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By E-mail

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**Contract No. PM 10/2022 -
Independent Environmental Checker for Drainage Improvement Works at
Yuen Long – Stage 2**

Verification of Monthly EM&A Report (January 2025)

12 February 2025

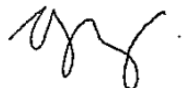
Dear Sir,

We refer to the Monthly EM&A Report under the captioned Project, which was certified on 12 February 2025 by the Environmental Team Leader appointed under Condition 2.1 of the Environmental Permit No. EP-596/2021 (hereinafter referred to as "EP").

We would like to inform you that we have no adverse comment on the captioned submission. Therefore, we hereby verify the abovementioned submission in accordance with EP Conditions 1.9 and 4.4.

Should you have any queries regarding the captioned, please contact our Hin Chan at 2828 5764 or the undersigned at 2828 5751.

Yours faithfully
for MOTT MACDONALD HONG KONG LIMITED



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**Drainage
Improvement Works
Near Four Villages in
Yuen Long – Sung
Shan New Village, Tai
Wo, Lin Fa Tei and Ha
Che**

Monthly Environmental
Monitoring and Audit (EM&A)
Report

**Wing Tat Civil Engineering Co.
Limited**

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2025-02-12

aurecon

*Bringing ideas
to life*

Document control record

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Executive Summary

A1. This is the 12th Monthly Environmental Monitoring and Audit (EM&A) Report for Drainage Improvement Works Near Four Villages in Yuen Long (the Project). This report was prepared by Aurecon Hong Kong Limited under Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long – Stage 2 (hereinafter called the “Contract”). This report documents the findings of EM&A works during the reporting period from 1 to 31 January 2025.

Key Construction Works in the Reporting Period

A2. A summary of construction activities undertaken during the reporting period is presented below:

Ha Che

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction; and
- Removal of Sheet piles, Drain Laying works, Reinstatement

Lin Fa Tei

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Sung Shan New Village

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Tai Wo

- Site Clearance

Monitoring and Audit Programme

A3. The monthly EM&A programme was undertaken by the ET in accordance with the approved Updated EM&A Manual. 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
Water Quality Monitoring	<u>Ha Che, Lin Fa Tei and Sung Shan New Village:</u> 6, 13, 20 and 27 January 2025
	<u>Tai Wo</u> 2, 4, 6, 8, 10, 13, 15, 17, 20, 22, 24 and 27 January 2025
Noise Monitoring	<u>Ha Che, Lin Fa Tei, Sung Shan New Village and Tai Wo</u> 6, 13 and 23 January 2025
Weekly Environmental Site Inspection	8, 15, 22 and 28 January 2025

Breaches of Action and Limit Levels

A4. No exceedance was recorded in the reporting month. Summary of the environmental exceedance for the reporting month is tabulated in **Table A2**.

Table A2 Summary of Exceedances in the Reporting Period

Environmental Monitoring	Parameter	No. of non-project related exceedances		Total No. of non-project related exceedances	No. of exceedances related to the project		Total No. of exceedance related to the project
		AL	LL		AL	LL	
Water Quality	DO	0	0	0	0	0	0
	Turbidity	0	0	0	0	0	0
	SS	0	0	0	0	0	0
Noise	Leq(30mins)	0	0	0	0	0	0

Water Quality

A5. No exceedance during impact water quality monitoring was recorded during reporting period.

Noise

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

Complaint Log

A7. One environmental complaint regarding air quality and one complaint regarding water quality were received during the reporting period. The relevant investigations are conducting by the related parties. The investigation results will be presented when the investigation has been completed.

Notification of Summons and Successful Prosecutions

A8. No notification of summons or successful prosecutions was received in the reporting period.

Reporting Changes

A9. No reporting changes in the reporting period.

Future Key Issues

A10. The major site activities for the next reporting period are summarized below:

Ha Che

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction
- Removal of Sheet piles, Drain Laying works, Reinstatement

Lin Fa Tei

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction

Sung Shan New Village

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction

Tai Wo

- Site Clearance
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting

1 Introduction

1.1 Project Background

- 1.1.1 The Drainage Master Plan Studies for the Yuen Long, Kam Tin, Ngau Tam Mei and Tin Shui Wai Drainage Basin (YLDMP) were completed in 1998. The majority of the improvement works in Yuen Long and Kam Tin recommended under the YLDMP Study have been completed. Since completion of the DMP Studies, there have been changes in developments within the areas and new development proposals and town planning studies were commissioned. In addition, some new flooding complaints were received at the upstream areas of the drainage basins, indicating that further improvement to the drainage systems was required.
- 1.1.2 The Drainage Services Department (DSD) commissioned the “Review of Drainage Master Plans in Yuen Long and North Districts – Feasibility Study” (the Review Study) in 2008 so that the new development scenarios could be incorporated and the effectiveness of the previously recommended works could also be assessed. The Review Study completed in end 2011 identified that some areas in Yuen Long District could not meet the required flood protection level according to the latest land use changes and future developments taking into account various factors, including sedimentation at the downstream main channels, mangrove growth at river estuaries, updated extreme sea level statistics at Tsim Bei Tsui and projected climate change impacts, in the hydraulic analysis. To account for the severity and extent of possible flooding and the works implementation time, the Review Study proposed drainage improvement works in Yuen Long District.
- 1.1.3 Atkins China Ltd (ACL) was commissioned by the DSD in November 2013 to undertake an Investigation, Design and Construction Consultancy entitled “Agreement No. CE 22/2013 (DS) Drainage Improvement Works in Yuen Long, Stage 1 – Investigation, Design and Construction” (hereinafter called the Assignment). The Project comprises construction of drainage improvement works to four villages (namely Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che) including landscaping, waterscaping, utilities diversion, temporary traffic arrangements, re-provisioning / improvements to existing dry weather flow intercepting system and any other works incidental to the completion of the Project.
- 1.1.4 An Environmental Impact Assessment (EIA) Study Brief (ESB-279/2014) for four villages namely Ha Che, Tai Wo, Lin Fa Tei and Sung Shan New Village which is a designated project was issued by the Environmental Protection Department (EPD) on 14 October 2014.
- 1.1.5 The EIA Report for Drainage Improvement Works Near Four Villages in Yuen Long – Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che (referred to as “the Project”) (Register No. AEIAR-229/2021) was approved on 3 June 2021 and the Environmental Permit (EP) EP-596/2021, covering the Upgrading, Construction and Deepening of the Project was granted on 28 September 2021.
- 1.1.6 Aurecon Hong Kong Limited (Aurecon) is commissioned by the Wing Tat Civil Engineering Co. Limited to undertake the Environmental Team (ET) services and carry out the Environmental Monitoring and Audit (EM&A) for Drainage Improvement Works Near Four Villages in Yuen Long - Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che (Register No. EP-596/2021).

1.1.7 This is the 12th Monthly EM&A Report summarizing the key findings of the construction phase EM&A programme from 1 to 31 January 2025 (the reporting period) and is submitted to fulfil the requirements in Condition 4.4 of EP-596/2021 and Section 12.2 of the approved Updated EM&A Manual of the Project.

1.2 Construction Works Programme

1.2.1 The construction programme and the location plan of the Project are shown in **Appendix 1.1** and **Figure 1.1** respectively. The locations of the proposed drainage improvement works at the four villages are presented in **Figures 1.2a** to **Figures 1.2d**.

1.3 Project Organisation

1.3.1 Involvement of relevant parties in a collaborative and interactive manner is essential for the implementation of the recommended EM&A programme. The following sections outline the primary responsibilities and duties of the key EM&A programme participants. The lines of communication with respect to EM&A works are shown in **Diagram 1.1**.

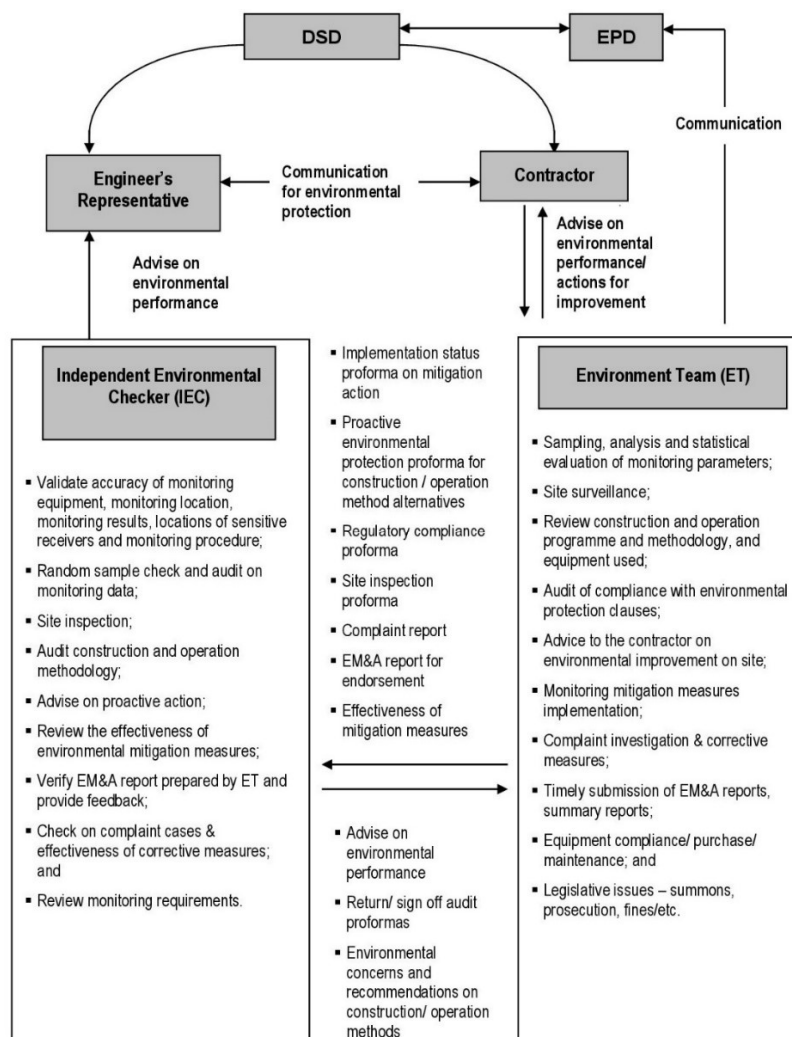


Diagram 1.1 Organisation Chart

1.3.2 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	Drainage Services Department
Supervisor / Engineer's Representative (ER)	Atkins China Ltd
Contractor	Wing Tat Civil Engineering Co. Limited
Environmental Team (ET)	Aurecon Hong Kong Limited
Independent Environmental Checker (IEC)	Mott MacDonald Hong Kong Limited

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

1.4 Construction Works Programme and Construction Works Area

1.4.1 The construction works commenced on 20 February 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 during this reporting period is presented below:

Ha Che

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction; and
- Removal of Sheet piles, Drain Laying works, Reinstatement

Lin Fa Tei

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Sung Shan New Village

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Tai Wo

- Site Clearance

1.5 Summary of Environmental Status

1.5.1 A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project is presented in **Table 1.2**.

Table 1.2 Status of Environmental License, Notifications and Permits

Permit / License No.	Valid Period		Status
	From	To	
Environmental Permit			
EP-596/2021	28/09/2021	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation			
Ref. Number: 497623	29/09/2023	N/A	Valid
Billing Account for Disposal of Construction Waste			
7048880	18/10/2023	N/A	Valid
Registration of Chemical Waste Producer			
5213-526-W3771-01	02/11/2023	N/A	Valid
Effluent Discharge License under Water Pollution Control Ordinance			
<u>Lin Fa Tei</u> WT10002494-2023	24/05/2024	31/05/2029	Valid
<u>Tai Wo</u> WT10002495-2023	29/07/2024	31/07/2029	Valid
<u>Ha Che</u> WT10002496-2023	26/04/2024	30/04/2029	Valid
<u>Sung Shan New Village</u> WT10002497-2023	10/07/2024	31/07/2029	Valid
Construction Noise Permit (CNP)			
<u>Lin Fa Tei</u> GW-RN0852-24	24/07/2024	07/01/2025	Valid
GW-RN0091-25	29/01/2025	28/07/2025	Valid
<u>Ha Che</u> GW-RN0980-24	26/08/2024	31/01/2025	Valid
<u>Sung Shan New Village</u> GW-RN1184-24	11/10/2024	01/04/2025	Valid

1.5.2 The status for all environmental aspects is presented in **Table 1.3**.

1.5.3 The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the approved Updated EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix 1.3**.

Table 1.3 Summary of Status for Key Environmental Aspects under the Approved Updated EM&A Manual

Parameters	Status
Water Quality	
Baseline Monitoring under Approved Updated EM&A Manual	The baseline water quality monitoring results have been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 4.3.
Impact Monitoring	The regular impact water quality monitoring was commenced at Ha Che on 21 February 2024. Since construction works were commenced at Lin Fa Tei and Tai Wo on 20 March 2024, impact water quality monitoring at Lin Fa Tei (i.e. C6, C7A and C8) and Tai Wo (i.e. C4 and C5) were started 20 March 2024. Impact water quality monitoring at Sung Shan New Village (i.e. C1A, C2 and C3A) was commenced on 17 April 2024 since the construction work at Sung Shan New Village was begun on 16 April 2024. Impact water quality monitoring at Tai Wo was resumed starting from 16 December 2024.
Noise	
Baseline Monitoring	Up to the end of the reporting period, the baseline noise monitoring results for Ha Che have been reported in the Baseline Monitoring Report and submitted to the EPD under EP Condition 4.3. Baseline noise monitoring results for Tai Wo, Lin Fa Tei, and Sung Shan New Village will be further updated in the Baseline Monitoring Report and submitted to the EPD. The revised Baseline Monitoring Report was submitted to EPD for acceptance on 4 July 2024.
Impact Monitoring	The weekly impact noise monitoring was commenced at Ha Che on 23 February 2024. Since construction works were commenced at Lin Fa Tei and Tai Wo on 20 March 2024, impact noise monitoring at Lin Fa Tei (i.e. LFT_M1, LFT_M3A, LFT_M7 and LFT_M11) and Tai Wo (i.e. TW_M2 and TW_M3) were started 20 March 2024. Impact noise monitoring at Sung Shan New Village (i.e. SSNV_M2, SSNV_M3 and SSNV_M6) was commenced on 19 April 2024 since the construction work at Sung Shan New Village was begun on 16 April 2024. The noise monitoring at LFT_M7 have been suspended since 27 March 2024 due to the objection from property management office for providing access to designated monitoring location. The property management office formally refused our application of access right LFT_M7 on 29 May 2024. An alternative monitoring location LFT_M6 was proposed to replace LFT_M7 and agreed with the ER and the IEC on 29 May 2024 and 4 June 2024 respectively, impact noise monitoring was thus carried out at LFT_M6 from 4 June 2024 onward. Impact noise monitoring at Tai Wo was resumed starting from 16 December 2024.

Parameters		Status
Ecology		
Freshwater Crab Translocation Plan (FCTP)		The EPD had no further comment on the submitted FCTP on 9 February 2024. A formal reply letter was issued by the EPD on 4 July 2024 after the submission of hardcopy for their record. Pre-construction survey at Ha Che was carried out between 5 and 7 February 2024. Pre-construction survey at Lin Fa Tei was carried out between 11 and 13 March 2024.
Habitat Creation and Management Plan (HCMP)		The first draft of HCMP was submitted to the EPD and the Agriculture, Fisheries and Conservation Department (AFCD) on 22 December 2023. Following comments from the EPD and AFCD dated 17 January 2024, the revised HCMP was submitted to EPD and AFCD for further review. Further comment was received from EPD on 27 May 2024, the revised HCMP was submitted to EPD for approval on 13 June 2024. It was accepted by EPD on 9 July 2024.
Mitigation Measures listed in Approved Updated EM&A Manual		On-going
Waste Management		
Mitigation Measures listed in Approved Updated EM&A Manual		On-going
Land Contamination		
Mitigation Measures listed in Approved Updated EM&A Manual		No suspected contamination was observed or reported by the Contractor in the reporting period.
Landscape and Visual		
Landscape and Visual Mitigation Plan (LVMP)		The first draft of LVMP was submitted to the EPD, the AFCD and the Planning Department (PlanD) on 22 December 2023. Following comments from the EPD, AFCD and PlanD on 7 February 2024, the LVMP is pending for further revision. The updated LVMP was submitted to EPD for review on 24 July 2024. Comment for LVMP (Rev. 6) was received from EPD on 16 August 2024, the revision of LVMP (Rev. 7) had been submitted to EPD on 21 January 2025.
Weekly Site Audit		On-going
Mitigation Measures listed in Approved Updated EM&A Manual		On-going
Cultural Heritage		
Archaeological Survey		The Archaeological Survey at Lin Fa Tei was carried out from 16 to 28 October 2024. The completion brief of archaeological survey was submitted to AMO for review on 30 October 2024. No comment was received from the AMO up to the end of the reporting period.

Parameters	Status
Mitigation Measures listed in Approved Updated EM&A Manual	On-going
Environmental Audit	
Site Inspection covering Measures of Air Quality, Noise, Water Quality, Waste, Land Contamination, Ecological Quality, Landscape and Visual Impacts and Cultural Heritage	On-going

2 Water Quality

2.1 Monitoring Requirement

- 2.1.1 In accordance with the approved Updated EM&A Manual, 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.
- 2.1.2 Replicate in-situ measurements of dissolved oxygen (DO), temperature, pH, turbidity, salinity, water depth and suspended solids (SS) for each independent sampling event shall be collected to ensure a robust statistically interpretable database.

2.2 Monitoring Location

- 2.2.1 Impact water quality monitoring was conducted at 10 monitoring stations which is summarized in **Table 2.1**. The location of water quality monitoring stations is shown in **Figure 2.1a** to **Figure 2.1d**.

Table 2.1 Summary of Impact Water Quality Monitoring Stations

Stream	Monitoring ID	Coordinates (HK Grid)		Remarks
		Easting	Northing	
SSNV	C1A ⁽¹⁾	821702	831945	Alternative Impact Monitoring Point
	C2	822459	831470	Control Monitoring Point
	C3A ⁽²⁾	822413	831284	Alternative Control Monitoring Point
TW	C4 ⁽³⁾	825497	830664	Control Monitoring Point
	C5 ⁽³⁾	825486	830716	Impact Monitoring Point
LFT	C6	827232	831713	Control Monitoring Point
	C7A ⁽⁴⁾	826865	832115	Alternative Control Monitoring Point
	C8	826513	832075	Impact Monitoring Point
HC	C9	828304	835029	Control Monitoring Point
	C10	827919	834271	Impact Monitoring Point

Notes:

- (1) At Station C1, access to safe sampling of water is not feasible due to steep banks on both sides of the stream channel. An alternative monitoring location is proposed at Station C1A, which is about 250 m along the same stream channel downstream of Station C1 and is accessible for safe water sampling.
- (2) During the first day of baseline monitoring at Station C3, shallow water was observed, and the ET could not sample enough water for monitoring. As agreed by the ER, the Contractor, and the IEC, a new sampling location, Station C3A, was identified at about 130 m upstream and was accessible for water sampling.
- (3) Construction works at Tai Wo are only allowed during dry season (i.e. October to March) in accordance with Condition 3.2 of EP No.: EP-596/2021. Impact water quality monitoring at Tai Wo was resumed starting from 16 December 2024.
- (4) For Station C7, the location is not close to the nearest, revised works boundary (about 200 m away). An alternative monitoring location is proposed at Station C7A, which is about 23 m upstream of the nearest, revised works boundary.

2.3 Monitoring Parameter and Frequency

2.3.1 The monitoring parameters, frequency and duration of impact water quality monitoring are listed in **Table 2.2**.

Table 2.2 Parameters measured in the Impact Water Quality Monitoring

Parameter	Frequency	Duration	Stream	Monitoring ID
Dissolved oxygen (DO), temperature, turbidity, salinity, pH, stream water depth and suspended solids (SS)	1 day in a week ⁽¹⁾	Throughout the construction phase	SSNV	C1A
				C2
				C3A
			LFT	C6
				C7A
	3 days in a week		HC	C8
				C9
			TW	C10
				C4
				C5

Notes:

(1) Impact monitoring shall be carried out 3 days per week during the construction process. The monitoring frequency can be reduced to once per week, with sampling/ measurement at the designated monitoring locations when no exceedances were recorded during the past three-month period in accordance with Section 2.7, Appendix 4 of the Updated EM&A Manual. The change of the monitoring frequency at SSNV, LFT and HC was approved by EPD on 25 November 2024. Hence, the monitoring frequency at SSNV, LFT and HC was changed to 1 day in a week starting from 2 December 2024.

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

2.4 Sampling Depths & Replication

2.4.1 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.

2.4.2 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.

2.5 Monitoring Equipment

2.5.1 The measurement of DO, temperature, turbidity, salinity, pH and stream water depth were undertaken *in-situ*. *In-situ* monitoring instruments in compliance with the specifications listed under Section 2.3 of Appendix 4 of the approved Updated EM&A Manual 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

- 2.5.2 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 – 20 mg/L and 0 – 200% saturation; and
 - The temperature within 0 – 45 °C.
- 2.5.3 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 model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).

pH

- 2.5.4 pH meter (e.g. Hanna – HI 9024 or equivalent) should be used to measure pH value of water samples in-situ. It should be readable to 0.1 pH 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

- 2.5.5 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 – 1000 NTU and be equipped with a cable (e.g. Hach model 2100P or an approved similar instrument).

Suspended Solids

- 2.5.6 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. Kahlsico Water Sampler or an approved similar instrument).
- 2.5.7 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

- 2.5.8 A portable, battery-operated echo sounder should be used for determining water depth at each designated monitoring station.
- 2.5.9 For shallow water (less than 1 m deep), a portable water depth ruler will be used to measure water depth.

Monitoring Position Equipment

- 2.5.10 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

- 2.5.11 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.
- 2.5.12 For sampling location with shallow water depth, plastic bucket would be used instead.

Calibration of In-situ Instruments

- 2.5.13 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.
- 2.5.14 For the on-site calibration of field equipment, the BS 127:1993, Guide to Field and On-Site Test Methods for the Analysis of Water should be observed.

Back-up Equipment

- 2.5.15 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 uninterruptedly even when some equipment is under maintenance, calibration, etc.

2.5.16 **Table 2.3** 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 2.1**.

Table 2.3 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, 22D100436, and 22C106561	Dissolved Oxygen (DO)	0 to 500%	<ul style="list-style-type: none"> 0 to 200%: $\pm 1\%$ of reading 200 to 500%: $\pm 8\%$ of reading
				Dissolved Oxygen (DO)	0 to 50 mg/L	<ul style="list-style-type: none"> 0 to 20 mg/L: ± 0.1 mg/L or 1% of reading, whichever is greater 20 to 50 mg/L: $\pm 8\%$ of reading
				Temperature	-5 to 50 °C	± 0.2 °C
				pH	0 to 14 pH units	± 0.2 pH units
				Turbidity	0 to 4000 NTU	<ul style="list-style-type: none"> 0 to 999 NTU: 0.3 NTU or $\pm 2\%$ of reading, whichever is greater 1000 to 4000 NTU: $\pm 5\%$ of reading
Salinity	0 to 70 ppt	<ul style="list-style-type: none"> $\pm 1.0\%$ of reading or ± 0.1 ppt, whichever is greater 				
Water Depth Ruler	鼎峯 0708	1	N/A	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: ± 1 m

2.6 Monitoring Methodology

- 2.6.1 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. For samples that were preserved with acid or alkalis prior to transport to the laboratory, the samples bottles were filled to the level specified by the analytical laboratory.
- 2.6.2 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. For the on-site calibration of field equipment, the BS 127:1993, Guide to Field and On-Site Test Methods for the Analysis of Water should be observed.
- 2.6.3 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.
- 2.6.4 Water sampling equipment deployed during the monitoring programme was decontaminated by manual washing and rinsed with clean distilled water after each sampling location.
- 2.6.5 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

- 2.6.6 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 2.4**.

Table 2.4 Method for Laboratory Analysis for Water Samples

Parameters	Analytical Method	Detection Limit
Suspended Solid (SS)	APHA 17ed 2540-D ⁽¹⁾	1 mg/L or better

Note:

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

2.7 QA/QC Requirements

Decontamination Procedures

- 2.7.1 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

- 2.7.2 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 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

- 2.7.3 Quality control of laboratory analysis of water samples was performed by Acumen Laboratory and Testing Limited for every batch of 20 samples:
- One method blank; and
 - One set of QC sample

2.8 Action and Limit Level for Water Quality Monitoring

- 2.8.1 The criteria of action and limit levels for water quality monitoring are defined in **Table 2.5**.

Table 2.5 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 or >120% of upstream control station of the same day, whichever is higher	> 99%-ile of baseline data or 130% of upstream control station of the same day, whichever is higher
Turbidity in NTU	> 95%-ile of baseline data or >120% of upstream control station of the same day, whichever is higher	> 99%-ile of baseline data or > 130% of upstream control station of the same day, whichever is higher

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 limits
- (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.

2.8.2 Based on the criteria listed in **Table 2.5**, the action and limit levels for water quality are determined in **Table 2.6**.

Table 2.6 Action and Limit Levels of Water Quality

Stream	Monitoring ID	Parameters	Action	Limit
SSNV	C1A	DO in mg/L	<6.72	<4 ⁽¹⁾
		SS in mg/L	>7.3 or >120% of upstream control station of the same day, whichever is higher	>8.5 or > 130% of upstream control station of the same day, whichever is higher
		Turbidity in NTU	>10.37 or >120% of upstream control station of the same day, whichever is higher	>10.81 or > 130% of upstream control station of the same day, whichever is higher
TW	C5	DO in mg/L	<8.36	<4 ⁽²⁾
		SS in mg/L	>9.9 or > 120% of upstream control station of the same day, whichever is higher	>10.0 or > 130% of upstream control station of the same day, whichever is higher
		Turbidity in NTU	>13.64 or > 120% of upstream control station of the same day, whichever is higher	>13.87 or > 130% of upstream control station of the same day, whichever is higher
LFT	C8	DO in mg/L	<5.38	<4 ⁽³⁾
		SS in mg/L	>6.3 or > 120% of upstream control station of the same day, whichever is higher	>7.0 or > 130% of upstream control station of the same day, whichever is higher
		Turbidity in NTU	>12.46 or > 120% of upstream control station of the same day, whichever is higher	>12.94 or > 130% of upstream control station of the same day, whichever is higher
HC	C10	DO in mg/L	<2.55	<2.43 ⁽⁴⁾
		SS in mg/L	>8.7 or > 120% of upstream control station of the same day, whichever is higher	>8.8 or > 130% of upstream control station of the same day, whichever is higher
		Turbidity in NTU	>20.06 or > 120% of upstream control station of the same day, whichever is higher	>21.07 or > 130% of upstream control station of the same day, whichever is higher

Notes:

- (1) The 1%-ile of baseline DO data at C1A is 6.61 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 C5 is 8.09 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 C8 is 5.36 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 C10 is 2.43 mg/L, which is lower than 4 mg/L. Taking account of the baseline water quality condition and to minimise any false alarm of water quality deterioration during construction phase, DO concentration of 2.43 mg/L is adopted as the limit level.

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 2.2** 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.

2.10 Results and Observations

2.10.1 The water quality monitoring schedule for this reporting month is shown in **Appendix 2.3**. The monitoring results and graphical presentation of water quality monitoring at the monitoring stations are shown in **Appendix 2.4**.

2.10.2 After confirmation of exceedance of the water quality monitoring results, ET has issued Notification of Exceedance (NOE) to inform relevant parties (i.e., EPD, ER, IEC and Contractor) about the exceedances. No exceedance during impact water quality monitoring was recorded during reporting period. The exceedance of impact water quality monitoring in the reporting Period is summarised in **Table 2.7**.

Table 2.7 Summary of Exceedance Records of Water Quality Monitoring in the Reporting Period

Parameter	No. of non-project related exceedances ⁽¹⁾		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	
Dissolved Oxygen	0	0	0	0	0	0
Turbidity	0	0	0	0	0	0
Suspended Solids	0	0	0	0	0	0

3 Noise

3.1 Monitoring Locations

3.1.1 The monitoring locations for construction noise monitoring are listed in **Table 3.1** and shown in **Figure 3.1a** to **Figure 3.1d**.

Table 3.1 Noise Monitoring Stations during Construction Phase

ID No. ⁽¹⁾	Location	Nature of Uses	Type of Measurement
SSNV_M2	Village house next to a nullah in Tong Tai Po Tsuen (near DD118 1720 S.A)	Residential	Façade
SSNV_M3	Village house near a soybean sauce factory in Sung Shan New Village (near DD118 1712)	Residential	Façade
SSNV_M6	#43, Sung Shan New Village	Residential	Free-field
TW_M2 ⁽⁴⁾	#200, Cheung Po	Residential	Free-field
TW_M3 ⁽⁴⁾	Kai Yip Garden, #3H, Tai Wo	Residential	Free-field
LFT_M1	#2G, Lin Fa Tei	Residential	Façade
LFT_M3A ⁽²⁾	Near #125B, Lin Fa Tei	Residential	Free-field
LFT_M5	#156B, Lin Fa Tei	Residential	Façade
LFT_M6 ⁽³⁾	#47, Shui Tsan Ti	Residential	Façade
LFT_M11 ⁽²⁾	#210, Ngau Keng Tsuen	Residential	Façade
HC_M3A ⁽²⁾	Next to DD111 326 S.B RP near Fan Kam Road	-	Free-field
HC_M4	#1C, Chuk Hang	Residential	Façade
HC_M6	The Arbutus House 12, #52, Shui Kan Shek	Residential	Façade

Notes:

- (1) SSNV – Sung Shan New Village; TW – Tai Wo; LFT – Lin Fa Tei; HC – Ha Che.
- (2) LFT_M3A, LFT_M11, HC_M3A and are alternative noise monitoring stations proposed to replace LFT_M3, LFT_M13 and HC_M3, respectively.
- (3) Due to the objection from property management office for providing access to designated monitoring location, the noise monitoring at LFT_M7 have been suspended since 27 March 2024. An alternative monitoring location LFT_M6 was proposed to replace LFT_M7 and agreed with the ER and the IEC.
- (4) Construction works at Tai Wo are only allowed during dry season (i.e. October to March) in accordance with Condition 3.2 of EP No.: EP-596/2021. Impact noise monitoring at Tai Wo was resumed starting from 16 December 2024.

3.2 Noise Monitoring Parameter, Frequency and Duration

3.2.1 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.

3.2.2 As supplementary information for data auditing, statistical results such as L_{10} and L_{90} were also obtained for reference.

3.2.3 **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
SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, TW_M2, TW_M3, LFT_M1, LFT_M3A, LFT_M5, LFT_M6 and LFT_M11	$L_{eq(30mins)}$ (as a logarithmic average of 6 consecutive $L_{eq(5mins)}$)	Once every week throughout the construction phase

3.3 Monitoring Equipment, Methodology and QA / QC Procedure

3.3.1 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.

3.3.2 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.

3.3.3 Sufficient numbers of noise measuring equipment and associated instrumentation were prepared by the ET. All the equipment and associated instrumentation were clearly labelled.

3.3.4 Wind data were collected from the records of Hong Kong Observatory Shek Kong Weather Station, which is about 2 km south-west of Ha Che and about 900 m north of Lin Fa Tei.

3.3.5 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 ($L_{eq(30mins)}$) would be determined for daytime noise by calculating the logarithmic average of six $L_{eq(5mins)}$ data
- 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} , L90 and L10 were recorded. In addition, noise sources were recorded on a standard record sheet.

3.3.6 **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	Model	No. of Equipment	Serial No.
Sound Level Meter	NTi Audio XL2	2	A2A-09696-E0 A2A-13663-F0
Acoustic Calibrator	Rion NC-75	1	34724244

3.4 Maintenance and Calibration

3.4.1 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 by a HOKLAS accredited laboratory or the manufacturer.

3.5 Action and Limit Levels

3.5.1 The Action and Limit levels were established in accordance with the approved Updated EM&A Manual. **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 3.2** 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		75 dB(A) ⁽¹⁾
07:00 – 23:00 on holidays; and 19:00 – 23:00 on all other days	When one or more documented complaints are received	45 dB(A) ⁽²⁾
23:00 – 07:00 of the next day		30 dB(A) ⁽²⁾

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.
- (2) The ASR of identified noise sensitive receivers is “A”, which is a rural area that is not affected by the influencing factors (Ifs). The limit levels are stipulated in the Technical Memorandum on Noise from Construction Work in Designated Areas.

3.6 Results and Observations

3.6.1 The construction noise monitoring was conducted on 6, 13 and 23 January 2025. The monitoring schedule is presented in **Appendix 2.3**.

3.6.2 The construction noise monitoring results are summarized in **Table 3.5**. No Action or Limit levels exceedance was recorded in the reporting period. Details of the results and graphical presentation are shown in **Appendix 3.3**.

Table 3.5 Summary of Construction Noise Monitoring Results

Monitoring Station	Noise Level, dB(A)		Limit Level
	Minimum	Maximum	
SSNV_M2	49.6	50.3	75 dB(A)
SSNV_M3	62.2	62.3	75 dB(A)
SSNV_M6 ⁽¹⁾	63.3	63.4	75 dB(A)
TW_M2 ⁽¹⁾	54.1	57.5	75 dB(A)
TW_M3 ⁽¹⁾	53.5	55.2	75 dB(A)
HC_M3A ⁽¹⁾	69.1	69.5	75 dB(A)
HC_M4	62.9	63.6	75 dB(A)
HC_M6	62.5	64.0	75 dB(A)
LFT_M1	58.0	58.7	75 dB(A)
LFT_M3A ⁽¹⁾	59.5	61.1	75 dB(A)
LFT_M5	60.1	61.0	75 dB(A)
LFT_M6	61.9	62.7	75 dB(A)
LFT_M11	58.5	58.8	75 dB(A)

Note:

(1) For Free Field measurement, +3 dB(A) was added to the measured results.

3.6.3 During the construction noise monitoring period, the influencing factors which may affect the results are summarized in **Table 3.6**.

Table 3.6 Influencing Factors at Noise Monitoring Stations

Monitoring Stations	Influencing Factors
SSNV_M2	Nil
SSNV_M3	Nil
SSNV_M6	Nil
TW_M2	Nil
TW_M3	Nil
HC_M3A	Road Traffic Noise
HC_M4	Road Traffic Noise
HC_M6	Road Traffic Noise
LFT_M1	Nil
LFT_M3A	Nil
LFT_M5	Road Traffic Noise
LFT_M6	Nil
LFT_M11	Road Traffic Noise

4 Ecology

4.1 Freshwater Crab

4.1.1 With reference to the approved EIA Report (Register No.: AEIAR-229/2021), two freshwater crab species of conservation importance were recorded within the work sites during the ecological baseline survey. *Somanniathelphusa zanklon* was recorded at Lin Fa Tei and Ha Che, while *Cryptopotamon anacoluthon* was recorded in the upstream area at Ha Che. Both species are endemic to Hong Kong and considered to be “Endangered” and “Vulnerable” by the IUCN respectively (IUCN 2023). The construction activities of the project will disturb their natural habitats and potentially causing a direct loss of these two species due to their limited mobility.

Post-translocation Monitoring

4.1.2 According to Section 5.2.5 of the approved Updated EM&A Manual for the Project, monthly post-translocation monitoring shall be conducted for at least 12 months after pre-construction surveys to monitor their establishment.

4.1.3 During the monitoring, active visual search by hand netting and kick sampling for aquatic fauna species would be performed at the respective receptor sites. Potential micro-habitats and hiding spaces that is favoured by the crabs such as rocks, organic debris, leaf litter, and riparian vegetation etc., will also be overturned or raked.

4.1.4 Upon discovery of any marked individuals from the pre-construction survey, date and time of capture, size and health condition of the individual will also be recorded once again.

4.1.5 The practice of mark and recapture of the translocated population of *S. zanklon* and *C. anacoluthon* at the receptor site can then be used to estimate population size, as well as inform the health and survival status of the translocated population.

4.1.6 The upper and lower receptor sites of Ha Che and receptor site of Lin Fa Tei were visited on 2 January 2025 to monitor the population of freshwater crabs translocated from Ha Che CH.A11.13~CH.A300.00, Lin Fa Tei CH.A0.00~CH.A200.00, and Ha Che CH.A300.00~CH.A653.949.

4.1.7 Site conditions of lower Ha Che receptor site and Lin Fa Tei receptor site in the reporting month were similar to previous months, i.e., no pollution, anthropogenic disturbance or change in vegetation was observed. Representative photos of the site conditions are presented in **Plate 4.1**.

Plate 4.1 Site condition of receptor sites at Ha Che and Lin Fa Tei during the reporting month



Upper receptor site for *Cryptopotamon anacoluthon* at Ha Che



Lower receptor site for *Somanniathelphusa zanklon* at Ha Che



Receptor site for *Cryptopotamon anacoluthon* and *Somanniathelphusa zanklon* at Lin Fa Tei

4.1.8 None of the translocated individuals from the pre-construction surveys was found in the upper and lower receptor sites of Ha Che or the receptor site of Lin Fa Tei in the reporting month. The inability to recapture the translocated individuals could be due to the structural complexity of the habitats of both sites. The presence of many rocks and riffles at the upper Ha Che receptor site and large and deep pools in the lower Ha Che and Lin Fa Tei receptor sites provides excellent refuge and protection for the crabs.

4.1.9 However, two new individuals of *C. anacoluthon* without markings were captured at the Ha Che Upper receptor sites. These individuals, however, were not the translocated individual as their details (i.e., carapace, sex and species) did not match with any of the translocated individuals in the record. These individuals were released immediately after record. Its details are summarized in **Table 4.1**.

Table 4.1 Summary of Freshwater Crab Species Captured during the Post-Translocation Monitoring

Species	ID No./Code	Sex	Carapace Size (mm)	Receptor Site	Time of Capture	Remarks
<i>C. anacoluthon</i>	New Individual	M	13.6	Ha Che Upper	19:13	Left pincer missing
<i>C. anacoluthon</i>	New Individual	M	13.8	Ha Che Upper	19:23	/

4.2 Habitat Compensation for the Affected Riverine Habitat

- 4.2.1 In order to ensure the reinstated habitat could compensate the loss of the important riverine habitat, Habitat Creation and Management Plan (HCMP) was approved by EPD under Condition 2.9 of the EP. The relevant drainage improvement works has been conducted continuously during the reporting period in accordance with the HCMP.

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 amount of waste generated by the construction works of the Project during the reporting period are shown in **Appendix 5.1**.
- 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 approved Updated EM&A Manual and waste management plans have been fully implemented.

6 Land Contamination

- 6.1.1 With reference to results of land contamination assessment included in the approved EIA Report (Register No.: AEIAR-229/2021), all identified sites with potential contamination are located outside the work area of the Project and no potential contamination arising from the proposed drainage improvement works is anticipated. Therefore, no land contamination issue is anticipated for this Project.
- 6.1.2 Mitigation measures listed in **Appendix 1.3** should be adopted if any suspended contamination encountered during construction.
- 6.1.3 No suspected on-site contamination was observed or reported by the Contractor in the reporting period.

7 Landscape and Visual

7.1 Audit Requirements

- 7.1.1 According to the approved Updated EM&A Manual, site audits should be undertaken every week during the construction phase 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 To monitor and audit the implementation of landscape and visual mitigation measures, four weekly landscape and visual site audits were carried out on 8, 15, 22 and 28 January 2025.
- 7.2.2 No deficiency in the mitigation measures on landscape and visual was observed during the reporting period.

8 Cultural Heritage

8.1 Archaeology

- 8.1.1 According to the assessment included in the approved EIA report (Register No.: AEIAR-229/2021) the proposed drainage works in the Lin Fa Tei area are located immediately adjacent to existing river course on mainly Pleistocene terraced alluvium and the western end of the alignment on Holocene alluvium between Lin Fa Tei Site of Archaeological Interest (SAI) and Shui Lau Tin SAI. The proposed works are partially located within Lin Fa Tei SAI. Previous investigations within SAI have shown both in situ and secondary deposit and with potential for wooden features near the stream bed. As per the recommendation from EIA report, Archaeological Survey shall be conducted prior to the construction works, the concerned area is marked in **Figure 8.1**.
- 8.1.2 A qualified archaeologist shall be engaged and apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) to conduct the Archaeological Survey prior to the construction phase. The scope and methodology of the Archaeological Survey shall be agreed with Antiquities and Monuments Office (AMO) prior to implementation. Tentatively and subject to agreement with AMO, a fieldscan, where possible, twenty auger tests and four 5 by 1m narrow trenches are proposed to further assess the archaeological potential of the area. If significant remains are uncovered, AMO should be notified and potential need for mitigation and/ or an appropriate way forward should be agreed by AMO and relevant parties.
- 8.1.3 For remaining drainage work areas (outside the area identified for Archaeological Survey) deemed to have limited (near Kam Sheung Road) to minimal (remainder of Works Areas) archaeological potential, AMO shall be informed immediately if antiquities or supposed antiquities are discovered during construction works for the proposed drainage improvement works for ascertaining required remedial works.
- 8.1.4 The licence application for archaeological survey works at Lin Fa Tei, Yuen Long was approved by the AMO on 28 June 2024. The Archaeological Survey at Lin Fa Tei was carried out from 16 to 28 October 2024. During this period, the qualified Archaeologist has excavated five test trenches (5m x 1.2m each in size) coded TT1 to TT5 respectively and executed 20 auger tests coded AH1 to AH20 respectively.
- 8.1.5 Generally, the fill deposit at the top of the excavated area is modern and formed in recent years; the sludge deposits underneath contain no archaeological remains whatsoever.
- 8.1.6 Therefore, it can be concluded that there is no archaeological potential in the Licence Area, and the construction works of the Project will not cause any adverse impact to archaeological heritage in this part of the Lin Fa Tei Site of Archaeological Interest. The completion brief of archaeological survey was submitted to AMO for review on 30 October 2024. No comment was received from the AMO up to the end of the reporting period.

8.2 Built Heritage

- 8.2.1 According to the approved Updated EM&A manual, mitigation measures that should be implemented during the construction phase for graded historic buildings are presented in **Table 8.1**.
- 8.2.2 Condition surveys were carried out by qualified structural engineer for Lee Tat Bridge, Lan Fong Study Hall and St John's Chapel prior to construction works. The Pre-construction Condition Survey Report were submitted to the EPD on 22 December 2023 under Condition 2.10 of the EP. The Antiquities and Monuments Office (AMO) had no adverse comment on the report on 3 January 2024. A formal reply letter was issued by the EPD on 21 June 2024 for their acceptance on the report.
- 8.2.3 Due to the distance between the works area at Ha Che and the Lan Fong Study Hall exceeded 30m radial distance during the reporting period, no vibration monitoring was undertaken. Settlement and tilting monitoring at Lan Fong Study Hall at Ha Che has been carried out during the reporting period(excluded public holiday). The distance between the north works area at Ha Che and the Lan Fong Study Hall is around 395.34m. While the distance between the south works area at Ha Che and the Lan Fong Study Hall is around 63.76m. The layout plan showing distance between the works area at Ha Che and the Lan Fong Study Hall is presented in **Figure 8.2**. No exceedance for relevant monitoring was recorded during the reporting period. No monitoring was carried out at St. John's Chapel near Tai Wo as no construction works were carried out at this district since April 2024. No monitoring has been carried out at Lee Tat Bridge at Lin Fa Tei as the works areas are more than 500 m away. Monitoring data is submitted to the AMO on quarterly basis.

Table 8.1 Mitigation Measures for Impacted Graded Historic Buildings

Graded Historic Buildings	Mitigation Measures
Lee Tat Bridge, Shui Tsan Tin (Grade 3)	<ul style="list-style-type: none"> ▪ A condition survey should be carried out in advance of works and after completion of works by qualified building surveyor or structural engineer. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are or were recommended with aid of photo records. The condition survey report must be submitted to the AMO for comment before construction activities commence and after the works have been completed. The contractor should implement the approved monitoring and precautionary measures.
Lan Fong Study Hall, Chuk Hang (Grade 3)	<ul style="list-style-type: none"> ▪ Vibration, settlement and tilting monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings, settlement limit set at 6/ 8/ 10mm, and tilting limit set at 1/2000; 1/1500; 1/1000 should be adopted. Monitoring proposal, including checkpoint locations, installation details, response actions for each of the AAA levels and frequency of monitoring should be submitted for AMO's consideration. Installation of monitoring checkpoints shall be carried out in great care and adequate protection shall be provided so as to avoid unnecessary disturbance/ damage to the historic fabrics. Photo records of monitoring checkpoints shall be submitted upon installation for AMO's records. Monitoring records should be submitted to AMO on regular basis and alert AMO should the monitoring reach AAA levels.
St John's Chapel, Cheung Po (Grade 2)	<ul style="list-style-type: none"> ▪ Vibration, settlement and tilting monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings, settlement limit set at 6/ 8/ 10mm, and tilting limit set at 1/2000; 1/1500; 1/1000 should be adopted. Monitoring proposal, including checkpoint locations, installation details, response actions for each of the AAA levels and frequency of monitoring should be submitted for AMO's consideration. Installation of monitoring checkpoints shall be carried out in great care and adequate protection shall be provided so as to avoid unnecessary disturbance/ damage to the historic fabrics. Photo records of monitoring checkpoints shall be submitted upon installation for AMO's records. Monitoring records should be submitted to AMO on regular basis and alert AMO should the monitoring reach AAA levels.

9 Environmental Site Inspection and Audit

9.1 Implementation Status of Environmental Mitigation Measures

9.1.1 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 were carried out on 8, 15, 22 and 28 January 2025 at the site portions listed in **Table 9.1** below.

Table 9.1 Site Inspection Record

Date	Inspected Site Portion	Time
8 January 2025	Sung Shan New Village	14:30 – 15:00
15 January 2025	Lin Fa Tei	14:30 – 15:00
22 January 2025	Ha Che & Lin Fa Tei	14:00 – 15:00
28 January 2025	Ha Che, Lin Fa Tei & Tai Wo	09:30 – 11:00

9.1.2 Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections and during the reporting period are summarized in **Table 9.2**.

Table 9.2 Site Observations

Date	Environmental Observations	Follow-up Status
	<u>Observation(s) and Recommendation(s)</u>	
8 Jan 2025	Sung Shan New Village: 1. The Contractor was reminded to direct the effluent to sedimentation tank for treatment before discharge.	Sung Shan New Village: 1. The effluent was direct to sedimentation tank for treatment before discharge.
	<u>Observation(s) and Recommendation(s)</u>	
15 Jan 2025	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
22 Jan 2025	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
28 Jan 2025	Nil	Nil

9.1.3 According to the EIA Study Report, Environmental Permit, contract documents and approved Updated EM&A Manual, 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**.

10 Summary of Monitoring Exceedance, Complaints, Notification of Summons and Prosecutions

10.1 Summary of Exceedance

10.1.1 During the reporting month, no exceedances for impact water quality monitoring was recorded.

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

10.1.3 No exceedance for settlement and tilting monitoring was recorded during the reporting period.

10.2 Summary of Environmental Non-Compliance

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

10.3 Summary of Environmental Complaint

10.3.1 One environmental complaint regarding air quality and one complaint regarding water quality were received during the reporting period. The relevant investigations are conducting by the related parties. The investigation results will be presented when the investigation has been completed.

10.3.2 The Cumulative Complaint Log is presented in **Appendix 10.1**.

10.4 Summary of Environmental Summon and Successful Prosecution

10.4.1 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 10.1**.

11 Future Key Issues

11.1 Works and Potential Environmental Issues in the next Reporting Period

11.1.1 The construction programme for the Project for the next reporting period is presented in **Appendix 1.1**.

11.1.2 Works to be undertaken in the next reporting period are summarized below:

Ha Che

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction
- Removal of Sheet piles, Drain Laying works, Reinstatement

Lin Fa Tei

- Site Clearance
- Breaking Ground
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction

Sung Shan New Village

- Site Clearance
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting
- Sheet piling & Backfilling and Compaction

Tai Wo

- Site Clearance
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting

11.1.3 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.

11.2 Recommendation

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

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

- 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.

Ecology

- Minimize loss of habitats and associated wildlife; and
- Using directional lighting to prevent excessive light spill into adjacent natural habitat and disturbance to nocturnal fauna.

Landscape and Visual

- Construction activities shall be carefully designed to minimize impact on existing retained trees; and
- Adequate tree protection measures shall be provided for the trees to be retained on site.

11.2.2 The tentative schedule of regular construction noise and water quality monitoring in the next reporting period is presented in **Appendix 11.1**. The regular impact noise and water quality monitoring will be conducted at the same monitoring locations in the next reporting period.

12 Conclusions

12.1 Conclusion

- 12.1.1 This 12th Monthly EM&A Report presents the EM&A works during the reporting period from 1 to 31 January 2025 in accordance with the approved Updated EM&A Manual.
- 12.1.2 No exceedance during impact water quality monitoring was recorded during reporting period.
- 12.1.3 No Action Level or Limit Level exceedance was recorded for construction noise monitoring in the reporting period.
- 12.1.4 No exceedance was recorded for settlement and tilting monitoring during the reporting period.
- 12.1.5 Environmental site inspections were conducted on 8, 15, 22 and 28 January 2025 by the ET in the reporting period.
- 12.1.6 One environmental complaint regarding air quality and one complaint regarding water quality were received during the reporting period. The relevant investigations are conducting by the related parties. The investigation results will be presented when the investigation has been completed.
- 12.1.7 The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

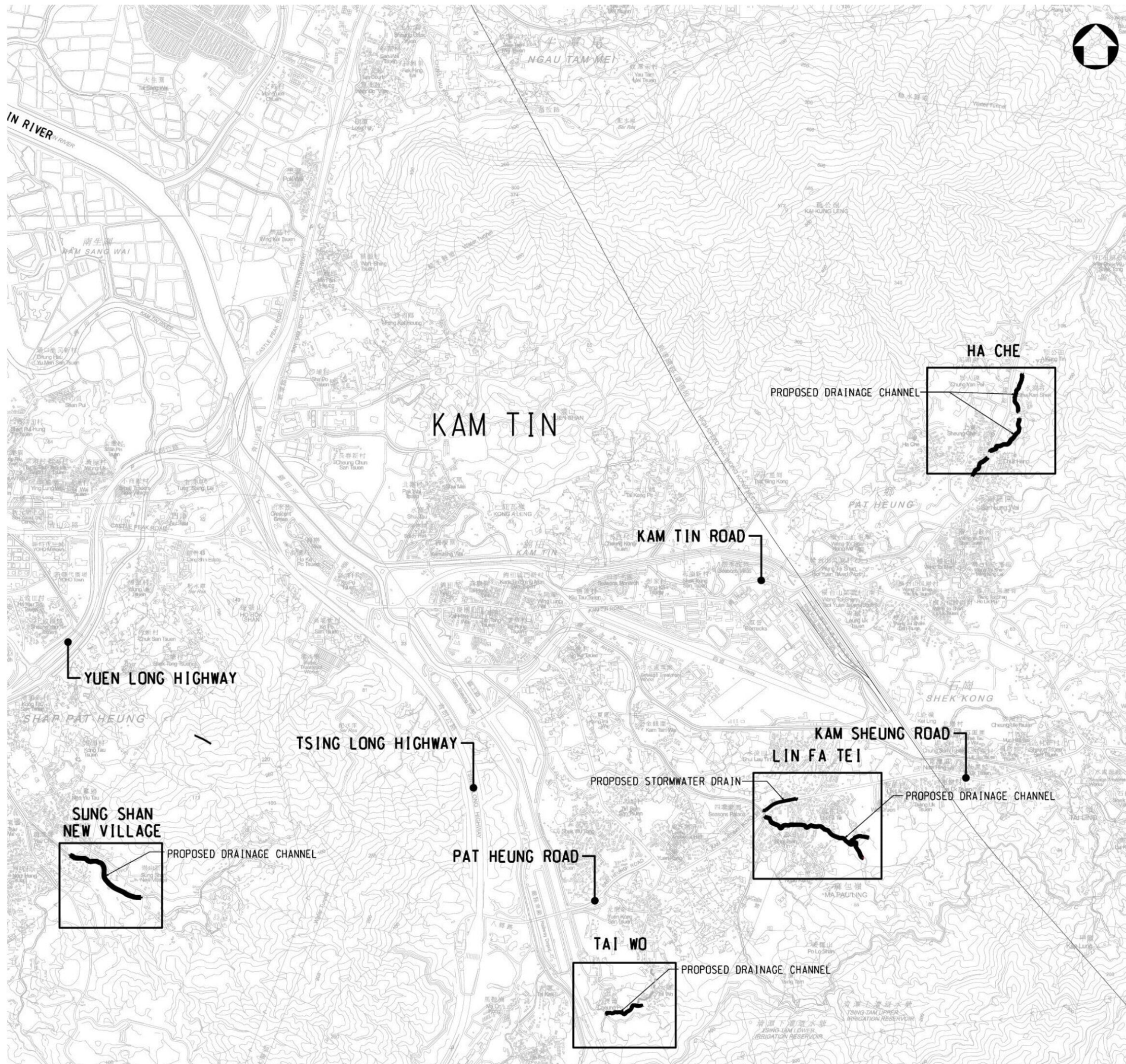
12.2 Comments/ Recommendations

- 12.2.1 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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Rev.	Date	Description	By	Chk'd	App'd
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-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP

Drawing Status: **CONTRACT**

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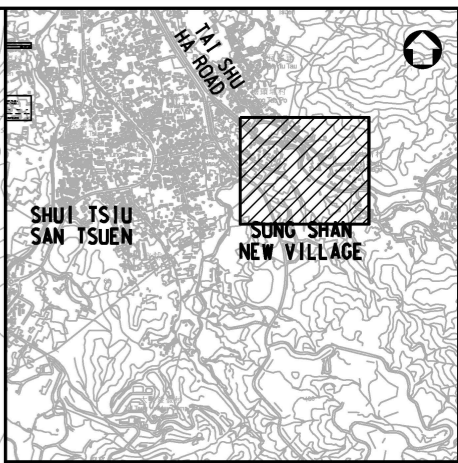
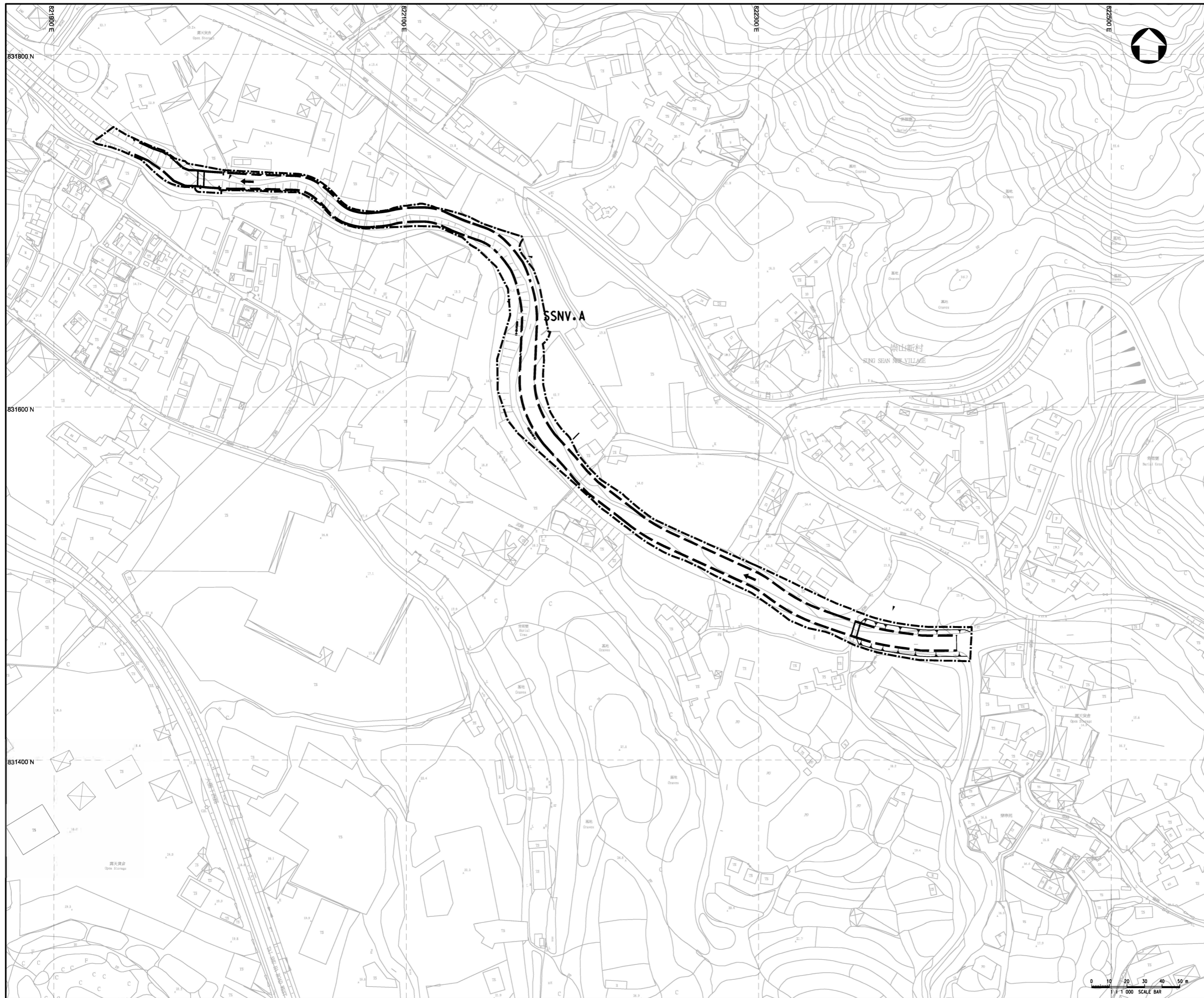
Client: **渠務署**
 Drainage Services Department
工程管理部
 Project Management Division

Contract Title:
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

Drawing Title:
SITE LOCATION PLAN

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Original Size	A1	Date	JUL 2022	Date	JUL 2022	Date	JUL 2022	Date	JUL 2022	
Drawing Number	Figure 1.1								Revision	A

Figure 1.2 Location of Work Areas for the Project



KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL

Rev.	Date	Description	By	Chk'd	App'd	Suitability
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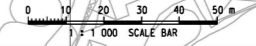
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Contract Title
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STAGE 2

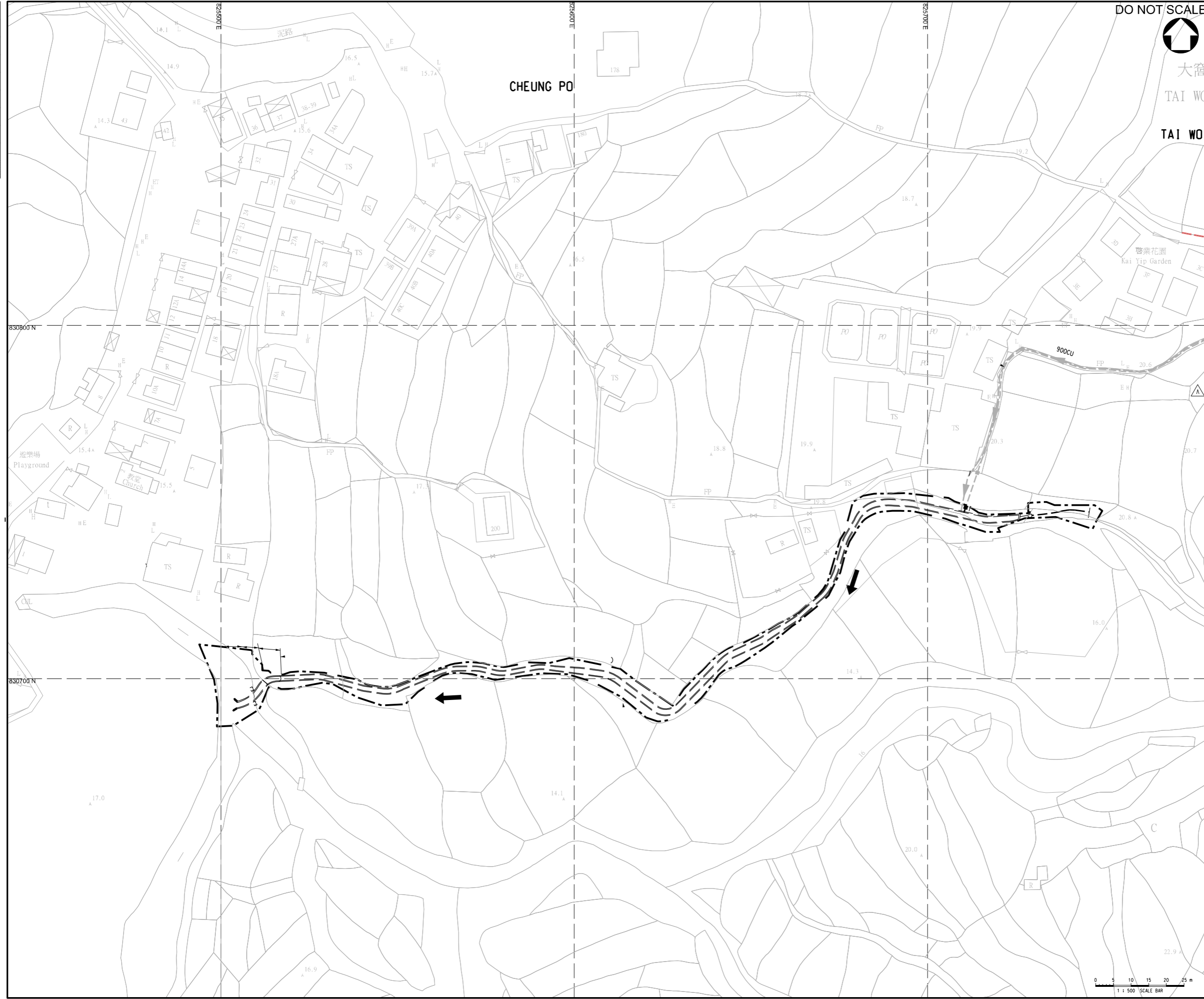
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GENERAL LAYOUT PLAN

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Figure 1.2 a



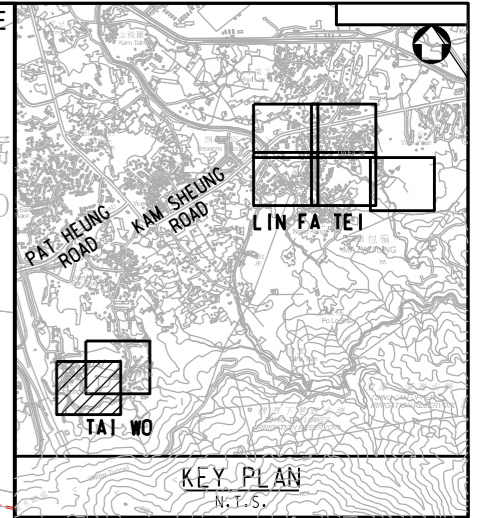
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LEGEND:

- WORKS BOUNDARY
- RECTANGULAR CHANNEL

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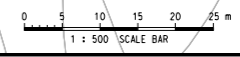
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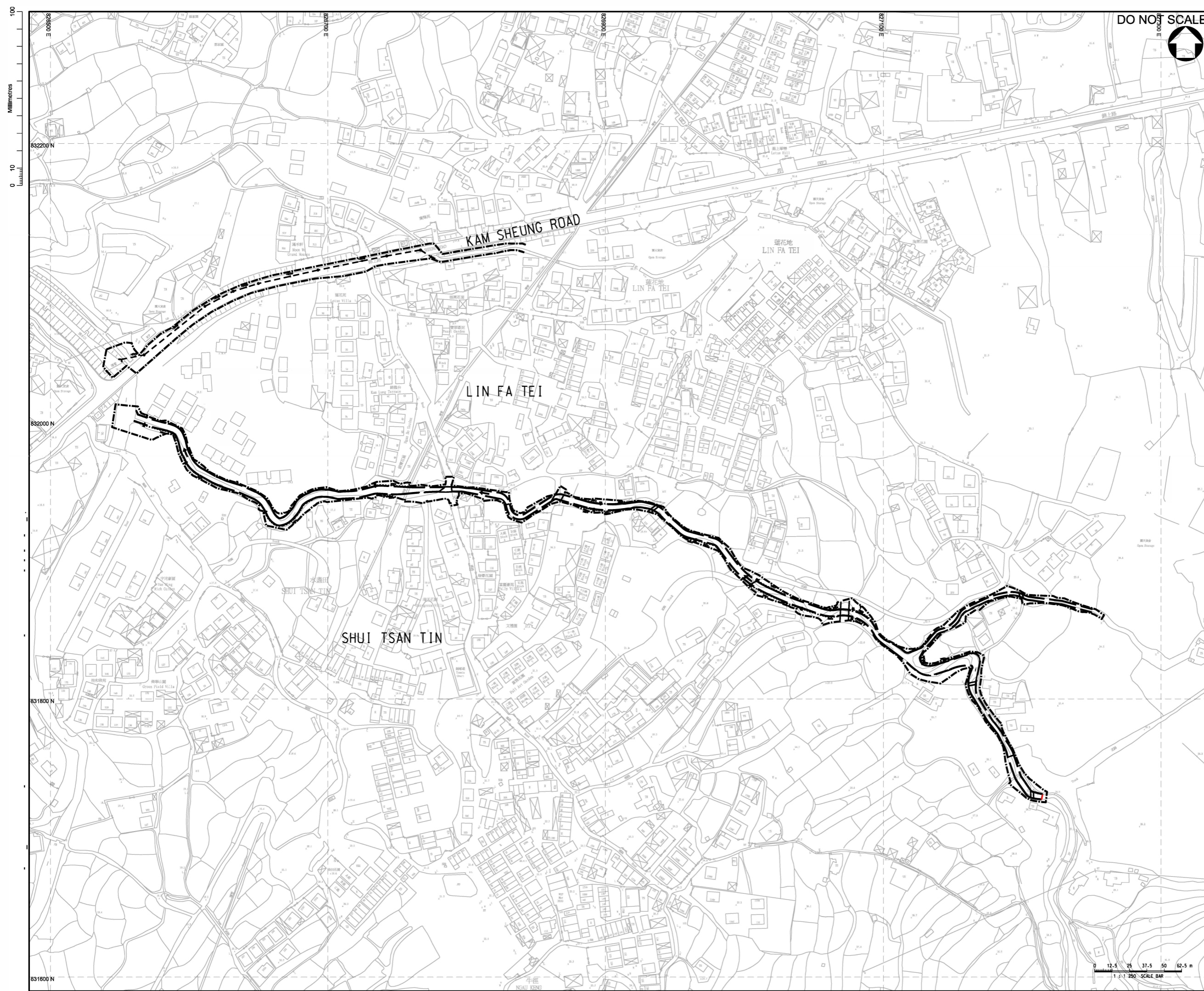
Client
渠務署
Drainage Services Department
工程管理部
Project Management Division

Contract Title
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

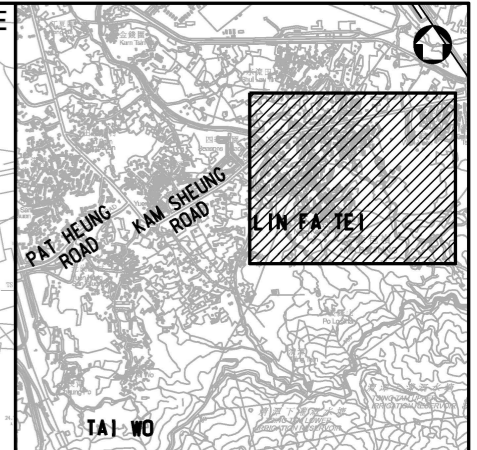
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GENERAL LAYOUT PLAN

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Figure 1.2b	A			





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KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL
 - 450 CU COVERED U-CHANNEL WITH NON-HEAVY DUTY PRECAST CONCRETE COVER
 - MANHOLE

Rev.	Date	Description	By	Chk'd	App'd	Suitability
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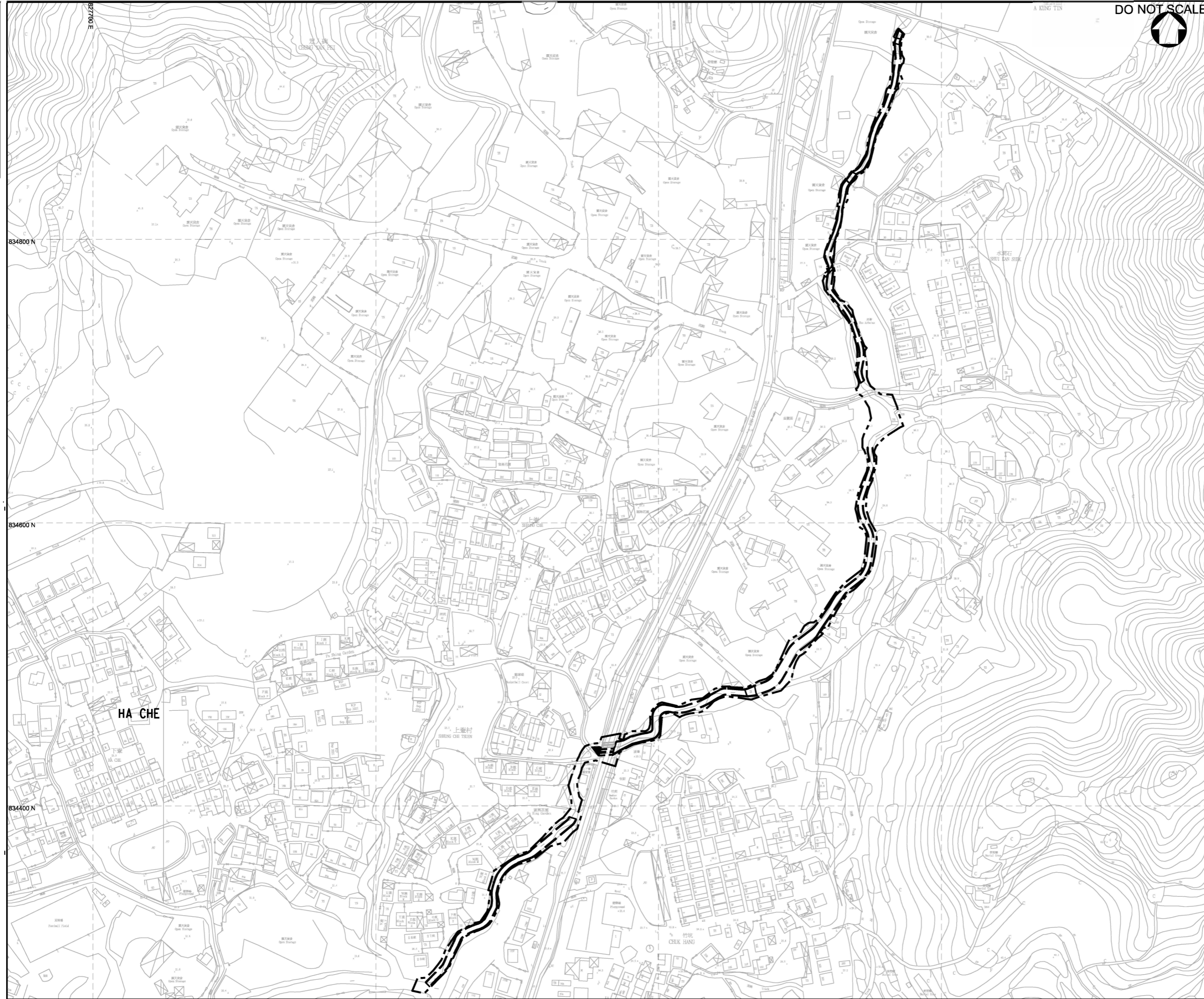
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AT YUEN LONG -
STAGE 2

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GENERAL LAYOUT PLAN

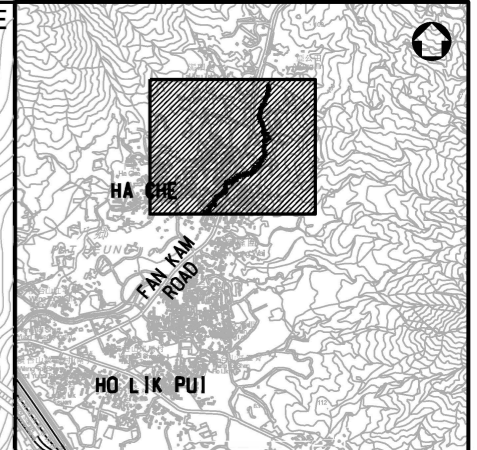
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KEY PLAN
N.T.S.

LEGEND:
 WORKS BOUNDARY
 RECTANGULAR CHANNEL

Rev.	Date	Description	By	Chkd	App'd
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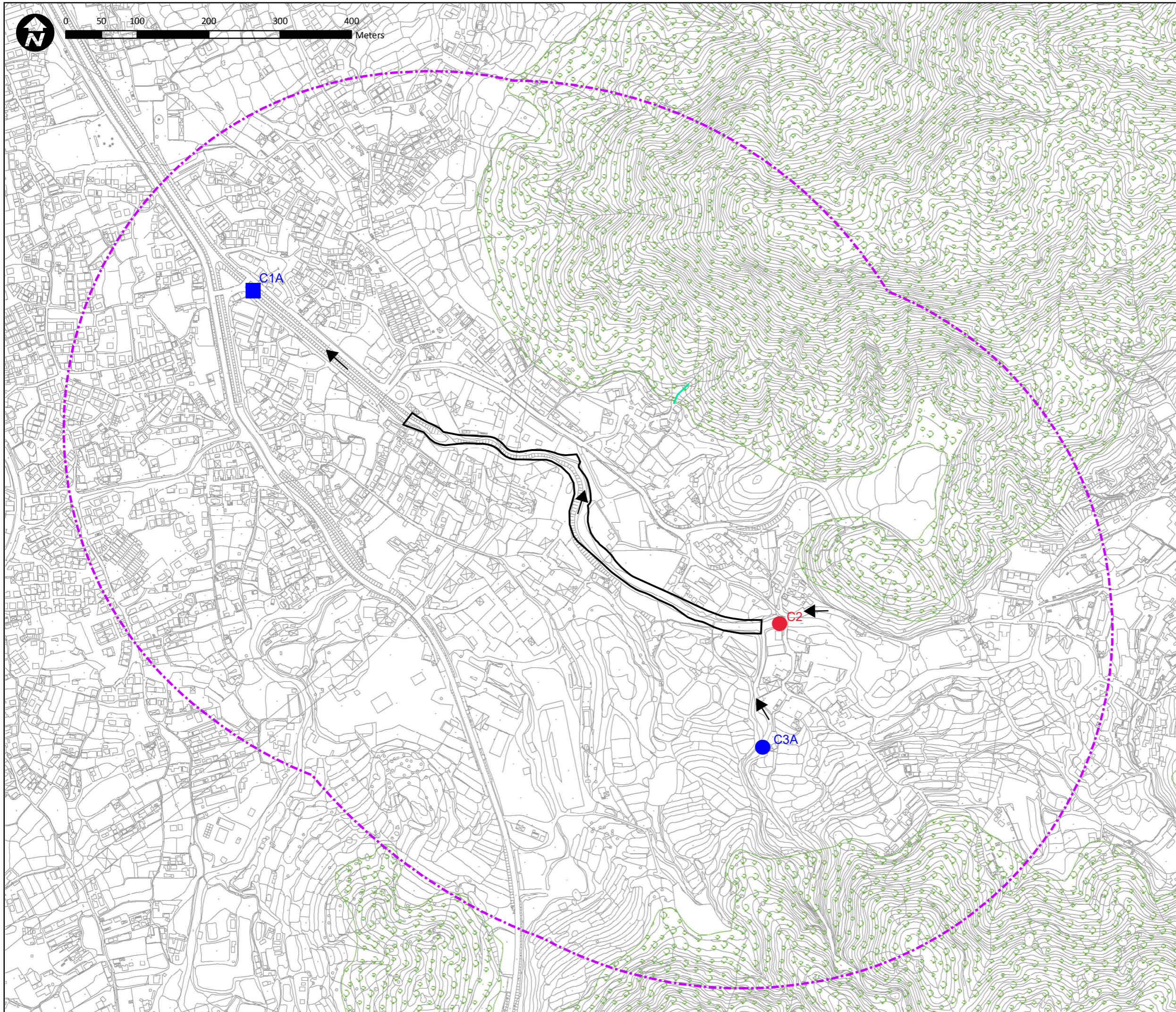
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 DRAINAGE IMPROVEMENT WORKS
 AT YUEN LONG -
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Drawing Title
 HA CHE -
 GENERAL LAYOUT PLAN

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Original Size	Date	Date	Date	Date
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Figure 2.1 Impact Water Quality Monitoring Locations



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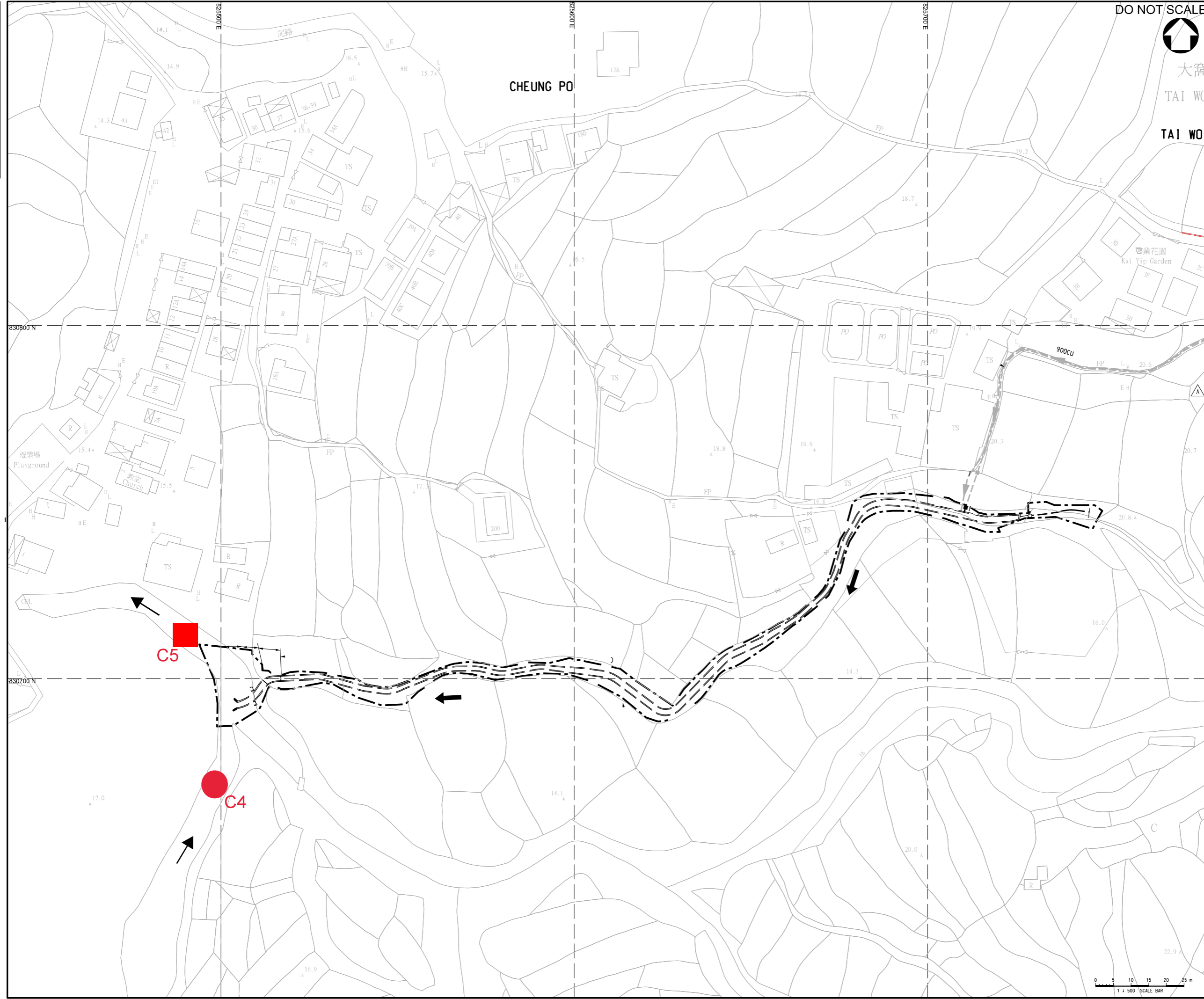
- Work Limit Boundary
- 500 m study area
- Control Station
- Alternative Control Station
- Alternative Impact Station
- ← Flow direction

Project Title:
**CONTRACT NO. DC/2022/02
 DRAINAGE IMPROVEMENT WORKS
 AT YUEN LONG -
 STAGE 2**

Figure Title:
**Water Quality Monitoring Locations at
 Sung Shan New Village**

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Approved by:	
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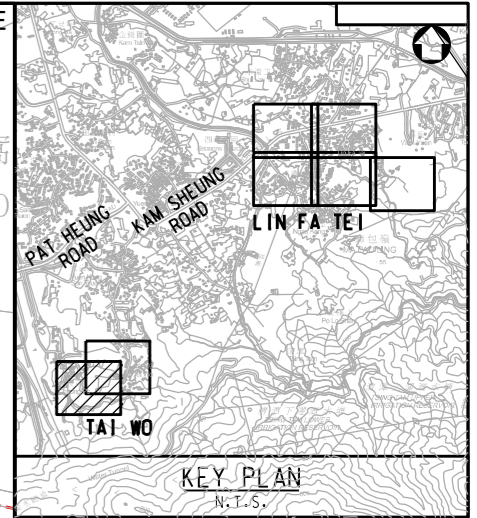
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Millimetres



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LEGEND:

- WORKS BOUNDARY
- RECTANGULAR CHANNEL
- Control Station
- Impact Station
- Flow Direction

Rev.	Date	Description	By	Chk'd	App'd	Suitability
A	OCT 2022	TENDER ADDENDUM NO.3	SHC	WCTT	KP	
-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP	

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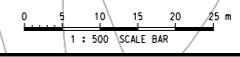
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Drainage Services Department

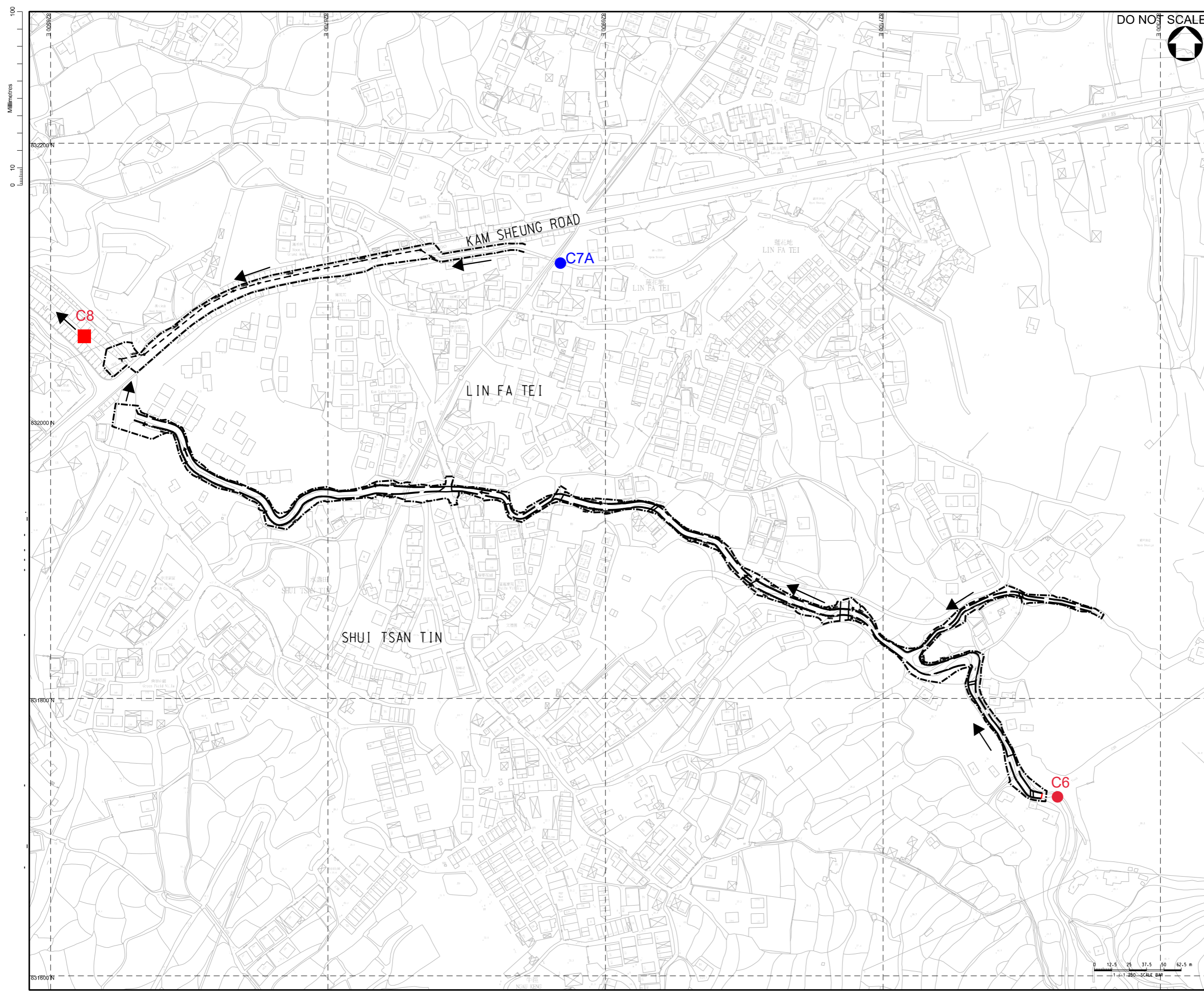
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Project Management Division

Contract Title
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

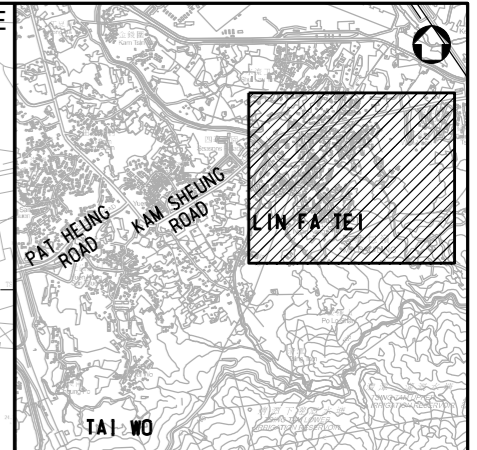
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at Tai Wo**

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KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL
 - 450 CU COVERED U-CHANNEL WITH NON-HEAVY DUTY PRECAST CONCRETE COVER
 - MANHOLE
 - Control Station
 - Alternative Control Station
 - Impact Station
 - Flow Direction

Rev.	Date	Description	By	CHK'd	App'd
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DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2






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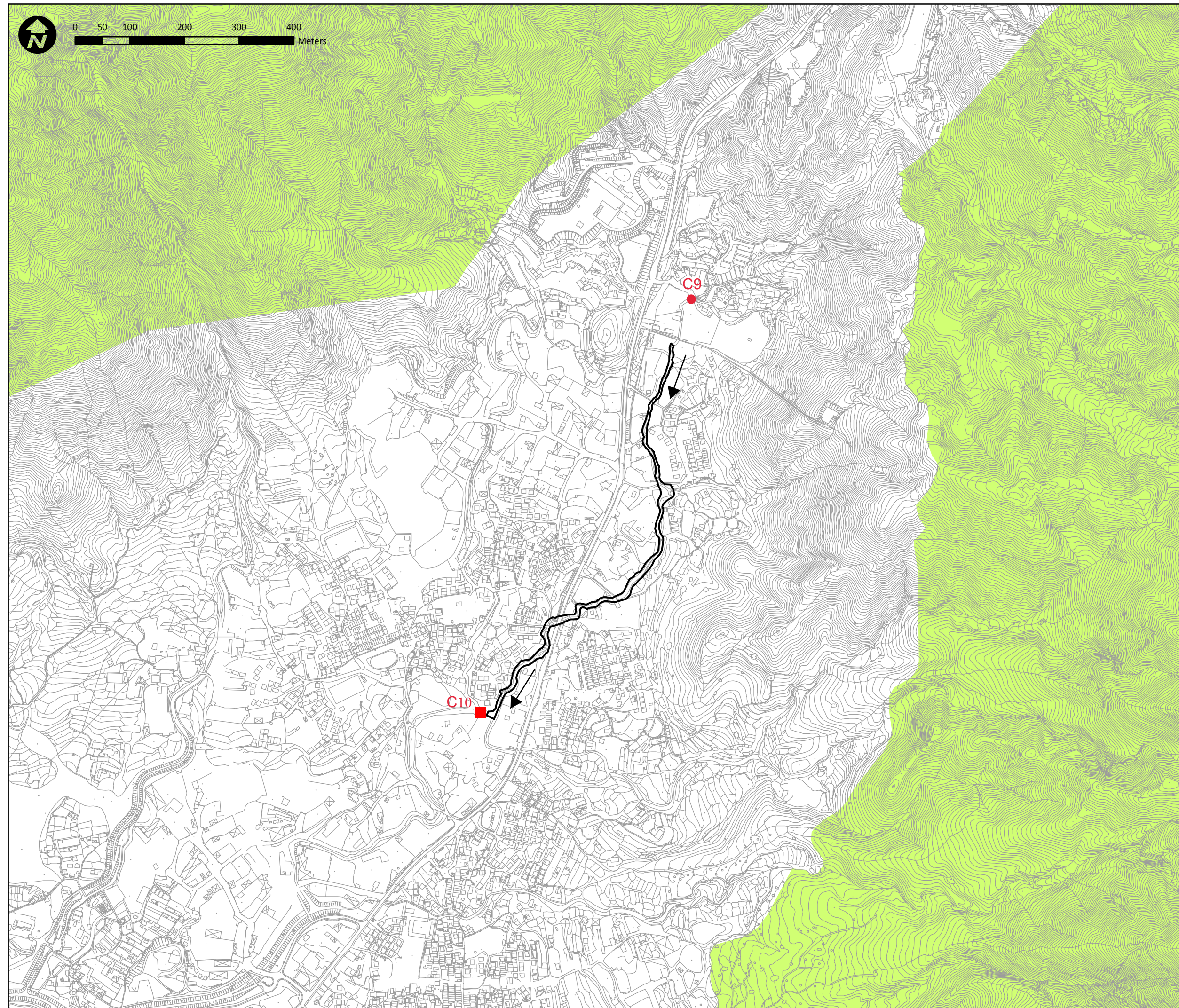
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- LEGEND:**
-  WORKS BOUNDARY
 -  RECTANGULAR CHANNEL
 -  Control Station
 -  Impact Station
 -  Flow Direction



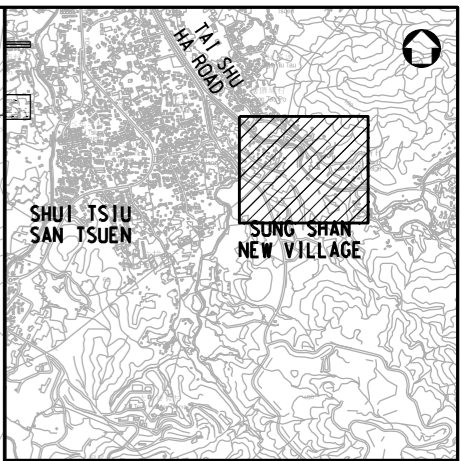
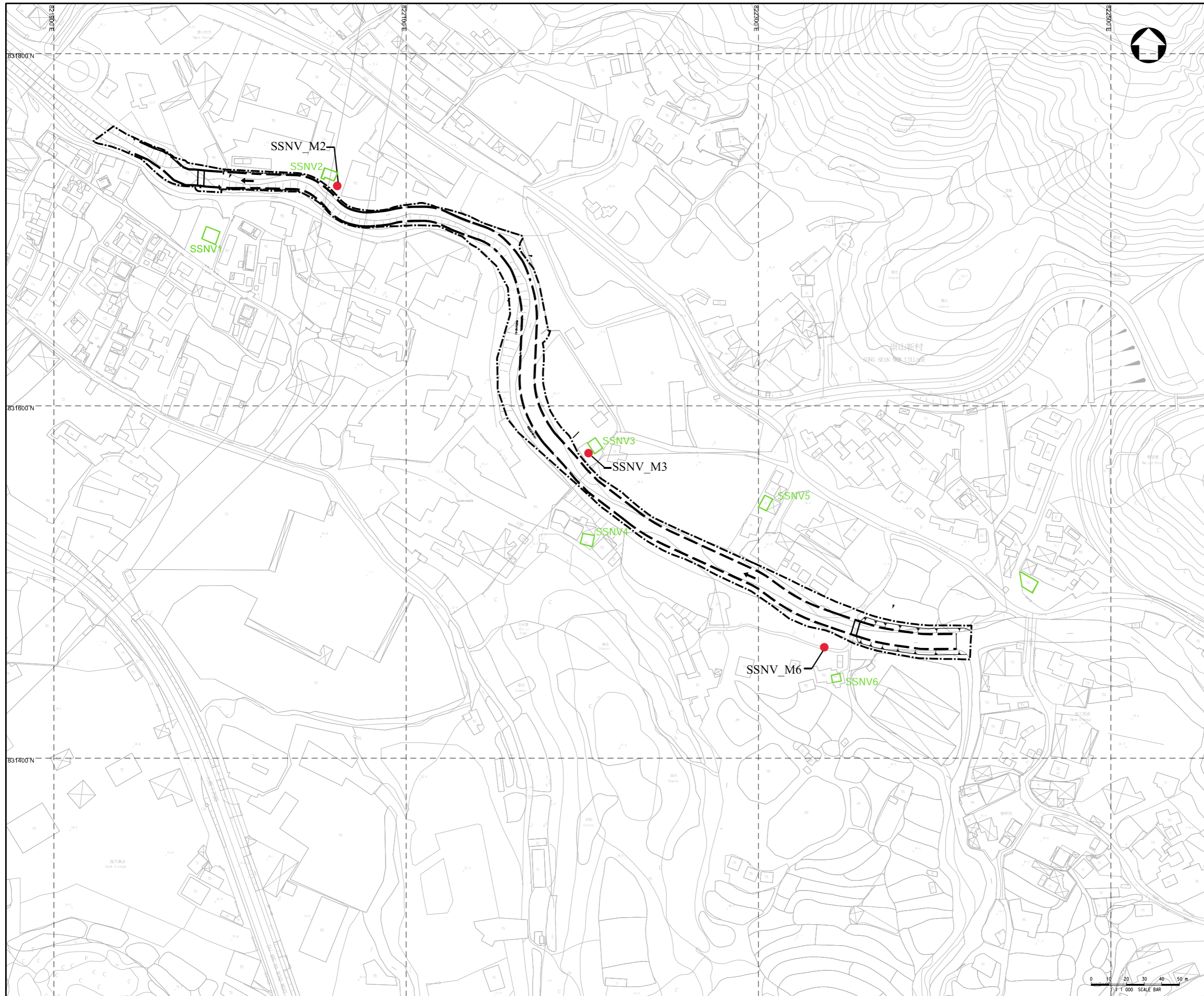
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 STAGE 2**

Figure Title:
**Water Quality Monitoring Locations at
 Ha Che**

Drawn by:	Scale: 1:6,500 on A3
Checked By:	Date:
Approved by:	
Figure Number:	Revision: R1

Figure 2.1d

Figure 3.1 Impact Noise Monitoring Locations



KEY PLAN
N.T.S.

LEGEND:

- WORKS BOUNDARY
- RECTANGULAR CHANNEL
- NOISE SENSITIVE RECEIVER
- NOISE MONITORING STATION

Rev.	Date	Description	By	CHK'd	App'd	Suitability
A	OCT 2022	TENDER ADDENDUM NO.3		SHC	WCTT	KP
-	JUL 2022	ISSUE FOR TENDER		SHC	WCTT	KP

Drawing Status: **CONTRACT**

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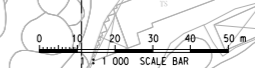
Client: 渠務署
Drainage Services Department
工程管理部
Project Management Division

Contract Title: **CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2**

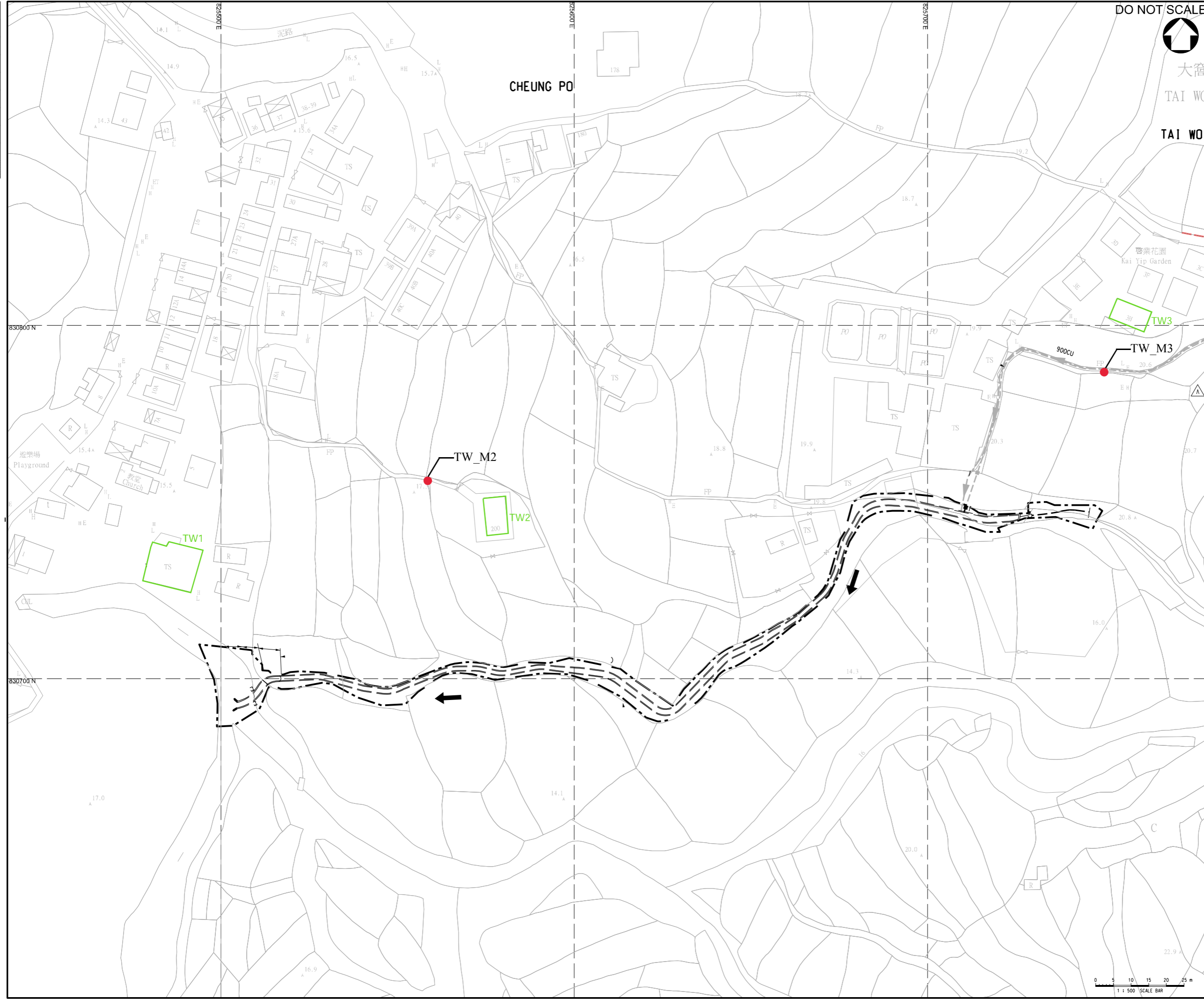
Drawing Title: **Noise Monitoring Locations at
Sung Shan New Village**

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Original Size	Date	Date	Date	Date
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Drawing Number: **Figure 3.1a**



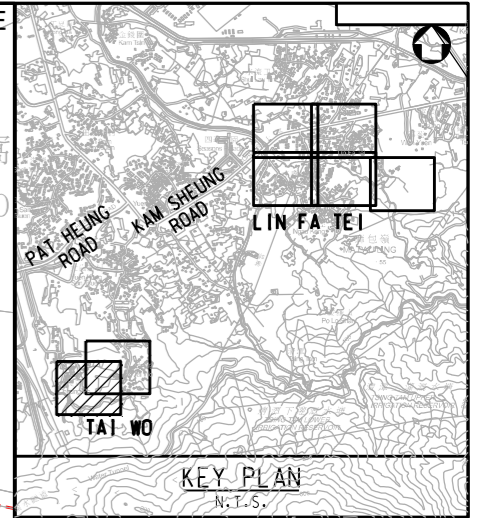
0 10 100
Millimetres



DO NOT SCALE



大窩
TAI WO
TAI WO



LEGEND:

- WORKS BOUNDARY
- RECTANGULAR CHANNEL
- NOISE SENSITIVE RECEIVER
- NOISE MONITORING STATION

Rev.	Date	Description	By	Chk'd	App'd	Suitability
A	OCT 2022	TENDER ADDENDUM NO.3		SHC	WCTT	KP
-	JUL 2022	ISSUE FOR TENDER		SHC	WCTT	KP

Drawing Status: **CONTRACT**

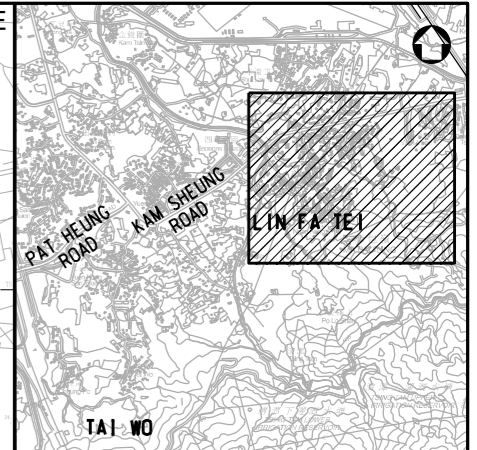
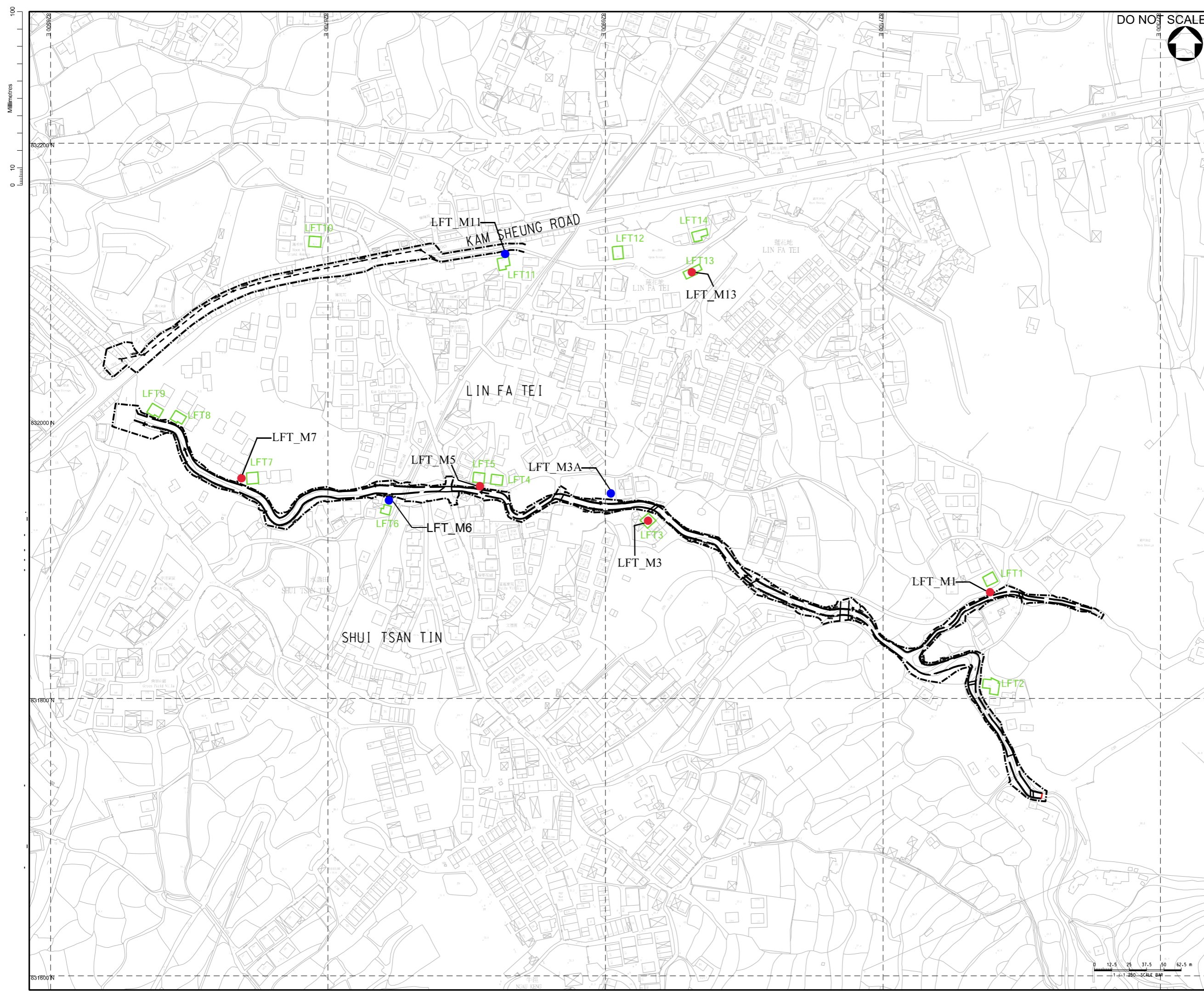
ATKINS
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Client
渠務署
Drainage Services Department
工程管理部
Project Management Division

Contract Title
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

Drawing Title
**Noise Monitoring Locations at
Tai Wo**

Scale	Designed	Drawn	Checked	Authorised
1 : 500	SHC	AC	WCTT	KP
Original Size	Date	Date	Date	Date
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022
Drawing Number	Figure 3.1b			Revision
				A



KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL
 - NOISE SENSITIVE RECEIVER
 - NOISE MONITORING STATION
 - ALTERNATIVE NOISE MONITORING STATION

Rev.	Date	Description	By	CHK'd	App'd	Suitability
A	NOV 2022	TENDER ADDENDUM NO. 4	SHC	WCTT	KP	
-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP	

Drawing Status: **CONTRACT**

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Drainage Services Department

Project Management Division

Contract Title:
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

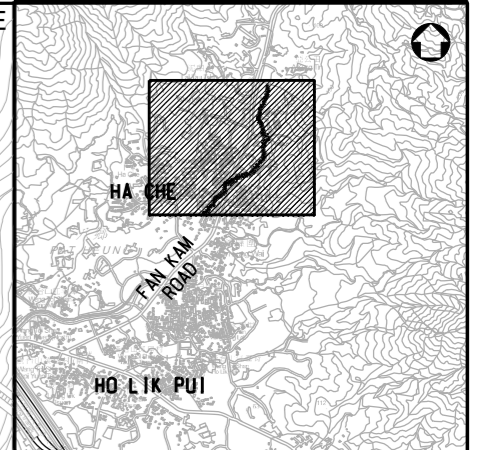
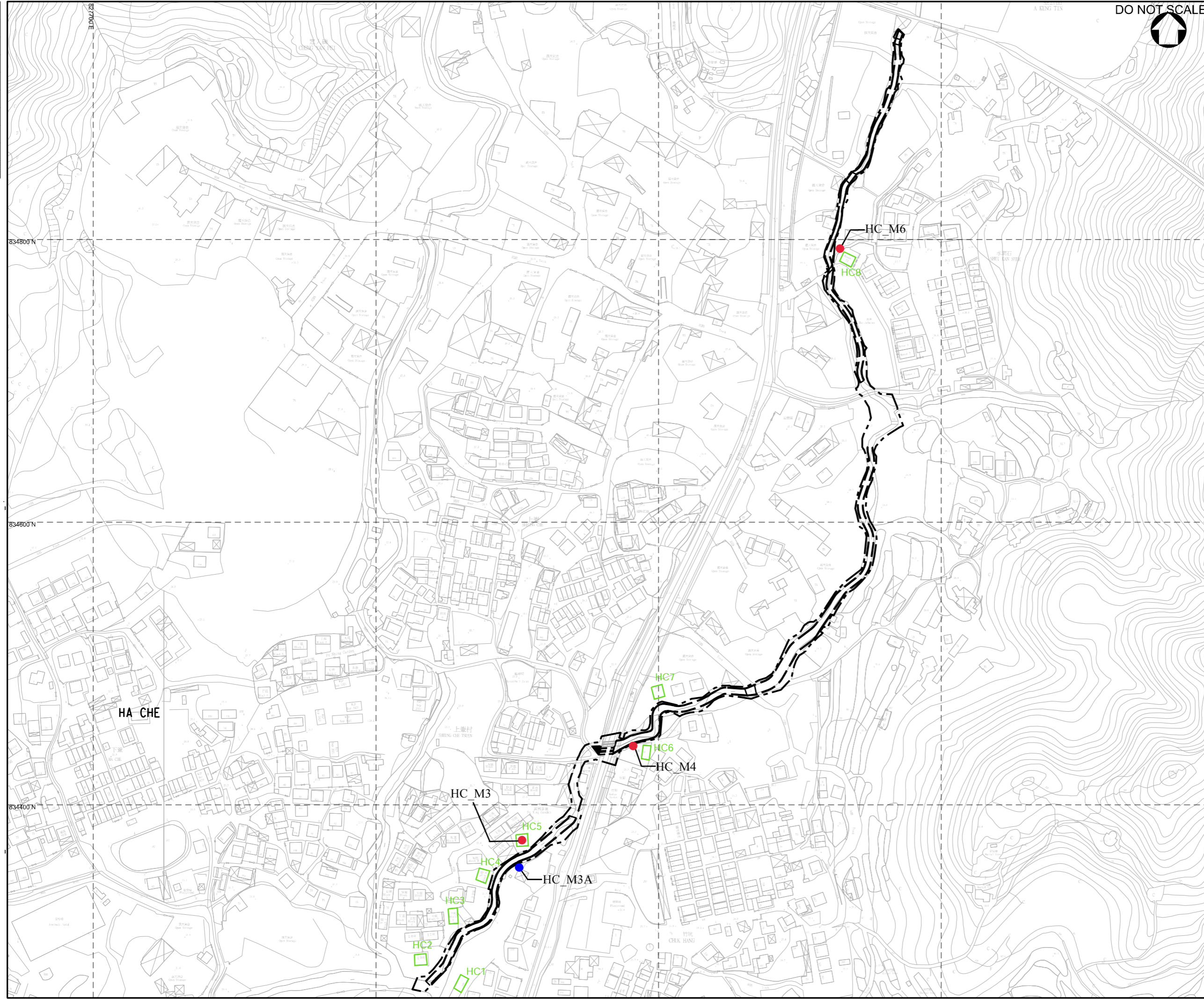
Drawing Title:
**Noise Monitoring Locations at
Lin Fa Tei**

Scale	Designed	Drawn	Checked	Authorised
Original Size	Date	Date	Date	Date
1 : 1250	SHC	AC	WCTT	KP
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022

Drawing Number: **Figure 3.1c**

100
0 10
Millimetres

DO NOT SCALE



KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL
 - NOISE SENSITIVE RECEIVER
 - NOISE MONITORING STATION
 - ALTERNATIVE NOISE MONITORING STATION

Rev.	Date	Description	By	Chk'd	App'd
A	NOV 2022	TENDER ADDENDUM NO. 4	SHC	WCTT	KP
-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP
Drawing Status: CONTRACT					Suitability: III

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Client: 渠務署
Drainage Services Department

Project Management Division

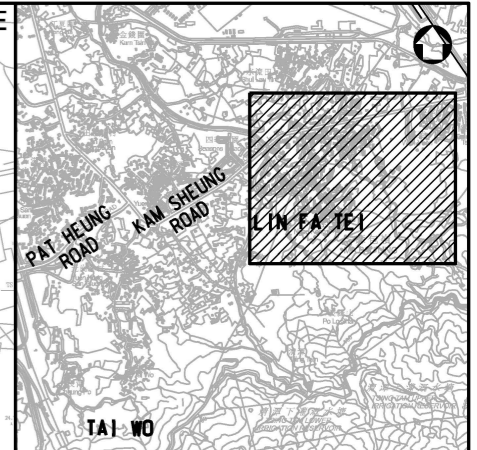
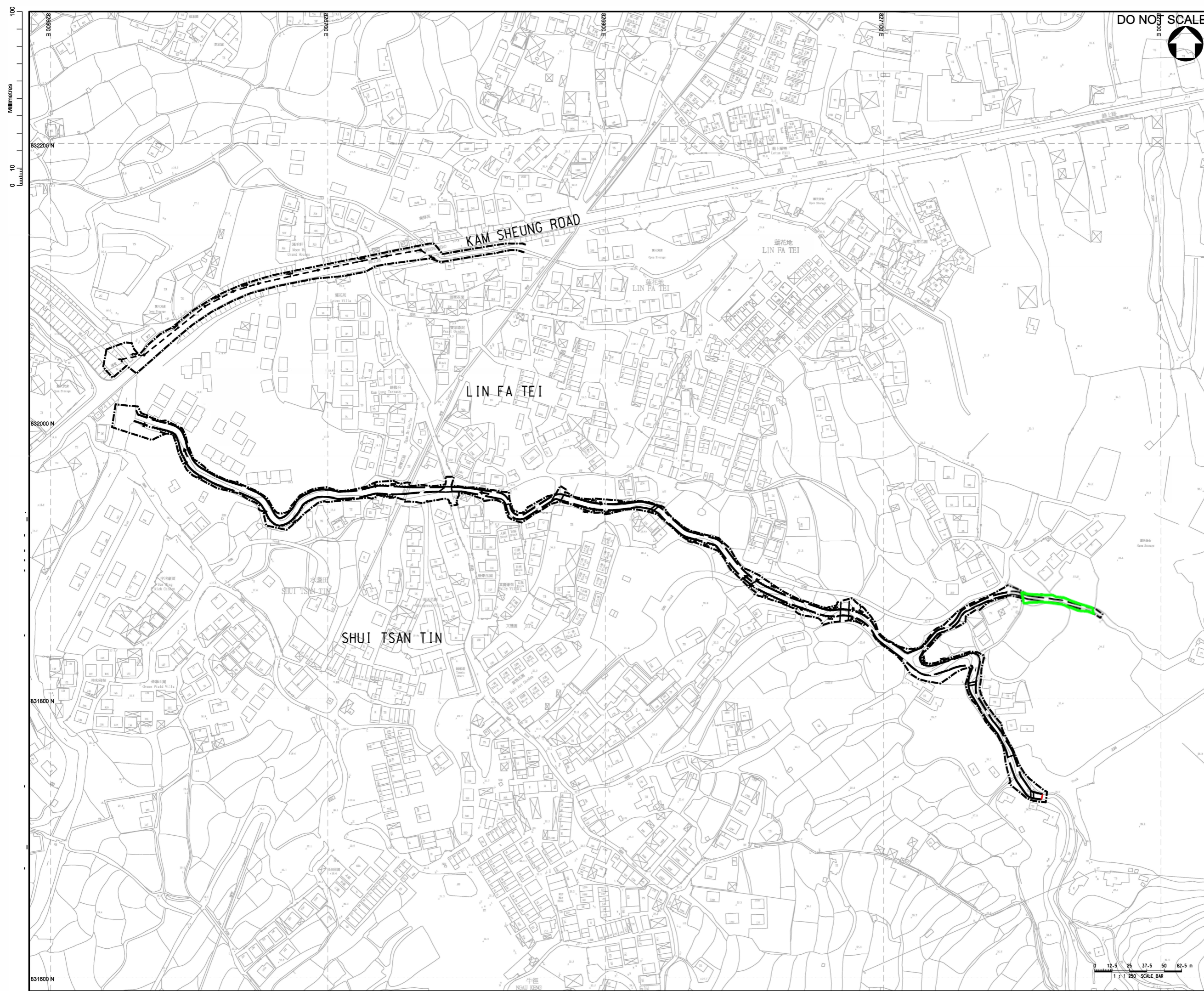
Contract Title: CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

Drawing Title: Noise Monitoring Locations at
Ha Che

Scale	Designed	Drawn	Checked	Authorised
1 : 1250	SHC	AC	WCTT	KP
Original Size	Date	Date	Date	Date
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022
Drawing Number	Revision			

Figure 3.1d

Figure 8.1 Area for Archaeological Survey



KEY PLAN
N.T.S.

- LEGEND:**
- WORKS BOUNDARY
 - RECTANGULAR CHANNEL
 - COVERED U-CHANNEL WITH NON-HEAVY DUTY PRECAST CONCRETE COVER
 - MANHOLE
 - AREA IDENTIFIED FOR ARCHAEOLOGICAL SURVEY

Rev.	Date	Description	By	Chkd	App'd	Suitability
A	NOV 2022	TENDER ADDENDUM NO. 4	SHC	WCTT	KP	
-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP	

Drawing Status: **CONTRACT**

ATKINS
Member of the SNC-Lavalin Group

Client: 渠務署
Drainage Services Department
工程管理部
Project Management Division

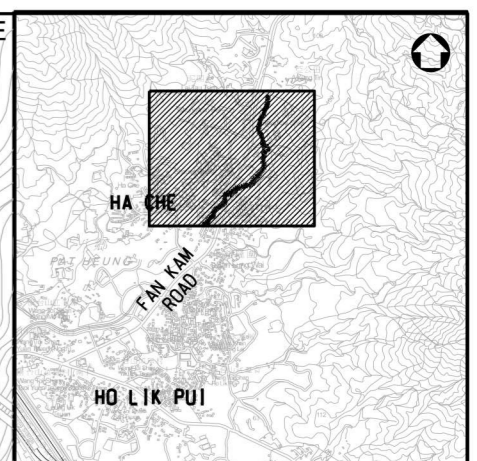
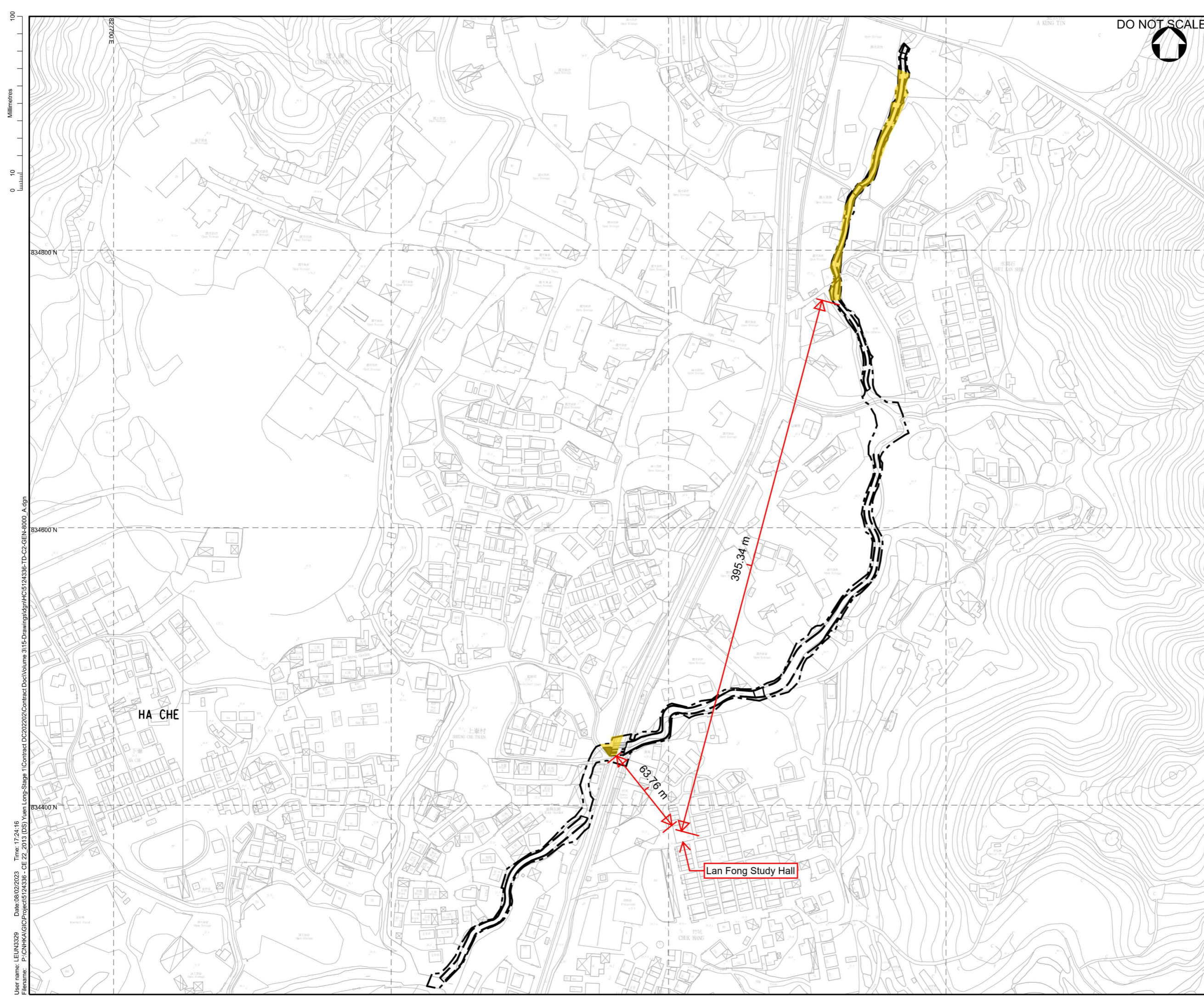
Contract Title: **CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2**

Drawing Title: **AREA IDENTIFIED FOR ARCHAEOLOGICAL
SURVEY**

Scale	Designed	Drawn	Checked	Authorised
1 : 1250	SHC	AC	WCTT	KP
Original Size	Date	Date	Date	Date
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022

Drawing Number: **Figure 8.1**

Figure 8.2 Layout plan showing distance between the works area at Ha Che and the Lan Fong Study Hall



KEY PLAN
N.T.S.

- NOTES:**
1. FOR GENERAL LAYOUT PLAN, REFER TO DRAWING NO. 5124336-TD-C2-GEN-0000.
 2. FOR GENERAL NOTES, REFER TO DRAWING NOS. 5124336-TD-C2-GEN-0001 & 0002.
 3. FOR LEGENDS, REFER TO DRAWING NO. 5124336-TD-C2-GEN-0003.
 4. FOR PROPOSED ALIGNMENT, REFER TO DRAWING NOS. 5124336-TD-C2-GEN-8001 TO 8004.

Works area

CONTROLLED COPY

Rev.	Date	Description	By	Chkd	App'd
A	NOV 2022	TENDER ADDENDUM NO. 4	SHC	WCTT	KP
-	JUL 2022	ISSUE FOR TENDER	SHC	WCTT	KP

Contract Status: **CONTRACT**

ATKINS
Member of the SNC-Lavalin Group

Client: **渠務署**
Drainage Services Department

Project Management Division

Contract Title: **CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2**

Drawing Title: **HA CHE -
GENERAL LAYOUT PLAN**

Scale	Designed	Drawn	Checked	Authorised
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Original Size	Date	Date	Date	Date
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022

Drawing Number: **Figure 8.2** Revision: **A**

User name: LEUNG329 Date: 08/02/2023 Time: 17:24:16
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Appendices

Appendix 1.1 Construction Programme

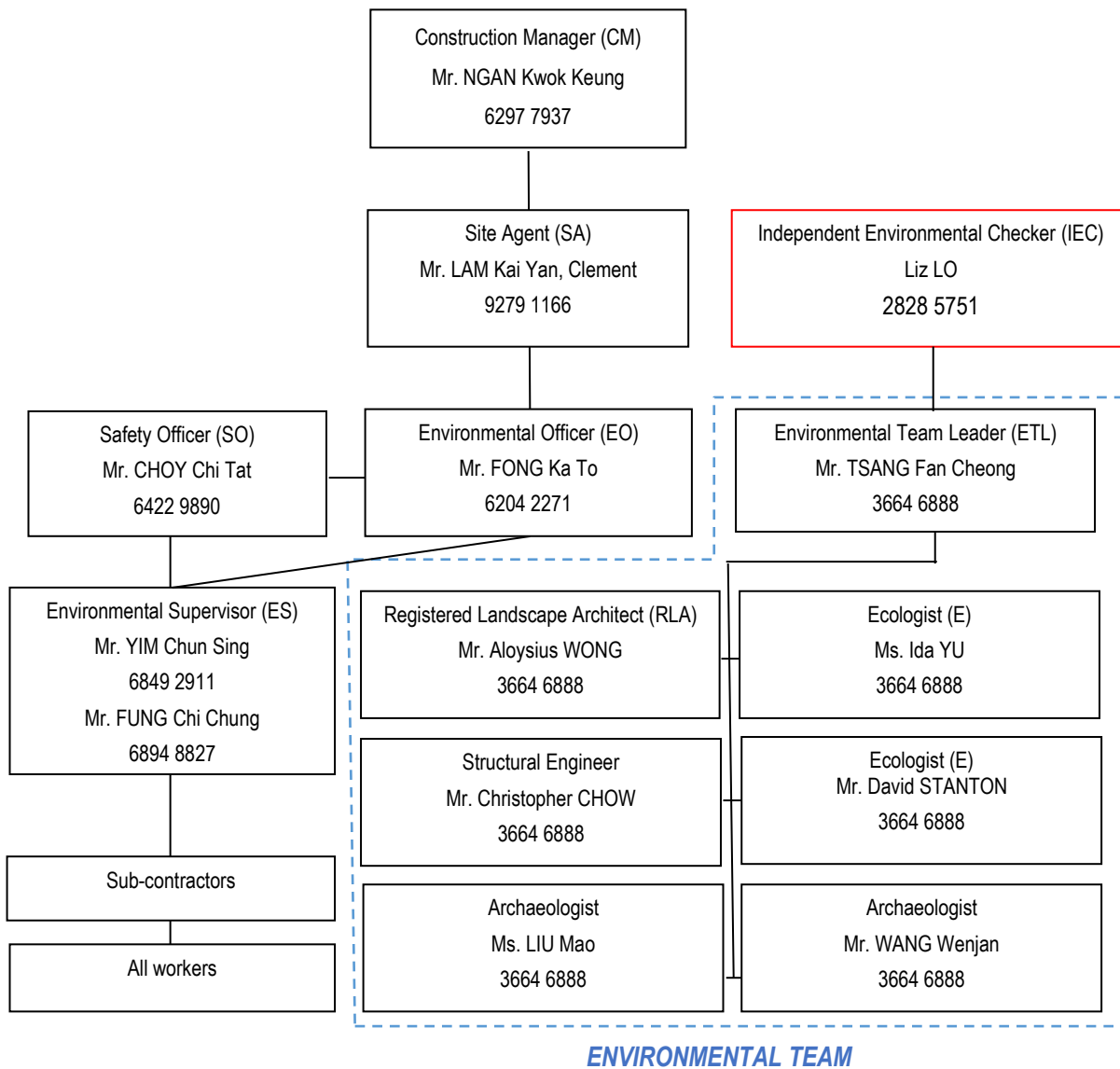
Appendix 1.2 Project Organization Chart

Wing Tat Civil Engineering Co. Ltd

Contract No. : DC/2022/02

Drainage Improvement Works at Yuen Long – Stage 2

Organization Chart of Environmental Management (updated on 12-06-2024)



Appendix 1.3 Implementation Status of Environmental Mitigation Measure

Air Quality Impact Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								
S.3.8.1	S.3.2.3	All the dust control measures as recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, should be implemented. Typical dust control measures include:	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> Proper and regular watering should be provided for all exposed and excavated work sites. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> All excavated or stockpile of dusty materials should be entirely covered by impervious sheeting or sprayed with water to ensure that the entire surface is wet. They should be sprayed with water immediately prior to any loading or transfer activities. These materials should be removed, backfilled or reinstated where practicable. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> After the removal of stockpiles, the remaining dusty material should be sprayed with water and cleared from the surface of roads. Stockpiling areas of dusty materials should not be extended beyond the pedestrian barriers, fencing or traffic cones. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> At locations with proposed open excavation and reinstatement works, hoarding of not less than 2.4 m from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. The contractor should ensure that the hoardings are well maintained throughout the entire construction period. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> Vehicles used for the transportation of dusty materials/ spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> Vehicle wheel washing facilities will be provided at exit of the works site. The areas where vehicle wheel washing activities are carried out and the section of the construction site between the vehicle washing facilities and the exit should be paved with concrete or bituminous materials. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> Where possible, routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> All demolished materials that may generate dust should be covered entirely by impervious sheeting or placed in a covered area with the top and three sides enclosed within a day of demolition. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> At construction works areas where demolition takes place, water or dust suppression chemicals should be sprayed prior to, during and immediately after the demolition activities to ensure that the top surface remains wet. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Annex 4 and Annex 12 of EIAO -TM, Air Pollution Control (Construction Dust) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> The requirements stipulated in the Development Bureau Technical Circular (Works) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness should be followed as far as practicable to enhance the cleanliness and tidiness of construction sites. 	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Development Bureau Technical Circular (Works) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> NRMMs should be approved or exempted with a label issued by EPD. The label should be displayed at a conspicuous position of the machine or vehicle. Nonroad vehicles are required to meet the Euro V emission standards and smoke requirements as stipulated under the Air Pollution Control (Vehicle Design Standards) (Emission) Regulation. 	Emission from NRMM during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.3.8.1	S.3.2.3	<ul style="list-style-type: none"> The works at overlapping section are recommended to be scheduled to avoid works at the areas near Fan Kam Road. The Contractor shall liaise with No. CE 61/2012 (HY) – Improvement to Fan Kam Road – Investigation contractors so as to avoid undertaking works concurrently with the works from CE 61/2012 Project when they are in the close proximity. As a conservative approach, works for drainage improvement shall be carried when the works from the No. CE 61/2012 project is over 500 m away. 	Prevent potential cumulative construction air quality impacts	Contractor(s)	At all construction areas of the site for Ha Che during the entire construction period	-	Implemented	Ha Che: 20 February 2024

Noise Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
Construction Phase									
S.4.6.6	S. 4.8.1	Use of quiet PMEs and smaller sized of PMEs as practicable.	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO-TM and NCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	
S.4.6.7	S. 4.8.1	Use of quiet PME for generator, mobile crane and excavator, wheeled/ tracked.	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO-TM and NCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
S.4.6.8	S. 4.8.1	The Contractor should be responsible for the design of temporary/ movable noise barriers with consideration of the size of PME and the requirements of intercepting the line of sight between the noise sensitive receivers and PME.	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO-TM and NCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	The mitigation measures of utilising material stockpiles and other structures as noise barriers, is not applicable to the construction areas.

Environmental Mitigation Implementation Schedule (EMIS)

S.4.7.1	S. 4.8.1	<ul style="list-style-type: none"> The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the NCO (Cap. 400) (for Construction Industry) published by the EPD; The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines; Before commencing any work, the Contractor shall submit to the Environmental Review for approval the method of working, equipment and noise mitigation measures intended to be used at the site; The Contractor shall devise and execute working methods to minimise the noise impact on the identified surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented; Noisy equipment and noisy activities should be located as far away from the NSR's as is practical; Machines and plant (such as dump truck, vibratory compactor, lorry, cranes) that may be intermitted use should be shut down between work periods or should be throttled down to a minimum. Additionally, the combined use of noisy equipment/ machines should be avoided, when possible; 	Noise control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	EIAO-TM and NCO	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>
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EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plants should be serviced regularly during the construction programme; Silencers, mufflers or acoustic treatment mats on construction equipment should be utilised and properly maintained during the construction duration; Plants known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable. 							
S.4.7.2	S. 4.8.1	The Contractor shall, from time to time, be aware of the noise impacts on the surrounding NSRs through adequate noise monitoring during the works so that adjustments can be made to the number of plants used for any construction activity and the corresponding plant positioning. These requirements shall be incorporated into the project works contract.	Noise control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	EIAO-TM and NCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	

Ecological Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								
S.5.9.2	S.5.2.1	The section of watercourse with construction activities should be hydrologically isolated from the rest of the watercourse as far as practicable (except discharge of treated runoff).	Ecological – to avoid and minimize the spatial impact/ disturbance to the riverine habitat	Contractor(s)	During construction at all sites	EIA, contractual requirements	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.5.9.2	S.5.2.1	The staged construction activities should be commenced from upstream and progresses toward the downstream area and the reinstatement work especially the planting of riparian vegetation should also be undertaken in stages and commenced as soon as the hardscape work completed in the working section	Ecological – to avoid and minimize the spatial impact and shorten the temporal disturbance to the riverine habitat	Contractor(s)	During construction at all sites	EIA, contractual requirements	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

S.5.9.3	S.5.2.2	Good Site Practice	Ecological – to avoid or minimize the potential disturbance to the habitats and wildlife inhabited within or adjacent to the work sites	Contractor(s)	During construction at all sites	EIA, contractual requirements	Implemented	Ha Che: 20 February 2024
		<ul style="list-style-type: none"> • Effective implementation of an Environmental Management Systems in accordance with the ISO 14001 for all work sites; • Effective implementation of mitigation measures recommended for dust suppression, noise reduction, as well as water quality and waste management as detailed in other sections of the EIA Report. • Effective implementation of the Tree Preservation Measures as detailed in the guidelines published by the Tree Management Office. • Staff awareness training on the ecological importance of the riverine habitats and inhabited wildlife, as well as briefing on the mitigation measures recommended in the EIA Report. • Well defined and fenced Work Area to prevent intentional or accidental encroachment or trespassing into the adjacent habitats for access, parking and operation of plants/ machineries, as well as stockpiling of construction material or waste; • Fence off any potentially ecologically sensitive resources within the work area with warning signpost; • Water diversion by means of submerged water pump should be avoided as far as practicable to prevent obstruction of wildlife movement along the channel; 					Lin Fa Tei: 20 March 2024	Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
		<ul style="list-style-type: none"> • Waste and refuse should be stored or dumped in appropriate receptacles and on-site burning of waste should be strictly prohibited; • Excavated material should be properly covered or promptly disposed of, and opportunities to stockpile and backfill the topsoil should be explored; • No chemical should be stockpiled on-site until absolutely necessary; • On-site maintenance of plant/ machineries/ vehicle should be avoided as far as practicable; • Silt/ Sediment/ Oil traps should be installed to avoid direct discharge of effluent or site run-off; • Regular ecological checks; • Cut down of vegetation during site clearance should be in stages before groundwork takes place as such to disperse any wildlife that is sheltering in the immediate area; and • minimise vehicle access. 						

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.5.9.4	S.5.2.10	The construction work in Tai Wo should be scheduled in the dry season and sandbags or other similar facilities should be placed along the southern boundary of the work site to prevent any accidental discharge of untreated effluent into the buffered grassland and EIS under adverse weather condition. In addition, discharge of any treated or untreated effluent, either by means of soakaway or direct discharge to nearby waterways, should be directed away from the grassland buffer and the EIS. The above measure should be audited regularly as part of the routine site inspection undertaken by the ET.	Ecological – to avoid and minimize any potential impact to the Cheung Po EIA from site discharge	Contractor(s)	Tai Wo	EIA, contractual requirements	Implemented	
S.5.9.6 to 5.9.7	S.5.2.7, 5.2.8	A detail survey to update the abundance and distribution of the endemic freshwater crabs within the project site (include the original watercourse which will be cut-off at Ha Che and Lin Fa Tei, inclusive of a receptor site search for the preparation of a “Freshwater Crab Translocation Plan”, in which the whole process including logistic arrangement should be detailed for the approval of AFCD.	Ecological – to avoid/ minimize the direct impact to the local population of these two endemic freshwater crab species	Engineer	Lin Fa Tei and Ha Che, before the commencement of the construction work	EIA, contractual requirements	Implemented, EPD advised no comment on the FCTP on 9 Feb 2024. A formal reply letter was issued by the EPD on 4 July 2024 after the submission of hardcopy for their record.	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.5.9.6 to 5.9.7	S.5.2.9	Capture and translocate two endemic freshwater crabs and undertake post-translocation monitoring programme in accordance to the approved “Freshwater Crab Translocation Plan”.	Ecological – to avoid/minimize the direct impact to the local population of these two endemic freshwater crab species.	Contractor, ET	Lin Fa Tei and Ha Che, within one month before the commencement of the construction work	EIA, contractual requirements	Implemented, pre-construction surveys at Ha Che and Lin Fa Tei were completed between 5 and 7 Feb 2024 and 11 and 13 Mar 2024 respectively	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024
S.5.9.6 to 5.9.8	S.5.2.9	Before the commencement of a construction work in a new section, the site should be inspected by the ecologist to confirm no inhabitation of the two freshwater crab species.	Ecological – to avoid/minimize the direct impact to the local population of these two endemic freshwater crab species	Contractor, ET	Lin Fa Tei and Ha Che, within one month before the commencement of the construction work	EIA, contractual requirements	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024
S.5.9.9	S.5.2.4	The <i>Aquilaria sinensis</i> (seedling) within the site boundary at Sung Shan New Village to be protected and retained during construction in accordance with DEVB TCW No. 4/2020 Tree Preservation	Ecological – to preserve the floral species of conservation concern	Engineer	Sung Shan New Village	EIA, contractual requirements	Implemented	Sung Shan New Village: 16 April 2024
S.5.9.13-5.9.19	S.5.2.15	Restoration of wildlife habitat by ecological habitat and niche that could promote colonisation of aquatic wildlife during the reinstatement of embankment and channel bed	Ecological – to compensate for the loss of wildlife habitat especially the two endemic freshwater crab species	Contractor(s)	All sites during construction	EIA, contractual requirements	The restoration and planting works will be conducted after the completion of construction work at Ha Che, Lin Fa Tei and Sung Shan New Village	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

Water Quality Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
Construction Phase									
S.6.7.2	S.6.2.3	<p>The mitigation measures should cover, but not limited to the following Best Management Practices:</p> <ul style="list-style-type: none"> Sand/ silt removal facilities such as sand traps, silt traps and sediment basins should be provided to remove sand/ silt particles from runoff to meet the requirements of the Technical Memorandum standards under the WPCO. The design of silt removal facilities should be based on the guidelines provided in ProPECC PN 2/23. All drainage facilities and erosion and sediment control structures should be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Work programmes should be designed to minimize the size of work areas to minimize the soil exposure soil and reduce the potential for increased siltation and runoff; 	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO and ProPECC PN 2/23	Deficiency of Mitigation Measures but rectified by the Contractor.	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>	WPCO licenses for Ha Che, Lin Fa Tei, Sung Shan New Village and Tai Wo were granted on 26 Apr 2024, 24 May 2024, 10 July 2024 and 29 July 2024 respectively.

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> • Boundaries of earthworks should be marked and surrounded by dykes or embankments for flood protection, as necessary; • Silt removal facilities, channels and manholes should be maintained and cleaned regularly to ensure the proper function; • Water pumped out from excavations should be discharged into silt removal facilities; • Careful programming of the works to minimize soil excavation during the rainy season. If excavation of soil cannot be avoided during the wet season (April to September), exposed slope surfaces should be covered by a tarpaulin or other means. Other measures that need to be implemented before, during, and after rainstorms are summarized in ProPECC PN 2/23; • Earthwork surfaces should be well compacted and the subsequent permanent work or surface protection should be 							

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<p>carried out immediately after the final surfaces are formed;</p> <ul style="list-style-type: none"> Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum; To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an on-line standby pump of adequate capacity and with automatic alternating devices; Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within the pH range of 6 to 10). Disposal of wastewater into storm drains will require more elaborate treatment. Surface run-off should be segregated from the concrete batching plant and casting yard area as much as possible, and diverted to the stormwater drainage system. Surface run-off contaminated by materials in a 							

Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		concrete batching plant or casting yard should be adequately treated before disposal into stormwater drains; <ul style="list-style-type: none"> Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric during rainstorms. 							

Environmental Mitigation Implementation Schedule (EMIS)

S.6.7.4	S6.2.3	<p>The guidelines stipulated in the ProPECC PN 2/23 “Construction Site Drainage” issued by the EPD should be followed to minimise the potential water quality impacts. Good housekeeping and stormwater best management practices, as detailed below, should be implemented to ensure that all construction runoff are well controlled to minimise the water quality impacts that arise due to the construction works of the Project.</p> <ul style="list-style-type: none"> Flood protection such as dikes or embankments should be provided around the boundaries of earthwork areas. Temporary ditches should be provided as appropriate to facilitate the runoff discharge into drainage system, through a silt/ sediment trap. The silt/ sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates; Construction works should be programmed to avoid surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed 	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO and ProPECC PN 2/23	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>	<ul style="list-style-type: none"> WPCO licenses for Ha Che, Lin Fa Tei, Sung Shan New Village and Tai Wo were granted on 26 Apr 2024, 24 May 2024, 10 July 2024 and 29 July 2024 respectively. The provision of oil interceptors in the drainage system downstream is not applicable as there is no oil/ fuel pollution spotted at the construction sites. Fuel tanks and storage areas are not placed
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Environmental Mitigation Implementation Schedule (EMIS)

slope surfaces should be covered by tarpaulin or other means;

- All drainage facilities and erosion and sediment control structures, if any, should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms;
- Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas;

at the construction sites.

- Deficiency of mitigation measures for sediment control but rectified by the Contractor.

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> All open stockpiles of construction materials (for example, aggregates, sand and fill material) should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system; 3Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers; Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 2/23. Particular attention should be paid to the control of silty surface runoff during storm events; 							

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-washing bay to the public road should be paved with sufficient backfall toward the wheel-washing bay to prevent vehicle tracking of soil and silty water to public roads and drains; Oil interceptors should be provided in the drainage system downstream of any oil/ fuel pollution sources as far as possible. The oil interceptors, if any, should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage 							

Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<p>system after accidental spillage;</p> <ul style="list-style-type: none"> Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts; All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby. 							
S.6.7.5	S.6.2.3	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage is expected to be carried out off-site and should only be undertaken within areas appropriately equipped to control these discharges.	To control the effluent discharge during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>	
S.6.7.6	S.6.2.3	Contractor shall apply for a discharge license under WPCO.	To control the effluent discharge during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO	Implemented.	<p>Ha Che: 26 Apr 2024</p> <p>Lin Fa Tei: 24 May 2024</p>	

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
								Sung Shan New Village: 16 April 2024	
S.6.7.7 & S.6.7.8	S.6.2.3	<p>Sewage from Workforce</p> <ul style="list-style-type: none"> Portable chemical toilets and/ or sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets to cater to 0.15 m³/day/worker of sewage and be responsible for appropriate disposal and maintenance. Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the project. Regular environmental audit on the construction site should be conducted to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the 	To control sewage generation during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO and Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		construction phase of the project would not cause water quality impact after undertaking all required measures.							
S.6.7.10 - S.6.7.15	S.6.2.3	Widening of Drainage Channels <ul style="list-style-type: none"> Due to the characteristics of narrow width and small water flow of the existing channel, the excavation should be carried out in dry condition (even in wet season) by diverting the stream flow from upstream by a temporary drainage channel with a temporary sheet piles, earth bund or barrier so that the works area will remain dry for later excavation and widening works; The temporary drainage channel would be backfilled when the construction works are completed or the temporary diversion is no longer required. Although flooding of the proposed containment section seldom occurs in dry season, the excavation would consider to suspend when flood water enters the containment causing leakage of runoffs to stream water; 	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	

Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> After dewatering of the streams, the sediments should be allowed to dry before excavation (yet still maintain a moist state to avoid dust nuisance). This will facilitate excavation of the sediments and also minimize the risk of drained water flowing back into watercourses or diversion channels as the sediment is handled. Where time or weather constraints require handling of wet sediment, care should be taken in the removal of sediment and the storage area should be bunded to prevent silty runoff entering watercourses. Given its small quantity, all excavated sediment should be reused on-site as backfilling material; 							
		<ul style="list-style-type: none"> To further minimize the leakage and loss of sediments during excavation, tightly sealed closed grab excavators should be employed in river sections where material to be handled is wet. Where material is dry and in non-river sections, conventional excavations can be used; 							

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> Excavated sediment will likely be temporarily stored on-site for reuse as backfilling material. This should be stored in a bunded area and covered at any time to avoid inadvertent release of silts and suspended solids to nearby water bodies; Regular monitoring of suspended solids, pH and turbidity should be conducted during excavation works. Any exceedance of water quality in the nearby water bodies caused by inadvertent release of site runoff should be rectified in accordance with EM&A programme for this project. 							
S.6.7.16	S6.2.3	Cast in-situ Construction <ul style="list-style-type: none"> Minimise the area of the site which generates contaminated stormwater runoff; Provide a separate dedicated drainage system to discharge clean stormwater from the site; Drain all contaminated stormwater and process wastewater to a collection pit for recycling; Regularly clean out solids that accumulate in the pit; 	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	

Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		<ul style="list-style-type: none"> There must be no dry weather wastewater discharges from the site; Monitor wet weather discharges for pH and suspended solids. Retain the records. 							
S.6.7.17	S6.2.3	Registration to EPD as a CWP (Chemical Waste Producers) is required if chemical wastes are generated and need to be disposed of. Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance (WDO). The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the WDO should be used as a guideline for handing chemical wastes.	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO, WDO and the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024	
S.6.7.18	S.6.2.3	Mitigation measures to avoid potential impact to Cheung Po EIS <ul style="list-style-type: none"> The construction work in Tai Wo should be scheduled in the dry season and sand bags or other similar facilities should be placed along the southern boundary to the work site to prevent any accidental discharge of untreated effluent into the buffered grassland and 	Water quality control during construction	Contractor(s)	At Tai Wo Area during the entire construction period	WPCO	Implemented		

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation	Remarks
		EIS under adverse weather condition; • Discharge of any treated or untreated effluent, either by means of soakaway or direct discharge to nearby waterways, should be directed away from the grassland buffer and the EIS.							

Waste Management Implication – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> An on-site environmental co-ordinator employed by the contractor should be identified prior to the outset of the work. Prior to commencement of project, the environmental coordinator shall prepare a WMP in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Sites, for the Engineers Representative's approval. The WMP shall include monthly and yearly Waste Flow Tables (WFT) that indicate the amount of waste generated, recycled and disposed of (including final disposal location), and which should be regularly updated; 	Waste management during construction	Contractor(s)	Prior to commencement of Project works and implemented throughout the entire construction period	ETWB TCW No. 19/2005	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> The Project contractor's waste management practices and effectiveness should also be audited by the Engineer on a regular basis; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> The reuse/ recycling of all materials on site should be investigated and exhausted prior to treatment/ disposal off-site; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> Good site practices should be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimisation; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> All waste materials should be sorted on-site into inert and non-inert C&D materials, and where the materials can be recycled or reused, they should be further segregated. Inert material, or public fill will comprise stone, rock, masonry, brick, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> The Project contractor should be responsible for identifying what materials can be recycled/ reused, whether on-site or off-site. In the event of the latter, the contractor should make arrangements for the collection of the recyclable materials. Any remaining non-inert waste should be collected and disposed of to the landfill as last resort whilst any inert C&D materials should be re-used on site as far as possible. Alternatively, if no use of the inert materials can be found on-site, the materials can be delivered to a public fill area or public fill bank after obtaining the appropriate licence; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> In order to monitor the disposal of C&D materials and solid waste at public filling facilities and landfills, and to control fly-tipping, a trip ticket system shall be implemented by the contractor, in accordance with the contract and the requirements of DEVB TCW No. 6/2010 "Trip Ticket System for Disposal of Construction and Demolition Material"; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	DEVB TCW No. 6/2010	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> Under the Waste Disposal (Chemical Waste) (General) Regulation, the Project contractor shall register as a Chemical Waste Producer (CWP) if chemical wastes such as spent lubricants, paints, etc. are generated onsite. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated onsite. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by the EPD; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	Waste Disposal (Chemical Waste) (General) Regulation	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> A sufficient number of covered bins should be provided onsite for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins should be cleared daily and the collected waste disposed of to the nearest refuse transfer station. Further to the issue of DEVB TC(W) No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness, the contractor is required to maintain a clean and hygienic site throughout the Project works; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance and DEVB TC(W) No. 8/2010	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> Minimize windblown litter and dust during transportation by either fitting trucks with mechanical covers or transporting waste in enclosed containers; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> All chemical toilets, if any, should be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal; 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; and 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<ul style="list-style-type: none"> The project contractor shall comply with all relevant statutory requirements and guidelines and their updated versions that may be issued during the course of the project construction. 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S.7.5.1	S.7.2.5	<p>Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices.</p> <ul style="list-style-type: none"> • Segregation and storage different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal; • Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the workforce; • Use of reusable non-timber formwork to reduce the amount of C&D material; • Prior to disposal of C&D waste, it is recommended that wood, steel and other metal shall be separated for re-used and/ or recycling to minimise the quantity of waste to be disposal of to landfill; • Proper storage and site practice to minimise the potential for damage and contamination of construction materials; • Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste. 	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	ETWB TCW No. 19/2005	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>

Land Contamination – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								
S.8.8.1	S.8.2.1	<p>Unexpected contaminated materials may be encountered near identified potential contaminated sites during construction. Should suspected contamination be found during construction, the extent and nature of contamination within project areas should be properly assessed and the contaminated soil/ groundwater should be remediated in accordance with EPD issued publications as below:</p> <ul style="list-style-type: none"> Guidance Note for Contaminated Land Assessment and Remediation; Guidance Manual for Use of Risk-based Remediation Goals (“RBRGs”) for Contaminated Land Management; and Practice Guide for Investigation and Remediation of Contaminated Land. 	Safety precautionary measures for handling possible contaminated materials	Contractor(s)	During construction works within the works areas nearby the land contamination sites HC-A, HC-C, HC-D, HC-I, LFT-A, LFT-B, LFT-C, LFT-D, LFT-E and SSNV-A	Guidance Note for Contaminated Land Assessment and Practice Guide for Investigation Remediation of Contaminated Land	No unexpected contaminated material was encountered during reporting period	N/A

Landscape & Visual Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								
S9.12.1.1	S.9.2	Construction Site Control CM01 - Tree Protection and Preservation Trees / woodland within the Project Site which are unaffected by the works shall be protected and preserved during the construction phase. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at detailed design stage for further retention of individual trees.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S9.12.1.1	S.9.2	CM02 – Compensatory Tree Planting If removal of trees unavoidable due to construction impacts, trees will be compensated where technically feasible.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	No tree was removed during reporting period	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S9.12.1.1	S.9.2	<p>CM03 - Works Area and Temporary Works Areas (Good Site Practice)</p> <p>The construction sequence and construction programme shall be optimized in order to minimize the duration of impact. Construction site controls shall be enforced including the storage of materials, and the location and appearance of site accommodation and site storage. The site office or temporary above-ground structures shall be sited in locations which are not visually prominent.</p>	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>
S9.12.1.1	S.9.2	<p>CM04 - Advance Implementation of Mitigation Planting</p> <p>Replanting of existing/ disturbed vegetation shall be undertaken as soon as technically feasible.</p>	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	No replanting work was conducted during reporting period	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>
S9.12.1.1	S.9.2	<p>CM05 - Coordination with Concurrent Projects</p> <p>Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce the period of disturbance.</p>	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	<p>Ha Che: 20 February 2024</p> <p>Lin Fa Tei: 20 March 2024</p> <p>Sung Shan New Village: 16 April 2024</p>

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S9.12.1.1	S.9.2	CM06 - Decorative Screen Hoarding Decorative screen hoarding will 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) to screen undesirable views of the works site. It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S9.12.1.1	S.9.2	CM07 – Light Control Construction and night time lighting glare will be controlled to minimize glare impact to adjacent VSRs during the construction stage. This is considered a general measure for good practice.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024
S9.12.1.1	S.9.2	CM08 – Topsoil reuse Excavated topsoil should be conserved for re-use by the project or other projects. This is considered a general measure for good site practice.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
S9.12.1.1	S.9.2	CM09 - Channel Bed Translocation Excavated natural stream bedding should be conserved for re-use by the project. This is considered a general measure for promoting sustainability and ecological continuity.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented	Ha Che: 20 February 2024 Lin Fa Tei: 20 March 2024 Sung Shan New Village: 16 April 2024

Cultural Heritage Impact – Implementation Schedule of Recommended Mitigation Measures

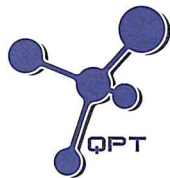
EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Construction Phase								

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Table 10-3	Table 10.1	<p>Lee Tat Bridge (GB-01)</p> <ul style="list-style-type: none"> A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures; Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings should be adopted. A monitoring schedule, the location of monitoring equipment, the frequency of monitoring, reporting requirements and action plan should be included in the condition survey report. The location of any monitoring equipment in the building must be approved by the owner before installation; 	Cultural heritage protection	Contractors	During the construction period, for Lee Tat Bridge (GB-01)	AMO Guidelines on CHIA; EIAO-TM	The condition survey report was submitted on 22 December 2023. Antiquities and Monuments Office (AMO) had no adverse comment on the report on 3 January 2024. A formal reply letter was issued by the EPD on 21 June 2024 for their acceptance on the report.	N/A

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
		<ul style="list-style-type: none"> A buffer zone should be provided to separate the building or walls of the building from the construction works. The buffer zone should be clearly marked out by temporary fencing. The buffer zone should be made at least 5 m from the proposed works or if this is not possible as large as the site restrictions allow; The contractor should ensure that safe public access is possible, through provision of clearly marked paths separated from the construction works areas, and is provided for any such affected cultural heritage structure. It is recommended that safe public access to the bridge be provided during the construction works. 						
Table 10-3	Table 10.1	Lan Fong Study Hall (GB-02) <ul style="list-style-type: none"> No mitigation required 	N/A	N/A	N/A	AMO Guidelines on CHIA; EIAO-TM	N/A	N/A
Table 10-3	Table 10.1	St. John's Chapel (GB-03) <ul style="list-style-type: none"> No mitigation required 	N/A	N/A	N/A	AMO Guidelines on CHIA; EIAO-TM	N/A	N/A

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?	Implementation Status	Starting date of Implementation
Table 10-1	S.10.2.1 – S.10.2.2	<ul style="list-style-type: none"> The proposed drainage works in the Lin Fa Tei area near previous wooden archaeological remains; Archaeological survey prior to construction works in area marked on Figure 10.16 of the EIA report; A qualified archaeologist shall apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) for the archaeological fieldwork. 	<p>Identification of archaeological remains, deposits and material within survey area</p> <p>Identification of archaeological extent</p>	Qualified archaeologist engaged by Contractor	Prior to construction phase	Antiquities and Monuments Ordinance	The Archaeological Survey at Lin Fa Tei was carried out from 16 to 28 October 2024.	16 October 2024
Table 10-1	S.10.2.3	As a precautionary measure, the Antiquities and Monuments Office (AMO) should be informed immediately in case of discovery of antiquities or supposed antiquities in the course of excavation for the proposed drainage improvement works at Tai Wo area, Ha Che River area, Lin Fa Tei area (all areas except area identified for Archaeological Survey) and Sung Shan New village area, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO.	To ensure appropriate mitigation measures can be timely formulated and implemented to preserve archaeological data, if discovered, in agreement with AMO	Contractor	During construction phase	Antiquities and Monuments Ordinance	No antiquities or supposed antiquities was discovered during the reporting period	N/A

Appendix 2.1 Calibration Certificates of Impact Water Quality Monitoring Equipment



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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 ⁺ 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 ± 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 ± 2.0 (°C)


(3) Salinity

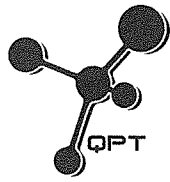
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.71	-2.9	Satisfactory
20	19.84	-0.8	Satisfactory
30	30.42	1.4	Satisfactory

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD100073

Date of Issue : 21 October 2024

Page No. : 2 of 2

(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 ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance ^(a) (%)	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

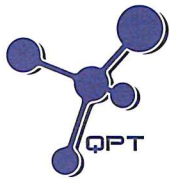
Tolerance of Turbidity should be less than ± 10.0 (%)

^(a) 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-BD100074
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 : 22D100436
Date of Received : 17 October 2024
Date of Calibration : 21 October 2024
Date of Next Calibration : 20 January 2025
Request No. : D-BD100074

PART C - REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

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

PART D - CALIBRATION RESULT

(1) pH value

Target (pH unit)	Display Reading (pH unit)	Tolerance	Result
4.00	4.02	0.02	Satisfactory
7.42	7.59	0.17	Satisfactory
10.01	10.19	0.18	Satisfactory

Tolerance of pH value should be less than ± 0.2 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Display Reading (°C)	Tolerance	Result
16.0	16.1	0.1	Satisfactory
25.5	25.0	-0.5	Satisfactory
40.0	39.6	-0.4	Satisfactory

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

(3) Salinity

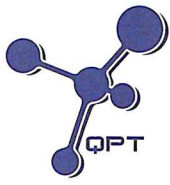
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.59	-4.1	Satisfactory
20	19.72	-1.4	Satisfactory
30	30.22	0.7	Satisfactory

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

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD100074
Date of Issue : 21 October 2024
Page No. : 2 of 2

(4) Dissolved oxygen

Expected Reading (mg/L)	Display Reading (mg/L)	Tolerance	Result
7.41	7.78	0.37	Satisfactory
5.61	5.21	-0.40	Satisfactory
3.49	3.54	0.05	Satisfactory
0.56	0.11	-0.45	Satisfactory

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

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance ^(a) (%)	Result
0	0.54	--	Satisfactory
10	9.68	-3.2	Satisfactory
20	18.75	-6.3	Satisfactory
100	91.88	-8.1	Satisfactory
800	736.64	-7.9	Satisfactory

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

^(a) 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.

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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 ⁺ 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 ± 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 ± 2.0 (°C)

(3) Salinity

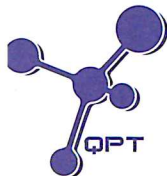
Expected Reading (g/L)	Display Reading (g/L)	Tolerance (%)	Result
10	9.70	-3.00	Satisfactory
20	19.88	-0.60	Satisfactory
30	30.35	1.17	Satisfactory

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

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SIGNATORY:

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BE010185
Date of Issue : 13 January 2025
Page No. : 2 of 2

(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 ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance ^(a)	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 ± 10.0 (%)

^(a) 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 ---



專業化驗有限公司
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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 ⁺ 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 ± 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 ± 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

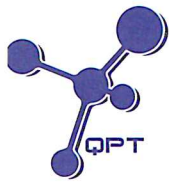
Tolerance of Salinity should be less than ± 10.0 (%)

--- CONTINUED ON NEXT PAGE ---

AUTHORIZED
SIGNATORY:



FUNG Yuen-ching
Laboratory Manager



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Test Report No. : R-BD120079
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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 ± 0.5 (mg/L)

(5) Turbidity

Expected Reading (NTU)	Display Reading (NTU)	Tolerance ^(a)	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 ± 10.0 (%)

^(a) 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 2.2 Event and Action Plan for Water Quality Exceedance

Event and Action Plan for Water Quality

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

Event	Action			
	ET ⁽¹⁾	IEC ⁽¹⁾	ER ⁽¹⁾	Contractor
Limit Level being exceeded by one sampling days	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and the DEP; 4. Check monitoring data, all plant, equipment and the Contractor's working methods; 5. Discuss mitigation measures with the IEC, the ER and the Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit Level. 	<ol style="list-style-type: none"> 1. Discuss with the ET and the Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by the Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; 2. Request the Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> 1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with the ET, the IEC and the ER and propose mitigation measures to the IEC and the ER within 3 working days; 6. Implement the agreed mitigation measures.

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

Note (1) ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative, DEP – Director of Environmental Protection.

Appendix 2.3 Impact Monitoring Schedule of the Reporting Month

Impact Noise & Water Monitoring Schedule for Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long Stage 2 (Version 2)

January 2025

Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2 Water quality monitoring at C4 and C5	3	4 Water quality monitoring at C4 and C5
5	6 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	7	8 Water quality monitoring at C4 and C5	9	10 Water quality monitoring at C4 and C5	11
12	13 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	14	15 Water quality monitoring at C4 and C5	16	17 Water quality monitoring at C4 and C5	18
19	20 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10	21	22 Water quality monitoring at C4 and C5	23 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	24 Water quality monitoring at C4 and C5	25
26	27 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10	28	29	30	31	

Noise Monitoring Locations:
 Noise monitoring stations at Ha Che: HC_M3A, HC_M4, and HC_M6
 Noise monitoring stations at Tai Wo: TW_M2 and TW_M3
 Noise monitoring stations at Lin Fa Tei: LFT_M1, LFT_M3A, LFT_M5, LFT_M6, and LFT_M11
 Noise monitoring stations at Sung Shan New Village: SSNV_M2, SSNV_M3, and SSNV_M6

Water Monitoring Locations:
 Water quality monitoring stations at Ha Che: C9 and C10
 Water quality monitoring stations at Tai Wo: C4 and C5
 Water quality monitoring stations at Lin Fa Tei: C6, C7A, and C8
 Water quality monitoring stations at Sung Shan New Village: C1A, C2, and C3A

Remarks:
 1. The schedule may be changed due to unforeseen circumstances (e.g. adverse weather, etc.)
 2. As approved by the EPD that the frequency of water monitoring at Ha Che, Lin Fa Tei and Sung Shan New Village has been changed from three times per week to once per week, while the frequency of water monitoring at Tai Wo remains as three times per week.
 3. As confirmed by the Contractor that there will be no construction works undertaken between 29 to 31 January 2025. Therefore, impact water quality monitoring on between 29 to 31 January 2025 will be cancelled.

Appendix 2.4 Impact Water Quality Monitoring Data

Contract No. DC/2022/02
 Drainage Improvement Works at Yuen Long -
 Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che
 Water Quality Monitoring Result



Water Quality Monitoring Location: C1A

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C1A	20250106	Fine	12:07	0.38	7.32		74.8		7.05		0.14		17.9		7.70		4.1		
C1A	20250106	Fine	12:07	0.38	7.32	7.32	74.8	74.8	7.05	7.05	0.14	0.14	17.9	17.9	7.79	7.75	2.4	3.3	
C1A	20250113	Fine	12:03	0.4	7.31		74.8		7.11		0.16		16.4		7.69		2.9		
C1A	20250113	Fine	12:03	0.4	7.32	7.32	74.8	74.8	7.11	7.11	0.16	0.16	16.4	16.4	7.61	7.65	2.8	2.9	
C1A	20250120	Cloudy	12:13	0.38	6.79		73.1		6.95		0.11		17.4		4.28		<1.0		
C1A	20250120	Cloudy	12:13	0.38	6.79	6.79	73.1	73.1	6.95	6.95	0.11	0.11	17.4	17.4	4.21	4.25	<1.0	1.0	
C1A	20250127	Cloudy	12:19	0.39	6.80		69.0		7.17		0.14		16.1		5.85		<1.0		
C1A	20250127	Cloudy	12:19	0.39	6.82	6.81	69.3	69.2	7.17	7.17	0.14	0.14	16.1	16.1	5.93	5.89	1.2	1.1	

Contract No. DC/2022/02
 Drainage Improvement Works at Yuen Long -
 Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che
 Water Quality Monitoring Result



Water Quality Monitoring Location: C2

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C2	20250106	Fine	11:58	0.43	4.41		45.9		7.01		0.12		17.2		4.19		5.9		
C2	20250106	Fine	11:58	0.43	4.41	4.41	45.9	45.9	7.01	7.01	0.12	0.12	17.2	17.2	4.21	4.2	4.5	5.2	
C2	20250113	Fine	11:54	0.38	6.13		61.2		6.93		0.11		15.2		4.47		6.7		
C2	20250113	Fine	11:54	0.38	6.20	6.17	61.8	61.5	6.92	6.93	0.11	0.11	15.2	15.2	4.44	4.46	5.7	6.2	
C2	20250120	Cloudy	11:54	0.4	5.91		60.3		6.88		0.10		16.3		3.94		4.3		
C2	20250120	Cloudy	11:54	0.4	5.92	5.92	60.4	60.4	6.88	6.88	0.10	0.1	16.3	16.3	3.92	3.93	7.2	5.8	
C2	20250127	Cloudy	12:11	0.4	6.09		61.1		6.97		0.12		15.5		6.05		5.5		
C2	20250127	Cloudy	12:11	0.4	6.08	6.09	61.0	61.1	6.97	6.97	0.12	0.12	15.5	15.5	6.05	6.05	5.4	5.5	

Contract No. DC/2022/02
 Drainage Improvement Works at Yuen Long -
 Sung Shan New Village, Tai Wo, Lin Fa Tei and Ha Che
 Water Quality Monitoring Result



Water Quality Monitoring Location: C3A

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C3A	20250106	Fine	11:53	0.51	9.45		93.1		7.64		0.02		14.7		2.59		<1.0		
C3A	20250106	Fine	11:53	0.51	9.44	9.45	93.1	93.1	7.64	7.64	0.01	0.02	14.7	14.7	2.59	2.59	1.5	1.3	
C3A	20250113	Fine	11:53	0.5	9.07		84.8		7.5		0.02		12.3		1.68		2.5		
C3A	20250113	Fine	11:53	0.5	9.08	9.08	84.9	84.9	7.49	7.5	0.02	0.02	12.3	12.3	1.67	1.68	1.8	2.2	
C3A	20250120	Cloudy	11:59	0.49	9.12		89.3		7.49		0.02		14.4		1.69		1.5		
C3A	20250120	Cloudy	11:59	0.49	9.12	9.12	89.3	89.3	7.49	7.49	0.02	0.02	14.4	14.4	1.72	1.71	1.5	1.5	
C3A	20250127	Cloudy	12:03	0.46	8.79		84.7		7.52		0.02		13.7		1.81		1.2		
C3A	20250127	Cloudy	12:03	0.46	8.82	8.81	84.9	84.8	7.51	7.52	0.02	0.02	13.7	13.7	1.83	1.82	1.6	1.4	



Water Quality Monitoring Location: C4

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Temperature (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C4	20250102	Fine	9:15	0.07	7.65		79.0		6.95		0.06		16.9		23.16		15.0		
C4	20250102	Fine	9:15	0.07	7.65	7.65	79.0	79.0	6.95	6.95	0.06	0.06	16.9	16.9	23.07	23.12	17.0	16.0	
C4	20250104	Fine	10:16	0.14	8.61		86.2		7.51		0.06		15.4		17.46		8.9		
C4	20250104	Fine	10:16	0.14	8.61	8.61	86.2	86.2	7.51	7.51	0.06	0.06	15.4	15.4	17.56	17.51	7.5	8.2	
C4	20250106	Fine	11:22	0.15	8.73		87.8		7.5		0.06		15.6		23.62		16.0		
C4	20250106	Fine	11:22	0.15	8.74	8.74	87.8	87.8	7.49	7.5	0.06	0.06	15.6	15.6	24.00	23.81	25.0	20.5	
C4	20250108	Fine	10:20	0.24	8.68		88.7		6.99		0.05		16.4		11.61		6.5		
C4	20250108	Fine	10:20	0.24	8.68	8.68	88.7	88.7	6.99	6.99	0.05	0.05	16.4	16.4	11.55	11.58	10.4	8.5	
C4	20250110	Fine	11:19	0.06	9.19		88.6		7.17		0.06		13.7		13.54		8.6		
C4	20250110	Fine	11:19	0.06	9.2	9.2	88.6	88.6	7.17	7.17	0.06	0.06	13.7	13.7	13.55	13.55	11.0	9.8	
C4	20250113	Fine	11:22	0.15	9.42		90.4		7.37		0.05		13.5		15.81		12.0		
C4	20250113	Fine	11:22	0.15	9.39	9.41	90.2	90.3	7.36	7.37	0.05	0.05	13.5	13.5	15.37	15.59	9.4	10.7	
C4	20250115	Fine	10:23	0.13	8.76		88.2		7.21		0.06		16.7		21.42		14.0		
C4	20250115	Fine	10:23	0.13	8.74	8.75	87.8	88.0	7.19	7.2	0.06	0.06	16.7	16.7	21.55	21.49	8.0	11.0	
C4	20250117	Fine	10:17	0.1	9.40		89.6		7.41		0.06		13.2		29.23		14.0		
C4	20250117	Fine	10:17	0.1	9.40	9.40	89.6	89.6	7.41	7.41	0.06	0.06	13.2	13.2	29.57	29.4	23.0	18.5	
C4	20250120	Cloudy	11:22	0.09	9.00		90.9		7.57		0.05		15.9		14.28		9.7		
C4	20250120	Cloudy	11:22	0.09	8.99	9.00	90.9	90.9	7.55	7.56	0.05	0.05	15.9	15.9	14.34	14.31	6.5	8.1	
C4	20250122	Cloudy	10:16	0.1	8.79		90.2		6.89		0.05		16.6		14.02		9.7		
C4	20250122	Cloudy	10:16	0.1	8.79	8.79	90.2	90.2	6.89	6.89	0.05	0.05	16.6	16.6	13.95	13.99	17.0	13.4	
C4	20250124	Fine	10:16	0.08	8.68		91.8		7.27		0.06		18		51.29		19.0		
C4	20250124	Fine	10:16	0.08	8.66	8.67	91.6	91.7	7.26	7.27	0.06	0.06	18	18.0	51.35	51.32	29.0	24.0	
C4	20250127	Cloudy	11:24	0.16	9.43		90.0		7.27		0.05		13.5		22.93		19.0		
C4	20250127	Cloudy	11:24	0.16	9.43	9.43	90.0	90.0	7.27	7.27	0.05	0.05	13.5	13.5	23.00	22.97	11.0	15.0	

Water Quality Monitoring Location: C5

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C5	20250102	Fine	9:14	0.06	8.88		88.9		7.31		0.06		16.78		3.28		<1.0		
C5	20250102	Fine	9:14	0.06	8.88	8.88	88.9	88.9	7.31	7.31	0.06	0.06	16.78	16.8	3.28	3.28	<1.0	1.0	
C5	20250104	Fine	10:17	0.08	9.13		89.0		7.24		0.06		14.2		4.29		1.4		
C5	20250104	Fine	10:17	0.08	9.09	9.11	88.6	88.8	7.23	7.24	0.06	0.06	14.2	14.2	4.32	4.31	1.2	1.3	
C5	20250106	Fine	11:25	0.05	8.85		87.3		7.34		0.07		14.7		3.29		<1.0		
C5	20250106	Fine	11:25	0.05	8.84	8.85	87.2	87.3	7.34	7.34	0.07	0.07	14.7	14.7	3.28	3.29	<1.0	1.0	
C5	20250108	Fine	10:17	0.05	9.13		89.0		7.24		0.06		14.2		4.29		1.4		
C5	20250108	Fine	10:17	0.05	9.13	9.13	88.6	88.8	7.23	7.24	0.06	0.06	14.2	14.2	4.32	4.31	1.2	1.3	
C5	20250110	Fine	11:18	0.03	9.13		87.6		7.22		0.07		13.5		2.91		1.9		
C5	20250110	Fine	11:18	0.03	9.13	9.13	87.6	87.6	7.22	7.22	0.07	0.07	13.5	13.5	2.90	2.91	1.4	1.7	
C5	20250113	Fine	11:20	0.14	9.69		89.9		7.17		0.07		12.0		3.25		<1.0		
C5	20250113	Fine	11:20	0.14	9.69	9.69	89.9	89.9	7.17	7.17	0.07	0.07	12.0	12.0	3.24	3.25	<1.0	1.0	
C5	20250115	Fine	10:24	0.04	8.63		86.2		7.08		0.07		15.3		4.01		<1.0		
C5	20250115	Fine	10:24	0.04	8.56	8.6	85.5	85.9	7.07	7.08	0.07	0.07	15.3	15.3	3.98	4	<1.0	1.0	
C5	20250117	Fine	10:19	0.05	9.53		88.6		6.87		0.08		12.1		3.06		1.2		
C5	20250117	Fine	10:19	0.05	9.52	9.53	88.5	88.6	6.87	6.87	0.08	0.08	12.1	12.1	3.05	3.06	1.1	1.2	
C5	20250120	Cloudy	11:30	0.04	9.58		92.3		7.45		0.07		13.7		4.10		<1.0		
C5	20250120	Cloudy	11:30	0.04	9.57	9.58	92.3	92.3	7.45	7.45	0.07	0.07	13.7	13.7	4.10	4.1	<1.0	1.0	
C5	20250122	Cloudy	10:14	0.05	8.64		86.3		7.42		0.07		15.3		3.67		<1.0		
C5	20250122	Cloudy	10:14	0.05	8.64	8.64	86.3	86.3	7.42	7.42	0.07	0.07	15.3	15.3	3.68	3.68	1.1	1.1	
C5	20250124	Fine	10:32	0.06	8.56		89.0		7.14		0.08		17.2		5.24		1.7		
C5	20250124	Fine	10:32	0.06	8.52	8.54	88.6	88.8	7.14	7.14	0.08	0.08	17.2	17.2	5.29	5.27	1.6	1.7	
C5	20250127	Cloudy	11:32	0.08	9.58		91.3		7.19		0.07		13.2		4.30		1.9		
C5	20250127	Cloudy	11:32	0.08	9.56	9.57	91.1	91.2	7.19	7.19	0.07	0.07	13.2	13.2	4.29	4.3	1.5	1.7	

Water Quality Monitoring Location: C6

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C6	20250106	Fine	10:38	0.24	5.73		59.0		6.99		0.14		16.7		9.87		3.1		
C6	20250106	Fine	10:38	0.24	5.73	5.73	59.0	59.0	6.99	6.99	0.14	0.14	16.7	16.7	9.86	9.87	2.9	3.0	
C6	20250113	Fine	10:38	0.24	8.51		82.4		7.31		0.08		13.9		7.98		2.1		
C6	20250113	Fine	10:38	0.24	8.57	8.54	83.0	82.7	7.31	7.31	0.08	0.08	13.9	13.9	8.01	8.00	3.1	2.6	
C6	20250120	Cloudy	10:48	0.25	8.61		85.5		7.06		0.11		15.0		3.54		3.0		
C6	20250120	Cloudy	10:48	0.25	8.60	8.61	85.5	85.5	7.06	7.06	0.11	0.11	15.0	15.0	3.55	3.55	2.8	2.9	
C6	20250127	Cloudy	10:48	0.24	8.90		85.3		7.4		0.07		13.4		2.91		2.4		
C6	20250127	Cloudy	10:48	0.24	8.91	8.91	85.4	85.4	7.4	7.4	0.07	0.07	13.4	13.4	2.99	2.95	3.4	2.9	

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 Water Quality Monitoring Result



Water Quality Monitoring Location: C7A

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C7A	20250106	Fine	10:55	0.06	8.63		87.1		7.19		0.11		15.8		7.31		4.0		
C7A	20250106	Fine	10:55	0.06	8.63	8.63	87.1	87.1	7.19	7.19	0.11	0.11	15.8	15.8	7.42	7.37	3.9	4.0	
C7A	20250113	Fine	10:48	0.1	7.21		71.0		7.12		0.15		14.7		32.78		9.3		
C7A	20250113	Fine	10:48	0.1	7.22	7.22	71.1	71.1	7.12	7.12	0.15	0.15	14.7	14.7	32.89	32.84	10.0	9.7	
C7A	20250120	Cloudy	11:05	0.06	6.66		67.9		6.9		0.14		16.3		10.08		7.1		
C7A	20250120	Cloudy	11:05	0.06	6.64	6.65	67.7	67.8	6.9	6.9	0.14	0.14	16.3	16.3	10.09	10.09	9.0	8.1	
C7A	20250127	Cloudy	11:03	0.07	7.19		71.4		7.17		0.15		15		3.98		3.1		
C7A	20250127	Cloudy	11:03	0.07	7.19	7.19	71.4	71.4	7.17	7.17	0.15	0.15	15	15.0	3.99	3.99	4.5	3.8	

Water Quality Monitoring Location: C8

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C8	20250106	Fine	11:02	0.08	5.49		57.7		7.27		0.16		17.7		6.15		1.6		
C8	20250106	Fine	11:02	0.08	5.48	5.49	57.5	57.6	7.27	7.27	0.16	0.16	17.7	17.7	6.18	6.17	1.1	1.4	
C8	20250113	Fine	11:00	0.08	6.84		69.6		7.28		0.12		16.2		3.89		<1.0		
C8	20250113	Fine	11:00	0.08	6.85	6.85	69.7	69.7	7.29	7.29	0.12	0.12	16.2	16.2	3.85	3.87	<1.0	1.0	
C8	20250120	Cloudy	11:10	0.08	6.27		65.6		7.37		0.12		17.5		5.89		1.1		
C8	20250120	Cloudy	11:10	0.08	6.23	6.25	65.2	65.4	7.37	7.37	0.12	0.12	17.5	17.5	5.91	5.90	2.0	1.6	
C8	20250127	Cloudy	11:10	0.08	6.30		64.0		7.28		0.12		16.1		3.31		1.8		
C8	20250127	Cloudy	11:10	0.08	6.27	6.29	63.7	63.9	7.27	7.28	0.12	0.12	16	16.1	3.27	3.29	1.1	1.5	

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 Water Quality Monitoring Result



Water Quality Monitoring Location: C9

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C9	20250106	Fine	10:04	0.25	9.36		94.1		7.63		0.06		15.6		0.95		6.4		
C9	20250106	Fine	10:04	0.25	9.36	9.36	94.1	94.1	7.63	7.63	0.06	0.06	15.6	15.6	0.97	0.96	4.2	5.3	
C9	20250113	Fine	10:00	0.24	9.85		95.1		7.59		0.07		13.8		0.58		4.0		
C9	20250113	Fine	10:00	0.24	9.85	9.85	95.1	95.1	7.59	7.59	0.07	0.07	13.7	13.8	0.61	0.60	5.0	4.5	
C9	20250120	Cloudy	10:12	0.2	9.44		93.7		7.61		0.07		15		9.87		4.5		
C9	20250120	Cloudy	10:12	0.2	9.44	9.44	93.7	93.7	7.61	7.61	0.07	0.07	15	15.0	9.81	9.84	7.0	5.8	
C9	20250127	Cloudy	10:12	0.21	8.96		91.4		8.03		0.06		16.3		15.53		6.4		
C9	20250127	Cloudy	10:12	0.21	8.95	8.96	91.3	91.4	8.95	8.49	0.06	0.06	16.3	16.3	15.51	15.52	6.6	6.5	

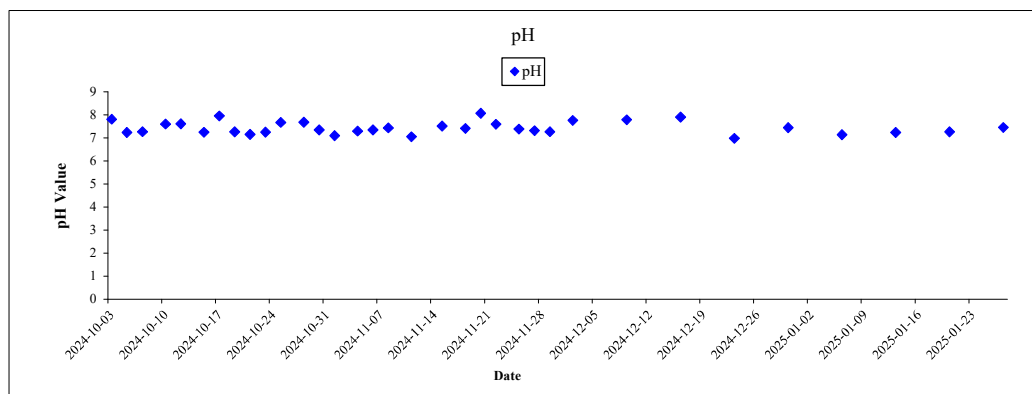
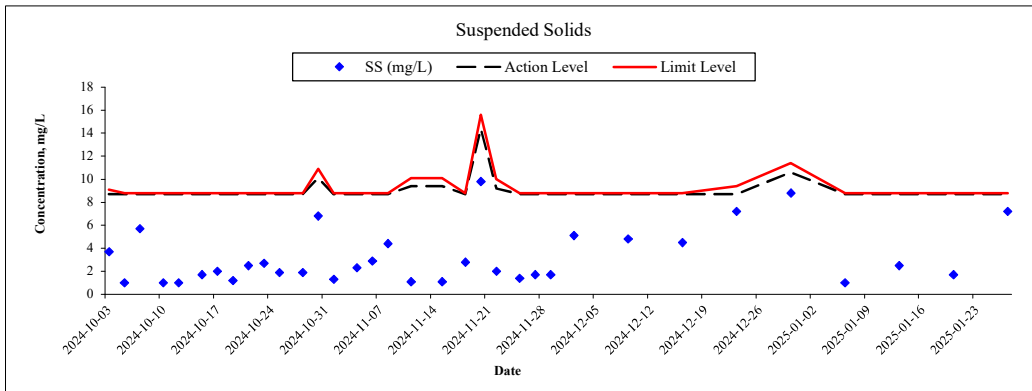
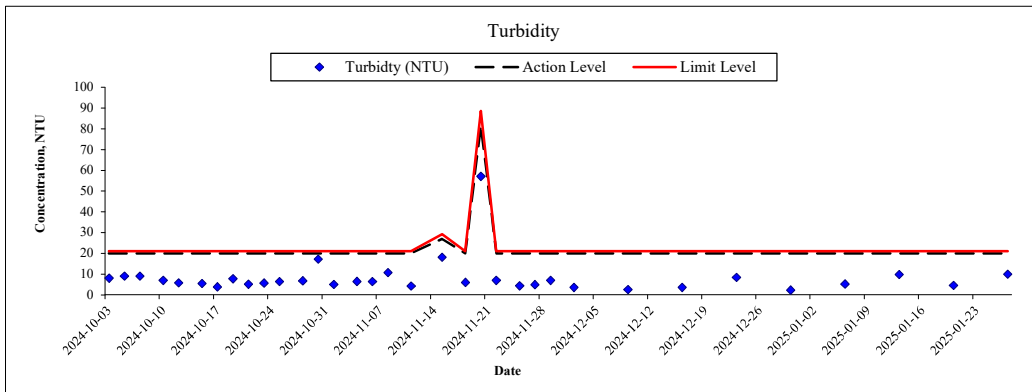
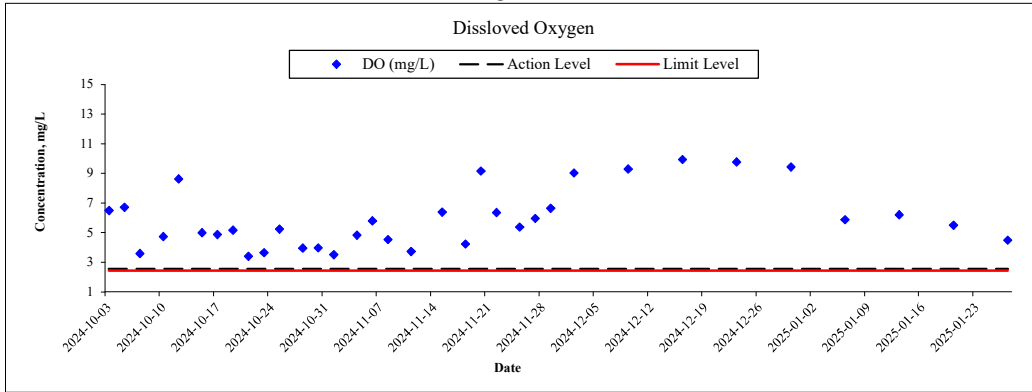
Contract No. DC/2022/02
 Drainage Improvement Works at Yuen Long -
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 Water Quality Monitoring Result



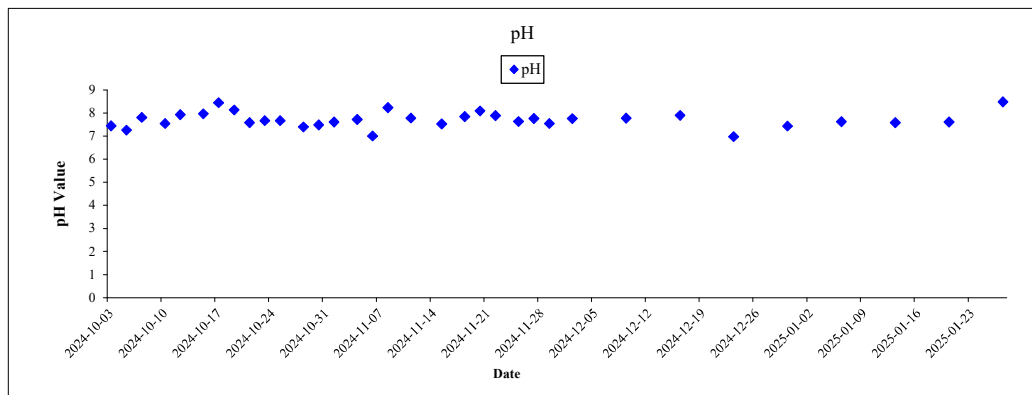
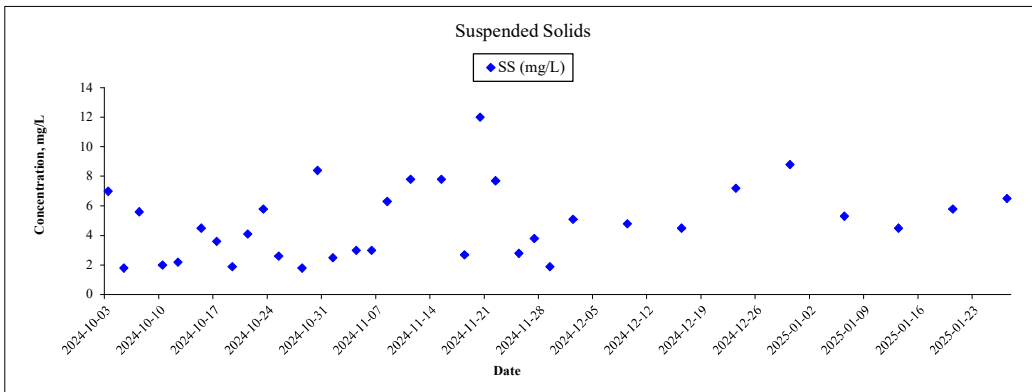
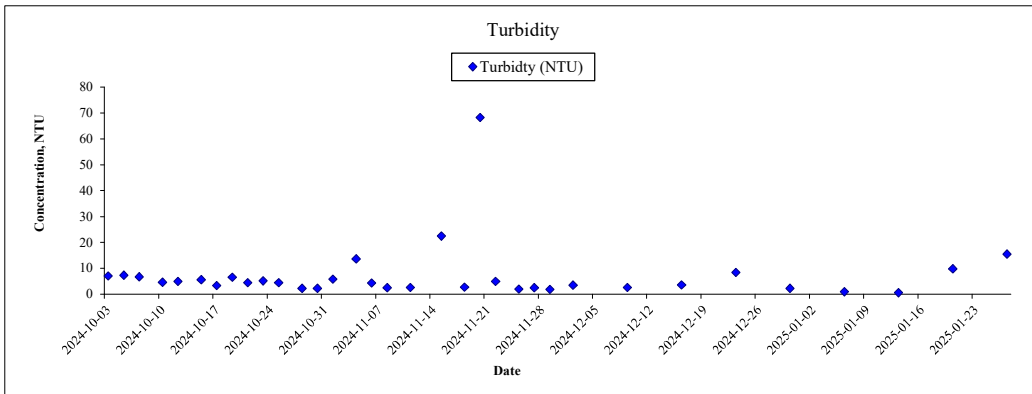
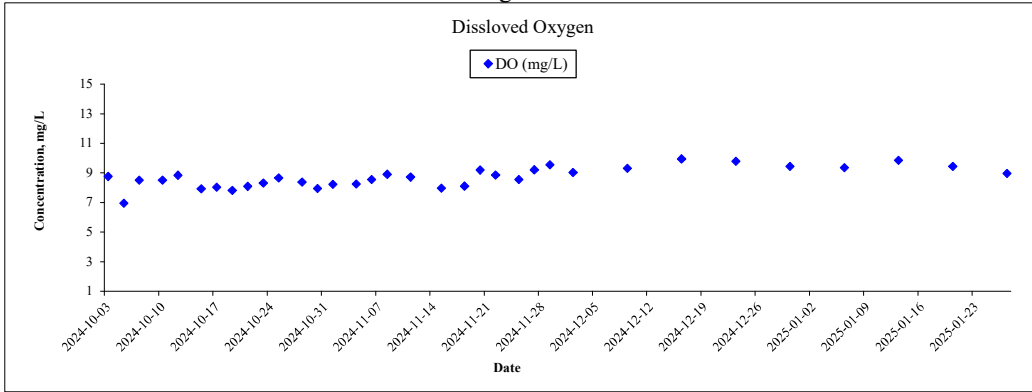
Water Quality Monitoring Location: C10

Location	Date	Weather	Time	Water Depth (m)	Dissolved Oxygen (mg/L)		Dissolved Oxygen Saturation (%)		pH		Salinity (ppt)		Tempertuare (°C)		Turbidity (NTU)		Suspended Solids (mg/L)		Remark
					Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	Value	Average	
C10	20250106	Fine	10:18	0.27	5.89		60.3		7.14		0.11		16.5		5.20		<1.0		
C10	20250106	Fine	10:18	0.27	5.88	5.89	60.2	60.3	7.14	7.14	0.11	0.11	16.5	16.5	5.22	5.21	<1.0	1.0	
C10	20250113	Fine	10:13	0.18	6.19		61.3		7.23		0.13		14.9		9.80		2.4		
C10	20250113	Fine	10:13	0.18	6.22	6.21	61.5	61.4	7.23	7.23	0.13	0.13	14.9	14.9	9.70	9.75	2.6	2.5	
C10	20250120	Cloudy	10:22	0.17	5.51		55.6		7.27		0.12		15.9		4.57		1.8		
C10	20250120	Cloudy	10:22	0.17	5.48	5.50	55.4	55.5	7.25	7.26	0.12	0.12	15.8	15.9	4.45	4.51	1.6	1.7	
C10	20250127	Cloudy	10:20	0.18	4.53		46.5		7.47		0.12		16.5		10.00		8.1		
C10	20250127	Cloudy	10:20	0.18	4.44	4.49	45.5	46.0	7.43	7.45	0.12	0.12	16.5	16.5	10.02	10.01	6.3	7.2	

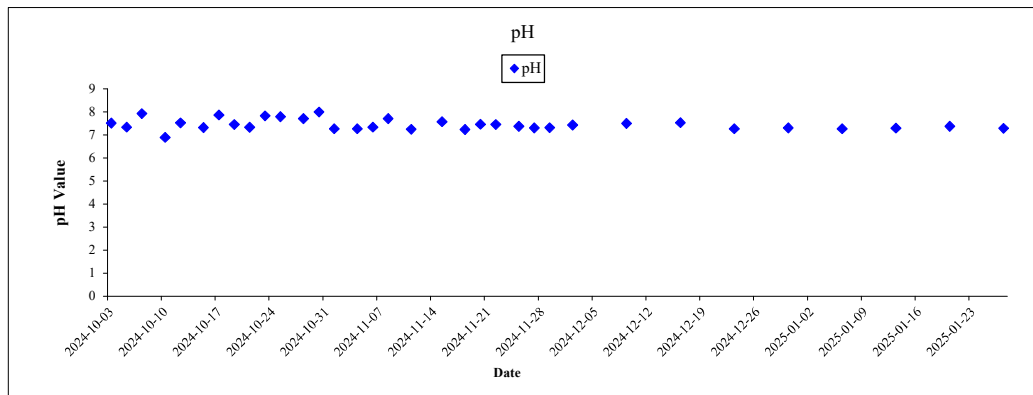
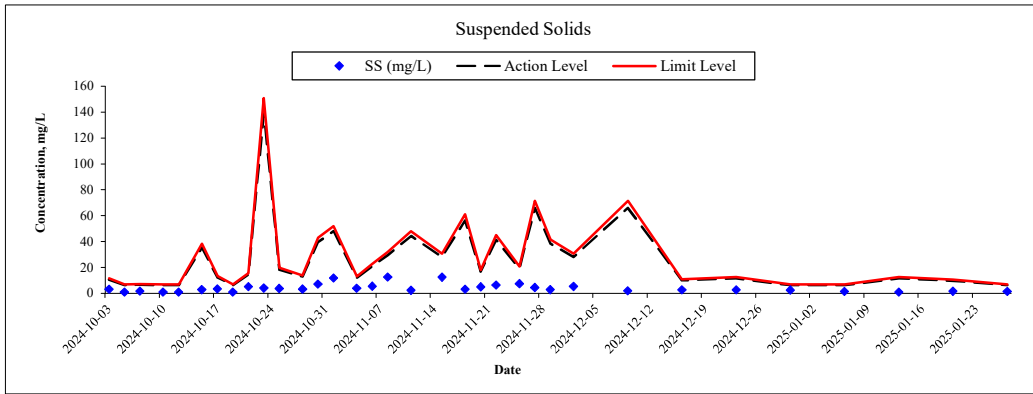
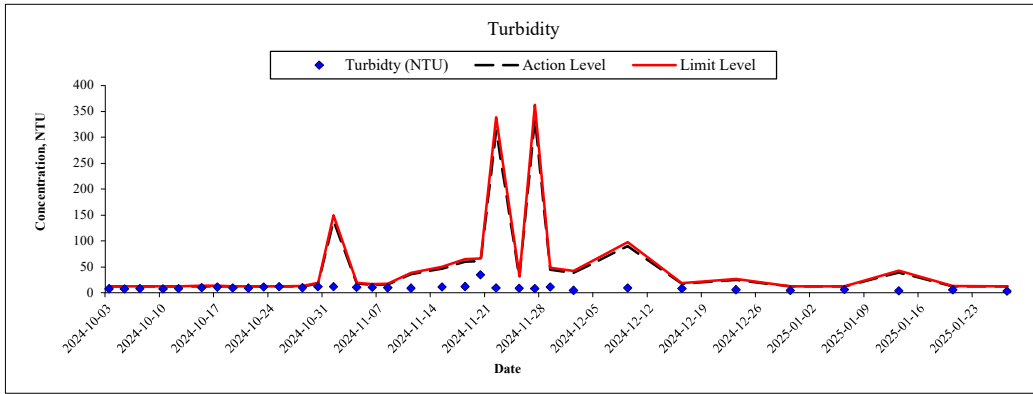
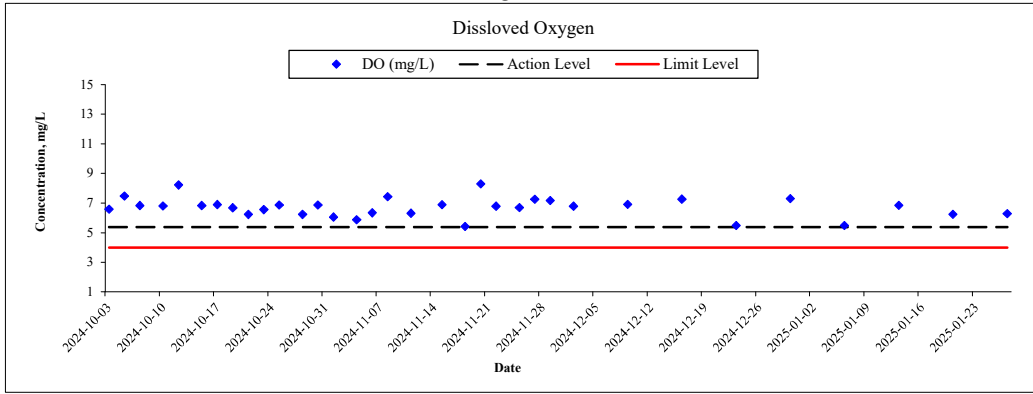
Monitoring Location: C10



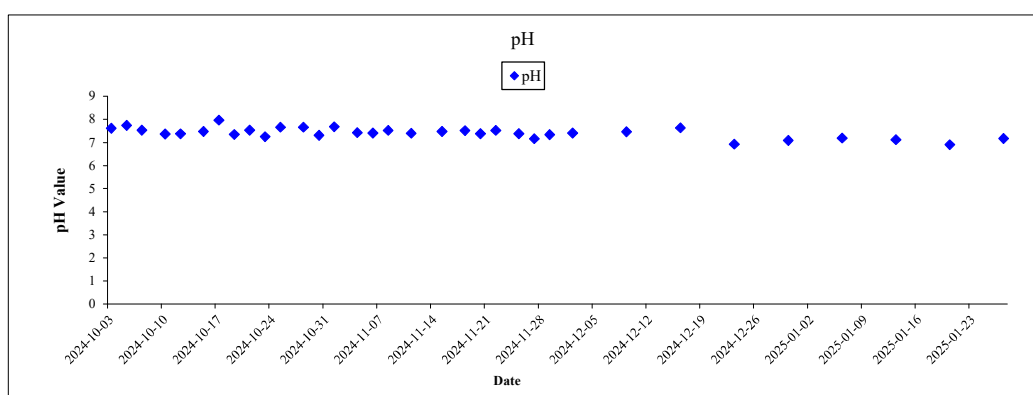
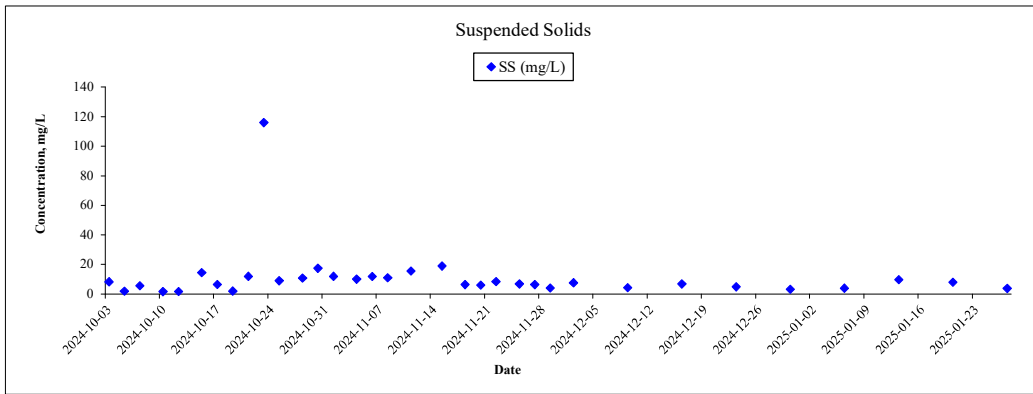
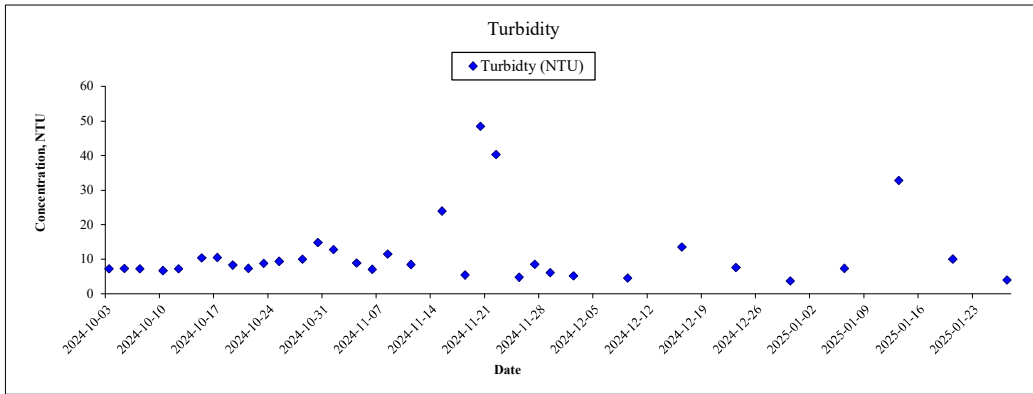
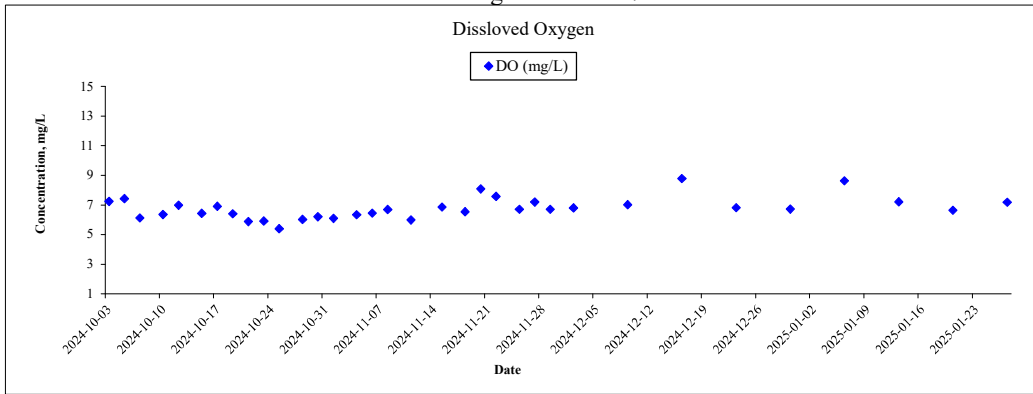
Monitoring Location: C9



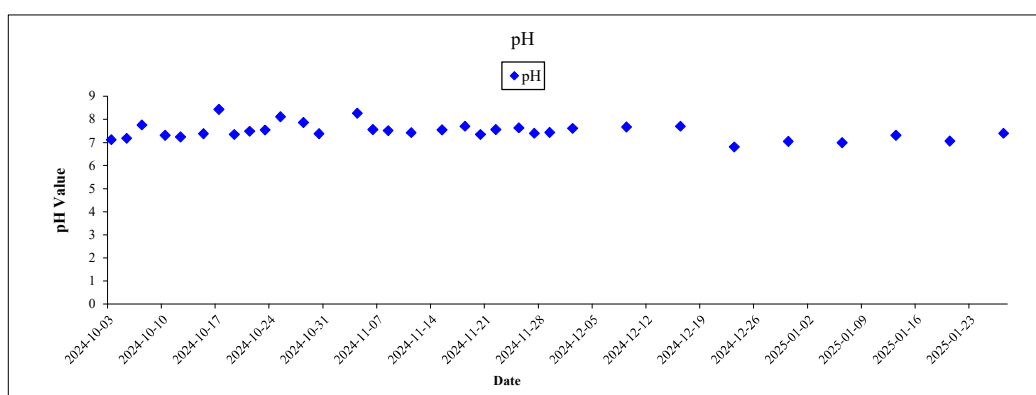
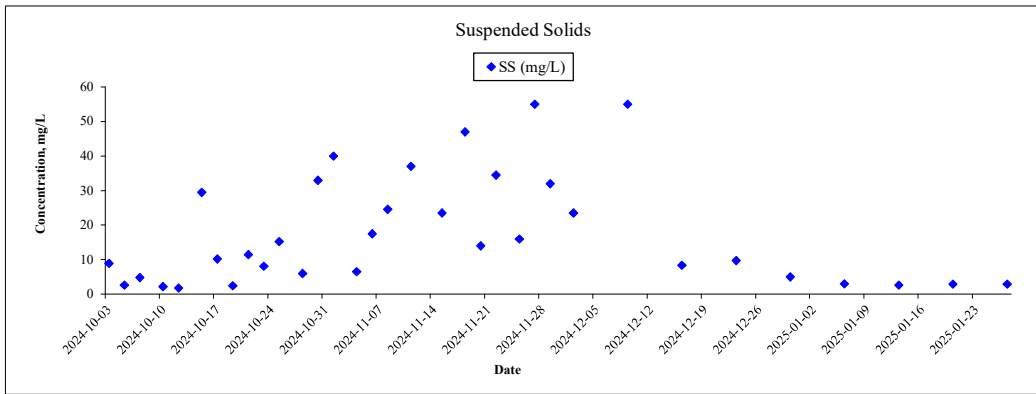
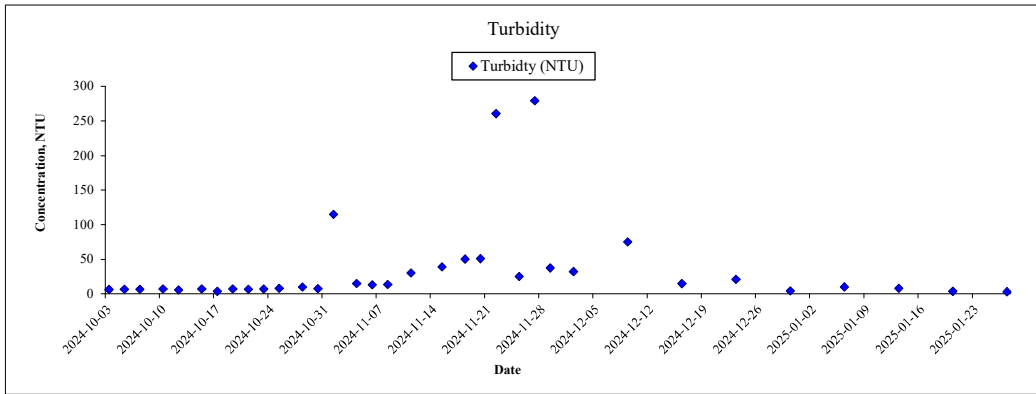
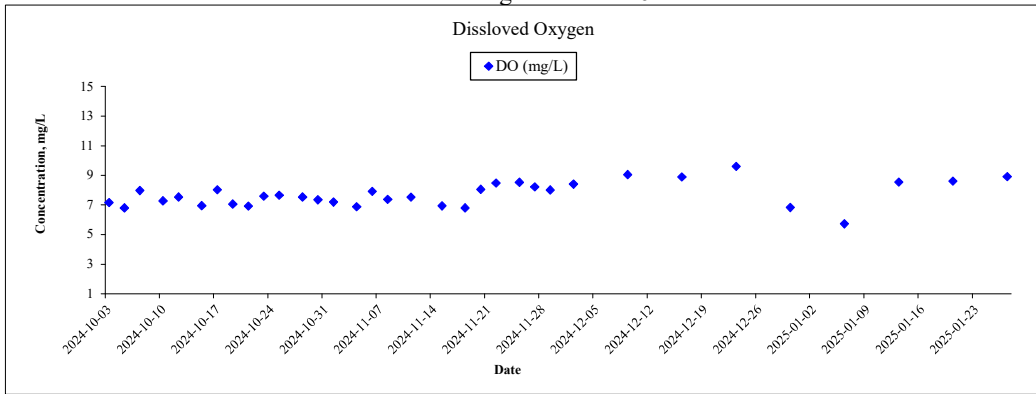
Monitoring Location: C8



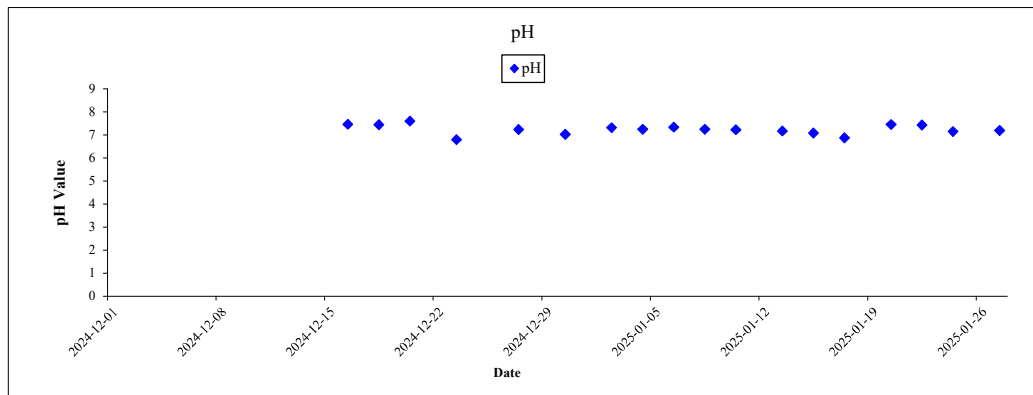
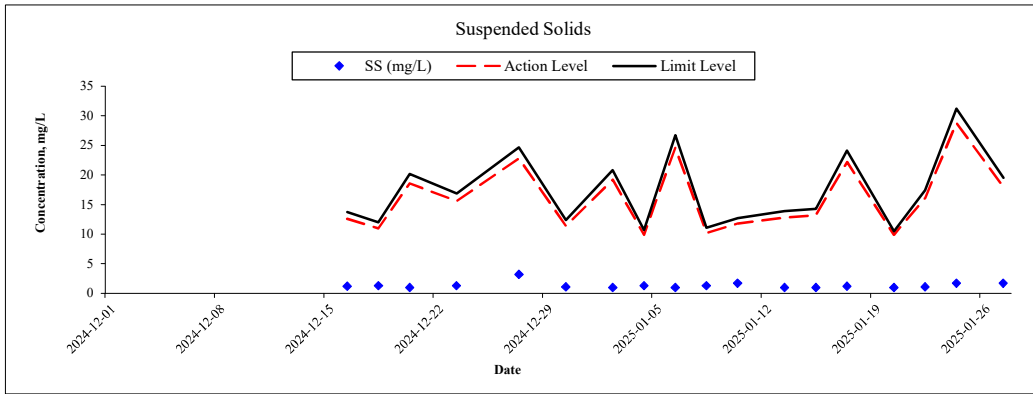
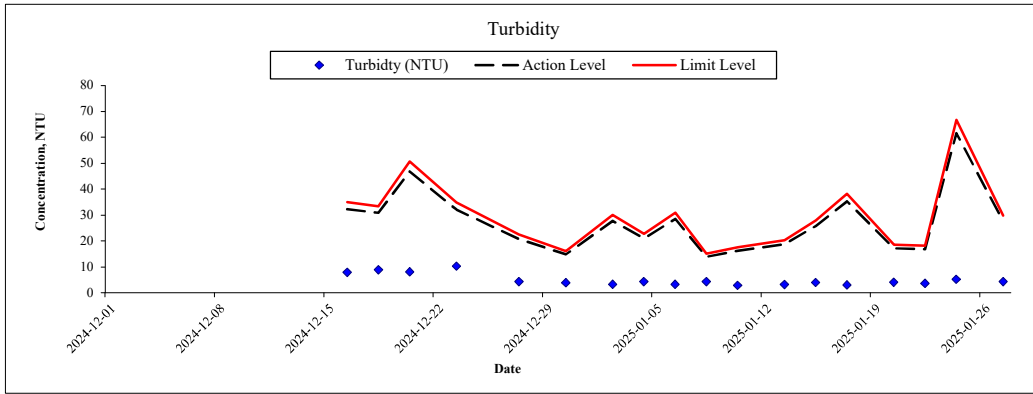
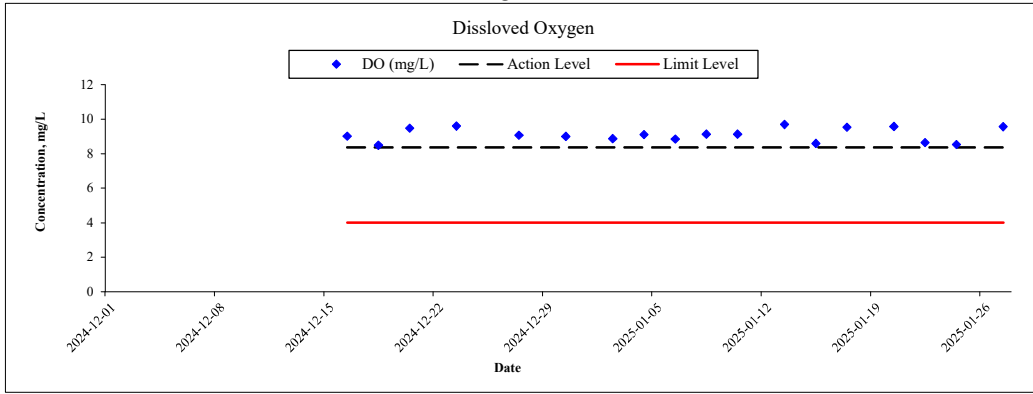
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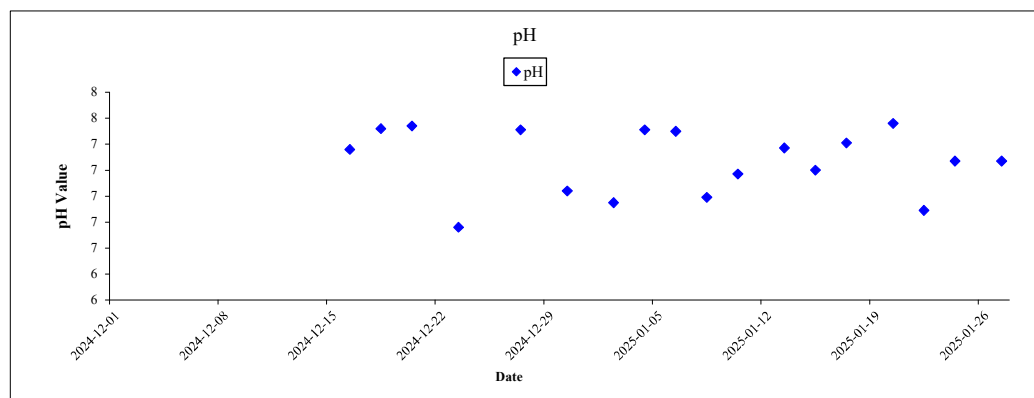
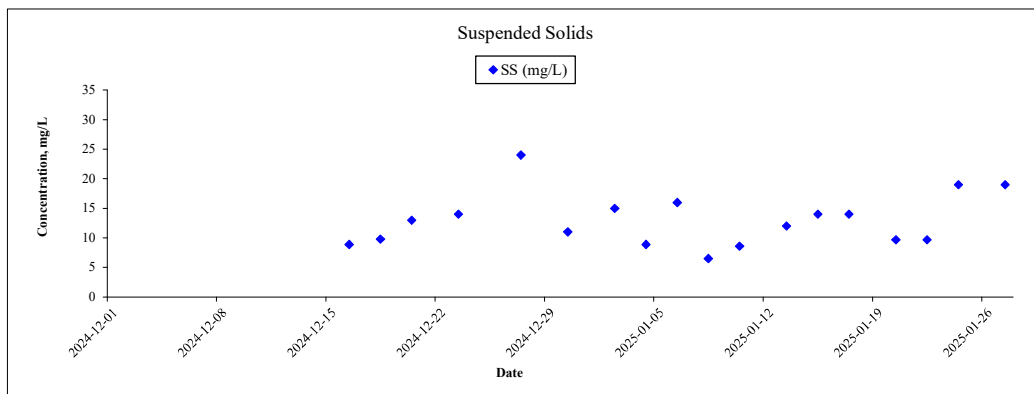
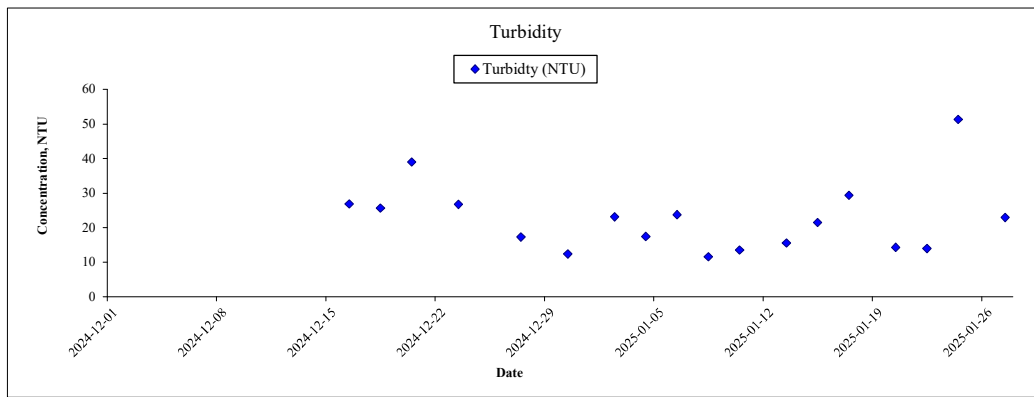
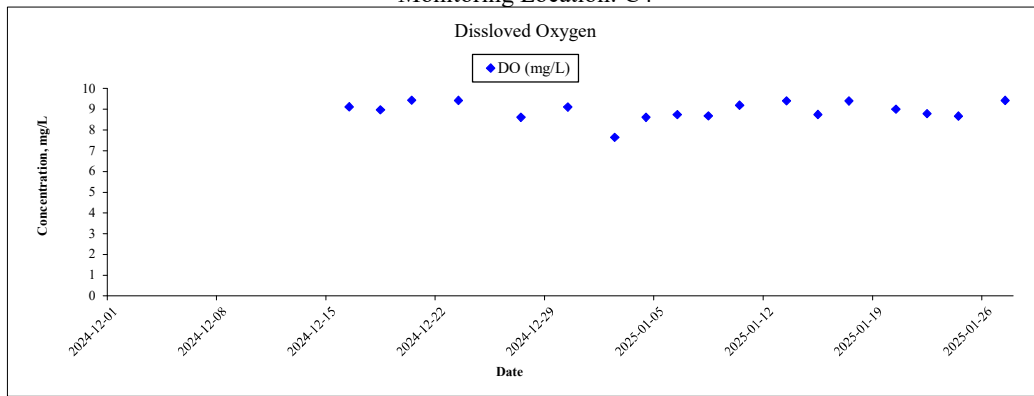
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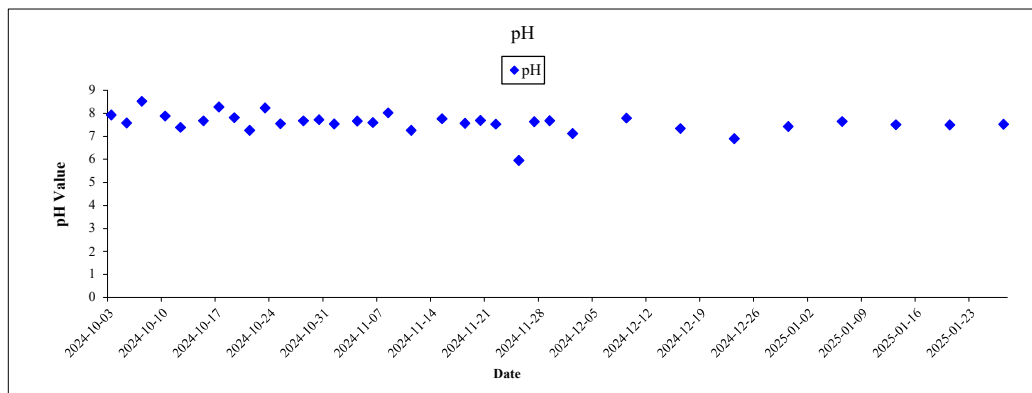
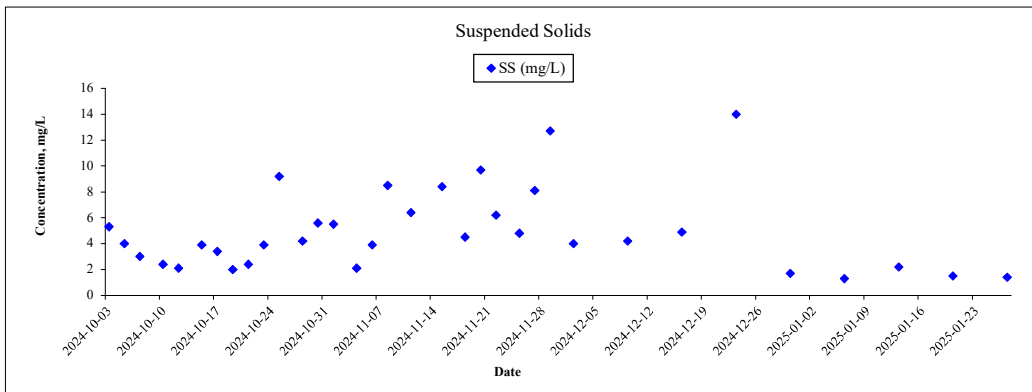
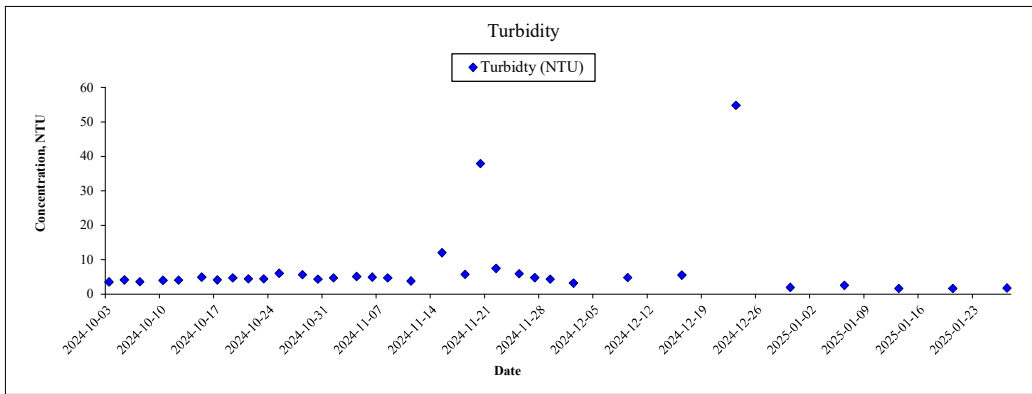
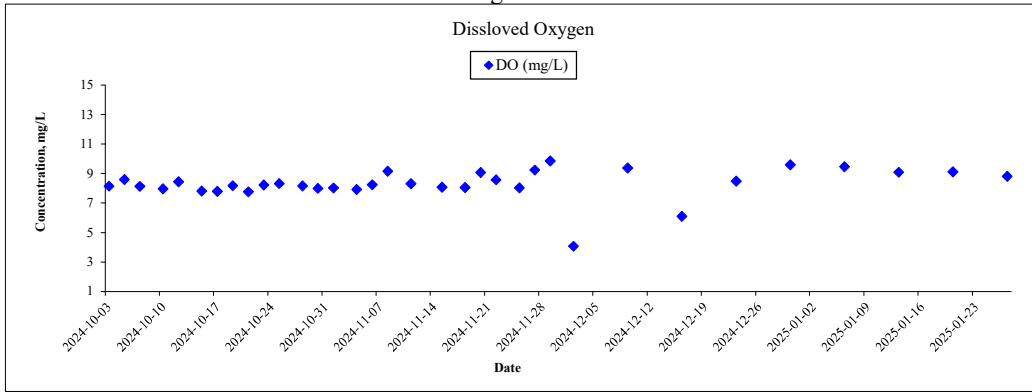
Monitoring Location: C5



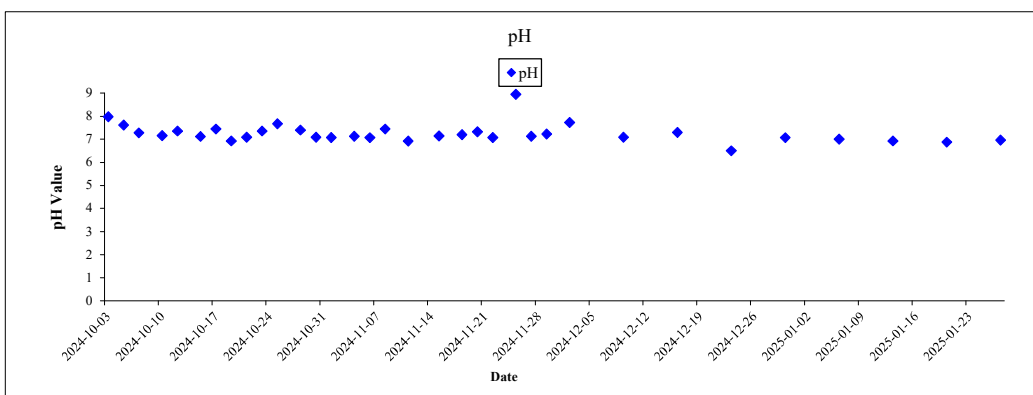
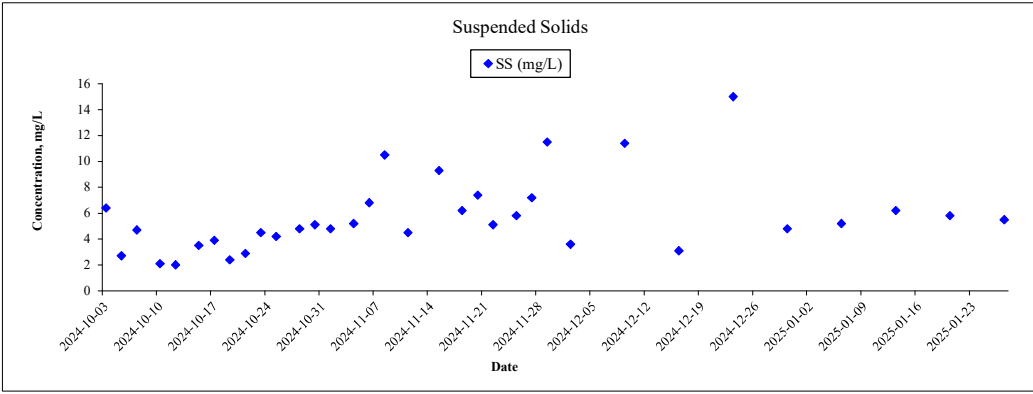
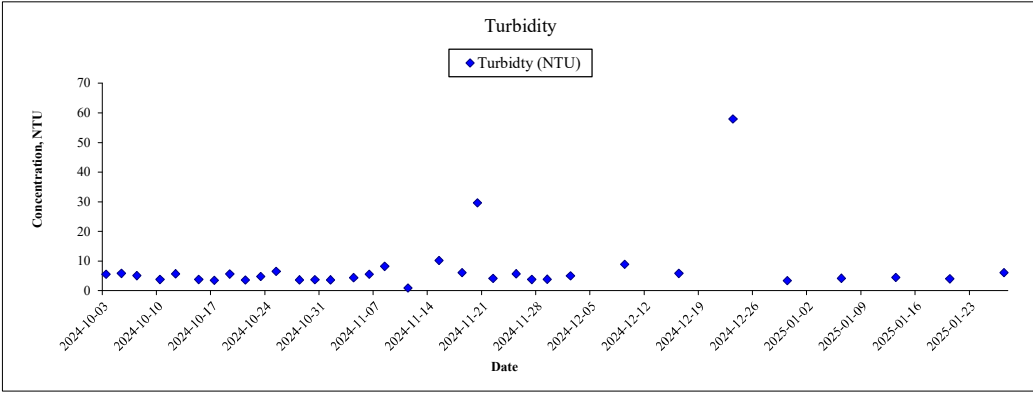
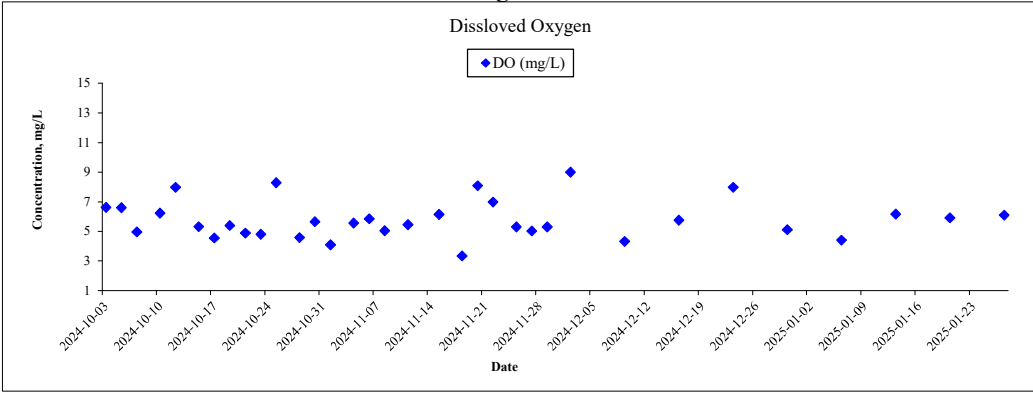
Monitoring Location: C4



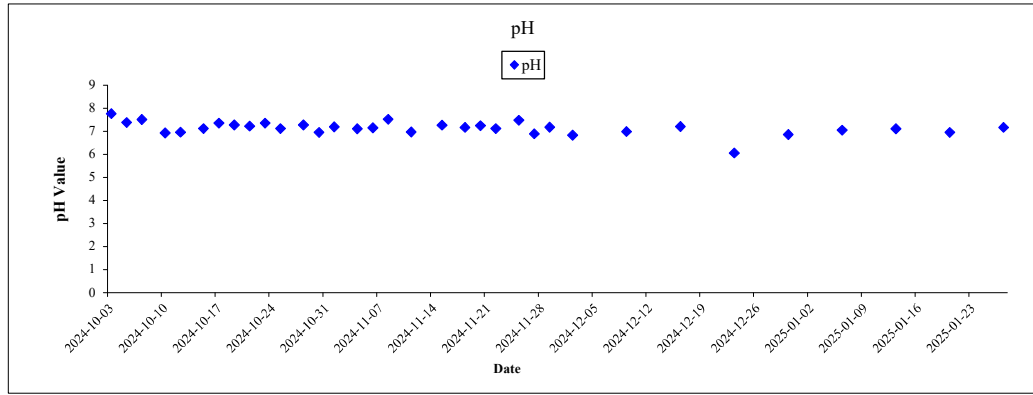
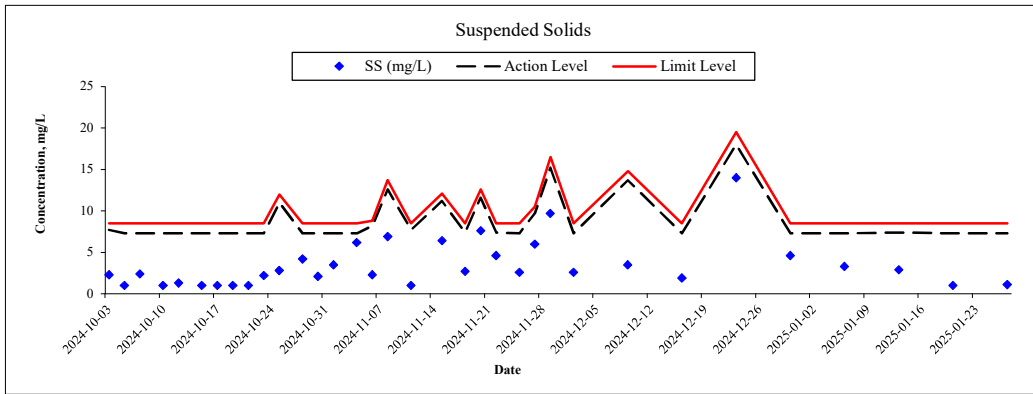
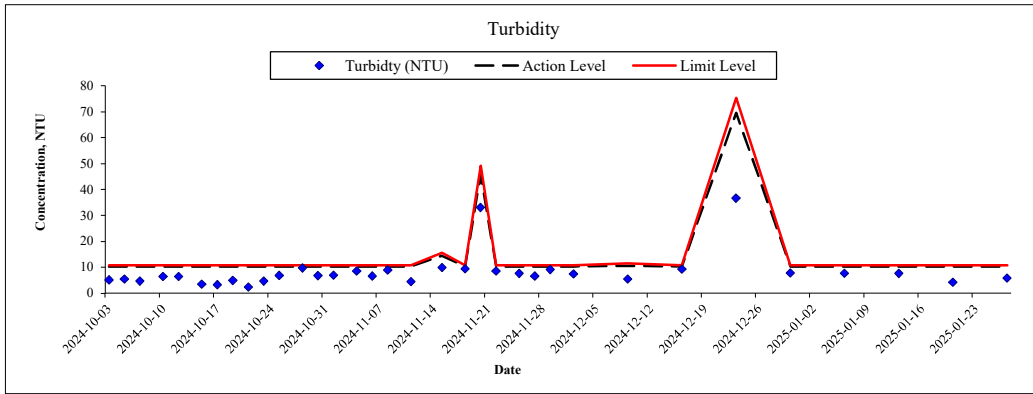
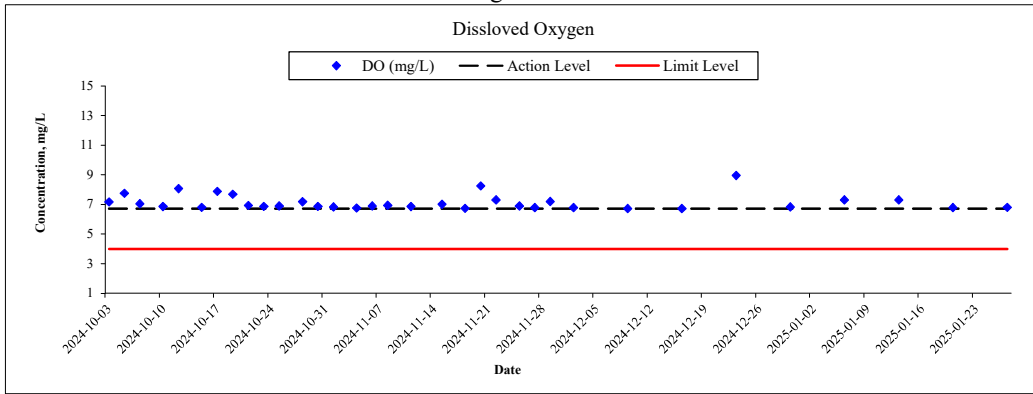
Monitoring Location: C3A



Monitoring Location: C2



Monitoring Location: C1A



Appendix 3.1 Calibration Certificates of Impact Noise Monitoring Equipment

Certificate of Calibration

for

Description: *Sound Level Meter*
Manufacturer: *NTi Audio*
Type No.: *XL2 (Serial No.: A2A-09696-E0)*
Microphone: *ACO 7052 (Serial No.:73780)*
Preamplifier: *NTi Audio MA220 (Serial No.:6282)*

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 (31.5Hz – 8kHz)**
 Outside
the allowable tolerance.

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

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

Date of receipt: 28 February 2024

Date of calibration: 02 March 2024

Date of NEXT calibration: 01 March 2025

Calibrated by: 
Calibration Technician

Certified by: 
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 02 March 2024

Certificate No.: APJ23-146-CC003



Page 1 of 4



1. Calibration Precaution:

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

2. Calibration Conditions:

Air Temperature: 22.9°C
 Air Pressure: 1005 hPa
 Relative Humidity: 61.2%

3. Calibration Equipment:

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

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

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

Linearity

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

Time Weighting

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

Certificate No.: APJ23-146-CC003



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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dB	SPL	Fast	94	31.5	94.0	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
					250	94.1	±1.4
					500	94.1	±1.4
					1000	94.1	Ref
					2000	94.4	±1.6
					4000	95.2	±1.6
				8000	94.5	+2.1; -3.1	

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA	SPL	Fast	94	31.5	54.6	-39.4±2.0
					63	67.9	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.4	-8.6±1.4
					500	90.9	-3.2±1.4
					1000	94.1	Ref
					2000	95.6	+1.2±1.6
					4000	96.2	+1.0±1.6
				8000	93.4	-1.1+2.1; -3.1	

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBC	SPL	Fast	94	31.5	91.0	-3.0±2.0
					63	93.3	-0.8±1.5
					125	93.9	-0.2±1.5
					250	94.1	-0.0±1.4
					500	94.2	-0.0±1.4
					1000	94.1	Ref
					2000	94.2	-0.2±1.6
					4000	94.4	-0.8±1.6
				8000	91.5	-3.0+2.1: -3.1	

Certificate No.: APJ23-146-CC003



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5. Calibration Results Applied

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

Uncertainties of Applied Value:

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

The uncertainties are evaluated for a 95% confidence level.

Note:

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

Certificate of Calibration

for

Description: Sound Level Meter
Manufacturer: NTi Audio
Type No.: XL2 (Serial No.: A2A-13663-F0)
Microphone: ACO 7052 (Serial No.: 84413)
Preamplifier: NTi Audio M2211 MA220 (Serial No.: 7014)

Submitted by:

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

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

- Within (31.5Hz – 4kHz)
 Outside

the allowable tolerance.

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

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

Date of receipt: 25 January 2024

Date of calibration: 29 January 2024

Date of NEXT calibration: 28 January 2025

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 29 January 2024

Certificate No.: APJ23-132-CC001

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1. Calibration Precaution:

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

2. Calibration Conditions:

Air Temperature: 20.6 °C
 Air Pressure: 1006 hPa
 Relative Humidity: 48.5 %

3. Calibration Equipment:

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

4. Calibration Results

Sound Pressure Level

Reference Sound Pressure Level

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

Linearity

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

Time Weighting

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

Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dB	SPL	Fast	94	31.5	94.1	±2.0
					63	94.1	±1.5
					125	94.1	±1.5
					250	94.1	±1.4
					500	94.1	±1.4
					1000	94.1	Ref
					2000	94.5	±1.6
					4000	95.1	±1.6

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBA	SPL	Fast	94	31.5	54.8	-39.4±2.0
					63	67.9	-26.2±1.5
					125	78.0	-16.1±1.5
					250	85.4	-8.6±1.4
					500	90.9	-3.2±1.4
					1000	94.1	Ref
					2000	95.7	+1.2±1.6
					4000	96.2	+1.0±1.6

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB	
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz			
30-130	dBC	SPL	Fast	94	31.5	91.1	-3.0±2.0
					63	93.3	-0.8±1.5
					125	93.9	-0.2±1.5
					250	94.1	-0.0±1.4
					500	94.2	-0.0±1.4
					1000	94.1	Ref
					2000	94.3	-0.2±1.6
					4000	94.4	-0.8±1.6

5. Calibration Results Applied

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

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.05
	63 Hz	± 0.05
	125 Hz	± 0.05
	250 Hz	± 0.05
	500 Hz	± 0.05
	1000 Hz	± 0.05
	2000 Hz	± 0.10
	4000 Hz	± 0.15
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:

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



Certificate 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



**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.



Appendix 3.2 Event and Action Plan for Noise Exceedance

Event and Action Plan for Noise

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

Appendix 3.3 Impact Noise Monitoring Data

Noise Level Results at HC_M3a

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	Leq-30min with free-field correction, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)			
06/01/2025	8:34	-	9:04	Fine	63.3	64.2	65.2	67.3	68.0	68.3	66.5	69.5
13/01/2025	8:33	-	9:03	Fine	66.8	65.6	66	63.1	66.6	67.3	66.1	69.1
23/01/2025	8:30	-	9:00	Fine	65.5	65.8	66.4	66.3	65.0	67.6	66.2	69.2
										Max	Min	
										69.5	69.1	

Noise Level Results at HC_M4

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	7:49	-	8:19	Fine	60.7	64.0	60.9	62.7	64.0	63.9	62.9
13/01/2025	7:52	-	8:22	Fine	60.2	62.3	63.6	61.4	65.3	65.5	63.5
23/01/2025	7:50	-	8:20	Fine	62.0	61.9	65.5	65.6	61.7	63.2	63.6
										Max	Min
										63.6	62.9

Noise Level Results at HC_M6

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	7:12	-	7:42	Fine	61.9	63.2	61.1	60.0	64.0	63.3	62.5
13/01/2025	7:15	-	7:45	Fine	62.3	65.6	64.6	60.7	66.0	62.4	64.0
23/01/2025	7:11	-	7:41	Fine	63.7	63.0	61.5	63.2	60.1	63.2	62.6
										Max	Min
										64.0	62.5

Noise Level Results at LFT_M1

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	12:01	-	12:31	Fine	60.3	56.3	57.5	60.5	58.6	57.3	58.7
13/01/2025	12:03	-	12:33	Fine	56.8	59.7	59.8	56.4	60.4	57.7	58.7
23/01/2025	12:06	-	12:36	Fine	55.3	59.4	58.8	57.3	57.6	58.3	58.0
										Max	Min
										58.7	58.0

Noise Level Results at LFT_M3A

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	Leq-30min with free-field correction, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)			
06/01/2025	12:37	-	13:07	Fine	55.4	55.9	60.1	58.4	59.1	58.0	58.1	61.1
13/01/2025	12:40	-	13:10	Fine	59.9	58.2	55.8	56.6	56.2	57.7	57.6	60.6
23/01/2025	12:43	-	13:13	Fine	56.5	54.9	56.2	57.9	57.5	55.2	56.5	59.5
										Max	Min	
										61.1	59.5	

Noise Level Results at LFT_M5

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	13:12	-	13:42	Fine	61.2	62.2	62.2	60.2	58.4	60.8	61.0
13/01/2025	13:16	-	13:46	Fine	58.2	59.6	61.4	60.1	60.6	60.0	60.1
23/01/2025	13:19	-	13:49	Fine	60.1	59.1	61.8	60.1	57.8	60.8	60.1
										Max	Min
										61.0	60.1

Noise Level Results at LFT_M6

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	13:52	-	14:22	Fine	62.4	65.6	63.7	59.6	61.1	60.8	62.7
13/01/2025	13:53	-	14:23	Fine	62.3	63.2	60.4	63.6	62.6	61.0	62.3
23/01/2025	13:55	-	14:25	Fine	62.1	60.5	61.6	62.3	62.8	61.7	61.9
										Max	Min
										62.7	61.9

Noise Level Results at LFT_M11

Date	Time		Weather	Leq-5min, dB(A)						30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	14:26	-	14:56	Fine	58.3	58.2	59.2	58.1	59.6	56.9	58.5
13/01/2025	14:28	-	14:58	Fine	58.8	58.9	58	58.6	59.6	56.4	58.5
23/01/2025	14:30	-	15:00	Fine	59.8	60.3	57.8	57.3	57.9	58.9	58.8
										Max	Min
										58.8	58.5

Noise Level Results at SSNV_M2

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	15:41	-	16:11	Fine	51.2	48.8	50.5	48.0	52.3	49.7	50.3
13/01/2025	15:38	-	16:08	Fine	50.3	48.8	48.1	51.6	48.3	49.6	49.6
23/01/2025	15:45	-	16:15	Fine	48.0	50.3	50.2	50.8	49.3	50.8	50.0
										Max	Min
										50.3	49.6

Noise Level Results at SSNV_M3

Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)		
06/01/2025	16:25	-	16:55	Fine	61.8	62.5	63.0	61.2	61.7	63.3	62.3
13/01/2025	16:26	-	16:56	Fine	62.4	63.1	62.0	61.8	62.4	61.2	62.2
23/01/2025	16:28	-	16:58	Fine	62.8	61.7	62.3	62.8	61.2	62.6	62.3
										Max	Min
										62.3	62.2

Noise Level Results at SSNV_M6

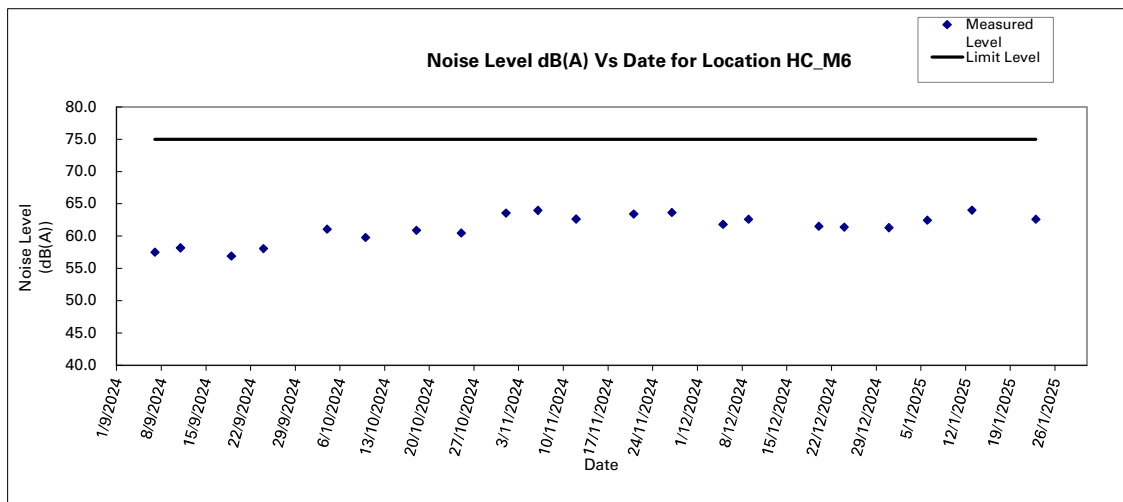
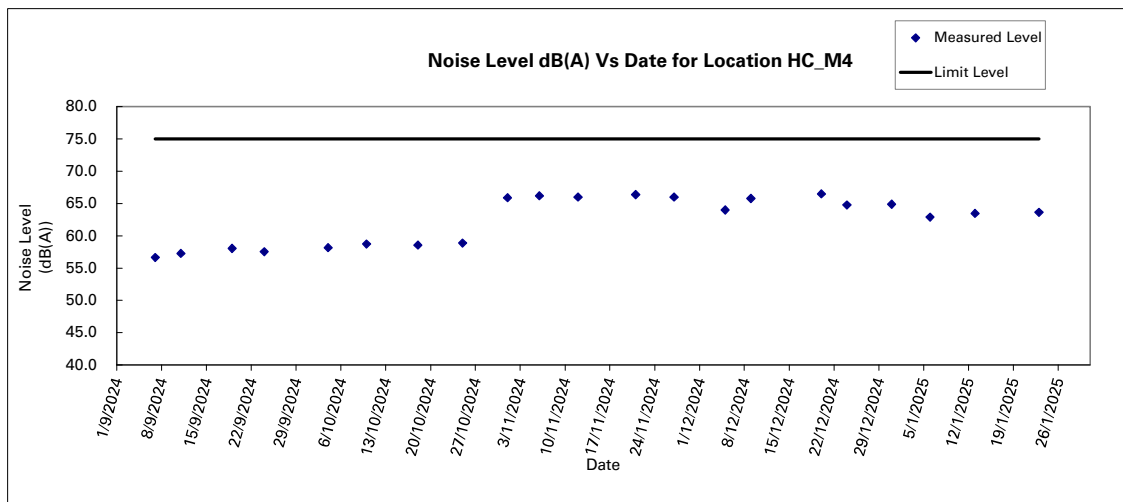
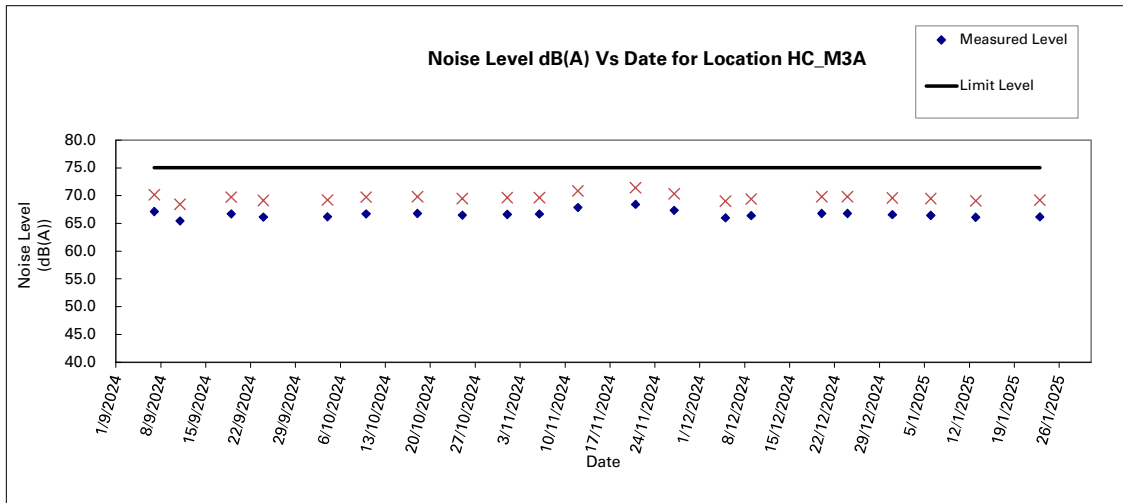
Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	Leq-30min with free-field correction, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)			
06/01/2025	17:15	-	17:45	Fine	60.1	61.8	59.9	58.8	59.3	61.3	60.3	63.3
13/01/2025	17:18	-	17:48	Fine	61.4	61.5	58.2	57.7	61.9	58.9	60.3	63.3
23/01/2025	17:14	-	17:44	Fine	61.8	58.8	57.8	61.1	62.3	58.1	60.4	63.4
										Max	Min	
										63.4	63.3	

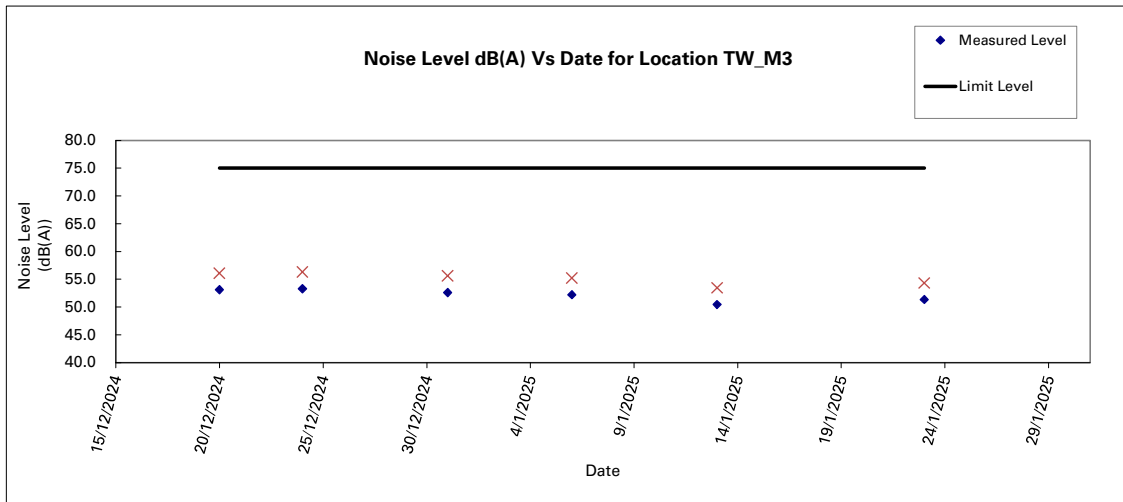
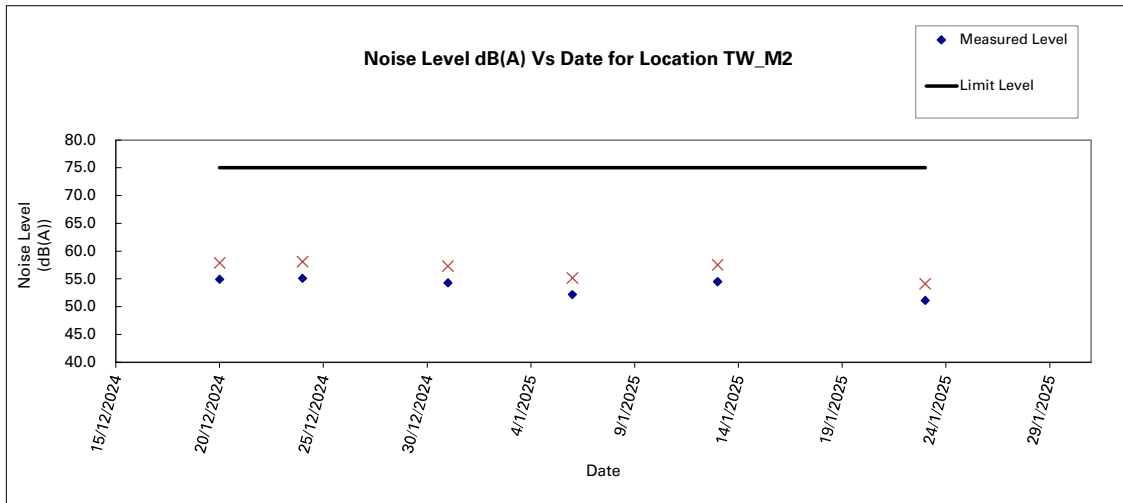
Noise Level Results at TW_M2

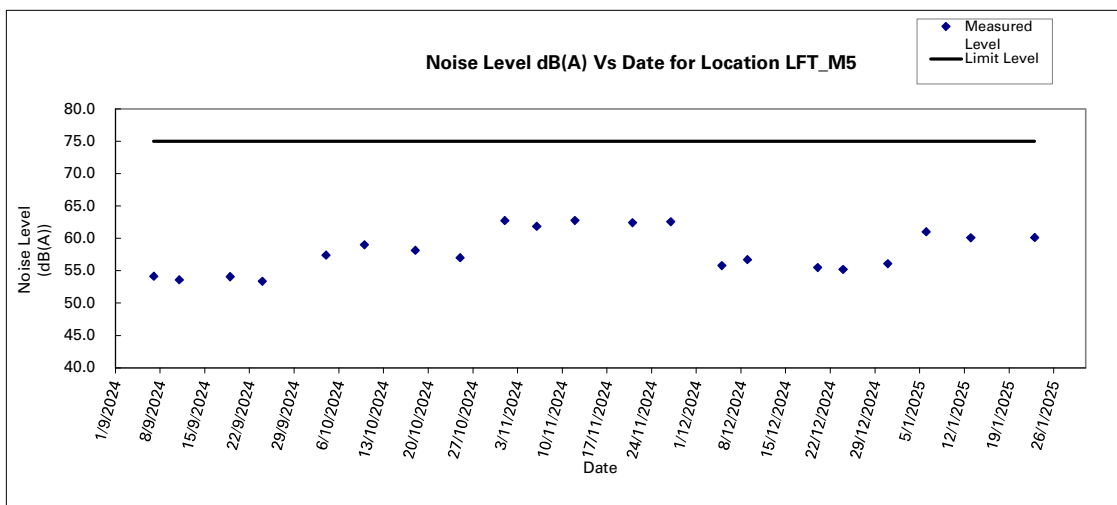
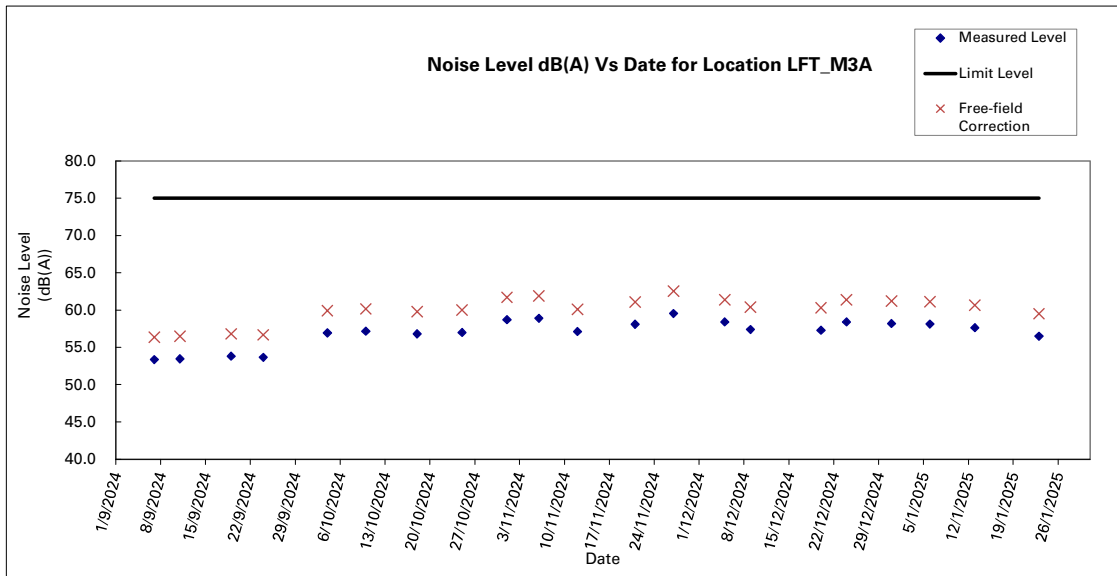
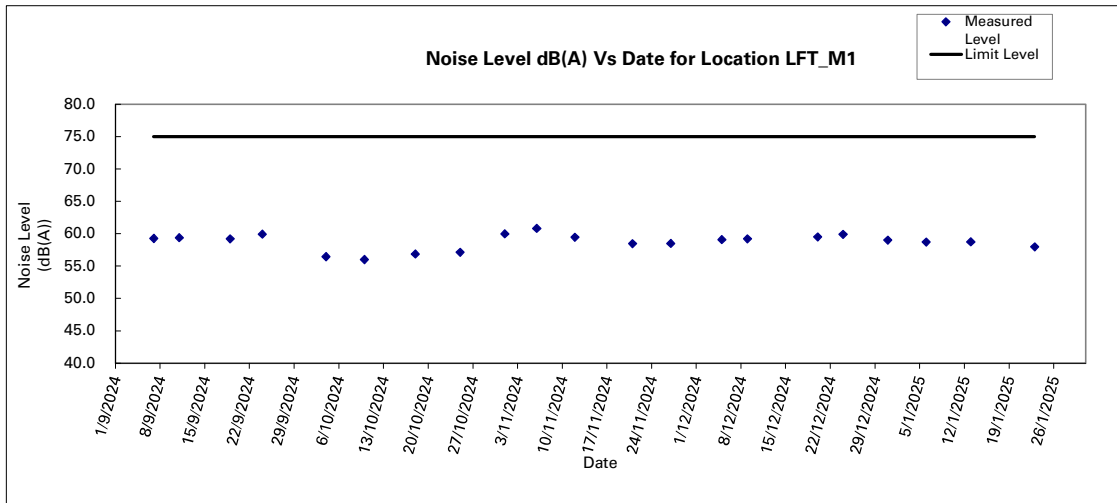
Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	Leq-30min with free-field correction, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)			
06/01/2025	10:03	-	10:33	Fine	54.2	50.4	49.7	53.5	51.9	51.6	52.2	55.2
13/01/2025	10:06	-	10:36	Fine	53.6	53.2	55.5	52.6	55.7	55.4	54.5	57.5
23/01/2025	10:05	-	10:35	Fine	50.3	49.6	50.6	51.8	48.0	53.9	51.1	54.1
											Max	Min
											57.5	54.1

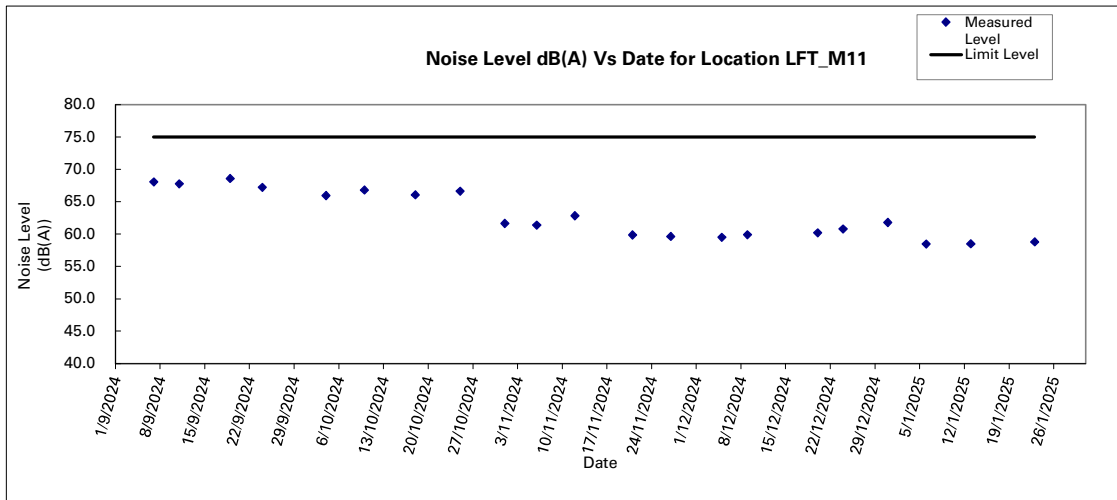
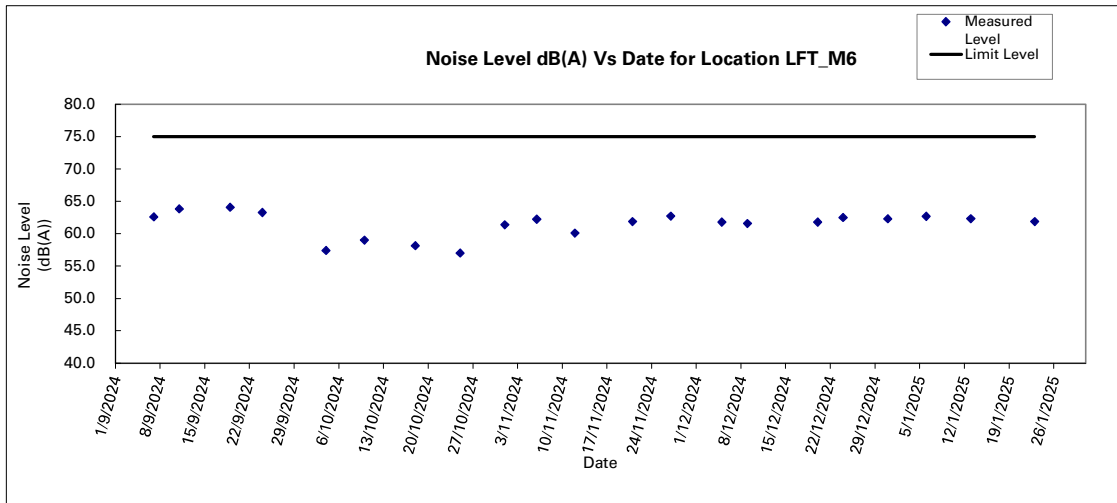
Noise Level Results at TW_M3

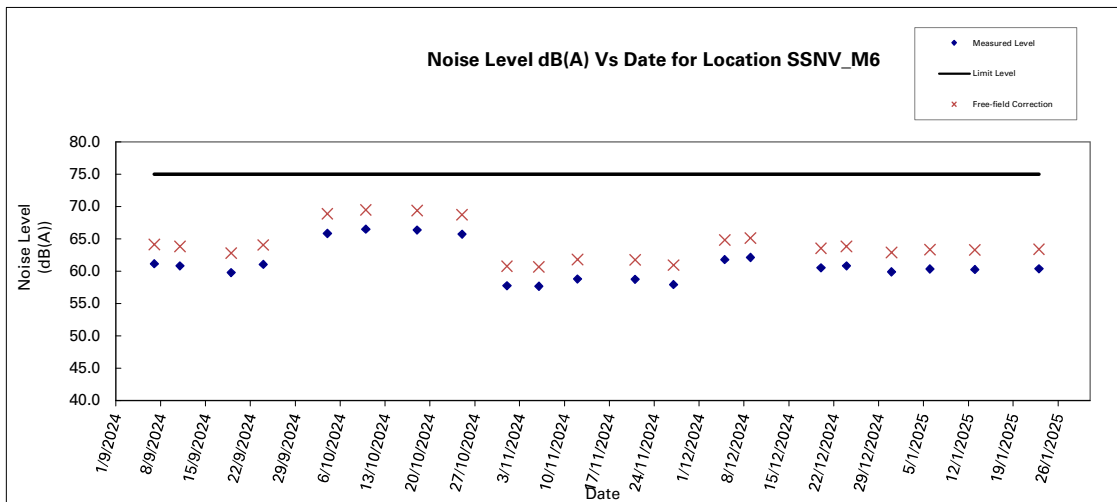
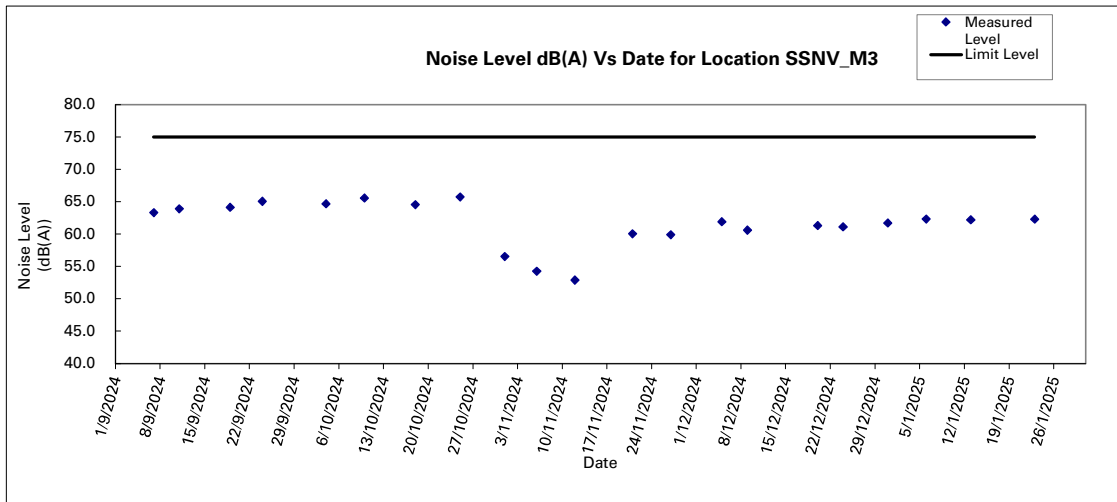
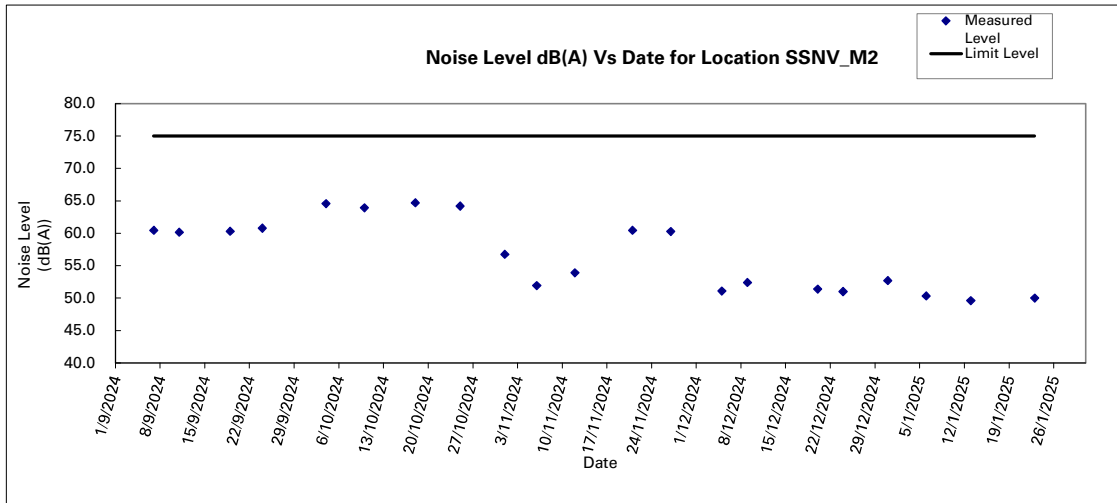
Date	Time		Weather	Leq-5min, dB(A)						Leq-30min, dB(A)	Leq-30min with free-field correction, dB(A)	
				Reading (1)	Reading (2)	Reading (3)	Reading (4)	Reading (5)	Reading (6)			
06/01/2025	10:38	-	11:08	Fine	49.1	52.1	50.8	53.5	52.3	53.8	52.2	55.2
13/01/2025	10:43	-	11:13	Fine	52.3	51.9	48.6	50.4	48.6	49.5	50.5	53.5
23/01/2025	10:43	-	11:13	Fine	50.9	49.0	53.2	49.4	53.9	48.6	51.3	54.3
											Max	Min
											55.2	53.5











Appendix 5.1 Waste Flow Table

Appendix 10.1 Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Jan 2025 - 31 Jan 2025	2	3	One complaint regarding air quality and one complaint regarding water quality were recorded on 22 Jan 2025.

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Jan 2025 - 31 Jan 2025	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Jan 2025 - 31 Jan 2025	0	0	N/A

Appendix 11.1 Impact Monitoring Schedule of Next Reporting Month

Impact Noise & Water Monitoring Schedule for Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long Stage 2 (Version 2)

February 2025

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1 Water quality monitoring at C4 and C5 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3
2	3 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10	4 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	5 Water quality monitoring at C4 and C5	6	7 Water quality monitoring at C4 and C5	8
9	10 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	11	12 Water quality monitoring at C4 and C5	13	14 Water quality monitoring at C4 and C5	15
16	17 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10	18	19 Water quality monitoring at C4 and C5	20	21 Water quality monitoring at C4 and C5 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	22
23	24 Water quality monitoring at C1A, C2, C3A, C4, C5 C6, C7A, C8, C9 and C10	25	26 Water quality monitoring at C4 and C5	27 Noise monitoring at SSNV_M2, SSNV_M3, SSNV_M6, HC_M3A, HC_M4, HC_M6, LFT_M1, LFT_M3A, LFT_M5, LFT_M6, LFT_M11, TW_M2 and TW_M3	28 Water quality monitoring at C4 and C5	

Noise Monitoring Locations:
 Noise monitoring stations at Ha Che: HC_M3A, HC_M4, and HC_M6
 Noise monitoring stations at Tai Wo: TW_M2 and TW_M3
 Noise monitoring stations at Lin Fa Tei: LFT_M1, LFT_M3A, LFT_M5, LFT_M6, and LFT_M11
 Noise monitoring stations at Sung Shan New Village: SSNV_M2, SSNV_M3, and SSNV_M6

Water Monitoring Locations:
 Water quality monitoring stations at Ha Che: C9 and C10
 Water quality monitoring stations at Tai Wo: C4 and C5
 Water quality monitoring stations at Lin Fa Tei: C6, C7A, and C8
 Water quality monitoring stations at Sung Shan New Village: C1A, C2, and C3A

Remarks:
 1. The schedule may be changed due to unforeseen circumstances (e.g. adverse weather, etc.)
 2. As approved by the EPD that the frequency of water monitoring at Ha Che, Lin Fa Tei and Sung Shan New Village has been changed from three times per week to once per week, while the frequency of water monitoring at Tai Wo remains as three times per week.

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