

JOB No.: TCS01196/22

WSD CONTRACT No.: 7/WSD/21 -

**CONSTRUCTION OF SIU HO WAN WATER TREATMENT
WORKS EXTENSION AND SIU HO WAN RAW WATER
BOOSTER PUMPING STATION**

**MONTHLY ENVIRONMENTAL MONITORING AND AUDIT
REPORT – MARCH 2026**

PREPARED FOR

CHINA ROAD AND BRIDGE CORPORATION

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14 April 2026	TCS01196/22/600/R0149v1		
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Attn: Mr. SY Kin Lik (SE/CM 3)

14 April 2026

By E-mail

Dear Sir,

RE: CONTRACT NO. 7/WSD/21
INDEPENDENT ENVIRONMENTAL CHECKER FOR ENVIRONMENTAL MONITORING AND AUDIT FOR
SIU HO WAN WATER TREATMENT WORKS EXTENSION
MONTHLY ENVIRONMENTAL MONITORING AND AUDIT REPORT – MARCH 2026

I refer to the Monthly Environmental Monitoring and Audit Report – March 2026 (Report No.: TCS01196/22/600/R0149v1) received on 14 April 2026 by the Environmental Team (ET), Action-United Environmental Services & Consulting (AUES) via email. In accordance with Condition 4.4 of Environmental Permit No.EP-207/2005/A, I hereby verify the captioned report.

Yours faithfully,

For and on behalf of

Allied Environmental Consultants Ltd.

Joanne NG
Independent Environmental Checker

JN/tw

c.c. Action-United Environmental Services & Consulting (AUES)
Binnies Hong Kong Limited

Attn: Mr. Ben Tam
Attn: Mr. Michael Ng

(By E-mail)
(By E-mail)

EXECUTIVE SUMMARY

- ES.01. Water Supplies Department (WSD) is the Proponent of the Works Contract 7/WSD/21 “Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping Station” (hereinafter named as the “Works Contract”). Under this Works Contracts, the works mainly comprise of increasing the water treatment capacity of Siu Ho Wan water treatment works (SHW WTW) from 150,000m³ per day to 300,000m³ per day within the existing water treatment works compound, by constructing new water treatment facilities and a new laboratory building and modifying the existing associated facilities; and constructing a new raw water booster pumping station at Siu Ho Wan to increase the raw water transfer capacity from Tai Lam Chung Reservoir to SHW WTW.
- ES.02. According to the Environmental Impact Assessment Ordinance (EIAO), the proposed Siu Ho Wan Water Treatment Works Extension is a Designated Project under Schedule 2, which shall be implemented under the Environmental Permit EP-207/2005/A (hereinafter called the “EP”). Besides, the works for Siu Ho Wan Raw Water Booster Pumping Station is a non-designated project which mentioned in Section 1.10 of Environmental Monitoring and Audit (EM&A) Manual.
- ES.03. On 20 March 2022, **China Road and Bridge Corporation** (hereinafter called the “Main Contractor”) awarded the **Works Contracts 7/WSD/21**. According to EM&A Manual, only air quality monitoring is required to be conducted which related to the works area under **Contracts 7/WSD/21** during construction phase of the SHW WTW Extension. Moreover, site inspection and audit is required under the EM&A program to ensure the recommended environmental mitigation measures are implemented properly and effective.
- ES.04. The Main-Contractor appointed Action-United Environmental Services & Consulting (AUES) as the Environmental Team of the Project (hereinafter referred as the “ET”) to implement air quality monitoring as well as associated duties in accordance with the EM&A Manual stipulation.
- ES.05. As advised by the Contractor, the major construction works under Works Contract was commenced on 24 May 2022. This is the 47th Monthly EM&A Report presenting monitoring results and inspection finding for the Project for the reporting period from **1 to 31 March 2026**.

ENVIRONMENTAL MONITORING AND AUDIT ACTIVITIES

- ES.06. Environmental monitoring activities under the EM&A programme for the Contract in the Reporting Month are summarized in the following table.

Issues	Environmental Monitoring Parameters / Inspection	Sessions
Air Quality	24-Hour TSP	5
Inspection / Audit	ET Regular Environmental Site Inspection	5
	Joint site audit with <i>Project Manager’s</i> Delegate and IEC	1

ACTION AND LIMIT LEVELS EXCEEDANCE

- ES.07. In the Reporting Month, no air quality monitoring exceedance was recorded.

SITE INSPECTION

- ES.08. In the Reporting Month, joint site inspections to evaluate the site environmental performance had been carried out by the representatives of the PMD, ET and the Contractor on **3, 10, 17, 24 and 31 March 2026**. Joint site inspection with PMD, ET, IEC and the Contractor was carried out on **17 March 2026**. No non-compliance was recorded during the site inspections.

ENVIRONMENTAL COMPLAINT

- ES.09. In the Reporting Month, no environmental complaint was received.

NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS

ES.010. In the Reporting Month, no prosecution or notification of summons was received.

REPORTING CHANGE

ES.011. There is no reporting change made for this monthly report.

FUTURE KEY ISSUES

ES.012. Special attention should be paid on the potential construction dust impact since most of the construction sites are adjacent to Siu Ho Wan Sewage Treatment Works. The *Contractor* should fully implement the construction dust mitigation measures as appropriately.

ES.013. Due to wet season has approached, the Contractor was reminded that all effluent discharge shall fulfill the requirement of Discharge Licence under the Water Pollution Control Ordinance.

ES.014. All other mitigation measures recommended in the Implementation Schedule for Environmental Mitigation Measures of the EM&A Manual should be properly implemented and maintained as far as practicable.

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1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 Water Supplies Department (WSD) is the Proponent of the Works Contract *7/WSD/21 – Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping Station* (hereinafter named as the “Works Contract”). The Project works predicted by WSD will be undertaken about 34 months. Layout plan of the Project is shown in [Appendix A](#).
- 1.1.2 According to the Environmental Impact Assessment Ordinance (EIAO), the proposed Siu Ho Wan Water Treatment Works Extension is a Designated Project under Schedule 2, which shall be implemented under the Environmental Permit EP-207/2005/A (hereinafter called the “EP”). Besides, the works for Siu Ho Wan Raw Water Booster Pumping Station is a non-designated project which mentioned in Section 1.10 of Environmental Monitoring and Audit (EM&A) Manual.
- 1.1.3 The Works Contract construction activities mainly include:-
- Extension of the existing Siu Ho Wan WTW within the existing Siu Ho Wan WTW compound from a capacity of 150,000 m³/day to 300,000 m³/day
 - Uprating of the treated/fresh water pumping capacity in the existing Siu Ho Wan Raw Water and Fresh Water Pumping Station within the existing Siu Ho Wan WTW compound from a capacity of 150,000 m³/day to 300,000 m³/day
 - Construction of the proposed Siu Ho Wan Raw Water Booster Pumping Station and the laying of the associated water mains
- 1.1.4 On 20 March 2022, **China Road and Bridge Corporation** (hereinafter called the “Main Contractor”) awarded the Works Contracts *7/WSD/21*. According to EM&A Manual, only air quality monitoring is required to be conducted which related to the works area under Contracts *7/WSD/21* during construction phase of the SHW WTW Extension. Moreover, site inspection and audit is required under the EM&A program to ensure the recommended environmental mitigation measures are implemented properly and effective.
- 1.1.5 The Main-Contractor appointed Action-United Environmental Services & Consulting (AUES) as the Environmental Team of the Project (hereinafter referred as the “ET”) to implement air quality (baseline and impact) monitoring as well as associated duties in accordance with the EM&A Manual stipulation.
- 1.1.6 Some design changes of the Project have been identified after the EIA stage for betterment in the design development. Some of these changes requires supplementary environmental review to address their likely environmental impacts and to identify any additional mitigation measures required for compliance with the EIAO. Supplementary environmental review has been performed for the changes and the review results are presented in the “Review Report on Environmental Impact Assessment (Review Report on EIA)” prepared under “Agreement No. CE 82/2017 (WS)”. Having reviewed the Review Report on EIA, no changes to the environmental monitoring requirement in the EM&A Manual are proposed for the work of SHW WTW Extension.
- 1.1.7 According to the approved EM&A Manual, only air quality is required to be monitored during the construction phase of the Project. As part of the EM&A program, baseline monitoring is required to determine the ambient environmental conditions. Pursuant to the EM&A Manual, baseline environmental monitoring is required to be conducted prior to commencement of the construction works under the Project. Baseline air quality monitoring was conducted from **8 to 21 April 2022**. During the baseline monitoring period, no major construction activities under the Project was observed.
- 1.1.8 As advised by the Contractor, the major construction works under Works Contract was commenced on 24 May 2022. This is the **47th** Monthly EM&A Report presenting monitoring results and inspection finding for the Project for the reporting period from **1 to 31 March 2026**.

1.2 REPORT STRUCTURE

1.2.1 The Monthly EM&A Report is structured into the following sections:-

Section 1 Introduction

Section 2 Project Organization and Construction Progress

Section 3 Summary of Impact Monitoring Requirements

Section 4 Air Quality Monitoring

Section 5 Waste Management

Section 6 Site Inspections

Section 7 Environmental Complaints and Non-Compliances

Section 8 Implementation Status of Mitigation Measures

Section 9 Conclusions and Recommendations

2 PROJECT ORGANISATION AND CONSTRUCTION PROGRESS

2.1 PROJECT ORGANISATION

2.1.1 The project organization is shown in [Appendix B](#). The roles and responsibilities of the various parties involved in the EM&A process and the organizational structure of the organizations responsible for implementing the EM&A programme are outlined below.

Water Supplies Department (WSD)

2.1.2 WSD is the Project Proponent and the Permit Holder of the EP of the development of the Project and will assume overall responsibility for the project. An Independent Environmental Checker (IEC) shall be employed by WSD to audit the results of the EM&A works carried out by the ET.

Environmental Protection Department (EPD)

2.1.3 EPD is the statutory enforcement body for environmental protection matters in Hong Kong.

Project Manager's Delegate (PMD)

2.1.4 The *PMD* is responsible for overseeing the construction works and for ensuring that the works are undertaken by the *Contractor* in accordance with the specification and contract requirements. The duties and responsibilities of the *PMD* with respect to EM&A are:

- Supervise the *Contractor's* activities and ensure that the requirements in the EM&A Manual are fully complied with;
- Inform the *Contractor* when action is required to reduce impacts in accordance with the Event and Action Plans;
- Comply with the agreed Event Contingency Plan in the event of any exceedance.

The Contractor

2.1.5 The Main *Contractor* is responsible perform construction works and for ensuring that the works are undertaken compliance with the specification and contract requirements. The duties and responsibilities of the Main *Contractor* with respect to EM&A are:

- Employ an ET to undertake monitoring, laboratory analysis and reporting of environmental monitoring and audit;
- Provide information / advice to the ET regarding works activities which may contribute, or be continuing to the generation of adverse environmental conditions;
- Submit proposals on mitigation measures in case of exceedances of Action and Limit levels in accordance with the Event and Action Plans;
- Implement measures to reduce impact whenever Action and Limit levels are exceeded;
- Implement the corrective actions instructed by *PMD*;
- Accompany joint site audit undertaken by the ET; and
- Adhere to the procedures for carrying out complaint investigation.

Environmental Team (ET)

2.1.6 The ET is responsible perform implementation EM&A programmes of the Contract Works as stipulated in the Updated EM&A Manual ensure the works are fully compliance with environmental regulations. The duties and responsibilities of the ET with respect to EM&A are:

- Set up all the required environmental monitoring stations;
- Monitor various environmental parameters as required in the EM&A Manual;
- Analyze the EM&A data and review the success of EM&A programme to cost effectively confirm the adequacy of mitigation measures implemented and the validity of the EIA predictions and to identify any adverse environmental impacts arising;
- Carry out site inspection to investigate and audit the *Contractor's* site practice, equipment and work methodologies with respect to pollution control and environmental mitigation, and take proactive actions to pre-empt problems;
- Audit and prepare audit reports on the environmental monitoring data and site environmental conditions;

- Report on the EM&A results to the IEC, *Contractor*, the *PMD* and EPD or its delegated representative;
- Recommend suitable mitigation measures to the *Contractor* in the case of exceedance of Action and Limit levels in accordance with the Event and Action Plans;
- Undertake regular and ad-hoc on-site audits / inspections and report to the *Contractor* and the ER of any potential non-compliance; and
- Follow up and close out non-compliance actions.

Independent Environmental Checker (IEC)

2.1.7 The duties and responsibilities of IEC with respect to EM&A are:

- Review the EM&A works performed by the ET (at not less than monthly intervals);
- Audit the monitoring activities and results (at not less than monthly intervals);
- Report the audit results to the *PMD* and EPD in parallel;
- Review the EM&A reports (monthly summary reports) submitted by the ET;
- Review the proposal on mitigation measures submitted by the *Contractor* in accordance with the Event and Action Plans;
- Check the mitigation measures submitted by the *Contractor* in accordance with the Event and Action Plans;
- Check the mitigation measures that have been recommended in the EIA and this Manual, and ensure they are properly implemented in a timely manner, when necessary;
- Report the findings of site inspections and other environmental performance reviews to *PMD* and EPD;
- Coordinate the monitoring and auditing works for all the on-going contracts in the area in order to identify possible sources / causes of exceedances and recommend suitable remedial actions where appropriate; and
- Coordinate the assessment and response to complaints / enquires from locals, green groups, district councils or the public at large.

2.2 CONSTRUCTION PROGRESS

2.2.1 The major construction activities conducted under the Contract in the Reporting Period are listed below. The 3-month rolling construction programme is shown in [Appendix C](#).

- Internal E&M works were in progress at portion BPS-1
- Construction of road pavement works at portion BPS-1
- Installation of drainage pipe at portion WTW-1
- Water tightness test of SRGF tank at portion WTW-1
- Internal and External ABWF works was in progress at portion WTW-1
- Installation of building services at portion WTW-1
- Installation of building services at portion WTW-2
- Installation of lime dosing tank & dross pipe at portion WTW-4
- Installation of cable containment at portion WTW-4
- Construction of HV/LV and drainage system at portion WTW-7
- Construction of DN1200 BV Chamber & pipe fitting at portion WTW-7

2.3 SUMMARY OF ENVIRONMENTAL PERMITS AND LICENCES

2.3.1 Summary of the relevant permits, licences, and/or notifications on environmental protection for the Project are presented in *Table 2-1*.

Table 2-1 Status of Environmental Licences and Permits of the Contract

Item	Description	Licence/Permit Status			
		Reference No./ License No./ Account No.	Approval Date	Expiry Date	Status
1	Environmental Permit	EP-207/2005/A	NA	NA	Valid
2	Air Pollution Control (Construction Dust) Regulation	Ref: 477913	23 Mar 2022	N/A	Valid
3	Waste Disposal Regulation – Billing Account for Disposal of Construction Waste	EPD Ref. No: RS02509 Acc. No.: 7043631	08 Apr 2022	N/A	Valid
4	Chemical Waste Producer Registration	5213-961-C4701-01	31 May 2023	N/A	Valid
5	Water Pollution Control Ordinance – Discharge Licence	WT00041885-2022	8 Sep 2022	30 Sep 2027	Valid
6	Construction Noise Permit	GW-RS0944-25	1 Oct 2025	31 Mar 2026	Valid

3 SUMMARY OF IMPACT MONITORING REQUIREMENTS

3.1 GENERAL

- 3.1.1 Only air quality monitoring is required to carry out related to Works contracts *7/WSD/21* during the construction phase to ensure the dust mitigation measures and performance properly implementation.
- 3.1.2 The other environmental monitoring for Works Area of Pui O was related to other Works Contracts and will be implemented by other appointed ET.
- 3.1.3 According to the Review Report on EIA, no changes to the environmental monitoring requirement in the EM&A Manual are proposed for the work of SHW WTW Extension. Air quality monitoring work will be implemented according to the EM&A Manual.

3.2 MONITORING PARAMETERS

- 3.2.1 The EM&A program of construction phase monitoring shall cover the following environmental issues:
- Air quality;
- 3.2.2 A summary of impact monitoring parameters is presented in *Table 3-1*:

Table 3-1 Summary of Monitoring Parameters

Environmental Issue	Parameters
Air Quality	1-hour TSP by Real-Time Portable Dust Meter(as required in case of complaints); and 24-hour TSP by High Volume Air Sampler.

3.3 MONITORING LOCATIONS

- 3.3.1 According to the Review Report on EIA, air quality monitoring work should be implemented according to the EM&A Manual. As stated in Section 4 of EM&A Manual, there was only one air quality monitoring station designated under SHW WTW Extension. The air quality monitoring locations is listed in *Table 3-2*.

Table 3-2 Designated Air Quality Monitoring Stations

Monitoring Station Identification No	Location
SHWAB	Siu Ho Wan WTW Administration Building

3.4 MONITORING FREQUENCY AND PERIOD

- 3.4.1 The requirements of impact monitoring are stipulated in *Sections 2.1.9* of the approved EM&A Manual and presented as follows.

Air Quality Monitoring

- 3.4.2 Frequency of impact air quality monitoring is as follows:
- 1-hour TSP 3 times every six days (as required in case of complaints)
 - 24-hour TSP Once every 6 days during course of works.

3.5 MONITORING EQUIPMENT

Air Quality Monitoring

- 3.5.1 The 24-hour and 1-hour TSP levels shall be measured by following the standard high volume sampling method as set out in the *Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50), Appendix B*. If the ET proposes to use a direct reading dust meter to measure 1-hour TSP levels, it shall submit sufficient information to the IEC to approve.
- 3.5.2 The filter paper of 24-hour TSP measurement shall be determined by HOKLAS accredited laboratory.

3.5.3 All equipment to be used for air quality monitoring are listed in below table.

Table 3-3 Air Quality Monitoring Equipment

Equipment	Model
24-Hr TSP	
High Volume Air Sampler	TISCH High Volume Air Sampler, HVS Model TE-5170*
Calibration Kit	TISCH Model TE-5025A*
1-Hour TSP	
Portable Dust Meter	Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter / SidePak™ Personal Aerosol Monitor AM510

* Instrument was used in the Reporting Period and the calibration certificate could be referred in Appendix E.

3.6 MONITORING PROCEDURES

1-hour TSP

3.6.1 Operation of the 1-hour TSP meter will follow manufacturer's Operation and Service Manual.

3.6.2 The 1-hour TSP monitor, brand named "Sibata LD-3B Laser Dust monitor Particle Mass Profiler & Counter" is a portable, battery-operated laser photometer. The 1-hour TSP meter provides a real time 1-hour TSP measurement based on 900 light scattering. The 1-hour TSP monitor consists of the following:

- A pump to draw sample aerosol through the optic chamber where TSP is measured;
- A sheath air system to isolate the aerosol in the chamber to keep the optics clean for maximum reliability; and
- A built-in data logger compatible with Windows based program to facilitate data collection, analysis and reporting.

3.6.3 The 1-hour TSP meter to be used will be within the valid period, calibrated by the manufacturer prior to purchasing. Span check and BG of the instrument will be performed before each monitoring event. A valid calibration certificate is attached in [Appendix E](#).

24-hour TSP

3.6.4 The equipment used for 24-hour TSP measurement is the High Volume Sampler (hereinafter the "HVS") brand named TISCH, Model TE-5170 TSP High Volume Air Sampler, which complied with *EPA Code of Federal Regulation, Appendix B to Part 50*. The HVS consists of the following:

- An anodized aluminum shelter;
- A 8"x10" stainless steel filter holder;
- A blower motor assembly;
- A continuous flow/pressure recorder;
- A motor speed-voltage control/elapsed time indicator;
- A 7-day mechanical timer, and
- A power supply of 220v/50 Hz

3.6.5 For HVS for 24-hour TSP monitoring, the HVS is mounted in a metallic cage with a top for protection and also it is sat on the existing ground or the roof of building. The flow rate of the HVS between 0.6m³/min and 1.7m³/min will be properly set in accordance with the manufacturer's instruction to within the range recommended in *EPA Code of Federal Regulation, Appendix B to Part 50*. Glass Fiber Filter 8" x 10" of TE-653 will be used for 24-Hour TSP monitoring and would be supplied by laboratory. The general procedures of sampling are described as below:-

- A horizontal platform with appropriate support to secure the samples against gusty wind should be provided;
- Installed with elapsed-time meter with ± 2 minutes accuracy for 24 hours operation;

- Equipped with a timing/control device with ± 5 minutes accuracy for 24 hours operation;
- With flow control accuracy for $\pm 2.5\%$ deviation over 24-hour sampling period;
- No two samplers should be placed less than 2 meters apart;
- The distance between the sampler and an obstacle, such as building, must be at least twice the height that the obstacle protrudes above the sample;
- A minimum of 2 meters of separation from any supporting structure, measured horizontally is required;
- Before placing any filter media at the HVS, the power supply will be checked to ensure the sampler work properly;
- The filter paper will be set to align on the screen of HVS to ensure that the gasket formed an air tight seal on the outer edges of the filter. Then filter holder frame will be tightened to the filter hold with swing bolts. The holding pressure should be sufficient to avoid air leakage at the edge.
- The mechanical timer will be set for a sampling period of 24 hours (00:00 mid-night to 00:00 mid-night next day). Information will be recorded on the field data sheet, which would be included the sampling data, starting time, the weather condition at current and the filter paper ID with the initial weight;
- After sampling, the filter paper will be collected and transfer from the filter holder of the HVS to a sealed envelope and sent to a local HOKLAS accredited laboratory for quantifying.

3.6.6 All the sampled 24-hour TSP filters will be kept in normal air conditioned room conditions, i.e. 70% HR (Relative Humidity) and 25°C, for six months prior to disposal.

3.6.7 The HVS used for 24-hour TSP monitoring will be calibrated before the commencement for sampling, and after in two months interval with the manufacturer's instruction using the NIST-certified standard calibrator (Tisch Calibration Kit Model TE-5025A) to establish a relationship between the follow recorder meter reading in cfm (cubic feet per minute) and the standard flow rate, Qstd, in m³/min. Motor brushes of HVS will be regularly replaced of about five hundred hours per time. Valid certificates of the calibration kit and HVS are attached in [Appendix E](#).

3.7 DERIVATION OF ACTION/LIMIT (A/L) LEVELS

3.7.1 The baseline results form the basis for determining the environmental acceptance criteria for the impact monitoring. According to the approved Environmental Monitoring and Audit Manual, the air quality criteria were set up, namely Action and Limit levels are listed in **Tables 3-4**.

Table 3-4 Action and Limit Levels of Air Quality

Monitoring Station	Action Level ($\mu\text{g}/\text{m}^3$)		Limit Level ($\mu\text{g}/\text{m}^3$)	
	1-hour TSP	24-hour TSP	1-hour TSP	24-hour TSP
SHWAB	291	170	500	260

3.8 METEOROLOGICAL INFORMATION

3.8.1 The meteorological information including wind direction, wind speed, humidity, rainfall, air pressure and temperature is extracted from the Chek Lap Kok Station. Meteorological data are attached in [Appendix J](#).

3.9 DATA MANAGEMENT AND DATA QUALITY ASSURANCE / QUALITY CONTROL (QA/QC)

3.9.1 All monitoring data were handled by the ET's in-house data recording and management system.

3.9.2 The monitoring data recorded in the equipment were downloaded directly from the equipment at each monitoring day or after completion of baseline measurement. The downloaded monitoring data were input into a computerized database properly maintained by the ET. The laboratory results were input directly into the computerized database and checked by personnel other than those who input the data.

3.9.3 For monitoring parameters that require laboratory analysis, the local laboratory shall follow the QA/QC requirements as set out under the HOKLAS scheme for the relevant laboratory tests.

4 AIR QUALITY MONITORING

4.1 GENERAL

4.1.1 The air quality monitoring schedule is presented in [Appendix G](#) and the monitoring results are summarised in the following sub-sections.

4.1.2 In the reporting Period, no air quality complaint was received, thus no 1-hour TSP monitoring required to conduct according to **Section 2.19** of the approved EM&A Manual.

4.2 AIR MONITORING RESULTS

4.2.1 In the Reporting Period, a total of **5** events 24-hour TSP monitoring were carried out and the monitoring results are summarized in **Table 4-1**. The detailed 24-hour monitoring data are presented in [Appendix H](#) and the relevant graphical plots are shown in [Appendix I](#).

Table 4-1 Summary of 24-hour TSP Monitoring Result – SHWAB

24-hour TSP ($\mu\text{g}/\text{m}^3$)	
Date	Meas. Result
4-Mar-26	28
10-Mar-26	57
16-Mar-26	61
21-Mar-26	62
27-Mar-26	78
Average (Range)	57 (28 – 78)

4.2.2 As shown in **Tables 4-1**, all the 24-hour TSP monitoring results were below the Action/Limit Levels. No Notification of Exceedance (NOE) was issued in this Reporting Period.

4.2.3 The meteorological data during the impact monitoring days are summarized in [Appendix J](#).

5 WASTE MANAGEMENT

5.1 GENERAL WASTE MANAGEMENT

5.1.1 Waste management was carried out in accordance with the Waste Management Section in the Environmental Management Plan for the Contract.

5.2 RECORDS OF WASTE QUANTITIES

5.2.1 All types of waste arising from the construction works are broadly classified into the following:

- Insert construction and demolition (C&D) material; and
- C&D waste.

5.2.2 The quantities of waste for disposal in this Reporting Month under the Contract are summarised in **Tables 5-1** and **5-2** and the Waste Flow Table as shown in **Appendix K**. Whenever possible, materials were reused on-site as far as practicable.

Table 5-1 Summary of Quantities of Inert C&D Materials for the Contract

Type	Quantity in Reporting Month	Disposal / Dumping Ground
Reused in this Contract (Inert) (in T)	0	NA
Reused in other Contracts/ Projects (Inert) (in T)	0	NA
Disposal as Public Fill (Inert) (in T)	711.300	TM 38

Table 5-2 Summary of Quantities of C&D Wastes for the Contract

Type	Quantity in Reporting Month	Disposal / Dumping Ground
Recycled Metal ('000kg)	0.011	NA
Recycled Paper / Cardboard Packing ('000kg)	0.322	NA
Recycled Plastic ('000kg)	0.030	NA
Chemical Wastes ('000kg)	0	NA
General Refuses (in T)	63.560	NENT

6 SITE INSPECTIONS

6.1 REQUIREMENTS

- 6.1.1 According to the EM&A Manual, the programme of environmental site inspection shall be formulated by ET Leader. Weekly environmental site inspections were carried out to confirm the environmental performance.

6.2 FINDINGS / DEFICIENCIES DURING THE REPORTING MONTH

- 6.2.1 In the Reporting Month, joint site inspections to evaluate the site environmental performance were carried out by the representatives of the *PMD*, *ET* and the *Contractor* on **3, 10, 17, 24 and 31 March 2026**. Joint site inspection with *PMD*, *ET*, *IEC* and the *Contractor* was carried out on **17 March 2026**. No non-compliance was recorded.

- 6.2.2 The findings / deficiencies observed during the weekly site inspections are listed in **Table 6-1**.

Table 6-1 Site Observations for the Contract

Date	Findings / Deficiencies	Follow-Up Status
3 March 2026	- Construction waste was cumulated at WTB, which should be disposed properly. - The Contractor was reminded to remove stagnant water regularly after rainfall to prevent mosquito breeding. - The Contractor was reminded to cover sandy stockpile with tarpaulin sheet properly.	- The Contractor was arranged a dump truck to remove construction waste. - Reminder only. - Reminder only.
10 March 2026	- Cement bags was observed at WTB, which should be cover with tarpaulin sheet properly. - The Contractor was reminded to remove stagnant water regularly to prevent mosquito breeding. - The Contractor was reminded to keep the site tidiness and enhance house-keeping.	- Cement bags was cover with tarpaulin sheet properly. - Reminder only. - Reminder only.
17 March 2026	Chemical container at WTW-9 was found without drip tray, which should be store properly on drip tray to prevent leakage.	The chemical containers was removed.
24 March 2026	Standing water at site area should be clear out regularly to prevent mosquito breeding.	Reminder only.
31 March 2026	The Contractor was reminded to maintain site housekeeping.	Reminder only.

7 ENVIRONMENTAL COMPLAINTS AND NON-COMPLIANCES

7.1 ENVIRONMENTAL COMPLAINTS, SUMMONS AND PROSECUTIONS

- 7.1.1 There was no environmental complaint, prosecution or notification of summons received in the Reporting Month.
- 7.1.2 The statistical summary table of the environmental complaints, summons and prosecution are presented in **Tables 7-1, 7-2 and 7-3**. Detailed complaint log for the Contract is presented in **Appendix L**.

Table 7-1 Statistical Summary of Environmental Complaints

Reporting Month	Environmental Complaint Statistics		
	Frequency	Cumulative	Project related complaint
24 May 2022 to 28 February 2026	0	0	0
1 to 31 March 2026	0	0	0

Table 7-2 Statistical Summary of Environmental Summons

Reporting Month	Environmental Summons Statistics		
	Frequency	Cumulative	Project related summons
24 May 2022 to 28 February 2026	0	0	0
1 to 31 March 2026	0	0	0

Table 7-3 Statistical Summary of Environmental Prosecution

Reporting Month	Environmental Prosecution Statistics		
	Frequency	Cumulative	Project related prosecution
24 May 2022 to 28 February 2026	0	0	0
1 to 31 March 2026	0	0	0

8 IMPLEMENTATION STATUS OF MITIGATION MEASURES

8.1 GENERAL REQUIREMENTS

- 8.1.1 The environmental mitigation measures recommended in the ISEMM in the EM&A Manual covered the issues of dust, noise, water, waste, land contamination and ecology and they are summarised and presented in *Appendix M*.
- 8.1.2 The Contract works under the Project shall be implementing the required environmental mitigation measures according to the EM&A Manual as subject to the site conditions. Environmental mitigation measures generally implemented by the Contract and the implementation status are shown in *Appendix M*.

8.2 TENTATIVE CONSTRUCTION ACTIVITIES IN THE COMING MONTH

- 8.2.1 According to the information provided by the *Contractor*, the major construction activities under the Contract in the coming month are listed below:
- Construction of HV/LV cable duct from OLB to WTB
 - Exterior finishing works at portion WTW-1
 - Interior finishing works at level +37.0mPD and +44.0mPD at portion WTW-1
 - Water testing on BAC filter tank at portion WTW-1
 - Exterior finishing works at portion BPS-1
 - Interior finishing works at portion BPS-1
 - Construction of HV/LV cable ducts, drawpits and drainage system at portion BPS-1
 - Construction of road pavement works at portion BPS-1

8.3 KEY ISSUES FOR THE COMING MONTH

- 8.3.1 Special attention should be paid on the potential construction dust impact since most of the construction sites are adjacent to Siu Ho Wan Sewage Treatment Works. The *Contractor* should fully implement the construction dust mitigation measures as appropriately.
- 8.3.2 Due to wet season was approached, the Contractor was reminded that all effluent discharge shall fulfill the requirement of Discharge Licence under the Water Pollution Control Ordinance.
- 8.3.3 All other mitigation measures recommended in the Implementation Schedule for Environmental Mitigation Measures of the EM&A Manual should be properly implemented and maintained as far as practicable.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1 CONCLUSIONS

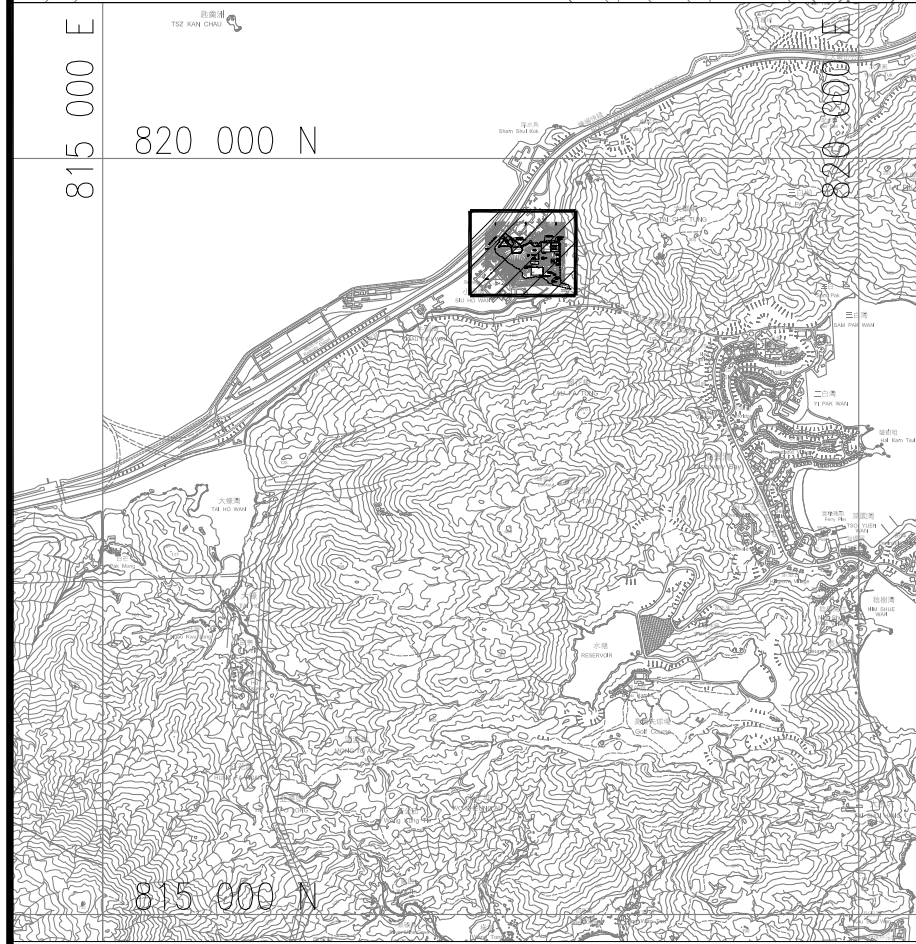
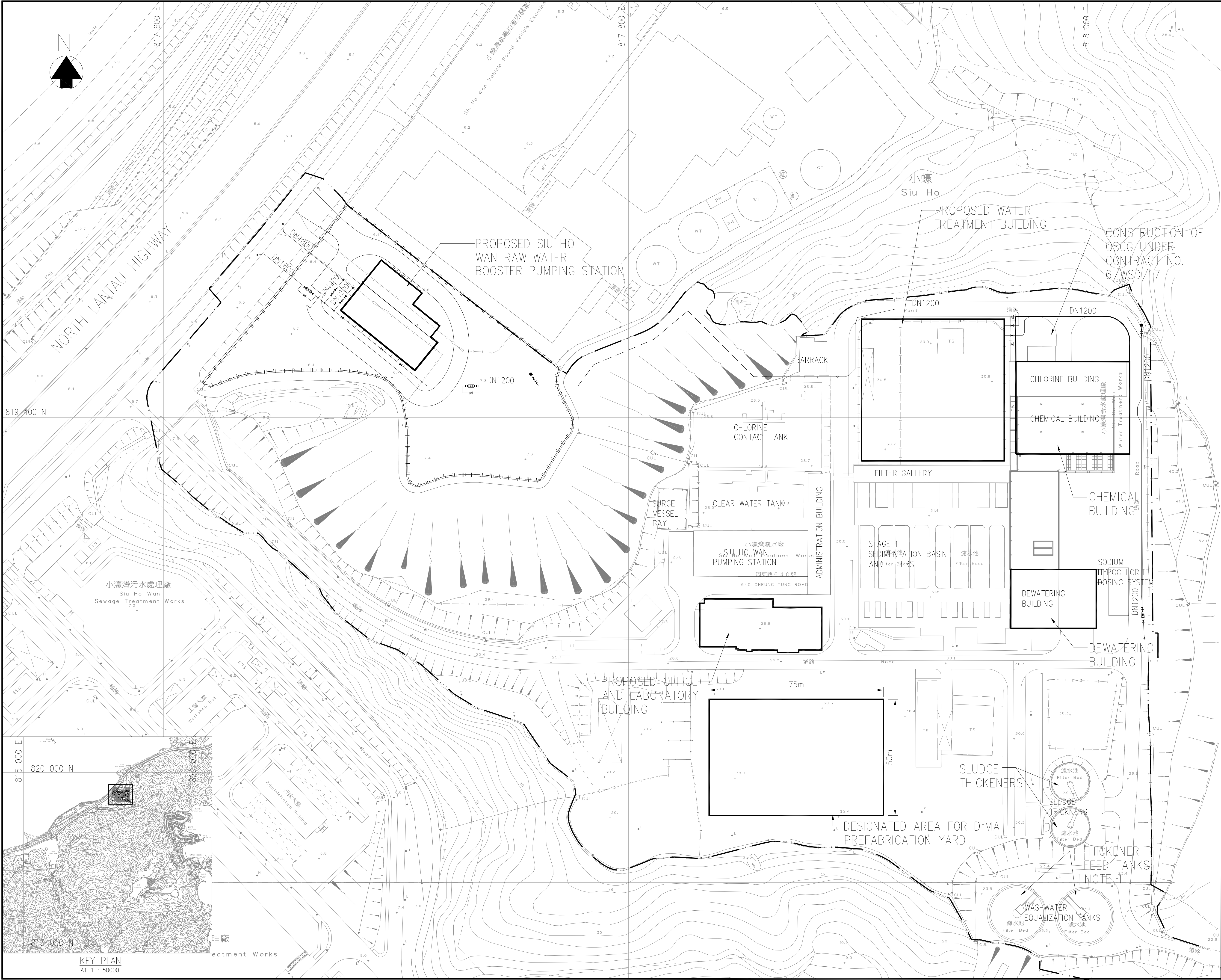
- 9.1.1 As advised by the *Contractor*, the major construction works under Works Contract was commenced on 24 May 2022. This is the **47th** Monthly EM&A Report presenting monitoring results and inspection finding for the Project for the reporting period from **1 to 31 March 2026**.
- 9.1.2 In the Reporting Month, no 24-hour TSP monitoring results triggered the Action/Limit level was recorded. No NOE or the associated corrective actions were therefore issued.
- 9.1.3 In the Reporting Month, joint site inspections to evaluate the site environmental performance had been carried out by the representatives of the *PMD*, *ET* and the *Contractor* on **3, 10, 17, 24 and 31 March 2026**. Joint site inspection with *PMD*, *ET*, *IEC* and the *Contractor* was carried out on **17 March 2026**. No non-compliance was recorded during the site inspections.
- 9.1.4 In the Reporting Month, no environmental complaint, prosecution or notification of summons was received. In addition, no emergency event related to violation of environmental legislation for illegal dumping and landfilling was received.

9.2 RECOMMENDATIONS

- 9.2.1 Special attention should be paid on the potential construction dust impact since most of the construction sites are adjacent to Siu Ho Wan Sewage Treatment Works. The *Contractor* should fully implement the construction dust mitigation measures as appropriately.
- 9.2.2 Due to the wet season had approached; the *Contractor* was reminded that all effluent discharge shall fulfill the requirement of Discharge Licence under the Water Pollution Control Ordinance.
- 9.2.3 All other mitigation measures recommended in the Implementation Schedule for Environmental Mitigation Measures of the EM&A Manual should be properly implemented and maintained as far as practicable.

Appendix A

Layout Plan of the Project



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LEGEND:

- SITE BOUNDARY
- PROPOSED RAW WATER MAINS (BURIED)
- PROPOSED RAW WATER MAINS (EXPOSED)
- PROPOSED FENCING
- PROPOSED BUILDING WORKS

NOTE 1:
THE EXISTING WASHWATER EQUALIZATION TANKS TO BE RENAMED AS "THICKENER FEED TANKS"

0	05/21	ISSUE FOR TENDER DRAWING			JC
Revision	Date	Description			Initial
		Designed	Checked	Drawn	Checked
Initial		CT/CCK	YFC/AS	SZ	JC
Date	05/21	05/21	05/21	05/21	05/21

Approved

Contract No.
7/WSD/21

Contract Title
CONSTRUCTION OF SIU HO WAN WATER TREATMENT WORKS EXTENSION AND SIU HO WAN RAW WATER BOOSTER PUMPING STATION

Drawing Title
SITE LOCATION

Drawing No. 199755A/B&V/GN/00001	Revision 0
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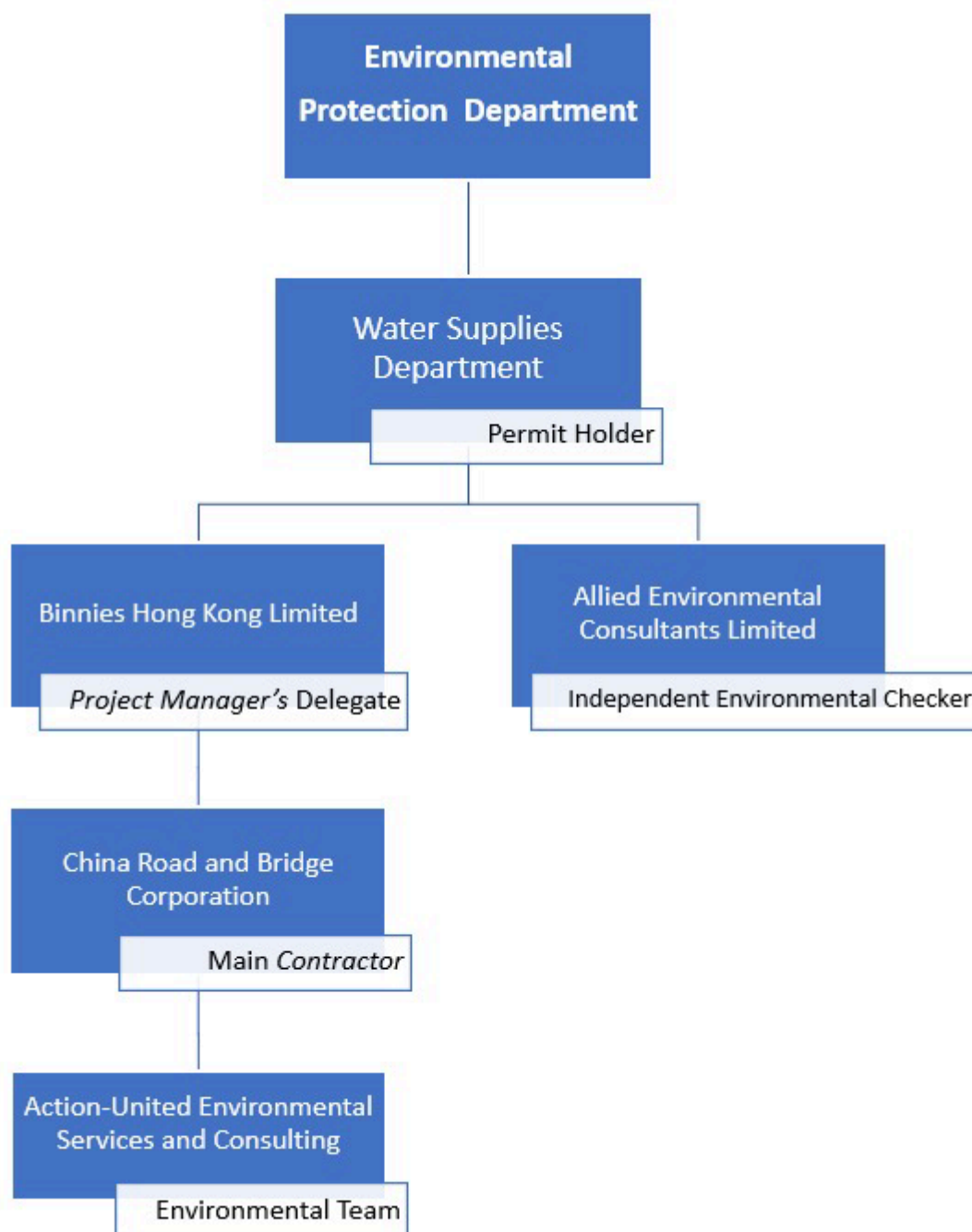
Scale
A1 1 : 750
A3 1 : 1500

水務署
Water Supplies
Department

binnies
BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

Appendix B

Project Organization



Contact Details of Key Personnel

Organisation	Project Role	Position	Name	Tel No.
Binnies Hong Kong Limited	<i>Project Manager's Delegate</i>	Chief Resident Engineer	Mr. Gilbert Ying	6343 1027
		Senior Resident Engineer	Mr. Raymond Kok	9037 1280
		Resident Engineer	Mr. Michael Ng	9198 7268
		Assistant Resident Engineer	Mr. Joshua Tam	9769 8786
China Road and Bridge Corporation	<i>Contractor</i>	Construction Manager	Mr. Raymond Mau	5335 9571
		Site Agent	Mr. Chan Ming-tai	9358 7007
		Environmental Manager	Mr. Dennis Ho	5645 0563
		Environmental Officer	Mr. KF So	6273 1608
		Environmental Supervisor	Mr. Henry Cheung	5988 6488
Allied Environmental Consultants Limited	Independent Environmental Checker	Principle Consultant	Ms. Joanne Ng	2815 7028
Action-United Environmental Services Consulting and	Environmental Team	Environmental Team Leader	Mr. Tam Tak Wing	2959 6059
		Environmental Consultant	Mr. Ben Tam	2959 6059
		Environmental Consultant	Ms. Nicola Hon	2959 6059

Appendix C

3-month Rolling Construction Programme

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26

Activity ID	Activity Name	Duration	Remaining Duration	Start	Finish	Total Float	Duration % Complete	2026					
								Feb	Mar	Apr	May	Jun	Jul
								48	49	50	51	52	53
Construction of Siu Ho Wan Water Treatment Works		1781d	439d	27-Jun-22 A	12-May-27	-56d	75.35%						
Section of the Works (Revised Completion Date)		29d	29d	17-Mar-26	15-Apr-26	0d	0%						
SEW1160	Section 2- Installation and modification works for Water Treatment Build	0d	0d		17-Mar-26*	0d	0%						
SEW1170	Section 3- E&M installation works for Siu Ho Wan Raw Water Booster P	0d	0d		17-Mar-26*	0d	0%						
SEW1190	Section 4- Landscape softworks and establishment works	0d	0d		15-Apr-26*	0d	0%						
Section of the Works (Planned Completion Date)		4d	4d	08-May-26	12-May-26	-56d	0%						
SEW1050	Section 2- Installation and modification works for Water Treatment Build	0d	0d		12-May-26	-56d	0%						
SEW1060	Section 3- E&M installation works for Siu Ho Wan Raw Water Booster P	0d	0d		08-May-26	-52d	0%						
Defect Date for Each Section of the Works		834d	439d	29-Jan-25 A	12-May-27	-56d	47.36%						
SEW1100	Section 1- Construction of Water Treatment Building, Siu Ho Wan Raw V	365d	243d	01-Sep-25 A	28-Oct-26*	-49d	33.42%						
SEW1110	Section 2- Installation and modification works for Water Treatment Build	365d	365d	13-May-26	12-May-27*	-56d	0%						
SEW1120	Section 3- E&M installation works for Siu Ho Wan Raw Water Booster P	365d	365d	09-May-26	08-May-27*	-52d	0%						
SEW1140	Section 3A-Entrustment Works	365d	29d	29-Jan-25 A	28-Mar-26*	-59d	92.05%						
Section 2 of the Works		1494d	74d	27-Jun-22 A	12-May-26	-52d	95.05%						
Water Treatment Building		1432d	74d	27-Jun-22 A	12-May-26	-52d	94.83%						
Architectural Works		272d	57d	28-Jun-25 A	25-Apr-26	-56d	79.04%						
S110760.2	Finishing works from +25.0mPD up to +29.5mPD floor for DAF Mainte	30d	0d	28-Jun-25 A	04-Mar-26 A		100%						
S110800	Finishing works from +29.5mPD up to +37mPD floor including water ti	25d	0d	05-Nov-25 A	04-Mar-26 A		100%						
S110820	Finishing works from +32.5mPD to +44mPD floor including water tightn	25d	5d	12-Nov-25 A	04-Mar-26	-28d	80%						
S110840	Finishing works from+32.5mPD to +39.0mPD and water tightness test fo	25d	10d	04-Feb-26 A	09-Mar-26	-12d	60%						
S110880.1	Finishing works from+44.0mPD to +50.5mPD floor including PSA, Ozon	25d	10d	28-Nov-25 A	09-Mar-26	-26d	60%						
S110881	Finishing works at roof floor +50.5mPD	60d	15d	09-Nov-25 A	14-Mar-26	-29d	75%						
S110882	Finishing works of external wall	15d	15d	12-Mar-26	26-Mar-26	-27d	0%						
S223170	Construction of planter on the roof	45d	45d	28-Feb-26	25-Apr-26	-44d	0%						
S223200	Installation of external facade	30d	30d	28-Feb-26	08-Apr-26	-29d	0%						
S223205	Installation of vertical greening system	30d	30d	28-Feb-26	08-Apr-26	-29d	0%						
Statutory Submission schedule		1432d	71d	27-Jun-22 A	09-May-26	-53d	95.04%						
GBP Submission and Approval		180d	20d	30-Nov-25 A	19-Mar-26	-52d	88.89%						
S211991	Submission/Review/Approval by PM and FSD - 4th submission (To suit i	180d	10d	30-Nov-25 A	09-Mar-26	-52d	94.44%						
S212001	4th GBP Approval from FSD	10d	10d	10-Mar-26	19-Mar-26	-52d	0%						
DG Application and Approval		1413d	71d	27-Jun-22 A	09-May-26	-53d	94.98%						
S210060	DG (Ozone) installation approval - dwg & layout by FSD for WTB	680d	10d	27-Jun-22 A	09-Mar-26	-52d	98.53%						
S210065	Design works and re-submission to address FSD's Comment	100d	5d	10-Jul-24 A	04-Mar-26	-47d	95%						
S210080	DG application letter - DG store (Oxygen tank) for WTB	16d	16d	10-Mar-26	27-Mar-26	-41d	0%						
S210100	DG acknowledgement and "No objection" letter from FSD	10d	10d	28-Mar-26	13-Apr-26	-41d	0%						
S210140	Vent/425 DG completion inspection for WTB	5d	5d	23-Apr-26	27-Apr-26	-53d	0%						
S210160	DG (Ozone & oxygen tank) - inform FSD for installation completion insp	15d	15d	18-Mar-26	01-Apr-26	-27d	0%						
S210180	FS_ Certificate (Acceptance memo) for WTB	10d	10d	28-Apr-26	07-May-26	-53d	0%						
S210200	FSD issue DG certificate for WTB	10d	10d	28-Apr-26	09-May-26	-41d	0%						
FSI/314 for FS Installation Submission		7d	7d	29-Mar-26	04-Apr-26	-18d	0%						
S210120	FS_Form FSI314,FSI501 & As-built dwgs for WTB	7d	7d	29-Mar-26	04-Apr-26	-18d	0%						
WSD-Submit Form WWO 542 for Water Supply Application		12d	12d	28-Feb-26	11-Mar-26	-34d	0%						
S210235	WW046 submission to WSD	12d	12d	28-Feb-26	11-Mar-26	-34d	0%						
WSD-Submit Form WWO 542 for FS Water Supply Application		52d	52d	28-Feb-26	20-Apr-26	-34d	0%						
S210250	WW046 submission to WSD	12d	12d	28-Feb-26	11-Mar-26	-34d	0%						
S210255	WSD - Received WWO 46 Part V for water certificate issued by WSD	40d	40d	12-Mar-26	20-Apr-26	-34d	0%						



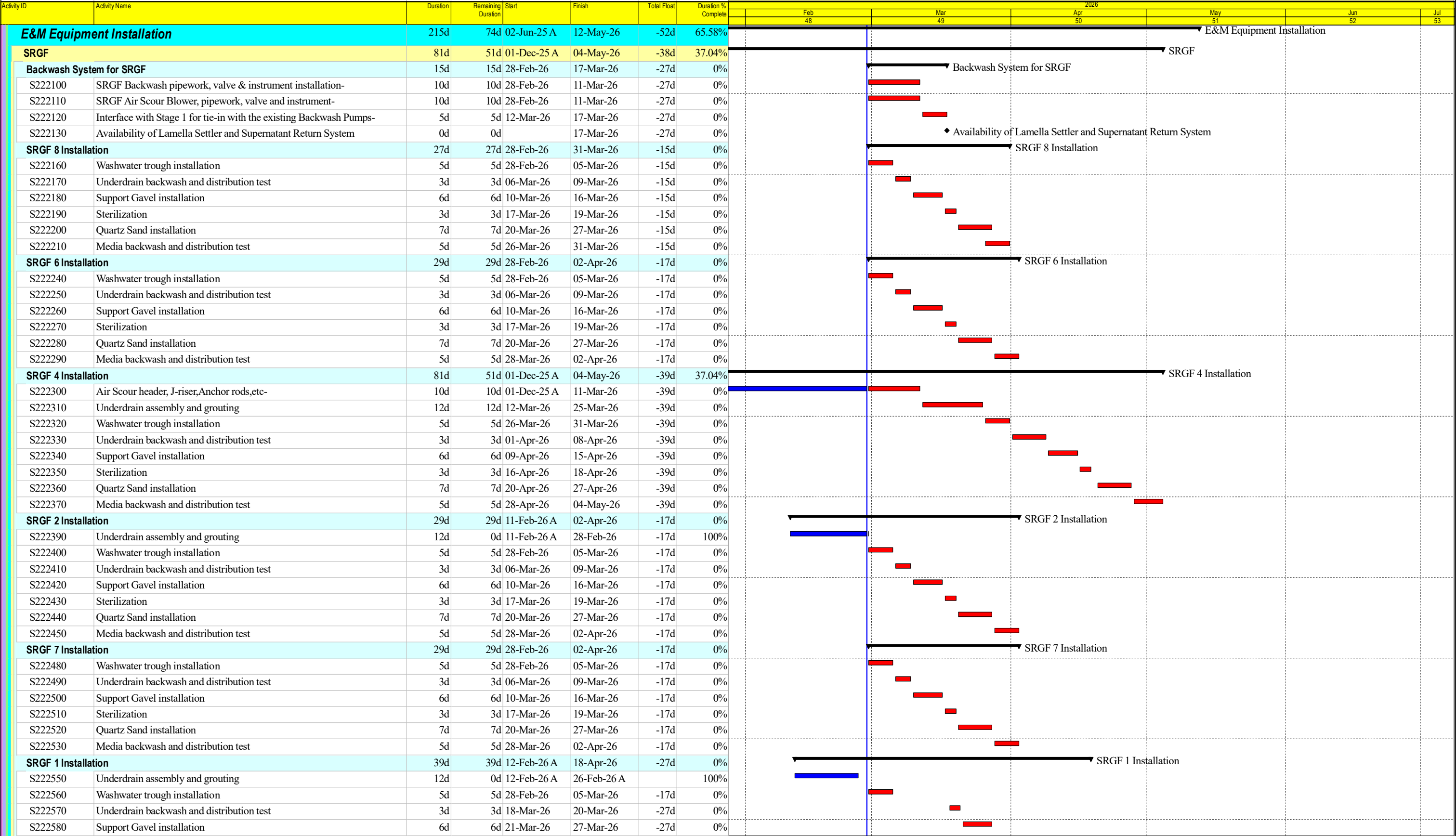
Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 1 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



中國路橋
CRBC

- Actual Work
- Non-Critical Activity
- Critical Activity
- ◆

◆ Milestone
- Summary

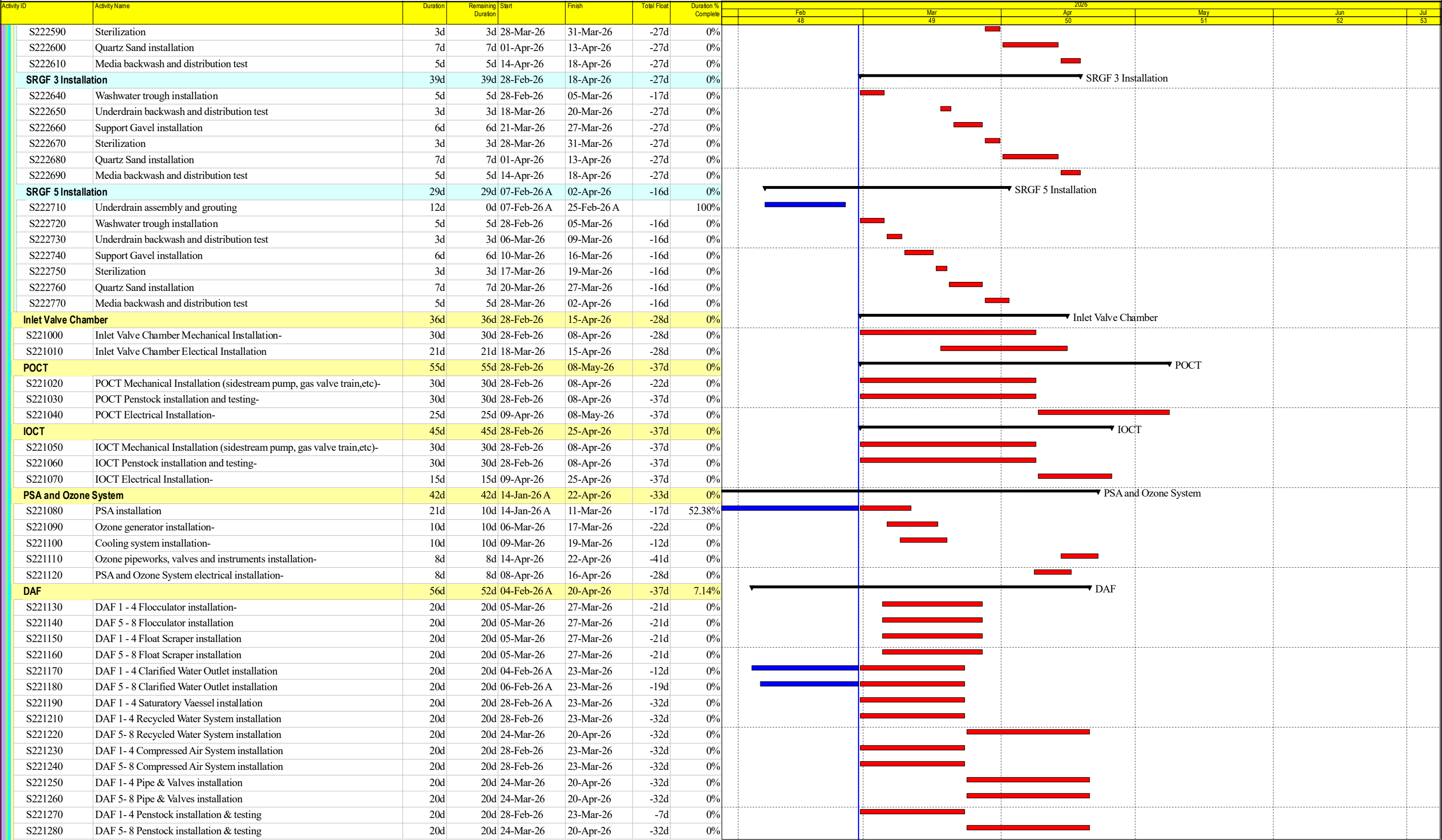
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3 Month Rolling Programme -
Mar 2026 to May 2026

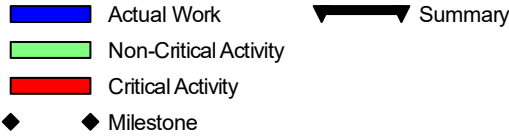
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Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



中國路橋
CRBC

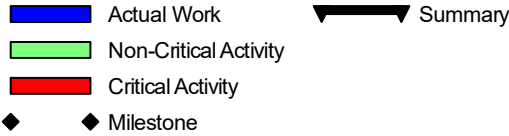
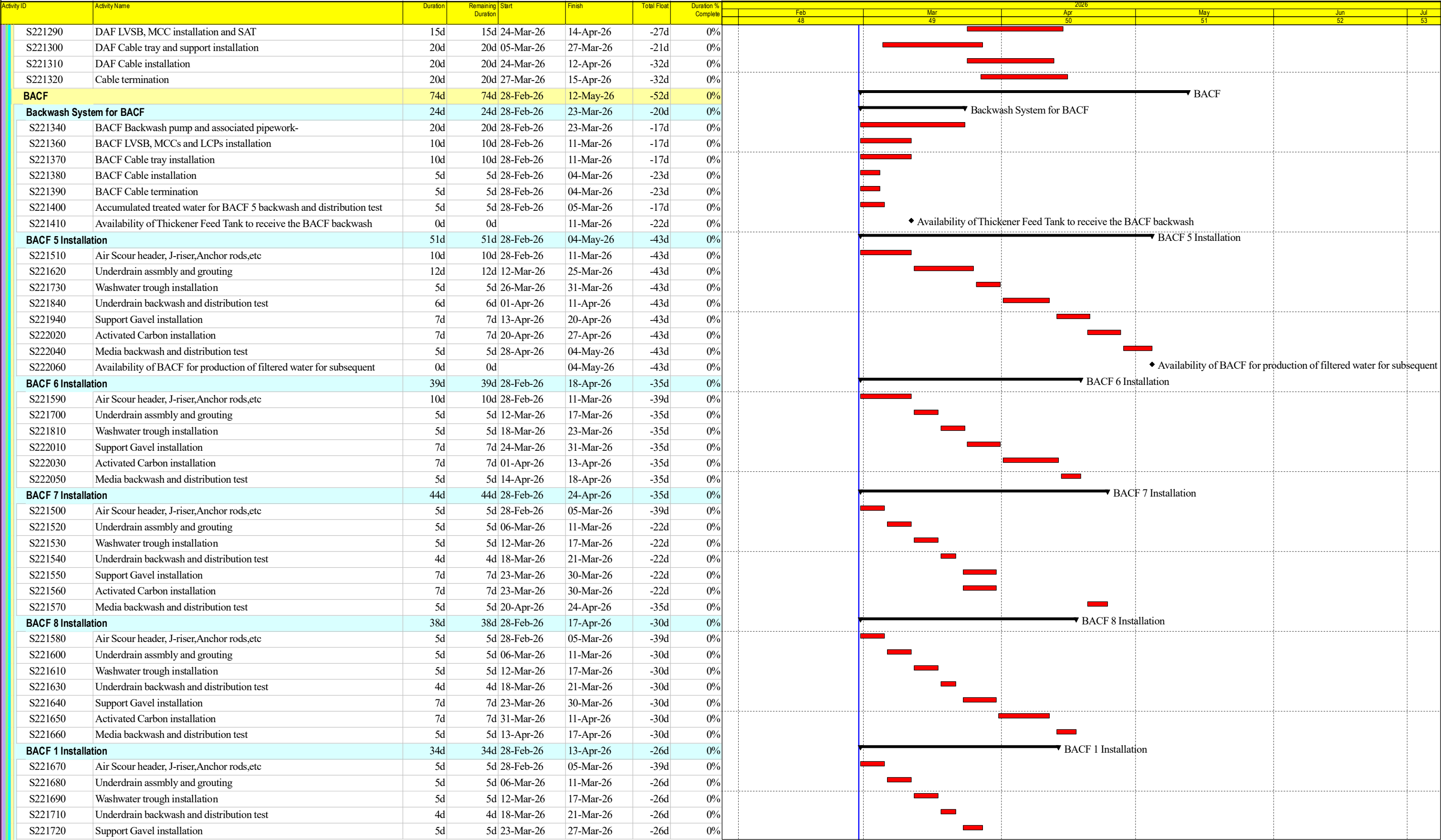


Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



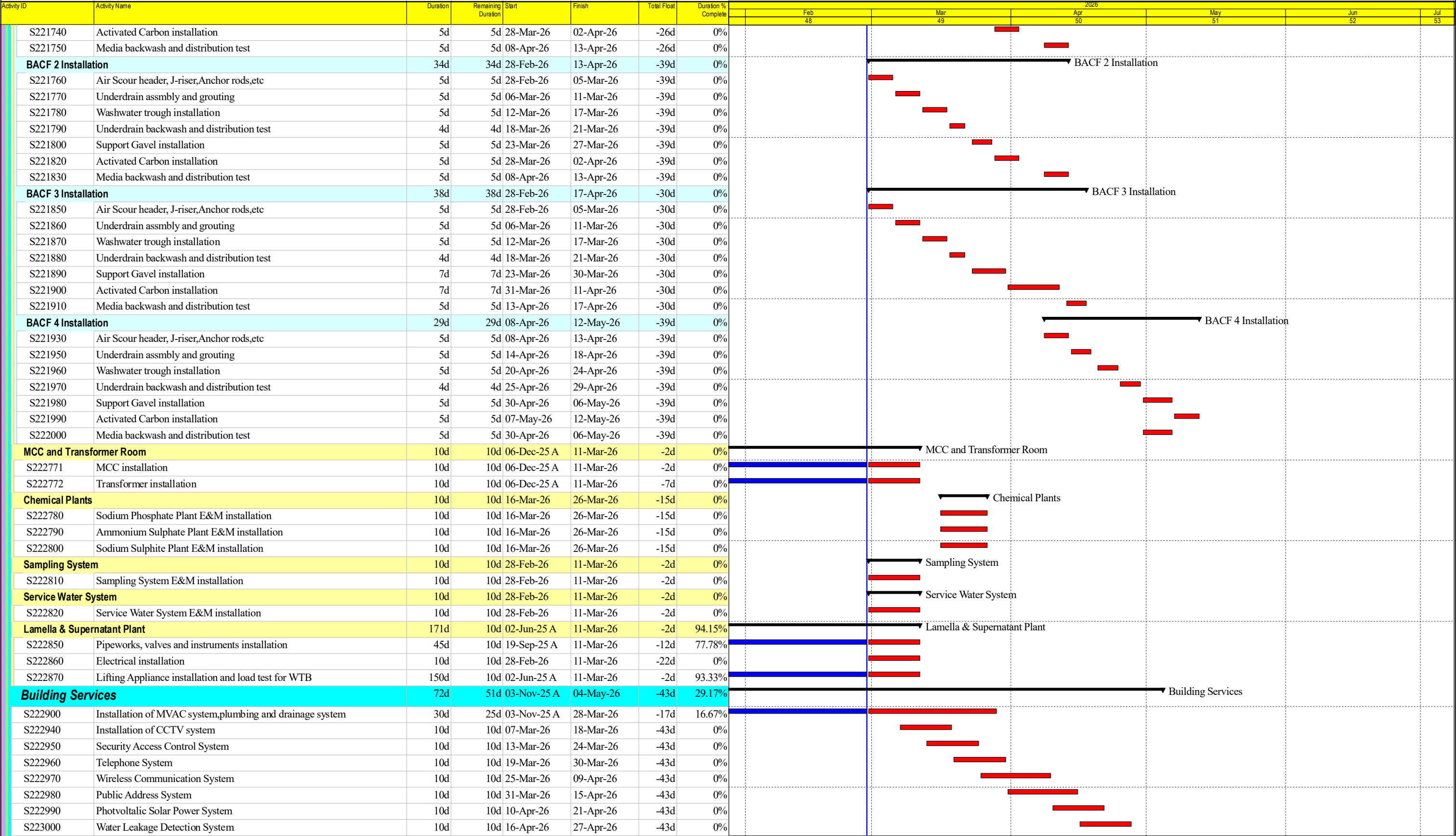
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28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 4 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



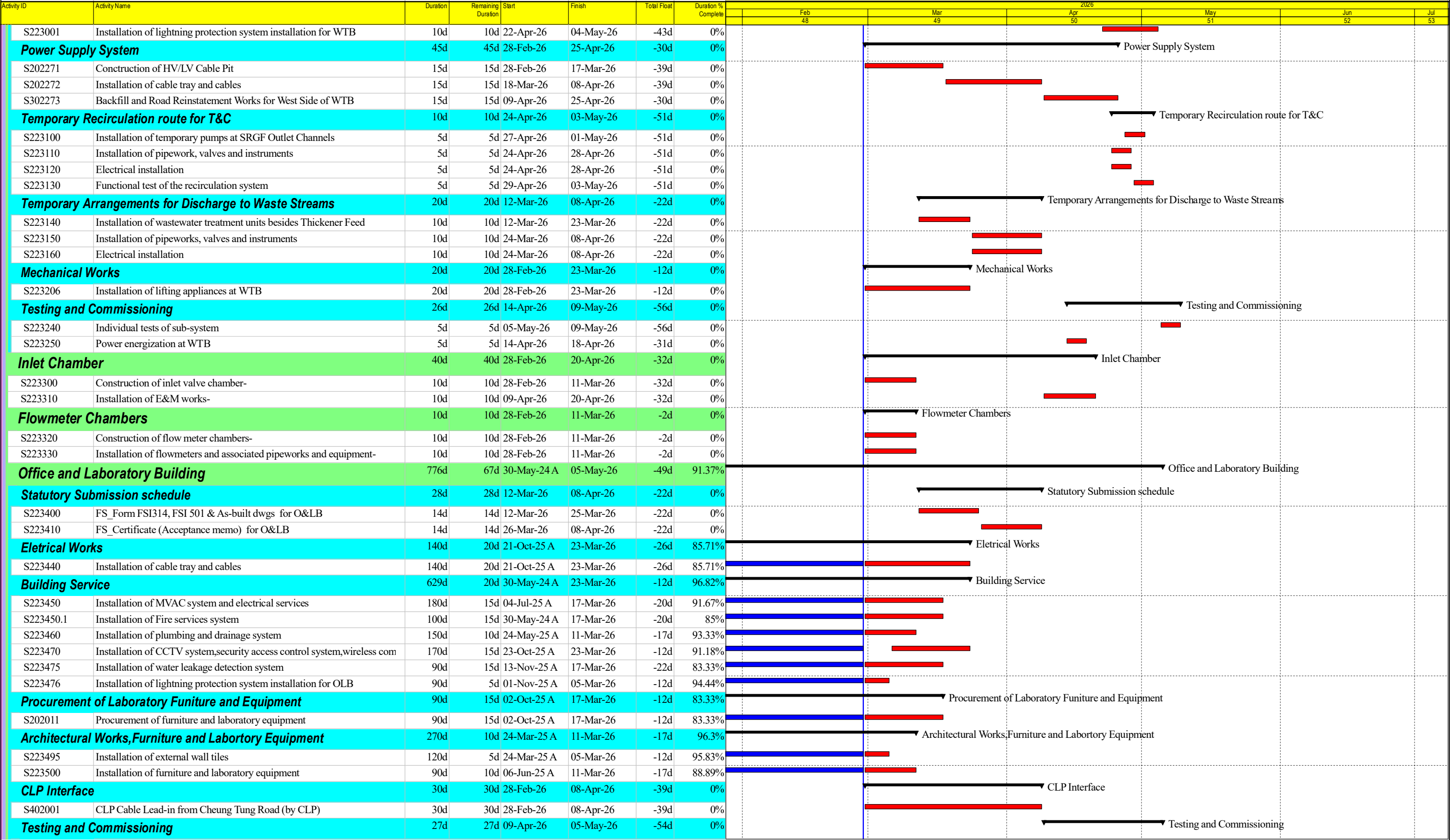
Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 5 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



Actual Work
Non-Critical Activity
Critical Activity
Milestone

Summary

Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 6 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26

Activity ID	Activity Name	Duration	Remaining Duration	Start	Finish	Total Float	Duration % Complete	2026					
								Feb 48	Mar 49	Apr 50	May 51	Jun 52	Jul 53
S223505	Power energization at O&LB	5d	5d	09-Apr-26	13-Apr-26	-54d	0%						
S223510	Inspection after installation of E&M works	14d	14d	14-Apr-26	27-Apr-26	-54d	0%						
S223520	Setting to work (PS 9.5.1)	14d	14d	22-Apr-26	05-May-26	-54d	0%						
S223530	Individual tests of sub-system	14d	14d	21-Apr-26	04-May-26	-54d	0%						
Reinstatement Works		30d	30d	28-Feb-26	08-Apr-26	-15d	0%						
S223541	Drainage works near the O&LB	20d	20d	28-Feb-26	23-Mar-26	-15d	0%						
S223542	Paving works around the O&LB	10d	10d	06-Mar-26	17-Mar-26	-10d	0%						
S223545	Backfill and Reinstatement the road	10d	10d	24-Mar-26	08-Apr-26	-15d	0%						
Dewatering Building		342d	40d	16-Nov-24 A	20-Apr-26	-31d	88.3%						
S223610	Installation of new filter press system	270d	15d	16-Nov-24 A	17-Mar-26	-31d	94.44%						
S223615	Replacement of MVAC system	150d	30d	20-Mar-25 A	08-Apr-26	-22d	80%						
S223617	Dewatering system Testing and Commissioning	24d	24d	18-Mar-26	18-Apr-26	-31d	0%						
S223618	Handover to Plant Operator	1d	1d	20-Apr-26	20-Apr-26	-31d	0%						
Washwater System		30d	30d	28-Feb-26	08-Apr-26	-15d	0%						
S223620	Modification of washwater equalization tanks No.1 and No.2-	15d	15d	28-Feb-26	17-Mar-26	-6d	0%						
S223630	Modification of sludge thickeners and associated pipeworks	15d	15d	28-Feb-26	17-Mar-26	-10d	0%						
S223635	Electrical installation	10d	10d	12-Mar-26	23-Mar-26	-15d	0%						
S223638	Testing of washwater system	10d	10d	24-Mar-26	08-Apr-26	-15d	0%						
Chemical Building		1051d	57d	21-Mar-23 A	25-Apr-26	-39d	94.58%						
Modification of Existing Lime System & other systems and Installatio		550d	40d	29-Nov-23 A	20-Apr-26	-31d	92.73%						
S223720	Modification of the existing alum,polyelectrolyte and silicofluoride syste	150d	10d	25-Jun-25 A	11-Mar-26	-22d	93.33%						
S223725	Modification of electrical works	180d	10d	02-Jul-25 A	08-Apr-26	-22d	94.44%						
S223726	MiMEP erection in Chemical Building	250d	40d	29-Nov-23 A	20-Apr-26	-31d	84%						
Electrical Installation		784d	40d	21-Mar-23 A	20-Apr-26	-25d	94.9%						
S223729	Replacement of MVAC system	200d	10d	21-Mar-23 A	20-Apr-26	-25d	95%						
S223730	Electrical installation	150d	15d	20-Jun-25 A	17-Mar-26	-1d	90%						
S223731	Replacement of existing lighting system	200d	20d	21-Aug-25 A	23-Mar-26	-5d	90%						
Testing		5d	5d	21-Apr-26	25-Apr-26	-41d	0%						
S401030	System testing-	5d	5d	21-Apr-26	25-Apr-26	-41d	0%						
Chlorination Building		97d	54d	04-Aug-25 A	07-May-26	-39d	44.33%						
S224000	Installation of chlorinators	10d	10d	28-Feb-26	11-Mar-26	-43d	0%						
S224001	Installation of hypochlorite dosing system	10d	10d	12-Mar-26	23-Mar-26	-39d	0%						
S224002	Modification of existing chlorine water distribution pipework	10d	10d	12-Mar-26	23-Mar-26	-39d	0%						
S224010	Modification and replacement of the existing Chlorine Building power su	10d	10d	28-Mar-26	13-Apr-26	-39d	0%						
S224011	Replacement of existing lighting system	10d	5d	04-Aug-25 A	13-Apr-26	-19d	50%						
S224015	Tie-in common manifold to new Stream 2A with 2 new chlorinators	10d	10d	14-Apr-26	24-Apr-26	-39d	0%						
S224016	Connection of the new chlorinators to the hypochlorite dosing system	10d	10d	25-Apr-26	07-May-26	-39d	0%						
Filter Gallery, Chlorine Contact Tank and Clear Water Tank		38d	38d	24-Mar-26	12-May-26	-43d	0%						
S224020	Installation of dosing lines sampling-	10d	10d	15-Apr-26	25-Apr-26	-36d	0%						
S224021	Modification of existing water pipes-	15d	15d	15-Apr-26	02-May-26	-43d	0%						
S224022	Replacement of new flowmeter of stream 2A-	15d	15d	21-Apr-26	08-May-26	-43d	0%						
S224023	Sterilization of pipeworks	3d	3d	09-May-26	12-May-26	-43d	0%						
S224024	Replacement of MVAC system-	30d	30d	24-Mar-26	02-May-26	-38d	0%						
Laying of Sludge Pipe (SP-01) CHF 0 to 218		316d	44d	20-Jan-24 A	24-Apr-26	-29d	86.08%						
S313360	Laying of Sludge pipe (SP-01) CHF 100 to 172 from lamellar settler to ex	35d	30d	20-Jan-24 A	08-Apr-26	-29d	14.29%						
S313365	Pressure test for sludge pipe (SP-01)	7d	7d	09-Apr-26	16-Apr-26	-29d	0%						
S401070	Connection to existing DN800 washwater pipe	7d	7d	17-Apr-26	24-Apr-26	-29d	0%						



中國路橋
CRBC

Actual Work
Non-Critical Activity
Critical Activity
Milestone

Summary

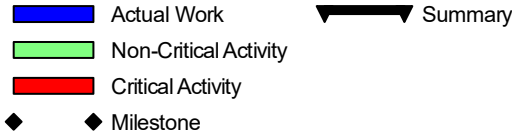
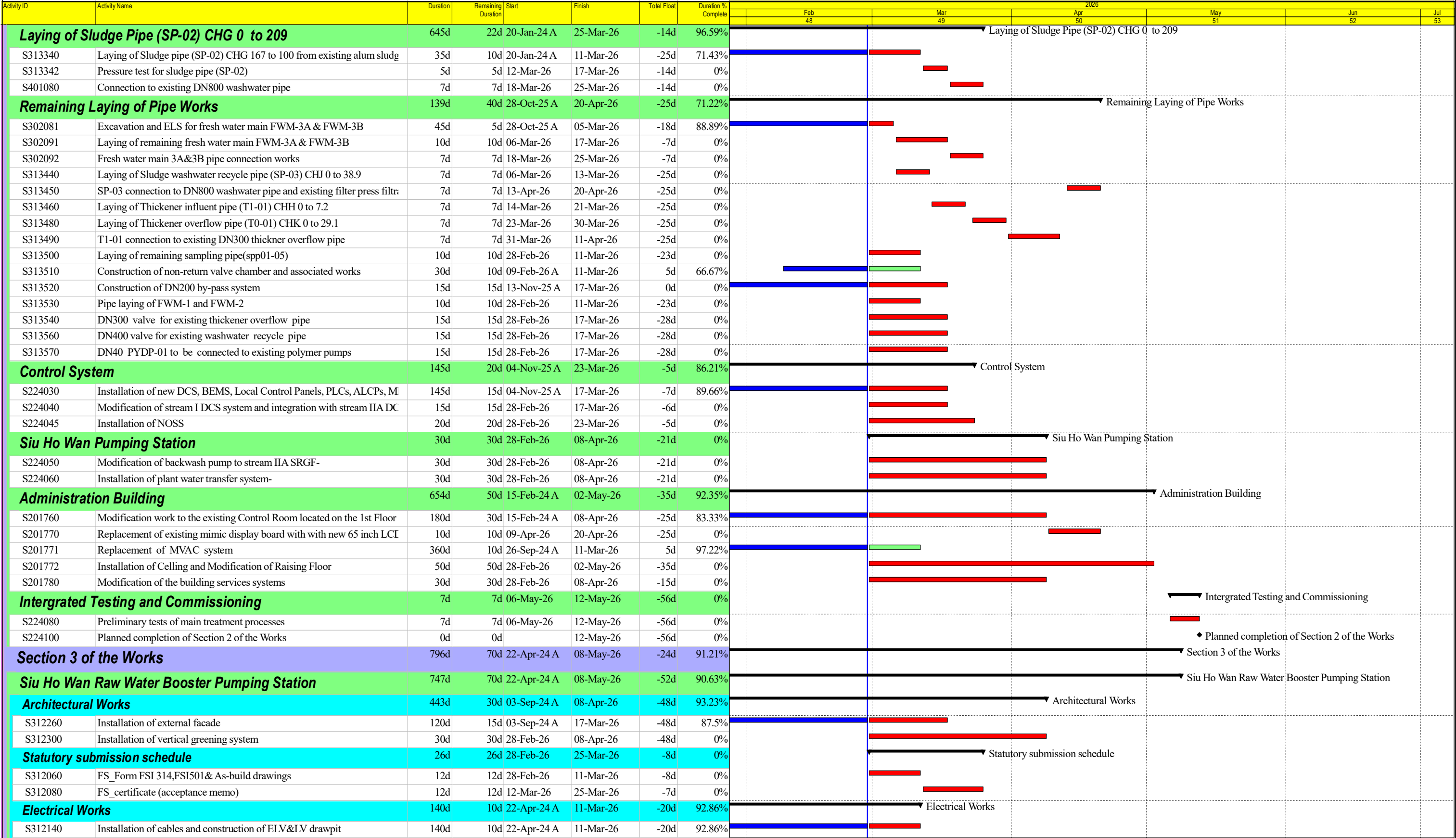
Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 7 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



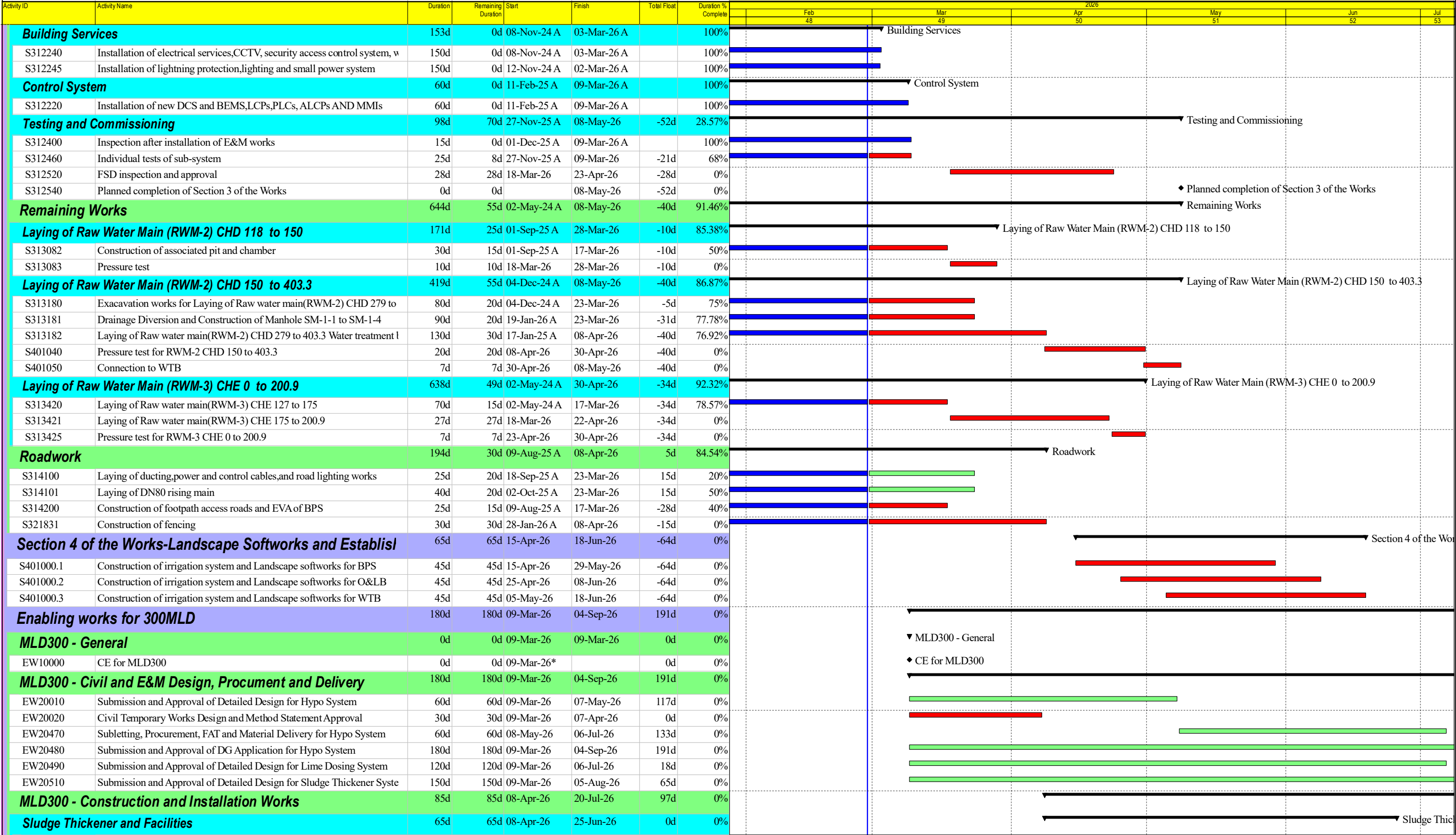
Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 8 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26



Actual Work
Non-Critical Activity
Critical Activity
Milestone

Summary

Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 9 of 10)

Contract No. 7/WSD/21 Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping

Data Date:28-Feb-26

Activity ID	Activity Name	Duration	Remaining Duration	Start	Finish	Total Float	Duration % Complete	2026					
								Feb 48	Mar 49	Apr 50	May 51	Jun 52	Jul 53
EW20030	Run-in construction for access	14d	14d	08-Apr-26	23-Apr-26	0d	0%						
EW20040	Site clearance, temporary drainage system and trial pit for site area	21d	21d	24-Apr-26	19-May-26	0d	0%						
EW20060	Open cut to formation level (+27.9mPD) and Pouring blinding layer	30d	30d	20-May-26	25-Jun-26	0d	0%						
External works		60d	60d	08-May-26	20-Jul-26	97d	0%						
EW20450	DN50 pipes laying from hypo system to filter gallery	60d	60d	08-May-26	20-Jul-26	97d	0%						



中國路橋
CRBC

- Actual Work
- Non-Critical Activity
- Critical Activity
- Milestone

Summary

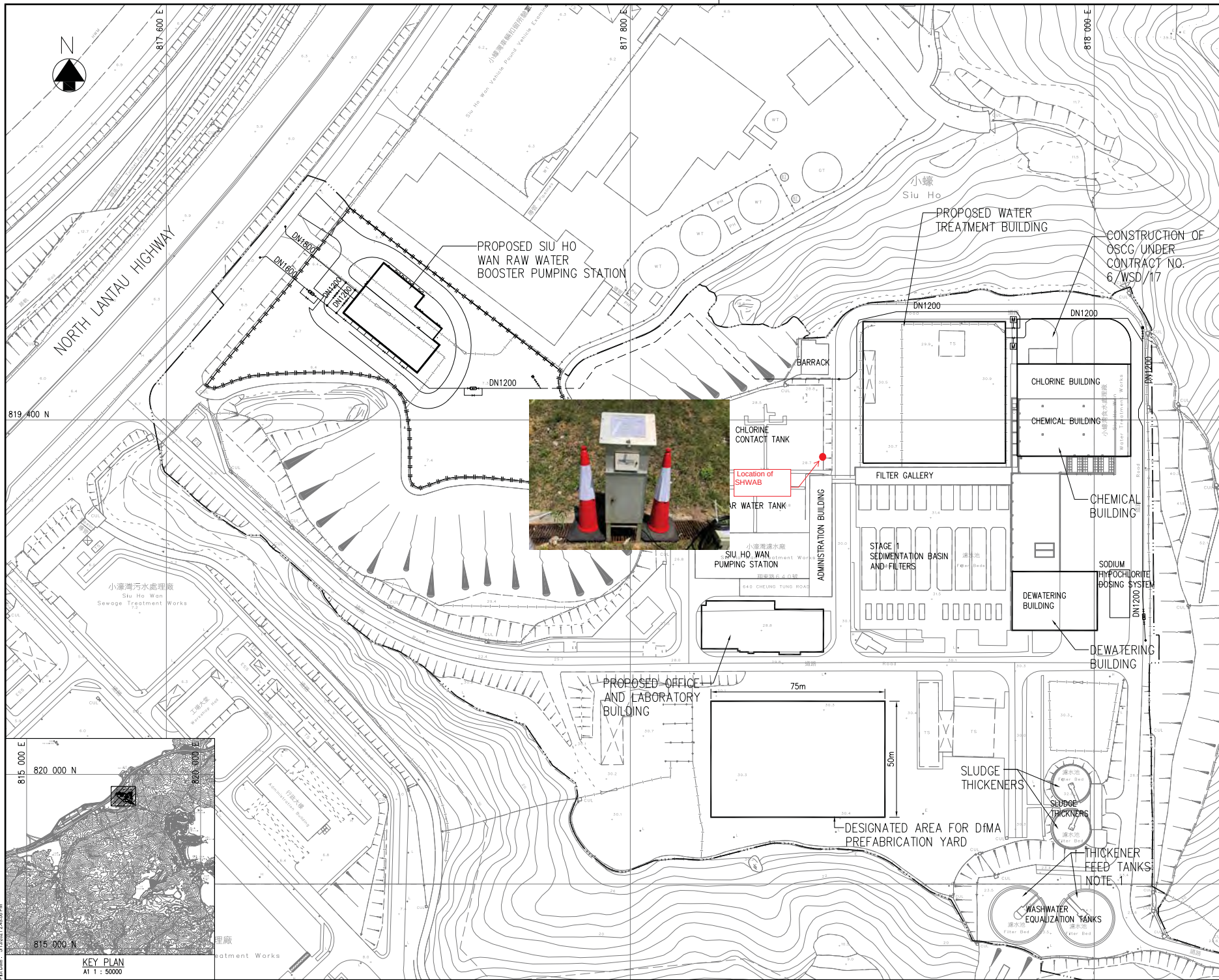
Date	Revision	Checked	Approved
28-Feb-26	1	CLX	RM

3 Month Rolling Programme -
Mar 2026 to May 2026

(sheet 10 of 10)

Appendix D

Monitoring Locations



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LEGEND:

- SITE BOUNDARY
- - - - - PROPOSED RAW WATER MAINS (BURIED)
- - - - - PROPOSED RAW WATER MAINS (EXPOSED)
- |-|-| PROPOSED FENCING
- PROPOSED BUILDING WORKS

NOTE1:
THE EXISTING WASHWATER EQUALIZATION TANKS TO BE RENAMED AS "THICKENER FEED TANKS"

Revision	Date	Description	Drawn	Checked	Initial
0	05/21	ISSUE FOR TENDER DRAWING	JC		
Initial	05/21	05/21	05/21	05/21	05/21

Approved: *James Chan*

Contract No. 7/WSD/21

Contract Title
CONSTRUCTION OF SIU HO WAN WATER TREATMENT WORKS EXTENSION AND SIU HO WAN RAW WATER BOOSTER PUMPING STATION

Drawing Title
SITE LOCATION

Drawing No.	Revision
199755A/B&V/GN/00001	0

Scale
A1 1 : 750
A3 1 : 1500

水務署
Water Supplies Department

binnies
BINNIES HONG KONG LIMITED
寶尼新工程顧問有限公司

Appendix E

Calibration Certificates

TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Siu Ho Wan WTW Administration
 Location ID : SHWAB
 Name and Model: TISCH HVS Model TE-5170

Date of Calibration: 23-Jan-26
 Next Calibration Date: 23-Mar-26
 Technician: Dicky Chan

CONDITIONS

Sea Level Pressure (hPa)
 Temperature (°C)

1024.6
 14.5

Corrected Pressure (mm Hg)
 Temperature (K)

768.45
 288

CALIBRATION ORIFICE

Make-> TISCH
 Model-> 5025A
 Serial # -> 1941

Qstd Slope ->
 Qstd Intercept ->

2.09671
 -0.01852

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.10	6.10	12.2	1.714	53	55.24	Slope = 29.1638 Intercept = 5.1454 Corr. coeff. = 0.9984
13	4.80	4.80	9.6	1.522	48	50.03	
10	3.60	3.60	7.2	1.319	41	42.73	
7	2.40	2.40	4.8	1.079	35	36.48	
5	1.60	1.60	3.2	0.882	30	31.27	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pstd = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760))-b)$$

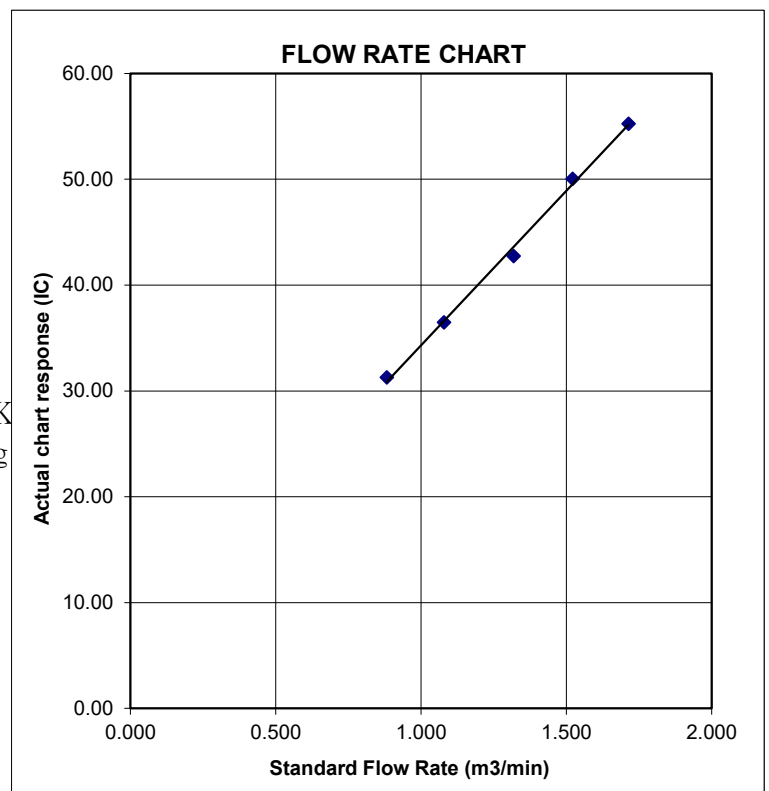
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TSP SAMPLER CALIBRATION CALCULATION SPREADSHEET

Location : Siu Ho Wan WTW Administration
 Location ID : SHWAB
 Name and Model: TISCH HVS Model TE-5170

Date of Calibration: 13-Mar-26
 Next Calibration Date: 13-May-26
 Technician: Dicky Chan

CONDITIONS

Sea Level Pressure (hPa)
 Temperature (°C)

1022.5
 18.8

Corrected Pressure (mm Hg)
 Temperature (K)

766.875
 292

CALIBRATION ORIFICE

Make-> TISCH
 Model-> 5025A
 Serial # -> 1941

Qstd Slope ->
 Qstd Intercept ->

2.09671
 -0.01852

CALIBRATION

Plate No.	H2O (L) (in)	H2O (R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC corrected	LINEAR REGRESSION
18	6.20	6.20	12.4	1.714	54	55.40	Slope = 28.4152 Intercept = 6.2247 Corr. coeff. = 0.9974
13	4.90	4.90	9.8	1.524	48	49.24	
10	3.70	3.70	7.4	1.326	42	43.09	
7	2.30	2.30	4.6	1.047	36	36.93	
5	1.60	1.60	3.2	0.875	30	30.78	

Calculations :

$$Qstd = 1/m[\text{Sqrt}(H20(Pa/Pstd)(Tstd/Ta))-b]$$

$$IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$$

Qstd = standard flow rate

IC = corrected chart responses

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K

Pstd = actual pressure during calibration (mm Hg

For subsequent calculation of sampler flow:

$$1/m((I)[\text{Sqrt}(298/Tav)(Pav/760))-b)$$

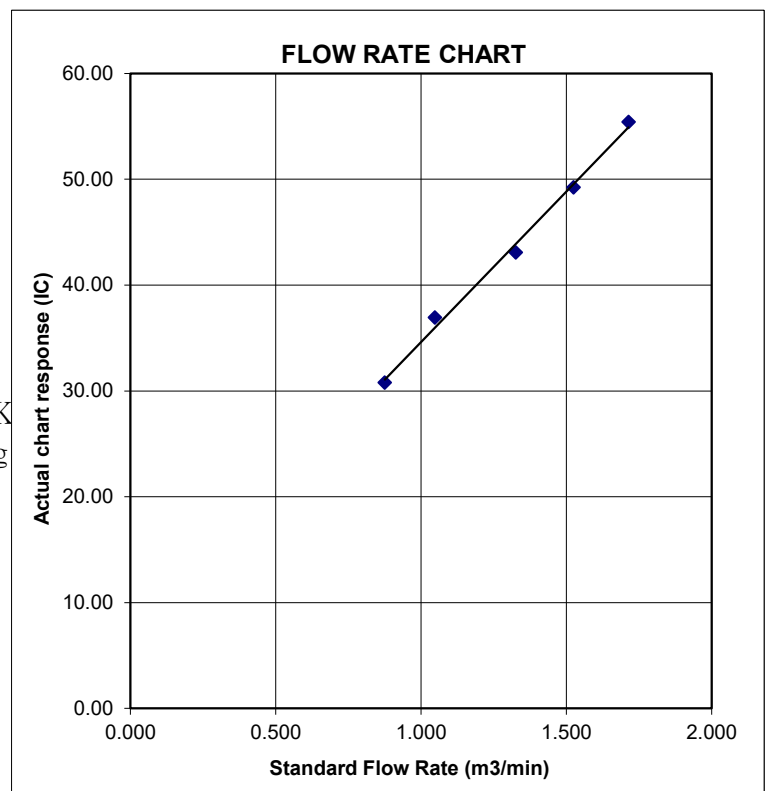
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



Certificate of Calibration

Calibration Certification Information

Cal. Date: December 8, 2025 Rootsmeter S/N: 438320 Ta: 294 °K
Operator: Jim Tisch Pa: 755.7 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 1941

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4570	3.2	2.00
2	3	4	1	1.0380	6.4	4.00
3	5	6	1	0.9290	7.9	5.00
4	7	8	1	0.8850	8.8	5.50
5	9	10	1	0.7320	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
1.0035	0.6888	1.4197	0.9958	0.6834	0.8821
0.9993	0.9627	2.0078	0.9915	0.9552	1.2475
0.9973	1.0735	2.2448	0.9895	1.0652	1.3948
0.9961	1.1255	2.3543	0.9884	1.1168	1.4628
0.9907	1.3535	2.8394	0.9831	1.3430	1.7642
QSTD	m=	2.13603	QA	m=	1.33754
	b=	-0.04992		b=	-0.03102
	r=	1.00000		r=	1.00000

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	Vstd/ΔTime	Qa=	Va/ΔTime
For subsequent flow rate calculations:			
Qstd=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$	Qa=	$1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$

Standard Conditions

Tstd: 298.15 °K
Pstd: 760 mm Hg

Key

ΔH: calibrator manometer reading (in H2O)
ΔP: rootsmeter manometer reading (mm Hg)
Ta: actual absolute temperature (°K)
Pa: actual barometric pressure (mm Hg)
b: intercept
m: slope

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

Appendix F

Event and Action Plan

Event Action Plan for Air Quality

Event	Action			
	ET	IEC	PMD	Contractor
Action Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, <i>PMD</i> and <i>Contractor</i>; 3. Repeat measurement to confirm finding; and 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check <i>Contractor</i>'s working method; and 3. Review and advise the ET and <i>PMD</i> on the effectiveness of the proposed remedial measures.	1. Notify <i>Contractor</i>.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Rectify any unacceptable practice and implement remedial measures; and 3. Amend working methods agreed with <i>PMD</i> if appropriate.
Action Level exceedance for two or more consecutive samples	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, <i>PMD</i> and <i>Contractor</i>; 3. Advise the <i>PMD</i> and <i>Contractor</i> on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC, <i>PMD</i> and <i>Contractor</i> on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and <i>PMD</i>; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check <i>Contractor</i>'s working method; 3. Discuss with ET and <i>Contractor</i> on possible remedial measures; 4. Advise the ET and <i>PMD</i> on the effectiveness of the proposed remedial measures; and 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify <i>Contractor</i>; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures 2. Submit proposals for remedial actions to <i>PMD</i> with a copy to ET and IEC within 3 working days of notification; 3. Implement the agreed proposals; and 4. Amend proposal if appropriate.
Limit Level exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform <i>PMD</i>, <i>Contractor</i>, IEC and EPD; 3. Repeat	1. Check monitoring data submitted by ET; 2. Check <i>Contractor</i>'s working method; 3. Discuss with ET, <i>PMD</i> and <i>Contractor</i> on possible remedial measures;	1. Confirm receipt of notification of failure in writing; 2. Notify <i>Contractor</i>; and 3. Supervise and ensure remedial measures properly implemented.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals

	measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of <i>Contractor's</i> remedial actions and keep IEC, EPD and <i>PMD</i> informed of the results.	4. Advise the <i>PMD</i> and ET on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.		for remedial actions to <i>PMD</i> with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
Limit Level exceedance for two or more consecutive samples	1. Notify IEC, <i>PMD</i>, <i>Contractor</i> and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of <i>Contractor's</i> working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC, <i>Contractor</i> and <i>PMD</i> to discuss the remedial actions to be taken; 7. Assess effectiveness of <i>Contractor's</i> remedial actions and keep IEC, EPD and <i>PMD</i> informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check <i>Contractor's</i> working method; 3. Discuss amongst <i>PMD</i>, ET, and <i>Contractor</i> on the potential remedial actions; 4. Review <i>Contractor's</i> remedial actions whenever necessary to assure their effectiveness and advise the <i>PMD</i> accordingly; and 5. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify <i>Contractor</i>; 3. In consultation with the ET and IEC, agree with the <i>Contractor</i> on the remedial measures to be implemented; 4. Supervise and ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the <i>Contractor</i> to stop that portion of work until the exceedance is abated.	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial actions to <i>PMD</i> with a copy to ET and IEC within 3 working days of notification; 4. Implement the agreed proposals; 5. Resubmit proposals if problem still not under control; 6. Stop the relevant portion of works as determined by the <i>PMD</i> until the exceedance is abated.

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

PMD – Project Manager's Delegate

Appendix G

Monitoring Schedule

Impact Air Quality Monitoring Schedule for the Reporting Period

Date		AIR QUALITY MONITORING (24-HOUR TSP)
Sun	1-Mar-26	
Mon	2-Mar-26	
Tue	3-Mar-26	
Wed	4-Mar-26	✓
Thu	5-Mar-26	
Fri	6-Mar-26	
Sat	7-Mar-26	
Sun	8-Mar-26	
Mon	9-Mar-26	
Tue	10-Mar-26	✓
Wed	11-Mar-26	
Thu	12-Mar-26	
Fri	13-Mar-26	
Sat	14-Mar-26	
Sun	15-Mar-26	
Mon	16-Mar-26	✓
Tue	17-Mar-26	
Wed	18-Mar-26	
Thu	19-Mar-26	
Fri	20-Mar-26	
Sat	21-Mar-26	✓
Sun	22-Mar-26	
Mon	23-Mar-26	
Tue	24-Mar-26	
Wed	25-Mar-26	
Thu	26-Mar-26	
Fri	27-Mar-26	✓
Sat	28-Mar-26	
Sun	29-Mar-26	
Mon	30-Mar-26	
Tue	31-Mar-26	

✓	Monitoring Day
	Sunday or Public Holiday

Impact Air Quality Monitoring Schedule for next Reporting Period

Date		AIR QUALITY MONITORING (24-HOUR TSP)
Wed	1-Apr-26	
Thu	2-Apr-26	✓
Fri	3-Apr-26	
Sat	4-Apr-26	
Sun	5-Apr-26	
Mon	6-Apr-26	
Tue	7-Apr-26	
Wed	8-Apr-26	✓
Thu	9-Apr-26	
Fri	10-Apr-26	
Sat	11-Apr-26	
Sun	12-Apr-26	
Mon	13-Apr-26	
Tue	14-Apr-26	✓
Wed	15-Apr-26	
Thu	16-Apr-26	
Fri	17-Apr-26	
Sat	18-Apr-26	
Sun	19-Apr-26	
Mon	20-Apr-26	✓
Tue	21-Apr-26	
Wed	22-Apr-26	
Thu	23-Apr-26	
Fri	24-Apr-26	
Sat	25-Apr-26	✓
Sun	26-Apr-26	
Mon	27-Apr-26	
Tue	28-Apr-26	
Wed	29-Apr-26	
Thu	30-Apr-26	✓

✓	Monitoring Day
	Sunday or Public Holiday

Appendix H

Database of Monitoring Result

WSD Contract No.: 7/WSD/21 - Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping Station
Monthly Environmental Impact Monitoring and Audit Report (March 2026)

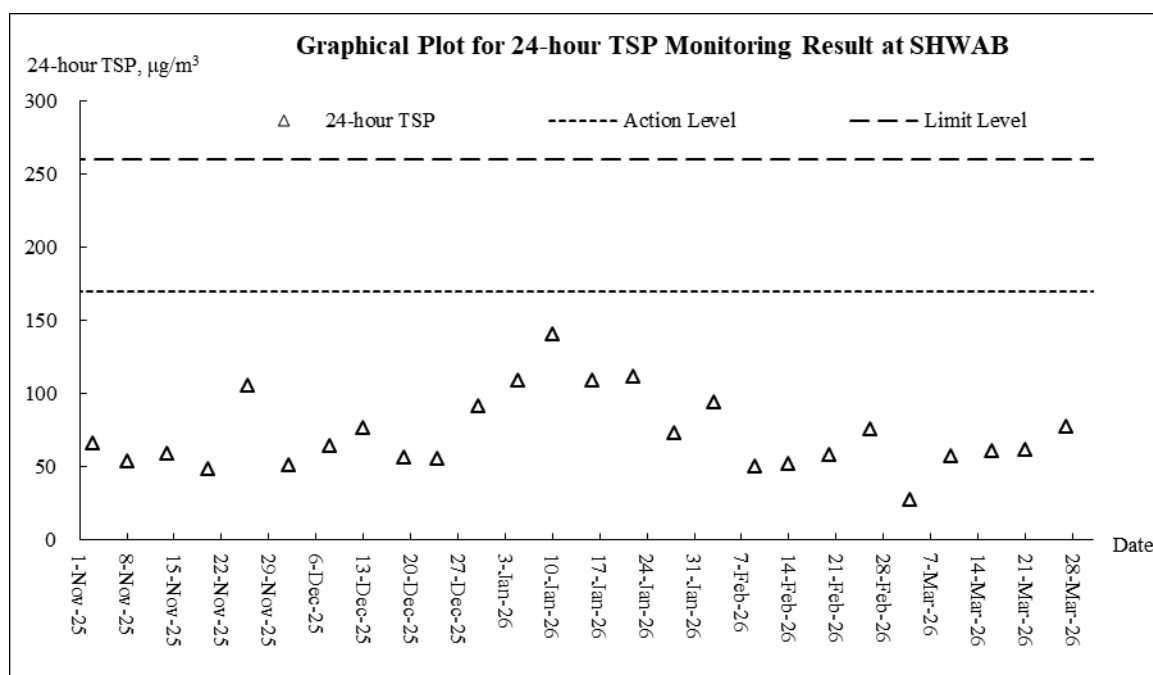


Impact Monitoring Results for 24-hour TSP at SHWAB															
DATE	SAMPLE NUMBER	ELAPSED TIME		ACTUAL (min)	CHART READING			AVG TEMP (°C)	STANDARD			FILTER WEIGHT (g)		WEIGHT DUST COLLECTED (g)	DUST 24-hour TSP IN AIR (ug/m ³)
		INITIAL	FINAL		MIN	MAX	AVG		AVG PRESS (hPa)	FLOW RATE (m ³ /min)	AIR VOLUME (std m ³)	INITIAL	FINAL		
4-Mar-26	22349	23937.46	23961.46	1440.00	30	40	35.0	16.5	1017.0	1.04	1502	2.7244	2.7662	0.0418	28
10-Mar-26	22348	23961.47	23985.47	1440.00	42	42	42.0	17.7	1022.5	1.29	1855	2.7385	2.8447	0.1062	57
16-Mar-26	22355	23985.47	24009.47	1440.00	39	39	39.0	20.8	1018.6	1.17	1690	2.7860	2.8887	0.1027	61
21-Mar-26	22366	24009.47	24033.47	1440.00	40	40	40.0	21.4	1016.9	1.21	1737	2.7874	2.8946	0.1072	62
27-Mar-26	22379	24033.47	24057.47	1440.00	38	40	39.0	24.2	1011.7	1.16	1673	2.7909	2.9209	0.1300	78

Appendix I

Graphical Plots for Monitoring Result

24-Hour TSP



Appendix J

Meteorological Data

Date		Weather	Total Rainfall (mm)	Chek Lap Kok				
				Mean Air Temp. (°C)	Wind Speed (km/h)	Mean Relative Humidity (%)	Wind Direction	Mean Press. (hPa)
1-Mar-26	Sun	Mainly cloudy with a few showers.	0.1	23.3	24.2	79.2	E	1010.4
2-Mar-26	Mon	Moderate to fresh north to northeasterly winds.	15.4	24.3	17.2	80.5	E	1010.7
3-Mar-26	Tue	Showers will be more frequent with a few thunderstorms later.	68	18.9	20.5	83.7	N/NE	1014.4
4-Mar-26	Wed	Mainly cloudy with a few showers.	66	16.3	12.5	85.0	N/NE	1017
5-Mar-26	Thu	Mainly cloudy. One or two light rain	Trace	19.2	15.2	75.2	NW	1016.4
6-Mar-26	Fri	Moderate to fresh north to northeasterly winds.	0	20.4	15.2	58.7	N	1017.6
7-Mar-26	Sat	Mainly cloudy with a few showers.	0	21.2	17.5	61.5	E/SE	1020.1
8-Mar-26	Sun	Moderate northeasterly winds	0	20.3	19	61.2	E/SE	1020.3
9-Mar-26	Mon	Mainly cloudy. One or two light rain	Trace	21.1	17	64.2	E	1021.6
10-Mar-26	Tue	Fine. Dry and warm	0.1	17.5	10.5	79.2	NE	1022.5
11-Mar-26	Wed	Light to moderate northeasterly winds	0	19.6	8.7	65.7	NE	1019.4
12-Mar-26	Thu	Fine. Dry and warm	0	21.0	12.5	64.7	E/SE	1019.2
13-Mar-26	Fri	Fine. Dry and warm	0	20.2	27.0	49.0	E/SE	1022.5
14-Mar-26	Sat	Mainly cloudy. Hot with sunny periods	0	20.1	15.0	51.5	W/NW	1023
15-Mar-26	Sun	Light winds, moderate easterlies.	0	22.5	15.0	50.5	E	1021.5
16-Mar-26	Mon	Light winds.	0	23.0	20.5	57.0	E	1018.6
17-Mar-26	Tue	Mainly fine. Hot. Light winds.	Trace	22.6	16.5	76.7	E	1016.9
18-Mar-26	Wed	Light winds, moderate easterlies.	0	24.3	13.7	65.5	E	1015.7
19-Mar-26	Thu	Mainly fine and hot	Trace	24.4	14	65.0	W/SW	1014.3
20-Mar-26	Fri	Cloudy periods and coastal mist	0.1	24.0	23	72.7	E	1015.7
21-Mar-26	Sat	Light winds.	0	23.1	27.5	75.7	E	1016.9
22-Mar-26	Sun	Mainly fine and hot	Trace	24.8	19.5	64.7	E	1016.1
23-Mar-26	Mon	Light winds, moderate easterlies.	0	24.3	13.2	71.0	E	1014.3
24-Mar-26	Tue	Mainly fine and hot	0	25.3	12	67.5	E	1012.8
25-Mar-26	Wed	Mainly fine. Hot. Light winds.	0	26.0	10.5	67.0	W/SW	1012.7
26-Mar-26	Thu	Light to moderate east to southeasterly winds.	0	26.0	11.5	71.2	S	1012.2
27-Mar-26	Fri	Mainly cloudy. Hot with sunny periods	1.1	26.5	12.2	70.5	E	1011.7
28-Mar-26	Sat	Mainly fine. Hot. Light winds.	Trace	25.9	18	73.2	S/SW	1011.8
29-Mar-26	Sun	Mainly cloudy. Hot with sunny periods	Trace	25.8	16.7	70	E	1011.7
30-Mar-26	Mon	Mainly cloudy with occasional showers and severe squally thunderstorms.	3.6	24.6	20	72.5	S/SE	1010.7
31-Mar-26	Tue	Mainly cloudy with a few showers.	Trace	26.3	16.5	73	S	1010.2

Remark: The above information was extracted from the Hong Kong Observatory Station of Chek Lap Kok of below link:
<https://www.hko.gov.hk/en/index.html>

Appendix K

Waste Flow Table

Monthly Summary Waste Flow Table for 2026 (year)

Project : Construction of Siu Ho Wan Water Treatment Works Extension and Siu Ho Wan Raw Water Booster Pumping Station

Contract No.: 7/WSD/21

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete (a) (see Note 3)	Reused in the Contract (b)	Reused in other Projects (c)	Disposed as Public Fill (d)	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in Tonne)	(in Tonne)	(in Tonne)	(in Tonne)	(in Tonne)	(in Tonne)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in Tonne)
Jan	2779.500	154.270	0.000	0.000	2625.230	52.790	0.010	0.469	0.012	0.020	108.490
Feb	2401.780	0.000	0.000	0.000	2401.780	57.810	0.010	0.353	0.026	0.000	62.690
Mar	773.930	62.630	0.000	0.000	711.300	0.000	0.011	0.322	0.030	0.000	63.560
Apr	0.000										
May	0.000										
Jun	0.000										
Sub-total	5955.210	216.900	0.000	0.000	5738.310	110.600	0.0310	1.1440	0.0680	0.020	234.740
Jul	0.000										
Aug	0.000										
Sep	0.000										
Oct	0.000										
Nov	0.000										
Dec	0.000										
Total	5955.210	216.900	0.000	0.000	5738.310	110.600	0.0310	1.1440	0.0680	0.020	234.740

- Notes:
- (1) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
 - (2) Plastics refer to plastic bottles/containers, plastic sheets/ foam from packaging materials.
 - (3) Broken concrete for recycling into aggregates.
 - (4) Total Quantity Generated = a+b+c+d.

Appendix L

Environmental Complaints Log

Environmental Complaints Log

Log ref.	Date of complaint	Complaint route	Reference no.	Complaint nature	Investigation finding	Status
1						
2						
3						
4						

Appendix M

Implementation Schedule for Environmental Mitigation Measures

Environmental Mitigation Implementation Schedule for Air Quality Control

EIA Ref	Environmental Protection Measures	Location/Timing	Implementation Agent	Implementation Stages*			Relevant Legislation & Guidelines
				D	C	O	
Construction Phase (Air Quality Control)							
S3.8	Dust mitigation measures stipulated in the Air Pollution Control (Construction Dust) Regulation shall be incorporated to control dust emission. Notice shall be given to authority prior to commencing of work. Relevant control measures include: - watering on the work sites at Siu Ho Wan WTW twice a day; - skip hoist for material transport shall be totally enclosed by impervious sheeting; - vehicle washing facilities shall be provided at every vehicle exit point; - the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point shall be paved with concrete, bituminous materials or hardcores; - every main haul road shall be scaled with concrete and kept clear of dusty materials or sprayed with water so as to maintain the entire road surface wet; - every stock of more than 20 bags of cement shall be covered entirely by impervious sheeting placed in an area sheltered on the top and the three sides; - all dusty materials shall be sprayed with water prior to any loading, unloading or transfer operation so as to maintain the dusty materials wet; - every vehicle shall be washed to remove any dusty materials from its body and wheels before leaving the construction sites; - the dusty materials stockpiled on site shall be covered; and - the load of dusty materials carried by vehicle leaving a construction site shall be covered entirely by clean impervious sheeting to ensure dust materials do not leak from the vehicle.	Work site / during construction period.	Contractor		√		Air Pollution Control (Construction Dust) Regulation
Operation Phase(Air Quality)							
NA	NA	NA	NA	NA	NA	NA	NA
Construction Phase (Noise Control)							
S4.8.1	Use of silenced PME	Work site close to all NSRs	Contractor		√		NCO, EIAO-TM
S4.8.6	Good Site Practices: - Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program. - Mobile plant, if any, should be sited as far away from NSRs as possible. - Machines and plant (such as trucks) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum. - Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs. - Material stockpiles and other structures should be effectively utilised, wherever practicable, in screening noise from on-site construction activities. - Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction programme.	Work site close to all NSRs / throughout the construction period.	Contractor		√		NCO, EIAO-TM

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				D	C	O	
Operation Phase(Noise Control)							
NA	NA	NA	NA	NA	NA	NA	NA
Construction Phase (Water Quality Control)							
S5.7.2	<i>Construction Site Runoff and Drainage</i> - Before commencing any site formation work, all sewer and drainage connections shall be sealed to prevent debris, soil, sand etc. from entering public sewers/drains. - Sand/silt removal facilities such as sand traps, silt traps and sediment basins shall be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the Water Pollution Control Ordinance. The design of silt removal facilities shall be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures shall be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. - Water pumped out from foundation excavations shall be discharged into silt removal facilities. - Exposed soil surfaces shall be protected by paving or fill material as soon as possible to reduce the potential of soil erosion. - Open stockpiles of construction materials or construction wastes on-site of more than 50m3 shall be covered with tarpaulin or similar fabric during rainstorms.	Work site / During the construction period	Contractor		√		ProPECC PN 1/94; WPCO
S5.7.3	<i>General Construction Activities</i> Debris and rubbish generated on-site shall be collected, handled and disposed of properly to avoid entering the nearby watercourses and storm water drains. Stockpiles of cement and other construction materials shall be kept covered when not being used.	Work site / During the construction period	Contractor		√		ProPECC PN 1/94; WPCO
S5.7.4	Oils and fuels shall only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund shall be drained of rainwater after a rain event.	Work site / During the construction period	Contractor		√		
S5.7.5	<i>Sewage from Construction Workforce</i> Temporary sanitary facilities, such as portable chemical toilets, shall be employed on-site. A licensed contractor shall be responsible for appropriate disposal and maintenance of these facilities.	Work site / During the construction period	Contractor		√		WPCO
Operation Phase(Water Quality Control)							
NA	NA	NA	NA	NA	NA	NA	NA
Construction Phase (Ecology)							
S.6.9.3	<i>Mitigation to minimise impacts on vegetation in woodland</i> All trees shall be preserved as far as possible, especially species of high conservation or amenity value. Recommendations to be provided in the Tree Survey Report to mitigate impacts on trees shall be followed. Where trees are to be preserved in-situ, but are likely to be disturbed from works activities, protective fencing/hoarding shall be carefully set up around the affected trees (refer to	Work site / particularly woodland / During design phase and construction period	WSD/ Contractor	√	√		EIAO

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				D	C	O	
S.6.9.4/ S.6.11.2	Landscape and Visual). Disturbance of individuals of the shrub/tree species Pavetta hongkongensis and tree Aquilaria sinensis of conservation interest should be avoided. A buffer to the dripline of each plant of at least 1m radius should be demarcated to prohibit disturbance. Where loss of this species would be unavoidable, it is recommended that these plants may be transplanted to safe locations within the same habitat. Following transplantation, regular monitoring of the trees and seedlings should be conducted by a suitably qualified botanist/horticulturist over a 12-month period.						
S.6.9.5	<i>Mitigation to minimise impacts on aquatic ecology</i> Trench excavation works for the raw water mains near the stream courses should be carried out in the dry season as far as practicable.	Work site / During construction period	WSD/ <i>Contractor</i>	√	√		
S.6.9.6	<i>Mitigation to minimise general disturbance to wildlife</i> Noise mitigation measures through the use of quiet construction plant shall be implemented to minimise disturbance to habitats adjacent to the works areas.	Work site / During construction period	<i>Contractor</i>		√		EIAO
S.6.9.7	<i>General good site practice</i> - Placement of equipment or stockpile in designated works areas and access routes selected on existing disturbed land to minimise disturbance to natural habitats. - Construction activities shall be restricted to works areas that shall be clearly demarcated. The works areas shall be reinstated after completion of the works. - Waste skips shall be provided to collect general refuse and construction wastes. The wastes shall be disposed of timely and properly off-site. - General drainage arrangements shall include sediment and oil traps to collect and control construction site run-off. - Open burning on works sites is illegal, and shall be strictly prohibited. Stove fires on works sites shall also not be allowed. Temporary fire fighting equipment shall be provided particularly in woodland areas.	Work site / During construction period	<i>Contractor</i>		√		EIAO
S.6.9.8.	<i>Re-vegetation to reinstate works areas</i> As far as possible compensatory planting shall use native plants of the same species that occur in the adjacent woodland habitat and have flowers/fruits attractive to wildlife. On-site compensatory planting should be conducted on at least a one to one basis.	Work site in woodland / Immediately following works	<i>Contractor</i>		√		EIAO
Operation Phase(Ecology)							
NA	NA	NA	NA	NA	NA	NA	NA
Construction Phase (Landscape and Visual Impact)							
S7.9	- All existing top-soil shall be conserved and reused - Temporary hoarding barriers shall be of a recessive visual appearance in both colour and form. - Chromatic colour scheme with appropriate texture should be considered while designing the external surface of the proposed SHW Raw Water Booster Pumping Station in order to visually merge the proposed structures into the surrounding landscape.	During construction phase	<i>Contractor</i>		√		EIAO-TM
Operation Phase(Landscape and Visual Impact)							

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EIA Ref	Environmental Protection Measures	Location/Timing	Implementation Agent	Implementation Stages*			Relevant Legislation & Guidelines
				D	C	O	
S7.9	- New compensatory planting works shall be carried out as early as possible in the construction period which allow maximum time for establishment and more mature trees when the works completed. - Landscape or compensatory planting shall be provided where appropriate for enhancing greening and achieving visual screening. In this aspect, compensatory tree planting shall be considered. Selection of plant species shall match with the surrounding vegetation type and form for consistency of landscape resources and visual comfort, for matching with the local habitat. Tree planting shall be firstly considered when the amenity area or slope is feasible for planting trees so as to provide visual screening.	During operation phase	Contractor			√	EIAO-TM
S7.9	- Planting area of approximately 2000 to 3000mm wide where fast growing tall trees with dense foliage shall be provided along the site boundary of Siu Ho Wan Raw Water Booster Pumping Station for visual screening. - For planting close to or surrounded by natural terrain, compensatory planting should be arranged in a semi natural manner where feasible in order to blend the new planting into natural environment. - The newly planted trees, shrubs and grassed areas are maintained throughout the first 12 months of the operation stage.	During operation phase	Contractor			√	EIAO-TM
Waste Management							
S10.5.1 - S10.5.3	<i>Good Site Practices</i> Good site practices during the construction activities include: - Nomination of approved personnel, such as a site manager, to be responsible for good site practices and making arrangements for collection of all wastes generated at the site and effective disposal to an appropriate facility. - Training of site personnel in proper waste management and chemical waste handling procedures. - Provision of sufficient waste disposal points and regular collection for disposal. - Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers. - Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors. - A Waste Management Plan shall be prepared and submitted to the Engineer for approval. One may make reference to ETWB TCW No. 15/2003 for details. - A recording system for the amount of wastes generated, recycled and disposed (including the disposal sites) shall be proposed. - In order to monitor the disposal of C&D material at public filling areas and to control fly tipping, a trip-ticket system shall be included as one of the contractual requirements to be implemented by an Environmental Team undertaking the Environmental Monitoring and Audit work. One may make reference to WBTC No. 21/2002 for details.	Work site / the During construction period	Contractor		√		Waste Disposal Ordinance (Cap.54) WBTC No.21/2002, ETWB TCW No. 15/2003
S10.5.4	<i>Waste Reduction Measures</i> Waste reduction is best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices. Recommendations to achieve waste reduction	Work site / During planning & design stage, and construction	WSD/Contractor	√	√		WBTC No.4/98, ETWB TCW No. 15/2003

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EIA Ref	Environmental Protection Measures	Location/Timing	Implementation Agent	Implementation Stages*			Relevant Legislation & Guidelines
				D	C	O	
	include: - Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. - Separate labelled bins shall be provided to segregate aluminium cans from other general refuse generated by the work force, and to encourage collection of by individual collectors. - Any unused chemicals or those with remaining functional capacity shall be recycled. - Maximising the use of reusable steel formwork to reduce the amount of C&D material. - Proper storage and site practices to minimise the potential for damage or contamination of construction materials. - Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	stage					
S10.5.9	<i>General Refuse</i> General refuse shall be stored in enclosed bins or compaction units separate from C&D material. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D material.	Work site / During the construction period	Contractor		√		Public Health and Municipal Services Ordinance (Cap. 132)
S10.5.7	<i>Construction & Demolition (C&D) Material</i> When disposing C&D material at a public filling area, it shall be noted that the material shall only consist of soil, rock, concrete, brick, cement plaster/mortar, inert building debris, aggregates and asphalt. The material shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered to be unsuitable by the Filling Supervisor.	Work site / During the construction period	Contractor		√		WBTC No. 4/98, 21/2002, 25/99, 12/2000 ETWB TCW No. 15/2003
S10.5.8	<i>Chemical Wastes</i> If chemical wastes are produced at the construction site, the Contractor would be required to register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Good quality containers compatible with the chemical wastes shall be used. Appropriate labels shall be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosives, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport and dispose of the chemical wastes generated at the Chemical Waste Treatment Centre at Tsing Yi, or other licenced facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. All chemical wastes shall be removed from the waterworks installations at the first instance.	Work site / During the construction period	Contractor		√		

Note: N/A Not applicable

*D – Design; C – Construction; O – Operation