

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

Quarterly Environmental
Monitoring and Audit (EM&A)
Report – May to July 2024

**Wing Tat Civil Engineering Co.
Limited**

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

Verification of Quarterly EM&A Report (May to Jul 2024)

26 August 2024

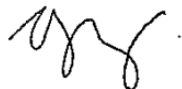
Dear Sir,

We refer to the Quarterly EM&A Report under the captioned Project, which was certified on 26 August 2024 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 Condition 1.9 and Section 12.3 under the Updated EM&A Manual.

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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Executive Summary

- A1. Drainage Services Department (DSD) has appointed Aurecon Hong Kong Limited (Aurecon) to undertake the Environmental Team services for the project and implement the EM&A works.
- A2. The construction works commenced on 20 February 2024.
- A3. This 2nd Quarterly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. DC/2022/02 Drainage Improvement Works at Yuen Long – Stage 2 (hereinafter called the “Contract”). The report summaries the findings of the EM&A programme during the reporting period from 1 May to 31 July 2024.

Key Construction Works in the Reporting Period

- A4. A summary of construction activities undertaken during the reporting period is presented below:

Ha Che

- Site Clearance Work
- Lifting Operation;
- Plant Operation;
- Excavation;
- Installation of Precast Unit;
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Lin Fa Tei

- Site Clearance Work
- Lifting Operation;
- Plant Operation;
- Excavation;
- Sheet Piling;
- Breaking Ground;
- Temporary Drainage Diversion; and
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting

Tai Wo

- No construction activities.

Sung Shan New Village

- Site Clearance; and
- Breaking Ground.

Breaches of Environmental Quality Performance Limits (AL levels)

Water Quality

A5. The summary of exceedance records during the reporting period is summarized in **Table A1**.

Table A1 Summary of Exceedance Records of Water Quality Monitoring

Parameter	No. of non-project related exceedances		Total No. of non-project related exceedances	No. of exceedance related to the Project		Total No. of exceedance related to the Project
	AL	LL		AL	LL	
Dissolved Oxygen	0	0	0	0	0	0
Turbidity	0	0	0	0	0	0
Suspended Solids	0	11	11	0	0	0

A6. Eleven (11) limit level exceedances for SS were recorded during the reporting period. After investigation of above the exceedances, it was considered to non-project related.

Noise

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

Complaint Log

A8. One environmental complaint regarding the water quality was received in the reporting period. The relevant investigation for the complaint on 14 June 2024 had been completed during the reporting period. It is concluded that the complaint is not related to the Project.

Notification of Summons and Successful Prosecutions

A9. No notification of summons or successful prosecutions was received in the reporting period.

Reporting Changes

A10. 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. Thus, the construction EM&A programme at Tai Wo, including impact water quality monitoring, impact noise monitoring and weekly inspection, are temporarily suspended during the reporting period.

A11. 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.

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 2nd Quarterly EM&A Report summarizing the key findings of the construction phase EM&A programme from 1 May to 31 July 2024 (the reporting period) and is submitted to fulfil the requirements in Section 12.3 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 work 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**.

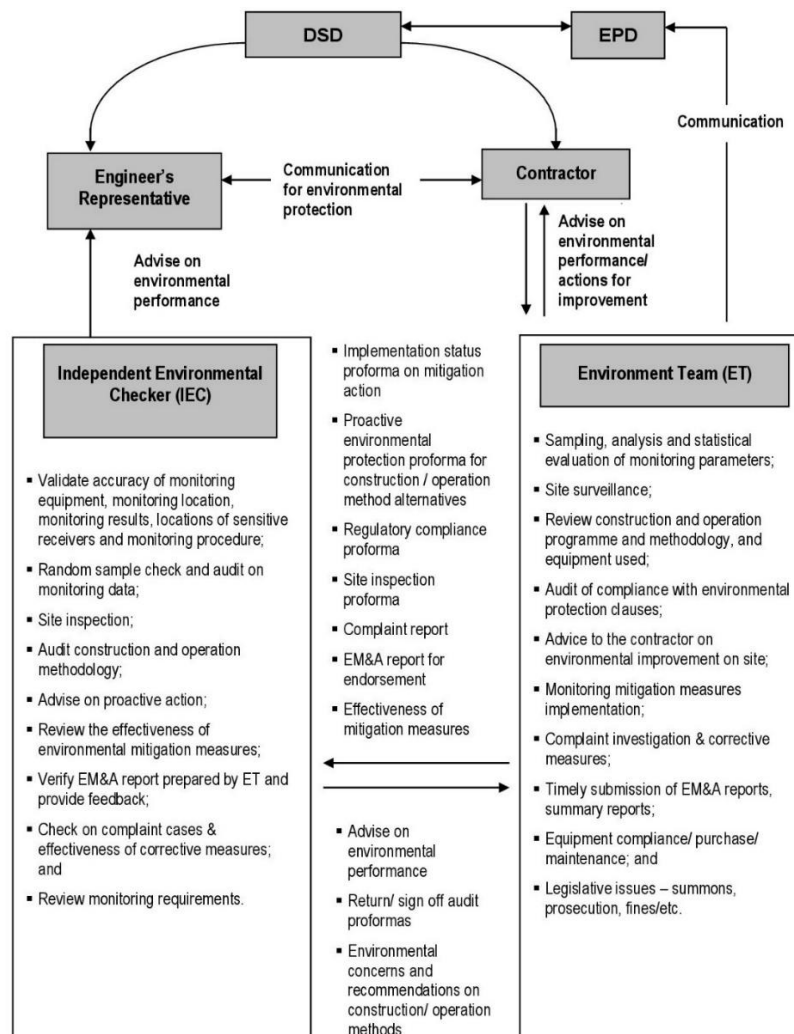


Diagram 1.1 Organisation Chart

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.

1.5 Works undertaken during the Period

1.5.1 The main construction works carried out in the reporting period were as below.

Ha Che

- Site Clearance Work
- Lifting Operation;
- Plant Operation;
- Excavation;
- Installation of Precast Unit;
- Temporary Drainage Diversion
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting; and
- Sheet piling & Backfilling and Compaction

Lin Fa Tei

- Site Clearance Work
- Lifting Operation;
- Plant Operation;
- Excavation;
- Sheet Piling;

- Breaking Ground;
- Temporary Drainage Diversion; and
- Excavation and Lateral Support, Relocate/ Divert Utilities, Rebar Fixing, Formwork Erection and Cast-in, Concreting

Tai Wo

- No construction activities.

Sung Shan New Village

- Site Clearance; and
- Breaking Ground.

1.5.2 The environmental mitigation measures corresponding to the main construction works implemented in the reporting period can be referred to **Appendix 1.3**.

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 8 monitoring stations (excluded Station C4 & Station C5) during the reporting period 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 ⁽⁴⁾	825497	830664	Control Monitoring Point
	C5 ⁽⁴⁾	825486	830716	Impact Monitoring Point
LFT	C6	827232	831713	Control Monitoring Point
	C7A ⁽³⁾	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) 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.
- (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. Hence, monitoring for Station C4 & Station C5 are only required during dry season (i.e. October to March).

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

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 Action and Limit Level for Water Quality Monitoring

2.4.1 The criteria of action and limit levels for water quality monitoring are defined in **Table 2.3**.

Table 2.3 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 limit.
- (3) All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered necessary.

2.4.2 Based on the criteria listed in **Table 2.3**, the action and limit levels for water quality are determined in **Table 2.4**.

Table 2.4 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.

2.5 Event and Action Plan

2.5.1 Should any non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix 2.1** 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.

2.6 Results and Observations

2.6.1 The detailed monitoring results during the reporting period are reported in the monthly EM&A Reports. The graphical presentation of water quality monitoring at the monitoring stations are shown in **Appendix 2.2**.

2.6.2 Eleven (11) limit level exceedances for SS were recorded during the reporting period. After investigation of above the exceedances, it was considered to non-project related.

2.6.3 The summary of exceedance records of water quality monitoring during the reporting period is summarized in **Table 2.5**.

Table 2.5 Summary of Exceedance Records of Water Quality Monitoring

Parameter	No. of non-project related exceedances		Total No. of non-project related exceedances	No. of exceedance related to the Project		Total No. of exceedance related to the Project
	AL	LL		AL	LL	
Dissolved Oxygen	0	0	0	0	0	0
Turbidity	0	0	0	0	0	0
Suspended Solids	0	11	11	0	0	0

2 May 2024

2.6.4 Exceedances of limit levels on SS were recorded during the regular monitoring at C1A and C8 on 2 May 2024. There were no construction activities taking place at Sung Shan New Village on 2 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 2 May 2024 at Lin Fa Tei. Water bypasses were provided on-site to direct river water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection of the reporting period. It is considered that the exceedances of limit levels of SS are not related to the Project.

7 May 2024

- 2.6.5 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 7 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 7 May 2024 at Lin Fa Tei. Water bypass was provided on-site to direct stream water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 8 May 2024. It is considered that the exceedance of limit level of SS is not related to the Project.

14 May 2024

- 2.6.6 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 14 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 14 May 2024 at Lin Fa Tei. Water bypass was provided on-site to direct stream water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedance of limit level of SS is not related to the Project.

16 May 2024

- 2.6.7 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 16 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 16 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

18 May 2024

- 2.6.8 Exceedances of limit levels on SS were recorded during the regular monitoring at C8 & C10 on 18 May 2024. Geotextiles were properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei and Ha Che. No accidental site runoff was reported on 18 May 2024 at Lin Fa Tei and Ha Che. Sedimentation tank for desilting the effluent from construction site was deployed in Ha Che, a sump pump was also deployed for directing the effluent to sedimentation tank. Water bypasses were provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei and Ha Che. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

23 May 2024

- 2.6.9 Exceedances of limit levels on SS were recorded during the regular monitoring at C8 & C10 on 23 May 2024. Geotextiles were properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei and Ha Che. No accidental site runoff was reported on 23 May 2024 at Lin Fa Tei and Ha Che. Sedimentation tank for desilting the effluent from construction site was deployed in Ha Che, a sump pump was also deployed for directing the effluent to sedimentation tank. Water bypasses were provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei and Ha Che. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 and 29 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

28 May 2024

- 2.6.10 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 28 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 28 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 29 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

30 May 2024

- 2.6.11 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 30 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 30 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 29 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

2.7 Quarterly Assessment of Construction Impacts on Suspended Solids at the Project Site

2.7.1 The comparison of the difference between the quarterly mean and 1.3 times of the ambient mean is presented in **Table 2.6**.

Table 2.6 Comparison of the difference between the quarterly mean and 1.3 times of the ambient mean

Parameter	Monitoring Location	Quarterly Mean of SS (mg/L)	Baseline Level of SS (mg/L)	1.3 Times of Ambient Mean (mg/L) ⁽¹⁾	Quarterly Mean of SS > 1.3 Times of Ambient Mean (Y/N)	Request of Further Mitigation Measures (Y/N)
Suspended Solids	C1A	3.8	4.8	6.2	N	N
	C2 (Control Point)	5.7	3.2	4.2	Y	N/A
	C3A (Control Point)	4.8	2.2	2.9	Y	N/A
	C6 (Control Point)	6.9	3.7	4.8	Y	N/A
	C7A (Control Point)	8.0	6.7	8.7	N	N/A
	C8	8.0	4.0	5.2	Y	N
	C9 (Control Point)	9.8	5.9	7.7	Y	N/A
	C10	7.0	8.5	11.1	N	N

Notes:

(1) 1.3 times of the ambient mean equal to be defined as 30% increase of the baseline data.

Sung Shan New Village (Station C1A, C2 & C3A)

2.7.2 The quarterly mean of SS at Station C1A (Impact Point) (3.8 mg/L) is lower than the 1.3 times of the ambient mean. Hence, no further mitigation measures for control of water quality impact are required at Sung Shan New Village.

Lin Fa Tei (Station C6, C7A & C8)

2.7.3 Based on the quarterly mean of SS at Station C6 (6.9 mg/L), Station C7A (8.0 mg/L) & Station C8 (8.0 mg/L), it reflected the quarterly mean of SS at C7A (Control Point) is same with the quarterly mean of SS at Station C8 (Impact Point). The quarterly mean of SS at Station C8 is affected by the runoff from upstream. Moreover, water bypass was provided on-site to direct river water from upstream of the works area to downstream of the works area at Lin Fa Tei. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during the reporting period. Hence, It reflected the mitigation measures for control of construction runoff at Lin Fa Tei are effective to avoid the water quality impact during the reporting period. It is recommended the existing mitigation measures at Lin Fa Tei should be maintained in good effectiveness.

Ha Che (Station C9 & C10)

- 2.7.4 The quarterly mean of SS at Station C10 (Impact Point) (7.0 mg/L) is lower than the 1.3 times of the ambient mean. Hence, no further mitigation measures for control of water quality impact are required at Ha Che. However, it viewed that the quarterly mean of SS at Station C9 (Control Point) (9.8 mg/L) is higher than Station C10 (Impact Point). Therefore, it reflected other sources affected the water quality of the river.

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	#200, Cheung Po	Residential	Free-field
TW_M3	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⁾	Village house near the nullah (DD112 699 S.E)	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.

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. The monitoring should be conducted during the construction phase between 0700 and 1900 on normal weekdays at the designated monitoring locations.

3.2.2 As supplementary information for data auditing, statistical results such as L10 and L90 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 between 0700 and 1900 on normal weekdays

3.3 Action and Limit Levels

3.3.1 The Action and Limit levels were established in accordance with the approved Updated EM&A Manual. **Table 3.3** 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 3.1** shall be carried out.

Table 3.3 Action and Limit Levels for Construction Noise Monitoring

Time Period	Action	Limit Level
07:00 – 19:00 on normal weekdays	When one or more documented complaints are received	75 dB(A) ⁽¹⁾
07:00 – 23:00 on holidays; and 19:00 – 23:00 on all other days		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 in Influencing Factors (Ifs). The limit levels are stipulated in the Technical Memorandum on Noise from Construction Work in Designated Areas.

3.4 Results and Observations

3.4.1 The detailed monitoring results during the reporting period are reported in the monthly EM&A Reports. The graphical presentation of noise monitoring at the monitoring stations are shown in **Appendix 3.2**.

3.4.2 No Action or Limit levels exceedance was recorded in the reporting period.

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.

Freshwater Crab Translocation Plan

- 4.1.2 Freshwater Crab Translocation Plan (FCTP) was prepared by an Ecologist with relevant experience in freshwater habitats and submitted to the EPD and the AFCD for their approval under Condition 2.8 of the EP. Any aquatic species of conservation importance found during the pre-construction surveys were translocated to suitable receptor sites outside of the proposed works area, and their condition and number was monitored to ensure their long-term survivorship after translocation. The EPD advised 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 Results

Ha Che

- 4.1.3 The pre-construction survey was carried out at Ha Che on 5, 6 and 7 February 2024 prior to the commencement of construction works at Ha Che. A total of 11 freshwater crabs were collected, marked, and translocated from Ha Che. All these captured individuals were observed on the first (5 February 2024) and third (7 February 2024) nights of the three consecutive pre-construction surveys. No crabs were collected on 6 February 2024. Seven *C. anacoluthon* (four males and three females) were found particularly on the upper section of the works area within rocky substratum and leaf-litters, while four *S. zanklon* were noted on sections with soft silty-muddy substrate.
- 4.1.4 The captured endemic freshwater crabs were translocated to the identified receptor sites indicated in the approved Freshwater Crab Translocation Plan. *C. anacoluthon* were translocated in the section of shallow fast-flowing semi-natural watercourse with rocky substratum located south-east of Chuk Hang Village. Meanwhile *S. zanklon* were translocated to the section of shallow slow-flowing seminatural channel characterised soft soil substrate encompassed by a small patch of woodland and village houses. The receptor sites have comparable characteristics with the collection site.

- 4.1.5 Several aquatic invertebrates were also incidentally caught during the surveys. Among the observed aquatic invertebrates, larvae of species with conservation importance namely one *Macromia berlandi*, two *Macromia urania* and two *Zygonyx iris* were translocated to the proposed receptor sites. *M. urania* and *M. berlandi* were translocated to the receptor site for *S. zanklon* while *Z. iris* to the receptor site of *C. anacoluthon*.

Lin Fa Tei (CH.A0.00 ~ CH.A200.00)

- 4.1.6 The pre-construction survey was carried out at Lin Fa Tei in sections CH.A0.00 ~ CH.A200.00 on 11, 12 and 13 March 2024 prior to the commencement of construction works at Lin Fa Tei in sections CH.A0.00 ~ CH.A200.00. A freshwater crab was collected, marked, and translocated from Lin Fa Tei. The captured individuals were observed on the third (13 March 2024) night of the three consecutive pre-construction surveys. No crabs were collected on 11 and 12 March 2024. The captured *C. anacoluthon* was found by kick sampling within the stream bed roughly 5 meters downstream from the concrete water gate within section CH.A0.00 ~ CH.A200.00.
- 4.1.7 The captured endemic freshwater crab was translocated to the identified receptor site indicated in the approved Freshwater Crab Translocation Plan. The captured *C. anacoluthon* was translocated to a section of a shallow slow-flowing seminatural watercourse with silt and rocky substrate surrounded by agricultural lands at Lin Fa Tei which has comparable characteristics with the collection site.
- 4.1.8 A single individual of an adult Spotted Narrow-mouthed Frog was found on a slope in the eastern section of section CH.A0.00 ~ CH.A200.00. As the specimen is mobile and able to avoid the construction area once the construction work commences, it was not translocated to the receptor site.

Lin Fa Tei (CH.A200.00 ~ CH.A500.00 and CH.B0.00 ~ CHB.149.77)

- 4.1.9 The pre-construction survey was carried out at Lin Fa Tei in sections CH.A200.00 ~ CH.A500.00 and CH.B0.00 ~ CHB.149.77 on 17, 18 and 19 April 2024 prior to the commencement of construction works at Lin Fa Tei in sections CH.A200.00 ~ CH.A500.00 and CH.B0.00 ~ CHB.149.77. No freshwater crab was collected during the pre-construction survey.
- 4.1.10 Two individuals of adult Spotted Narrow-mouthed Frog were found during the surveys. As this specimen is mobile and able to avoid the construction area once the construction work commences, it was not translocated to the receptor site. The specimens were brought to nearby agricultural lands instead, which is the preferred habitat of the species.

Post-translocation Monitoring

- 4.1.11 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.

- 4.1.12 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.
- 4.1.13 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.
- 4.1.14 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.
- 4.1.15 Freshwater Crab Translocation Plan and Post-translocation Monitoring were carried out in the reporting period. The monitoring results are reported in the monthly EM&A Reports prepared for this Contract.
- 4.1.16 None of the translocated individuals from the pre-construction survey was found in the upper and lower receptor sites of Ha Che or the receptor site of Lin Fa Tei during the reporting period.
- 4.1.17 However, two new individuals of *C. anacoluthon* without markings were captured at the upper receptor site of Ha Che and a single individual of *S. zanklon* without markings was captured at the Lin Fa Tei receptor site in June 2024. Two new individuals of *C. anacoluthon* without markings were captured, one at the upper receptor site and at the lower receptor site of Ha Che in July 2024. These, however, were not the translocated individuals as their details (i.e., carapace, sex and species) did not match with any of the translocated individuals in the record.

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 will be 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, 14 weekly landscape and visual site audits were carried out in the reporting period.
- 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.

8.2 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.

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 audits were carried out by ET on weekly basis at least once per week to monitor the implementation of proper environmental management practices and mitigation measures in the Project site.

9.1.2 Total 14 site inspections were carried out during the reporting period. No outstanding issues were reported during the reporting period. Details of observations recorded during the site inspections are presented in **Table 9.1**.

Table 9.1 Site Observations

Date	Environmental Observations	Follow-up Status
	<u>Observation(s) and Recommendation(s)</u>	
2 May 2024	Ha Che: 1. The stagnant water should be removed regularly. 2. The oily stagnant water should be disposed as "chemical waste".	Ha Che: 1. The stagnant water had been removed regularly. 2. The oily stagnant water had been disposed as "chemical waste".
	<u>Observation(s) and Recommendation(s)</u>	
8 May 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
16 May 2024	Ha Che: 1. Geotextile at the site boundary should be well maintained and deployed at the right position. 2. Effluent should be directed to sedimentation tank for treatment before discharge in accordance with discharge license requirement.	Ha Che: 1. Geotextile at the site boundary had been well maintained and deployed at right position. 2. Effluent had been directed to sedimentation tank for treatment before discharge in accordance with discharge license requirement.
	<u>Observation(s) and Recommendation(s)</u>	
22 May 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
29 May 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
5 June 2024	Lin Fa Tei: 1. Geotextiles should be maintained in right position and good condition. Ha Che: 2. Geotextiles should be maintained in right position and good condition.	Lin Fa Tei: 1. Geotextiles had been maintained in right position and good condition. Ha Che: 2. Geotextiles had been maintained in right position and good condition.

Date	Environmental Observations	Follow-up Status
	<u>Observation(s) and Recommendation(s)</u>	
12 June 2024	Lin Fa Tei: 1. Geotextiles should be maintained in right position and good condition. 2. Wastewater from construction site should be directly discharged into the sediment tank.	Lin Fa Tei: 1. Geotextiles had been maintained in right position and good condition. 2. Wastewater from construction site has been directly discharged into the sediment tank.
	<u>Observation(s) and Recommendation(s)</u>	
19 June 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
26 June 2024	Ha Che: 1. Chemical drum should be stored in properly storage area.	Ha Che: 1. Chemical drum had been stored in properly storage area.
	<u>Observation(s) and Recommendation(s)</u>	
3 July 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
10 July 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
17 July 2024	Nil	Nil
	<u>Observation(s) and Recommendation(s)</u>	
24 July 2024	Lin Fa Tei: The decolored NRMM label should be replaced with a proper label (Excavator BH08)	Lin Fa Tei: The proper NRMM label had been labeled by the contractor.
	<u>Observation(s) and Recommendation(s)</u>	
31 July 2024	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

Water Quality Monitoring

10.1.1 The summary of exceedance records of water quality monitoring during the reporting period is summarized in **Table 10.1**.

Table 10.1 Summary of Exceedance Records of Water Quality Monitoring

Parameter	No. of non-project related exceedances		Total No. of non-project related exceedances	No. of exceedance related to the Project		Total No. of exceedance related to the Project
	AL	LL		AL	LL	
Dissolved Oxygen	0	0	0	0	0	0
Turbidity	0	0	0	0	0	0
Suspended Solids	0	11	11	0	0	0

10.1.2 Eleven (11) limit level exceedances for SS were recorded during the reporting period. After investigation of above the exceedances, it was considered to non-project related.

2 May 2024

10.1.3 Exceedances of limit levels on SS were recorded during the regular monitoring at C1A and C8 on 2 May 2024. There were no construction activities taking place at Sung Shan New Village on 2 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 2 May 2024 at Lin Fa Tei. Water bypasses were provided on-site to direct river water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection of the reporting period. It is considered that the exceedances of limit levels of SS are not related to the Project.

7 May 2024

10.1.4 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 7 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 7 May 2024 at Lin Fa Tei. Water bypass was provided on-site to direct stream water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 8 May 2024. It is considered that the exceedance of limit level of SS is not related to the Project.

14 May 2024

- 10.1.5 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 14 May 2024. A geotextile was deployed at the boundary of the works area as a mitigation measure to prevent runoff from site at Lin Fa Tei. No accidental site runoff was reported on 14 May 2024 at Lin Fa Tei. Water bypass was provided on-site to direct stream water from upstream of the works area to downstream of the works area at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedance of limit level of SS is not related to the Project.

16 May 2024

- 10.1.6 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 16 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 16 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

18 May 2024

- 10.1.7 Exceedances of limit levels on SS were recorded during the regular monitoring at C8 & C10 on 18 May 2024. Geotextiles were properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei and Ha Che. No accidental site runoff was reported on 18 May 2024 at Lin Fa Tei and Ha Che. Sedimentation tank for desilting the effluent from construction site was deployed in Ha Che, a sump pump was also deployed for directing the effluent to sedimentation tank. Water bypasses were provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei and Ha Che. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

23 May 2024

- 10.1.8 Exceedances of limit levels on SS were recorded during the regular monitoring at C8 & C10 on 23 May 2024. Geotextiles were properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei and Ha Che. No accidental site runoff was reported on 23 May 2024 at Lin Fa Tei and Ha Che. Sedimentation tank for desilting the effluent from construction site was deployed in Ha Che, a sump pump was also deployed for directing the effluent to sedimentation tank. Water bypasses were provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei and Ha Che. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 22 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

28 May 2024

- 10.1.9 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 28 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 28 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 29 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

30 May 2024

10.1.10 Exceedance of limit level on SS was recorded during the regular monitoring at C8 on 30 May 2024. A geotextile was properly deployed at the boundary of works area as the mitigation measure for preventing site runoff at Lin Fa Tei. No accidental site runoff was reported on 30 May 2024 at Lin Fa Tei. A water bypass was provided on-site for directing the river water from upstream of the works area to downstream at Lin Fa Tei. Since sufficient measures for preventing contamination of downstream water were well implemented and no deficiency in mitigation measures for preventing site runoff was observed during weekly site inspection at Lin Fa Tei on 29 May 2024. It is considered that the exceedances of limit levels of SS are not related to the Project.

Noise Monitoring

10.1.11 No Action Level or Limit Level exceedance 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 the water quality was received in the reporting period. The relevant investigation for the complaint on 14 June 2024 had been completed during the reporting period. The summary of the investigation is presented below.

14 June 2024

10.3.2 A complaint regarding the discharge of effluent from the construction site at Lin Fa Tei was received by the Environmental Protection Department on 14 June 2024 and referred to the Drainage Services Department (DSD), the Environmental Team (ET) and the Independent Environmental Checker (IEC) on 5 July 2024. Based on the information provided by the Contractor and the information collected from the site inspection, all wastewater from the Project works area was collected and treated before discharge. It is concluded that the complaint is not related to the Project. After the complaint, the Contractor has enhanced and properly implemented the precautionary and mitigation measures to minimise muddy water discharged from the works area and other non-project related effluent discharged within the site boundary

10.3.3 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 Conclusions and Recommendations

11.1 Conclusion

- 11.1.1 This 2nd Quarterly EM&A Report presents the EM&A works during the reporting period from 1 May to 31 July 2024 in accordance with the approved Updated EM&A Manual.
- 11.1.2 Water Quality Monitoring was conducted during the reporting period. Eleven (11) limit level exceedances for SS were recorded during the reporting period. After investigation of above the exceedances, it was considered to non-project related.
- 11.1.3 Construction noise monitoring was carried out during the reporting period. No Action Level or Limit Level exceedance was recorded for construction noise monitoring in the reporting period.
- 11.1.4 Post-translocation monitoring was conducted during the reporting period. None of the translocated individuals from the pre-construction survey was found in the upper and lower receptor sites of Ha Che or the receptor site of Lin Fa Tei during the reporting period. However, two new individuals of *C. anacoluthon* without markings were captured at the upper receptor site of Ha Che and a single individual of *S. zanklon* without markings was captured at the Lin Fa Tei receptor site in June 2024. Two new individuals of *C. anacoluthon* without markings were captured, one at the upper receptor site and at the lower receptor site of Ha Che in July 2024. These, however, were not the translocated individuals as their details (i.e., carapace, sex and species) did not match with any of the translocated individuals in the record.
- 11.1.5 Total 14 environmental site inspections and 14 landscape and visual site audits were carried out in the reporting period. Recommendations on mitigation measures were given to the Contractor for remediating the deficiencies identified during the site inspections.
- 11.1.6 One environmental complaint regarding the water quality was received in the reporting period. The relevant investigation for the complaint on 14 June 2024 had been completed during the reporting period. It is concluded that the complaint is not related to the Project.
- 11.1.7 No notification of summons and successful prosecutions were recorded in the reporting period.
- 11.1.8 The EM&A methodology has been effective in monitoring the environmental impacts of the Project and the effectiveness of the mitigation measures. The data collected were useful in determining whether the Project had caused unacceptable impacts on the sensitive receivers. Analysis of all EM&A data collected throughout the baseline and the impact monitoring periods demonstrated the environmental acceptability of the Project.

11.2 Comments/ Recommendations

- 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

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

Waste Management

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

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

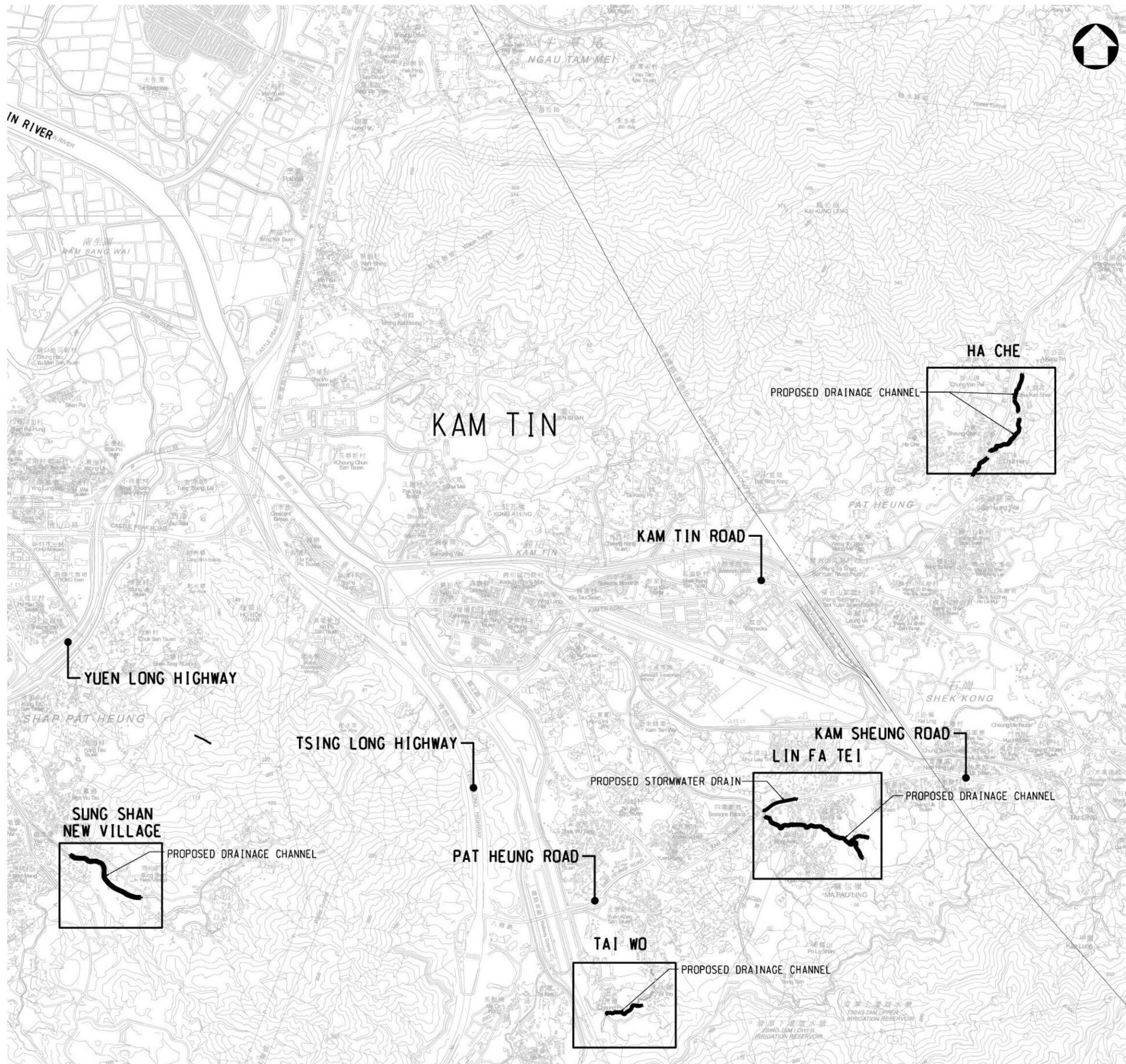
- Construction activities shall be carefully designed to minimize impact on existing retained trees; and
- Adequate tree protection measures shall be provided for the trees to be retained on site.

11.2.2 The 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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 File name: P:\CNHKA\GIS\Projects\154336 - CE 22 2013 (DS) Yuen Long Stage 1\Contract DC202202\Contract Doc\Volume 3\15-Drawings\General\5124336-TD-C2-GEN-0000_A.dgn



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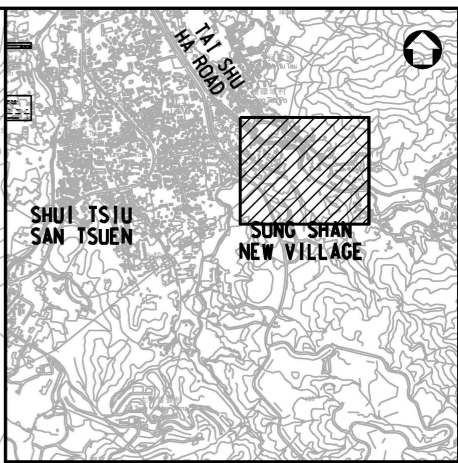
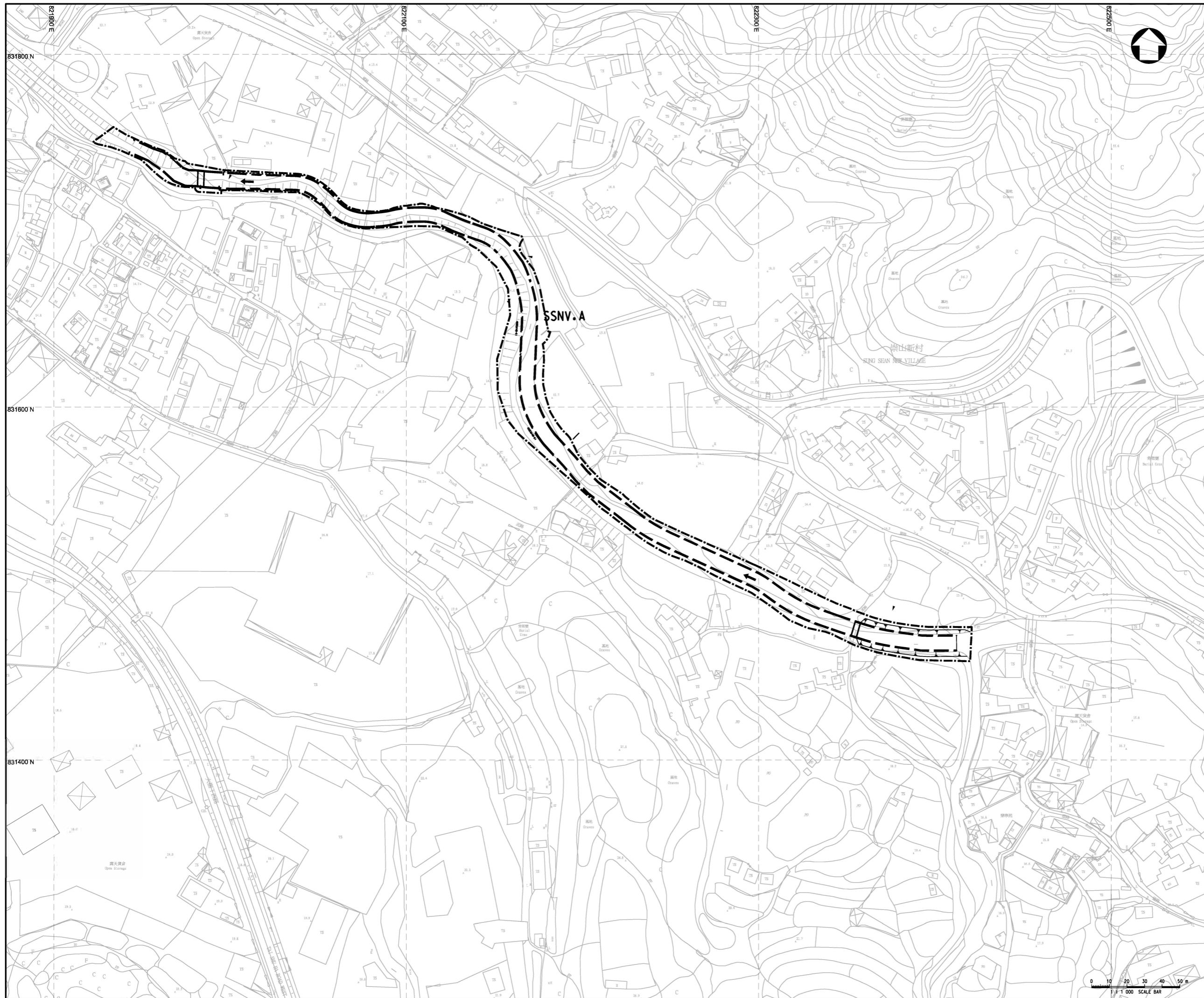
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DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

Drawing Title: **SITE LOCATION PLAN**

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N.T.S.	SHC	AC	WCTT	KP
Original Size	Date	Date	Date	Date
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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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Drawing Status						CONTRACT

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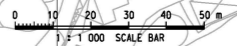
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Project Management Division

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

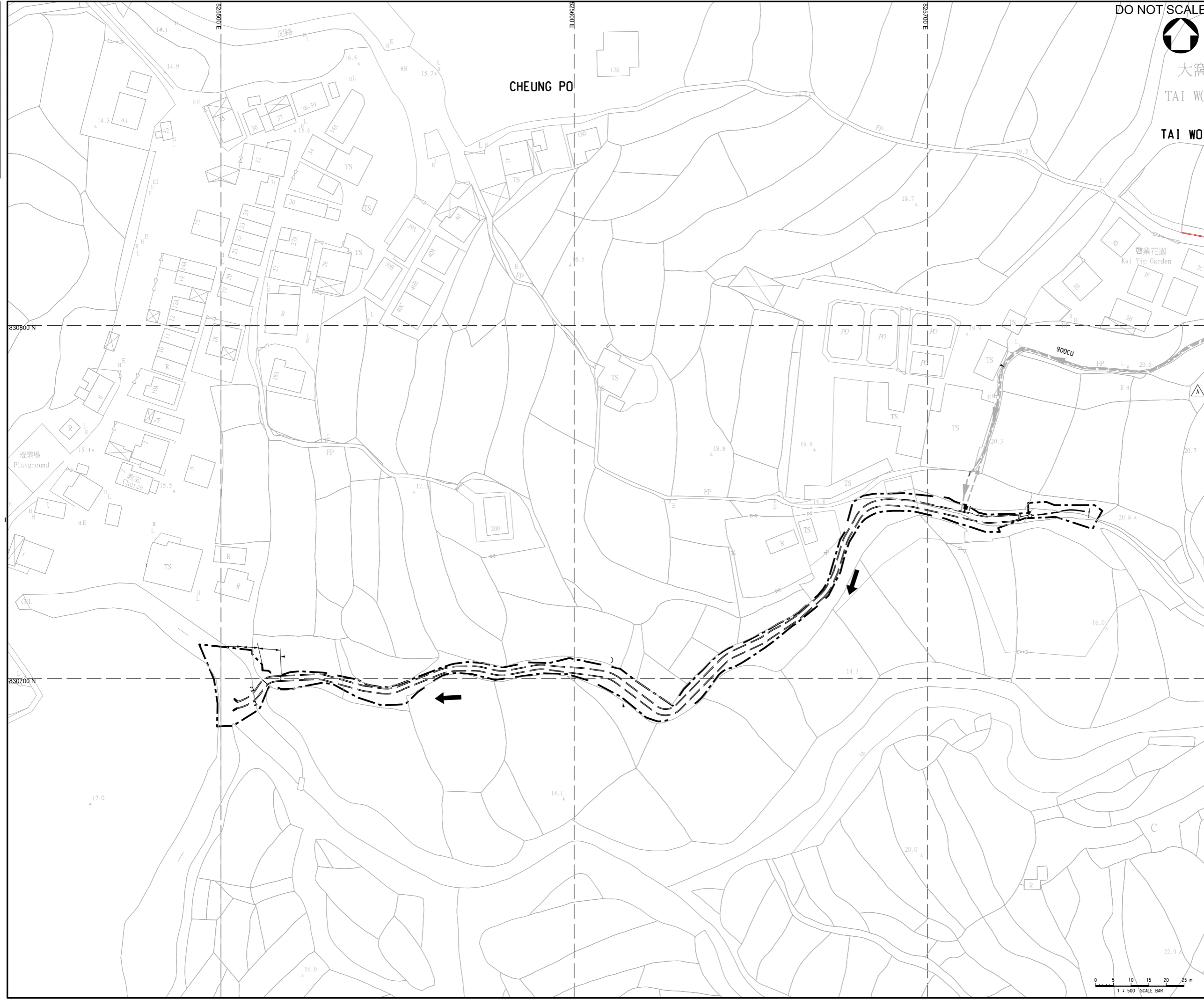
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**SUNG SHAN NEW VILLAGE -
GENERAL LAYOUT PLAN**

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Drawing Number
Figure 1.2 a



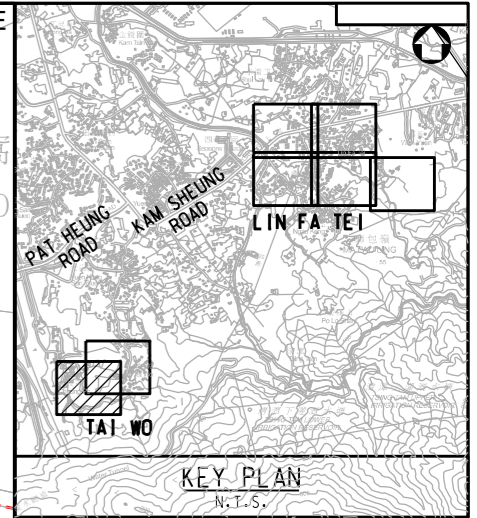
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Millimetres



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KEY PLAN
N.T.S.

LEGEND:
 [Dashed line] WORKS BOUNDARY
 [Solid line with arrows] RECTANGULAR CHANNEL

Rev.	Date	Description	By	Chk'd	App'd	Suitability
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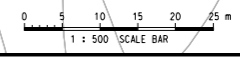
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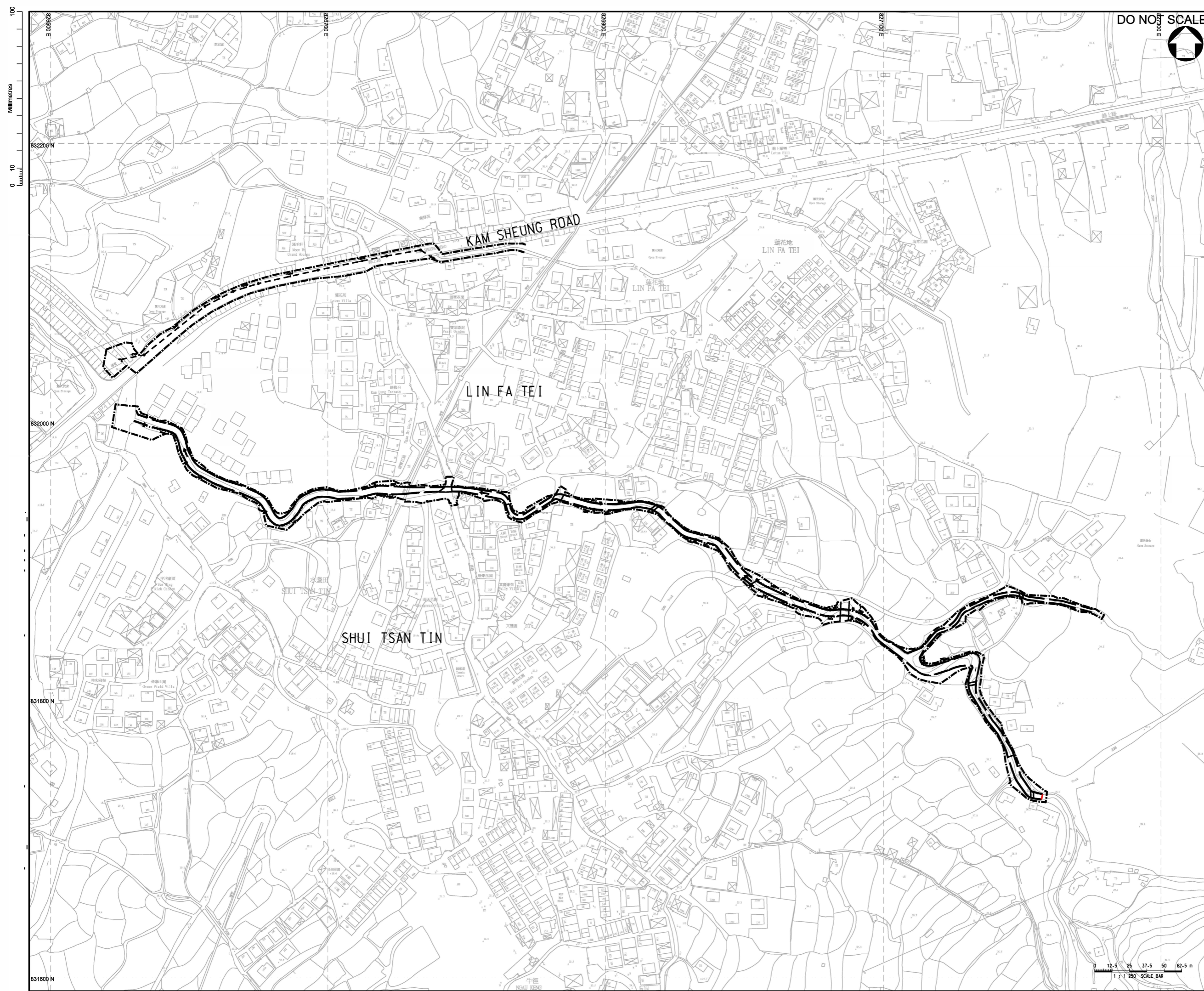
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Contract Title
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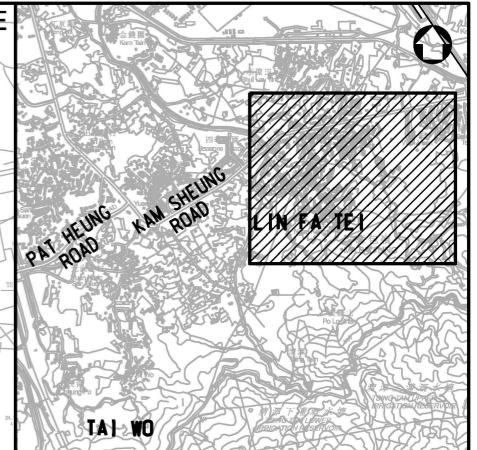
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 TAI WO -
 GENERAL LAYOUT PLAN

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Drawing Number	Revision			
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
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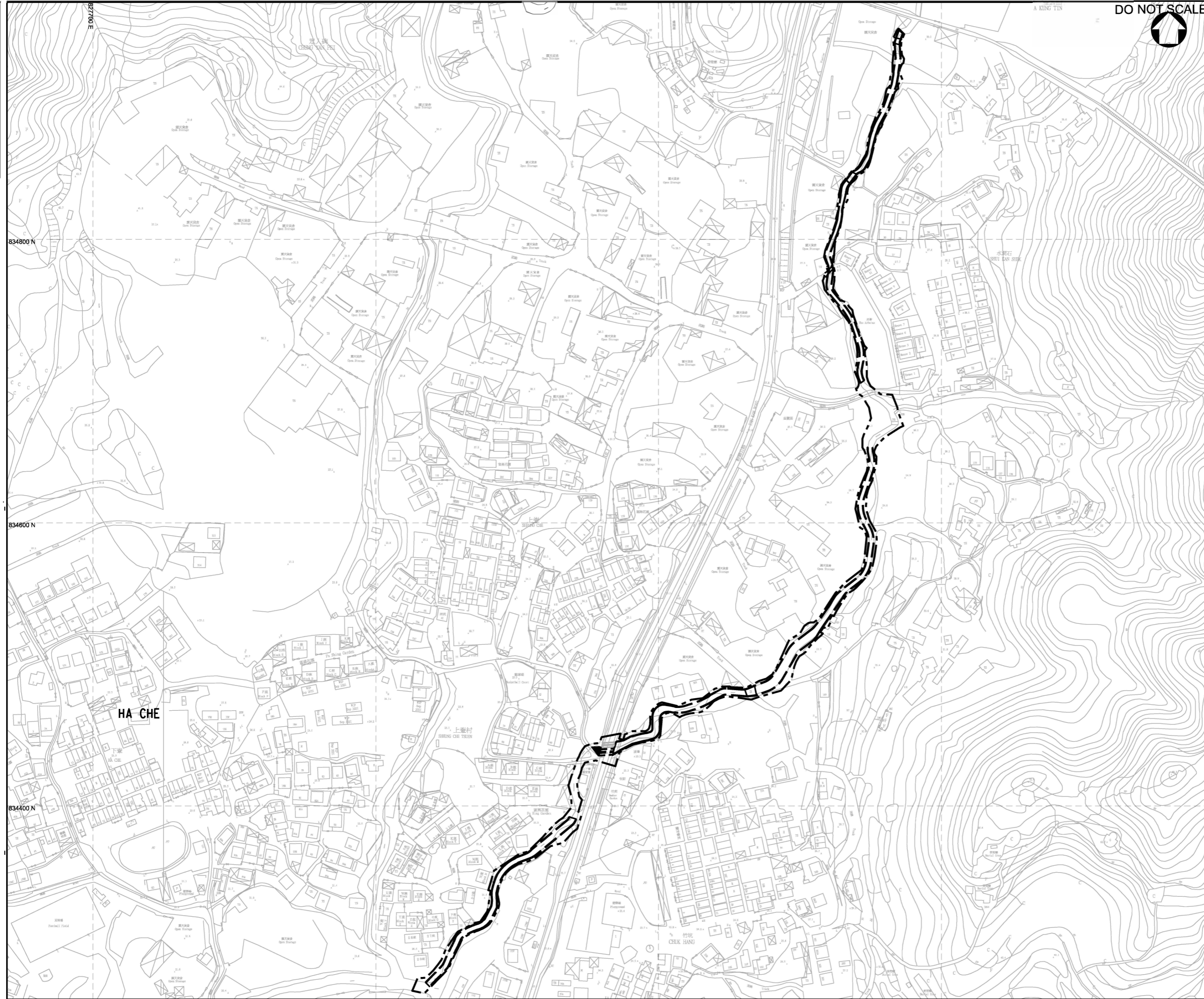
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DRAINAGE IMPROVEMENT WORKS
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STAGE 2

Drawing Title: **LIN FA TEI -**
GENERAL LAYOUT PLAN

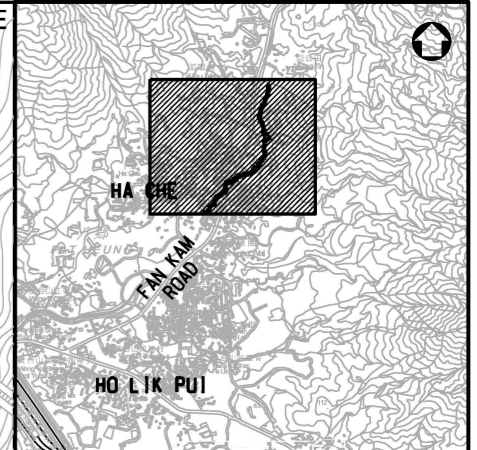
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Drawing Number: **Figure 1.2 c** Revision: **---**

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KEY PLAN
N.T.S.

LEGEND:
 WORKS BOUNDARY
 RECTANGULAR CHANNEL

Rev.	Date	Description	By	Chkd	App'd	Suitability
A	NOV 2022	TENDER ADDENDUM NO. 4				
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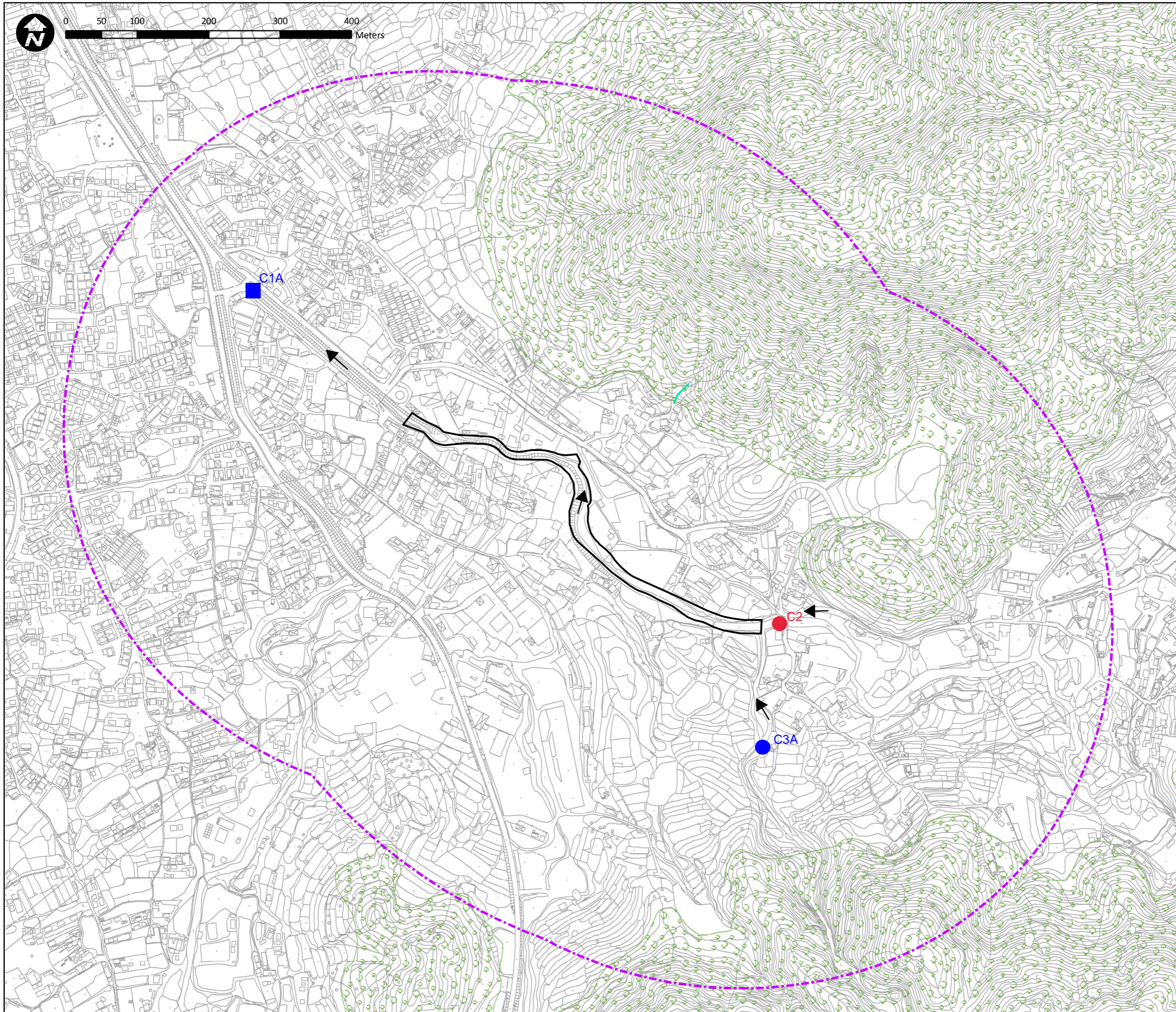
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Drawing Title
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 GENERAL LAYOUT PLAN

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Original Size	Date	Date	Date	Date
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Drawing Number	Revision			

Figure 1.2 d

Figure 2.1 Impact Water Quality Monitoring Locations



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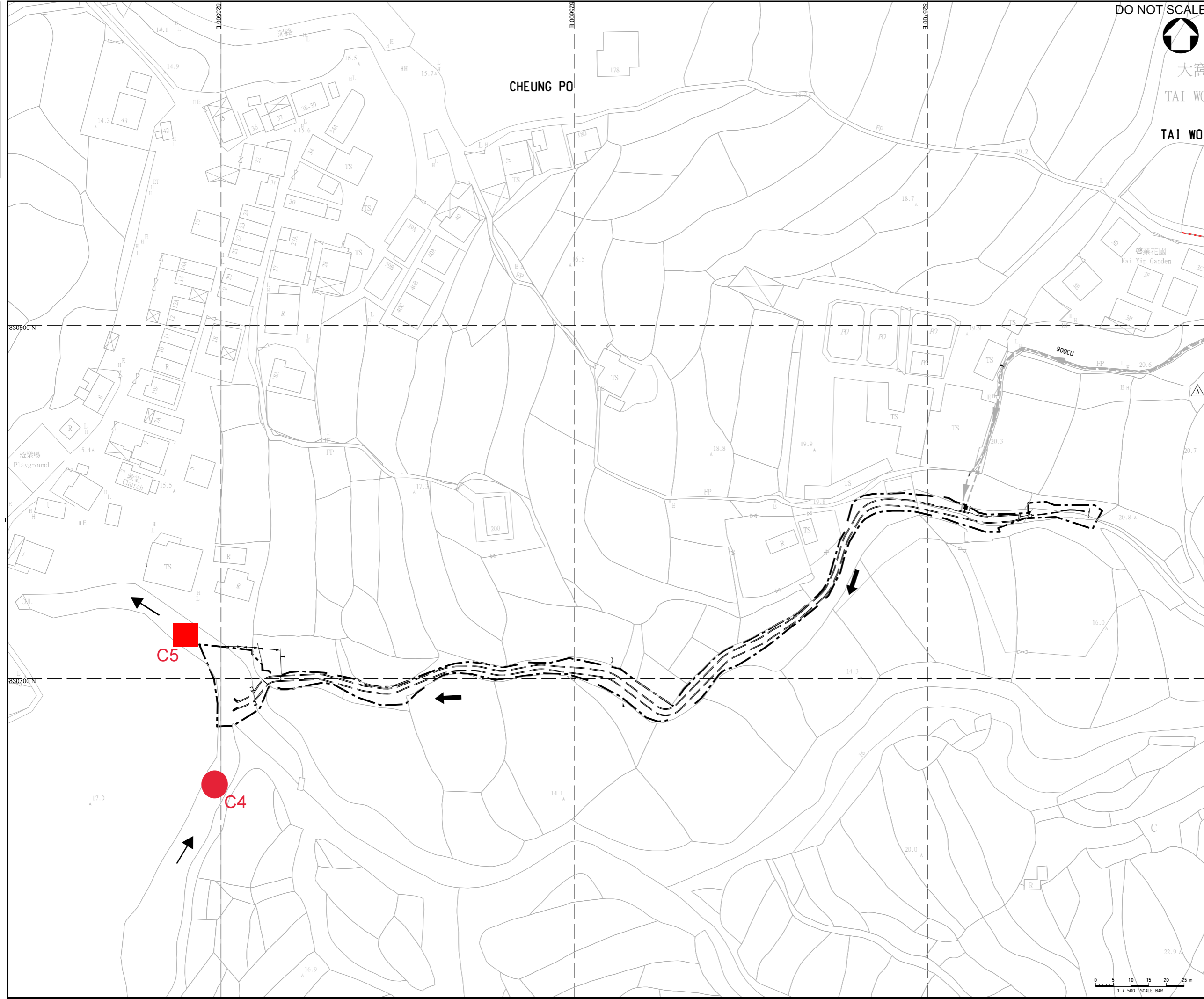
- Work Limit Boundary
- 500 m study area
- Control Station
- Alternative Control Station
- Alternative Impact Station
- ← Flow direction

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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Figure Number: Figure 2.1a	Revision: R1

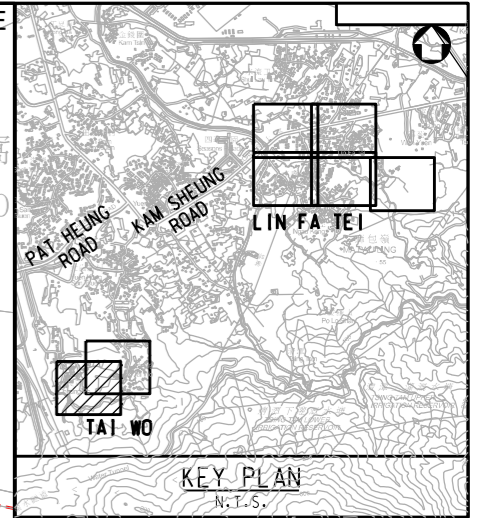
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LEGEND:

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

Rev.	Date	Description	By	Chkd	App'd	Suitability
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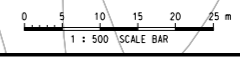
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工程管理部
Project Management Division

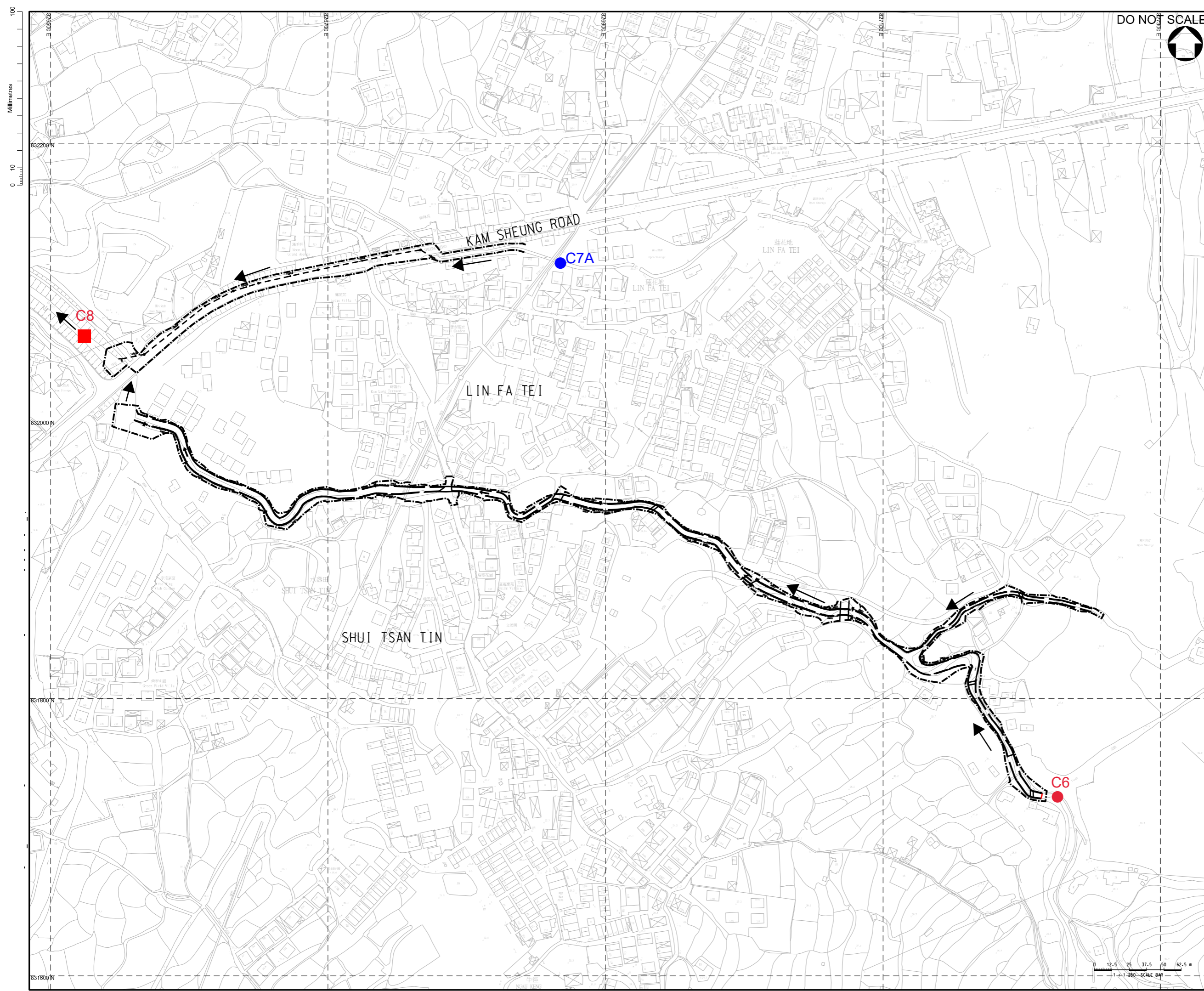
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DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

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at Tai Wo**

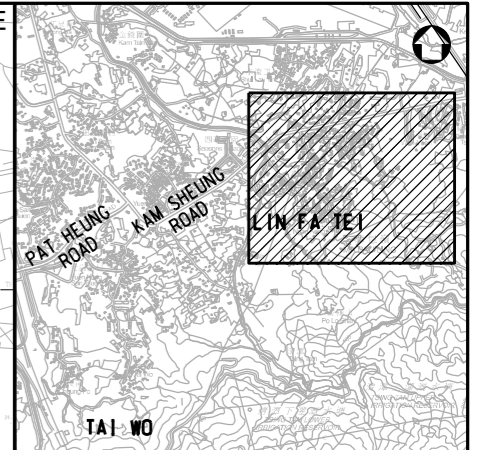
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Drawing Number
Figure 2.1b





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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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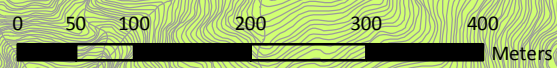
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Project Management Division






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DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG - STAGE 2

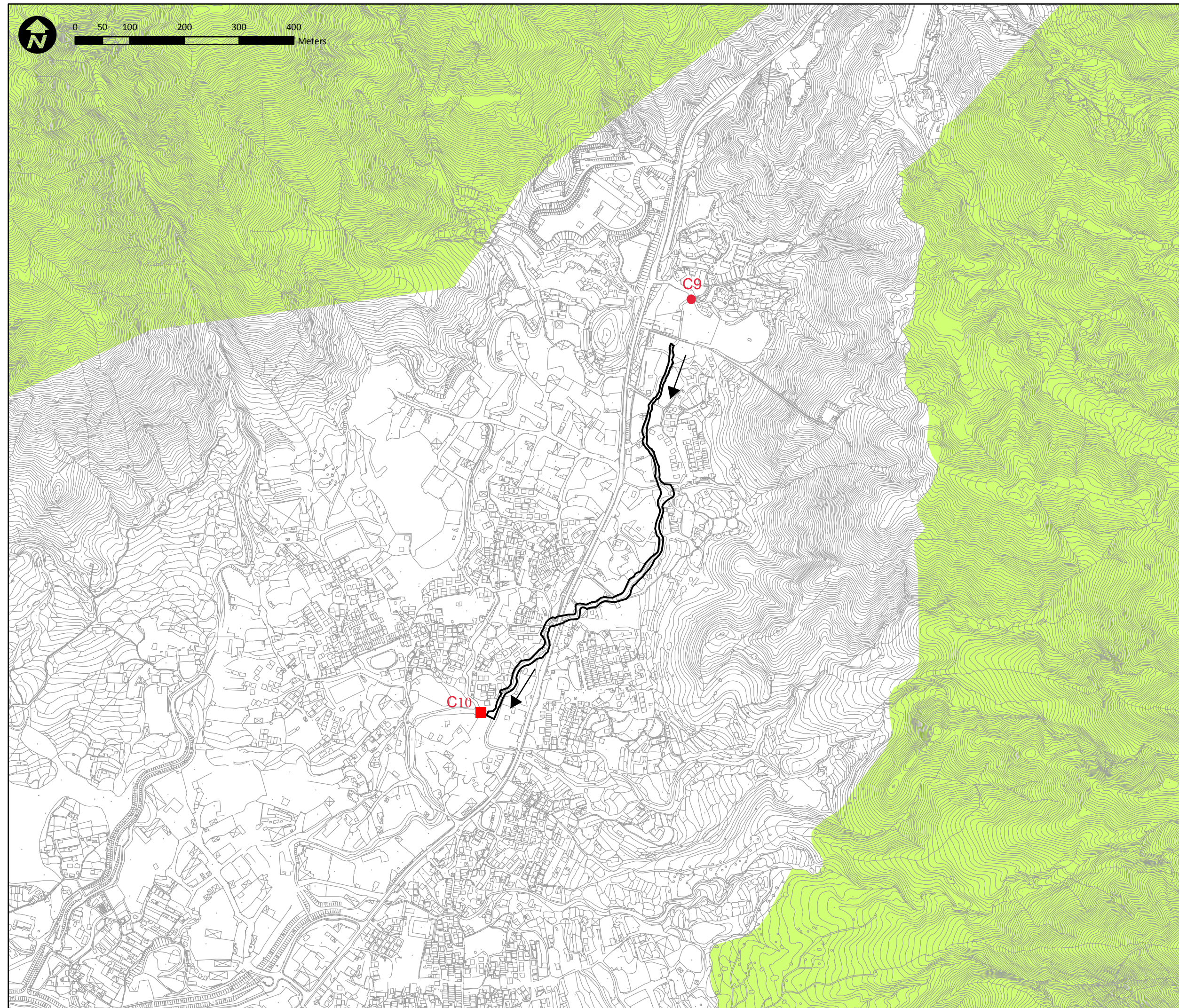
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Drawing Number: **Figure 2.1c**



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

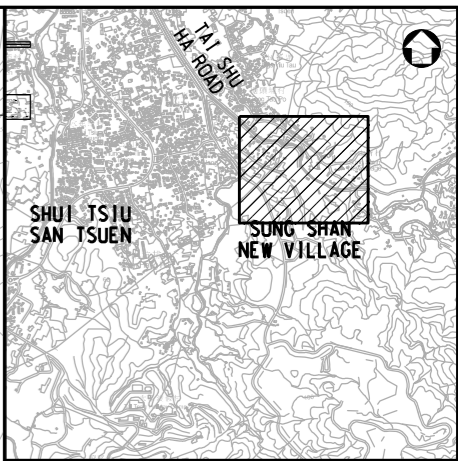
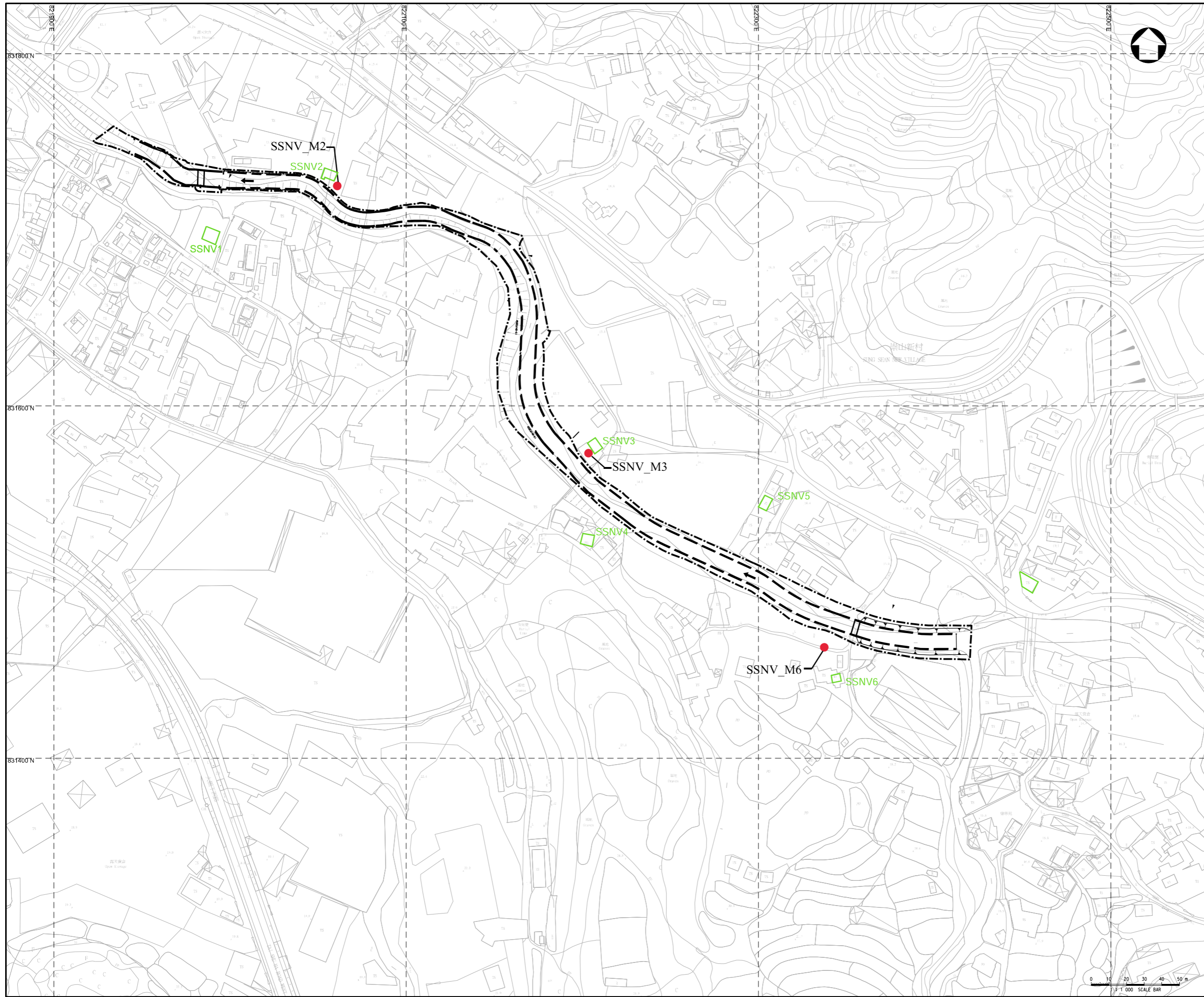


Project Title:
**CONTRACT NO. DC/2022/02
 DRAINAGE IMPROVEMENT WORKS
 AT YUEN LONG -
 STAGE 2**

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

Drawn by:	Scale: 1:6,500 on A3
Checked By:	Date:
Approved by:	
Figure Number: Figure 2.1d	Revision: R1

Figure 3.1 Impact Noise Monitoring Locations



KEY PLAN
N.T.S.

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

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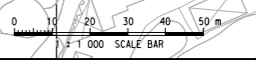
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Drainage Services Department

工程管理部
Project Management Division

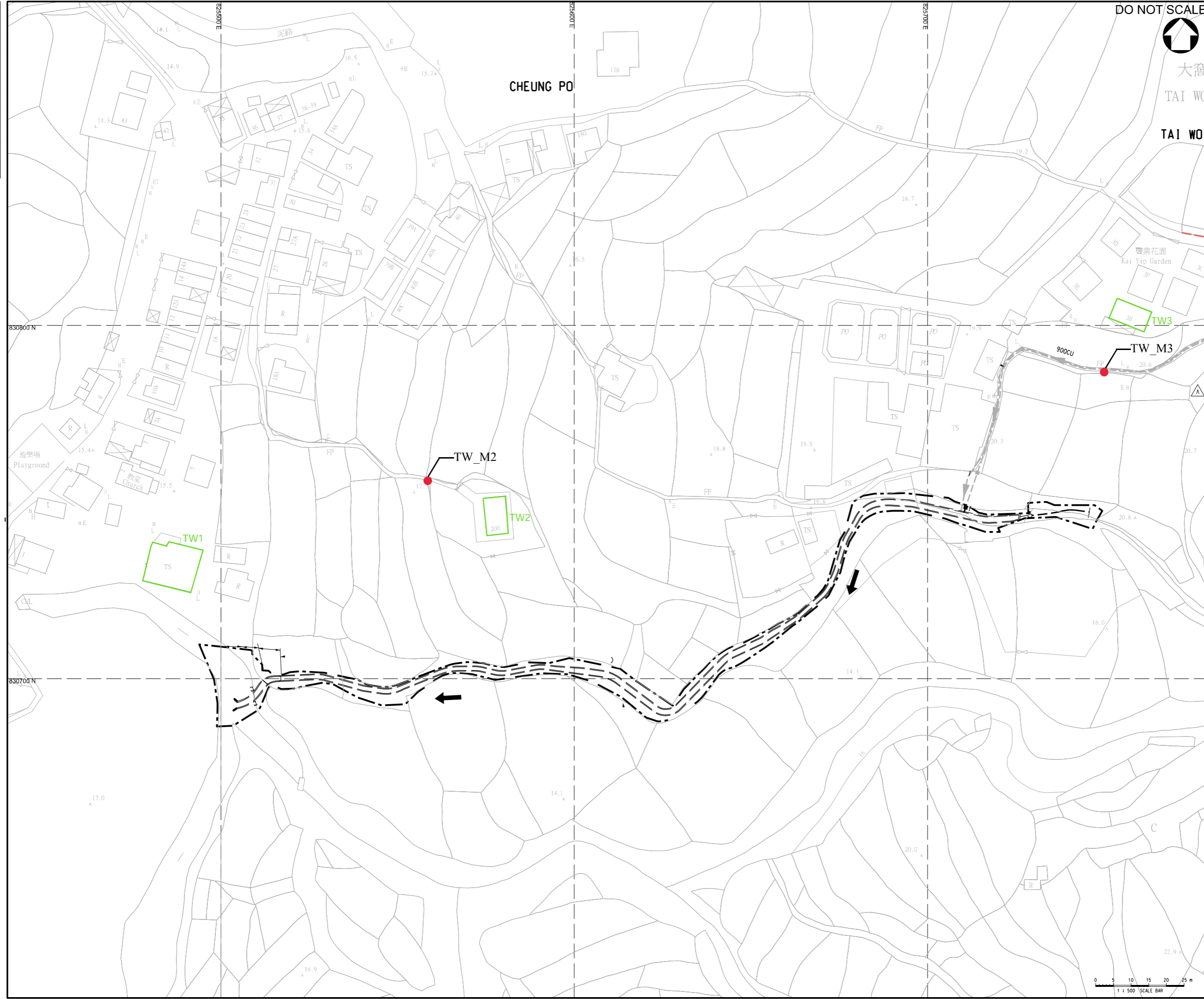
Contract Title
CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2

Drawing Title
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Sung Shan New Village**

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Drawing Number Figure 3.1a				Revision



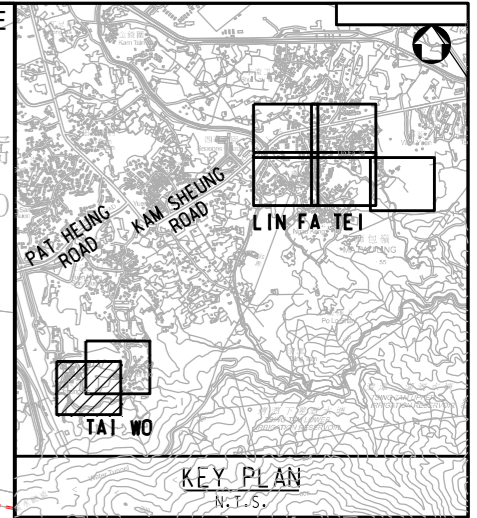
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LEGEND:

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

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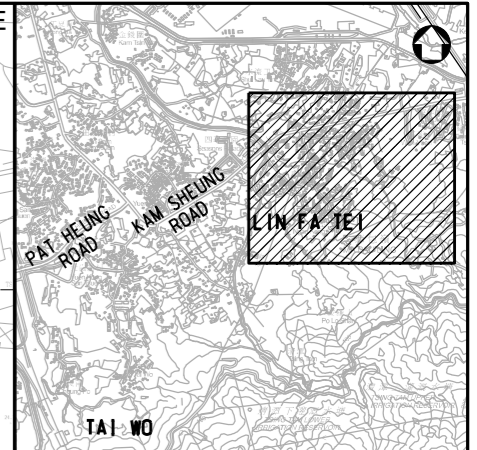
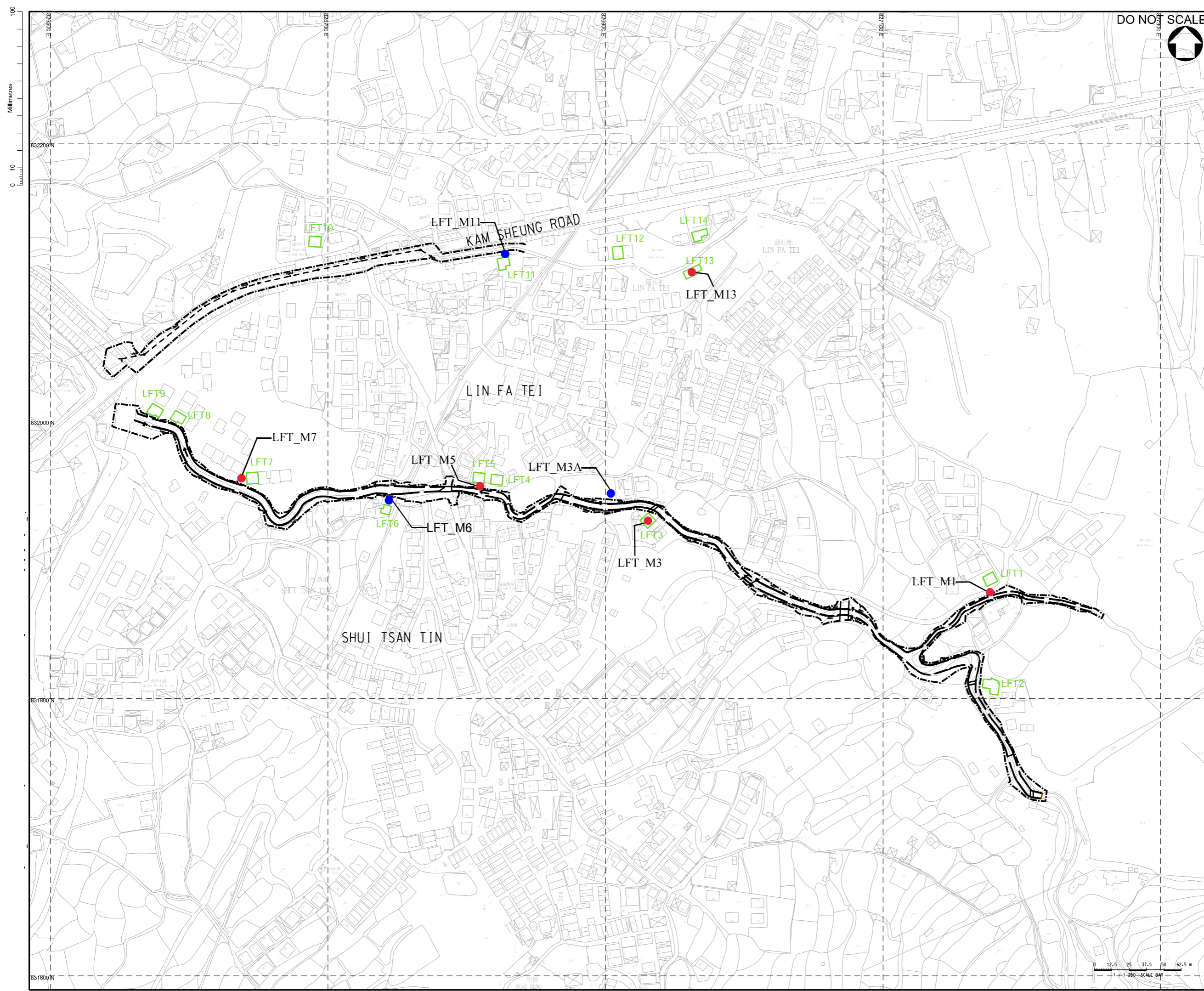
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Drawing Title:
Noise Monitoring Locations at
Tai Wo

Scale:	Designed:	Drawn:	Checked:	Authorised:
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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

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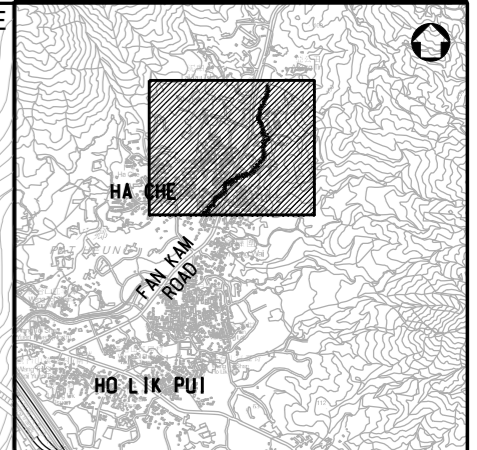
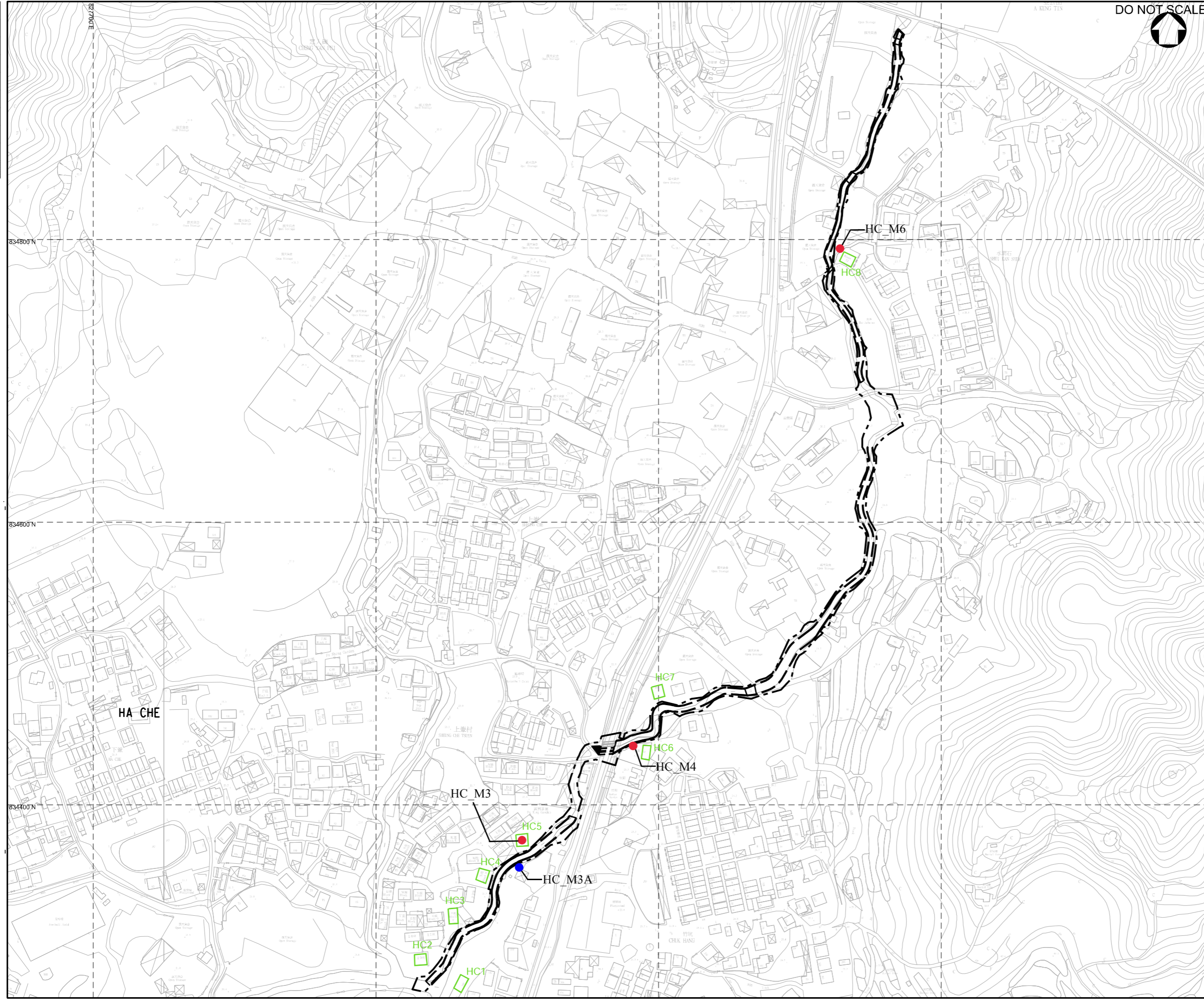
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Drawing Number: **Figure 3.1c**

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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

ATKINS
Member of the SNC-Lavalin Group

Client: **渠務署**
Drainage Services Department

Project Management Division

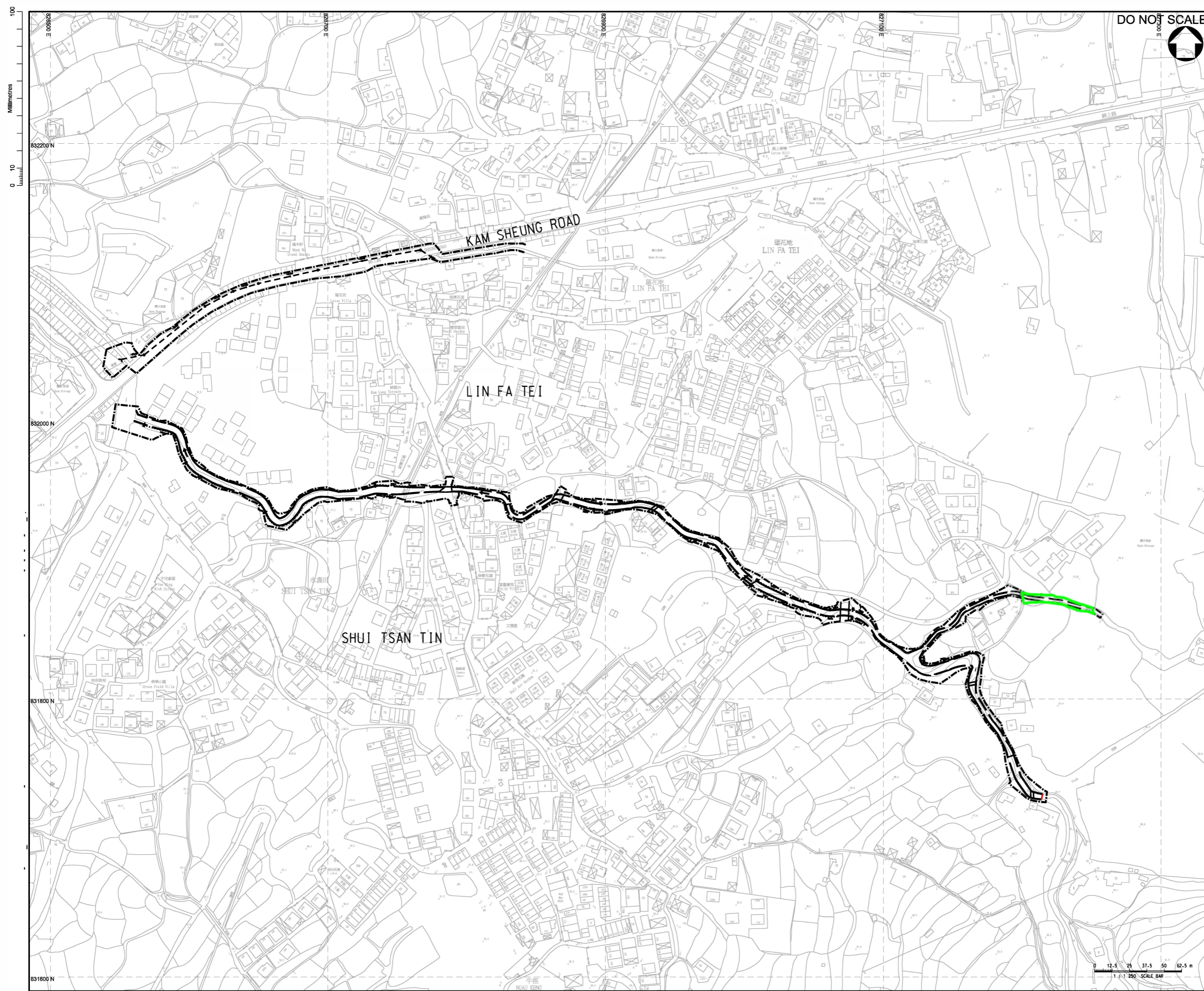
Contract Title: **CONTRACT NO. DC/2022/02
DRAINAGE IMPROVEMENT WORKS
AT YUEN LONG -
STAGE 2**

Drawing Title: **Noise Monitoring Locations at
Ha Che**

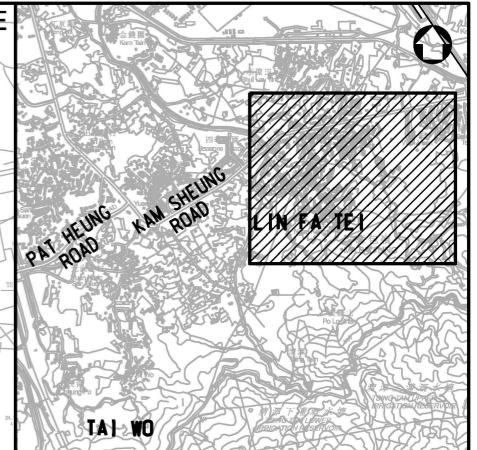
Scale	Designed	Drawn	Checked	Authorised
1 : 1250	SHC	AC	WCTT	KP
Original Size	Date	Date	Date	Date
A1	JUL 2022	JUL 2022	JUL 2022	JUL 2022
Drawing Number	Revision			

Figure 3.1d

Figure 8.1 Area for Archaeological Survey



DO NOT SCALE



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**

Appendices

Appendix 1.1 Construction Programme

WING TAT CIVIL ENGINEERING CO.LTD
 CONTRACT NO. DC/2022/02 - DRAINAGE IMPROVEMENT WORKS AT YUEN LONG - STAGE 2
 PROJECT PROGRAMME

ID	Task Name	Constraint Date	Constraint Type	Duration	Start	Finish	Early Start	Early Finish	Late Start	Late Finish	Total Slack	TRA	Predecessors	Half 1	2023, Half 2	2024, Half 1	2024, Half 2	2025, Half 1	2025, Half 2	2026, Half 1	2026, Half 2	2027, Half 1	
28	HC05 CH.A284.946-CHA339.556 (Ex. CH Str. Assessment)	Thu 26/7/2	o Later Than	60 days	Fri 24/3/8	Mon 24/5/6	Fri 24/3/8	Mon 24/5/6	Mon 26/5/4	Thu 26/7/2	787 days	0	19										
29	(Deleted in PMI) Demolish & relocate wall, gate YLL797/2		NA 1 As Possible	30 days	Tue 23/12/26	Wed 24/1/24	Tue 23/12/26	Wed 24/1/24	Sun 26/3/22	Mon 26/4/20	817 days	0	6										
30	(Deleted in PMI) HC01 CH.A11.13-CHA18.14		NA 1 As Possible	45 days	Thu 24/1/25	Sat 24/3/9	Thu 24/1/25	Sat 24/3/9	Tue 26/4/21	Thu 26/6/4	817 days	5	29										
31	(Deleted in PMI) Pedestrian & Vehicular Crossing no. 1 (Box Culvert no. 1)	Thu 26/7/2	o Later Than	28 days	Sun 24/3/10	Sat 24/4/6	Sun 24/3/10	Sat 24/4/6	Fri 26/6/5	Thu 26/7/2	817 days	0	30										
32	Pedestrian & Vehicular Crossing no. 2 (Box Culvert no. 2) [A]	Thu 26/7/2	o Later Than	28 days	Thu 24/2/8	Wed 24/3/6	Thu 24/2/8	Wed 24/3/6	Thu 24/2/8	Wed 24/3/6	0 days	0	26,25,15FS-14										
33	HC02 CH.A18.14-CH.A120.261 (BC1-2)		NA 1 As Possible	282 days	Thu 23/10/19	Fri 24/7/26	Thu 23/10/19	Fri 24/7/26	Thu 24/3/7	Mon 26/8/31	140 days	0											
34	EWN/007 NCE/001 Ambiguity on Drawings	Thu 23/10/19	o Earlier Than	30 days	Thu 23/10/19	Fri 23/11/17	Thu 23/10/19	Fri 23/11/17	Mon 26/7/13	Tue 26/8/11	998 days	0											
35	C9 tender for Precast units [A]		NA 1 As Possible	20 days	Sat 23/11/18	Thu 23/12/7	Sat 23/11/18	Thu 23/12/7	Wed 26/8/12	Mon 26/8/31	998 days	0	34										
36	Sheetpiling & Temp. Drainage Diversion [A]		NA 1 As Possible	44 days	Thu 24/3/7	Fri 24/4/19	Thu 24/3/7	Fri 24/4/19	Thu 24/3/7	Fri 24/4/19	0 days	1	32										
37	Excavation and Lateral Support [A]		NA 1 As Possible	35 days	Tue 24/4/2	Mon 24/5/6	Tue 24/4/2	Mon 24/5/6	Tue 24/4/2	Mon 24/5/6	0 days	1	36FS-18 days										
38	Walls		NA 1 As Possible	40 days	Fri 24/4/19	Tue 24/5/28	Fri 24/4/19	Tue 24/5/28	Fri 24/4/19	Tue 24/5/28	0 days	0											
39	Install precast portion (double beam)		NA 1 As Possible	40 days	Fri 24/4/19	Tue 24/5/28	Fri 24/4/19	Tue 24/5/28	Fri 24/4/19	Tue 24/5/28	0 days	0	37FS-18 days										
40	Ground Beams		NA 1 As Possible	40 days	Sat 24/5/4	Wed 24/6/12	Sat 24/5/4	Wed 24/6/12	Sat 24/5/4	Wed 24/6/12	0 days	0											
41	Rebar Fixing		NA 1 As Possible	30 days	Sat 24/5/4	Sun 24/6/2	Sat 24/5/4	Sun 24/6/2	Sat 24/5/4	Sun 24/6/2	0 days	1	39FS-25 days										
42	Formwork Erection and Cast-in items		NA 1 As Possible	30 days	Tue 24/5/14	Wed 24/6/12	Tue 24/5/14	Wed 24/6/12	Tue 24/5/14	Wed 24/6/12	0 days	1	41FS-20 days										
43	Concreting		NA 1 As Possible	1 day	Fri 24/5/24	Fri 24/5/24	Fri 24/5/24	Fri 24/5/24	Fri 24/5/24	Fri 24/5/24	0 days	0	42FS-20 days										
44	Other in-situ portions		NA 1 As Possible	40 days	Sat 24/5/25	Wed 24/7/3	Sat 24/5/25	Wed 24/7/3	Sat 24/5/25	Wed 24/7/3	0 days	0											
45	Rebar Fixing		NA 1 As Possible	30 days	Sat 24/5/25	Sun 24/6/23	Sat 24/5/25	Sun 24/6/23	Sat 24/5/25	Sun 24/6/23	0 days	1	43										
46	Formwork Erection and Cast-in items		NA 1 As Possible	30 days	Tue 24/6/4	Wed 24/7/3	Tue 24/6/4	Wed 24/7/3	Tue 24/6/4	Wed 24/7/3	0 days	1	45FS-20 days										
47	Concreting		NA 1 As Possible	1 day	Fri 24/6/14	Fri 24/6/14	Fri 24/6/14	Fri 24/6/14	Fri 24/6/14	Fri 24/6/14	0 days	0	46FS-20 days										
48	Backfilling and Compaction		NA 1 As Possible	28 days	Sat 24/6/15	Fri 24/7/12	Sat 24/6/15	Fri 24/7/12	Sat 24/6/15	Fri 24/7/12	0 days	0	47										
49	Removal of Sheetpiles		NA 1 As Possible	28 days	Sat 24/6/29	Fri 24/7/26	Sat 24/6/29	Fri 24/7/26	Sat 24/6/29	Fri 24/7/26	0 days	0	48FS-14 days										
50	Animal Escape Ramp	Thu 26/7/2	o Later Than	28 days	Fri 24/8/9	Sat 24/7/13	Fri 24/8/9	Sat 24/7/13	Fri 26/6/5	Thu 26/7/2	692 days	0	49FS-14 days										
51	Demolish & relocate toilet YLL797/5 [A]		NA 1 As Possible	10 days	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	0 days	0	49FS-14 days										
52	Demolish & relocate container YLL797/6 [A]		NA 1 As Possible	10 days	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	0 days	0	49FS-14 days										
53	Demolish & relocate porch YLL797/7 [A]		NA 1 As Possible	10 days	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	0 days	0	49FS-14 days										
54	Demolish & relocate fencing, retaining wall YLL797/10,11 [A]		NA 1 As Possible	10 days	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	Sat 24/7/13	Mon 24/7/22	0 days	0	49FS-14 days										
55	HC03 CH.A126.235-CH.A187.706 (BC2-3)		NA 1 As Possible	122 days	Mon 24/7/8	Wed 24/11/6	Mon 24/7/8	Wed 24/11/6	Mon 24/7/8	Wed 24/11/6	0 days	0											
56	Sheetpiling & Temp. Drainage Diversion		NA 1 As Possible	28 days	Mon 24/7/8	Sun 24/8/4	Mon 24/7/8	Sun 24/8/4	Mon 24/7/8	Sun 24/8/4	0 days	2	51FS-15 days,5										
57	Excavation and Lateral Support		NA 1 As Possible	28 days	Mon 24/7/22	Sun 24/8/18	Mon 24/7/22	Sun 24/8/18	Mon 24/7/22	Sun 24/8/18	0 days	2	56FS-14 days										
58	Walls		NA 1 As Possible	35 days	Mon 24/8/5	Sun 24/9/8	Mon 24/8/5	Sun 24/9/8	Mon 24/8/5	Sun 24/9/8	0 days	0											
59	Install precast portion (double beam)		NA 1 As Possible	35 days	Mon 24/8/5	Sun 24/9/8	Mon 24/8/5	Sun 24/9/8	Mon 24/8/5	Sun 24/9/8	0 days	0	57FS-14 days										
60	Ground Beams		NA 1 As Possible	30 days	Thu 24/8/15	Fri 24/9/13	Thu 24/8/15	Fri 24/9/13	Thu 24/8/15	Fri 24/9/13	0 days	0											
61	Rebar Fixing		NA 1 As Possible	20 days	Thu 24/8/15	Tue 24/9/3	Thu 24/8/15	Tue 24/9/3	Thu 24/8/15	Tue 24/9/3	0 days	2	59FS-25 days										
62	Formwork Erection and Cast-in items		NA 1 As Possible	20 days	Sun 24/8/25	Fri 24/9/13	Sun 24/8/25	Fri 24/9/13	Sun 24/8/25	Fri 24/9/13	0 days	2	61FS-10 days										
63	Concreting		NA 1 As Possible	1 day	Wed 24/9/4	Wed 24/9/4	Wed 24/9/4	Wed 24/9/4	Wed 24/9/4	Wed 24/9/4	0 days	0	62FS-10 days										
64	Other in-situ portions		NA 1 As Possible	30 days	Thu 24/9/5	Fri 24/10/4	Thu 24/9/5	Fri 24/10/4	Thu 24/9/5	Fri 24/10/4	0 days	0											
65	Rebar Fixing		NA 1 As Possible	20 days	Thu 24/9/5	Tue 24/9/24	Thu 24/9/5	Tue 24/9/24	Thu 24/9/5	Tue 24/9/24	0 days	2	63										
66	Formwork Erection and Cast-in items		NA 1 As Possible	20 days	Sun 24/9/15	Fri 24/10/4	Sun 24/9/15	Fri 24/10/4	Sun 24/9/15	Fri 24/10/4	0 days	2	65FS-10 days										
67	Concreting		NA 1 As Possible	1 day	Wed 24/9/25	Wed 24/9/25	Wed 24/9/25	Wed 24/9/25	Wed 24/9/25	Wed 24/9/25	0 days	0	66FS-10 days										
68	Backfilling and Compaction		NA 1 As Possible	28 days	Thu 24/9/26	Wed 24/10/23	Thu 24/9/26	Wed 24/10/23	Thu 24/9/26	Wed 24/10/23	0 days	0	67										
69	Removal of Sheetpiles		NA 1 As Possible	28 days	Thu 24/10/10	Wed 24/11/6	Thu 24/10/10	Wed 24/11/6	Thu 24/10/10	Wed 24/11/6	0 days	0	68FS-14 days										
70	Pedestrian & Vehicular Crossing no. 1 (Box Culvert no. 3)		NA 1 As Possible	40 days	Thu 24/10/24	Mon 24/12/2	Thu 24/10/24	Mon 24/12/2	Thu 24/10/24	Mon 24/12/2	0 days	0	69FS-14 days										
71	Demolish & relocate drainage channel YLL797/12		NA 1 As Possible	20 days	Tue 24/11/19	Sun 24/12/8	Tue 24/11/19	Sun 24/12/8	Tue 24/11/19	Sun 24/12/8	0 days	0	70FS-14 days										
72	HC04 CH.A195.853-CH.A284.946 (BC3-Ex. CH)		NA 1 As Possible	127 days	Sun 24/11/24	Sun 25/3/30	Sun 24/11/24	Sun 25/3/30	Sun 24/11/24	Sun 25/3/30	0 days	0											
73	Sheetpiling & Temp. Drainage Diversion		NA 1 As Possible	30 days	Sun 24/11/24	Mon 24/12/23	Sun 24/11/24	Mon 24/12/23	Sun 24/11/24	Mon 24/12/23	0 days	2	71FS-15 days										
74	Excavation and Lateral Support		NA 1 As Possible	30 days	Mon 24/12/9	Tue 25/1/7	Mon 24/12/9	Tue 25/1/7	Mon 24/12/9	Tue 25/1/7	0 days	2	73FS-15 days										
75	Ground and Edge Beams		NA 1 As Possible	55 days	Tue 24/12/24	Sun 25/2/16	Tue 24/12/24	Sun 25/2/16	Tue 24/12/24	Sun 25/2/16	0 days	0											
76	Install precast portion (ground beam)		NA 1 As Possible	40 days	Tue 24/12/24	Sat 25/2/1	Tue 24/12/24	Sat 25/2/1	Tue 24/12/24	Sat 25/2/1	0 days	0	74FS-15 days										
77	Rebar Fixing		NA 1 As Possible	30 days	Wed 25/1/8	Thu 25/2/6	Wed 25/1/8	Thu 25/2/6	Wed 25/1/8	Thu 25/2/6	0 days	2	76FS-25 days										
78	Formwork Erection and Cast-in items		NA 1 As Possible	30 days	Sat 25/1/18	Sun 25/2/16	Sat 25/1/18	Sun 25/2/16	Sat 25/1/18	Sun 25/2/16	0 days	2	77FS-20 days										
79	Concreting		NA 1 As Possible	1 day	Tue 25/1/28	Tue 25/1/28	Tue 25/1/28	Tue 25/1/28	Tue 25/1/28	Tue 25/1/28	0 days	0	78FS-20 days										
80	Walls		NA 1 As Possible	40 days	Wed 25/1/29	Sun 25/3/9	Wed 25/1/29	Sun 25/3/9	Wed 25/1/29	Sun 25/3/9	0 days	0											
81	Rebar Fixing		NA 1 As Possible	30 days	Wed 25/1/29	Thu 25/2/27	Wed 25/1/29	Thu 25/2/27	Wed 25/1/29	Thu 25/2/27	0 days	2	79										
82	Formwork Erection and Cast-in items		NA 1 As Possible	30 days	Sat 25/2/8																		

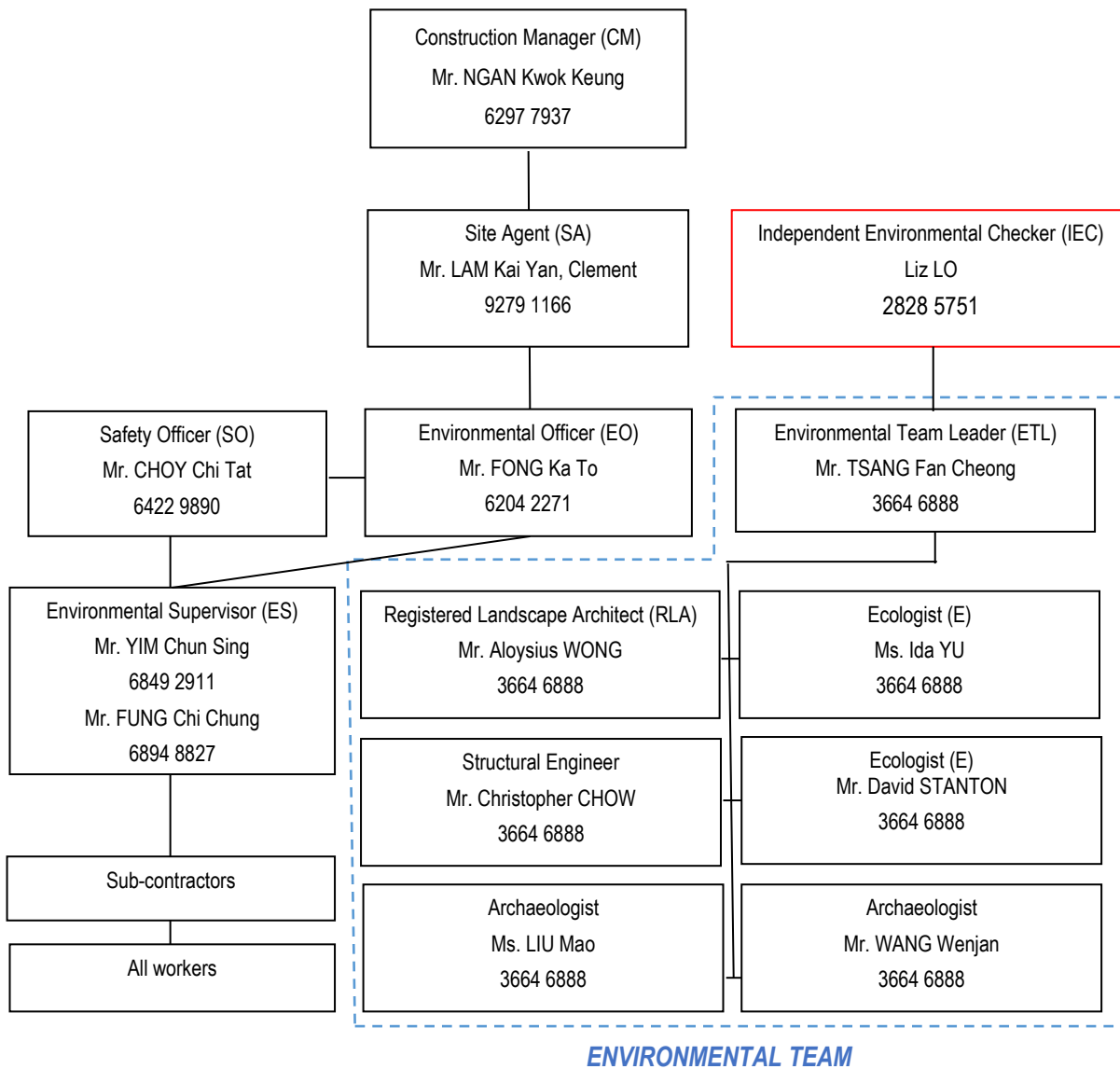
Appendix 1.2 Project Organization Chart

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 Measures

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
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
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
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
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

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
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
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
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
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
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

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
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
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
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
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	Deficiency of Mitigation Measures 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
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

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
Construction Phase							
S.4.6.6	S. 4.8.1	Use of quiet PME 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
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
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

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
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

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
		<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

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
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
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

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
S.5.9.3	S.5.2.2	<p>Good Site Practice</p> <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; 	<p>Ecological – to avoid or minimize the potential disturbance to the habitats and wildlife inhabited within or adjacent to the work sites</p>	<p>Contractor(s)</p>	<p>During construction at all sites</p>	<p>EIA, contractual requirements</p>	<p>Implemented</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
		<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
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.
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

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
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
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
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

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
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; 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; 	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. WPCO licenses for Ha Che, Lin Fa Tei and Sung Shan New Village were granted on 26 Apr 2024, 24 May 2024 and 10 July 2024 respectively. WPCO license for Tai Wo is under application.

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
		<ul style="list-style-type: none"> 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 carried out immediately after the final surfaces are formed; 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; 					

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
<ul style="list-style-type: none"> 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 concrete batching plant or casting yard should be adequately treated before disposal into stormwater drains; Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric during rainstorms. 							
S.6.7.4	S6.2.3	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.	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. WPCO licenses for Ha Che, Lin Fa Tei and Sung Shan New Village were granted on 26 Apr 2024, 24 May 2024 and 10 July 2024 respectively. WPCO license for Tai Wo is under application.

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
		<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 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; 					

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
		<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
		<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 system after accidental spillage; 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. 					

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
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
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	WPCO licenses for Ha Che, Lin Fa Tei and Sung Shan New Village were granted on 26 Apr 2024, 24 May 2024 and 10 July 2024 respectively. WPCO license for Tai Wo is under application.

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
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 construction phase of the project would not cause water quality impact after undertaking all required measures. 	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

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
S.6.7.10 - S.6.7.15	S.6.2.3	<p>Widening of Drainage Channels</p> <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 contaminant 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; 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; 	Water quality control during construction	Contractor(s)	At all construction areas of the site 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
		<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; • 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. 					

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
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; There must be no dry weather wastewater discharges from the site; Monitor wet weather discharges for pH and suspended solids. Retain the records. 	Water quality control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO	Implemented
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

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
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 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. 	Water quality control during construction	Contractor(s)	At Tai Wo Area during the entire construction period	WPCO	Implemented

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
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
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
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

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
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
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
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

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
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
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

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
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
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
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
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
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

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
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

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
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

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
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
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
S9.12.1.1	S.9.2	CM03 - Works Area and Temporary Works Areas (Good Site Practice) 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.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented
S9.12.1.1	S.9.2	CM04 - Advance Implementation of Mitigation Planting Replanting of existing/ disturbed vegetation shall be undertaken as soon as technically feasible.	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

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
S9.12.1.1	S.9.2	CM05 - Coordination with Concurrent Projects Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce the period of disturbance.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work sites	EIAO-TM	Implemented
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
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
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
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

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
Construction Phase							
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	<p>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.</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
		<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
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
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	Archaeological Survey will be conducted prior to the construction works

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
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

Appendix 2.1 Event and Action Plans for Water Quality

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.

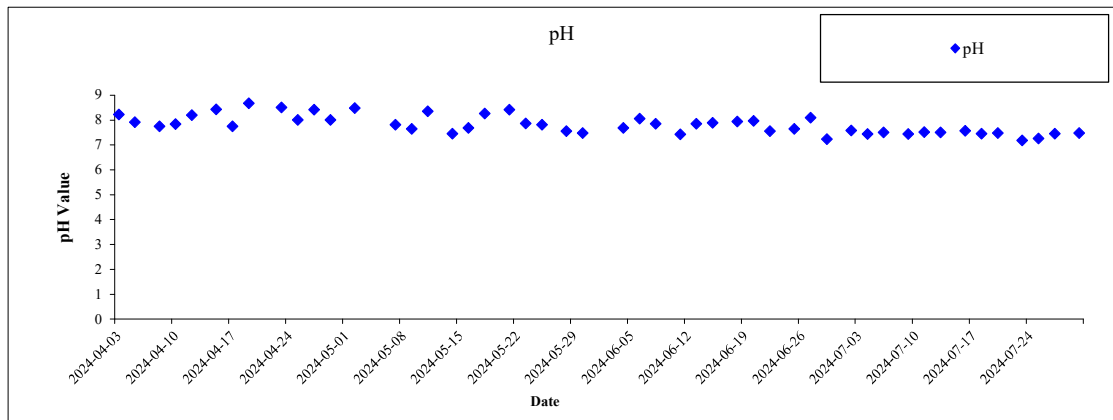
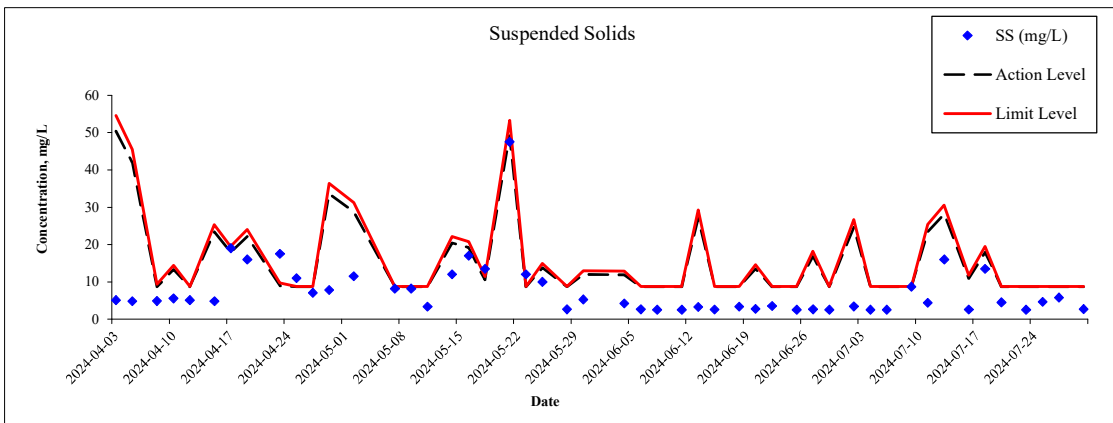
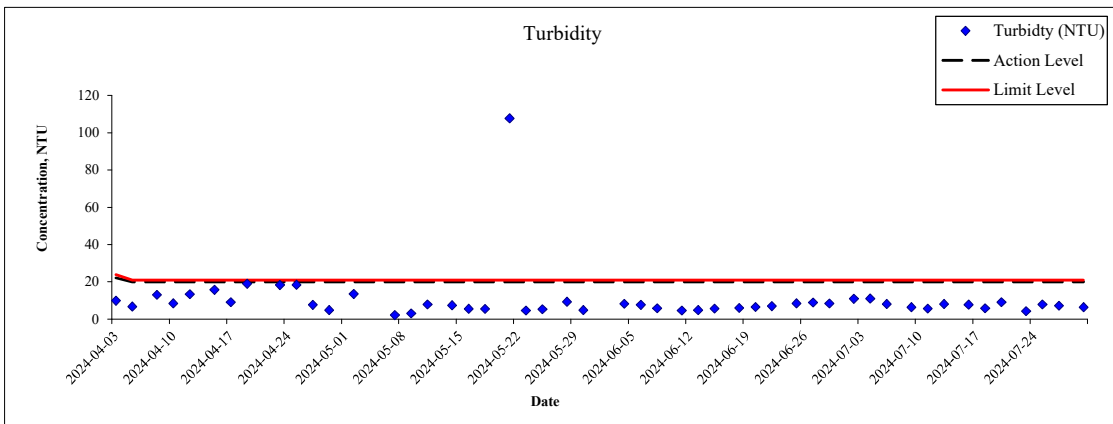
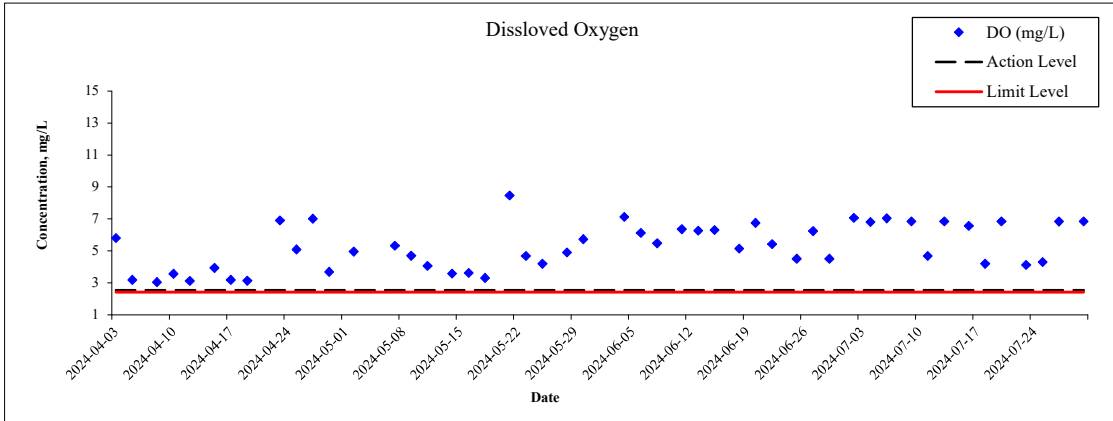
Event	Action			
	ET ⁽¹⁾	IEC ⁽¹⁾	ER ⁽¹⁾	Contractor
Limit Level being exceeded by one sampling days	<ol style="list-style-type: none"> 1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform the IEC, the Contractor and the DEP; 4. Check monitoring data, all plant, 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.

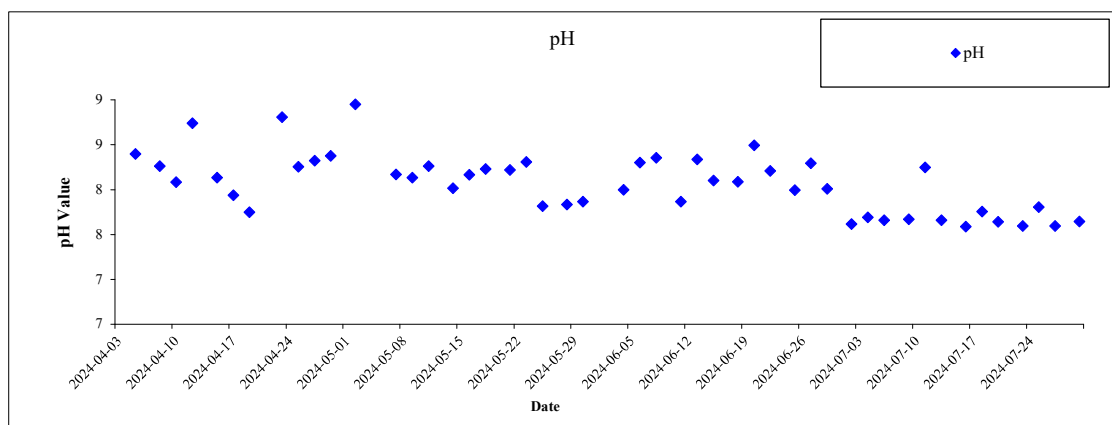
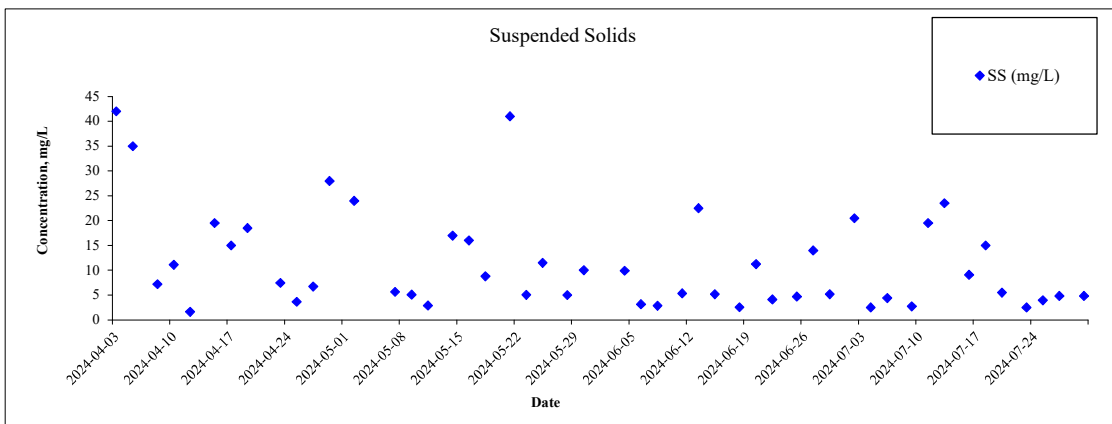
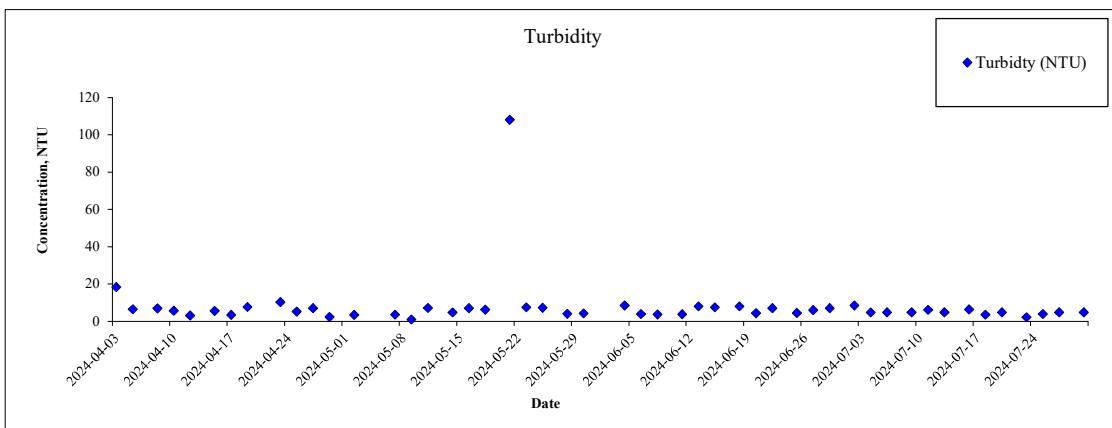
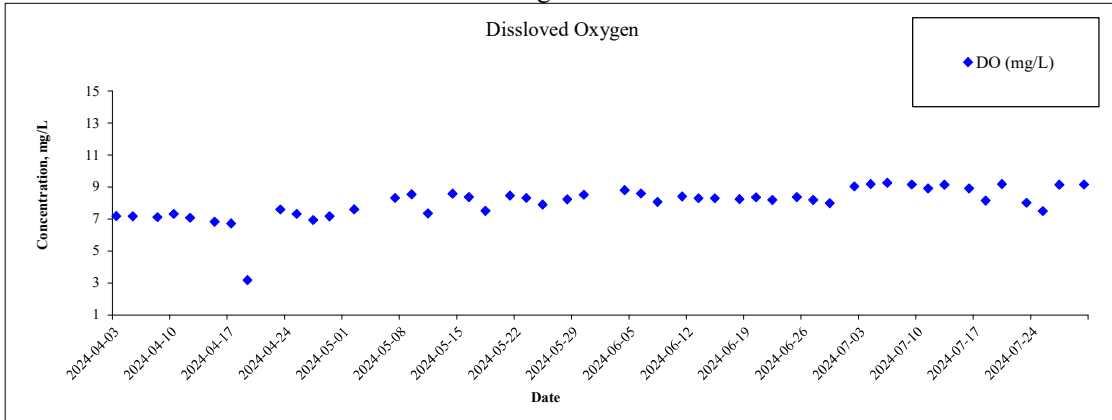
Note (1) ET – Environmental Team, IEC – Independent Environmental Checker, ER – Engineer's Representative, DEP – Director of Environmental Protection.

Appendix 2.2 Graphical Presentation of Water Quality Monitoring

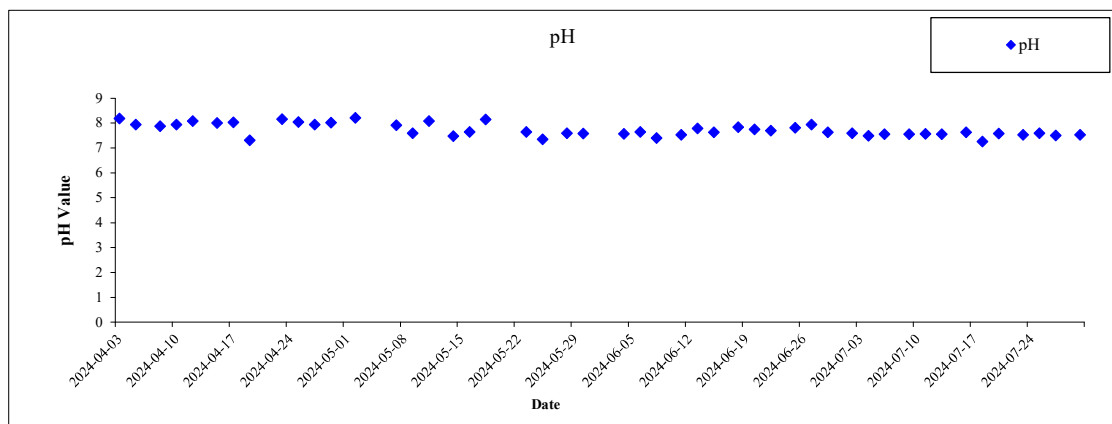
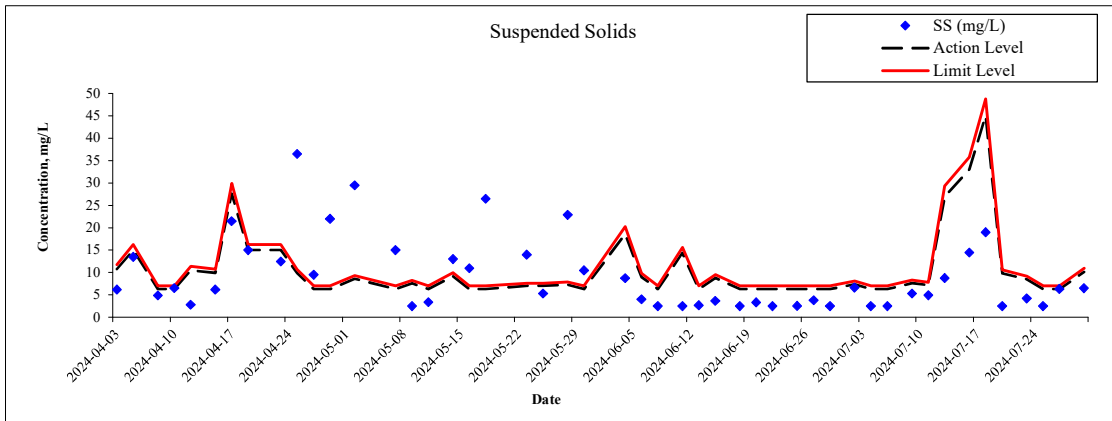
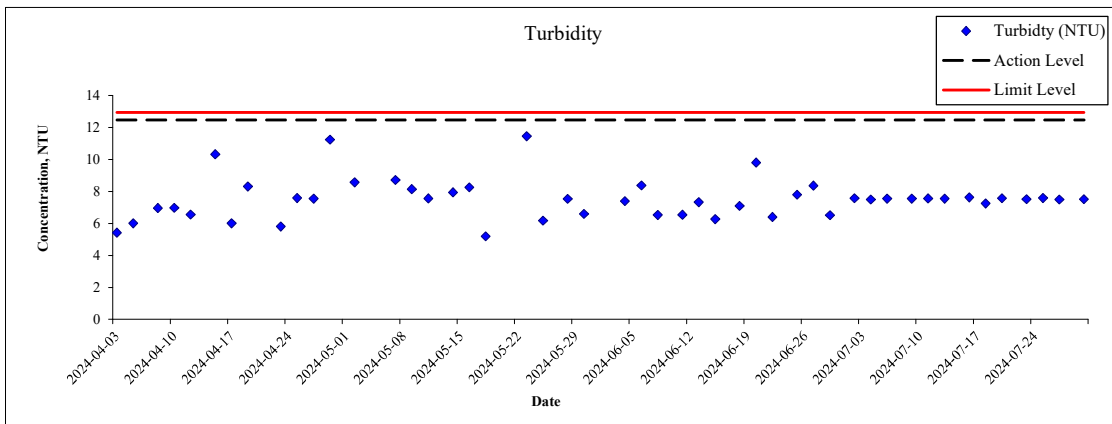
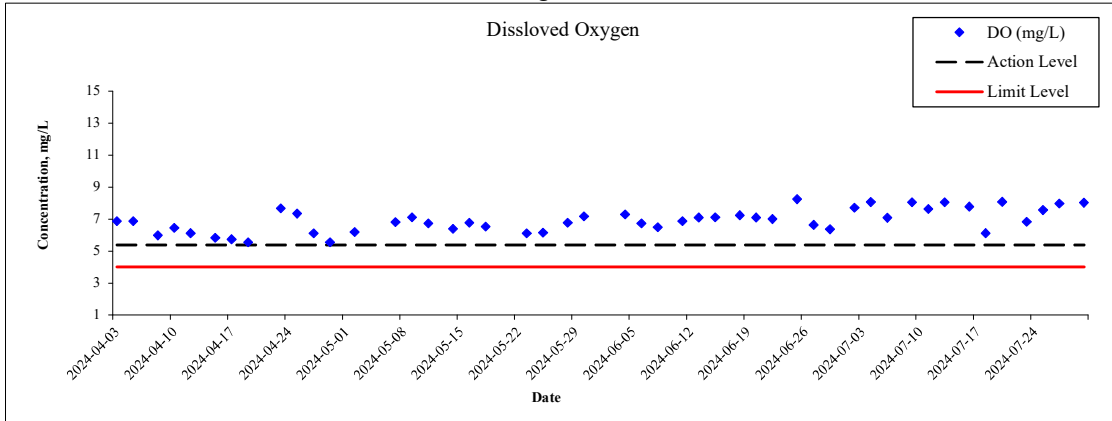
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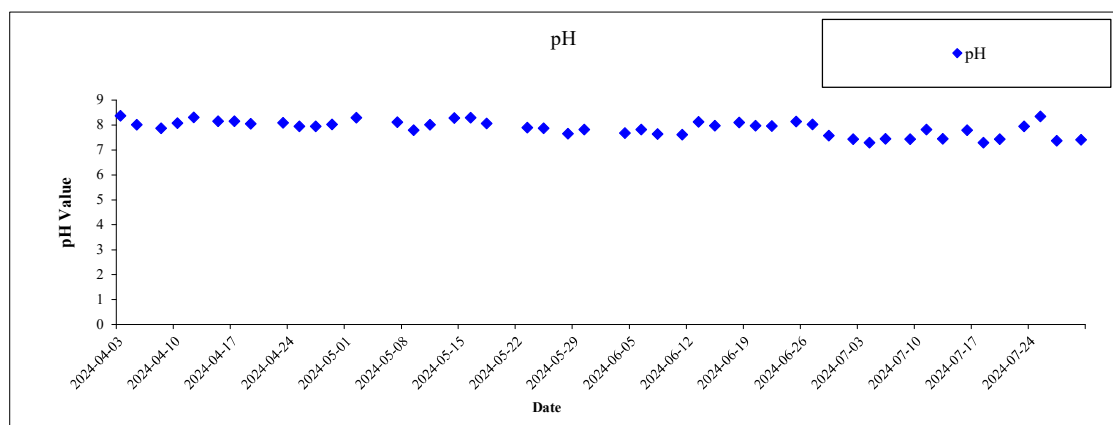
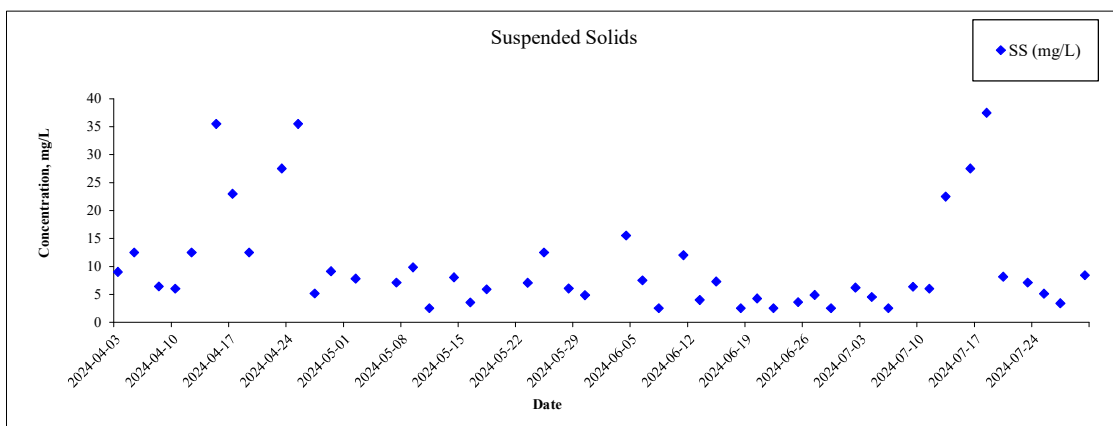
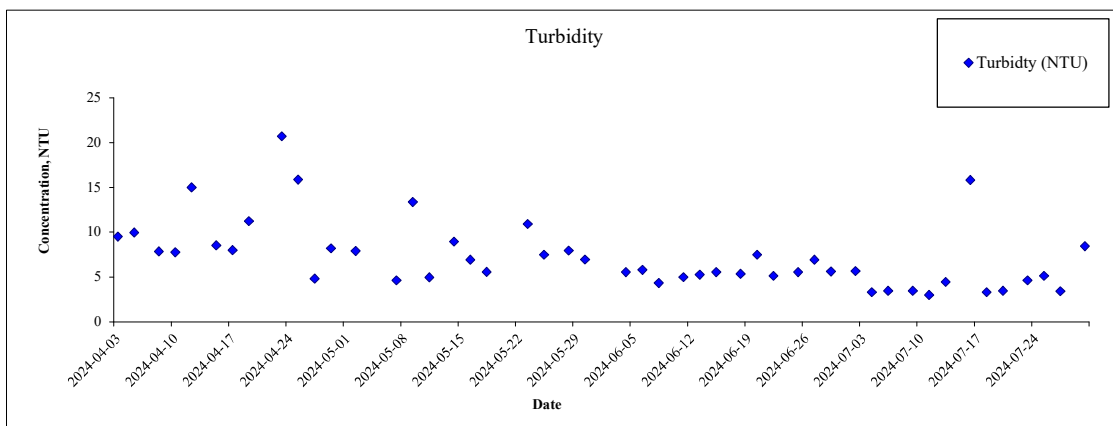
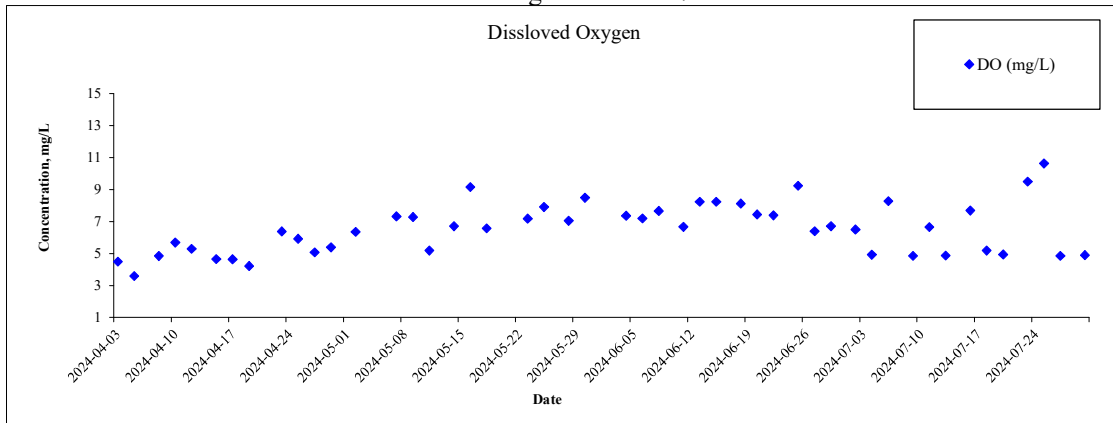
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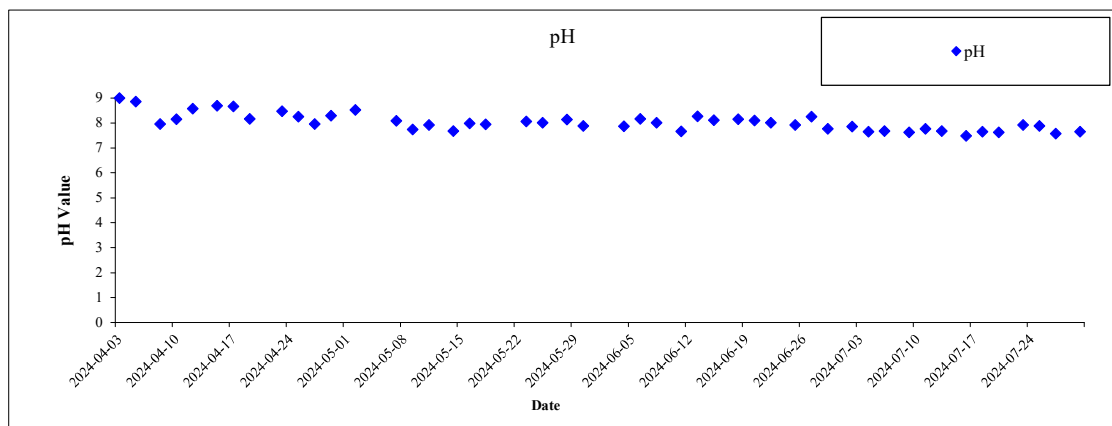
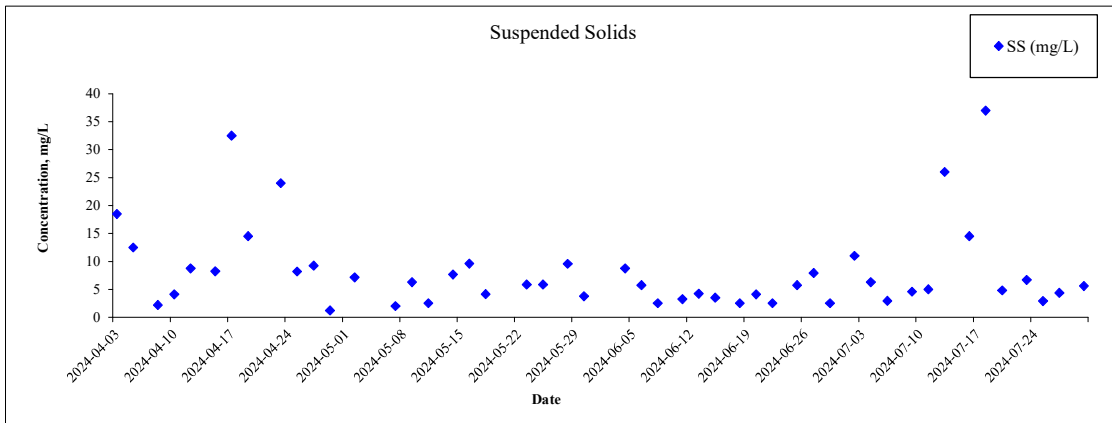
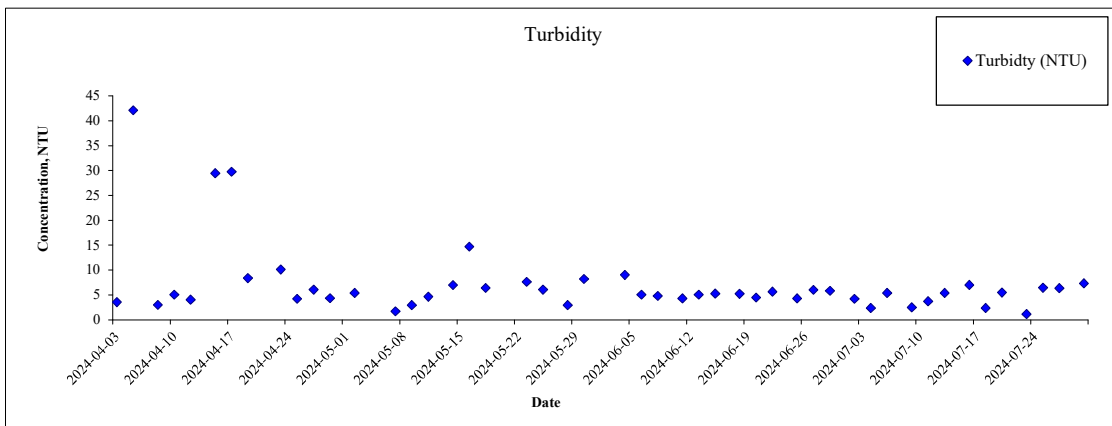
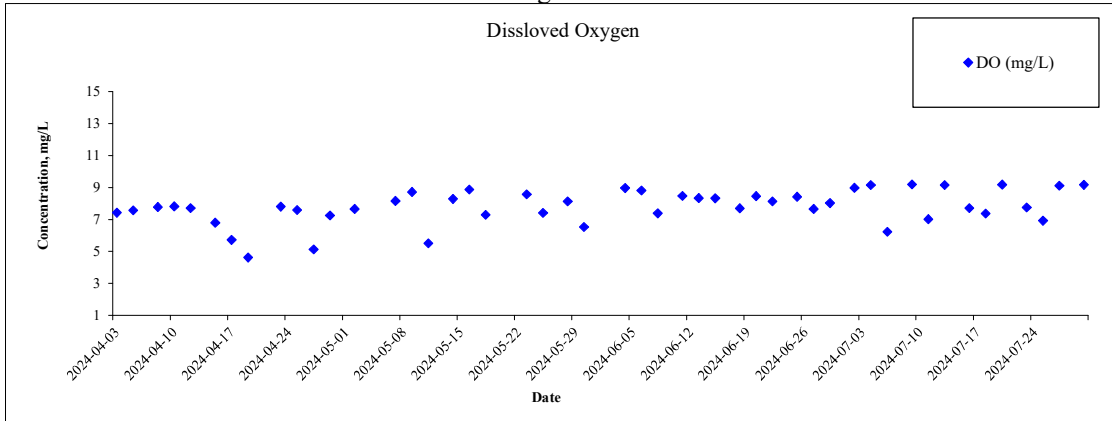
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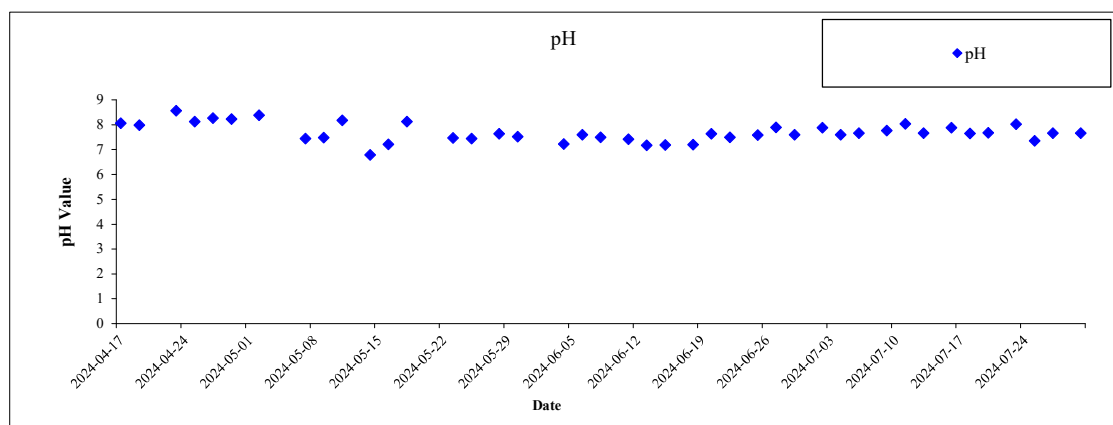
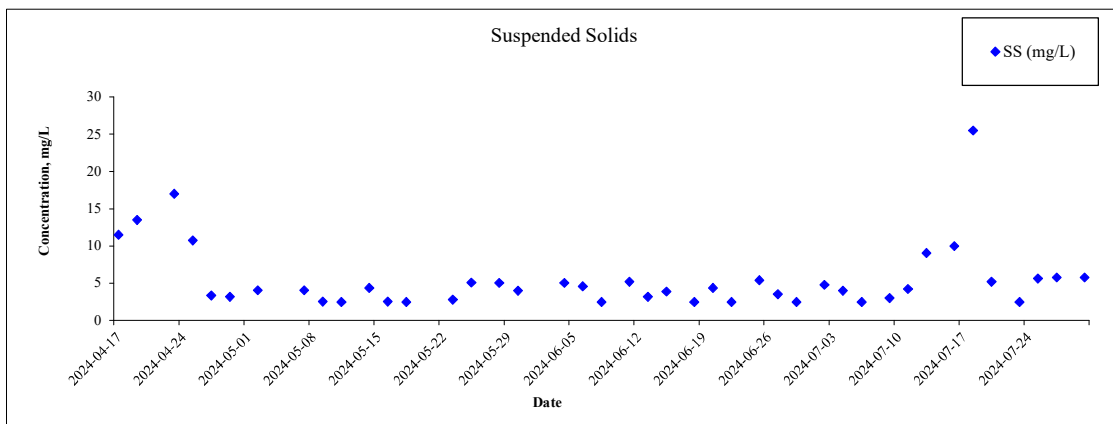
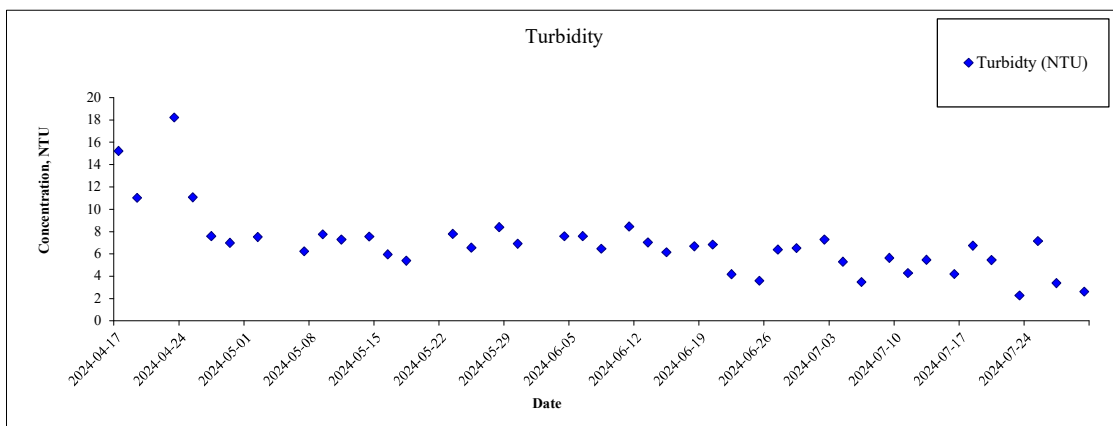
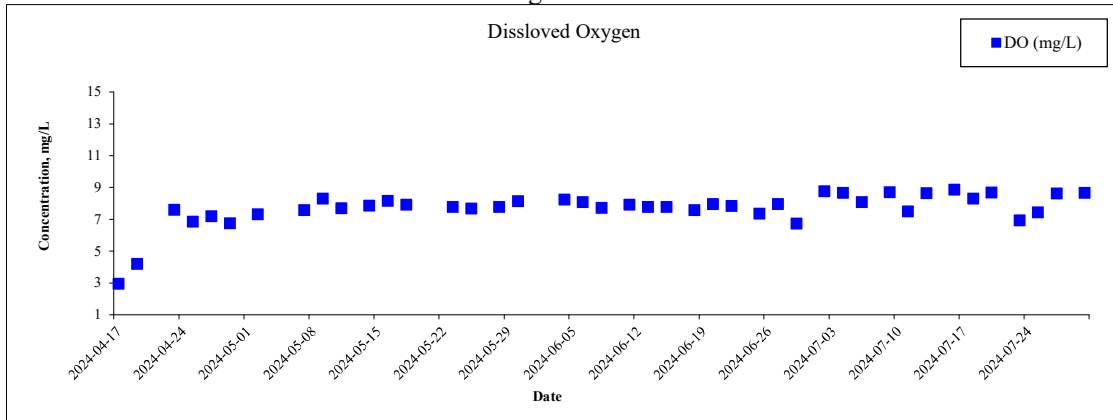
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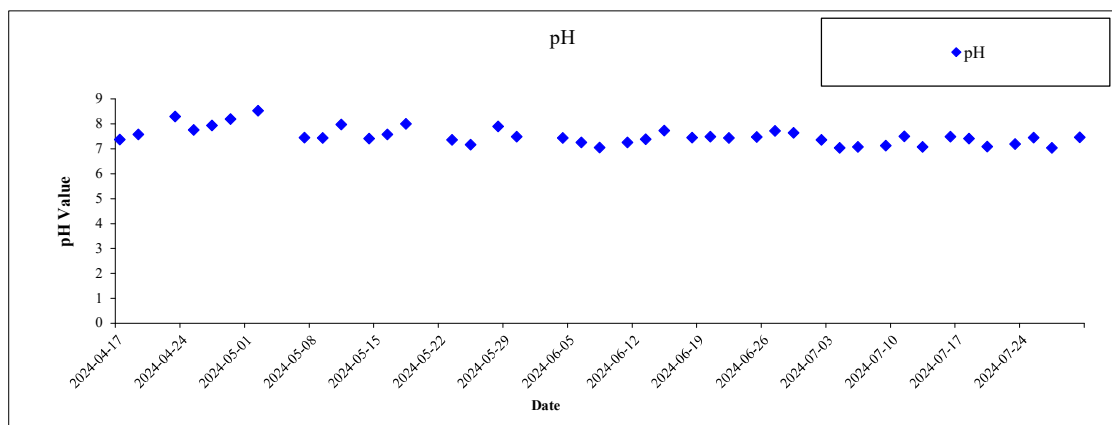
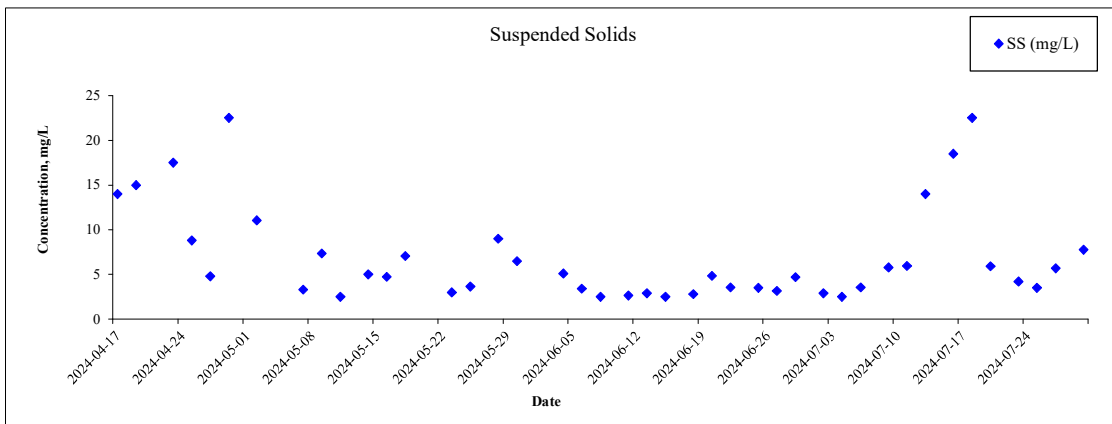
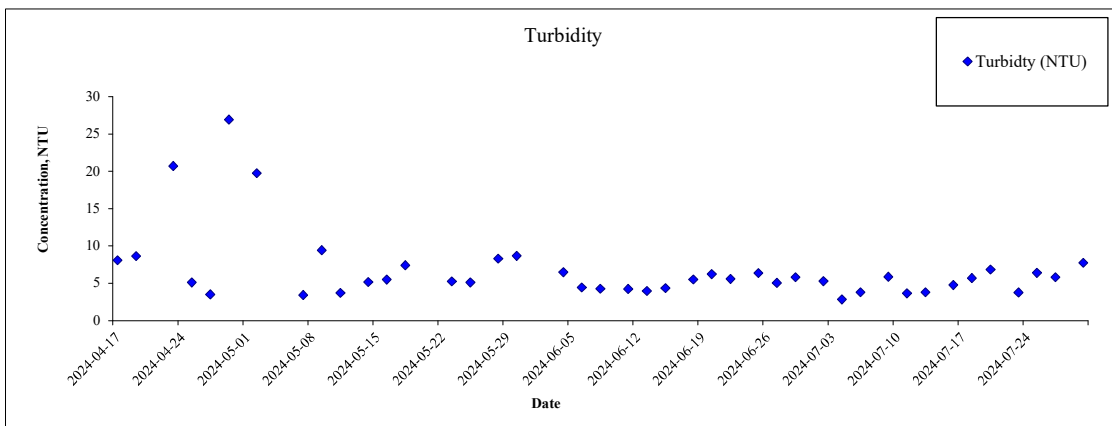
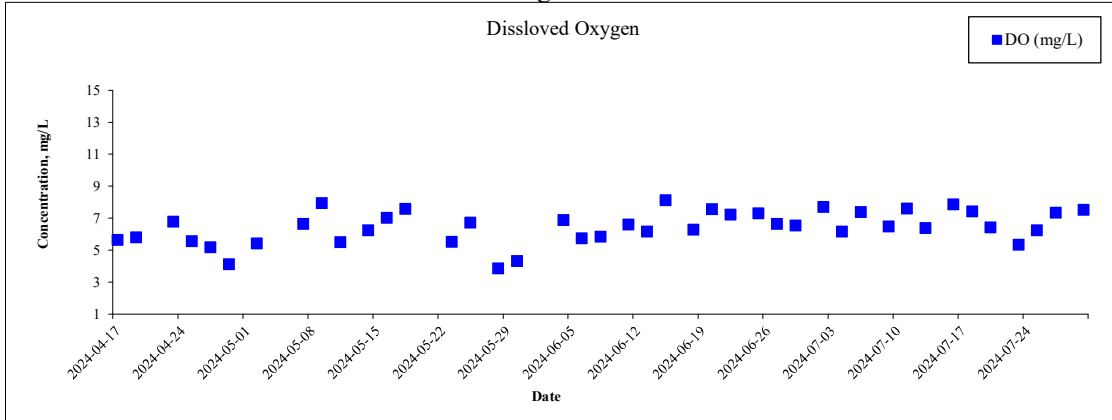
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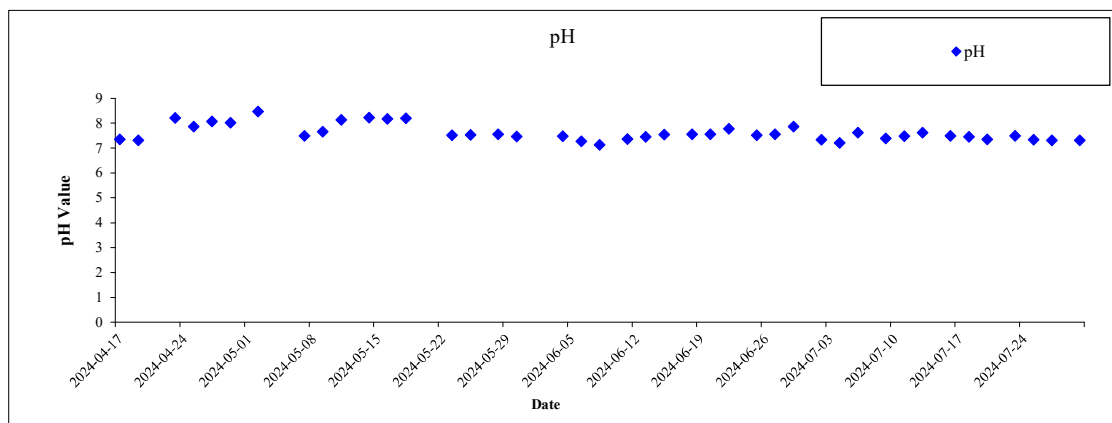
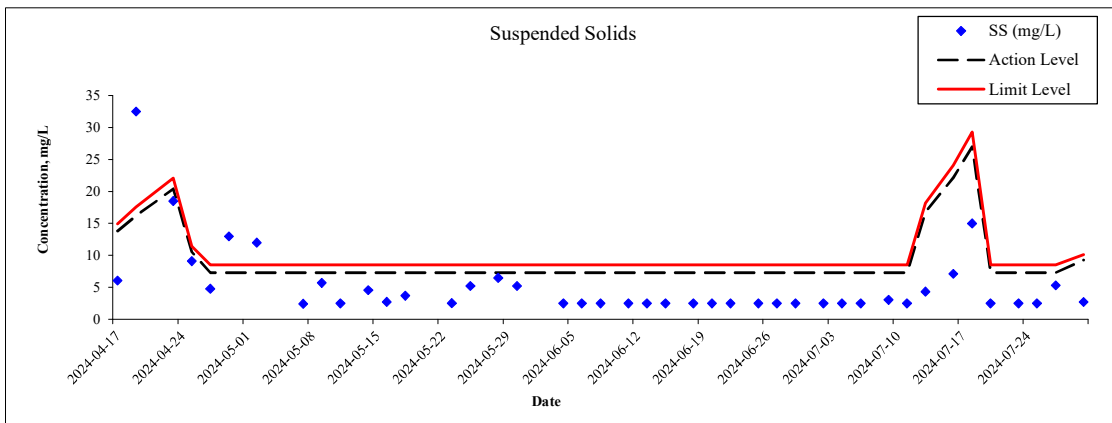
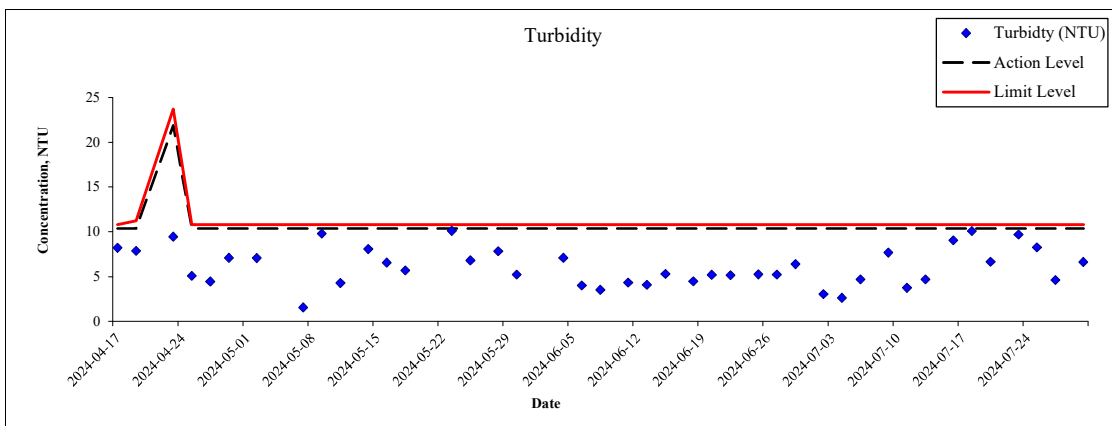
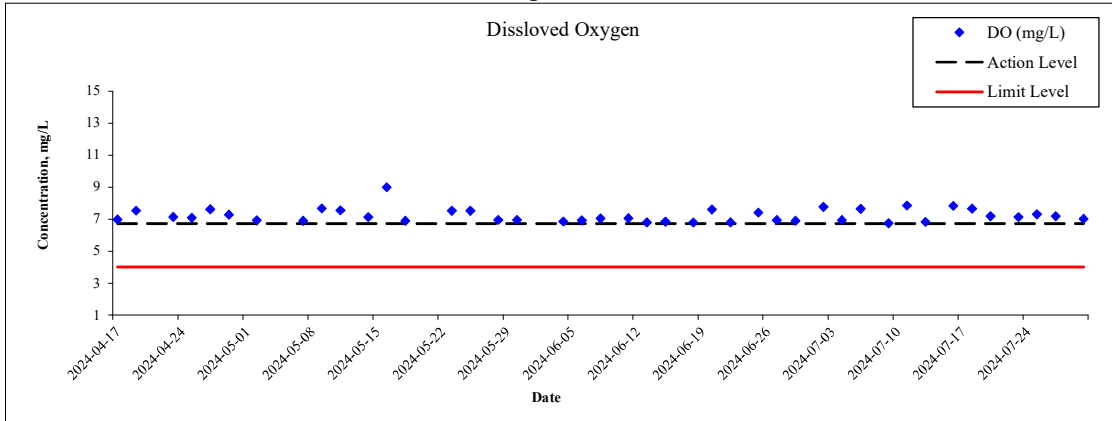
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Monitoring Location: C2



Monitoring Location: C1A

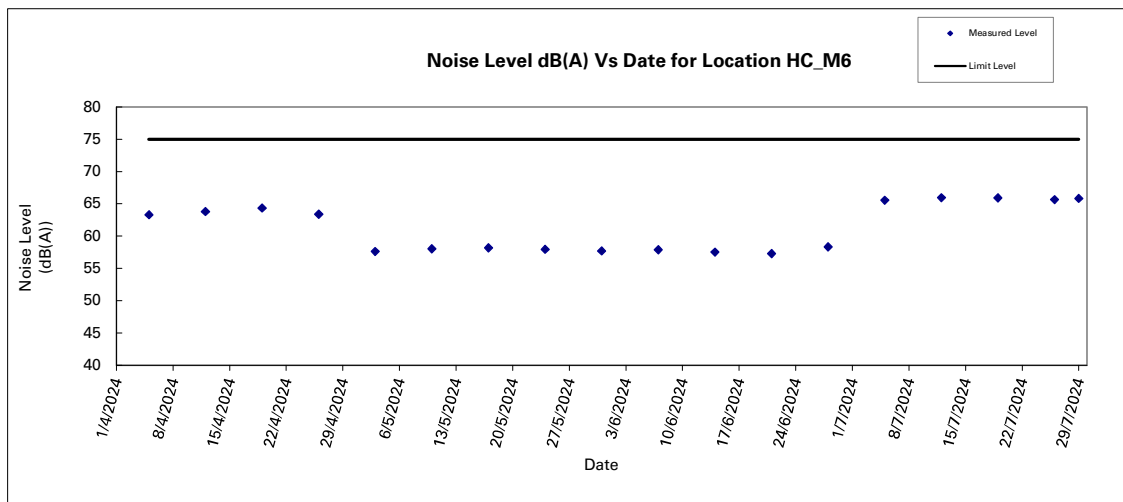
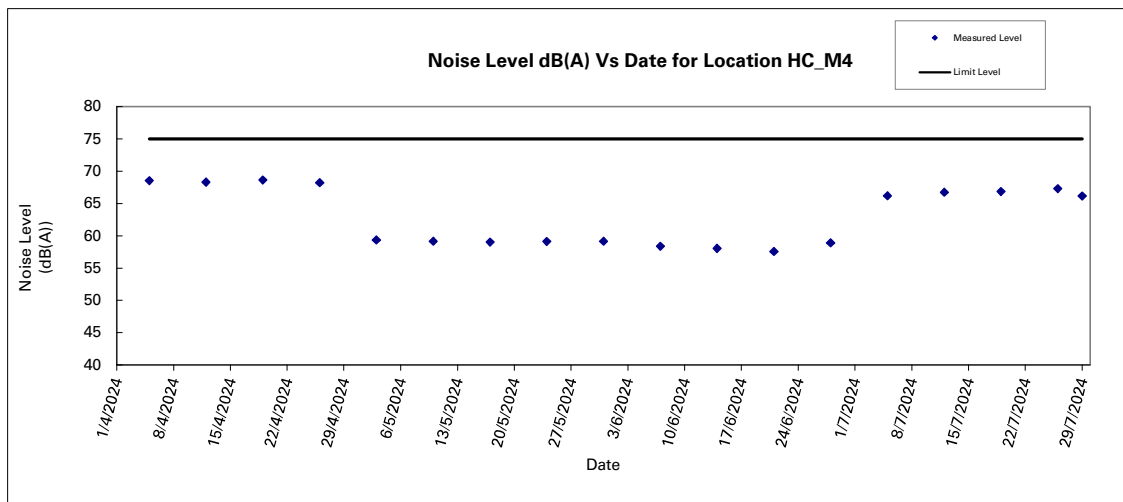
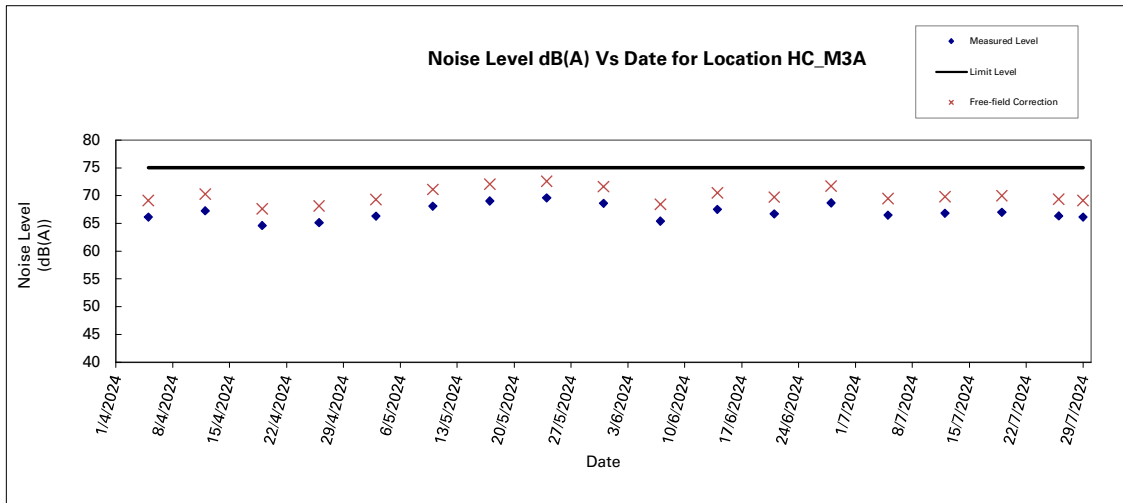


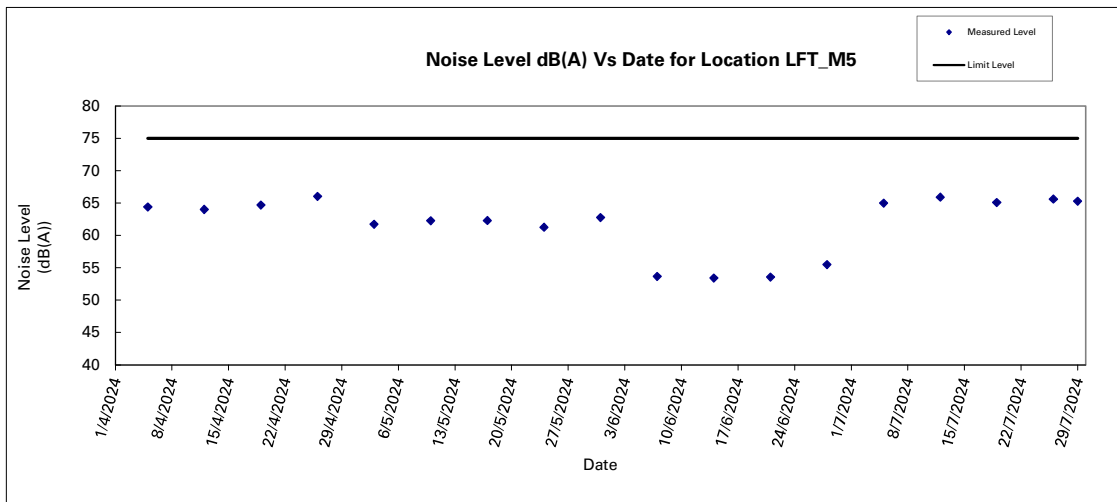
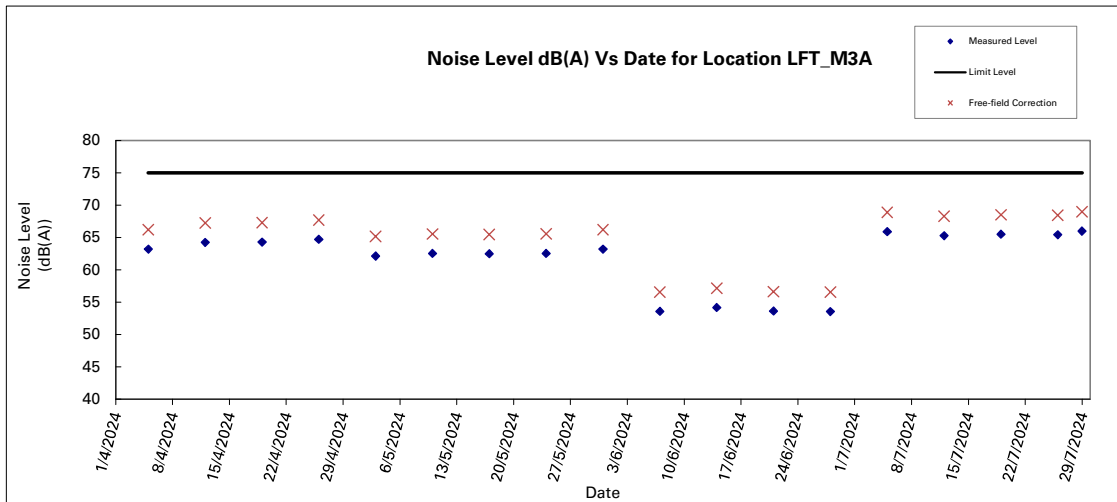
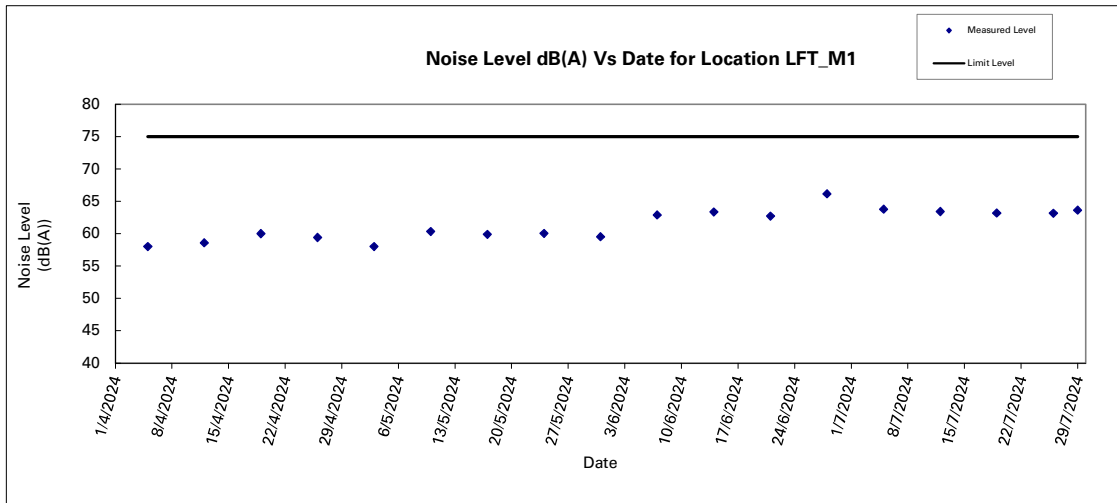
Appendix 3.1 Event and Action Plans for Noise

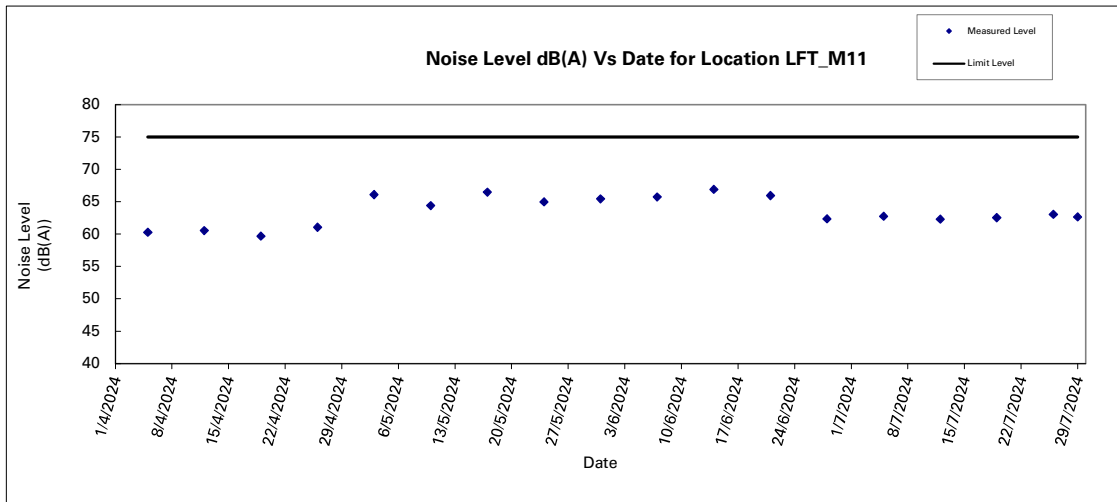
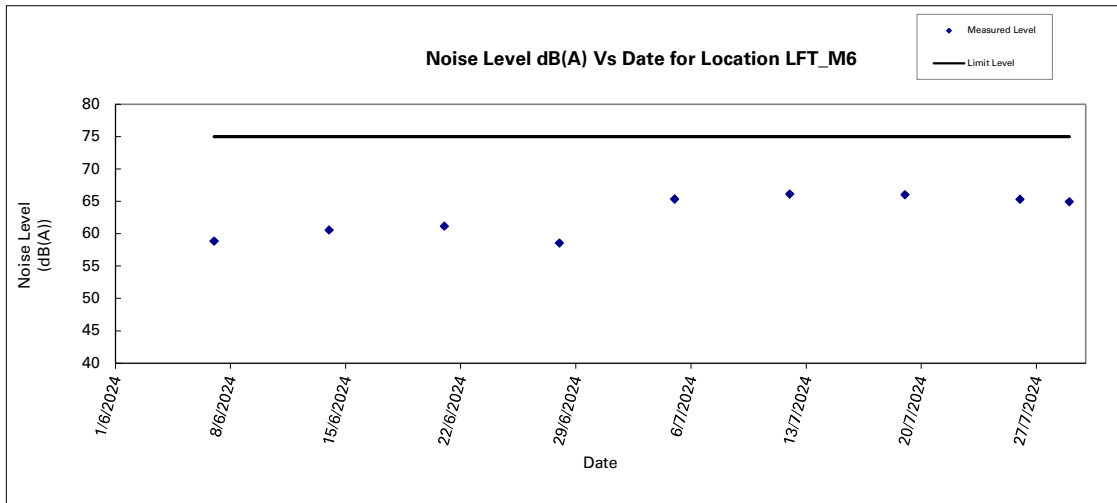
Event and Action Plan for Noise

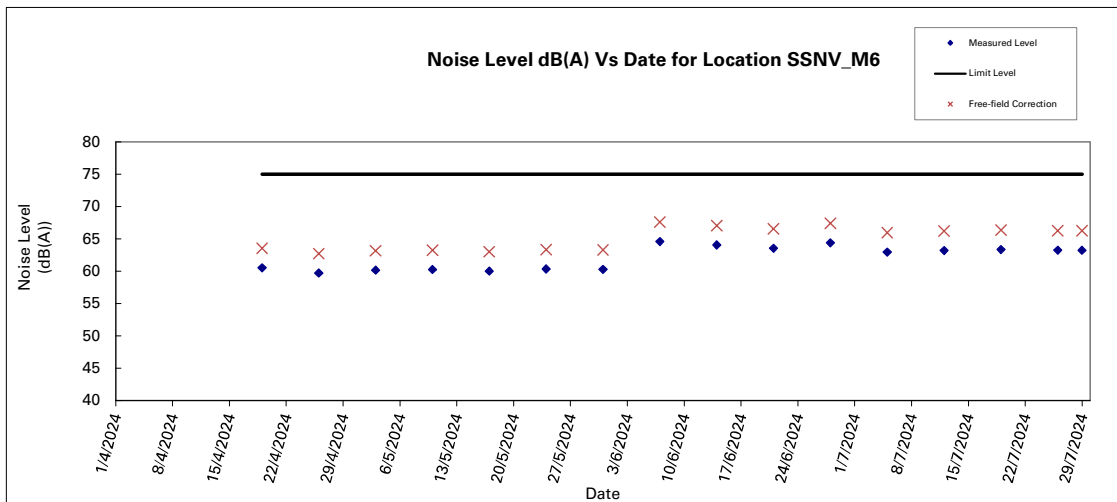
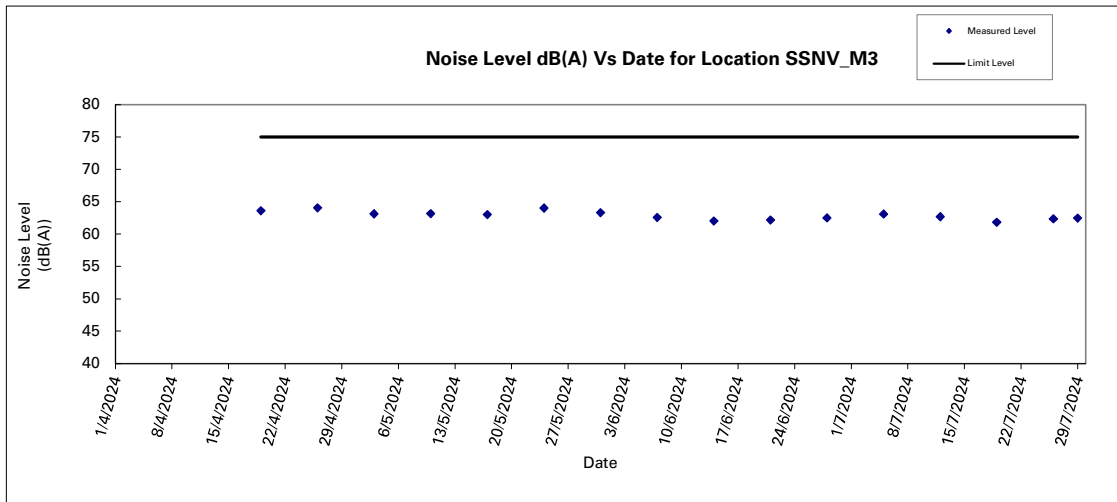
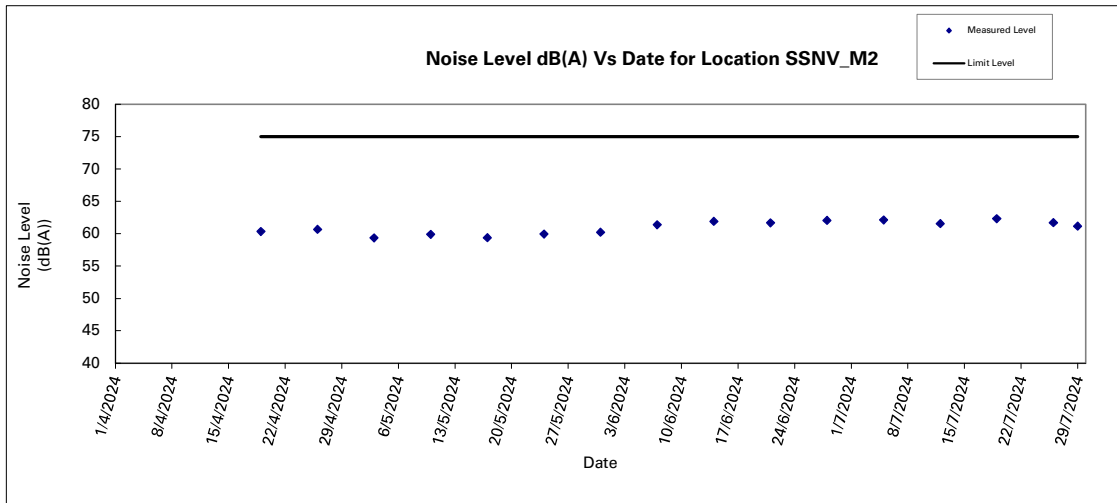
Event	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify ER, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the IEC and the Contractor and formulate remedial measures; and 5. Increase monitoring 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 3.2 Graphical Presentation of Noise Monitoring









Appendix 5.1 Waste Flow Table

Name of Department : Drainage Services Department

Contract No. : DC/2022/02

Monthly Summary Waste Flow Table for 2024

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Materials Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / Cardboard Packaging	Plastic	Chemical Waste	Others, e.g. General Refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
Jan	0.037	0.029	0.000	0.000	0.037	0.000	0.000	0.000	0.000	0.000	0.020
Feb	0.053	0.046	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.030
Mar	0.437	0.098	0.000	0.000	0.437	0.000	0.000	0.000	0.000	0.000	0.055
Apr	1.040	0.305	0.000	0.000	1.040	0.000	0.000	0.000	0.000	0.000	0.000
May	0.498	0.038	0.000	0.000	0.498	0.000	0.000	0.000	0.000	0.000	0.002
Jun	0.232	0.012	0.000	0.000	0.232	0.000	0.000	0.000	0.000	0.000	0.026
Sub-total	2.298	0.528	0.000	0.000	2.298	0.000	0.000	0.000	0.000	0.000	0.133
Jul	0.927	0.048	0.000	0.000	0.927	0.000	0.000	0.000	0.000	0.000	0.021
Aug											
Sep											
Oct											
Nov											
Dec											
Total	3.224	0.576	0.000	0.000	3.224	0.000	0.000	0.000	0.000	0.000	0.154

*As of 5 August 2024

Appendix 10.1 Complaint Log

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 May 2024 - 31 July 2024	1	1	Water Quality

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 May 2024 - 31 July 2024	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 May 2024 - 31 July 2024	0	0	N/A

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