 3no.)	12	11-Jan-25	24-Jan-25	59	Sampling & Backfill within Part B2 Site (Total: 3no.)				
S2-1-110	Formation of haul road and soil platform for piling works (Total:4,900m3)(one-lane traffic)(Total:227x12m,2724m2) 2plant	45	25-Jan-25	21-Mar-25	59	ks (Total:4,900m3)(one-lane traffic)(Total:227x12m,2724m2) 2plant				
S2-1-220	Tree pruning, root cutting and tree transplant (Total: 3no.) +3x 30d for root cutting, 7d for tree transplant	97	31-Jan-25	07-May-25	159	nd tree transplant (Total: 3no.) +3x 30d for root cutting, 7d for tree transplant				
S2-1-130	Pre-drilling works (Total: 14no.) (PR=3d/no), 2rigs	21	19-Feb-25	14-Mar-25	59			Pre-drilling works (Total: 14no.) (PR=3d/no), 2rigs		
S2-1-140	Installation of soldier pile for construction of AR-RW11 to 13 (Total: 59no) (PR=4d/no) 2 rigs	118	01-Mar-25	25-Jul-25	59	Installation of soldier pile for construction of AR-RW11 to 13 (Total: 59no) (PR=4d/no) 2 rigs				
West & North Side of Part B2 - (W) A2 Road: from 1000 to 1100 & (N) A1 Road: from 1250 to 1310		84	30-Dec-24	11-Apr-25	151	30-Dec-24				
S2-1-600	Site Clearance, Survey witin Part B2 Site	60	30-Dec-24	13-Mar-25	151	e Clearance, Survey witin Part B2 Site				
S2-1-610	(N) Excavation from B2 North Site and form a haul road at approx. 68-70mPD [** 1]	24	14-Mar-25	11-Apr-25	151			(N) Excavation from B2 North Site and form a haul road at approx. 68-70mPD [** 1]		
Site Formation Works in Part B1		136	06-Mar-25	20-Aug-25	128			06-Mar-25		
Access Road to Frech Water Service Reservoir and Slopeworks at East (Soil=67,950m3; Rock=2,205m3)		60	06-Mar-25	04-May-25	14			06-Mar-25		
S2-2-R100	Preliminary Works, Site clearance at no tree area, Survey (East of FWSR)	60	06-Mar-25	04-May-25	14			Preliminary Works, Site clearance at no tree area, Survey (East of FWSR)		

Summary	Critical Remaining Work	Finish C...
Actual LOE	Milestone	No Pred...
Remaining LOE	Crit Milestone	No Suc...
Actual Work	Actual Milestone	
Remaining Work	Start Constraint	

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025		
							Dec	Jan	Feb	Mar
	Compartment 1 (North) / North Section of Fresh Water SR (Soil=76,212m3; Rock=39,674m3)	60	06-Mar-25	04-May-25	131					06-Mar-25
S2-2-300	Preliminary Works, Site clearance at no tree area, Survey (North of FWSR)	60	06-Mar-25	04-May-25	131				Preliminary Works, Site clearance at no tree area, Survey (North of FWSR)	
	Compartment 2 (Middle) / Middle Section of Fresh Water SR (Soil=194,896m3; Rock=85,365m3)	136	06-Mar-25	20-Aug-25	11					06-Mar-25
S2-2-500	Preliminary Works, Site clearance at no tree area, Survey (at Middle of FWSR)	60	06-Mar-25	04-May-25	14				Preliminary Works, Site clearance at no tree area, Survey (at Middle of FWSR)	
S2-2-520	Excavation and form a haul road from approx. 70mPD to 99mPD for access to middle FWSR [** 2]	12	06-May-25	19-May-25	11					Excavation and form a haul road from approx. 70mPD
S2-2-530	Excavation and form a haul road from approx. 99mPD to 110mPD for access to west side of middle FWSR [** 3]	12	20-May-25	03-Jun-25	11					Excavation and form a haul road from approx. 99m
S2-2-510	Tree Felling, Protection to preserved trees, Site Clearance, Survey (at Middle of FWSR)	78	04-Jun-25	20-Aug-25	13					Tree F
	Compartment 3 (South) / South Section of Fresh Water SR (Soil=176,384m3; Rock=140,884m3)	60	06-Mar-25	21-May-25	204					06-Mar-25
S2-2-700	Preliminary Works, Site clearance at no tree area, Survey (South of FWSR - Stage 1)	60	06-Mar-25	21-May-25	204				Preliminary Works, Site clearance at no tree area, Survey (South of FWSR - Stage 1)	
	Construction Works under Section 3 - All works within Part C1 and C2	747	18-Oct-24 A	06-May-27	477					
	XP Area 2	580	18-Oct-24 A	09-Oct-26	644					
	Construction in Part C1 Site (near Shek Po Tsuen)	580	18-Oct-24 A	09-Oct-26	644					
S3-4-120	Approval process for submission of TPRP/ supplementary TPRP within Part C1 of the Site	120	18-Oct-24 A	14-Feb-25	592					
	Mainlaying Works along Shek Po East Road (FWDMD-D & FLWDM-D), D: CH500 - CH740	480	27-Feb-25	09-Oct-26	644					27-Feb-25
S3-4-200	FWDMD-D & FLWDM-D - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (CH500-740,240m)(PR=40d/20m)	480	27-Feb-25	09-Oct-26	644					
	Mainlaying Works along Hung Chi Road (FWDMD-E & FLWDM-D/E), D: CH260 - CH500; E: CH0 - CH68	80	31-Mar-25	10-Jul-25	92					31-
S3-4-350	FWDMD & FLWDM - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (E: CH20-68, 48m)(PR=40d/25m)	80	31-Mar-25	10-Jul-25	92					
	Construction in Part C1 Site (near Tin Shui Wai West Interchange)	187	18-Oct-24 A	17-Jul-25	367					
S3-3-120	Approval process for submission of TPRP/ supplementary TPRP within Part C1 of the Site	120	18-Oct-24 A	16-Mar-25	130					
S3-3-130	GI works for trenchless design	18	27-Feb-25	19-Mar-25	101					GI works for trenchless design
S3-3-140	Design Approval for trenchless works crossing Castle Peak Road/ Hung Tin Road	120	20-Mar-25	17-Jul-25	449					Design Approval for trenchless works crossing Castle Peak Road/ Hung Tin Road
	Mainlaying Works along Hung Tin Road Northbound (FWDMD-B/B1, FLWDM-B/B1)	36	20-Mar-25	07-May-25	101					20-Mar-25
S3-3-200	(FWDMD-B/B1) - TTA, Removal planter, road furniture, survey, UU detection under flyover area and railway monitoring device	36	20-Mar-25	07-May-25	101					(FWDMD-B/B1) - TTA, Removal planter, road furniture, survey, UU detection under flyover area and railway monitoring device

	Summary		Critical Remaining Work		Finish C...
	Actual LOE		Milestone		No Pred...
	Remaining LOE		Crit Milestone		No Suc...
	Actual Work		Actual Milestone		
	Remaining Work		Start Constraint		

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Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025		
							Dec	Jan	Feb	Mar
XP Area 3		734	18-Oct-24 A	06-May-27	27					
Construction in Part C1 Site (near Wo Ping San Tsuen)		734	18-Oct-24 A	06-May-27	27					
Mainlaying Works along Village Road (FWDm-F, FLWDM-F), F: FW CH0 - CH52/ FLW CH0 - CH51		36	18-Feb-25	31-Mar-25	311				18-Feb-25	
S3-2-100	Site clearance and survey and UU detection, fence off at planter area	36	18-Feb-25	31-Mar-25	311		Site clearance and survey and UU detection, fence off at planter area			
Mainlaying Works across Nullah (FWDm-F, FLWDM-F), F: FW CH52 - CH112/ FLW CH51 - CH110		132	03-Jan-25	17-Jun-25	311		03-Jan-25			
S3-2-200	Pipe Bridge - Site clearance and survey and UU detection, fence off at planter area	36	03-Jan-25	17-Feb-25	311	and UU detection, fence off at planter area				
S3-2-210	UU diverison (if necessary)	120	18-Feb-25	17-Jun-25	383			UU diverison (if necessary)		
Mainlaying Works along Tat Fuk Street (FWDm-F, FLWDM-F), F: FW CH112 - 290/ FLW CH110 - 289		150	18-Oct-24 A	18-May-25	488					
S3-2-400b	Approval process for submission of TPRP/ supplementary TPRP	120	18-Oct-24 A	14-Feb-25	597					
S3-2-400T	Tree pruning, root cutting and tree transplant (Total: 3no.) +3x 30d for root cutting, 3d for tree transplant	93	15-Feb-25	18-May-25	597	ing, root cutting and tree transplant (Total: 3no.) +3x 30d for root cutting, 3d for tree transplant				
S3-2-410	Phase 1 (60m long) - TTA, site clearance, Tree felling, survey, UU detection	6	27-Feb-25	05-Mar-25	485		Phase 1 (60m long) - TTA, site clearance, Tree felling, survey, UU detection			
S3-2-420	FWDm & FLWDM - Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (CH230-CH290,60m+59m)(PR=54d/TTA)	54	06-Mar-25	14-May-25	485	WDM & FLWDM - Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (CH230-CH290,60m+59m)(PR=54d/TTA)				
Mainlaying Works along Shun Tat Street (FWDm-F, FLWDM-F), F: FW CH290 - CH944/ FLW CH289 - CH941		647	27-Feb-25	06-May-27	27				27-Feb-25	
S3-2-510	FWDm- TTA, removal, sheet pile, exca, ELS, pipelaying, backfill, road reinstate (CH300-CH944, 644m)(PR=50d/25m),2wf	647	27-Feb-25	06-May-27	27	removal, sheet pile, exca, ELS, pipelaying, backfill, road reinstate (CH300-CH944, 644m)(PR=50d/25m),2wf				
Construction Works under Section 4 - All works within Part C3		362	18-Oct-24 A	14-Jan-26	294					
S4-120	Approval process for submission of TPRP/ supplementary TPRP within Part C3 of the Site (incl. TG 159)	120	18-Oct-24 A	14-Feb-25	42					
S4-140	Tree Survey and submit survey record to PM and submission TPRP/ supplementary TPRP (TG 158) [Within late access area ]	30	25-Jan-25	04-Mar-25	454	n TPRP/ supplementary TPRP (TG 158) [Within late access area ]				
S4-150	Approval process for submission of TPRP/ supplementary TPRP within Part C3 of the Site (TG 158)	120	05-Mar-25	02-Jul-25	558	Approval process for submission of TPRP/ supplementary TPRP within Part C3 of the Site (TG 158)				
XP Area 1		262	27-Feb-25	14-Jan-26	92				27-Feb-25	
Mainlaying Works along Fung Yu Road		51	27-Feb-25	02-May-25	14				27-Feb-25	
S4-195	FYR - Mobilization for TTA implement	12	27-Feb-25	12-Mar-25	14			FYR - Mobilization for TTA implement		
S4-200	FYR - TTA, Site clearance, Tree Felling, Survey, construction of temporary road on existing footpath along Fung Yu Road	36	13-Mar-25	28-Apr-25	14	FYR - TTA, Site clearance, Tree Felling, Survey, construction of temporary road on existing footpath along Fung Yu Road				
S4-210	Shift the traffic onto temporary road	3	29-Apr-25	02-May-25	14					

	Summary		Critical Remaining Work		Finish C...
	Actual LOE		Milestone		No Pred...
	Remaining LOE		Crit Milestone		No Suc...
	Actual Work		Actual Milestone		
	Remaining Work		Start Constraint		

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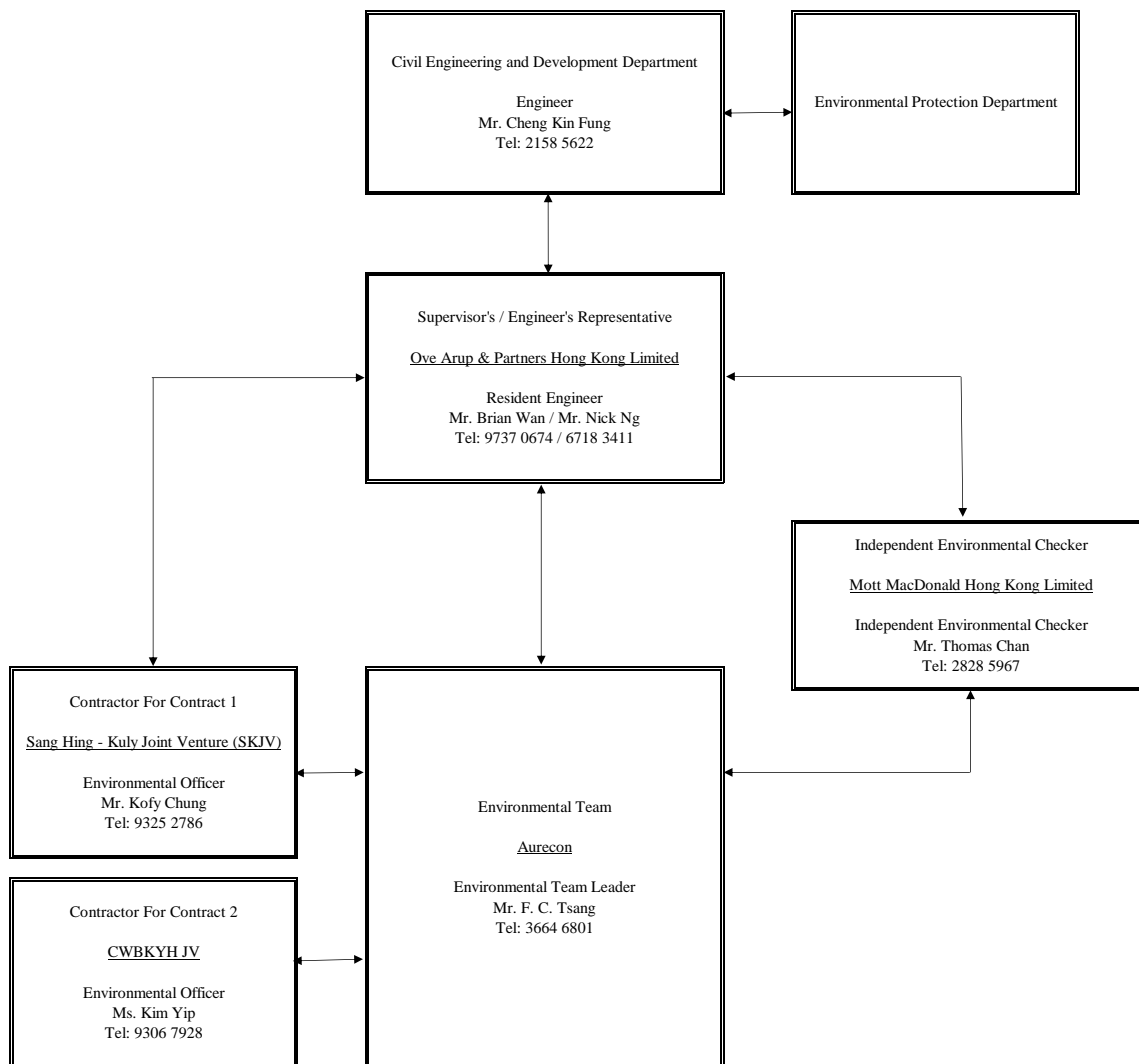


Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2024		2025		
							Dec	Jan	Feb	Mar
	Mainlaying Works along Shap Pat Heung Road	95	13-Mar-25	10-Jul-25	63					13-Mar-25
S4-300	WTM-A2 - TTA at roundabout (A2: CH100-136)	0	13-Mar-25		57				WTM-A2 - TTA at roundabout (A2: CH100-136)	◆
S4-310	SPHR - Existing box culvert modification - Sheet pile, exca, ELS, RC works and associated drainage works	120	13-Mar-25	10-Jul-25	74		SPHR - Existing box culvert modification - Sheet pile, exca, ELS, RC works and associated drainage works			
	Mainlaying Works along Lam Hau Tsuen Road	250	13-Mar-25	14-Jan-26	92					13-Mar-25
S4-410	WTM-A2 - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (A2: CH236-CH336, 100m)(PR=50d/20m)	250	13-Mar-25	14-Jan-26	92		WTM-A2 - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (A2: CH236-CH336, 100m)(PR=50d/20m)			
	GI Works at both Lam Yu Road and Shan Ha Road	54	13-Mar-25	21-May-25	224					13-Mar-25
S4-500	LYR - TTA, Site clearance, Tree Felling, Survey	36	13-Mar-25	28-Apr-25	203				LYR - TTA, Site clearance, Tree Felling, Survey	
S4-510	GI works for trenchless design	18	29-Apr-25	21-May-25	224					
	Construction Works under Section 5 - All works within Part C4	260	18-Oct-24 A	30-Sep-25	22					
	XP Area 2	260	18-Oct-24 A	30-Sep-25	22					
	Mainlaying Works along Hung Shui Kiu Tin Sam Road (FWDm-B/C, FLWDM-B/C) B: CH410 - 620, C: CH0 - 158	177	27-Feb-25	30-Sep-25	22					27-Feb-25
S5-230a	FWDM & FLWDM - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (C2: 98m)(PR=54d/30m)	177	27-Feb-25	30-Sep-25	22		FWDM & FLWDM - TTA, Sheet pile, exca, ELS, pipelaying, backfill, road reinstate (C2: 98m)(PR=54d/30m)			
	Mainlaying Works along Hung Yuen Road (FWDMD & FLWDM-D), D: CH0 - CH260	120	18-Oct-24 A	14-Feb-25	38					14-Feb-25, Mainlaying Works along Hung Yuen Road
S5-120	Approval process for submission of TPRP/ supplementary TPRP within Part C4 of the Site	120	18-Oct-24 A	14-Feb-25	38					
	Construction Works under Section 7 / 8 / 9	186	13-Sep-24 A	16-May-25	1038					
	Section 7 - MIC Site office	186	13-Sep-24 A	16-May-25	1038					
S7-090	Get Approval of MS of Site Clearance at Part E from RSS and MTRC	39	13-Sep-24 A	10-Jan-25	1089					
S7-100a	Get Approval of TPRP at Part E - Fell Tree	120	18-Oct-24 A	14-Feb-25	1293					
S7-100d	Get Approval of Design and MS from RSS and MTRC	21	18-Jan-25	07-Feb-25	1279		Get Approval of Design and MS from RSS and MTRC			
S7-100f	Prefabrication of MIC Office	42	08-Feb-25	28-Mar-25	1038				Prefabrication of MIC Office	
S7-100b	Tree Felling and site clearance	12	15-Feb-25	28-Feb-25	1050				Tree Felling and site clearance	
S7-100e	Formation, blinding and footing of MIC Office [After approval of TPRP in Part E subject to comment item 16]	12	01-Mar-25	14-Mar-25	1050		Formation, blinding and footing of MIC Office [After approval of TPRP in Part E subject to comment item 16]			
S7-100g	Installation of MIC Office	36	29-Mar-25	16-May-25	1038					Installation of MIC Office

	Summary		Critical Remaining Work		Finish C...
	Actual LOE		Milestone		No Pred...
	Remaining LOE		Crit Milestone		No Suc...
	Actual Work		Actual Milestone		
	Remaining Work		Start Constraint		

## **Appendix 1.2 Project Organization Chart**

### Project Organization Chart



←→ Link of Communication



## **Appendix 1.3 Implementation Status of Environmental Mitigation Measure**

Environmental Mitigation Implementation Schedule (EMIS)

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
<b>Air Quality</b>						
S4.10	Watering once per hour on active works areas, exposed areas and unpaved haul roads to reduce dust emission	To minimize the dust impact	Contractor	Construction Phase	<ul style="list-style-type: none"> <li>• Air Pollution Control Ordinance (APCO)</li> <li>• To control the dust impact to meet HKAQO and TM-EIAO criteria</li> </ul>	Implemented
	The active construction works area should be reduced to one-third of monthly average work of the respective Work Contract so as to alleviate adverse dust impact.					N/A
	When there are open excavation and spoil handling works, hoarding of 3m high should be provided along the construction site boundary adjacent to the non-construction areas such as residential, educational institutes or recreation area in use so as to minimize the dust impact.					N/A
	Dust suppression measures stipulated in Air Pollution Control (Construction Dust) Regulation and good site practices: <ul style="list-style-type: none"> <li>• Use of regular watering to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather.</li> <li>• Use of frequent watering for particularly dusty construction areas and areas close to Air Sensitive Receivers (ASRs).</li> <li>• Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines.</li> <li>• Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> <li>• Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations.</li> <li>• Establishment and use of vehicle wheel and body washing facilities at the exit points of the site.</li> <li>• Provision of wind shield and dust extraction units or similar dust mitigation measures at the loading area of barging point, and use of water sprinklers at the loading</li> </ul>				<ul style="list-style-type: none"> <li>• Air Pollution Control (Construction Dust) Ordinance (APCO)</li> <li>• To control the dust impact to meet HKAQO and TM-EIAO criteria</li> </ul>	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<p>area where dust generation is likely during the loading process of loose material, particularly in dry seasons/ periods.</p> <ul style="list-style-type: none"> <li>Provision of not less than 2.4m high hoarding from ground level along site boundary where adjoins a road, streets or other accessible to the public except for a site entrance or exit. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.</li> <li>Imposition of speed controls for vehicles on site haul roads.</li> <li>Where possible, routing of vehicles and positioning of construction plant should be at the maximum possible distance from ASRs.</li> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides.</li> </ul>					
<b>Construction Noise</b>						
S5.13	Use of quiet plant which should be made reference to the Powered Mechanical Equipment (PME) listed in the Technical Memorandum or the Quality Powered Mechanical Equipment (QPME) / other commonly used PME listed in Environmental Protection Department (EPD) web pages as far as possible which includes the Sound Power Level (SWLs) for specific quiet PME.	Reduce the noise levels of plant items	Contractor	Construction Phase	EIAO-TM	Implemented
S5.13	Install movable noise barrier and enclosures. The movable noise barrier can provide 5 dB(A) noise reduction for mobile plant and 10 dB(A) noise reduction for static plant. The barrier material shall have a surface mass of not less than 14 kg/m <sup>2</sup> . The enclosures can provide 15 dB(A) noise reduction.	Screen the noisy plant items to be used at all construction sites				N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S5.13	Proper workfront management and proper grouping of PME during construction activities operated at the critical work areas.	Reduce the construction noise impact				N/A
S5.13	Maintain the recommended minimum separation between the schools and the critical works areas during examination periods.					N/A
S5.13	<u>Good Site Management Practices</u> <ul style="list-style-type: none"><li>only well-maintained plant should be operated on-site, and plant should be serviced regularly during the construction programme;</li><li>machines and plant (such as trucks and cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li><li>plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs</li><li>silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works</li><li>mobile plant should be sited as far away from NSRs as possible and practicable; and</li><li>material stockpiles, site offices and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities.</li></ul>	Control construction airborne noise				Implemented
S5.13	Liaison with the school representative(s) to obtain the examination schedule so as to avoid noisy construction activities during school examination period.					Implemented
S5.13	Set up a liaison group among CEDD, relevant government departments, contractors of the Works contracts, etc. during construction phase of the Project to ensure proper implementation of mitigation measures.					N/A
<b>Water Quality</b>						

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Surface run-off from construction sites should be discharged into stormwater drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sedimentation basins. Channels/earth bunds/sandbag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Perimeter channels should be provided on site boundaries where necessary to intercept stormwater run-off from outside the site so that it will not wash across the site. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	To minimise impact from construction site run-off	Contractor	Construction Phase	<ul style="list-style-type: none"> <li>Water Pollution Control Ordinance (WPCO), Technical Memorandum on EIA Ordinance (EIAO-TM), ProPECC PN 1/94,</li> <li>Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM-DSS)</li> </ul>	Implemented
S6.11	Silt removal facilities, channels and manholes should be maintained, and the deposited silt and grit should be removed regularly, at the onset of and after each rainstorm to prevent local flooding. Any practical options for the diversion and re-alignment of drainage should comply with both engineering and environmental requirements in order to provide adequate hydraulic capacity of all drains.					N/A
S6.11	Construction works should be programmed to minimise soil excavation works in rainy seasons (April to September). If excavation in soil cannot be avoided in these months or at any time of year when rainstorms are likely, for the purpose of preventing soil erosion, temporary exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Intercepting channels should be provided (e.g., along the crest / edge of excavation) to prevent stormwater run-off from washing across exposed soil surfaces. Arrangements should always be in place in such a way that adequate surface protection measures can be safely carried out well before the arrival of a rainstorm.					Implemented
S6.11	Earthworks final surfaces should be well compacted, and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms. Appropriate drainage like intercepting channels should be provided where necessary.					N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections. Rainwater pumped out from trenches or foundation excavations should be discharged into stormwater drains via silt removal facilities.					N/A
S6.11	Open stockpiles of construction materials (e.g., aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms.					N/A
S6.11	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent stormwater run-off from getting into foul sewers. Discharge of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.					N/A
S6.11	Good site practices should be adopted to remove rubbish and litter from construction sites so as to prevent the rubbish and litter from spreading from the site area. It is recommended to clean the construction sites on a regular basis.					Implemented
S6.11	Water used in ground boring and drilling for site investigation or rock / soil anchoring should as far as practicable be re-circulated after sedimentation. When there is a need for final disposal, the wastewater should be discharged into stormwater drains via silt removal facilities.	To minimise impact from boring and drilling water				Implemented
S6.11	All vehicles and plants should be cleaned before they leave a construction site to minimise the deposition of earth, mud, debris on roads. A wheel washing bay should be provided at every site exit if practicable and wash-water should have sand and silt settled out or removed before discharging into stormwater drains. The section of construction road between the wheel washing bay and the public road should be paved with backfall to reduce vehicle tracking of soil and to prevent site run-off from entering public road drains.	To minimise impact from wheel washing water				Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	Acidic wastewater generated from acid cleaning, etching, pickling and similar activities should be neutralised to within the pH range of 6 to 10 before discharging into foul sewers.	To minimise impact from acidic wastewater				N/A
S6.11	There is a need to apply to EPD for a discharge licence for discharge of effluent from the construction site under the WPCO. The discharge quality must meet the requirements specified in the discharge licence. All the run-off and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS.	To minimise impact from effluent discharges				N/A
S6.11	Beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence. The beneficial uses of the treated effluent for other on-site activities such as dust suppression, wheel washing and general cleaning etc., can minimise water consumption and reduce the effluent discharge volume. If monitoring of the treated effluent quality from the works areas is required during the construction phase of the Project, the monitoring should be carried out in accordance with the relevant WPCO licence.	To minimise impact from effluent discharges				N/A
S6.11	To minimise the potential water quality impacts from the construction works located near any inland watercourses, the practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams/rivers from adverse impacts arising from construction works" should be adopted where applicable: <ul style="list-style-type: none"> <li>Impermeable sheet piles and cofferdams should be used as required to divert water flow from the construction works area so that all the construction works would be undertaken within a dry zone and physically separated from the watercourses.</li> </ul>	To minimise impact from construction works near watercourses			<ul style="list-style-type: none"> <li>WPCO, EIAO-TM, ETWB TC9Works) No. 5/2005</li> </ul>	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul style="list-style-type: none"> <li>The proposed works should preferably be carried out within the dry season where the flow in the stormwater culvert/water channel/stream is low.</li> <li>The use of less or smaller construction plants may be specified in works areas close to the inland water bodies.</li> <li>Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from any watercourses during carrying out of the construction works.</li> <li>Stockpiling of construction materials and dusty materials should be covered and located away from any watercourses.</li> <li>Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby water receivers.</li> <li>Construction activities, which generate large amount of wastewater, should be carried out in a distance away from the watercourses, where practicable.</li> <li>Mitigation measures to control site run-off from entering the nearby water environment should be implemented to minimise water quality impacts. Surface channels should be provided along the edge of the waterfront within the work sites to intercept the run-off.</li> <li>Construction effluent, site run-off and sewage should be properly collected and/or treated.</li> <li>Any temporary works site inside the stormwater watercourses should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the stormwater quality.</li> <li>Proper shoring may need to be erected in order to prevent soil/mud from slipping into the inland water bodies.</li> </ul>					

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S6.11	<p>The key water quality measure for protection of the revitalised drainage channel water is to avoid polluted site run-off from reaching the revitalised drainage channel water. Relevant mitigation measures should follow the practices outlined in ETWB TC (Works) No. 5/2005 "Protection of natural streams / rivers from adverse impacts arising from construction works" as listed below:</p> <ul style="list-style-type: none"> <li>Impermeable sheet piles and cofferdams should be used as required to divert water flow from the construction works area so that all the construction works would be undertaken within a dry zone and physically separated from the revitalised drainage channel water.</li> <li>The proposed works should preferably be carried out within the dry season where the flow in the revitalised drainage channel is low.</li> <li>The use of less or smaller construction plants may be specified in works areas close to the revitalised drainage channel.</li> <li>Temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction materials should be located well away from the revitalised drainage channel during carrying out of the construction works.</li> <li>Stockpiling of construction materials and dusty materials should be covered and located away from the revitalised drainage channel water.</li> <li>Construction debris and spoil should be covered up and/or disposed of as soon as possible to avoid being washed into the nearby revitalised drainage channel.</li> <li>Construction activities, which generate large amount of wastewater, should be carried out a distance away from the revitalised drainage channel, where practicable.</li> <li>Mitigation measures to control site run-off from entering the nearby revitalised drainage channel should be implemented to minimise water quality impacts. Surface channels should be provided along the edge of the</li> </ul>	To minimise impact from revitalisation and greening of Drainage Channel Banks				Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<p>revitalised drainage channel within the work sites to intercept the run-off.</p> <ul style="list-style-type: none"> <li>Construction effluent, site run-off and sewage should be properly collected and/or treated.</li> <li>Any temporary works site inside the revitalised drainage channel should be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props to prevent adverse impact on the revitalised drainage channel water.</li> </ul> <p>Proper shoring may need to be erected in order to prevent soil / mud from slipping into the revitalised drainage channel.</p>					
S6.11	The construction method and sequence of the proposed construction in watercourses / concrete flood storage pond for works sites of DP12 should be carefully designed so that all the construction works including any excavation and pilling operations would be undertaken within a dry zone and physically separated from the watercourses downstream.	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM	N/A
S6.11	Impermeable sheet pile walls or cofferdam walls or steel casing should be installed to fully enclose the construction works area (including all the excavation and piling works) in the watercourse / pond prior to the commencement of any works in watercourse / pond. Dewatering of the construction works area or diversion of water flow should be undertaken before the construction works to avoid water flow in the construction works area. Silt removal facilities should be used to clarify the effluent generated from the dewatering operation before discharging back to the watercourse / drainage system.	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM, TM-DSS	N/A
S6.11	Any construction works including excavation and pilling activities should be undertaken in a dry zone surrounded by the impermeable sheet pile walls or cofferdam walls or steel casing. Silt curtains should also be deployed around the construction works area inside the watercourse, where practicable, as a second layer of protection to further minimise sediment and contaminant release. All wastewater generated from the pilling activities should be regarded as	To minimise impact from construction in watercourses / concrete flood storage pond			WPCO, EIAO-TM	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	part of the construction site effluent, which should be properly collected and treated as appropriate to meet the standards stipulated in the TM-DSS before disposal. It is recommended that the construction works in watercourses / pond should be undertaken in dry seasons, where practicable, when the water flow is low.					
S6.11	Construction works for removal and diversion of watercourses should be undertaken within a dry zone. Where necessary, cofferdams or similar impermeable sheet pile walls should be used to isolate the works areas from the neighbouring waters.	To minimise impact from removal and diversion of watercourse			WPCO, EIAO-TM	N/A
S6.11	Construction works at watercourse should be undertaken only after flow diversion or dewatering operation is fully completed to avoid water flow in the works area. Dewatering of watercourse should be performed by diverting the water flow to new or temporary drainage. Where necessary, cofferdams or similar impermeable sheet pile walls should be used to isolate the works areas from neighbouring waters. The permanent or temporary drainage for carrying the diverted flow from existing watercourse to be removed should be constructed and completed before dewatering of that existing watercourse. Construction of all the proposed permanent and temporary drainage should be undertaken in a dry zone prior to receiving any water flow.				WPCO, EIAO-TM, TM-DSS	N/A
S6.11	The Contractor should provide a dry zone for all the construction works to be undertaken in watercourses and stormwater drainage following the tentative works sequence as described above or using other approved methods as appropriate to suit the works condition. The flow diversion works should be conducted in dry season, where possible, when the flow in the watercourse is low. The wastewater and ingress water from the site should be properly treated to comply with the WPCO and the TM-DSS before discharge.				WPCO, EIAO-TM, TM-DSS	N/A
S6.11	The site practices outlined in the ProPECC PN 1/94 "Construction Site Drainage" and ETWB TC (Works) No. 5/2005 "Protection of natural streams/ivers from adverse impacts arising from construction works" should be adopted				WPCO, EIAO-TM, ProPECC PN 1/94,	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	for the proposed demolition or diversion of watercourses where applicable.				ETWB TC (Works) No. 5/2005	
S6.11	Construction works at the existing ponds / wet areas should be conducted only after dewatering of these ponds / wet areas is fully completed. The drained water generated from the dewatering of these ponds / wet areas to be removed should be temporarily stored in appropriate storage tanks or containers for reuse on-site as far as possible. Any surplus drained water should be tankered away for proper disposal at STW in a controlled manner.	To minimise impact from removal of ponds / wet areas			WPCO, EIAO-TM	N/A
S6.11	It is recommended to drain only one pond at a time to minimise the potential water quality impact. Dewatering works at ponds / wet areas should be conducted within dry season to minimise the quantity of drained water. No direct discharge of drained water to the stormwater drainage system or marine water should be allowed.					N/A
S6.11	Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation, should be observed and complied with for control of chemical wastes.	To minimise impact from accidental spillage			WPCO, Waste Disposal Ordinance (WDO), Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	Implemented
S6.11	Any service workshop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.				WPCO, WDO, Waste Disposal (Chemical Waste) (General) Regulation, EIAO-TM	N/A
S6.11	Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance. The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the Waste Disposal					N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Ordinance details the requirements to deal with chemical wastes. General requirements are given as follows: <ul style="list-style-type: none"> <li>Suitable containers should be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport.</li> <li>Chemical waste containers should be suitably labelled, to notify and warn the personnel who are handling the wastes, to avoid accidents.</li> <li>Storage area should be selected at a safe location on site and adequate space should be allocated to the storage area.</li> </ul>					
S6.11	No discharge of sewage to the stormwater system and marine water will be allowed. Adequate and sufficient portable chemical toilets should be provided in the works areas to handle sewage from construction workforce. A licensed waste collector should be employed to clean and maintain the chemical toilets on a regular basis.	To minimise impact from workforce sewage effluent			WPCO, EIAO-TM, TM-DSS	Implemented
S6.11	Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the surrounding environment. Regular environmental audit of the construction site should be conducted to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site.				WPCO, EIAO-TM	N/A
S6.11	Any excavated contaminated material and exposed contaminated surface should be properly housed and covered to avoid generation of contaminated run-off. Open stockpiling of contaminated materials should not be allowed. Any contaminated run-off or wastewater generated from the land decontamination processes should be properly collected and diverted to wastewater treatment facilities (WTF). The WTF shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as total petroleum hydrocarbon) to an undetectable range. All treated effluent from the wastewater treatment system shall meet the requirements as stated in	To minimise impact from contaminated site run-off and wastewater from land decontamination			WPCO, EIAO-TM, TM-DSS	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal.					
S6.11	No direct discharge of groundwater from contaminated areas should be adopted. Prior to any excavation works within the potentially contaminated areas, the baseline groundwater quality in these areas should be reviewed based on the past relevant site investigation data and any additional groundwater quality measurements to be performed with reference to Guidance Note for Contaminated Land Assessment and Remediation and the review results should be submitted to EPD for examination. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, this contaminated groundwater should be either properly treated or properly recharged into the ground in compliance with the requirements of the TM-DSS. If wastewater treatment is to be deployed for treating the contaminated groundwater, the wastewater treatment unit shall deploy suitable treatment processes (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (such as total petroleum hydrocarbon) to an undetectable range. All treated effluent from the wastewater treatment plant shall meet the requirements as stated in the TM-DSS and should be either discharged into the foul sewers or tankered away for proper disposal.	To minimise impact from groundwater from contaminated areas			WPCO, TM-DSS, Guidance Note for Contaminated Land Assessment and Remediation	N/A
S6.11	If deployment of wastewater treatment is not feasible for handling the contaminated groundwater, groundwater recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in section 2.3 of the TM-DSS. The baseline groundwater quality should be determined prior to the selection of the recharge wells and submit a working plan to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of	To minimise impact from groundwater from contaminated areas			WPCO, EIAO-TM, TM-DSS	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	ambient groundwater at the recharge well. Groundwater monitoring wells should be installed near the recharge points to monitor the effectiveness of the recharge wells and to ensure that no likelihood of increase of groundwater level and transfer of pollutants beyond the site boundary. Prior to recharge, free products should be removed as necessary by installing the petrol interceptor. The Contractor should apply for a discharge licence under the WPCO through the Regional Office of EPD for groundwater recharge operation or discharge of treated groundwater.					
S6.11	<p>The following measures should be implemented by the Contractors to minimise the chance of emergency construction site discharge (due to failure of treatment facilities such as sand traps, silt traps, sedimentation basins, oil interceptors etc.):</p> <ul style="list-style-type: none"> <li>• Provide spare or standby treatment facilities of suitable capacities for emergency replacement in case damage or defect or malfunctioning of the duty treatment facilities is observed.</li> <li>• Conduct daily integrity checking of the construction site drainage and treatment facilities to inspect malfunctions, in particular before, during and after a storm event.</li> <li>• Carry out regular maintenance or desilting works to maintain effectiveness of the construction site drainage and treatment facilities in particular before, during and after a storm event.</li> </ul>	To minimise impact from construction site discharges			WPCO, EIAO-TM, TM-DSS	N/A
S6.11	An Emergency Response Plan (ERP) should be developed to minimise the potential impact from construction site discharges under failure of treatment facilities during emergency situations or inclement weather. The ERP should give the emergency contacts to mobilise retention facilities and stakeholders to be notified as well as the details of the proposed construction site drainage system and the design and operation of duty and standby treatment facilities. The ERP should also provide the procedures and guidelines for routine integrity checking and maintenance of the drainage	To minimise impact from construction site discharges				Implemented



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	system and treatment facilities as well as the emergency response and rectification procedures to restore normal operation of the treatment facilities in case of treatment failure during emergency situation or inclement weather. The Best Management Practices (BMPs) in controlling water pollution arising from the construction activities and an event and action plan with action and limit levels for water quality monitoring should be included in the ERP. The ERP should be submitted to the EPD for approval before commencement of the construction works.					
S6.11	Construction of the Project would involve diversion of the existing twin 800 mm diameter rising mains along Tin Ying Road. New sewerage facilities for receiving the diverted sewage flow from the existing rising mains should be constructed prior to the commencement of any demolition and construction works at the existing rising mains. All sewage flow running in the existing rising mains along Tin Ying Road should be diverted to the new sewerage system prior to any demolition and construction works at the existing rising mains. No discharge of sewage flow to the environment should be allowed during the sewerage diversion works.	To minimise impact from sewerage diversion works			WPCO, EIAO-TM	N/A
S6.11	All excavated materials generated from removal and diversion of watercourses, removal and construction works in ponds and wet areas as well as the proposed bridge pier construction works in watercourses should be collected and handled in compliance with the Waste Disposal Ordinance. Excavated sediment, if any, generated from the excavation activities in watercourses, ponds and wet areas should be tested and classified in accordance with the ETWB TCW No. 34/2002 for determining the disposal arrangement for the sediment. No direct disposal of the construction wastes or excavated materials into the stormwater drainage system and marine water should be allowed.	To manage the disposal of sediment			Waste Disposal Ordinance, ETWB TCW No. 34/2002	N/A
<b>Waste Management</b>						

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S8.2	<u>Good Site Practice</u> The following good site practices are recommended during the construction phase: <ul style="list-style-type: none"> <li>• Nomination of an approved person, such as a site manager, to be responsible for the implementation of good site practices,</li> <li>• Training of site personnel in proper waste management and chemical handling procedures.</li> <li>• Provision of sufficient waste disposal points and regular collection of waste.</li> <li>• Appropriate measures to minimize windblown litter and dust during handling, transportation and disposal of waste; and</li> <li>• Preparation of a WMP in accordance with the ETWB TCW No. 19/2005 Environmental Management on Construction Sites and submitted it to the Engineer for approval.</li> </ul>	Minimise waste generation during construction	Contractor	Construction Phase	Waste Disposal Ordinance, Public Cleansing and Prevention of Nuisances Regulation (Cap. 132BK)	Implemented
S8.2	<u>Waste Reduction Measures</u> Waste reduction is best achieved by proper planning and design at the planning and design phases, as well as by ensuring the implementation of good site practices. The following recommendations are proposed to achieve waste reduction: <ul style="list-style-type: none"> <li>• Segregation and storage of different types of waste in different containers or skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> <li>• Adopt proper storage and site practices to minimize the potential for damage to, and contamination of, construction materials;</li> <li>• Plan the delivery and stock of construction materials carefully to minimise the amount of waste generated;</li> <li>• Sort out demolition debris and excavated materials from demolition works to recover reusable / recyclable portions (i.e. soil, rock, broken concrete, etc.);</li> <li>• Maximize the use of reusable steel formwork to reduce the amount of C&amp;D materials;</li> </ul>				Waste Disposal Ordinance	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul style="list-style-type: none"> <li>Minimize over ordering concrete, mortars and cement grout by doing careful check before ordering; and</li> <li>Adopt pre-cast construction method instead of cast-in-situ method for construction of concrete structures as far as possible.</li> </ul>					
S8.2	<u>Storage of Waste</u> Storage of materials on site may induce adverse environmental impacts if not properly managed. The following recommendations should be implemented to minimise the impacts: <ul style="list-style-type: none"> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimising the potential of pollution;</li> <li>Maintain and clean storage areas routinely;</li> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from being wind-blown or washed away; and</li> <li>Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>	Minimise waste impacts during storage of waste			Waste Disposal Ordinance	Implemented
S8.2	<u>Collection and Transportation of Waste</u> Waste hauler with appropriate permits should be employed by the Contractor for the collection and transportation of waste from works areas to respective disposal outlets. The following recommendation should be implemented to minimise the impacts: <ul style="list-style-type: none"> <li>Remove waste in timely manner;</li> <li>Employ the trucks with cover or enclosed containers for waste transportation;</li> <li>Obtain relevant waste disposal permits from the appropriate authorities; and</li> <li>Dispose of waste at licensed waste disposal facilities.</li> </ul>	Minimise waste impacts during collection and transportation of waste			Waste Disposal Ordinance	Implemented
S8.2	<u>Construction and Demolition (C&amp;D) Materials</u> Wherever practicable, C&D materials should be segregated from other waste to avoid contamination and ensure acceptability at the public filling areas or reclamation sites. The following mitigation measures should be implemented in handling the C&D materials:	Minimise waste impacts from C&D materials			Waste Disposal Ordinance, Land (Miscellaneous Provisions) Ordinance, Waste Disposal (Charges	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<ul style="list-style-type: none"> <li>Adopt “selective demolition” technique to demolish the existing structure and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> <li>Maintain the stockpile areas and reuse excavated fill material for backfilling;</li> <li>Carry out on-site sorting to recover the inert C&amp;D materials and reusable and recyclable materials prior to disposal off-site;</li> <li>Make provisions in the contract documents to allow and promote the use of recycled aggregates where appropriate; and</li> <li>Implement a trip-ticket system for each works contract in accordance with DEVB TC(W) No. 6/2010 Trip-ticket System for Disposal of Construction and Demolition Material to ensure that the disposal of C&amp;D materials are properly documented and verified.</li> </ul> <p>The Contractor should be responsible for devising a system to work for on-site sorting of C&amp;D materials. It is recommended that the system should include the identification of the source of generation, estimated quantity of waste generated, arrangement for on-site sorting and/or collection, designated stockpiling areas, frequency of collection by recycling contractors and frequency of removal off-site.</p>				for Disposal of Construction Waste) Regulation (Cap. 354N)	
S8.2	<p><u>Asbestos Containing Materials</u></p> <p>Due to the potential large amount of asbestos containing materials during the site clearance stage, asbestos investigation is required. However, as asbestos investigation will involve a large number of buildings and most premises will involve private access, which cannot be obtained at this stage, it is considered that an asbestos specialist shall be employed by the responsible parties during the construction stage to investigate this issue.</p> <p>Sufficient and reasonable lead time shall be allowed for preparation, vetting and implementation of Asbestos Investigation Report and Asbestos Abatement Plan in</p>	Control the asbestos containing materials and ensure proper storage, handling and disposal			Code of Practice on Handling, Transportation and Disposal of Asbestos Waste ProPECC PN 2/97 Handling of Asbestos Containing Materials in Buildings	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<p>accordance with Air Pollution Control Ordinance before commencement of any demolition or site clearance work. Some key precautionary measures related to the handling and disposal of asbestos are listed as following:</p> <ul style="list-style-type: none"> <li>• Adoption of protection, such as full containment, mini containment, or segregation of work area;</li> <li>• Provision of decontamination facilities for cleaning of workings, equipment and bagged waste before leaving the work area;</li> <li>• Adoption of engineering control techniques to prevent fibre release from work area, such as use of negative pressure equipment with high efficiency particulate air (HEPA) filters to control air flow between the work area and the outside environment;</li> <li>• Wetting of asbestos containing materials before and during disturbance, minimising the breakage and dropping of asbestos containing materials, and packing of debris and waste immediately after it is produced;</li> <li>• Cleaning of work area by wet wiping and vacuuming with HEPA-filtered vacuum cleaner;</li> <li>• Coating on any surfaces previously in contact with or contained by asbestos with a sealant;</li> <li>• Proper bagging, safe storage and disposal of asbestos and asbestos-contaminated waste;</li> <li>• Pre-treatment of all effluent from the work area before discharged; and</li> <li>• Air monitoring strategy to check the leakage and clearance of the work area during and after the asbestos work.</li> </ul>					
S8.2	<p><u>Chemical Waste</u>  For those processes which generated chemical waste, it may be possible to find alternatives to eliminate the use of chemicals, to reduce the generation quantities or to select a chemical type of less impact on environment, health and safety as far as possible.  If chemical waste is produced at the construction site, the Contractor will be required to register with the EPD as a</p>	Control the chemical waste and ensure proper storage, handling and disposal.			Waste Disposal (Chemical Waste) General) Regulation, Code of Practice on the Packaging, Labelling and	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	chemical waste producer. Chemical waste should be stored in appropriate containers and collected by a licensed chemical waste contractor. Chemical waste (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while chemical waste that cannot be recycled should be disposed of at either the CWTC, or another licensed facility.				Storage of Chemical Waste	
S8.2	<u>General Refuse</u> General refuse should be stored in enclosed bins separately from construction and chemical waste. Recycling bins should also be placed to encourage recycling. Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean. A reputable waste collector should be employed to remove general refuse on a daily basis. It is expected that such arrangements would minimise potential environmental impacts.	Minimise production of general refuse and avoid odour, pest and litter impacts			Waste Disposal Ordinance	Implemented
	<u>Excavated Sediment</u> Since the amount of excavated sediment generated from the inland water removal / diversion works is expected to be small, all excavated sediment will be treated and reused on-site as backfilling materials for the Project. This approach avoids the need for off-site disposal that may result in impacts on the marine environment. In addition, all construction works near the watercourses should be undertaken within a dry zone and during dry season to avoid adverse impacts to the environment. The excavated sediment, if stockpiled on site, should be stored in enclosed containers and transported to the on-site treatment facilities as soon as practicable to minimise any potential odour impacts.	Proper handling of excavated sediment			Waste Disposal Ordinance	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	<u>Contaminated Soil</u> It is considered unlikely that contaminated land issues, if any subject to site investigation, would be a concern during either the construction or the operational of the proposed development as remediation on contaminated area would be carried out prior to construction. However, as a precaution, it is recommended that standard good site practices should be implemented during the construction phase to minimise any potential exposure to contaminated soils or groundwater.	Proper handling of contaminated soil			Practice Guide for Investigation and Remediation of Contaminated Land	N/A
<b>Land Contamination</b>						
-	<u>Identified Potentially Contaminated Sites</u> Prior to development of these sites, the Project Proponent should appoint a consultant to re-appraise these sites to update the corresponding findings and sampling and testing requirements presented in the Contamination Assessment Plan (CAP).  Supplementary CAP(s), incorporating the findings of the site re-appraisal and the updated sampling and testing strategy, should be prepared and submitted to EPD for approval prior to conducting any site investigation (SI) works.  SI works should then be carried out according to the supplementary CAP(s). Contamination Assessment Report (CAR(s)) and, if contaminated soil and/or groundwater identified, Remediation Action Plan (RAP(s)) should be prepared and submitted to EPD for approval.	Identify the presence, nature and extent of contamination and formulate the necessary remedial actions	CEDD/ Detailed Design Consultant / Contractor	After the land is resumed and handed over to the Project Proponent and prior to commencement of any remediation / construction works.	EIAO-TM, Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management, Guidance Notes for Contaminated Land Assessment and Remediation; and Practice Guide for Investigation and Remediation of Contaminated Land	Implemented
-	<u>Remaining Non-Contaminated Sites</u>  After the sites are handed over to the Project Proponent for development, the Project Proponent should appoint a consultant to revisit these sites to assess the latest land uses and site conditions. If any of these sites are found to have potential land contamination issues, the Project Proponents					Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	appointed consultant should prepare and submit supplementary CAP(s) to EPD for approval prior to conducting any SI works.  SI works should then be carried out according to the supplementary CAP(s). CAR(s) and, if contaminated soil and/or groundwater identified, RAP(s) should be prepared and submitted to EPD for approval					
-	Any contaminated soil and groundwater should be treated according to EPD's approved RAP(s) and RR(s) should be submitted to EPD for agreement after completion of the remediation works.	Remediate any contaminated soil and groundwater and demonstrate that the remediation works are adequate and is carried out in accordance with EPD's approved RAP(s).	Contractor	After the land is resumed and handed over to the PP and prior to commencement of any construction works.		N/A
<b>Ecology</b>						
S10.2.4	Scheduling the site formation and construction works at Sites 3-32, 3-33, 3-37, 3-39 and 3-40 outside the breeding season of ardeids	Minimise disturbance impacts to breeding ardeids in San Sang San Tsuen egrettry	CEDD / Contractor	Construction phase	TM-EIAO	N/A
S10.2.5	Provision of screening (e.g., hoarding) at adjacent habitats within CA at northwest of San Sang San Tsuen.	Disturbance impacts (e.g. noise/vibration, visual) to adjacent habitats within the CA				N/A
S10.2.6	Hoarding around "Green Belt" zoning to mitigate construction disturbance impacts to the Crested Serpent Eagle habitat.	Minimise construction disturbance impacts to the Crested Serpent Eagle habitat				N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S10.2.7	Carefully design the construction methods and sequence of the proposed pier in the watercourses so that all piling and excavation works would be done within dry zone and physically separated from the watercourse downstream	Minimise potential water quality impacts to the habitats of the main channel and waterbird species				N/A
S10.2.8	An ecologist with relevant experience should be consulted before the clearance of any bat roost.	Ensure no bat roost would be damaged due to the proposed development				Implemented
S10.2.10	Provision of hoarding for proper delineation of works boundary.	Minimise construction disturbance impacts to existing mitigation ponds				N/A
S10.2.11	General dust and noise control measures.	Mitigate disturbance impacts to the surrounding habitats and associated wildlife				Implemented
S10.2.12	Night-time lighting control.	Minimise glare disturbance to wildlife				N/A
S10.2.13 – S10.2.15	Good site practices during the construction phase to avoid any pollution entering any nearby watercourses.	Minimise water quality impacts to nearby water bodies				Implemented
Fisheries						

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
S.13.4.8	Follow the mitigation measures proposed in the water quality assessment for construction and operational phase.	To protect fisheries resources from potential indirect impacts arising from deterioration of water quality	Contractor	Construction phase	EIA, contractual requirements	Implemented
<b>Landscape and Visual</b>						
CM1	<u>Minimised construction area and contractor's temporary works areas</u> The construction area and contractor's temporary works areas should be minimised. General Good Practice Measures - For areas unavoidably disturbed by the Project on a short-term basis e.g., works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to	Minimise impacts on adjacent landscape	Government/ Developer/ Detailed Design Consultant/ Contractor	Prior to construction, construction stages. This should be implemented as soon as the areas become available, to achieve early establishment	-	Implemented
CM2	<u>Stripping and storing of topsoil</u> Topsoil, where identified, should be stripped and stored for re-use in the construction of the soft landscape works, where practical. The Contract Specification shall include storage and reuse of topsoil as appropriate. On potentially contaminated sites (as per Section 8) where investigation results indicate soil contamination is present, the use of contaminated soils for planting is to be avoided where appropriate.	Minimise the loss of existing topsoil and reduce the need to provide imported material		Detailed design, construction stages	-	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
CM3	<u>Protection of existing trees</u> Tree Protection & Preservation – Existing trees to be retained within the Project site should be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Protect and Preserve Trees			ETWB Technical Circular Works (TCW) No. 29/2004 and 3/2006	Implemented
CM4	<u>Transplantation of existing trees where practical</u> Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the Project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Transplant Trees where suitable for transplantation		Prior to Construction, Construction Phase & Maintenance in Operation Phase	ETWB TCW 3/2006 and 2/2004 HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit	N/A
CM5	<u>Control of night-time lighting</u> Control of night-time lighting and glare by hooding all lights.	Minimise impact of night-time lighting and glare	Government/ Developer/ Contractor	Construction stage	-	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Construction day and night-time lighting should be controlled to minimise glare impact to adjacent VSRs during the construction phase.					
CM6	<u>Construction of decorative hoarding around construction works</u> Erection of decorative mesh screens or construction hoardings around works areas in visually unobtrusive colours screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publicly accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	To screen undesirable views of the works site.	Contractor	Construction stage	-	Implemented
CM7	<u>Reduction of construction period to practical minimum</u> Reduction of construction period to practical minimum	Minimise length of exposure to construction works	Government/ Developer/ Detailed Design Consultant/ Contractor	Construction stage	-	Implemented
CM8	<u>Prevention of run-off</u> Limitation of / Ensuring no run-off into surrounding landscape and prohibit run-off from entering adjacent water bodies and waterways.	Minimise / limit impacts on surrounding landscape and adjacent water sea areas	Government/ Developer/ Detailed Design Consultant/ Contractor	Construction stage	Guidelines for this include ETWB Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse impacts arising from construction works; Building Department (BD) Practice Note for Authorized Persons and Registered Structural Engineers 295: Protection of natural	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
					streams/rivers from adverse impacts arising from construction works	
CM9	<u>Phasing of construction stage</u> Phasing of the construction stage to reduce visual impacts.	Minimise visual impacts during the construction phase		Construction stage	-	Implemented
CM10	<u>Advance screen planting</u> Advance screen planting of fast-growing tree and shrub species to noise barriers and hoardings. Trees shall be capable of reaching a height >10m within 10 years.	Minimise length of exposure without long term mitigation measures		Detailed design, construction stages	ETWB TCW 3/2006 and 2/2004	N/A
CM11	<u>Minimise disturbance footprints</u> To minimise landscape and visual impacts, the footprint and elevation of such elements should be optimised to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimise landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Reduce topographical changes and minimize land resumption		Detailed design, construction stages	GEO Publication No. 1/2011, Technical Guidelines on Landscape Treatment on Slopes	N/A
CM12	<u>Protection of existing water courses</u> For all the natural rivers and streams inside the development area, consideration of protection measures should be made to minimise any impacts from the construction works. Avoid affecting Watercourses – In the detailed design, consideration should be made of watercourses, to minimise any impacts e.g. at new bridge crossings, viaducts, road alignment etc. Guidelines stated should be followed.	Avoid direct impacts to watercourses	Detailed Design Consultant/ Contractor	Detailed design, construction stages	Guidelines for this include ETWB Technical Circular (Works) No. 5/2005 Protection of natural streams/rivers from adverse	Implemented

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Bridges and box culverts should also be used to minimise the necessity of watercourse modification and protect the watercourses where necessary.				impacts arising from construction works; Building Department (BD) Practice Note for Authorized Persons and Registered Structural Engineers 295: Protection of natural streams/rivers from adverse impacts arising from construction works	
CM13	<u>Hydroseeding on modified slopes</u> Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	To prevent erosion and subsequent loss of landscape resources and character. To ensure man-made slopes are as visually amenable as possible.	Government/ Developer/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	GEO publication (1999) – Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes	N/A
CM14	<u>Integrate Open Space Network with existing nullah conditions</u> For watercourses affected during construction, measures should be sought to minimise the impact with respect to the existing nullah conditions, existing shrubs and trees along the banks.	Minimise / limit impacts on surrounding landscape and			ETWB TCW No. 5/2005 – Protection of natural streams/rivers	N/A

EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
	Where natural streams are unavoidably affected along some of their length, they can be diverted to avoid the proposed new developments and retain the integrity of the whole stream. Detailed design of any stream diversion should follow the Guidelines in ETWB Technical Circular (Works) No. 5/2005 (Protection of natural streams/ivers from adverse impacts arising from construction works) and appropriate construction methods should be used.	adjacent water sea areas			from adverse impacts arising from construction works; DSD Practice Note No.1/2005, Guidelines on Environmental Considerations for River Channel Design	
<b>Cultural Heritage Impact</b>						
S13.1.1	The archaeological impact arising from the construction works should be assessed when the detailed design of the works is available. Preservation in situ is the top priority to safeguard the archaeological remains in the impacted area by amending the layout plans of the construction works. However, if the works cannot avoid disturbance to the archaeological deposit, depending on degree of direct impact, the following mitigation measures should be considered, such as archaeological surveys, archaeological watching brief, preservation by record and relocation of archaeological remains. The scope and programme of the archaeological fieldwork would be agreed with AMO.	Minimise impact to archaeology in SAls	Contractor	Prior to construction phase commencement	Environmental Impact Assessment Ordinance EIAO (Cap.499) and Technical Memorandum (EIAO-TM) Guidance Note on Assessment of Impact on Sites of Culture Heritage in Environmental Impact Assessment Studies (GCH-EIA) Antiquities and Monuments Ordinance (A&MO) Hong Kong Planning Standards and	N/A



EM&A Ref.	Mitigation Measures	Objective of the recommended measure & main concerns to address	Implement Agent	Implementation Timing	Requirements and / or Standards to be Achieved	Implementation status
					Guidelines (HKPSG) Guidelines for Cultural Heritage Impact Assessment (GCHIA)	
S13.1.2	Further archaeological survey is required to be conducted at APA 1 and APA 2 to ascertain the extent of any archaeological remains within the APAs if any construction works will be carried out. Based on the findings of the survey, mitigation measures could be proposed, such as preservation in situ, preservation by record, or relocation of archaeological remains, in prior agreement with the AMO. Direct impact arising from the proposed development within APA 3 should be avoided as far as possible.	Minimise impact to archaeology in APAs.			EIAO-TM GCH-EIA A&MO HKPSG GCHIA	N/A
S13.1.5	Preservation by record (including cartographic and photographic record) prior to any construction works would be required for the directly impacted built heritage.	Minimise impact to built heritage			EIAO-TM GCH-EIA HKPSG GCHIA	N/A
-	A Conservation Management Plan should be proposed to implement future maintenance and management of the cultural heritage.	Maximise the public education, heritage and cultural tourism related opportunities in this area as heritage attractions.	CEDD		EIAO-TM GCH-EIA A&MO HKPSG GCHIA	N/A

## **Appendix 1.4      Impact Monitoring Schedule of the Reporting Month**





## **Appendix 2.1 Calibration Certificates of Impact Air Quality Monitoring Equipment**



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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467356				
Our Report Reference No.:	RPT-24-HVS-0080				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

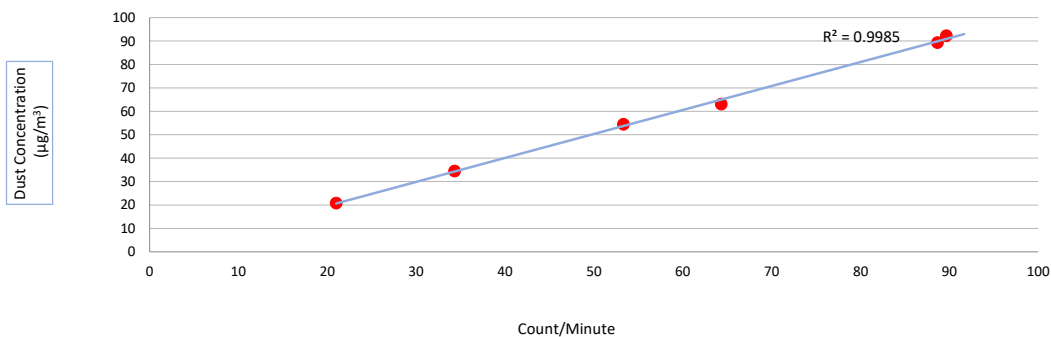
**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	16140	90	92
2	17/08/2024	11835.91	11838.91	180.00	9600	53	54
3	17/08/2024	11838.91	11841.91	180.00	15960	89	89
4	18/07/2024	11841.94	11844.94	180.00	6180	34	34
5	18/07/2024	11844.94	11847.94	180.00	3780	21	21
6	18/07/2024	11847.94	11850.94	180.00	11580	64	63

**Linear Regression of y on x**

Slope, K factor:	<b>1.0232</b>	Intercept:	<b>-0.8300</b>	*Correlation Coefficient, R:	<b>0.9992</b>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	

Verification Curve



Operated By:

Andy Li

Project Technician, Environmental

Date: 23-08-2024

Checked By:

Tandy Tse

Senior Consultant, Environmental

Date: 23-08-2024

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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467357				
Our Report Reference No.:	RPT-24-HVS-0081				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

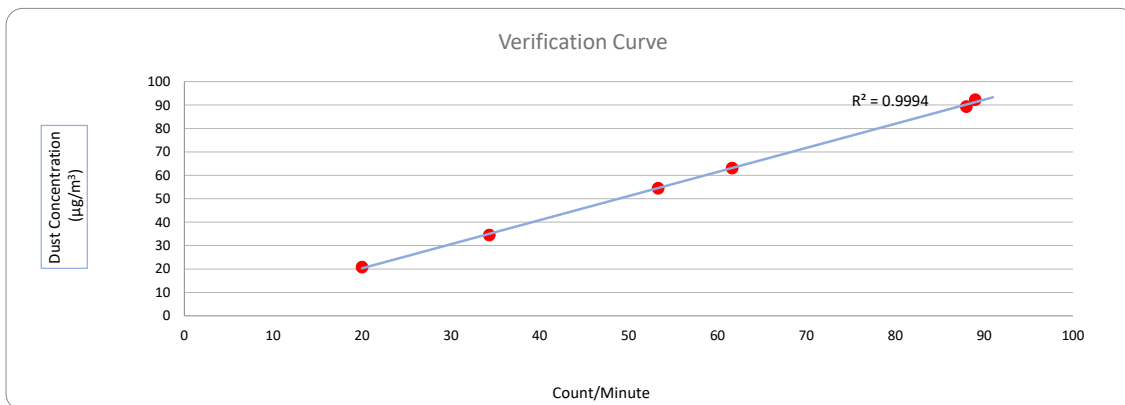
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	16020	89	92
2	17/08/2024	11835.91	11838.91	180.00	9600	53	54
3	17/08/2024	11838.91	11841.91	180.00	15840	88	89
4	18/07/2024	11841.94	11844.94	180.00	6180	34	34
5	18/07/2024	11844.94	11847.94	180.00	3600	20	21
6	18/07/2024	11847.94	11850.94	180.00	11100	62	63

**Linear Regression of y on x**

Slope, K factor:	<b>1.0280</b>	Intercept:	<b>-0.2511</b>	*Correlation Coefficient,R:	<b>0.9997</b>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



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Date: 23-08-2024

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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467358				
Our Report Reference No.:	RPT-24-HVS-0082				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

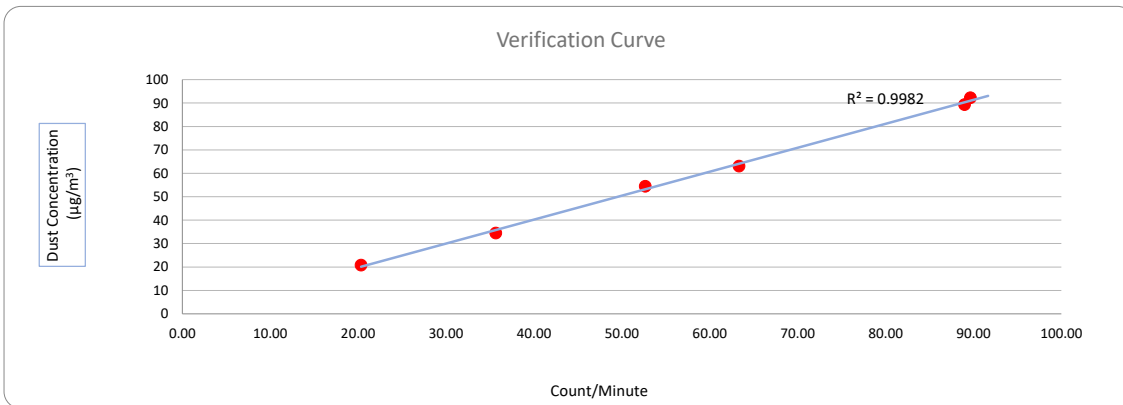
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	16140	89.67	92
2	17/08/2024	11835.91	11838.91	180.00	9480	52.67	54
3	17/08/2024	11838.91	11841.91	180.00	16020	89.00	89
4	18/07/2024	11841.94	11844.94	180.00	6420	35.67	34
5	18/07/2024	11844.94	11847.94	180.00	3660	20.33	21
6	18/07/2024	11847.94	11850.94	180.00	11400	63.33	63

**Linear Regression of y on x**

Slope, K factor:	<b>1.0225</b>	Intercept:	<b>-0.6726</b>	*Correlation Coefficient,R:	<b>0.9991</b>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



Operated By:

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Date: 23-08-2024

Checked By:

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Date: 23-08-2024

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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467359				
Our Report Reference No.:	RPT-24-HVS-0083				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

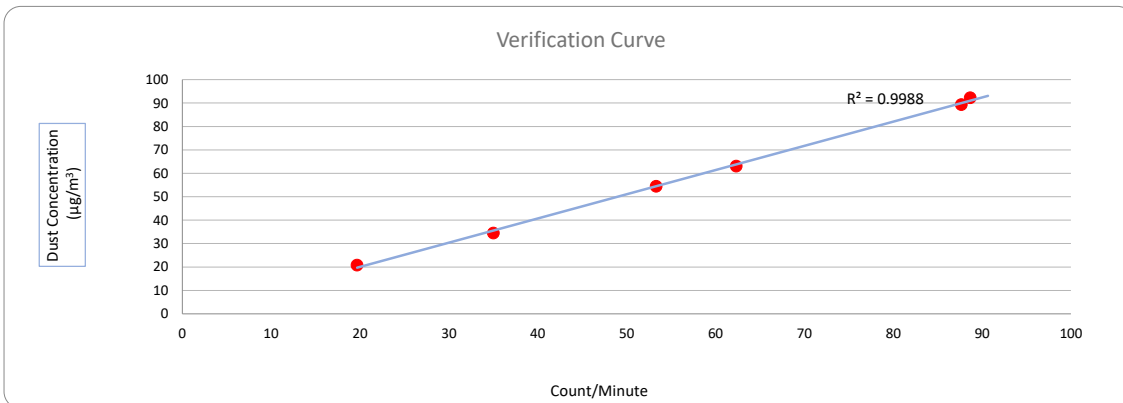
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	15960	89	92
2	17/08/2024	11835.91	11838.91	180.00	9600	53	54
3	17/08/2024	11838.91	11841.91	180.00	15780	88	89
4	18/07/2024	11841.94	11844.94	180.00	6300	35	34
5	18/07/2024	11844.94	11847.94	180.00	3540	20	21
6	18/07/2024	11847.94	11850.94	180.00	11220	62	63

**Linear Regression of y on x**

Slope, K factor:	<b>1.0331</b>	Intercept:	<b>-0.6022</b>	*Correlation Coefficient, R:	<b>0.9994</b>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



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Date: 23-08-2024

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Date: 23-08-2024

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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467360				
Our Report Reference No.:	RPT-24-HVS-0084				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

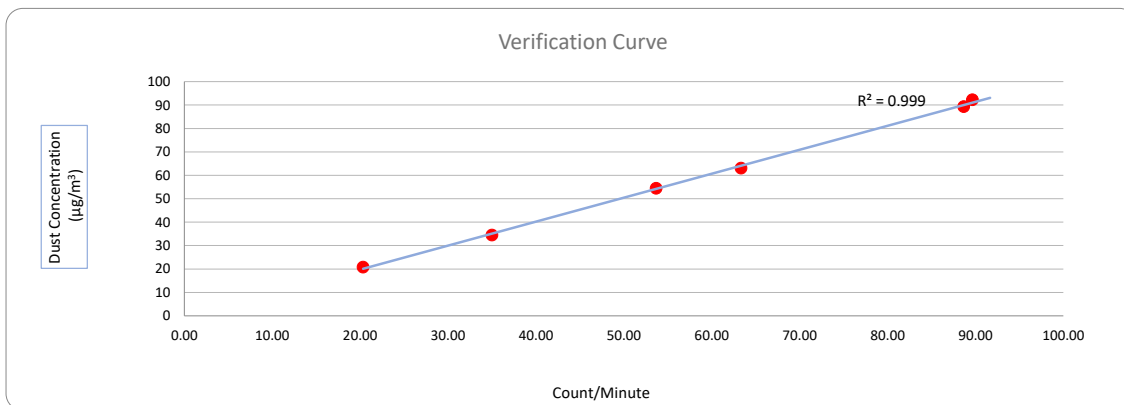
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	16140	89.67	92
2	17/08/2024	11835.91	11838.91	180.00	9660	53.67	54
3	17/08/2024	11838.91	11841.91	180.00	15960	88.67	89
4	18/07/2024	11841.94	11844.94	180.00	6300	35.00	34
5	18/07/2024	11844.94	11847.94	180.00	3660	20.33	21
6	18/07/2024	11847.94	11850.94	180.00	11400	63.33	63

**Linear Regression of y on x**

Slope, K factor:	<b>1.0229</b>	Intercept:	<b>-0.6982</b>	*Correlation Coefficient,R:	<b>0.9995</b>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



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Date: 23-08-2024

Checked By:

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Date: 23-08-2024

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

**Information of Calibrated Equipment**

Verification Test Date:	<b>17-Aug-24</b>	to	<b>18-Aug-24</b>	Next Verification Test Date:	<b>17-Aug-25</b>
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	467361				
Our Report Reference No.:	RPT-24-HVS-0085				
Calibration Location:	Man Cheong Building				

**Standard Equipment Information**

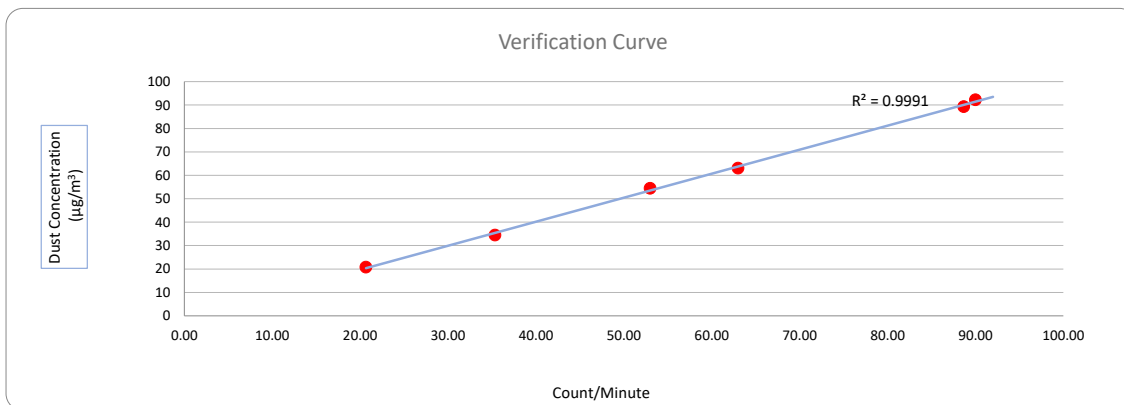
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1050	3465
Last Calibration Date:	17-Aug-24	16-Jan-24
Next Calibration Date:	30-Aug-24	15-Jan-25

**Equipment Verification Result**

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ( $\mu\text{g}/\text{m}^3$ ) y-axis
1	17/08/2024	11832.91	11835.91	180.00	16200	90.00	92
2	17/08/2024	11835.91	11838.91	180.00	9540	53.00	54
3	17/08/2024	11838.91	11841.91	180.00	15960	88.67	89
4	18/07/2024	11841.94	11844.94	180.00	6360	35.33	34
5	18/07/2024	11844.94	11847.94	180.00	3720	20.67	21
6	18/07/2024	11847.94	11850.94	180.00	11340	63.00	63

**Linear Regression of y on x**

Slope, K factor:	<b><u>1.0251</u></b>	Intercept:	<b><u>-0.8237</u></b>	*Correlation Coefficient,R:	<b><u>0.9996</u></b>
Verification Test Result:	<b><u>Strong Correlation, Results were accepted.</u></b>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.	



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Date: 23-08-2024

Checked By:

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Date: 23-08-2024



## **Appendix 2.2     Impact Air Quality Monitoring Data**

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM1								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	13:24	14:24	15:24	61	56	51	56
08/01/2025	Fine	13:37	14:37	15:37	65	66	67	66
14/01/2025	Fine	10:11	11:11	12:11	17	16	15	16
20/01/2025	Cloudy	15:30	16:30	17:30	18	15	14	16
25/01/2025	Fine	9:32	10:32	11:32	16	16	16	16
27/01/2025	Cloudy	14:16	15:16	16:16	10	9	11	10

TSP-1hr		
Average	Max.	Min.
30	67	9

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM2								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	14:02	15:02	16:02	69	53	43	55
08/01/2025	Fine	13:49	14:49	15:49	51	60	52	54
14/01/2025	Fine	10:25	11:25	12:25	15	18	18	17
20/01/2025	Cloudy	15:46	16:46	17:46	10	11	13	11
25/01/2025	Fine	9:51	10:51	11:51	13	12	11	12
27/01/2025	Cloudy	14:33	15:33	16:33	8	7	7	7

TSP-1hr		
Average	Max.	Min.
26	69	7

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM3								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	14:20	15:20	16:20	57	47	43	49
08/01/2025	Fine	14:21	15:21	16:21	48	48	47	48
14/01/2025	Fine	10:44	11:44	12:44	11	21	17	16
20/01/2025	Cloudy	15:59	16:59	17:59	11	12	15	13
25/01/2025	Fine	10:20	11:20	12:20	13	11	12	12
27/01/2025	Cloudy	14:50	15:50	16:50	9	10	12	10

TSP-1hr		
Average	Max.	Min.
25	57	9

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM4								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	14:14	15:14	16:14	60	66	70	65
08/01/2025	Fine	15:01	16:01	17:01	66	70	69	68
14/01/2025	Fine	9:30	10:30	11:30	35	40	32	36
20/01/2025	Cloudy	14:32	15:32	16:32	41	37	38	39
25/01/2025	Fine	10:22	11:22	12:22	10	12	13	12
27/01/2025	Cloudy	14:49	15:49	16:49	7	7	8	7

TSP-1hr		
Average	Max.	Min.
38	70	7

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM5								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	14:36	15:36	16:36	72	70	63	68
08/01/2025	Fine	15:13	16:13	17:13	66	70	69	68
14/01/2025	Fine	9:42	10:42	11:42	54	43	43	47
20/01/2025	Cloudy	14:48	15:48	16:48	45	46	52	48
25/01/2025	Fine	10:54	11:54	12:54	10	8	11	10
27/01/2025	Cloudy	15:12	16:12	17:12	9	10	9	9

TSP-1hr		
Average	Max.	Min.
42	72	8

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM6								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) µg/m <sup>3</sup>	Reading (2) µg/m <sup>3</sup>	Reading (3) µg/m <sup>3</sup>	Average µg/m <sup>3</sup>
02/01/2025	Fine	15:01	16:01	17:01	67	70	61	66
08/01/2025	Fine	15:44	16:44	17:44	58	60	60	59
14/01/2025	Fine	9:59	10:59	11:59	43	37	43	41
20/01/2025	Cloudy	15:03	16:03	17:03	33	40	47	40
25/01/2025	Fine	11:13	12:13	13:13	12	15	11	13
27/01/2025	Cloudy	15:33	16:33	17:33	12	12	13	12

TSP-1hr		
Average	Max.	Min.
39	70	11

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM7								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	
04/01/2025	Fine	13:48	14:48	15:48	45	37	34	39
10/01/2025	Fine	14:33	15:33	16:33	32	35	34	34
16/01/2025	Fine	10:11	11:11	12:11	29	32	25	29
22/01/2025	Fine	13:10	14:10	15:10	25	22	24	24
28/01/2025	Fine	14:27	15:27	16:27	17	17	15	16

TSP-1hr		
Average	Max.	Min.
28	45	15

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM8a								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	µg/m³
04/01/2025	Fine	14:03	15:03	16:03	59	55	53	56
10/01/2025	Fine	14:49	15:49	16:49	34	31	28	31
16/01/2025	Fine	10:28	11:28	12:28	60	67	70	66
22/01/2025	Fine	13:24	14:24	15:24	30	31	29	30
28/01/2025	Fine	14:42	15:42	16:42	24	17	14	18

TSP-1hr		
Average	Max.	Min.
40	70	14

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM10								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	
04/01/2025	Fine	14:38	15:38	16:38	36	32	31	33
10/01/2025	Fine	15:04	16:04	17:04	31	34	36	34
16/01/2025	Fine	10:51	11:51	12:51	30	32	30	31
22/01/2025	Fine	13:44	14:44	15:44	27	26	26	26
28/01/2025	Fine	15:08	16:08	17:08	19	24	24	22

TSP-1hr		
Average	Max.	Min.
29	36	19

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM11								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	µg/m³
04/01/2025	Fine	15:10	16:10	17:10	33	30	27	30
10/01/2025	Fine	13:37	14:37	15:37	43	35	37	38
16/01/2025	Fine	10:33	11:33	12:33	61	63	57	60
22/01/2025	Fine	14:17	15:17	16:17	17	14	13	15
28/01/2025	Fine	14:15	15:15	16:15	14	13	13	13

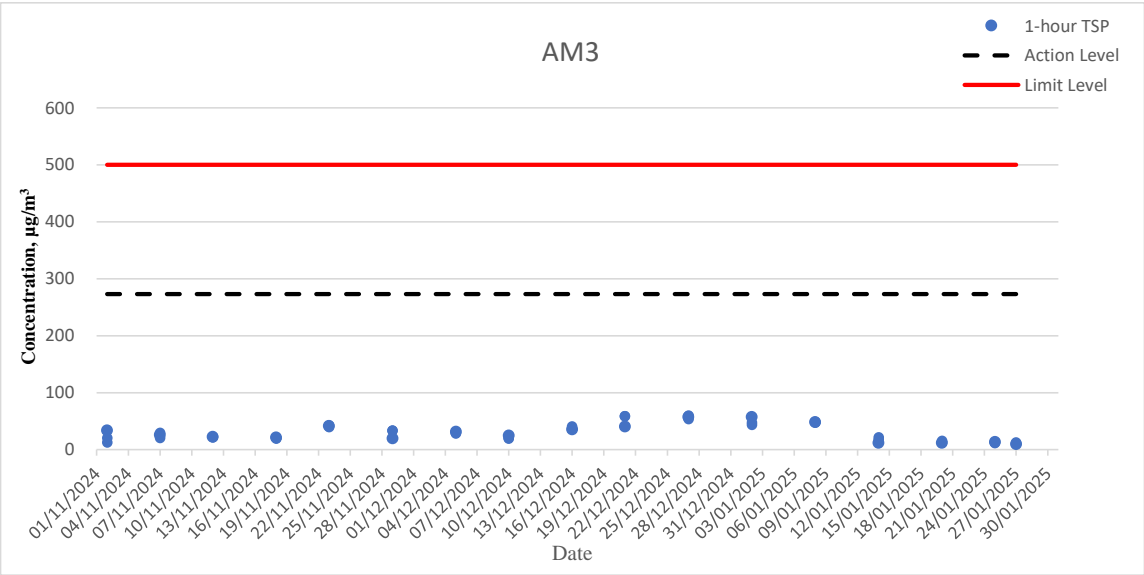
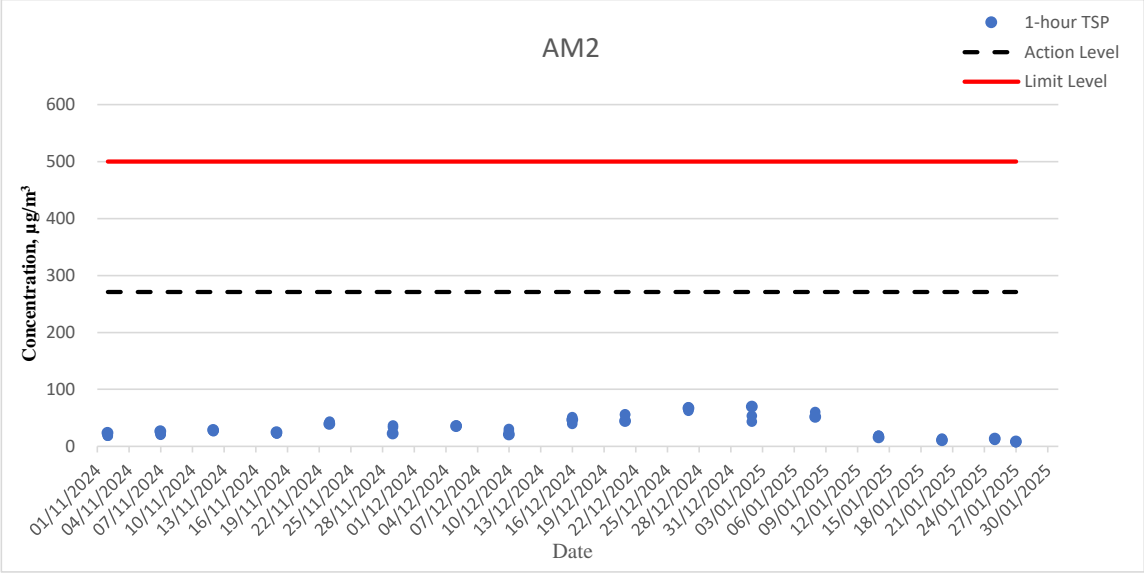
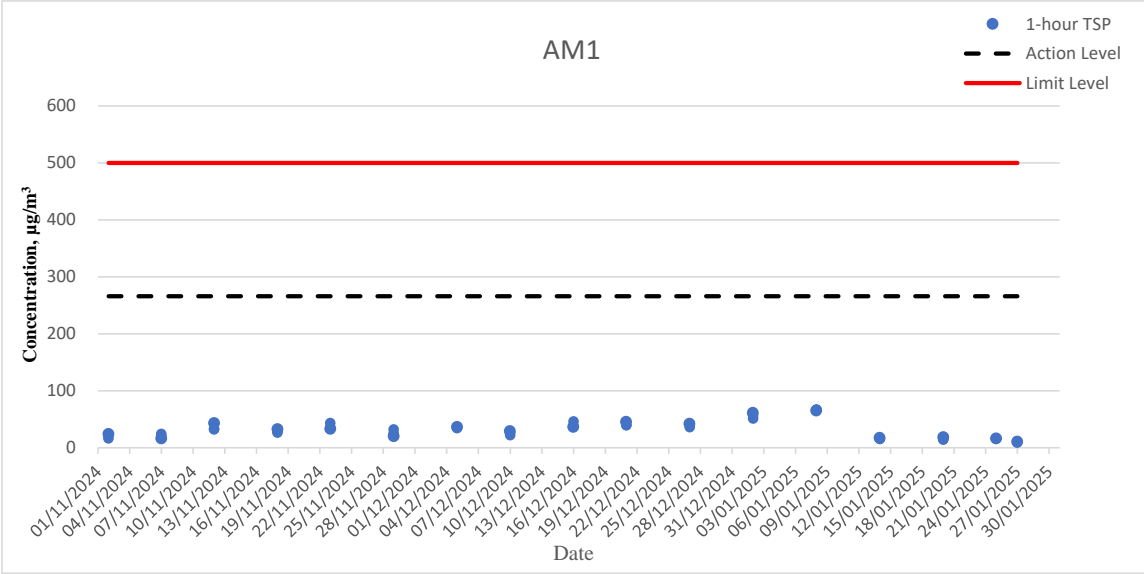
TSP-1hr		
Average	Max.	Min.
31	63	13

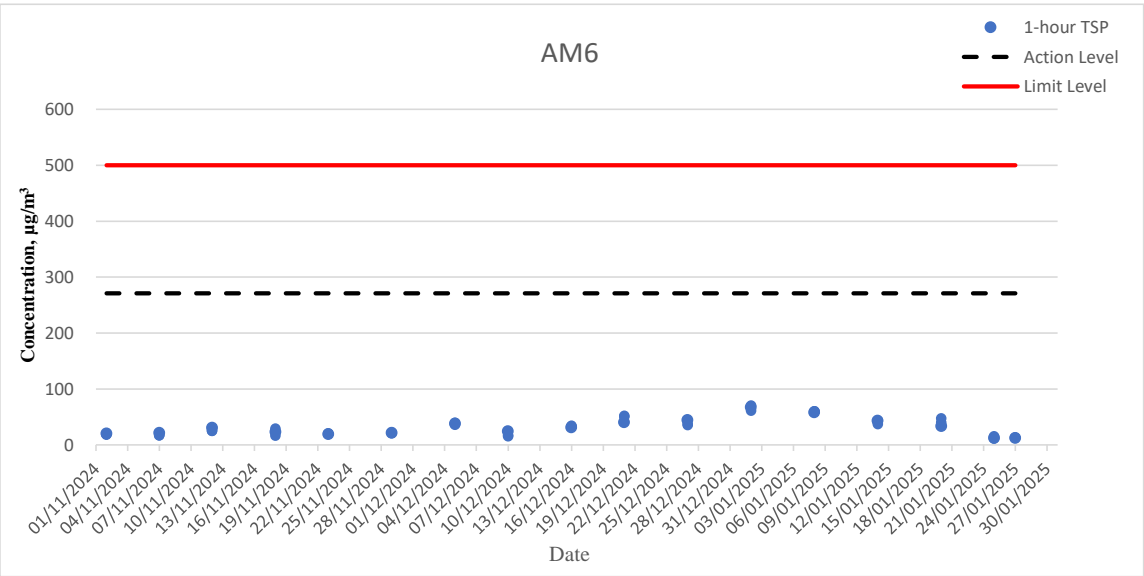
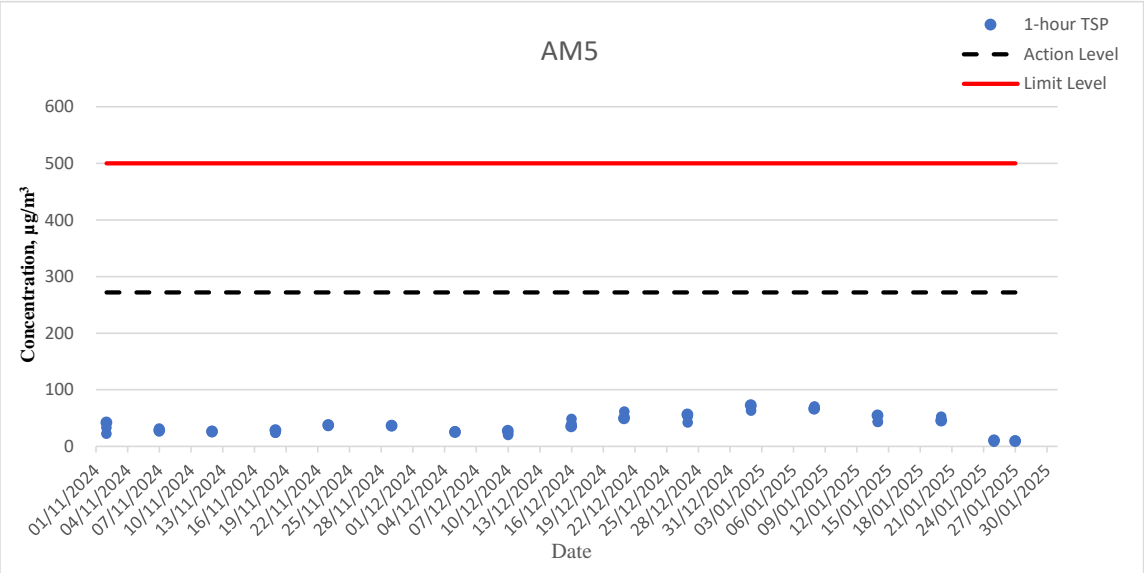
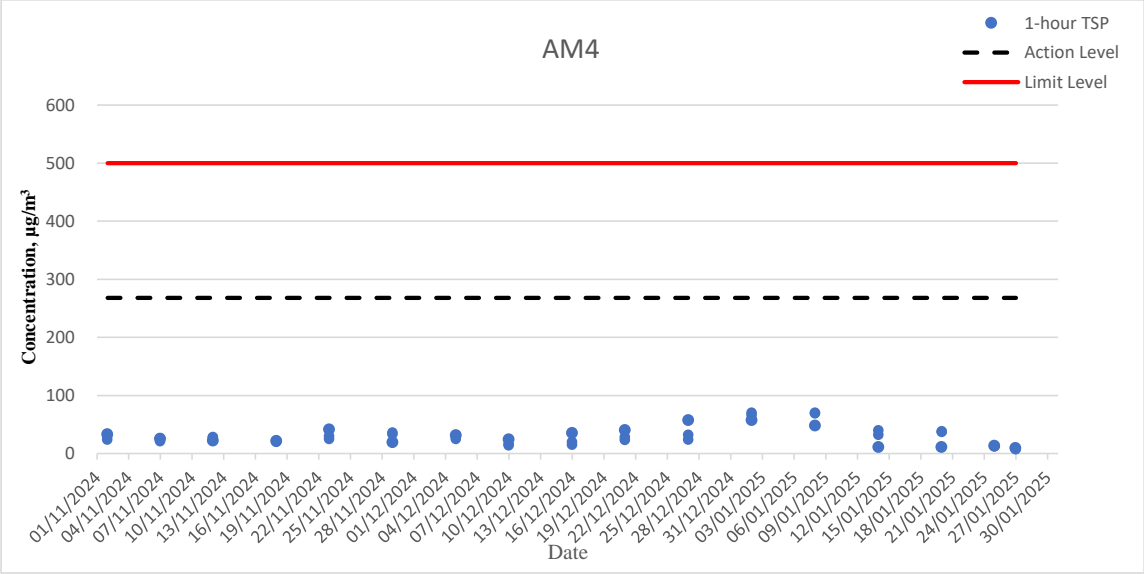
Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM12								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	
04/01/2025	Fine	15:32	16:32	17:32	41	39	34	38
10/01/2025	Fine	13:57	14:57	15:57	61	54	50	55
16/01/2025	Fine	10:48	11:48	12:48	59	57	73	63
22/01/2025	Fine	14:33	15:33	16:33	18	19	17	18
28/01/2025	Fine	14:29	15:29	16:29	14	14	15	14

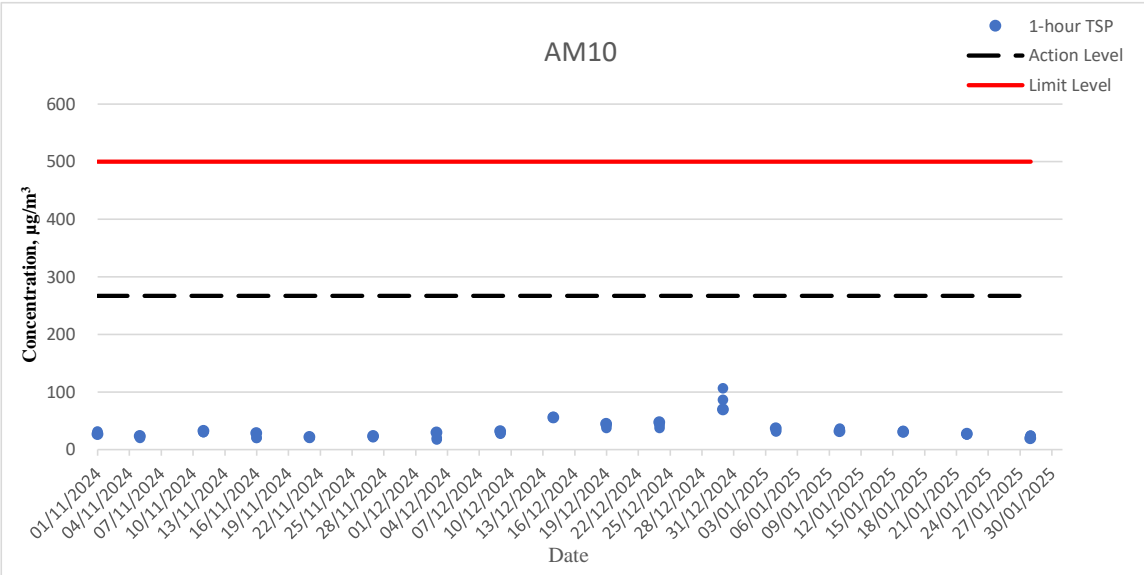
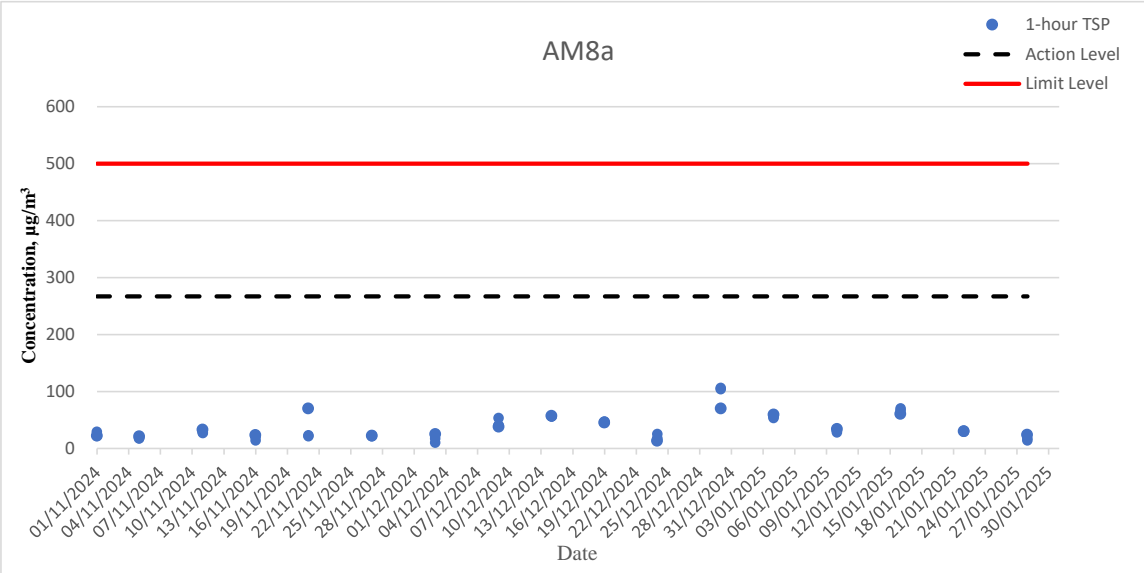
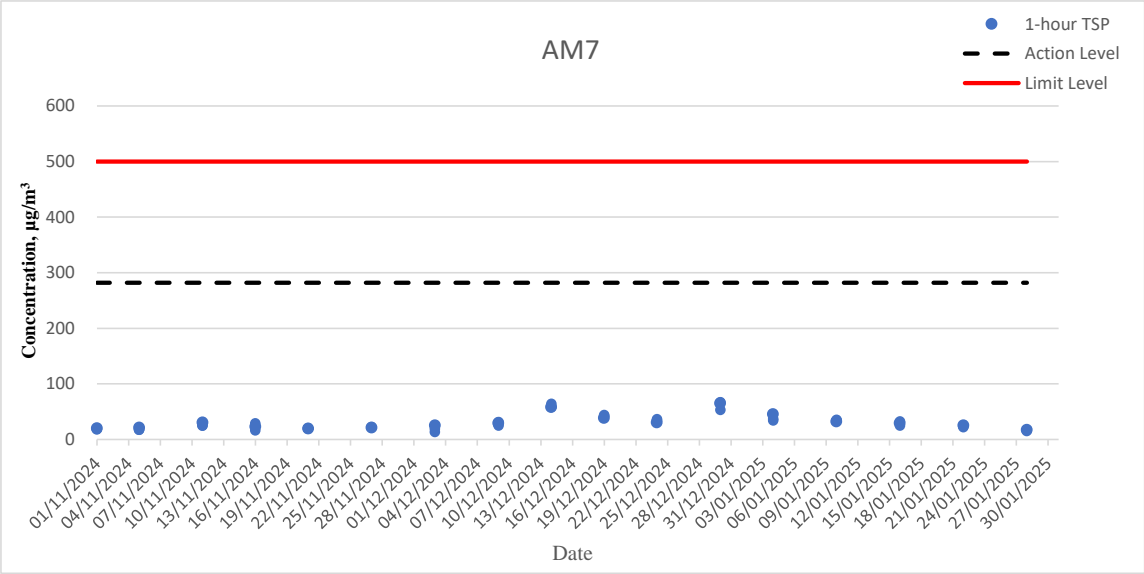
TSP-1hr		
Average	Max.	Min.
38	73	14

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m <sup>3</sup> ) at Location AM14								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	
04/01/2025	Fine	15:55	16:55	17:55	30	27	23	27
10/01/2025	Fine	14:11	15:11	16:11	38	41	39	39
16/01/2025	Fine	10:59	11:59	12:59	60	60	61	60
22/01/2025	Fine	14:49	15:49	16:49	15	15	14	15
28/01/2025	Fine	15:00	16:00	17:00	13	18	14	15

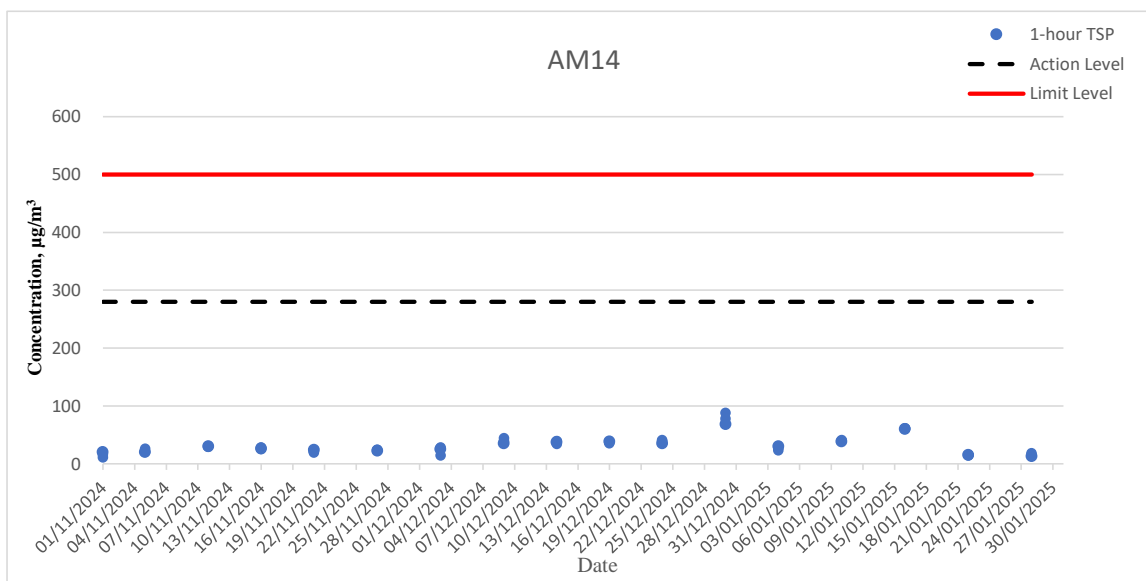
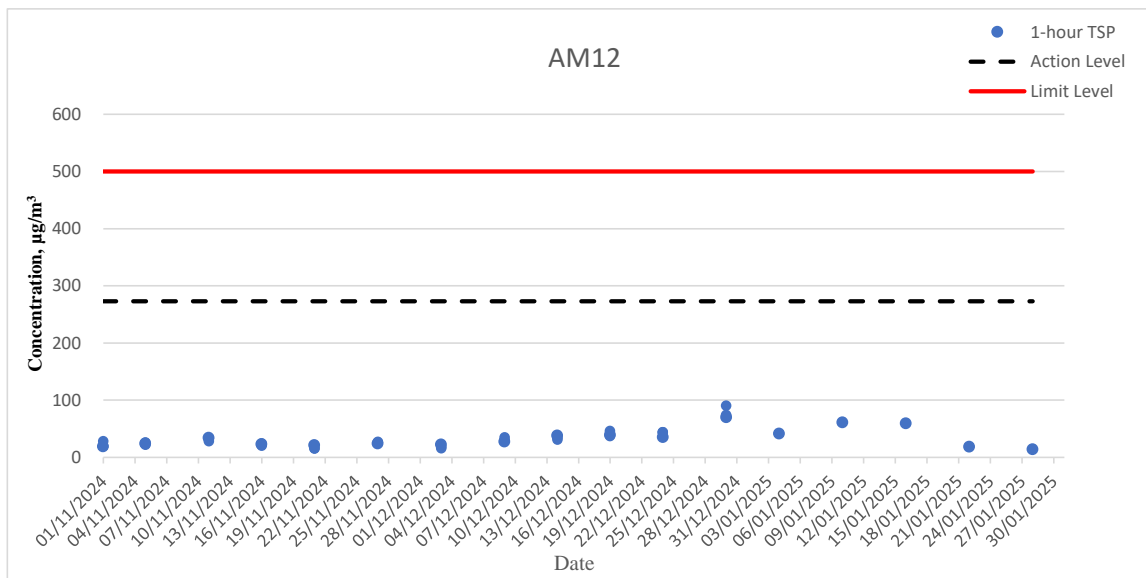
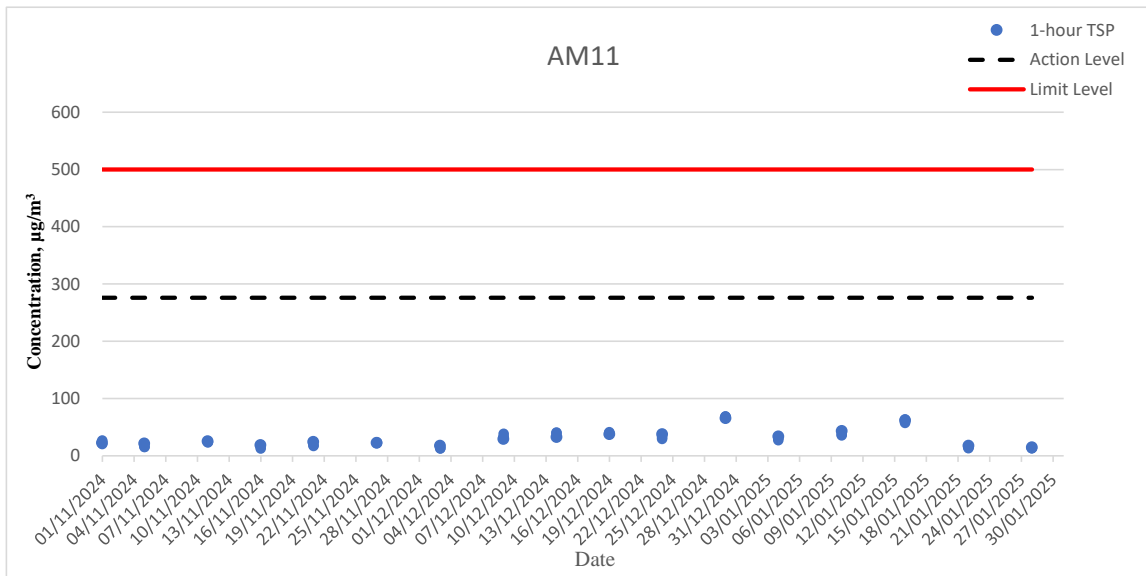
TSP-1hr		
Average	Max.	Min.
31	61	13







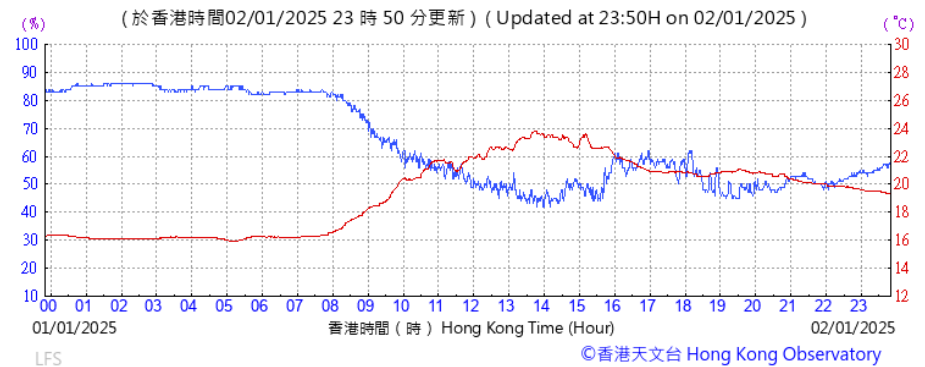




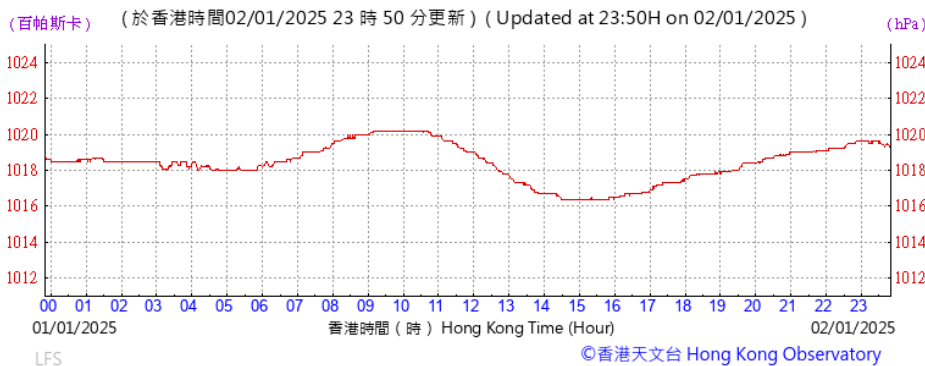
## **Appendix 2.3 Weather Information during the Reporting Period**

02 January 2025

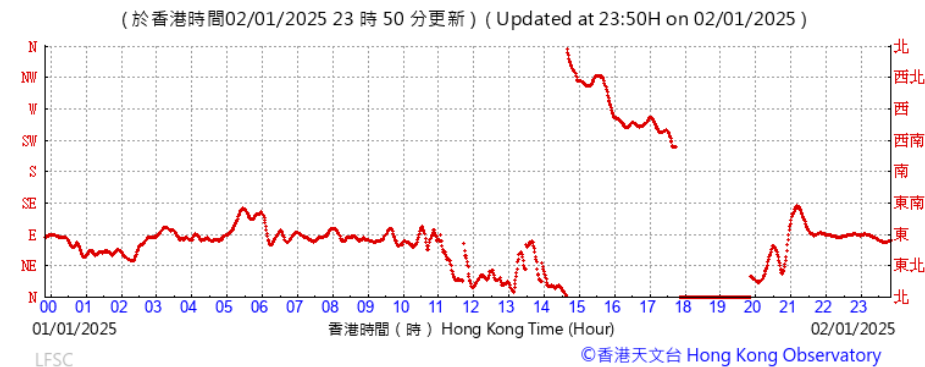
Temperature/humidity:



Pressure:



Wind Direction:

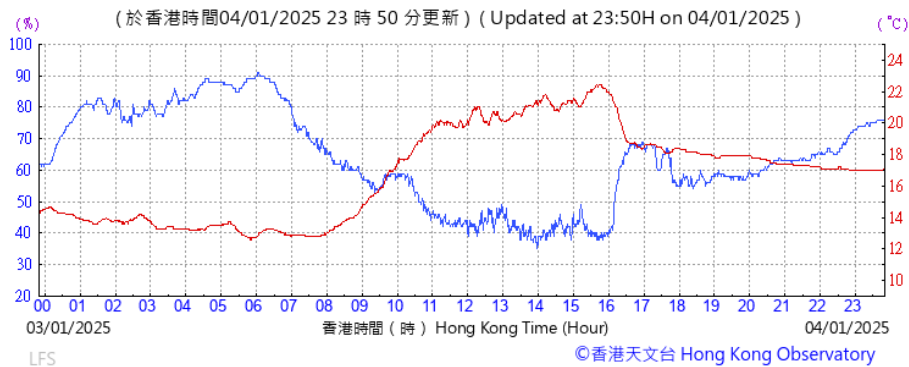


Wind Speed:

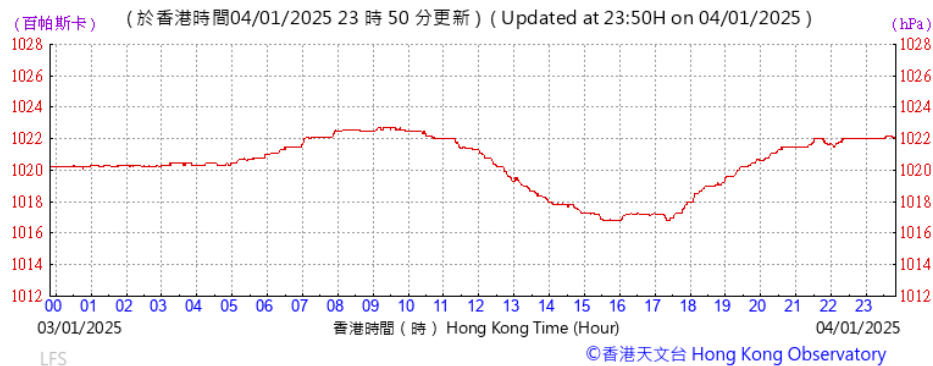


04 January 2025

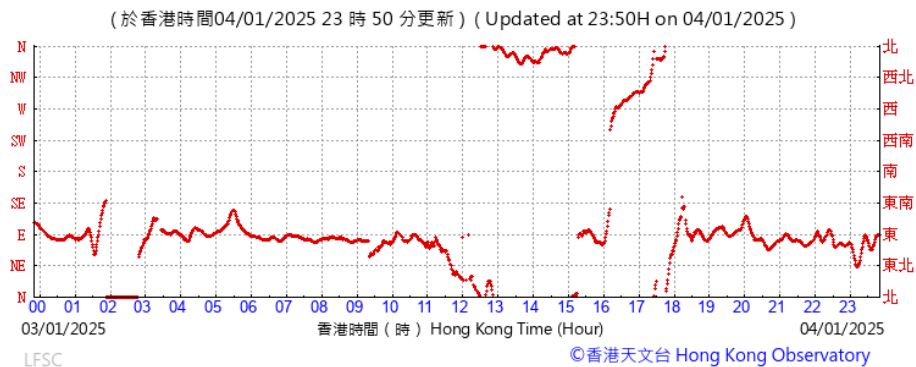
Temperature/humidity:



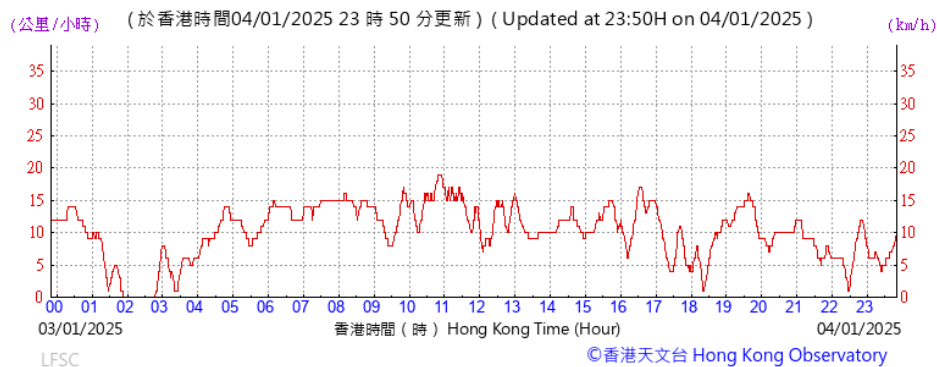
Pressure:



Wind Direction:

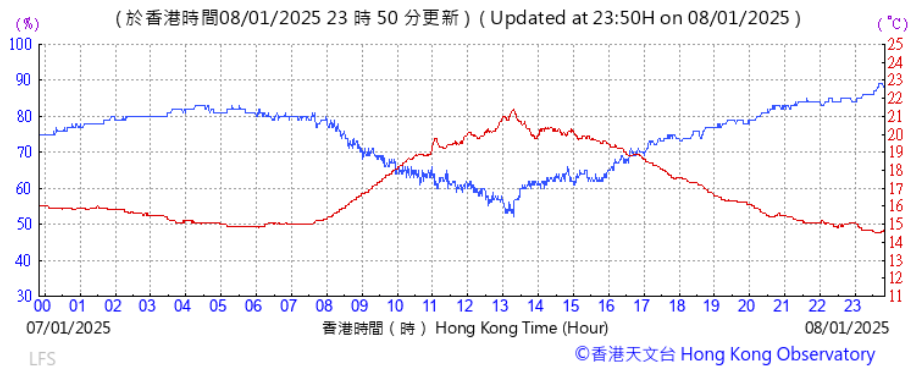


Wind Speed:

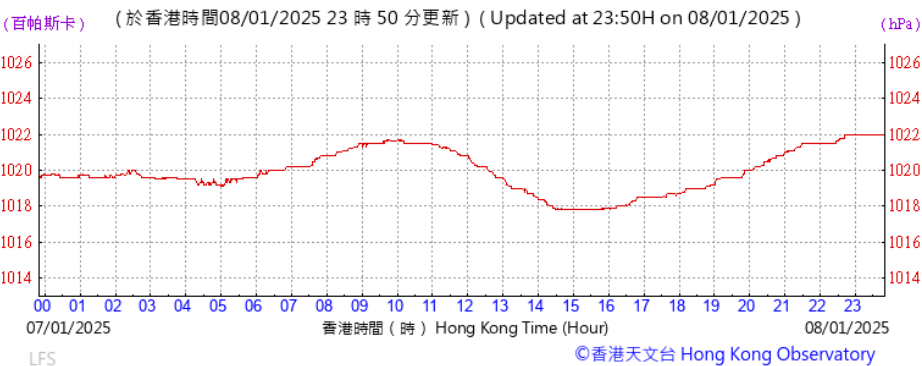


08 January 2025

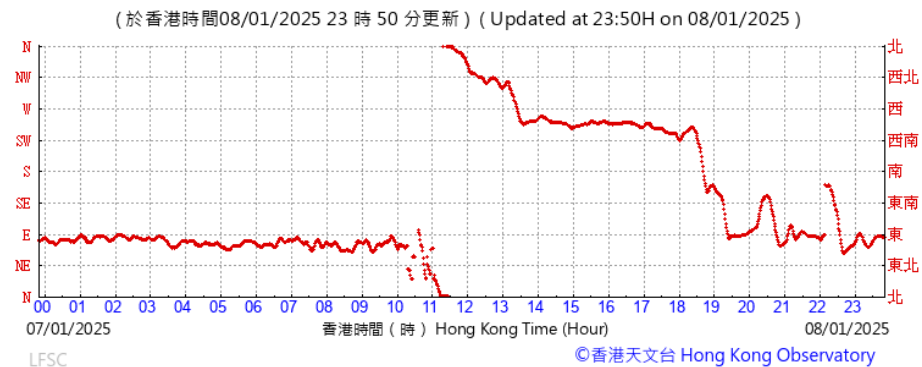
Temperature/humidity:



Pressure:



Wind Direction:

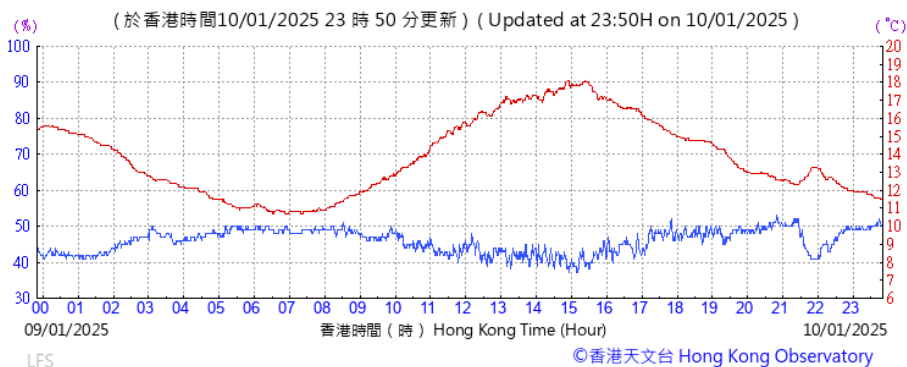


Wind Speed:

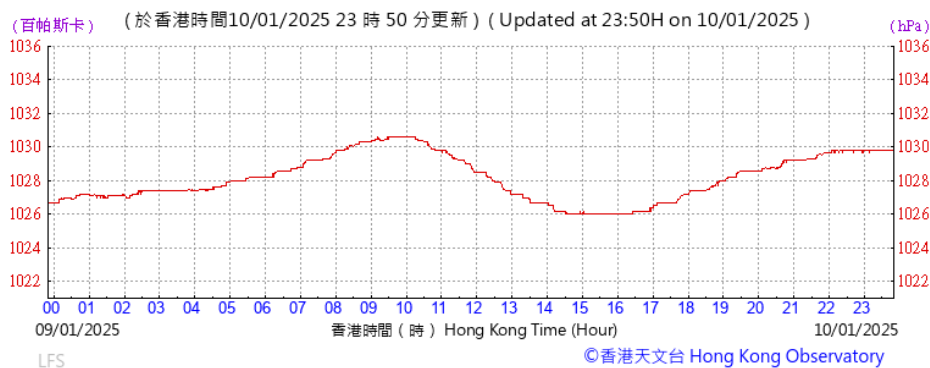


## 10 January 2025

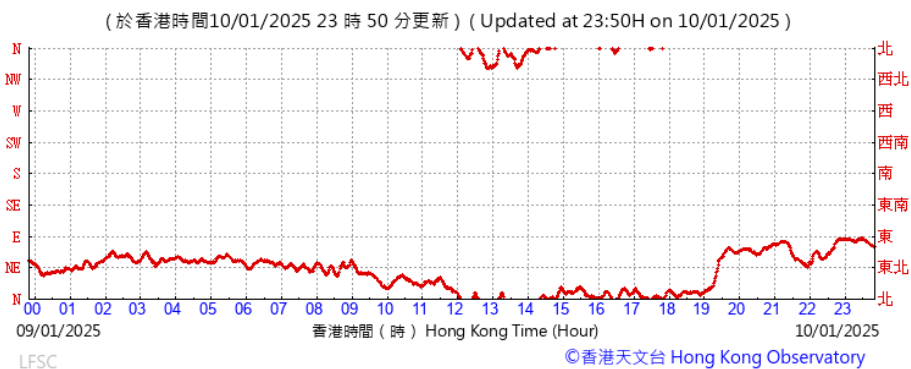
Temperature/humidity:



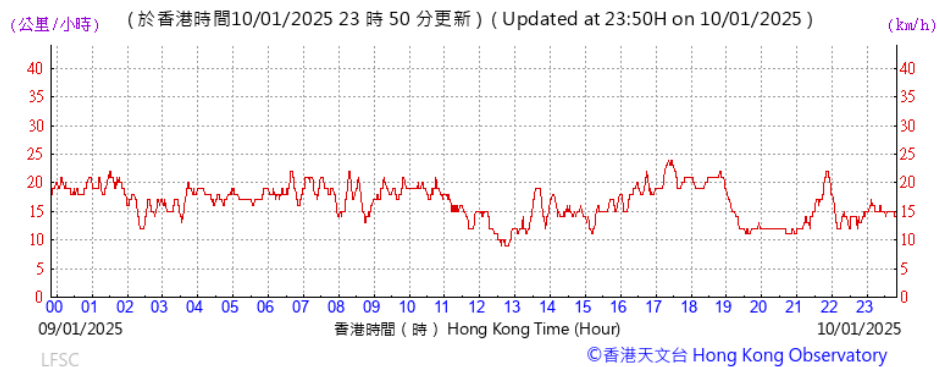
Pressure:



Wind Direction:



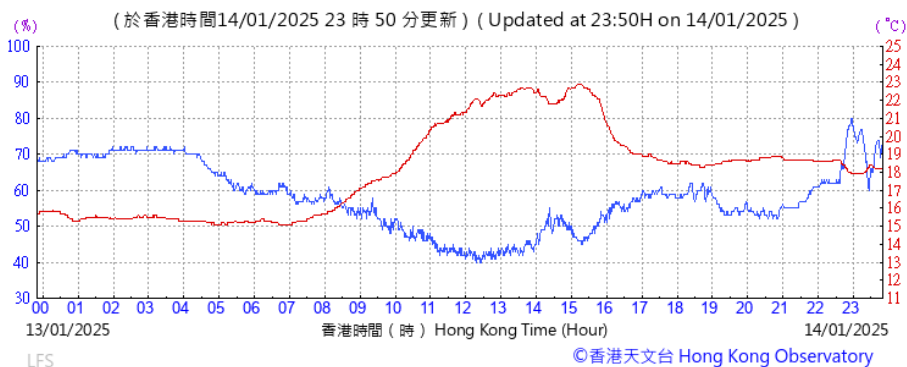
Wind Speed:



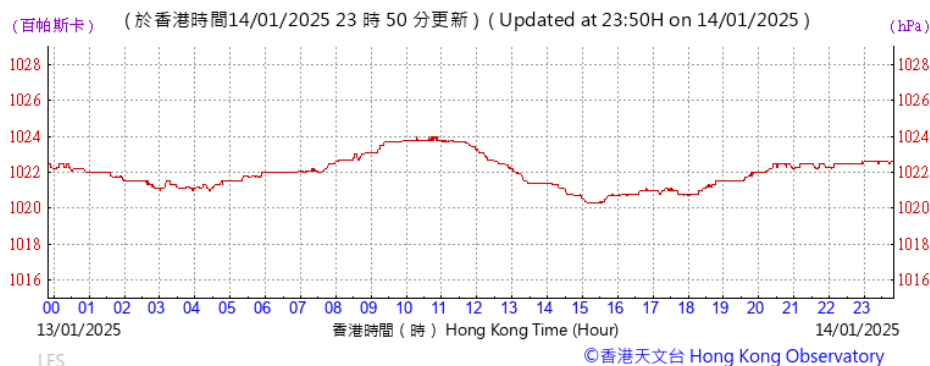


14 January 2025

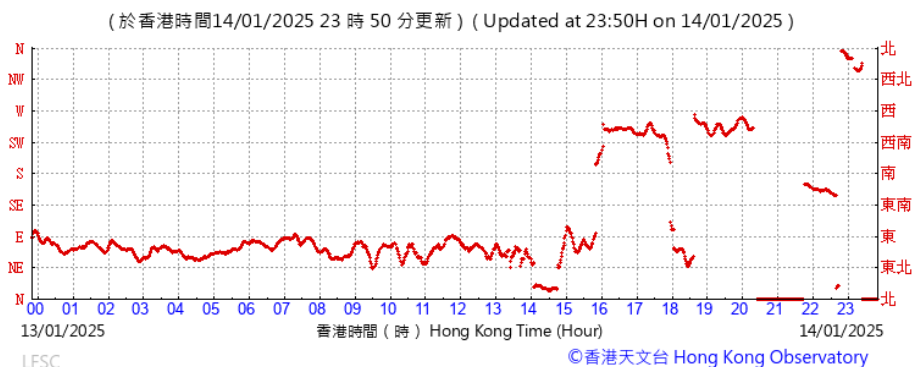
Temperature/humidity:



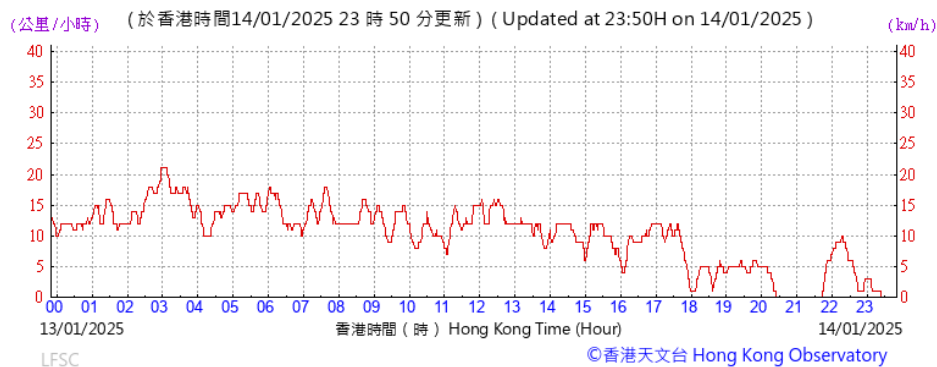
Pressure:



Wind Direction:

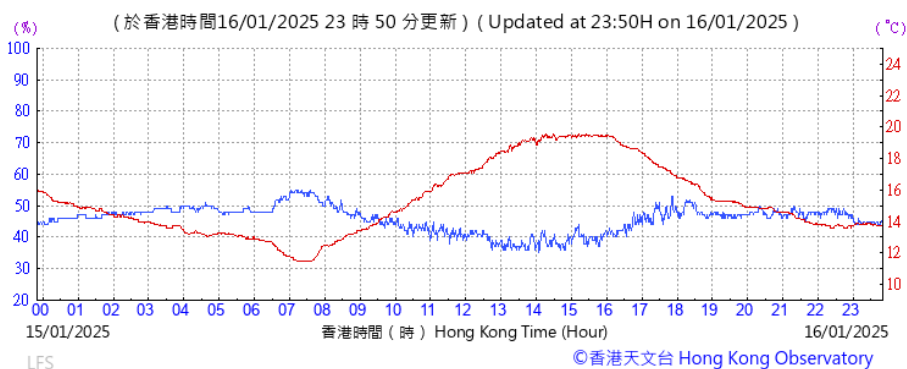


Wind Speed:

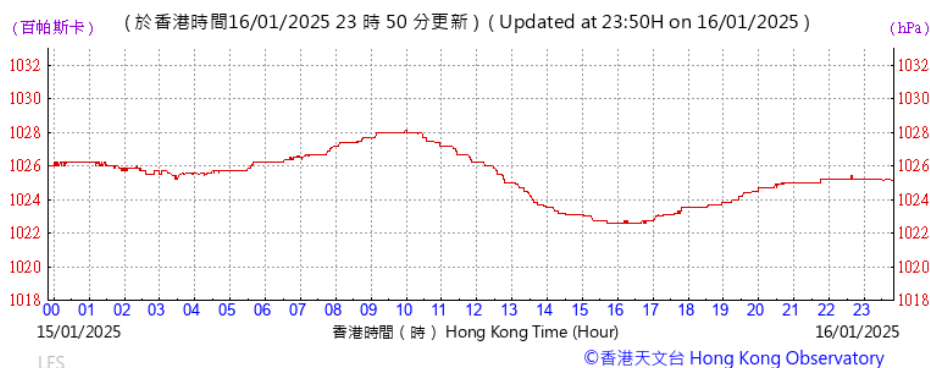


16 January 2025

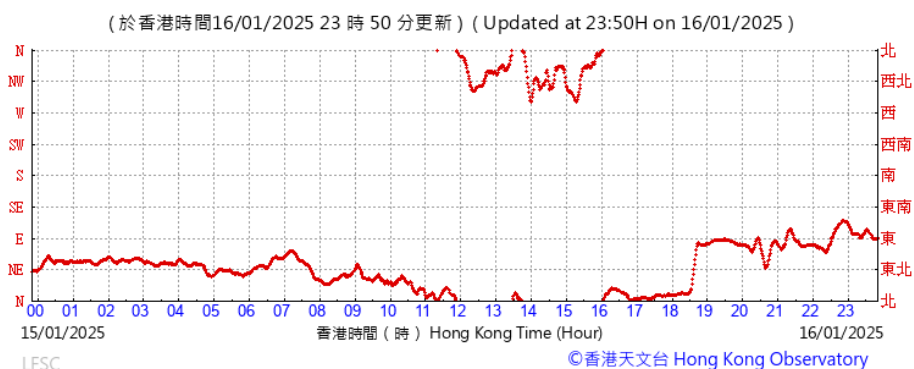
Temperature/humidity:



Pressure:



Wind Direction:

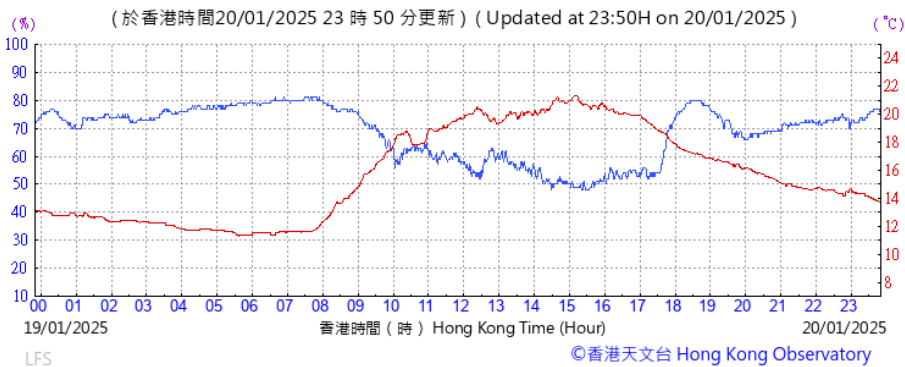


Wind Speed:

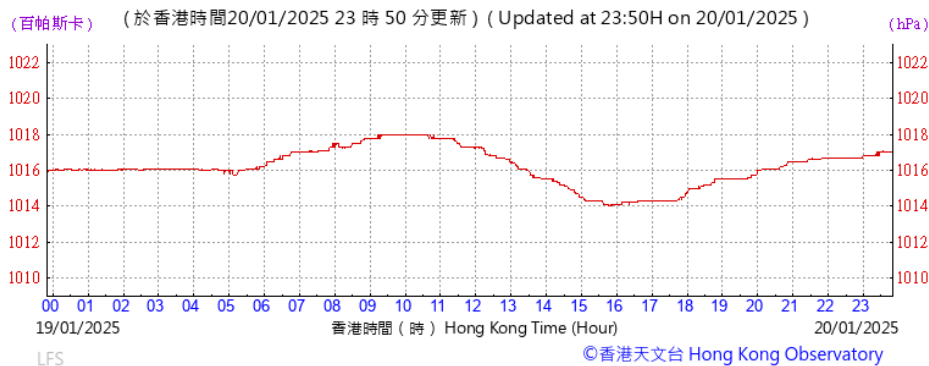


20 January 2025

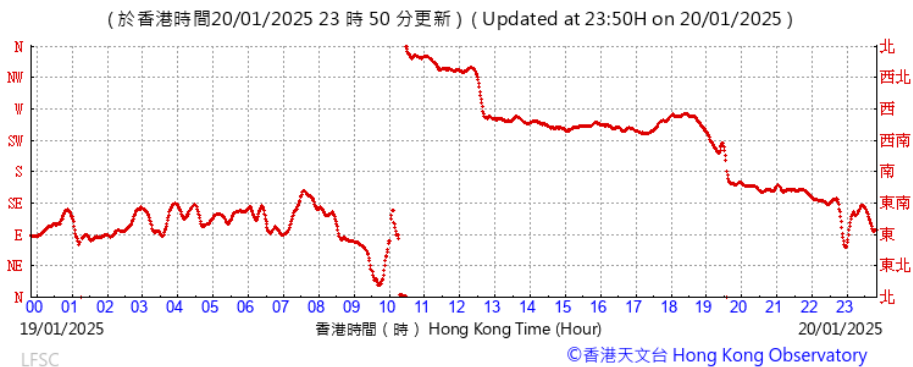
Temperature/humidity:



Pressure:



Wind Direction:

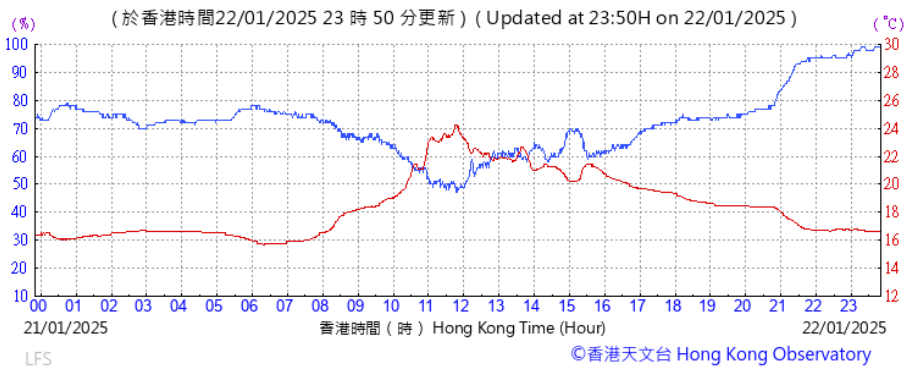


Wind Speed:

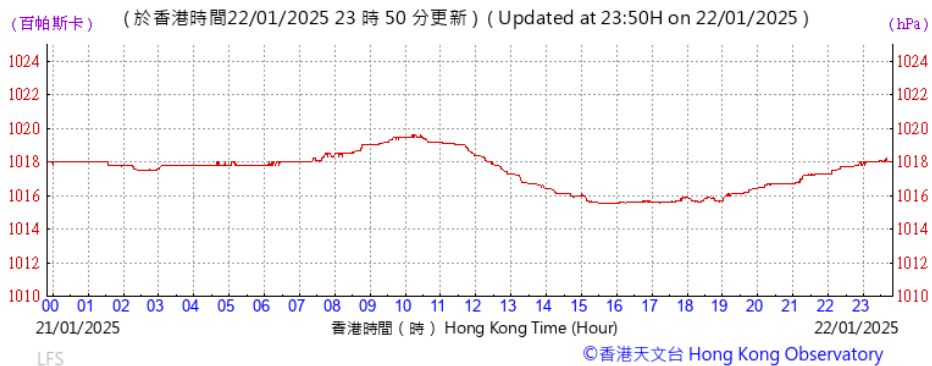


22 January 2025

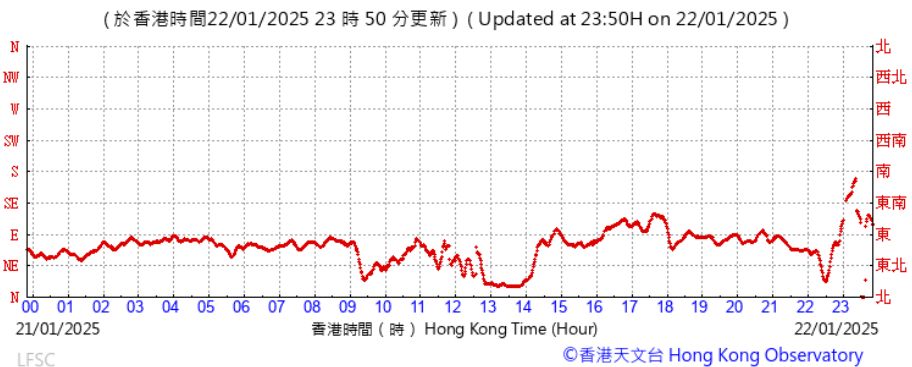
Temperature/humidity:



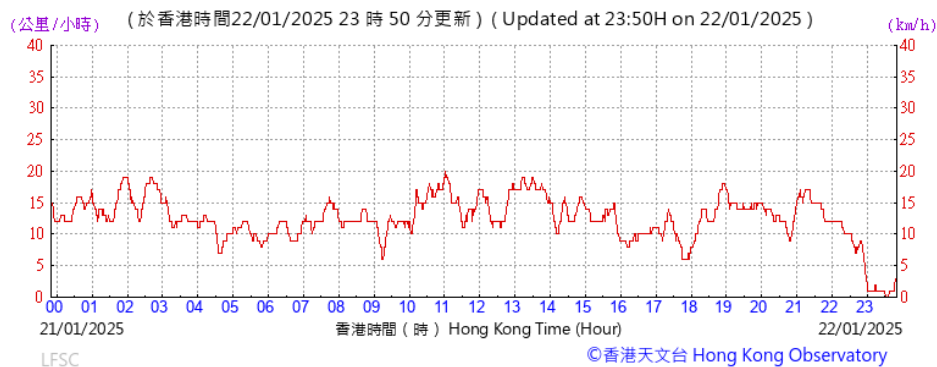
Pressure:



Wind Direction:

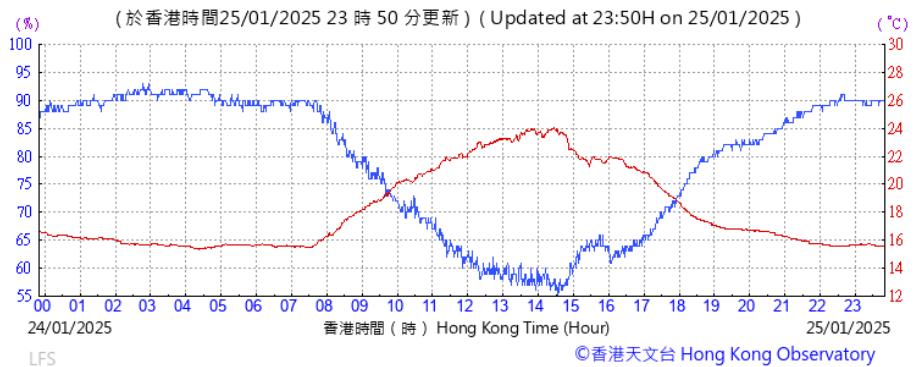


Wind Speed:

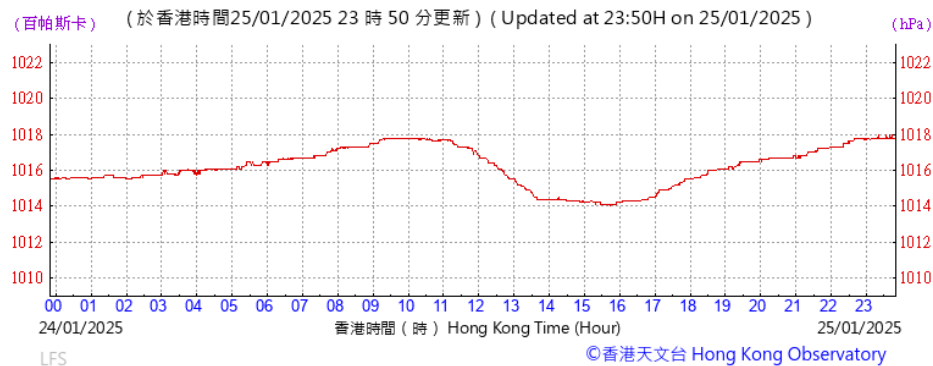


25 January 2025

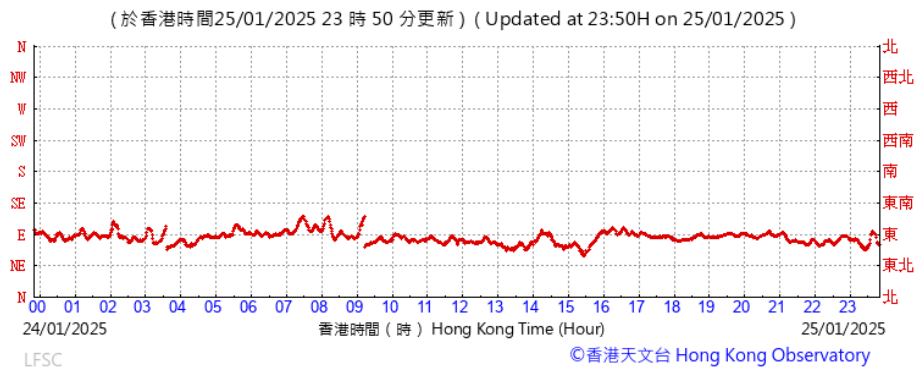
Temperature/humidity:



Pressure:



Wind Direction:

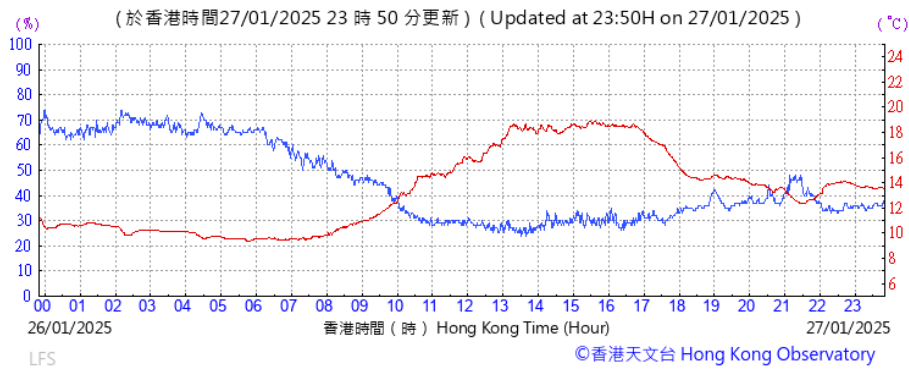


Wind Speed:

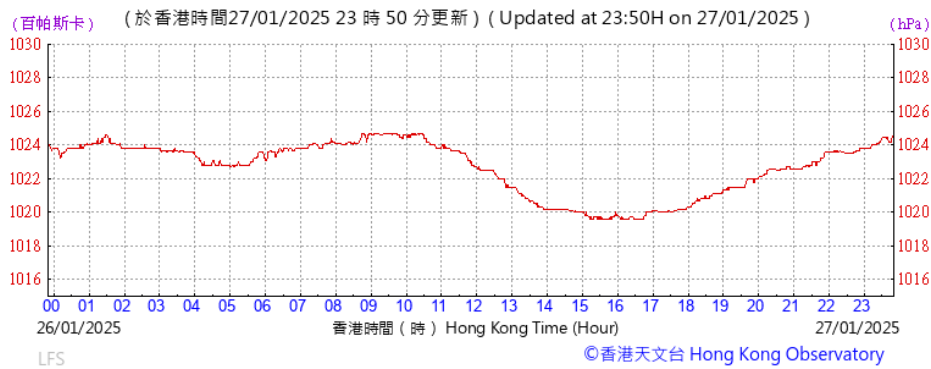


27 January 2025

Temperature/humidity:



Pressure:



Wind Direction:



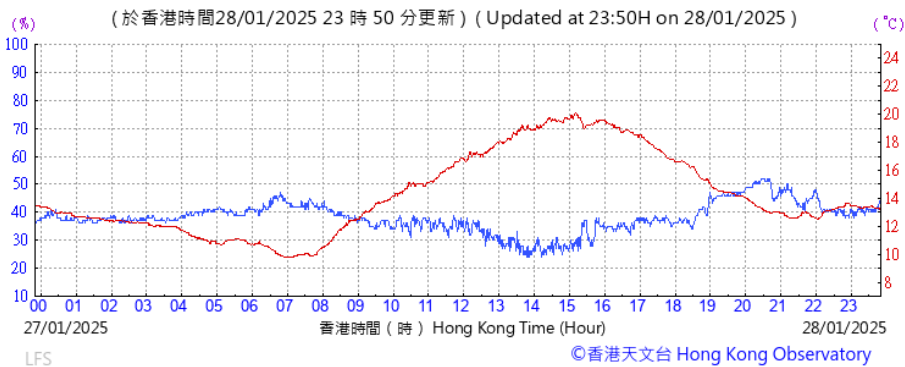
Wind Speed:



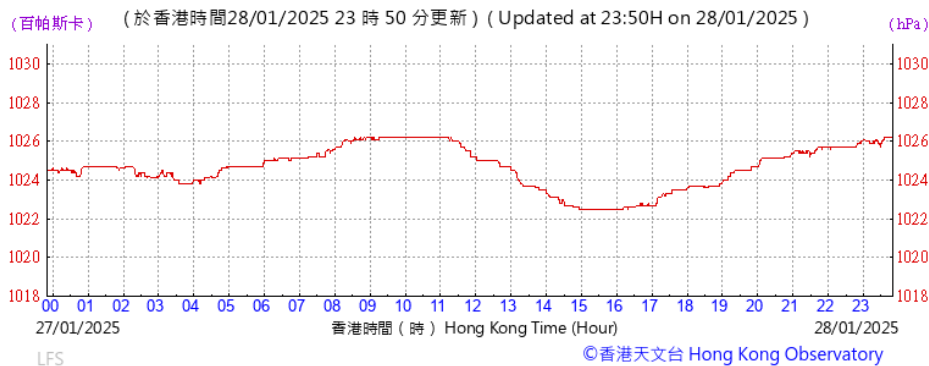


28 January 2025

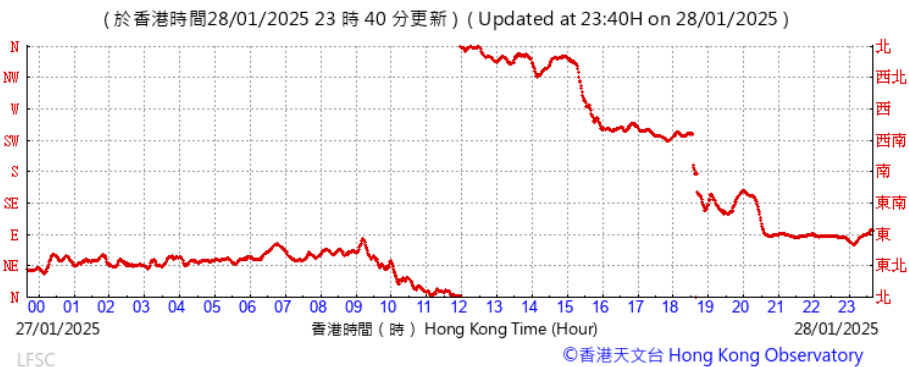
Temperature/humidity:



Pressure:



Wind Direction:



Wind Speed:



## **Appendix 2.4 Event and Action Plan for Air Quality**

## Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	ER	Contractor
<b>Action level being exceeded by one sampling</b>	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Repeat measurement to confirm finding; and</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method; and</li> <li>3. Review and advise the ET and ER on the effectiveness of the proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s), investigate the causes of exceedance and propose remedial measures;</li> <li>2. Implement remedial measures; and</li> <li>3. Amend working methods agreed with the ER as appropriate.</li> </ol>
<b>Action level being exceeded by two or more consecutive sampling</b>	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform Contractor, IEC and ER;</li> <li>3. Advise the Contractor and ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with Contractor, IEC and ER; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise the ET and ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented by the Contractor; and</li> <li>4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the causes of exceedance;</li> <li>2. Submit proposals for remedial measures to the ER with a copy to ET and IEC within three working days of notification;</li> <li>3. Implement the agreed proposals; and</li> <li>4. Amend proposal as appropriate.</li> </ol>

<b>Limit level being exceeded by one sampling</b>	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily; and</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures; and</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification;</li> <li>4. Implement the agreed proposals; and</li> <li>5. Amend proposal if appropriate.</li> </ol>
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<b>Limit level being exceeded by two or more consecutive sampling</b>	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by the ET;</li> <li>2. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>4. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>3. Supervise the implementation of remedial measures; and</li> <li>4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source(s) and investigate the causes of exceedance;</li> <li>2. Take immediate action to avoid further exceedance;</li> <li>3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification;</li> <li>4. Implement the agreed proposals;</li> <li>5. Revise and resubmit proposals if problem still not under control; and</li> <li>6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>
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### **Appendix 3.1 Calibration Certificates of Impact Noise Monitoring Equipment**



# Certificate of Calibration

for

Description: Sound Level Calibrator

Manufacturer: RION

Type No.: NC-75

Serial No.: 34724244

Submitted by:

Customer: Aurecon Hong Kong Limited

Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong

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

☒ Within

☐ Outside

the allowable tolerance.

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


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

Date of receipt: 22 July 2024

Date of calibration: 24 July 2024

Date of NEXT calibration: 23 July 2025

Calibrated by:   
Calibration Technician

Certified by:   
Mr. Ng Yan Wa  
Laboratory Manager

Date of issue: 24 July 2024



Certificate No.: APJ23-154-CC002

Page 1 of 2

**1. Calibration Precautions:**

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

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 23.4 °C  
 Air Pressure: 1005 hPa  
 Relative Humidity: 56.7 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV230128	HOKLAS

**5. Calibration Results**

5.1 Sound Pressure Level

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	93.9

Note:

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



Certificate No.: APJ23-154-CC002

Page 2 of 2

# Certificate of Calibration

for

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

Submitted by:

Customer: Aurecon Hong Kong Limited  
Address: Unit 1608, 16/F, Tower B, Manulife Financial Centre,  
223-231 Wai Yip Street, Kwun Tong,  
Kowloon, Hong Kong

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

- ☒ Within  
☐ Outside

the allowable tolerance.

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

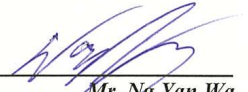
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 22 July 2024

Date of calibration: 24 July 2024

Date of NEXT calibration: 23 July 2025

Calibrated by:   
Calibration Technician

Certified by:   
Mr. Ng Yan Wa  
Laboratory Manager

Date of issue: 24 July 2024



Certificate No.: APJ23-154-CC003

Page 1 of 2

**1. Calibration Precautions:**

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

**2. Calibration Specifications:**

Calibration check

**3. Calibration Conditions:**

Air Temperature: 23.4 °C  
 Air Pressure: 1005 hPa  
 Relative Humidity: 56.7 %

**4. Calibration Equipment:**

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV230128	HOKLAS

**5. Calibration Results**

5.1 Sound Pressure Level

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

Note:

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





## Manufacturer Calibration Certificate

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3. All tests are traceable in accordance with ISO/IEC 17025.

No pattern approval is available for this sound level meter configuration.

### Sound Level Meter

Manufacturer	NTi Audio		
Type	XL3	S/N	A3A-01229-F0
Firmware	V1.36		
Microphone Model	M2340		
Preamplifier	MA230	S/N	1794
Microphone Capsule	MC230A	S/N	A28290
Performance class			
Customer Inventory Nr.			

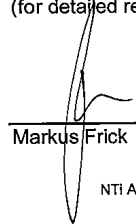
### Customer

Date 25 July 2024

Certificate FL-24-115

Results **PASSED**  
(for detailed report see next pages)

Operator

  
Markus Frick

NTi Audio AG • Im alten Riet 102, 9494 Schaan • Liechtenstein  
info@nti-audio.com • www.nti-audio.com

## Measurement equipment

### Test System

Model	NTi Audio FX100, S/No. 11094
Last Calibration	02 July 2024
Cal Certificate	NTI Cal #3393
Next Calibration	02 July 2025

### Reference Microphone

Model	MTG MV203 S/N #2435, Mic Capsule MK202 S/No. #7313
Last Calibration	18 November 2022
Cal Certificate	DAkKS-000875
Next Calibration	17 November 2024

### Sound Calibrator

Model	Norsonic 1251 S/No. #30930
Reference Level	114 dB
Calibration Frequency	1000 Hz
Last Calibration	08 December 2022
Cal Certificate	METAS #259-19602
Next Calibration	07 December 2024

## Environmental conditions

Temperature	25.2 °C
Humidity	48 %
Pressure	965 hPa

## Notes

- This calibration certificate documents the traceability to national standards, which realize the units of measurement according to the international Systems of Units (SI).
- The user is obliged to have the object recalibrated at appropriate intervals.
- This calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature are not valid.
- All limits listed in this report are acceptance limits in accordance with IEC61672.
- 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.



## 1. Indication at the calibration check frequency

The indication of the sound level meter at the calibration check frequency is checked by application of the sound calibrator and adjusted, if necessary, to indicate the required sound level for the environmental conditions under which the tests are performed. All levels in [dB].

Sensitivity before calibration	Sensitivity after calibration	Meas level	Limit -	Limit +	Uncert.	Status
42.9 mV/Pa	44.4 mV/Pa	114	113	115	0.2	Passed

## 2. Self-generated noise

### 2.1 Microphone cartridge installed

The self-generated noise is measured in the most-sensitive level range as a time-averaged sound pressure level with frequency-weighting A and an averaging time of 30 seconds. All levels in [dB].

Weight- ing	Meas level	Limit +	Uncert.	Status
A	16.0	19.0	0.1	Passed

### 2.2 Microphone cartridge replaced by the capsule replacement NTI-K65-15

The self-generated noise is measured in the most-sensitive level range as a time-averaged sound pressure level for all frequency-weightings and an averaging time of 30 seconds. All levels in [dB] referenced to S = 42 mV/Pa.

Weight- ing	Meas level	Limit +	Uncert.	Status
A	10.7	13.0	0.1	Passed
C	12.8	16.0	0.1	Passed
Z	18.6	24.0	0.1	Passed

## 3. Acoustic signal tests of a frequency weighting

The frequency weighting is tested for frequency-weighting A, using an acoustic test facility. The sound level meter is set to a fast time-weighted sound level in the reference level range. All levels in [dB].

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
125	70.0	69.6	-0.4	-1.0	1.0	0.4	Passed
250	77.1	77.0	-0.1	-1.0	1.0	0.4	Passed
500	82.7	82.7	0.0	-1.0	1.0	0.4	Passed
1000	86.0	86.1	0.1	-0.7	0.7	0.4	Passed
2000	87.2	87.4	0.2	-1.0	1.0	0.4	Passed
4000	87.0	87.1	0.1	-1.0	1.0	0.4	Passed
8000	84.8	84.9	0.1	-2.5	1.5	0.4	Passed

#### 4. Electric signal tests of frequency weightings

Frequency weightings are determined relative to the response at 1 kHz using steady sinusoidal electrical input signals. The sound level meter is set to display F-time-weighted sound level in the reference level range. All available frequency weightings provided in the sound level meter are verified. All levels in [dB].

##### 4.1 A-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	106.2	80.0	0.0	-1.0	1.0	0.1	Passed
125	96.1	79.9	-0.1	-1.0	1.0	0.1	Passed
250	88.6	79.9	-0.1	-1.0	1.0	0.1	Passed
500	83.2	79.9	-0.1	-1.0	1.0	0.1	Passed
2000	78.8	80.0	0.0	-1.0	1.0	0.1	Passed
4000	79.0	79.9	-0.1	-1.0	1.0	0.1	Passed
8000	81.1	79.6	-0.4	-2.5	1.5	0.1	Passed
12500	84.3	79.3	-0.7	-2.5	1.5	0.1	Passed
16000	86.6	78.6	-1.4	-2.5	1.5	0.1	Passed

##### 4.2 C-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	80.8	80.0	0.0	-1.0	1.0	0.1	Passed
125	80.2	80.0	0.0	-1.0	1.0	0.1	Passed
250	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
500	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
2000	80.2	80.0	0.0	-1.0	1.0	0.1	Passed
4000	80.8	79.9	-0.1	-1.0	1.0	0.1	Passed
8000	83.0	79.6	-0.4	-2.5	1.5	0.1	Passed
12500	86.2	79.3	-0.7	-2.5	1.5	0.1	Passed
16000	88.5	78.6	-1.4	-2.5	1.5	0.1	Passed

##### 4.3 Z-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	80.0	79.9	-0.1	-1.0	1.0	0.1	Passed
125	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
250	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
500	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
2000	80.0	79.9	-0.1	-1.0	1.0	0.1	Passed
4000	80.0	79.9	-0.1	-1.0	1.0	0.1	Passed
8000	80.0	79.8	-0.2	-2.5	1.5	0.1	Passed
12500	80.0	79.8	-0.2	-2.5	1.5	0.1	Passed
16000	80.0	79.8	-0.2	-2.5	1.5	0.1	Passed

## 5. Frequency and time weightings at 1kHz

While injecting a constant steady signal at the reference frequency of 1 kHz the F-time-weighted sound level, S-time-weighted sound level and time-averaged sound level are verified with frequency weighting A. Additionally the F-time-weighted sound level for frequency weightings C and Z is measured. The first measurement serves as reference and differences in the reading with respect to this first one are determined. All levels in [dB].

Level	Exp level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
LAF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LAS	114.0	113.8	-0.2	-0.7	0.7	0.1	Passed
LAeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LCF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LCeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LZF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LZeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed

## 6. Level linearity on the reference level range

The level linearity on the reference level range is determined by applying steady sinusoidal electrical signals at a frequency of 8 kHz with the sound level meter set for frequency-weighting A and fast time-weighting. All levels in [dB].

Exp abs level	Meas. level	Abs dev	Abs Limit -	Abs Limit +	Exp rel level	Rel dev	Rel Limit -	Rel Limit +	Uncert.	Status
114.0	114.0	0.0	-0.8	0.8	0.0	0.0	-0.3	0.3	0.1	Passed
119.0	119.0	0.0	-0.8	0.8	119.0	0.0	-0.3	0.3	0.1	Passed
124.0	124.0	0.0	-0.8	0.8	124.0	0.0	-0.3	0.3	0.1	Passed
129.0	129.0	0.0	-0.8	0.8	129.0	0.0	-0.3	0.3	0.1	Passed
134.0	134.1	0.1	-0.8	0.8	134.0	0.1	-0.3	0.3	0.1	Passed
135.0	135.1	0.1	-0.8	0.8	135.1	0.0	-0.3	0.3	0.1	Passed
136.0	136.1	0.1	-0.8	0.8	136.1	0.0	-0.3	0.3	0.1	Passed
114.0	114.0	0.0	-0.8	0.8	0.0	0.0	-0.3	0.3	0.1	Passed
109.0	109.0	0.0	-0.8	0.8	109.0	0.0	-0.3	0.3	0.1	Passed
104.0	104.0	0.0	-0.8	0.8	104.0	0.0	-0.3	0.3	0.1	Passed
99.0	99.0	0.0	-0.8	0.8	99.0	0.0	-0.3	0.3	0.1	Passed
94.0	94.0	0.0	-0.8	0.8	94.0	0.0	-0.3	0.3	0.1	Passed
89.0	89.0	0.0	-0.8	0.8	89.0	0.0	-0.3	0.3	0.1	Passed
84.0	84.0	0.0	-0.8	0.8	84.0	0.0	-0.3	0.3	0.1	Passed
79.0	79.0	0.0	-0.8	0.8	79.0	0.0	-0.3	0.3	0.1	Passed
74.0	74.0	0.0	-0.8	0.8	74.0	0.0	-0.3	0.3	0.1	Passed
69.0	69.0	0.0	-0.8	0.8	69.0	0.0	-0.3	0.3	0.1	Passed
64.0	64.0	0.0	-0.8	0.8	64.0	0.0	-0.3	0.3	0.1	Passed
59.0	59.0	0.0	-0.8	0.8	59.0	0.0	-0.3	0.3	0.1	Passed
54.0	54.0	0.0	-0.8	0.8	54.0	0.0	-0.3	0.3	0.1	Passed
49.0	49.0	0.0	-0.8	0.8	49.0	0.0	-0.3	0.3	0.1	Passed
44.0	44.0	0.0	-0.8	0.8	44.0	0.0	-0.3	0.3	0.1	Passed
39.0	39.0	0.0	-0.8	0.8	39.0	0.0	-0.3	0.3	0.1	Passed
34.0	34.0	0.0	-0.8	0.8	34.0	0.0	-0.3	0.3	0.1	Passed
29.0	29.0	0.0	-0.8	0.8	29.0	0.0	-0.3	0.3	0.1	Passed
28.0	28.0	0.0	-0.8	0.8	28.0	0.0	-0.3	0.3	0.1	Passed
27.0	27.1	0.1	-0.8	0.8	27.0	0.1	-0.3	0.3	0.1	Passed
26.0	26.1	0.1	-0.8	0.8	26.1	0.0	-0.3	0.3	0.1	Passed
25.0	25.1	0.1	-0.8	0.8	25.1	0.0	-0.3	0.3	0.1	Passed

## 7. Level linearity including the level range control

This test is not applicable for a single-range sound level meter.

## 8. Toneburst response

The response of the sound level meter to short-duration signals is tested on the reference level range with 4 kHz tonebursts that start and stop at zero crossings and are extracted from steady 4 kHz sinusoidal electrical input signals. The sound level meter is set for frequency weighting A. All levels in [dB].

The continuous signal level is 123 dB.

Burst signal	Burst duration [ms]	Exp level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
LAF	200	122.0	121.9	-0.1	-0.5	0.5	0.2	Passed
LAF	2	105.0	104.7	-0.3	-1.5	1.0	0.2	Passed
LAF	0.25	96.0	95.6	-0.4	-3.0	1.0	0.2	Passed
LAS	200	115.6	115.5	-0.1	-0.5	0.5	0.2	Passed
LAS	2	96.0	95.9	-0.1	-3.0	1.0	0.2	Passed
LAeq10s	200	106.0	105.9	-0.1	-0.5	0.5	0.2	Passed
LAeq10s	2	86.0	85.9	-0.1	-0.5	0.5	0.2	Passed
LAeq10s	0.25	77.0	76.6	-0.4	-0.5	0.5	0.2	Passed

### 9. C-weighted peak sound level

The sound level meter is tested on the least-sensitive level range with fast time weighting and C frequency weighting. The test signals are a single complete cycle of an 8 kHz sinusoid starting and stopping at zero crossings and positive and negative half cycles of a 500 Hz sinusoid that also start and stop at zero crossings. All levels in [dB].

Burst signal	Source level	Exp LCp-LCF	Meas LCp-LCF	Dev	Limit -	Limit +	Uncert.	Status
8kHz	114.0	3.4	3.3	-0.1	-2.0	2.0	0.2	Passed
500Hz +	132.0	2.4	2.2	-0.2	-1.0	1.0	0.2	Passed
500Hz -	132.0	2.4	2.2	-0.2	-1.0	1.0	0.2	Passed

### 10. Overload Indication

Overload indication is tested on the least-sensitive level range with the sound level meter set to A-weighted, time-averaged sound level. Positive and negative one-half-cycle sinusoidal electrical signals at a frequency of 4 kHz are used. All levels in [dB].

Start level	OV +	OV -	Dev	Limit -	Limit +	Uncert.	Status
136.5	139.1	139.1	0.0	-1.5	1.5	0.3	Passed





## Manufacturer Calibration Certificate

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3. All tests are traceable in accordance with ISO/IEC 17025.

No pattern approval is available for this sound level meter configuration.

### Sound Level Meter

Manufacturer	NTi Audio		
Type	XL3	S/N	A3A-01230-F0
Firmware	V1.36		
Microphone Model	M2340		
Preamplifier	MA230	S/N	1797
Microphone Capsule	MC230A	S/N	A28287
Performance class			
Customer Inventory Nr.			

### Customer

Date 25 July 2024

Certificate FL-24-114

Results **PASSED**  
(for detailed report see next pages)

Operator

Markus Frick

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info@nti-audio.com • www.nti-audio.com

## Measurement equipment

### Test System

Model	NTi Audio FX100, S/No. 11094
Last Calibration	02 July 2024
Cal Certificate	NTI Cal #3393
Next Calibration	02 July 2025

### Reference Microphone

Model	MTG MV203 S/N #2435, Mic Capsule MK202 S/No. #7313
Last Calibration	18 November 2022
Cal Certificate	DAkKS-000875
Next Calibration	17 November 2024

### Sound Calibrator

Model	Norsonic 1251 S/No. #30930
Reference Level	114 dB
Calibration Frequency	1000 Hz
Last Calibration	08 December 2022
Cal Certificate	METAS #259-19602
Next Calibration	07 December 2024

## Environmental conditions

Temperature	23.6 °C
Humidity	53 %
Pressure	965 hPa

## Notes

- This calibration certificate documents the traceability to national standards, which realize the units of measurement according to the international Systems of Units (SI).
- The user is obliged to have the object recalibrated at appropriate intervals.
- This calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature are not valid.
- All limits listed in this report are acceptance limits in accordance with IEC61672.
- 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.

## 1. Indication at the calibration check frequency

The indication of the sound level meter at the calibration check frequency is checked by application of the sound calibrator and adjusted, if necessary, to indicate the required sound level for the environmental conditions under which the tests are performed. All levels in [dB].

Sensitivity before calibration	Sensitivity after calibration	Meas level	Limit -	Limit +	Uncert.	Status
42.8 mV/Pa	42.9 mV/Pa	114	113	115	0.2	Passed

## 2. Self-generated noise

### 2.1 Microphone cartridge installed

The self-generated noise is measured in the most-sensitive level range as a time-averaged sound pressure level with frequency-weighting A and an averaging time of 30 seconds. All levels in [dB].

Weight- ing	Meas level	Limit +	Uncert.	Status
A	16.2	19.0	0.1	Passed

### 2.2 Microphone cartridge replaced by the capsule replacement NTI-K65-15

The self-generated noise is measured in the most-sensitive level range as a time-averaged sound pressure level for all frequency-weightings and an averaging time of 30 seconds. All levels in [dB] referenced to S = 42 mV/Pa.

Weight- ing	Meas level	Limit +	Uncert.	Status
A	10.7	13.0	0.1	Passed
C	12.7	16.0	0.1	Passed
Z	18.7	24.0	0.1	Passed

## 3. Acoustic signal tests of a frequency weighting

The frequency weighting is tested for frequency-weighting A, using an acoustic test facility. The sound level meter is set to a fast time-weighted sound level in the reference level range. All levels in [dB].

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
125	70.0	69.6	-0.4	-1.0	1.0	0.4	Passed
250	77.1	76.9	-0.2	-1.0	1.0	0.4	Passed
500	82.7	82.9	0.2	-1.0	1.0	0.4	Passed
1000	86.0	86.2	0.2	-0.7	0.7	0.4	Passed
2000	87.2	87.5	0.3	-1.0	1.0	0.4	Passed
4000	87.0	87.2	0.2	-1.0	1.0	0.4	Passed
8000	84.8	85.0	0.2	-2.5	1.5	0.4	Passed

#### 4. Electric signal tests of frequency weightings

Frequency weightings are determined relative to the response at 1 kHz using steady sinusoidal electrical input signals. The sound level meter is set to display F-time-weighted sound level in the reference level range. All available frequency weightings provided in the sound level meter are verified. All levels in [dB].

##### 4.1 A-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	106.2	80.0	0.0	-1.0	1.0	0.1	Passed
125	96.1	79.9	-0.1	-1.0	1.0	0.1	Passed
250	88.6	79.9	-0.1	-1.0	1.0	0.1	Passed
500	83.2	79.9	-0.1	-1.0	1.0	0.1	Passed
2000	78.8	80.0	0.0	-1.0	1.0	0.1	Passed
4000	79.0	79.9	-0.1	-1.0	1.0	0.1	Passed
8000	81.1	79.6	-0.4	-2.5	1.5	0.1	Passed
12500	84.3	79.3	-0.7	-2.5	1.5	0.1	Passed
16000	86.6	78.6	-1.4	-2.5	1.5	0.1	Passed

##### 4.2 C-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	80.8	80.0	0.0	-1.0	1.0	0.1	Passed
125	80.2	80.0	0.0	-1.0	1.0	0.1	Passed
250	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
500	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
2000	80.2	80.0	0.0	-1.0	1.0	0.1	Passed
4000	80.8	79.9	-0.1	-1.0	1.0	0.1	Passed
8000	83.0	79.6	-0.4	-2.5	1.5	0.1	Passed
12500	86.2	79.3	-0.7	-2.5	1.5	0.1	Passed
16000	88.5	78.6	-1.4	-2.5	1.5	0.1	Passed

##### 4.3 Z-Weighting

Freq. [Hz]	Gen. level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
1000	80.0	80.0	0.0	-0.7	0.7	0.1	Passed
63	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
125	80.0	80.1	0.1	-1.0	1.0	0.1	Passed
250	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
500	80.0	80.1	0.1	-1.0	1.0	0.1	Passed
2000	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
4000	80.0	80.0	0.0	-1.0	1.0	0.1	Passed
8000	80.0	79.9	-0.1	-2.5	1.5	0.1	Passed
12500	80.0	79.9	-0.1	-2.5	1.5	0.1	Passed
16000	80.0	79.9	-0.1	-2.5	1.5	0.1	Passed

## 5. Frequency and time weightings at 1kHz

While injecting a constant steady signal at the reference frequency of 1 kHz the F-time-weighted sound level, S-time-weighted sound level and time-averaged sound level are verified with frequency weighting A. Additionally the F-time-weighted sound level for frequency weightings C and Z is measured. The first measurement serves as reference and differences in the reading with respect to this first one are determined. All levels in [dB].

Level	Exp level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
LAF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LAS	114.0	113.8	-0.2	-0.7	0.7	0.1	Passed
LAeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LCF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LCeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LZF	114.0	114.0	0.0	-0.7	0.7	0.1	Passed
LZeq	114.0	114.0	0.0	-0.7	0.7	0.1	Passed

## 6. Level linearity on the reference level range

The level linearity on the reference level range is determined by applying steady sinusoidal electrical signals at a frequency of 8 kHz with the sound level meter set for frequency-weighting A and fast time-weighting. All levels in [dB].

Exp abs level	Meas. level	Abs dev	Abs Limit -	Abs Limit +	Exp rel level	Rel dev	Rel Limit -	Rel Limit +	Uncert.	Status
114.0	114.0	0.0	-0.8	0.8	0.0	0.0	-0.3	0.3	0.1	Passed
119.0	119.0	0.0	-0.8	0.8	119.0	0.0	-0.3	0.3	0.1	Passed
124.0	124.0	0.0	-0.8	0.8	124.0	0.0	-0.3	0.3	0.1	Passed
129.0	129.0	0.0	-0.8	0.8	129.0	0.0	-0.3	0.3	0.1	Passed
134.0	134.0	0.0	-0.8	0.8	134.0	0.0	-0.3	0.3	0.1	Passed
135.0	135.0	0.0	-0.8	0.8	135.0	0.0	-0.3	0.3	0.1	Passed
136.0	136.0	0.0	-0.8	0.8	136.0	0.0	-0.3	0.3	0.1	Passed
114.0	114.0	0.0	-0.8	0.8	0.0	0.0	-0.3	0.3	0.1	Passed
109.0	109.0	0.0	-0.8	0.8	109.0	0.0	-0.3	0.3	0.1	Passed
104.0	104.0	0.0	-0.8	0.8	104.0	0.0	-0.3	0.3	0.1	Passed
99.0	99.0	0.0	-0.8	0.8	99.0	0.0	-0.3	0.3	0.1	Passed
94.0	94.0	0.0	-0.8	0.8	94.0	0.0	-0.3	0.3	0.1	Passed
89.0	89.0	0.0	-0.8	0.8	89.0	0.0	-0.3	0.3	0.1	Passed
84.0	84.0	0.0	-0.8	0.8	84.0	0.0	-0.3	0.3	0.1	Passed
79.0	79.0	0.0	-0.8	0.8	79.0	0.0	-0.3	0.3	0.1	Passed
74.0	74.0	0.0	-0.8	0.8	74.0	0.0	-0.3	0.3	0.1	Passed
69.0	69.0	0.0	-0.8	0.8	69.0	0.0	-0.3	0.3	0.1	Passed
64.0	64.0	0.0	-0.8	0.8	64.0	0.0	-0.3	0.3	0.1	Passed
59.0	59.0	0.0	-0.8	0.8	59.0	0.0	-0.3	0.3	0.1	Passed
54.0	54.0	0.0	-0.8	0.8	54.0	0.0	-0.3	0.3	0.1	Passed
49.0	49.0	0.0	-0.8	0.8	49.0	0.0	-0.3	0.3	0.1	Passed
44.0	44.0	0.0	-0.8	0.8	44.0	0.0	-0.3	0.3	0.1	Passed
39.0	39.0	0.0	-0.8	0.8	39.0	0.0	-0.3	0.3	0.1	Passed
34.0	34.0	0.0	-0.8	0.8	34.0	0.0	-0.3	0.3	0.1	Passed
29.0	29.1	0.1	-0.8	0.8	29.0	0.1	-0.3	0.3	0.1	Passed
28.0	28.0	0.0	-0.8	0.8	28.1	-0.1	-0.3	0.3	0.1	Passed
27.0	27.1	0.1	-0.8	0.8	27.0	0.1	-0.3	0.3	0.1	Passed
26.0	26.1	0.1	-0.8	0.8	26.1	0.0	-0.3	0.3	0.1	Passed
25.0	25.1	0.1	-0.8	0.8	25.1	0.0	-0.3	0.3	0.1	Passed

## 7. Level linearity including the level range control

This test is not applicable for a single-range sound level meter.

## 8. Toneburst response

The response of the sound level meter to short-duration signals is tested on the reference level range with 4 kHz tonebursts that start and stop at zero crossings and are extracted from steady 4 kHz sinusoidal electrical input signals. The sound level meter is set for frequency weighting A. All levels in [dB].

The continuous signal level is 123 dB.

Burst signal	Burst duration [ms]	Exp level	Meas level	Dev	Limit -	Limit +	Uncert.	Status
LAF	200	122.0	121.9	-0.1	-0.5	0.5	0.2	Passed
LAF	2	105.0	104.8	-0.2	-1.5	1.0	0.2	Passed
LAF	0.25	96.0	95.6	-0.4	-3.0	1.0	0.2	Passed
LAS	200	115.6	115.5	-0.1	-0.5	0.5	0.2	Passed
LAS	2	96.0	95.9	-0.1	-3.0	1.0	0.2	Passed
LAeq10s	200	106.0	105.8	-0.2	-0.5	0.5	0.2	Passed
LAeq10s	2	86.0	85.9	-0.1	-0.5	0.5	0.2	Passed
LAeq10s	0.25	77.0	76.8	-0.2	-0.5	0.5	0.2	Passed



### 9. C-weighted peak sound level

The sound level meter is tested on the least-sensitive level range with fast time weighting and C frequency weighting. The test signals are a single complete cycle of an 8 kHz sinusoid starting and stopping at zero crossings and positive and negative half cycles of a 500 Hz sinusoid that also start and stop at zero crossings. All levels in [dB].

Burst signal	Source level	Exp LCp-LCF	Meas LCp-LCF	Dev	Limit -	Limit +	Uncert.	Status
8kHz	114.0	3.4	3.2	-0.2	-2.0	2.0	0.2	Passed
500Hz +	132.0	2.4	2.2	-0.2	-1.0	1.0	0.2	Passed
500Hz -	132.0	2.4	2.2	-0.2	-1.0	1.0	0.2	Passed

### 10. Overload Indication

Overload Indication is tested on the least-sensitive level range with the sound level meter set to A-weighted, time-averaged sound level. Positive and negative one-half-cycle sinusoidal electrical signals at a frequency of 4 kHz are used. All levels in [dB].

Start level	OV +	OV -	Dev	Limit -	Limit +	Uncert.	Status
136.8	139.4	139.5	0.1	-1.5	1.5	0.3	Passed

## Appendix 3.2 Impact Noise Monitoring Data

Noise Level Results at CM1

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
07/01/2025	9:12 - 9:42	Fine	52.0	52.6	60.3	54.3	50.7	58.7	56.3	59.3	58.7	50.1
13/01/2025	14:01 - 14:31	Fine	53.1	54.1	52.4	54.6	53.0	52.7	53.4	56.4	58.7	measured level ≤ baseline level
21/01/2025	9:04 - 9:34	Fine	55.3	50.1	51.3	52.0	52.8	54.6	53.1	56.1	58.7	measured level ≤ baseline level
28/01/2025	9:13 - 9:43	Cloudy	54.7	53.2	51.3	52.6	51.8	53.6	53.0	56.0	58.7	measured level ≤ baseline level
Average Construction Noise Level											54.7	

Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
47	47	46	44.5	44.9	44.6	54.6	51.6	61.7	57.2	52.2	52.1
50.5	50.6	51.4	50.4	50.8	52.6	60.2	59.4	58.4	60.1	60.7	59.5
47.7	46.7	47.9	48.7	47.8	48.5	56.4	52.2	53.5	55.2	55.2	56.1
50.6	49.7	48.6	49.7	50.6	50.2	61.4	60.0	62.4	61.6	60.4	62.7

Maximum Leq 30min, dB(A)	Minimum Leq 30min, dB(A)
59.3	56.0

Noise Level Results at CM2

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
07/01/2025	9:57 - 10:27	Fine	71.8	71.3	70.8	71.4	71.9	70.9	71.4	74.4	64.2	73.9
13/01/2025	14:36 - 15:06	Fine	71.6	70.4	70.4	71.5	71.6	70.3	71.0	74.0	64.2	73.5
21/01/2025	9:42 - 10:12	Fine	70.2	71.7	69.8	71.5	71.5	70.3	70.9	73.9	64.2	73.4
28/01/2025	9:46 - 10:16	Cloudy	71.7	71.6	72.3	72.0	71.8	71.6	71.8	74.8	64.2	74.4
Average Construction Noise Level											73.8	

Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
60.8	60.1	56.6	59.5	59.9	59.1	75.6	73.5	74.5	73.9	75.5	76.2
61.1	60.4	61.4	60.7	60.3	60.4	74.1	72.6	73.4	72.1	72.6	71.8
59.6	60.2	60.0	60.6	59.2	61.2	73.4	75.2	73.0	75.4	75.4	73.3
61.8	60.1	60.7	60.4	60.5	61.1	75.9	74.2	74.6	74.6	74.8	73.4

Maximum Leq 30min, dB(A)	Minimum Leq 30min, dB(A)
74.8	73.9

Noise Level Results at CM3

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
07/01/2025	10:45 - 11:15	Fine	66.0	65.8	67.1	66.1	66.3	65.3	66.1	69.1	71.5	measured level ≤ baseline level
13/01/2025	15:36 - 15:46	Fine	65.7	65.8	66.1	65.4	65.2	66.6	65.8	68.8	71.5	measured level ≤ baseline level
21/01/2025	10:16 - 10:46	Fine	64.8	67.2	65.2	66.5	64.1	64.5	65.5	68.5	71.5	measured level ≤ baseline level
28/01/2025	10:22 - 10:52	Cloudy	65.2	64.8	64.9	65.6	66.2	66.1	65.5	68.5	71.5	measured level ≤ baseline level
Average Construction Noise Level											68.7	

Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
55.3	53.8	55.9	53.5	57.8	53.2	70.0	69.1	70.7	69.5	70.0	69.4
53.1	54.6	54.9	56.1	55.6	53.8	73.1	73.3	73.6	70.6	71.6	72.4
51.6	51.7	53.2	51.1	51.1	52.7	68.8	71.1	69.2	70.5	68.0	68.1
54.8	53.4	53.6	53.8	54.2	54.8	70.5	71.6	70.4	70.6	71.6	70.4

Maximum Leq 30min, dB(A)	Minimum Leq 30min, dB(A)
69.1	68.5

Noise Level Results at CM4a

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
07/01/2025	11:37 - 12:07	Fine	66.3	64.4	69.9	61.7	61.5	66.5	66.0	69.0	75.0	measured level ≤ baseline level
13/01/2025	16:03 - 16:33	Fine	64.6	64.4	64.8	65.8	64.7	64.5	64.9	67.9	75.0	measured level ≤ baseline level
21/01/2025	10:58 - 11:28	Fine	64.2	63.5	62.8	63.4	63.1	63.7	63.5	66.5	75.0	measured level ≤ baseline level
28/01/2025	10:59 - 11:29	Cloudy	65.7	64.2	66.5	64.6	65.8	63.7	65.2	68.2	75.0	measured level ≤ baseline level
Average Construction Noise Level											67.9	

Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
54	53.9	70.1	59.6	55.1	55	67.8	67.3	82.4	73.5	65.9	64.8
52.6	51.6	51.7	52.3	53.8	52.4	68.8	69.4	70.2	69.8	68.7	69.8
53.4	52.0	51.8	52.0	53.9	51.0	67.8	67.5	66.6	67.5	66.5	67.6
53.4	54.1	54.8	54.3	53.4	54.6	71.3	70.4	69.7	69.8	70.6	70.5

Maximum Leq 30min, dB(A)	Minimum Leq 30min, dB(A)
69.0	66.5

Noise Level Results at CM10

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
07/01/2025	13:12 - 13:42	Fine	56.7	57.1	57.6	56.4	56.0	57.8	57.0	-	60.9	measured level ≤ baseline level
13/01/2025	14:34 - 15:04	Fine	57.0	57.0	57.1	56.7	57.8	57.0	57.1	-	60.9	measured level ≤ baseline level
21/01/2025	11:45 - 12:15	Fine	54.3	56.4	53.4	53.4	54.7	54.9	54.9	-	60.9	measured level ≤ baseline level
28/01/2025	9:32 - 10:02	Cloudy	54.7	54.9	57.5	61.2	56.5	60.6	58.3	-	60.9	measured level ≤ baseline level
Average Construction Noise Level											56.8	

Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
54.8	53.7	54.6	54.2	53.6	53.4	59.7	60.2	58.8	59.4	59.6	61.5
54.2	54.8	55.3	54.8	54.5	54.4	58.8	58.4	58.4	58.4	58.1	58.8
52.6	53.1	52.4	56.3	54.2	55.6	61.3	61.5	60.8	63.4	59.3	62.4
53.4	52.0	54.7	54.1	53.6	52.3	55.7	57.0	61.0	57.0	64.7	61.6

Maximum Leq 30min, dB(A)	Minimum Leq 30min, dB(A)
58.3	54.9

Noise Level Results at CM13

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline level, dB(A)	Construction Noise Level, Leq 30min, dB(A)							Reading (1)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)										
07/02/2025	14:03	14:33	Fine	50.6	50.1	50	51.3	50.7	50.7	50.6	-	54.4	measured level < baseline level						L90	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	L50	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
13/01/2025	15:19	15:49	Fine	49.0	49.4	48.4	54.7	47.8	47.8	-	50.4	measured level < baseline level						45.3		45.6	45.6	46.8	45.1	45.3	54.3		53.2	53.4	55.6	53.2	54.3			
21/01/2025	13:31	14:03	Fine	50.7	51.0	50.6	50.4	50.8	50.5	50.7	50.7	54.4	measured level < baseline level							43.9	43.7	42.2	42.9	42.6	42.6		51.8	52.7	51.7	52.7	50.3	50.9		
28/01/2025	10:15	10:45	Cloudy	54.2	48.1	49.3	59.6	54.1	48.0	54.4	-	54.4	measured level < baseline level							46.1	44.3	44.2	43.5	46.7	45.1		54.6	55.3	54.6	54.3	54.4	55.7		
											Average Construction Noise Level						51.5																	
Maximum Leq 30min, dB(A)										Minimum Leq 30min, dB(A)																								
54.4										50.4																								

Noise Level Results at CM14

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline level, dB(A)	Construction Noise Level, Leq 30min, dB(A)		Reading (1)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)							
07/01/2025	9:36	10:06	Fine	54.6	55.1	55.6	54.8	56.7	55.4	55.4	58.1	L90	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	L50	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	
13/01/2025	15:59	16:29	Fine	55.0	53.3	55.5	54.2	54.2	55.4	57.2	47.4		46.6	46.3	45.8	45.7	46.1	45.6		61.8	62.2	59.8	60.1	61.5	61.8	
21/01/2025	9:24	9:54	Fine	54.7	55.6	55.3	54.8	54.2	54.0	54.8	57.4		47.4	46.5	46.8	46.2	45.7	45.9		46.2	60.4	61.3	61.4	62.4	60.8	60.6
28/01/2025	10:58	11:28	Cloudy	69.2	52.4	52.4	52.2	54.3	54.0	61.9	64.8		47.4	64.8							73.4	57.0	56.6	55.5	58.4	57.9
											Average Construction Noise Level		59.4													
Maximum Leq 30min, dB(A)										Minimum Leq 30min, dB(A)																
64.9										57.7																

Noise Level Results at CM15a

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)		Reading (1)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)							
07/01/2025	10:10	20:40	Fine	67.9	67.8	68.1	68.6	68.9	68.7	68.4	64.7	70.3	L90	60.3	61.2	60.8	60.7	61.5	61.0	L50	74.8	73.2	74.0	73.4	73.8	73.9
13/01/2025	16:33	17:03	Fine	67.5	70.6	68.8	68.6	67.5	67.5	68.3	70.2	68.7		45.4	45.1	46.1	45.4	44.8	44.9		70.7	72.7	71.4	72.0	72.0	72.0
21/01/2025	9:59	20:29	Fine	68.4	69.7	69.4	69.8	68.4	68.6	69.1	72.1	71.2		61.4	61.3	61.7	62.4	61.1	61.7		75.0	74.6	73.5	74.6	74.6	73.8
28/01/2025	11:29	11:59	Cloudy	69.3	68.8	69.7	65.0	66.7	68.5	68.3	71.3	70.2		64.7	46.6	44.4	47.3	44.2	47.3		47.2	73.9	73.4	74.0	70.7	71.9
											Average Construction Noise Level															
Maximum Leq 30min, dB(A)										Minimum Leq 30min, dB(A)																
72.1										71.3																

Noise Level Results at CM16

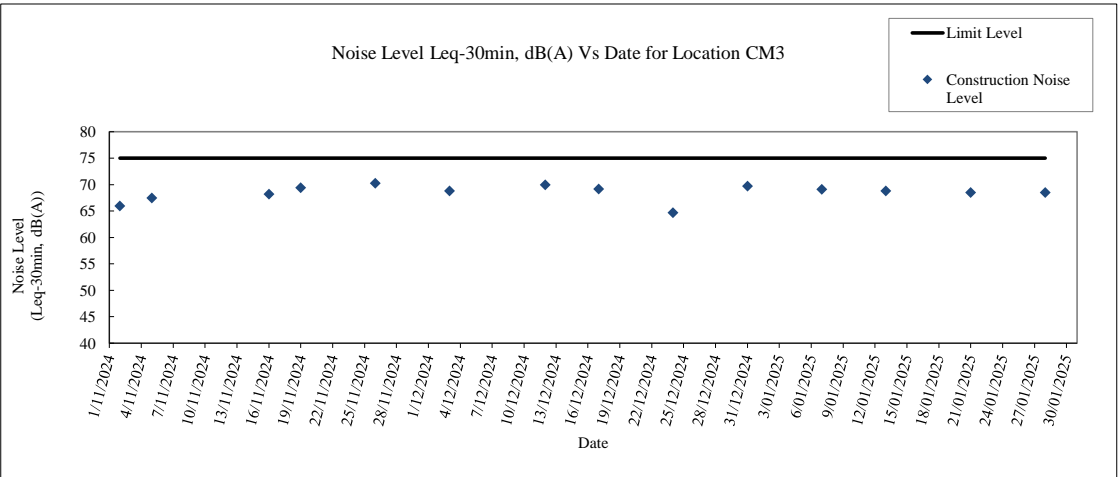
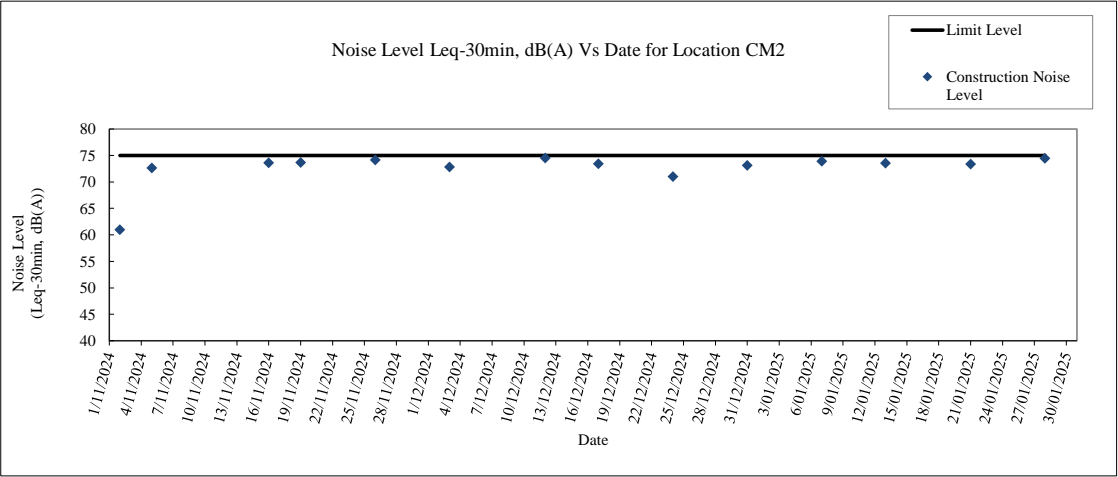
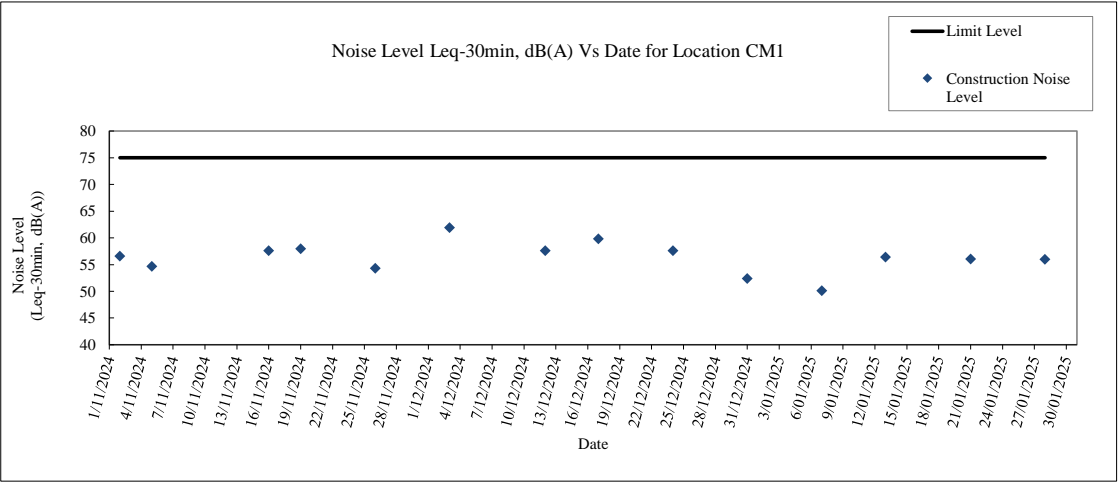
Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline level, dB(A)		Construction Noise Level, Leq 30min, dB(A)							Reading (1)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)					Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)						
07/01/2025	10:45	11:15	Fine	58.0	58.6	60.5	58.5	60.4	60.4		59.5	-	L90							L50											
13/01/2025	16:49	17:19	Fine	59.4	60.5	58.6	58.4	59.0	60.2		59.4	measured level < baseline level		54.9	55.7	56.0	54.5	56.5	56.3		60.5	60.7	62.9	61.0	63.2	62.8					
21/01/2025	17:06	17:36	Fine	62.2	63.3	65.7	64.1	63.6	66.3		64.4	measured level < baseline level		55.4	54.3	53.8	54.5	53.4	55.1		67.3	66.4	66.6	64.2	65.7	66.2					
28/01/2025	11:30	12:00	Cloudy	60.2	59.4	59.3	59.5	60.3	60.8		60.0	measured level < baseline level		57.0	57.6	58.8	59.1	57.9	58.2		63.0	66.1	68.7	69.0	66.9	66.6					
											Average Construction Noise Level	60.8																			
Maximum Leq 30min, dB(A)										Minimum Leq 30min, dB(A)																					
64.4										59.4																					

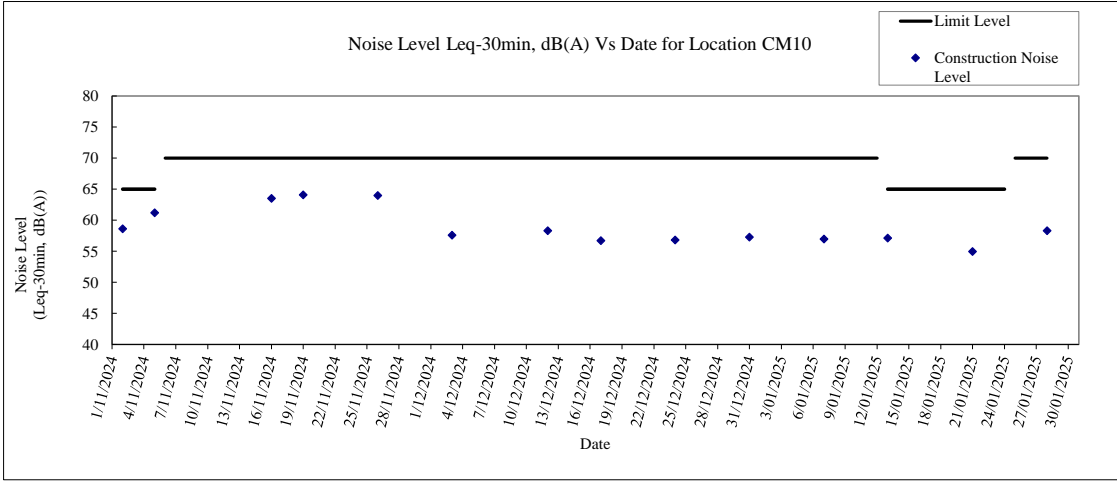
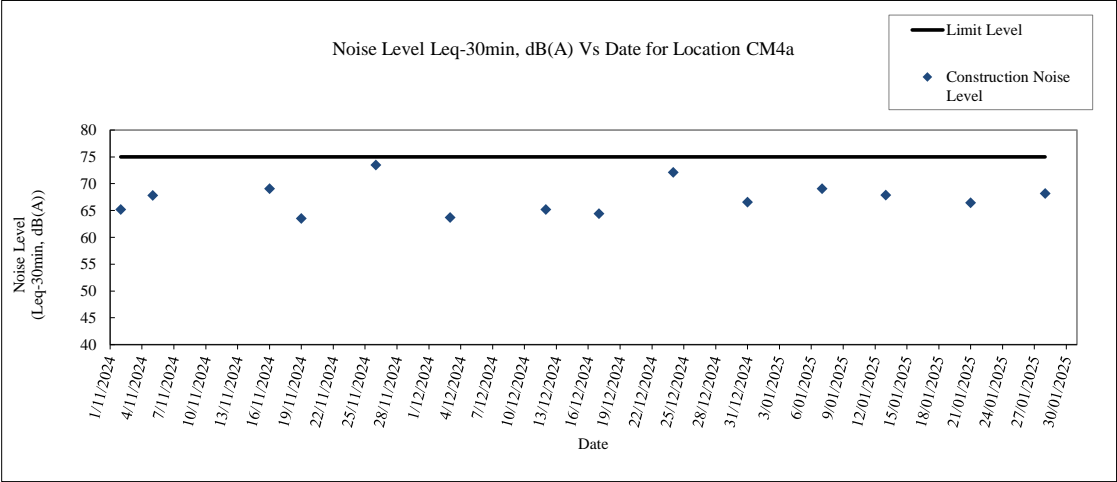
Noise Level Results at CM18

Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)		Reading (1)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
			Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)						Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)								
07/01/2025	16:12	16:42	Fine	60.4	60.8	60.8	61.0	60.4	61.5	60.8	63.8	56.6	62.9	L90	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)	L50	Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)
13/01/2025	17:45	18:15	Fine	65.0	63.0	64.9	64.1	63.8	65.7	64.4	67.4	56.6	62.9		58.4	55.6	56.4	56.6	57.4	57.7		65.6	64.6	66.7	67.4	67.4	65.4
21/01/2025	13:55	14:25	Fine	62.6	63.4	64	63.1	63.8	62.4	66.3	65.8	44.8	45.0		46.6	45.6	45.5	44.0	65.6	61.3		66.3	64.3	65.9	65.5		
28/01/2025	13:38	14:08	Cloudy	63.9	62.6	67.1	64.3	64.3	66.2	65.0	68.0	56.6	67.7		41.2	40.8	41.7	39.7	41.9	42.6		63.8	63.8	64.0	62.3	65.1	65.7
											Average Construction Noise Level		65.9														
Maximum Leq 30min, dB(A)										Minimum Leq 30min, dB(A)																	
68.0										63.8																	

Noise Level Results at CM20

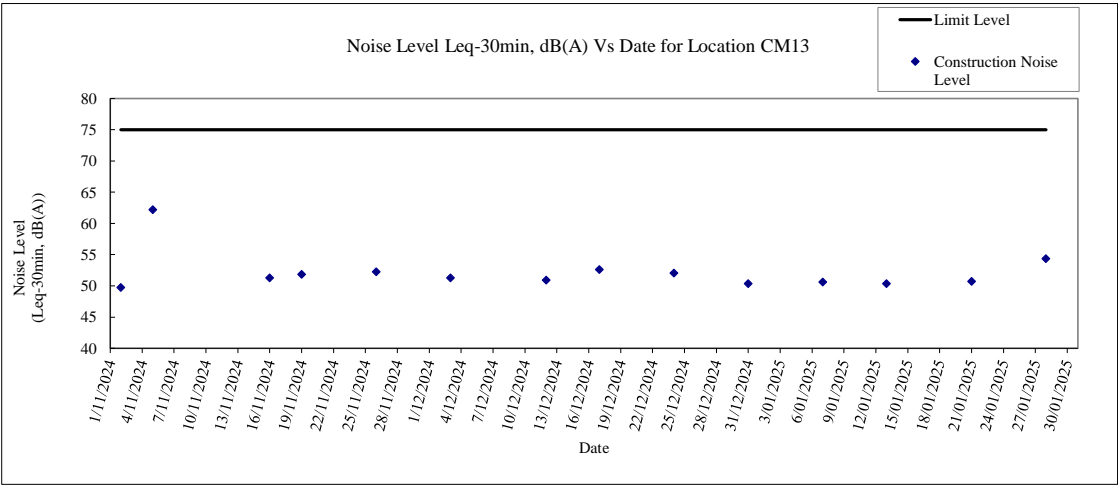
Date	Time	Weather	Leq 5min, dB(A)						Leq 30min, dB(A)	Leq 30min with free-field correction, dB(A)	Baseline Level, dB(A)	Construction Noise Level, Leq 30min, dB(A)	
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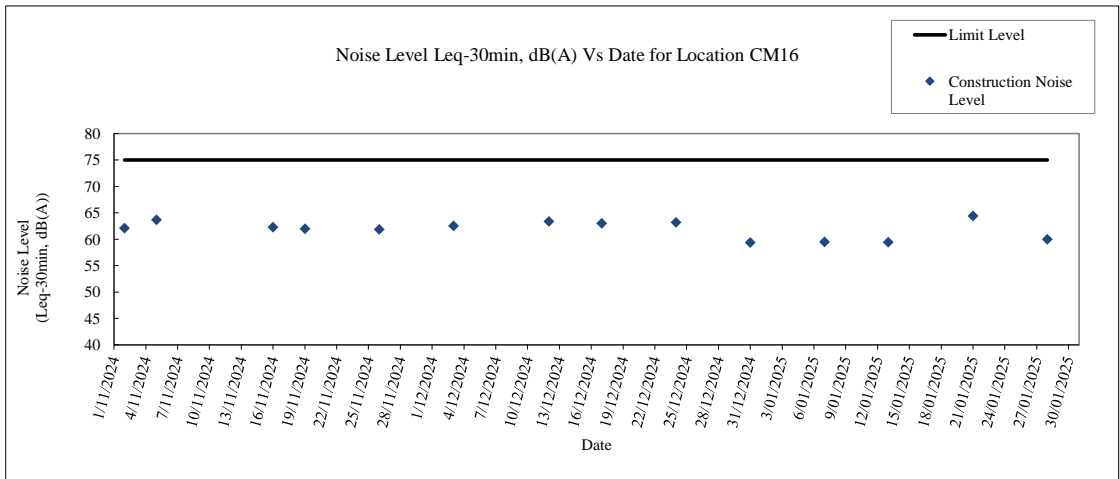
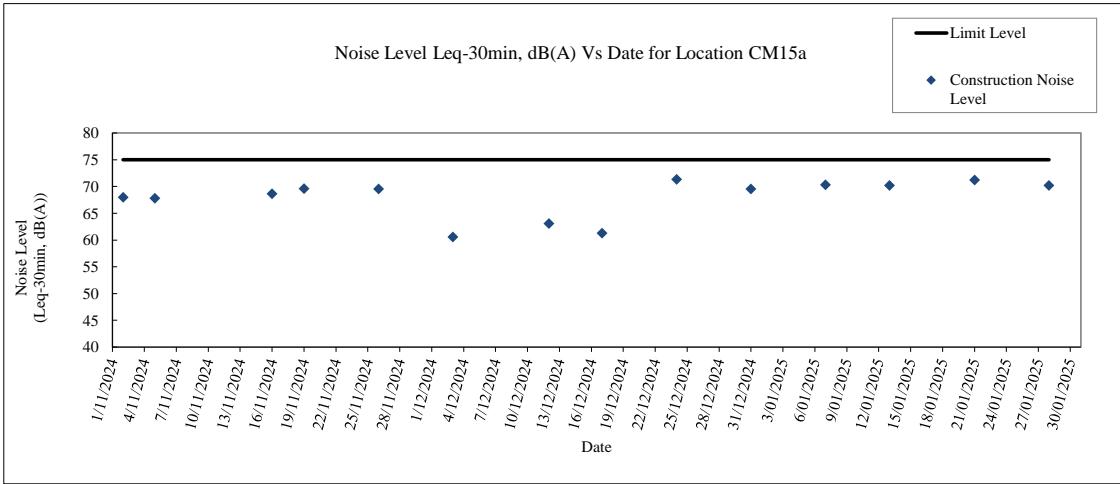
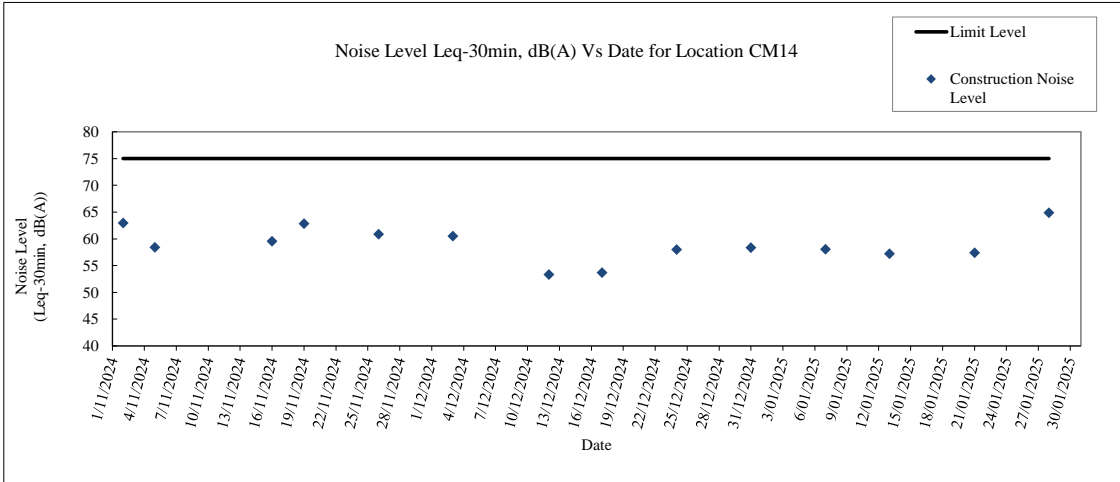




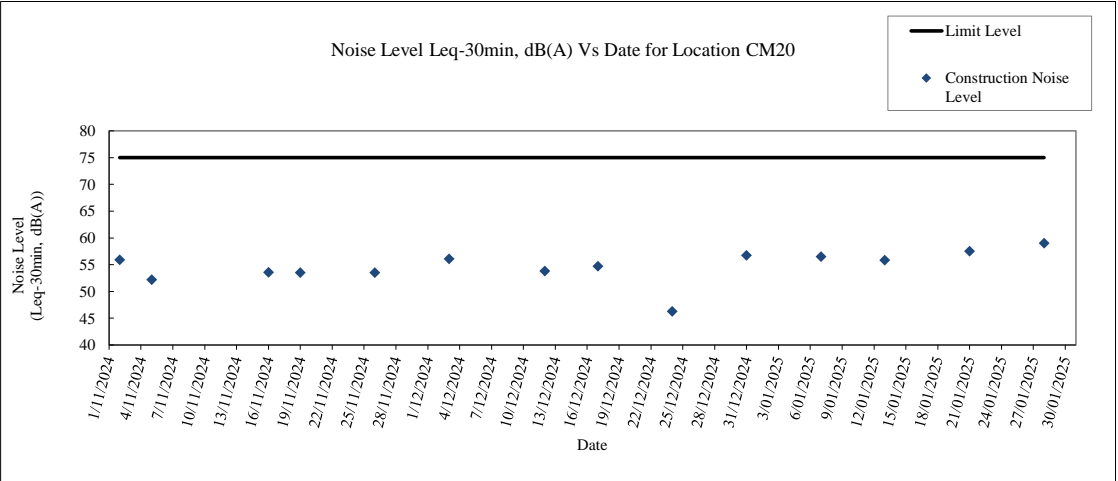
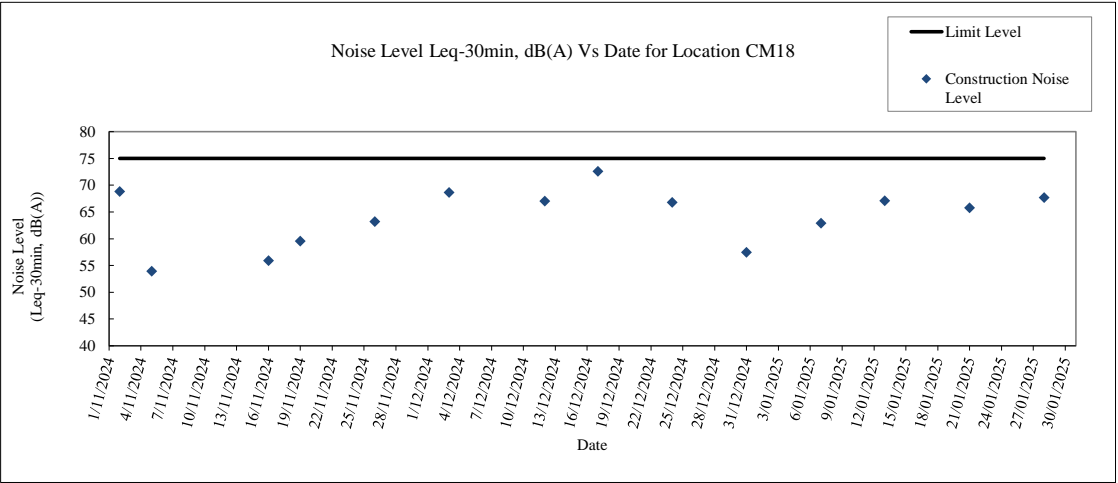
Note:

As four of the monitoring dates (2 November 2024, 5 November 2024, 13 January 2025 and 21 January 2025) fell within the exam period of the school, the limit level of noise monitoring of these two monitoring dates was set to be 65 dB(A), while the limit level of noise monitoring of the other monitoring dates were remained as 70 dB(A).







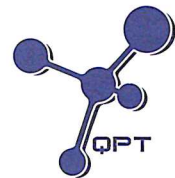


### **Appendix 3.3 Event and Action Plan for Noise**

### Event and Action Plan for Noise

<b>Action Level</b>	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Carry out investigation;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures; and</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem; and</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC ; and</li> <li>2. Implement noise mitigation proposals.</li> </ol>
<b>Limit Level</b>	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures properly implemented; and</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit further proposal if problem still not under control; and</li> <li>5. Stop the relevant portion of works as determined by ER, until the exceedance is abated.</li> </ol>

## **Appendix 4.1      Calibration Certificates of Impact Water Quality Monitoring Equipment**



專業化驗有限公司

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD100073  
Date of Issue : 21 October 2024  
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 : YSI ProDSS Multi Parameters  
Manufacturer : YSI  
Serial Number : 15M101091  
Date of Received : 16 October 2024  
Date of Calibration : 21 October 2024  
Date of Next Calibration : 20 January 2025  
Request No. : D-BD100073

### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H <sup>+</sup> 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	4.01	0.01	Satisfactory
7.42	7.43	0.01	Satisfactory
10.01	10.14	0.13	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  (pH unit)

#### (2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
16.0	16.1	0.1	Satisfactory
25.5	25.2	-0.3	Satisfactory
40.0	39.6	-0.4	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  (°C)


#### (3) Salinity

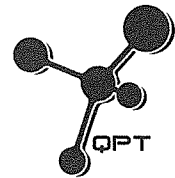
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.71	-2.9	Satisfactory
20	19.84	-0.8	Satisfactory
30	30.42	1.4	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  (%)

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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD100073

Date of Issue : 21 October 2024

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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
7.41	7.77	0.36	Satisfactory
5.61	5.22	-0.39	Satisfactory
3.49	3.56	0.07	Satisfactory
0.56	0.29	-0.27	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance <sup>(a)</sup> ( % )	Result
0	0.02	--	Satisfactory
10	10.11	1.1	Satisfactory
20	19.85	-0.7	Satisfactory
100	103.25	3.3	Satisfactory
800	822.19	2.8	Satisfactory

Tolerance of Turbidity should be less than  $\pm 10.0$  ( % )

<sup>(a)</sup> For 0 NTU, Display Reading should be less than 1 NTU

### 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 ---



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD120079  
Date of Issue : 23 December 2024  
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 : YSI ProDSS Multi Parameters  
Manufacturer : YSI  
Serial Number : 22C106561  
Date of Received : 18 December 2024  
Date of Calibration : 20 December 2024  
Date of Next Calibration : 19 March 2025

### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H <sup>+</sup> 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	4.03	0.03	Satisfactory
7.42	7.39	-0.03	Satisfactory
10.01	9.97	-0.04	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
18.5	17.8	-0.7	Satisfactory
21.0	20.8	-0.2	Satisfactory
36.0	36.0	0.0	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

Expected Reading ( g/L )	Display Reading ( g/L )	Tolerance ( % )	Result
10	10.15	1.50	Satisfactory
20	20.91	4.55	Satisfactory
30	31.93	6.43	Satisfactory

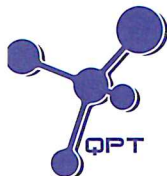
Tolerance of Salinity should be less than  $\pm 10.0$  ( % )

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AUTHORIZED  
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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD120079

Date of Issue : 23 December 2024

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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
9.10	9.08	-0.02	Satisfactory
6.87	6.51	-0.36	Satisfactory
4.61	4.11	-0.50	Satisfactory
0.74	0.38	-0.36	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance <sup>(a)</sup>	Result
0	0.39	--	Satisfactory
10	10.15	1.5	Satisfactory
20	19.75	-1.3	Satisfactory
100	97.55	-2.5	Satisfactory
800	753.00	-5.9	Satisfactory

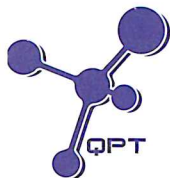
Tolerance of Turbidity should be less than  $\pm 10.0$  ( % )

<sup>(a)</sup> For 0 NTU, Display Reading should be less than 1 NTU

### Remark(s): -

- The "Date of Next Calibration" is recommended according to best practice principles followed by QPT or relevant international standards.
- The results relate only to the calibrated equipment as received.
- The performance of the equipment stated in this report is checked using independent reference material, with results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on the item under calibration/checking, regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable to similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

--- END OF REPORT ---



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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BE010185  
Date of Issue : 13 January 2025  
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 : YSI ProDSS (Multi-Parameters)  
Manufacturer : YSI  
Serial Number : 22D100436  
Date of Received : 07 January 2025  
Date of Calibration : 09 January 2025  
Date of Next Calibration : 08 April 2025  
Request No. : D-BE010185

### PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Test Parameter	Reference Method
pH value	APHA 21e 4500-H <sup>+</sup> 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	4.13	0.13	Satisfactory
7.42	7.54	0.12	Satisfactory
10.01	10.10	0.09	Satisfactory

Tolerance of pH value should be less than  $\pm 0.2$  ( pH unit )

#### (2) Temperature

Reading of Ref. thermometer ( °C )	Display Reading ( °C )	Tolerance	Result
17.0	17.2	0.2	Satisfactory
21.5	21.4	-0.1	Satisfactory
32.0	31.8	-0.2	Satisfactory

Tolerance of Temperature should be less than  $\pm 2.0$  ( °C )

#### (3) Salinity

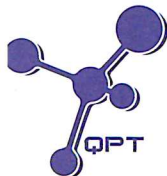
Expected Reading ( g/L )	Display Reading ( g/L )	Tolerance ( % )	Result
10	9.70	-3.00	Satisfactory
20	19.88	-0.60	Satisfactory
30	30.35	1.17	Satisfactory

Tolerance of Salinity should be less than  $\pm 10.0$  ( % )

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AUTHORIZED  
SIGNATORY:

FUNG Yuen-ching  
Laboratory Manager



專業化驗有限公司  
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## REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BE010185  
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### (4) Dissolved oxygen

Expected Reading ( mg/L )	Display Reading ( mg/L )	Tolerance	Result
8.55	8.48	-0.07	Satisfactory
5.48	5.08	-0.40	Satisfactory
3.01	2.89	-0.12	Satisfactory
0.70	0.21	-0.49	Satisfactory

Tolerance of Dissolved oxygen should be less than  $\pm 0.5$  ( mg/L )

### (5) Turbidity

Expected Reading ( NTU )	Display Reading ( NTU )	Tolerance <sup>(a)</sup>	Result
0	0.19	--	Satisfactory
10	10.89	8.9	Satisfactory
20	19.48	-2.6	Satisfactory
100	94.42	-5.6	Satisfactory
800	728.89	-8.9	Satisfactory

Tolerance of Turbidity should be less than  $\pm 10.0$  ( % )

<sup>(a)</sup> For 0 NTU, Display Reading should be less than 1 NTU

### Remark(s)

- The "Date of Next Calibration" is recommended according to best practice principles followed by QPT or relevant international standards.
- The results relate only to the calibrated equipment as received.
- The performance of the equipment stated in this report is checked using independent reference material, with results compared against a calibrated secondary source.
- "Displayed Reading" denotes the figure shown on the item under calibration/checking, regardless of equipment precision or significant figures.
- The "Tolerance Limit" mentioned is the acceptance criteria applicable to similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.

--- END OF REPORT ---

## **Appendix 4.2 Impact Water Quality Monitoring Data**

Water Quality Monitoring Location : U2

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	08:30	Fine	Middle	0.12	20.4	20.4	7.1	7.1	8.2	8.2	91.3	91.2	7.7	7.7	3.8	3.3
					20.4		7.1		8.2		91.1		7.7		2.8	
04 January 2025	09:30	Fine	Middle	0.10	19.7	19.7	7.7	7.7	8.1	8.0	88.5	88.0	7.3	7.4	5.4	4.1
					19.7		7.7		8.0		87.5		7.4		2.8	
06 January 2025	09:00	Fine	Middle	0.10	18.6	18.6	7.5	7.5	9.1	9.1	97.2	97.0	4.1	4.1	5.9	5.2
					18.5		7.5		9.0		96.7		4.1		4.5	
08 January 2025	10:00	Fine	Middle	0.10	20.9	20.9	7.6	7.7	8.8	8.8	98.7	98.6	5.0	5.0	5.1	5.2
					20.9		7.7		8.8		98.6		5.0		5.3	
10 January 2025	10:02	Fine	Middle	0.10	17.6	17.6	7.5	7.5	8.9	8.9	93.6	93.6	9.0	8.9	6.6	5.5
					17.6		7.5		8.9		93.5		8.9		4.3	
13 January 2025	09:19	Fine	Middle	0.08	18.0	18.0	7.6	7.6	9.2	9.2	97.0	97.0	12.8	12.8	17.0	15.5
					18.0		7.6		9.2		96.9		12.8		14.0	
15 January 2025	09:37	Fine	Middle	0.10	15.6	15.6	7.5	7.5	9.4	9.4	93.9	93.9	8.4	8.4	11.0	9.6
					15.6		7.5		9.5		93.8		8.4		8.2	
17 January 2025	10:14	Fine	Middle	0.10	17.6	17.6	7.7	7.7	9.4	9.4	98.0	98.0	9.5	9.6	10.0	8.6
					17.6		7.7		9.4		98.0		9.6		7.2	
20 January 2025	09:40	Cloudy	Middle	0.10	19.0	19.0	7.6	7.6	8.2	8.2	88.9	88.9	8.9	8.9	8.6	7.5
					19.0		7.6		8.2		88.9		9.0		6.3	
22 January 2025	09:39	Cloudy	Middle	0.10	18.8	18.8	7.5	7.5	9.3	9.3	99.7	99.7	20.3	20.2	10.0	13.5
					18.8		7.5		9.3		99.7		20.2		17.0	
24 January 2025	09:37	Fine	Middle	0.10	19.9	19.9	7.1	7.1	8.4	8.4	92.1	92.1	4.1	4.1	10.0	13.5
					19.9		7.1		8.4		92.1		4.1		17.0	
27 January 2025	09:37	Cloudy	Middle	0.10	17.3	17.3	8.0	8.0	9.5	9.5	99.2	99.2	20.7	20.7	4.9	5.0
					17.3		8.0		9.5		99.2		20.7		5.0	

Water Quality Monitoring Location : U5a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	13:02	Fine	Middle	0.02	19.2	19.2	9.4	9.4	9.2	9.2	99.8	99.8	29.4	29.4	153.0	120.0
					19.2		9.4		9.2		99.8		29.4		87.0	
04 January 2025	13:01	Fine	Middle	0.03	20.6	20.6	10.7	10.7	9.0	9.0	100.6	100.6	1.1	1.1	7.8	6.7
					20.6		10.7		9.0		100.6		1.1		5.6	
06 January 2025	13:54	Fine	Middle	0.03	20.0	20.0	10.9	10.9	9.1	9.1	97.2	97.3	9.7	9.6	21.0	17.5
					20.0		10.9		9.1		97.3		9.5		14.0	
08 January 2025	12:56	Fine	Middle	0.02	19.4	19.4	9.4	9.3	9.1	9.1	98.5	98.5	16.8	16.8	58.0	62.0
					19.4		9.3		9.1		98.5		16.9		66.0	
10 January 2025	13:02	Fine	Middle	0.03	18.4	18.4	11.4	11.4	9.2	9.2	97.9	97.9	3.6	3.7	85.0	67.5
					18.4		11.4		9.2		97.8		3.7		50.0	
13 January 2025	13:01	Fine	Middle	0.03	18.3	18.3	9.9	9.9	9.4	9.4	100.3	100.3	3.9	3.9	9.4	8.4
					18.3		9.9		9.4		100.3		4.0		7.3	
15 January 2025	13:00	Fine	Middle	0.03	15.7	15.7	11.0	11.0	9.8	9.8	99.1	99.1	4.0	4.0	13.0	11.4
					15.7		11.0		9.8		99.1		4.0		9.7	
17 January 2025	13:01	Fine	Middle	0.03	18.9	18.9	11.9	11.9	9.3	9.3	100.1	100.1	20.5	20.5	29.0	27.5
					18.9		11.9		9.3		100.1		20.5		26.0	
20 January 2025	13:36	Cloudy	Middle	0.02	17.4	17.4	11.4	11.4	9.4	9.4	98.4	98.4	13.5	13.5	27.0	33.0
					17.4		11.4		9.4		98.4		13.5		39.0	
22 January 2025	13:39	Cloudy	Middle	0.02	18.3	18.3	10.4	10.4	9.3	9.3	98.3	98.3	23.4	23.4	17.0	17.0
					18.3		10.4		9.3		98.3		23.3		17.0	
24 January 2025	13:10	Fine	Middle	0.03	19.7	19.7	11.8	11.8	8.8	8.8	96.9	96.9	28.8	28.8	86.0	82.0
					19.7		11.8		8.8		96.9		28.7		78.0	
27 January 2025	13:05	Cloudy	Middle	0.03	17.1	17.1	10.6	10.6	9.6	9.6	99.7	99.7	19.4	19.4	113.0	129.0
					17.1		10.7		9.6		99.6		19.4		145.0	

Water Quality Monitoring Location : U6a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	16:06	Fine	Middle	0.05	20.4	20.4	7.7	7.7	9.0	9.0	99.5	99.3	4.2	4.2	1.0	1.0
					20.4		7.7		8.9		99.0		4.1		1.0	
					21.1		8.0		8.7		97.7		2.1		5.5	
04 January 2025	13:30	Fine	Middle	0.05	21.1	21.1	8.0	8.0	8.7	8.7	97.9	97.8	2.1	2.1	3.4	4.5
					20.0		8.0		8.7		95.9		5.2		16.0	
					20.0		8.0		8.7		96.0		5.2		8.8	
06 January 2025	14:02	Fine	Middle	0.04	19.4	19.4	8.0	7.9	8.8	8.8	95.9	95.8	3.6	3.6	4.5	3.6
					19.4		7.9		8.8		95.6		3.5		2.6	
					18.7		8.3		9.2		98.5		1.7		1.1	
10 January 2025	13:30	Fine	Middle	0.05	18.7	18.7	8.3	8.3	9.2	9.2	98.5	98.5	1.6	1.6	1.0	1.1
					18.7		8.3		9.2		98.5		1.6		1.0	
					18.5		7.6		9.3		98.3		3.5		1.8	
13 January 2025	13:30	Fine	Middle	0.05	18.5	18.5	7.6	7.5	9.3	9.3	98.8	98.6	3.4	3.5	1.6	1.7
					18.5		7.5		9.3		98.8		3.4		1.6	
					17.2		7.6		9.7		100.4		4.5		5.0	
15 January 2025	13:31	Fine	Middle	0.05	17.2	17.2	7.6	7.6	9.7	9.7	100.4	100.4	4.5	4.5	5.0	4.5
					17.2		7.6		9.7		100.4		4.5		4.0	
					18.9		8.9		8.9		95.7		1.2		1.2	
17 January 2025	13:31	Fine	Middle	0.05	18.9	18.9	8.9	8.4	8.9	8.9	95.7	95.7	1.2	1.2	8.1	6.0
					18.9		8.0		8.9		95.7		1.2		5.0	
					22.4		7.6		11.1		127.6		5.0		6.3	
20 January 2025	15:56	Cloudy	Middle	0.05	22.4	22.4	7.6	7.6	11.1	11.1	127.6	127.7	5.0	5.0	8.3	7.3
					22.4		7.7		11.1		127.8		5.0		8.3	
					19.3		8.2		9.2		99.7		10.2		13.0	
22 January 2025	11:22	Cloudy	Middle	0.05	19.3	19.3	8.2	8.2	9.2	9.2	99.5	99.6	10.2	10.2	11.0	12.0
					19.6		7.8		7.5		82.0		5.5		15.0	
					19.6		7.9		7.5		82.0		5.5		15.0	
24 January 2025	13:38	Fine	Middle	0.05	17.4	17.4	7.7	7.7	9.4	9.4	98.0	98.0	5.6	5.6	5.8	5.3
					17.4		7.7		9.4		97.9		5.5		4.8	
					17.4		7.7		9.4		97.9		5.5		4.8	



Water Quality Monitoring Location : TS1

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	13:30	Fine	Middle	0.03	20.2	20.2	9.4	9.4	9.1	9.1	100.7	100.7	8.5	8.5	6.3	4.8
					20.2		9.4		9.1		100.7		8.5		3.3	
04 January 2025	14:00	Fine	Middle	0.02	20.7	20.7	7.8	7.8	8.7	8.7	96.8	96.8	7.2	7.3	5.2	4.5
					20.7		7.8		8.7		96.7		7.3		3.8	
06 January 2025	14:30	Fine	Middle	0.02	20.1	20.1	8.0	8.0	8.9	8.9	98.4	98.4	2.3	2.3	7.6	6.4
					20.1		8.0		8.9		98.3		2.2		5.1	
08 January 2025	14:00	Fine	Middle	0.02	19.4	19.4	8.5	8.5	8.7	8.7	94.8	94.8	7.0	6.9	19.0	24.0
					19.4		8.5		8.7		94.8		6.9		29.0	
10 January 2025	14:01	Fine	Middle	0.02	18.9	18.9	8.3	8.3	7.9	7.9	84.9	84.9	21.8	21.8	114.0	96.0
					18.9		8.3		7.9		84.8		21.8		78.0	
13 January 2025	14:00	Fine	Middle	0.02	18.2	18.2	7.9	7.9	9.1	9.1	96.1	96.2	19.5	19.5	188.0	171.5
					18.2		7.9		9.1		96.2		19.5		155.0	
15 January 2025	14:00	Fine	Middle	0.02	15.8	15.8	7.6	7.6	9.7	9.7	97.9	98.0	11.2	11.2	106.0	93.5
					15.8		7.6		9.7		98.0		11.2		81.0	
17 January 2025	14:09	Fine	Middle	0.02	19.1	19.1	8.8	8.8	9.0	9.0	97.4	97.4	6.6	6.7	63.0	76.0
					19.1		8.9		9.0		97.4		6.7		89.0	
20 January 2025	13:50	Cloudy	Middle	0.07	19.2	19.2	9.8	9.8	9.2	9.2	99.8	99.8	11.0	11.0	123.0	128.5
					19.2		9.8		9.2		99.8		11.0		134.0	
22 January 2025	14:02	Cloudy	Middle	0.02	19.4	19.4	9.2	9.2	8.7	8.7	94.8	94.8	39.4	39.4	7.0	8.0
					19.4		9.2		8.7		94.8		39.5		9.0	
24 January 2025	14:21	Fine	Middle	0.02	19.9	19.9	8.3	8.3	8.6	8.5	94.0	93.9	3.3	3.3	49.0	66.5
					19.9		8.3		8.6		93.8		3.3		84.0	
27 January 2025	14:09	Cloudy	Middle	0.03	17.6	17.7	11.3	11.3	9.5	9.5	99.3	99.4	6.5	6.5	18.0	14.5
					17.7		11.3		9.5		99.4		6.4		11.0	

Water Quality Monitoring Location : TS2a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	16:20	Fine	Middle	0.05	20.5	20.5	7.6	7.6	8.8	8.8	97.6	97.6	2.8	2.8	1.6	1.4
					20.5		7.7		8.8		97.5		2.9		1.2	
04 January 2025	14:30	Fine	Middle	0.06	21.0	21.0	7.7	7.7	8.5	8.5	95.7	95.6	5.6	5.6	3.4	3.4
					21.0		7.7		8.5		95.4		5.5		3.3	
06 January 2025	15:00	Fine	Middle	0.05	20.1	20.1	7.7	7.7	8.3	8.2	90.9	90.5	5.7	5.6	12.0	12.0
					20.1		7.7		8.2		90.0		5.6		12.0	
08 January 2025	15:00	Fine	Middle	0.05	19.5	19.5	7.5	7.5	5.1	5.1	55.4	55.9	11.3	11.3	4.5	5.0
					19.5		7.6		5.2		56.3		11.4		5.4	
10 January 2025	14:30	Fine	Middle	0.05	18.8	18.8	7.9	7.9	9.1	9.1	97.6	97.6	22.1	22.1	2.7	2.4
					18.8		7.9		9.1		97.6		22.0		2.0	
13 January 2025	14:30	Fine	Middle	0.05	18.6	18.6	7.5	7.5	8.9	8.9	95.2	95.1	17.6	17.6	2.2	2.1
					18.6		7.5		8.9		95.0		17.6		2.0	
15 January 2025	14:30	Fine	Middle	0.05	15.9	15.9	7.6	7.6	9.7	9.7	98.0	98.0	10.7	10.7	20.0	16.0
					15.9		7.6		9.7		98.0		10.8		12.0	
17 January 2025	14:40	Fine	Middle	0.05	19.2	19.2	7.9	7.8	8.9	8.9	95.9	95.8	14.6	14.6	10.0	8.9
					19.2		7.8		8.8		95.7		14.7		7.7	
20 January 2025	16:23	Cloudy	Middle	0.05	22.3	22.3	7.5	7.5	6.8	6.8	78.3	78.3	12.6	12.6	3.6	3.3
					22.3		7.5		6.8		78.2		12.6		3.0	
22 January 2025	14:35	Cloudy	Middle	0.05	19.6	19.6	7.8	7.8	7.6	7.5	82.8	82.3	14.0	16.8	4.6	4.7
					19.6		7.8		7.5		81.8		19.6		4.8	
24 January 2025	14:57	Fine	Middle	0.05	19.5	19.5	7.3	7.2	6.4	6.4	62.3	62.3	7.6	7.6	5.0	4.2
					19.5		7.2		6.4		62.3		7.6		3.3	
27 January 2025	14:39	Cloudy	Middle	0.05	17.5	17.5	7.6	7.6	8.4	8.3	87.4	87.3	6.3	6.3	5.6	4.5
					17.5		7.6		8.3		87.1		6.3		3.3	

Water Quality Monitoring Location : TSR1a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	16:50	Fine	Middle	0.05	20.6	20.6	7.4	7.4	8.6	8.6	97.3	97.3	11.6	11.6	20.0	16.5
					20.6		7.4		8.6		97.3		11.5		13.0	
04 January 2025	15:00	Fine	Middle	0.08	21.3	21.3	7.3	7.3	7.2	7.2	82.5	82.3	23.9	23.9	14.7	12.5
					21.3		7.3		7.2		82.1		23.8		10.3	
06 January 2025	15:30	Fine	Middle	0.05	20.1	20.1	7.6	7.7	8.3	8.3	91.9	92.0	7.6	7.7	36.0	33.5
					20.1		7.7		8.3		92.1		7.7		31.0	
08 January 2025	14:29	Fine	Middle	0.50	19.5	19.5	7.3	7.3	7.2	7.3	80.6	80.2	35.0	35.0	8.9	8.5
					19.5		7.4		7.2		79.7		35.0		8.1	
10 January 2025	15:00	Fine	Middle	0.50	18.6	18.6	7.5	7.5	8.4	8.5	90.8	91.2	4.9	4.9	1.7	1.6
					18.6		7.5		8.5		91.5		4.9		1.4	
13 January 2025	15:00	Fine	Middle	0.50	19.1	19.1	7.3	7.3	8.1	8.1	88.6	88.8	5.7	5.8	4.0	4.0
					19.1		7.3		8.2		88.9		5.7		3.9	
15 January 2025	15:00	Fine	Middle	0.50	15.8	15.8	7.1	7.1	9.3	9.3	95.0	94.9	6.3	6.2	20.0	17.5
					15.8		7.1		9.2		94.8		6.2		15.0	
17 January 2025	15:15	Fine	Middle	0.08	19.5	19.5	7.5	7.5	8.6	8.5	94.7	94.6	10.0	10.1	11.0	11.0
					19.5		7.5		8.5		94.4		10.1		11.0	
20 January 2025	12:30	Cloudy	Middle	0.60	20.1	20.1	7.4	7.4	8.1	8.1	94.0	94.0	18.1	18.2	4.7	4.7
					20.1		7.4		8.1		94.0		18.2		4.6	
22 January 2025	15:00	Cloudy	Middle	0.05	19.3	19.3	7.6	7.6	8.2	8.2	88.8	88.8	17.2	17.2	6.7	8.0
					19.3		7.6		8.2		88.7		17.2		9.2	
24 January 2025	15:36	Fine	Middle	0.50	19.6	19.6	6.9	6.9	5.5	5.5	57.8	57.8	5.2	5.2	6.8	7.7
					19.6		6.9		5.5		57.8		5.2		8.6	
27 January 2025	14:41	Cloudy	Middle	0.50	17.2	17.2	7.6	7.6	8.9	8.9	93.8	94.0	10.4	10.4	4.7	3.7
					17.2		7.6		9.0		94.1		10.4		2.7	



Water Quality Monitoring Location : HT

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	12:46	Fine	Middle	0.05	20.5	20.5	7.3	7.3	5.3	5.3	58.9	58.6	2.5	2.5	2.2	2.4
					20.5		7.3		5.2		58.2		2.5		2.6	
					19.7		7.7		8.0		87.4		3.8		2.7	
04 January 2025	11:10	Fine	Middle	0.05	19.7	19.7	7.7	7.7	7.9	8.0	86.8	87.1	3.8	3.8	2.0	2.4
					18.3		7.3		7.3		77.4		3.0		2.0	
					18.3		7.3		7.2		77.0		3.0		1.0	
06 January 2025	10:39	Fine	Middle	0.03	19.8	19.8	7.1	7.1	8.8	8.8	96.7	96.7	8.9	8.9	2.6	2.4
					19.8		7.1		8.8		96.7		8.9		2.1	
					17.5		7.7		6.8		71.7		6.6		5.9	
08 January 2025	12:46	Fine	Middle	0.03	17.5	17.5	7.7	7.7	6.8	6.8	71.3	71.5	6.6	6.7	3.6	4.8
					17.5		7.7		6.8		71.7		6.6		5.2	
					17.5		7.7		6.8		71.3		6.6		4.0	
10 January 2025	12:01	Fine	Middle	0.02	15.7	15.7	7.4	7.4	9.7	9.7	97.8	97.9	12.9	12.9	1.8	1.8
					15.7		7.4		9.7		98.0		12.9		1.8	
					17.8		7.8		8.6		90.4		6.1		7.1	
13 January 2025	11:12	Fine	Middle	0.05	17.8	17.8	7.8	7.8	8.6	8.6	90.6	90.5	6.1	6.1	6.7	6.9
					19.0		7.8		8.3	8.3	89.7		10.3		7.0	
					19.0		7.8		8.4		90.1		10.3		5.0	
15 January 2025	12:00	Fine	Middle	0.03	19.2	19.3	7.6	7.9	9.2	9.2	99.7	99.7	11.1	10.6	5.1	4.9
					19.3		8.2		9.2		99.7		10.2		4.7	
					21.1	21.1	7.3	7.3	8.7	8.7	97.7	97.7	3.0	3.0	5.1	4.9
17 January 2025	11:56	Cloudy	Middle	0.03	21.1		7.3		8.7		97.7		3.0		4.7	
					14.4		7.6		6.2	6.3	60.6	61.5	1.3	1.3	1.8	
					14.4		7.6		6.4		62.3		1.3		3.6	

Water Quality Monitoring Location : LUTa

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	17:21	Fine	Middle	0.08	20.7	20.7	7.2	7.2	4.1	4.0	54.0	54.1	9.0	9.0	5.6	4.5
					20.7		7.2		4.0		54.1		8.9		3.4	
					20.6		7.2		2.9		32.5		17.2		4.3	
04 January 2025	15:31	Fine	Middle	0.55	20.6	20.6	7.2	7.2	2.9	2.9	31.9	32.2	17.3	17.2	5.3	4.8
					20.1		7.4		7.5		83.1		6.5		6.4	
					20.4		7.4		7.5		83.1		6.4		8.7	
06 January 2025	16:30	Fine	Middle	0.60	19.3	19.3	7.3	7.3	6.4	6.3	69.6	69.5	7.2	7.3	6.3	6.5
					19.3		7.3		6.3		69.4		7.3		6.6	
					18.3		7.1		3.8		40.7		8.6		4.6	
10 January 2025	15:31	Fine	Middle	0.55	18.3	18.3	7.1	7.1	3.8	3.8	41.2	41.0	8.7	8.7	4.9	4.8
					18.5		8.6		9.6		106.0		14.4		8.3	
					18.5		8.7		9.7		106.8		14.6		7.8	
13 January 2025	15:30	Fine	Middle	0.65	19.2	19.3	7.7	7.7	9.2	9.1	99.1	98.7	4.4	4.4	5.7	4.9
					19.3		7.7		9.1		98.3		4.5		4.1	
					19.3		7.5		6.4		69.8		12.0		2.0	
15 January 2025	16:00	Fine	Middle	0.05	19.3	19.3	7.5	7.5	6.4	6.4	69.0	69.4	12.0	12.0	1.3	1.7
					20.2		7.8		8.5		94.7		21.0		7.1	
					20.2		7.8		8.5		94.6		20.9		7.7	
17 January 2025	17:31	Cloudy	Middle	0.30	19.5	19.5	7.8	7.8	8.7	8.7	95.0	95.0	18.6	18.6	8.3	7.1
					19.5		7.8		8.7		95.0		18.6		5.8	
					19.6		7.2		7.8		86.0		9.7		7.0	
20 January 2025	15:30	Cloudy	Middle	0.03	19.6	19.6	7.2	7.2	7.8	7.8	85.9	86.0	9.8	9.7	5.8	6.4
					17.0		7.7		9.1		95.5		12.2		8.4	
					17.0		7.7		9.1		95.5		12.1		8.5	

Water Quality Monitoring Location : D2a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	17:46	Fine	Middle	0.65	20.7	20.7	7.2	7.2	7.0	7.0	79.4	79.5	5.3	5.3	5.3	5.1
					20.7		7.2		7.1		79.5		5.4		4.9	
					21.3		7.7		6.0		69.1		10.4		9.2	
04 January 2025	16:01	Fine	Middle	0.50	21.3	21.3	7.7	7.7	6.0	6.0	68.9	69.0	10.4	10.3	8.1	8.7
					20.0		7.6		7.7		85.8		10.1		5.2	
					20.0		7.6		7.8		86.3		10.1		10.1	
06 January 2025	16:02	Fine	Middle	0.70	19.4	19.4	7.5	7.5	6.6	6.6	75.1	75.2	11.3	11.3	9.5	10.3
					19.4		7.5		6.6		75.3		11.3		11.0	
					18.3		7.7		7.8		82.8		6.6		8.1	
10 January 2025	16:09	Fine	Middle	0.65	18.3	18.3	7.7	7.7	7.8	7.8	82.6	82.7	6.6	6.6	9.0	9.0
					18.4		7.9		8.5		91.1		7.2		3.3	
					18.4		7.1		8.5		91.8		7.1		4.8	
13 January 2025	16:00	Fine	Middle	0.75	17.0	17.0	7.0	7.0	8.9	8.9	91.6	91.6	10.6	10.6	2.7	3.6
					17.0		7.0		8.9		91.6		10.6		4.5	
					19.5		7.3		7.3		7.8		7.8		85.7	
15 January 2025	15:30	Fine	Middle	0.12	24.8	24.8	7.9	7.9	9.8	9.8	119.5	119.5	5.3	5.3	4.7	4.7
					24.8		9.8		9.8		119.5		5.3		4.6	
					20.4		6.9		8.6		95.0		11.5		8.1	
17 January 2025	16:40	Fine	Middle	0.55	20.4	20.4	6.9	6.9	8.6	8.6	94.9	95.0	11.5	11.5	8.0	8.1
					20.4		6.9		8.6		94.9		11.5		8.0	
					19.5		7.3		7.3		7.8		7.8		85.7	
20 January 2025	17:03	Cloudy	Middle	0.08	19.5	19.5	6.9	6.9	7.8	7.8	86.7	86.6	6.3	6.3	11.0	10.5
					19.5		6.9		7.8		86.5		6.3		10.0	
					17.0		7.7		9.4		98.8		10.0		11.0	
22 January 2025	17:01	Cloudy	Middle	0.50	20.4	20.4	6.9	6.9	8.6	8.6	94.9	95.0	11.5	11.5	8.0	8.1
					20.4		6.9		8.6		94.9		11.5		8.0	
					19.5		7.3		7.3		7.8		7.8		85.7	
24 January 2025	16:46	Fine	Middle	0.50	19.5	19.5	6.9	6.9	7.8	7.8	86.7	86.6	6.3	6.3	11.0	10.5
					19.5		6.9		7.8		86.5		6.3		10.0	
					17.0		7.7		9.4		98.8		10.0		11.0	
27 January 2025	15:58	Cloudy	Middle	0.50	17.0	17.0	7.7	7.7	9.4	9.4	98.8	98.8	10.0	10.0	8.7	8.7
					17.0		7.7		9.4		98.8		10.0		8.7	



Water Quality Monitoring Location : D3

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	14:00	Fine	Middle	0.02	20.0	20.0	7.5	7.5	8.9	8.9	98.1	98.1	4.0	3.9	4.1	3.7
					20.0		7.5		8.9		98.1		3.9		3.3	
					20.4		7.6		8.3		92.6		5.8		6.8	
04 January 2025	16:31	Fine	Middle	0.03	20.4	20.4	7.6	7.6	8.4	8.4	92.8	92.7	5.7	5.8	5.1	6.0
					20.1		7.4		7.6		83.7		5.3		7.4	
06 January 2025	16:34	Fine	Middle	0.03	20.1	20.1	7.4	7.4	7.6	7.6	83.9	83.8	5.2	5.2	4.7	6.1
					20.1		7.4		7.6		83.9		5.2		4.7	
08 January 2025	16:30	Fine	Middle	0.02	19.1	19.1	7.6	7.5	7.5	7.4	80.6	80.4	3.1	3.1	6.1	5.2
					19.1		7.5		7.4		80.2		3.1		4.3	
10 January 2025	16:35	Fine	Middle	0.03	18.4	18.4	7.4	7.4	7.7	7.7	81.5	81.5	4.1	4.1	3.7	3.1
					18.4		7.4		7.7		81.5		4.1		2.4	
13 January 2025	16:30	Fine	Middle	0.07	18.7	18.7	7.4	7.6	7.9	7.9	84.2	84.2	1.9	2.0	3.9	3.0
					18.7		7.9		7.9		84.1		2.0		2.1	
15 January 2025	16:30	Fine	Middle	0.02	16.0	16.0	7.2	7.2	8.9	8.9	90.3	90.4	1.5	1.5	1.3	1.2
					16.0		7.2		8.9		90.4		1.5		<1.0	
17 January 2025	16:10	Fine	Middle	0.05	19.3	19.3	7.3	7.3	7.6	7.6	82.3	82.4	1.1	1.1	2.3	2.1
					19.3		7.3		7.6		82.5		1.1		1.8	
20 January 2025	13:02	Cloudy	Middle	0.03	18.1	18.1	7.4	7.4	7.1	7.1	74.8	74.7	1.4	1.4	2.1	2.1
					18.1		7.4		7.1		74.5		1.4		2.0	
22 January 2025	13:04	Cloudy	Middle	0.03	18.8	18.8	7.5	7.5	5.7	5.7	61.2	60.9	3.2	3.1	2.6	2.4
					18.8		7.5		5.6		60.5		3.1		2.2	
24 January 2025	17:11	Fine	Middle	0.06	19.7	19.7	7.2	7.2	7.4	7.4	80.8	80.7	0.6	0.6	5.9	6.4
					19.7		7.2		7.4		80.5		0.6		6.8	
27 January 2025	16:39	Cloudy	Middle	0.03	18.3	18.3	7.8	7.8	9.3	9.3	98.5	98.3	4.6	4.6	1.8	1.8
					18.3		7.8		9.2		98.1		4.6		1.7	

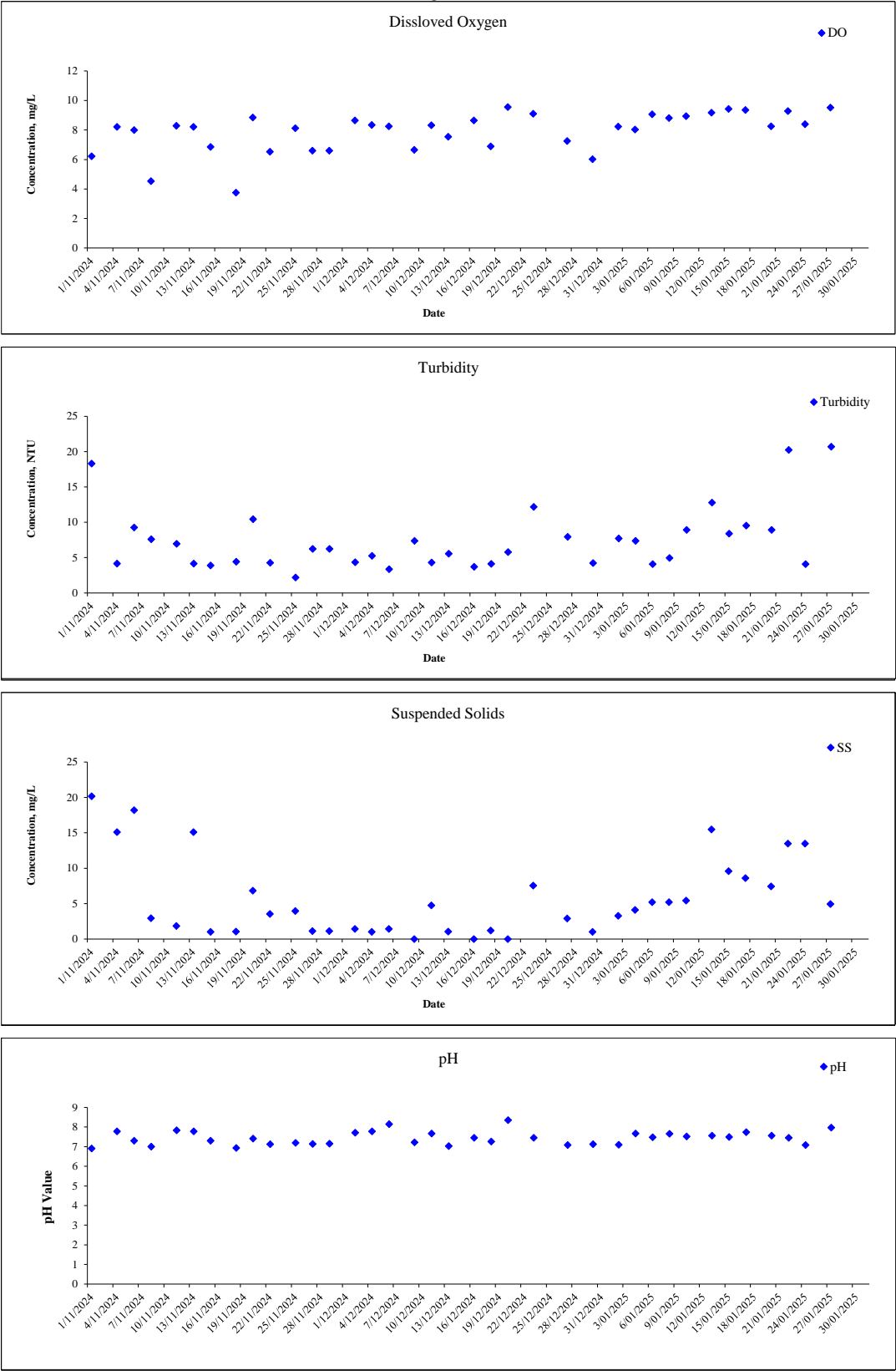
Water Quality Monitoring Location : D5a

Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH		DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)	
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average
02 January 2025	14:43	Fine	Middle	0.65	21.1	21.1	7.9	7.9	6.3	6.3	70.5	70.5	19.1	19.1	7.1	5.4
					21.1		7.9		6.3		70.5		19.0		3.7	
					20.3		7.4		7.8		86.1		14.9		9.6	
04 January 2025	17:00	Fine	Middle	0.50	20.3	20.3	7.4	7.4	7.8	7.8	85.9	86.0	14.9	14.9	15.2	12.4
					20.3		7.4		7.8		85.9		14.9		15.2	
06 January 2025	13:08	Fine	Middle	0.70	21.2	21.2	7.8	7.8	6.5	6.5	73.2	73.2	18.3	18.3	10.0	8.6
					21.2		7.8		6.5		73.1		18.3		7.2	
08 January 2025	17:00	Fine	Middle	0.80	19.2	19.2	7.7	7.7	8.0	8.0	87.0	87.0	8.4	8.4	8.1	7.3
					19.2		7.7		8.0		86.9		8.4		6.4	
10 January 2025	17:02	Fine	Middle	0.65	18.5	18.5	7.9	7.9	7.9	7.9	84.5	84.6	7.6	7.6	3.4	2.7
					18.5		7.9		7.9		84.6		7.5		1.9	
13 January 2025	17:00	Fine	Middle	0.75	18.4	18.4	7.7	7.7	8.1	8.1	86.0	86.3	9.0	8.9	10.0	8.0
					18.4		7.7		8.1		86.6		8.9		5.9	
15 January 2025	17:29	Fine	Middle	0.12	17.1	17.1	6.7	6.7	9.6	9.6	99.3	99.3	13.5	13.5	18.0	17.0
					17.1		6.7		9.6		99.3		13.4		16.0	
17 January 2025	17:18	Fine	Middle	0.55	19.6	19.6	7.4	7.4	6.2	6.2	67.4	67.3	6.3	6.3	5.3	4.8
					19.6		7.4		6.1		67.2		6.3		4.3	
20 January 2025	14:31	Cloudy	Middle	0.08	19.3	19.4	7.7	7.7	5.6	5.6	61.2	61.1	18.9	18.9	14.0	12.0
					19.4		7.7		5.6		60.9		19.0		10.0	
22 January 2025	16:39	Cloudy	Middle	0.50	18.7	18.7	6.8	6.8	8.9	8.9	95.2	95.5	19.1	19.0	3.4	3.0
					18.7		6.8		8.9		95.7		18.9		2.5	
24 January 2025	12:03	Fine	Middle	0.50	19.7	19.7	7.5	7.5	8.0	8.0	88.0	88.1	5.9	5.9	12.0	18.0
					19.7		7.5		8.0		88.1		5.9		24.0	
27 January 2025	17:22	Cloudy	Middle	0.50	18.2	18.2	7.7	7.7	9.3	9.3	98.8	98.8	8.5	8.4	5.1	5.5
					18.2		7.7		9.3		98.8		8.4		5.9	

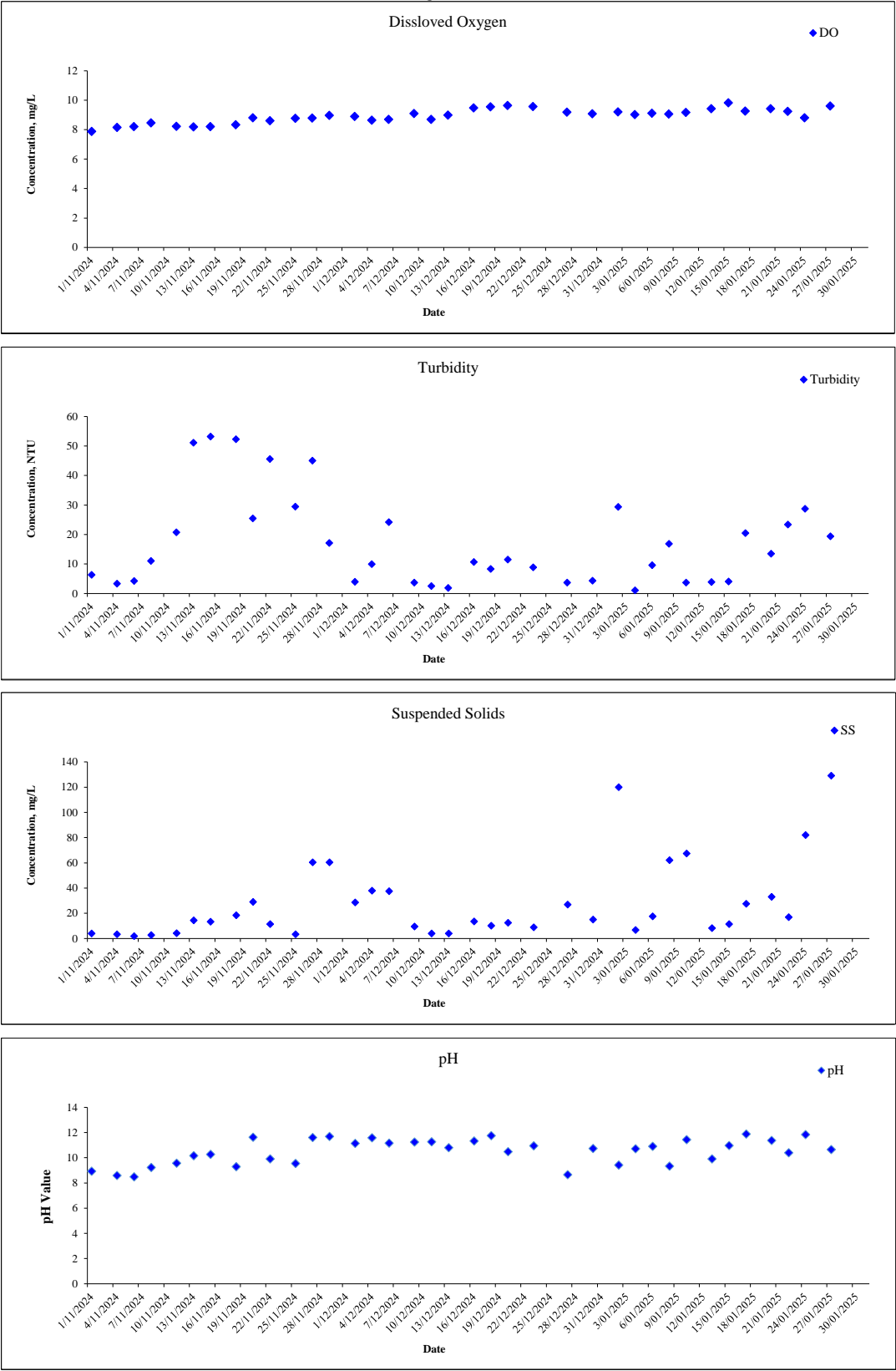
Water Quality Monitoring Location : D6a

Water Quality Monitoring Location: DOA																
Date	Start Time	Weather	Water depth (m)		Temperature (°C)		pH	DO (mg/L)		DO (%)		Turbidity (NTU)		Suspended Solids (mg/L)		
					Value	Average		Value	Average	Value	Average	Value	Average	Value	Average	Value
02 January 2025	15:20	Fine	Middle	0.02	17.8	17.8	6.9	6.9	8.9	8.9	93.1	93.1	11.9	11.9	1.7	1.6
					17.8		6.9		8.9		93.1		11.9		1.4	
					20.3		7.0		8.8		96.9		11.2		2.1	
04 January 2025	11:45	Fine	Middle	0.03	20.3	20.3	7.0	7.0	8.8	8.8	96.9	97.0	11.2	11.1	2.1	1.9
					20.3		7.0		8.8		97.1		11.1		1.6	
06 January 2025	13:25	Fine	Middle	0.03	17.9	17.9	7.1	7.1	8.9	8.9	93.9	93.9	11.9	11.8	1.7	1.5
					17.9		7.1		8.9		93.9		11.8		1.3	
08 January 2025	17:30	Fine	Middle	0.02	19.2	19.2	7.5	7.5	8.7	8.7	93.9	94.0	10.4	10.4	5.6	4.8
					19.2		7.5		8.7		94.1		10.4		3.9	
10 January 2025	12:30	Fine	Middle	0.03	18.2	18.2	7.2	7.2	9.3	9.3	98.4	98.4	9.1	9.1	1.7	1.5
					18.2		7.2		9.3		98.3		9.1		1.3	
13 January 2025	12:50	Fine	Middle	0.07	17.9	17.9	7.5	7.5	9.2	9.2	96.3	96.6	9.2	9.2	2.0	1.6
					17.9		7.5		9.2		96.3		9.2		2.0	
15 January 2025	17:00	Fine	Middle	0.02	18.6	18.7	7.2	7.2	8.9	8.9	95.8	95.8	6.3	6.3	7.1	6.2
					18.7		7.2		8.9		95.8		6.3		5.3	
17 January 2025	17:41	Fine	Middle	0.05	19.5	19.5	7.3	7.3	8.9	8.9	96.5	96.6	11.8	11.8	6.4	5.7
					19.5		7.3		8.9		96.6		11.8		5.0	
20 January 2025	15:00	Cloudy	Middle	0.03	15.8	15.8	7.1	7.1	8.9	8.9	89.4	89.6	10.4	10.4	4.7	4.0
					15.8		7.1		8.9		89.7		10.4		3.4	
22 January 2025	16:00	Cloudy	Middle	0.03	18.8	18.8	7.7	7.7	7.5	7.5	80.8	80.4	5.9	5.9	6.4	6.1
					18.8		7.7		7.9		5.9		5.6			
24 January 2025	12:35	Fine	Middle	0.06	19.6	19.6	7.1	7.1	8.8	8.7	95.5	95.5	10.5	10.5	4.4	3.4
					19.6		7.1		8.7		95.4		10.5		4.1	
27 January 2025	12:12	Cloudy	Middle	0.03	17.1	17.1	7.5	7.5	9.7	9.7	100.6	100.6	9.0	9.0	6.6	5.4
					17.1		7.5		9.7		100.6		9.0		6.6	

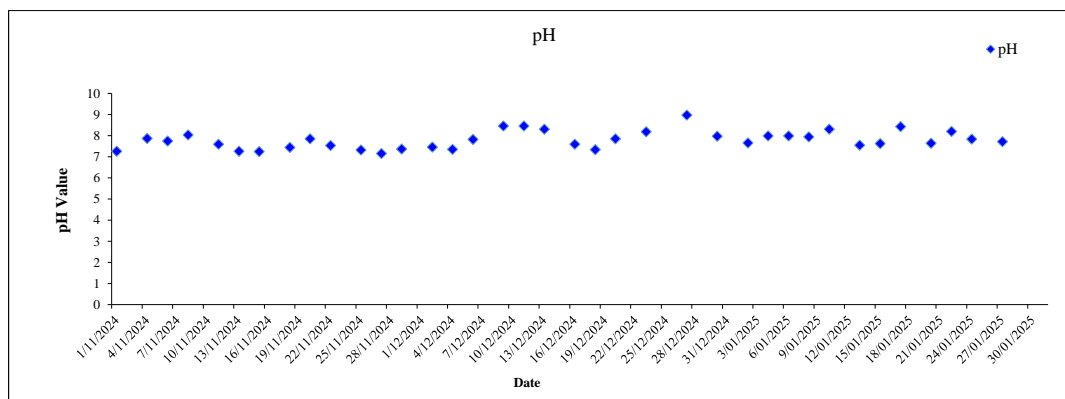
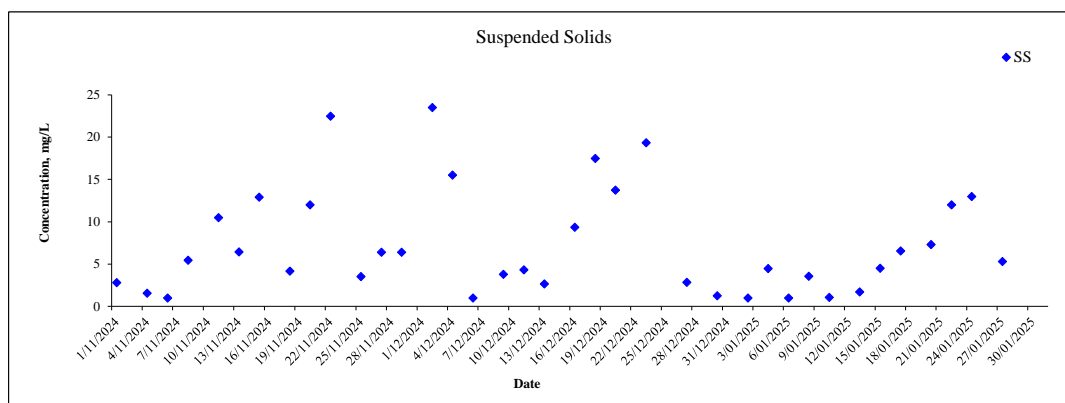
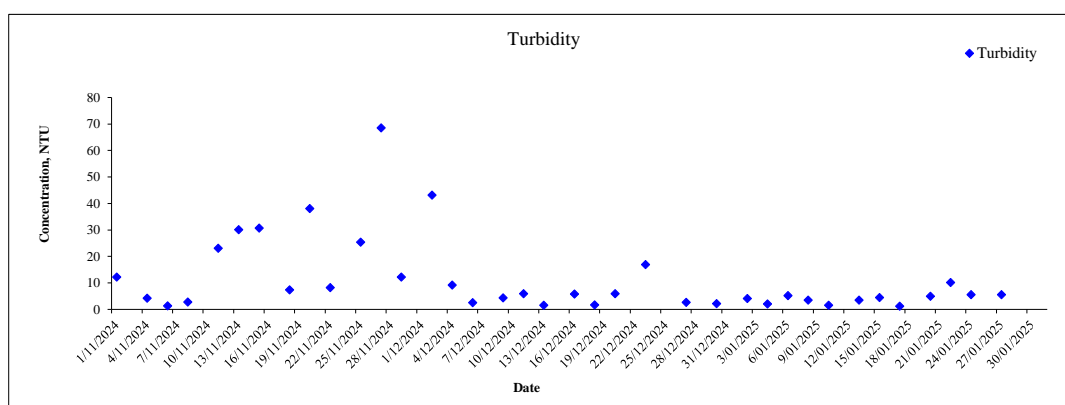
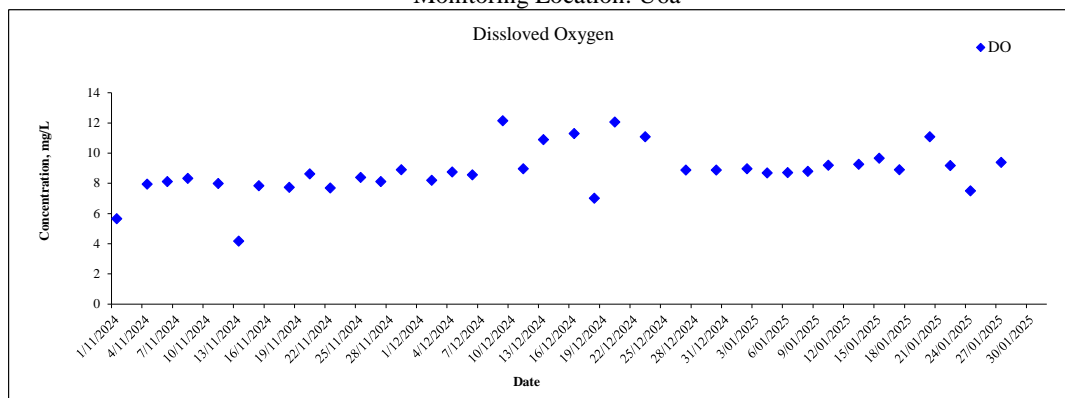
Monitoring Location: U2



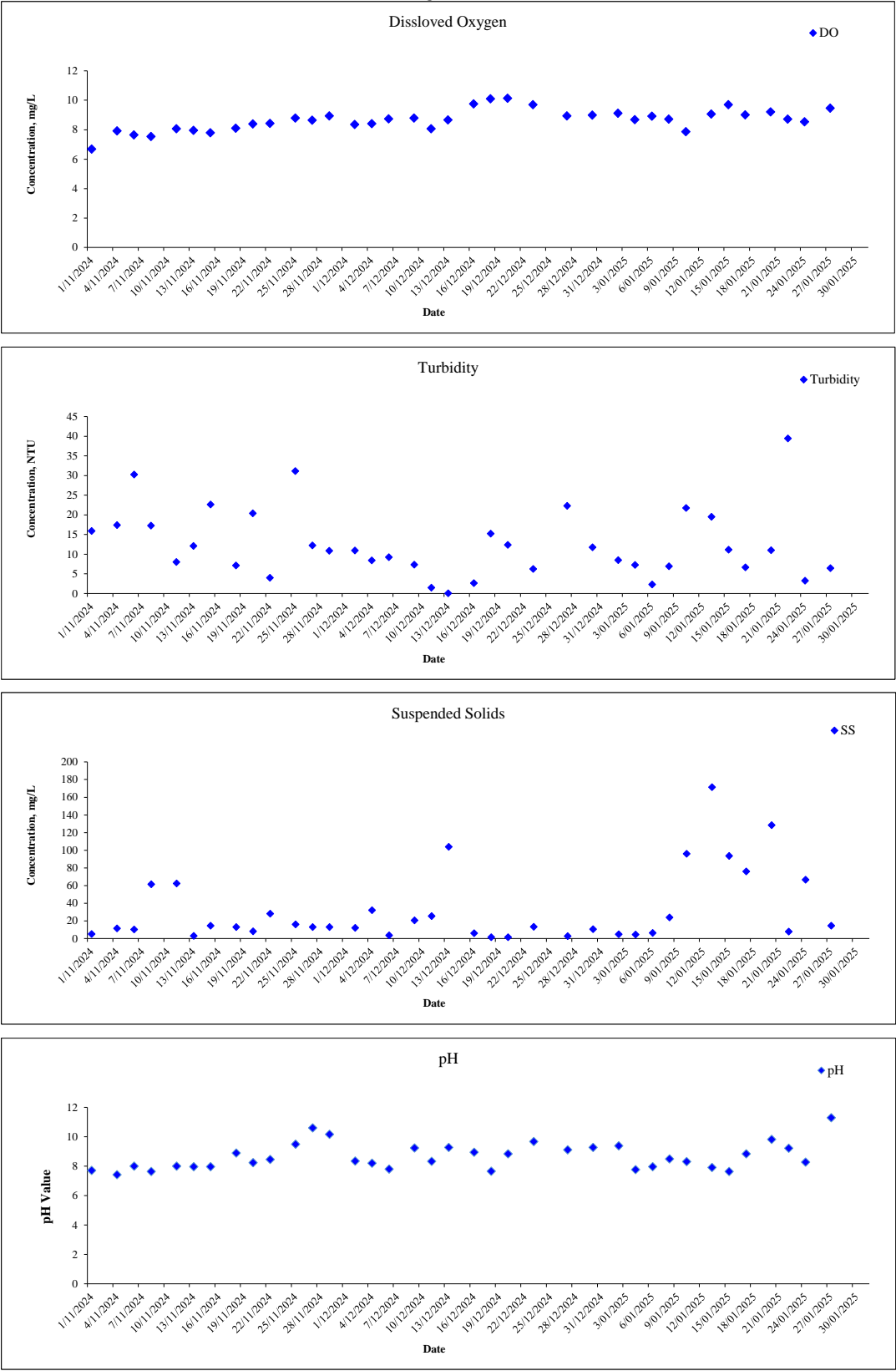
Monitoring Location: U5a



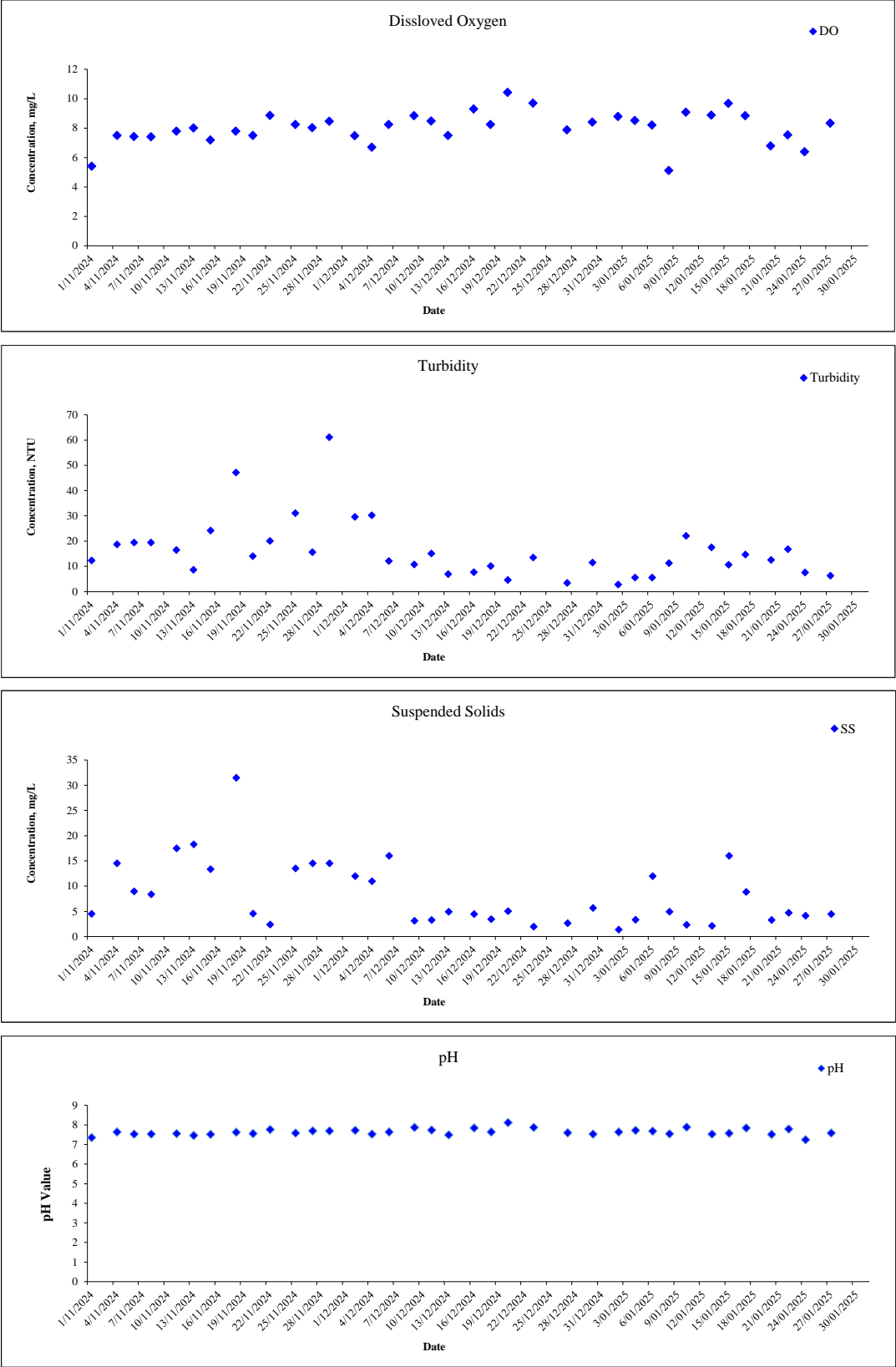
Monitoring Location: U6a



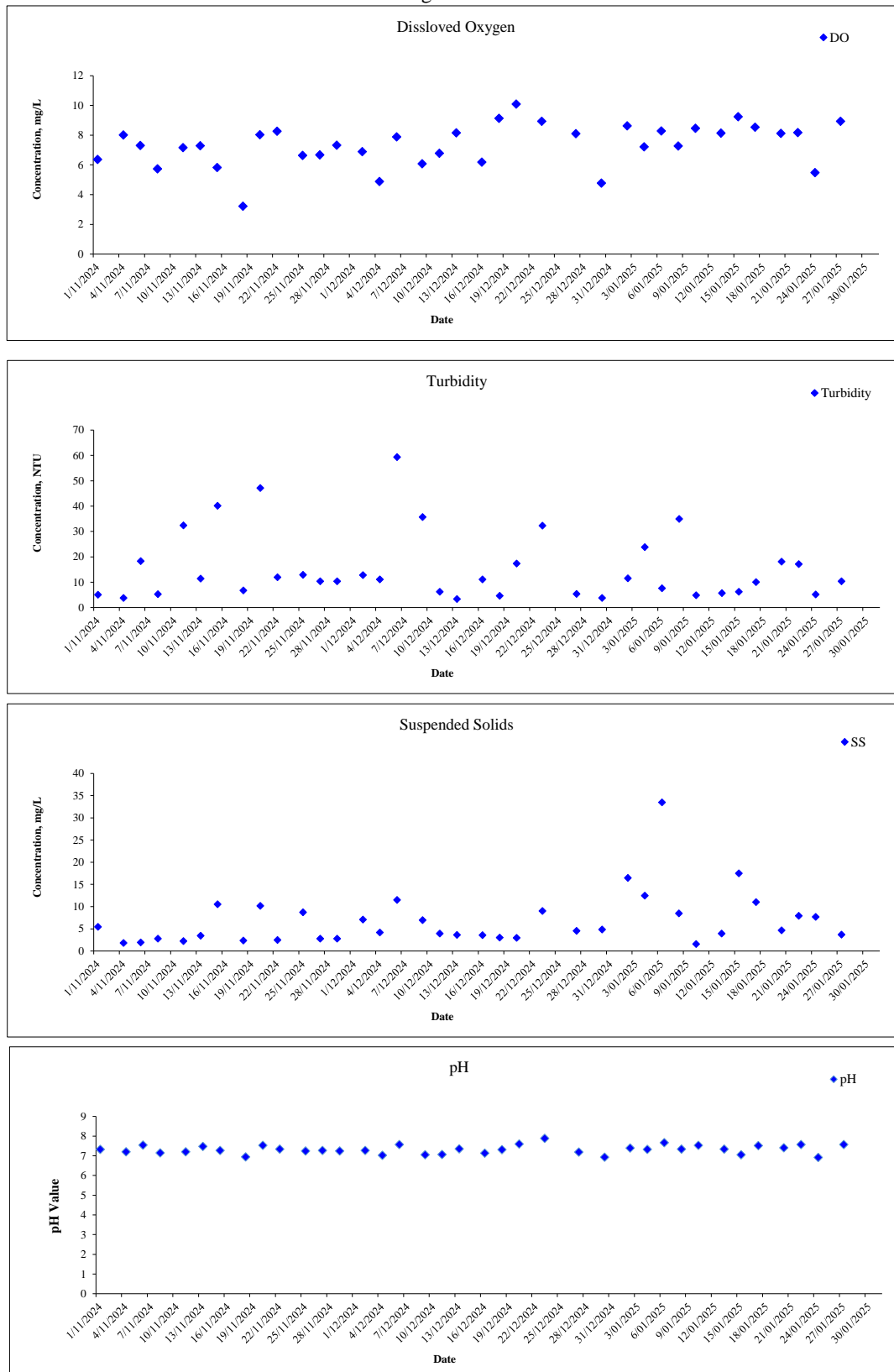
Monitoring Location: TS1



Monitoring Location: TS2a

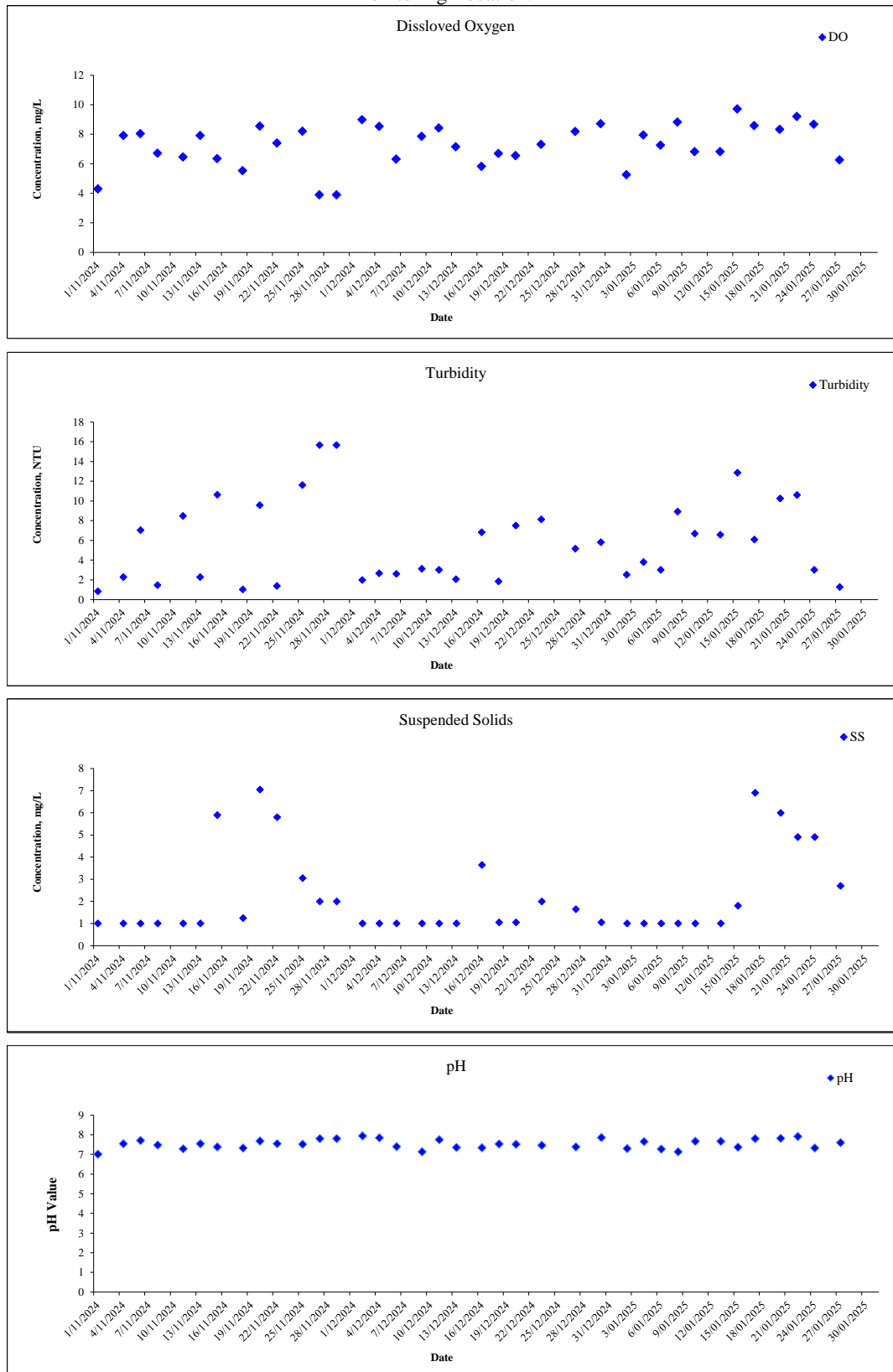


Monitoring Location: TSR1a

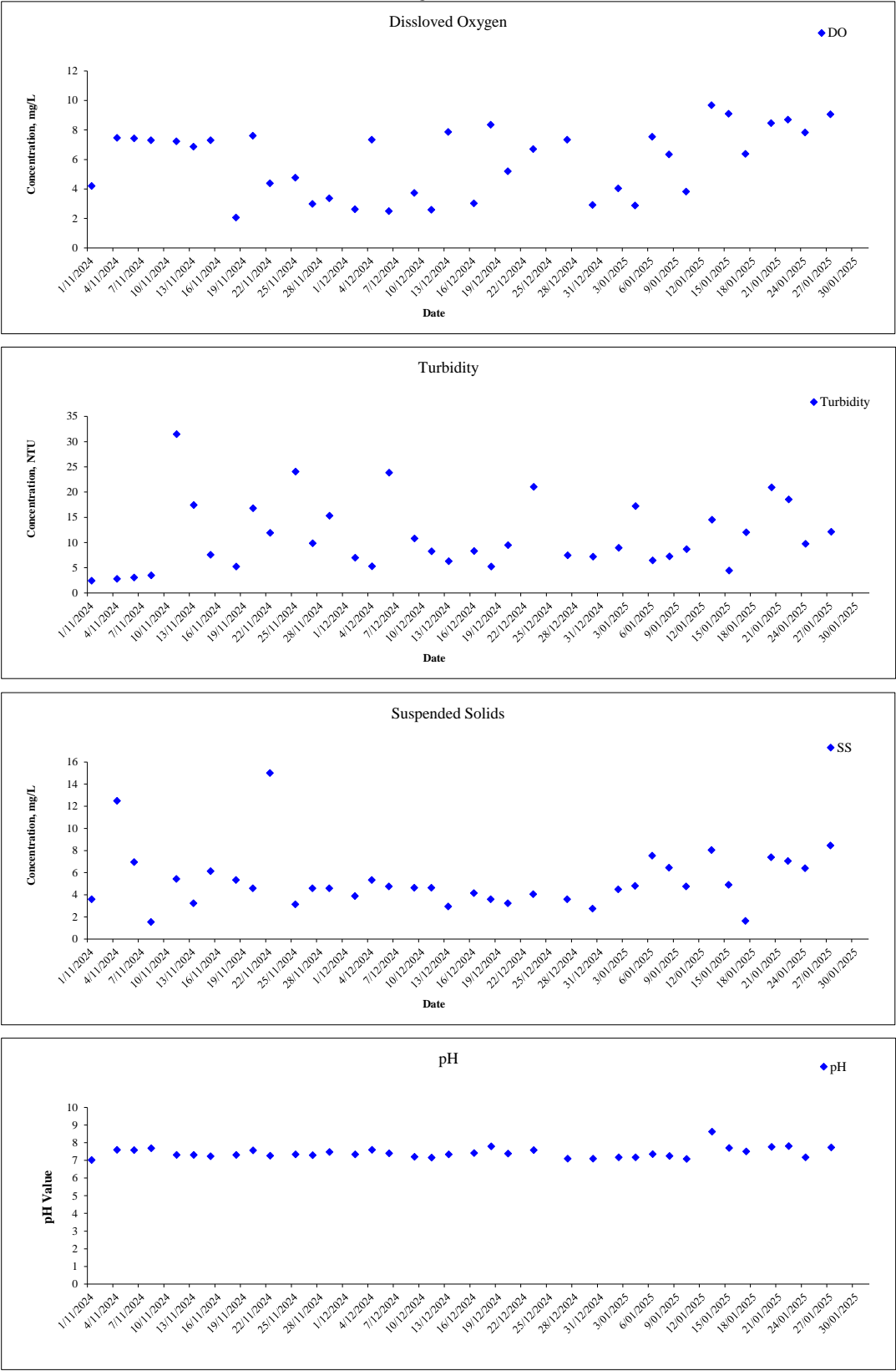




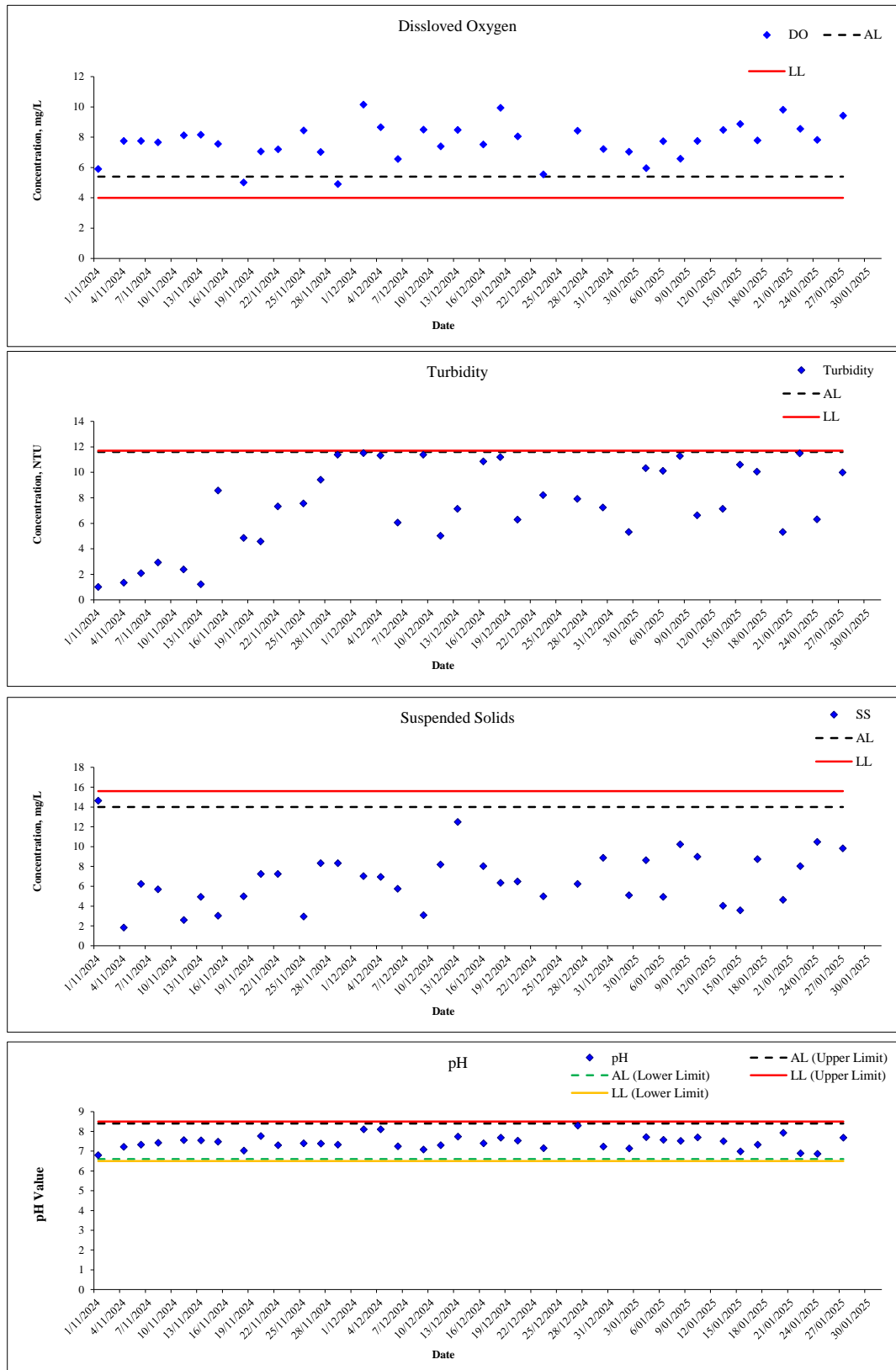
Monitoring Location: HT



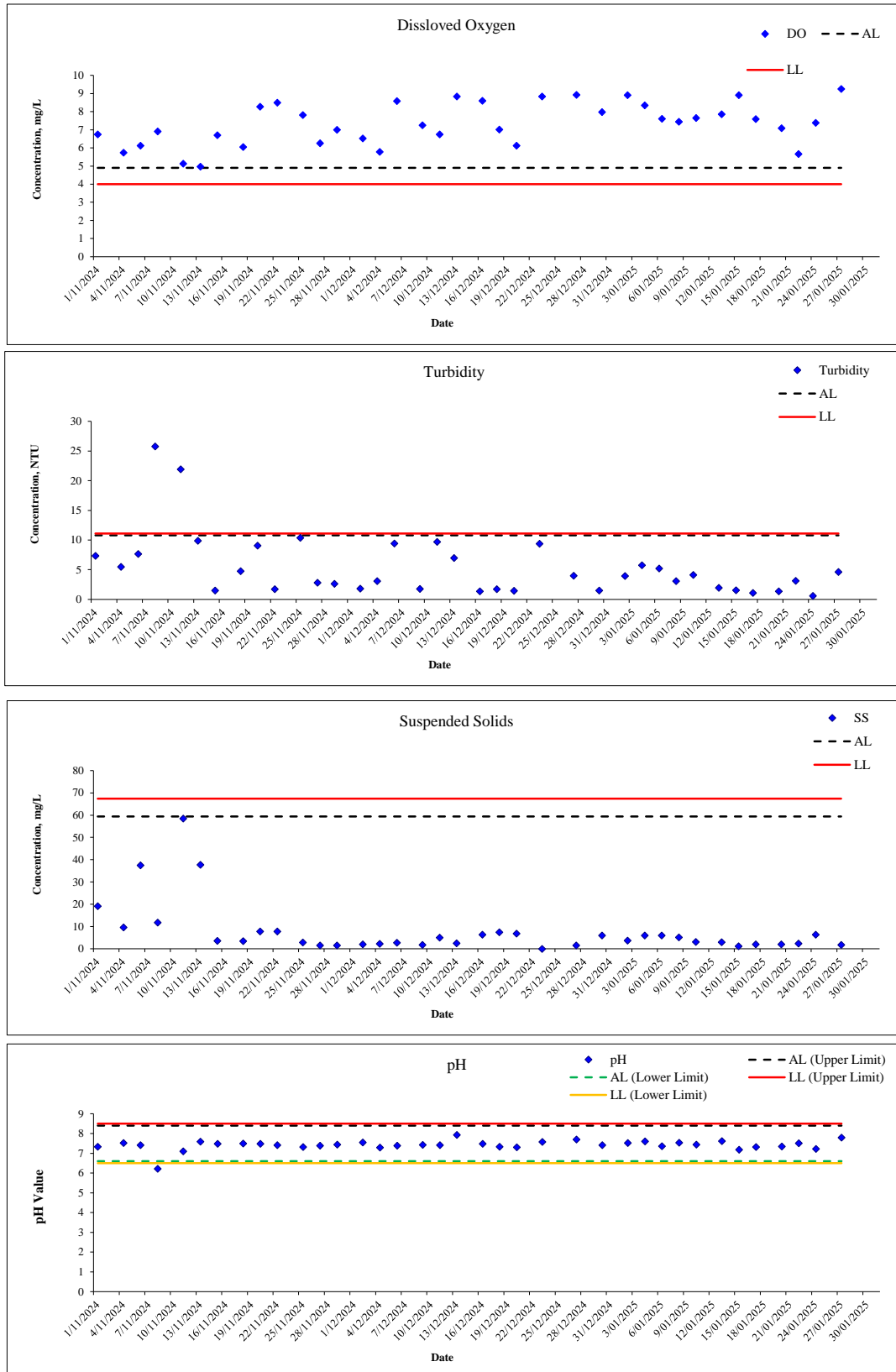
Monitoring Location: LUTa



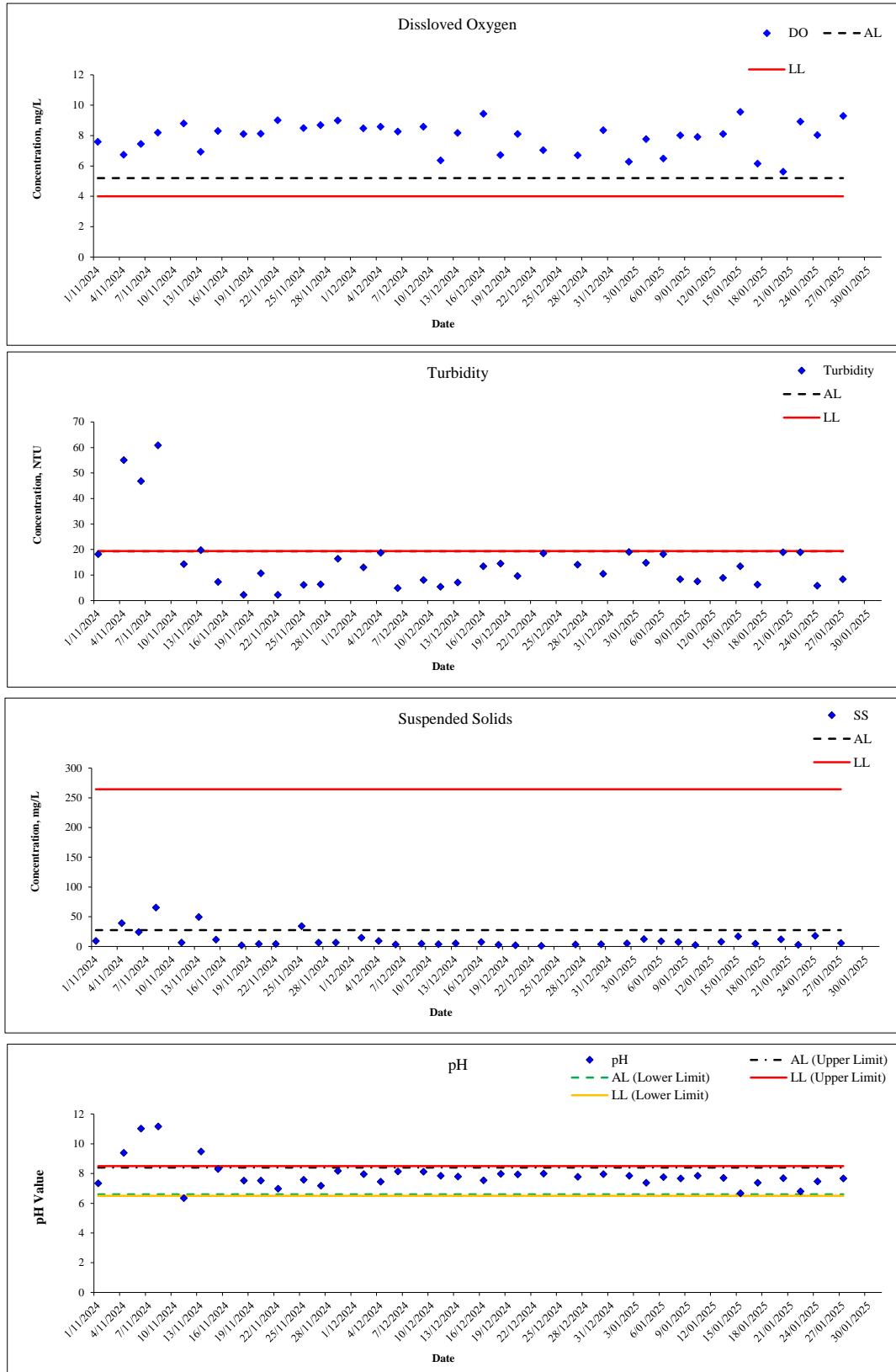
Monitoring Location: D2a



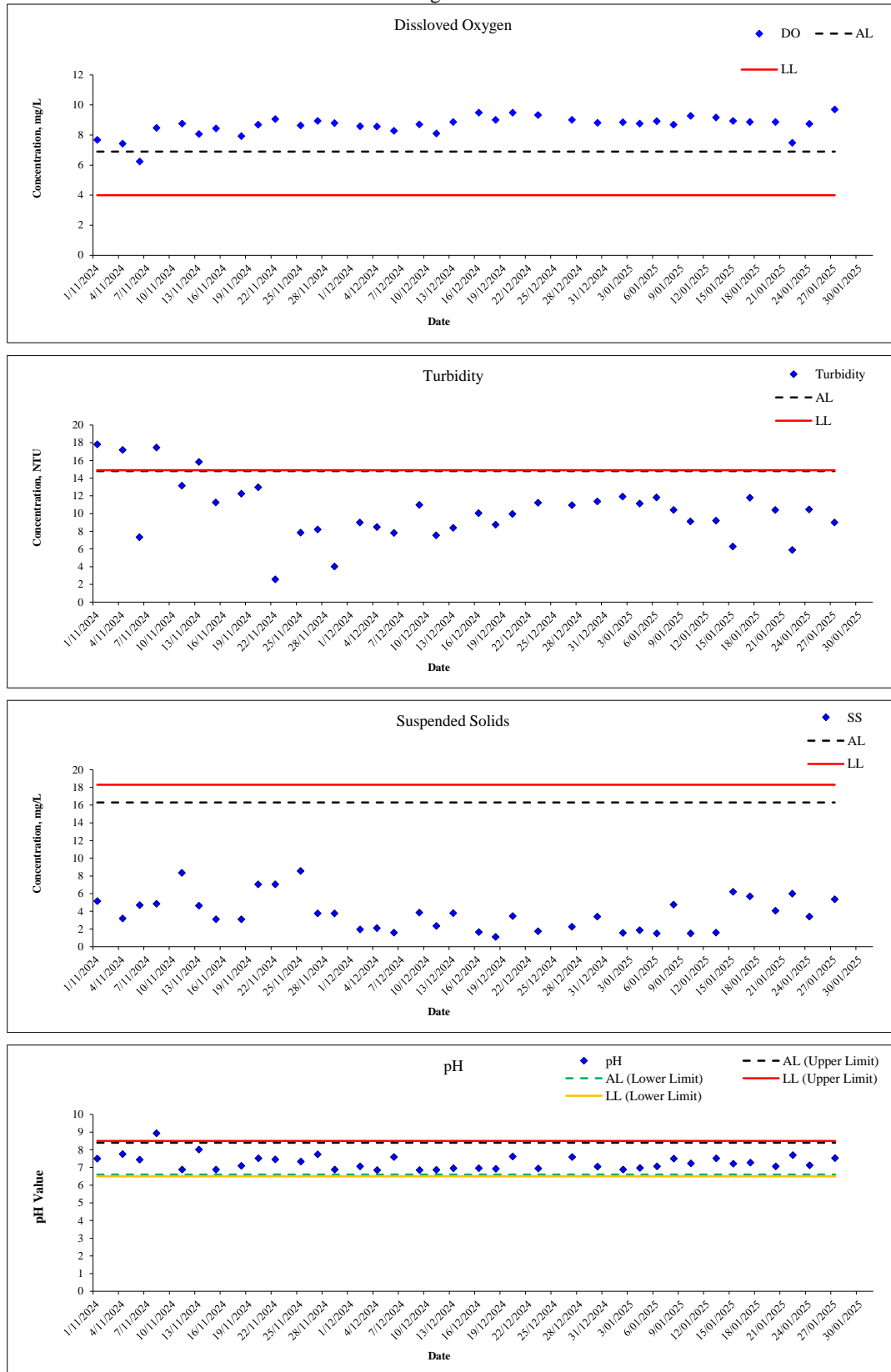
Monitoring Location: D3



Monitoring Location:D5a



Monitoring Location: D6a



## **Appendix 4.3 Quality Control Report for Suspended Solids**





## Acumen Laboratory and Testing Limited

Workshop 04, 7/F, The Whitney, No. 183 Wai Yip Street, Kwun Tong, Kowloon

Tel: (852) 2333 6823 Fax: (852) 2333 1316

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### Appendix - Quality Control Summary Table

Project Name: Service Contract No. WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team)

		Method Blank Report		Duplicate Report			Sample Spike Report		Pass / Fail
		MDL	Result	Original Result	Duplicate Result	RPD	Spike concentration	Spike Recovery	
Sampling Date	Job No. Unit	mg/L	mg/L	mg/L	mg/L	%	mg/L	%	/
02/01/2025	R250001	0.22	0.08	3.03	3.17	-4.52	10	94.3	Pass
04/01/2025	R250009	0.22	0.08	3.52	3.62	-2.80	10	93.4	Pass
06/01/2025	R250010	0.22	0.10	3.22	3.16	1.88	10	95.0	Pass
08/01/2025	R250030	0.22	0.09	4.70	4.81	-2.31	10	93.1	Pass
10/01/2025	R250034	0.22	0.11	5.01	5.16	-2.95	10	93.3	Pass
13/01/2025	R250045	0.22	0.08	4.54	4.43	2.45	10	94.7	Pass
15/01/2025	R250073	0.22	0.10	3.58	3.70	-3.30	10	92.7	Pass
17/01/2025	R250095	0.22	0.07	3.28	3.17	3.41	10	94.0	Pass
20/01/2025	R250114	0.22	0.11	3.80	3.87	-1.83	10	93.7	Pass
22/01/2025	R250153	0.22	0.08	3.96	3.83	3.34	10	93.6	Pass
24/01/2025	R250163	0.22	0.07	4.35	4.50	-3.39	10	94.0	Pass
27/01/2025	R250168	0.22	0.10	3.51	3.39	3.48	10	92.3	Pass



## Acumen Laboratory and Testing Limited

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### Appendix - Quality Control Summary Table

Project Name: Service Contract No. WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development -  
Environmental Team

		Method Blank Report		Duplicate Report			Sample Spike Report		Pass / Fail
		MDL	Result	Original Result	Duplicate Result	RPD	Spike concentration	Spike Recovery	
Sampling Date	Job No. Unit	mg/L	mg/L	mg/L	mg/L	%	mg/L	%	/
02/01/2025	R250001	0.22	0.11	3.13	3.02	3.58	10	94.9	Pass
04/01/2025	R250013	0.22	0.08	5.01	4.83	3.66	10	93.6	Pass
06/01/2025	R250015	0.22	0.11	4.66	4.85	-4.00	10	93.8	Pass
08/01/2025	R250031	0.22	0.11	4.94	4.78	3.29	10	94.6	Pass
10/01/2025	R250035	0.22	0.09	3.48	3.57	-2.55	10	93.2	Pass
13/01/2025	R250046	0.22	0.09	3.27	3.16	3.55	10	94.5	Pass
15/01/2025	R250074	0.22	0.10	5.11	5.21	-1.94	10	93.9	Pass
17/01/2025	R250096	0.22	0.08	3.97	3.86	2.81	10	93.3	Pass
20/01/2025	R250115	0.22	0.10	5.23	5.34	-2.08	10	93.2	Pass
22/01/2025	R250154	0.22	0.11	3.00	3.08	-2.63	10	93.7	Pass
24/01/2025	R250164	0.22	0.11	3.78	3.73	1.33	10	94.6	Pass
27/01/2025	R250169	0.22	0.08	3.30	3.41	-3.28	10	93.9	Pass

## **Appendix 4.4 Event and Action Plan for Water Quality**

### Event and Action Plan for Water Quality

Event	Action			
	ET Leader	IEC	ER	Contractor
<b>Action Level</b>				
<b>Action level being exceeded by one sampling day</b>	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC and Contractor;</li> <li>6. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET and IEC and propose mitigation measures to IEC and ER;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
<b>Action Level being exceeded by more than one consecutive sampling days</b>	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Prepare to increase the monitoring frequency to daily;</li> <li>8. Repeat measurement on next day of exceedance.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC on the proposed mitigation measures;</li> <li>2. Make agreement on the mitigation measures to be implemented;</li> <li>3. Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the noncompliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>

<b>Limit Level</b>				
<b>Limit level being exceeded by one sampling day</b>	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC and Contractor;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>2. Request Contractor to critically review the working methods;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> </ol>
<b>Limit level being exceeded by more than one consecutive sampling days</b>	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings;</li> <li>2. Identify source(s) of impact;</li> <li>3. Inform IEC, Contractor and EPD;</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods;</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor;</li> <li>6. Ensure mitigation measures are implemented;</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit Level for two consecutive days.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with ET and Contractor on the mitigation measures;</li> <li>2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly;</li> <li>3. Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with IEC, ET and Contractor on the proposed mitigation measures;</li> <li>2. Request Contractor to critically review the working methods;</li> <li>3. Make agreement on the mitigation measures to be implemented;</li> <li>4. Assess the effectiveness of the implemented mitigation measures.</li> <li>5. Consider and instruct, if necessary the Contractor to slow down or to stop all or part of the marine work until no exceedance if Limit Level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the non-compliance in writing;</li> <li>2. Rectify unacceptable practice;</li> <li>3. Check all plant and equipment;</li> <li>4. Consider changes of working methods;</li> <li>5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days;</li> <li>6. Implement the agreed mitigation measures.</li> <li>7. As directed by the ER, to slow down or to stop all or part of the marine work or construction activities.</li> </ol>

## **Appendix 5.1 Summary of Monthly Waste Flow Table**





## **Appendix 7.1      Event and Action Plan for Landscape and Visual**

### Event/Action Plan for Landscape and Visual

Event	Action			
	ET	IEC	ER	Contractor
<b>Design Check</b>	1. Check final design conforms to the requirements of EP and prepare report.	1. Check report. 2. Recommend remedial design if necessary.	1. Undertake remedial design if necessary.	-
<b>Nonconformity on one occasion</b>	1. Inform the IEC, ER and the Contractor 2. Discuss remedial actions with IEC, ER and Contractor 3. Monitor remedial actions until rectification has been completed	1. Check inspection report. 2. Check Contractor's working method 3. Discuss with ET, ER and Contractor on possible remedial measures. 4. Advise ER on effective of proposed remedial measures. 5. Check implementation of remedial measures	1. Confirm receipt of notification of nonconformity in writing 2. Review and agree on the remedial measures proposed by the Contractor 3. Ensure remedial measures are properly implemented	1. Identify source and investigate the nonconformity 2. Amend working methods agreed with ER as appropriate 3. Rectify damage and undertake any necessary replacement.
<b>Repeated nonconformity</b>	1. Identify sources 2. Inform the Contractor, IEC and ER 3. Discuss inspection frequency 4. Discuss remedial actions with IEC, ER and Contractor 5. Monitor remedial actions until rectification has been completed 6. If nonconformity stops, cease additional monitoring	1. Check inspection report 2. Check Contractor's working method 3. Discuss with ET, ER and Contractor on possible remedial measures 4. Advise ER on effectiveness of proposed remedial measures	1. Notify the Contractor 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented 3. Supervise implementation of remedial measures	1. Identify source and investigate the nonconformity 2. Amend working methods agreed with ER as appropriate 3. Rectify damage and undertake any necessary replacement. 4. Stop relevant portion of works as determined by ER until the nonconformity is abated.

## **Appendix 9.1      Complaint Log**

Statistical Summary of Environmental Complaints for Contract 1

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2025	0	0	N/A

Statistical Summary of Environmental Summons for Contract 1

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 – 31 January 2025	0	0	N/A

Statistical Summary of Environmental Prosecution for Contract 1

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 31 January 2025	0	0	N/A

Statistical Summary of Environmental Complaints for Contract 2

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 – 31 January 2025	0	0	N/A

Statistical Summary of Environmental Summons for Contract 2

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 – 31 January 2025	0	0	N/A

Statistical Summary of Environmental Prosecution for Contract 2

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 – 31 January 2025	0	0	N/A

## **Appendix 10.1    Impact Monitoring Schedule of Next Reporting Month**

**Service Contract No. WD/03/2023 Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development - Environmental Team (Version 1.0)**

**February 2025**

<b>Sun</b>	<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thur</b>	<b>Fri</b>	<b>Sat</b>
						<b>1</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM1, AM2, AM3, AM4, AM5 and AM6
<b>2</b>	<b>3</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM7, AM8a, AM10, AM11, AM12 and AM14	<b>4</b>	<b>5</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Noise Monitoring at CM1, CM2, CM3, CM4a, CM10, CM13, CM14, CM15a, CM16, CM18 and CM20	<b>6</b>  Impact Air Quality Monitoring at AM1, AM2, AM3, AM4, AM5 and AM6	<b>7</b>	<b>8</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM7, AM8a, AM10, AM11, AM12 and AM14
<b>9</b>	<b>10</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a	<b>11</b>  Impact Noise Monitoring at CM1, CM2, CM3, CM4a, CM10, CM13, CM14, CM15a, CM16, CM18 and CM20	<b>12</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM1, AM2, AM3, AM4, AM5 and AM6	<b>13</b>	<b>14</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM7, AM8a, AM10, AM11, AM12 and AM14	<b>15</b>
<b>16</b>	<b>17</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a	<b>18</b>  Impact Air Quality Monitoring at AM1, AM2, AM3, AM4, AM5 and AM6	<b>19</b>	<b>20</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM7, AM8a, AM10, AM11, AM12 and AM14	<b>21</b>  Impact Noise Monitoring at CM1, CM2, CM3, CM4a, CM10, CM13, CM14, CM15a, CM16, CM18 and CM20	<b>22</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a
<b>23</b>	<b>24</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM1, AM2, AM3, AM4, AM5 and AM6	<b>25</b>	<b>26</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a  Impact Air Quality Monitoring at AM7, AM8a, AM10, AM11, AM12 and AM14	<b>27</b>  Impact Noise Monitoring at CM1, CM2, CM3, CM4a, CM10, CM13, CM14, CM15a, CM16, CM18 and CM20	<b>28</b>  Impact Water Quality Monitoring at U2, U5a, U6a, TS1, TS2a, TSR1a, HT, LUTa, D2a, D3, D5a and D6a	

**Remarks:**

- The schedule may be changed due to unforeseen circumstances (e.g. adverse weather, etc.).
- Impact air quality monitoring at AM22, AM24 and AM25a will be carried out when the planned sensitive receivers are commissioned.
- Impact noise monitoring at CM28, CM29, CM31 and CM32 will be carried out when the planned sensitive receivers are commissioned.
- Impact water quality monitoring at U2 and HT will be carried out by the Environmental Team appointed under Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works, and the corresponding water quality monitoring data at these stations will be shared with this Project (i.e. Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development).



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