



**CONTRACT NO. SPW 12/2021**  
**SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS**  
**UNDER FURTHER ENVIRONMENTAL PERMIT NO. FEP-**  
**02/474/2013**  
**MONTHLY ENVIRONMENTAL MONITORING & AUDIT REPORT**  
**APRIL 2023**

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**Contract No. SPW 12/2021**

**Shek Wu Hui Effluent Polishing Plant – Main Work**

Monthly Environmental Monitoring & Audit Report

April 2023

(May 2023)

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**EXECUTIVE SUMMARY**

- i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – [April 2023](#) of Shek Wu Hui Effluent Polishing Plant – Main Work under Further Environmental Permit no. FEP-02/474/2013 (Hereafter as “the Project”). This is the [20<sup>th</sup>](#) EM&A report prepared by Environmental Team under Contract No. SPW 12/2021, presenting the environmental monitoring findings and information recorded during the period of [1 April 2023 to 30 April 2023](#). The cut-off date of reporting is at the end of each reporting month.
  
- ii. In the reporting month, the principal work activities of individual contracts are conducted as follows:

Contract No. DC/2018/06 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sludge Treatment Facilities and 132 kV Primary Substation

- [RC works](#)
- [Backfilling](#)
- [Sewage, utility and pipe works](#)
- [ABWF works](#)
- [ELS sheet pipe removal](#)
- [Construction of Outfall at Ng Tung River](#)

Contract No. DC/2018/07 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sewage Treatment Facilities

- [ELS works](#)
- [Sheet piling](#)
- [Excavation](#)
- [RC works](#)
- [Pipe laying](#)

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- [Superstructure works](#)
- [Electrical Installation](#)
- [Pipework Installation](#)
- [MFA and AFA Installation](#)
- [SPR Installation](#)
- [Plumbing installation](#)
- [MVAC Installation](#)
- [EOT and Monorail Installation](#)
- [Bio-Gas Holding tank Installation](#)
- [Penstock and Stoplog Installation](#)

- Delivery and Installation of THP System

Contract No. DE/2018/04 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – E&M Works for Sewage Treatment Facilities

- Improvement Works for Temporary Primary Sludge Thickener and its accessories
- E&M works for Leachate Pre-treatment Plant at existing compressor house.

Air Quality Monitoring

- iii. 1-hour and 24-hour Total Suspended Particulates (TSP) monitoring was conducted at two monitoring station. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 day in the reporting month.
- iv. No action or limit level exceedance was recorded in this reporting period.
- v. Power failure was encountered at AM2a on 10 April 2023, so the 24hr AQM for AM2a was temporarily suspended and has been resumed on 15 April 2023.

Noise Monitoring

- vi. Noise monitoring was conducted at three noise monitoring stations once per week in the reporting month.
- vii. No action or limit level exceedance was recorded in this reporting period.

Ecological Monitoring

- viii. Ecological monitoring conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station). The magnitude of how much above or below 1.5m was subject to tidal conditions of that week as it varied throughout different times of the year. Nonetheless, the high and low tide relative to that week's tidal condition were taken into consideration.
- ix. No Action or Limit level was triggered in the reporting month.

Water Quality Monitoring

- x. Water quality monitoring was conducted at two monitoring stations three days per week in the reporting month.
- xi. Eleven (11) limit level exceedances and one (1) action level exceedance were recorded in the reporting month. After investigation, all recorded exceedances were considered non-project related.

Site Inspections and Audit

- xii. The Environmental Team (ET) conducted weekly site inspections on 4, 11(DE/2018/03 and DE/2018/04), 13(DC/2018/06 and DC/2018/07), 18, 24(DC/2018/06 and DC/2018/07) and 27(DE/2018/03 and DE/2018/04) April 2023 and biweekly landscape inspection on 4 and 18 April 2023. IEC attended the joint site inspection on 24 and 27 April 2023. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

Complaints, Notifications of Summons and Successful Prosecutions

- xiii. No environmental complaint, notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.

Reporting Changes

- xiv. There are no particular reporting changes.

Future Key Issues

- xv. In coming reporting month, the principal work activities of individual contracts are anticipated as follows:

Contract No. DC/2018/06 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sludge Treatment Facilities and 132 kV Primary Substation

- RC works
- Sewage, utility and pipe works
- ABWF works

Contract No. DC/2018/07 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sewage Treatment Facilities

- ELS works
- Sheet piling
- RC works
- Excavation
- Pile laying

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- Superstructure works
- Electrical Installation
- Pipework Installation
- MFA and AFA Installation
- SPR Installation
- Plumbing installation
- MVAC Installation
- EOT and Monorail Installation
- Bio-Gas Holding tank Installation
- Penstock and Stoplog Installation
- Delivery and Installation of THP System

Contract No. DE/2018/04 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –  
E&M Works for Sewage Treatment Facilities

- Improvement works for Temporary Primary Sludge Thickener and its accessories.
- E&M & civil works for Leachate Pre-treatment Plant at existing compressor house and BR No 3&4.
- E&M works at Portion B-7, including DOU No.3A, Emergency Generator House and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical System.
- E&M works at Portion B-4, BR 2A & 2B.
- E&M works at Portion B-2, Inert works.

## 1 Introduction

### 1.1 Scope of the Report

- 1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) No. FEP-02/474/2013 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for North East New Territories New Development Areas (Register No.: AEIAR-175/2013).
- 1.1.2. In accordance with Clause 3.4 stated in FEP-02/474/2013, 3 hard copies and 2 electronic copies of Monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month throughout the entire construction period.
- 1.1.3. According to Section 9.4.1.1 of the Project EM&A Manual, the Monthly EM&A Report should be submitted within 10 working days at the end of each reporting month, with the first report due in the month after construction commences.

### 1.2 Structure of the Report

- Section 1**     **Introduction** – details the scope and structure of the report.
- Section 2**     **Project Background** – summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.
- Section 3**     **Status of Regulatory Compliance** – summarizes the status of valid Environmental Permits / Licenses during the reporting period.
- Section 4**     **Monitoring Requirements** – summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.
- Section 5**     **Monitoring Results** – summarizes the monitoring results obtained in the reporting period.
- Section 6**     **Compliance Audit** – summarizes the auditing of monitoring results, all exceedances environmental parameters.



- Section 7**     **Environmental Site Audit** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.
- Section 8**     ***Complaints, Notification of summons and Prosecution*** – summarizes the cumulative statistics on complaints, notification of summons and prosecution
- Section 9**     ***Conclusion***

## 2 Project Background

### 2.1 Background

2.1.1. The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) has been operating and maintaining for 30 years by the Drainage Services Department (DSD). It provides secondary level treatment to sewage collected from Sheung Shui, Fanling and adjacent areas. SWHSTW was completed in two stages and expanded progressively in the past years. In 1984, Stage I of SWHSTW was commissioned with design capacity of 60,000 cubic meters per day ( $\text{m}^3$  /day) at Average Dry Weather Flow (ADWF). In 2001, Stage II of SWHSTW was completed with design capacity enhanced to 80,000  $\text{m}^3$  /day at ADWF. In 2009, the expansion of SWHSTW was completed and its design capacity was increased to 93,000 $\text{m}^3$  /day at ADWF.

2.1.2. Further expansion of SWHSTW has been planned to be carried out in order to cope with the forecast increase in flow from Fanling North and Kwu Tong North New Development Area (NDA) and other NDAs and developments in three phases, namely Phase 1A, 1B and 2, which are later revised to Main Works Stage 1, Stage 2 and Stage 3 respectively. The EIA study report (Register No.: AEIAR-175/2013) for the NENT NDAs Study covered the assessment for the Further Expansion of SWHSTW, which is a designated project under item F.1 and F.2 of Part 1, Schedule 2 of the EIA Ordinance. The location of the project site is shown in [Figure 2.1](#).

A Further EP was applied on 18 January 2018 to assume the responsibility for constructing and operating the SWHEPP Project up to a capacity of 190,000  $\text{m}^3$ /day. The Further EP No. FEP-02/474/2013 was issued to DSD as permit holder on 15 February 2018. Due to overlapping of scope with the Further EP currently in force, the Further EP No. FEP-01/474/2013 was subsequently surrendered on 15 August 2018.

### 2.2 Project Organization and Contact Personnel

2.2.1 Drainage Service Department (DSD) is the overall project controllers for the Project. For the construction phase of the Project, Engineer's Representative, Contractor(s), Environmental Team and Independent Environmental Checker are appointed to manage and control environmental issues.

2.2.2 The project organization and lines of communication with respect to environmental protection works are shown in [Figure 2.2](#). Key personnel and contact particulars are summarized in [Table 2.1](#).

**Table 2.1 Contact Details of Key Personnel**

Party	Role	Post	Name	Contact No.
Drainage Services Department (DSD)	Permit Holder	Engineer	Mr. Frankie Yeung	2594 7471
AECOM	Supervisor Representative	Resident Engineer	Mr. Alex Leung	3907 6145
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Engineer	Ms. Ruby Hui	6218 6408
		Assistant Environmental Engineer	Mr. Marco Chan	6235 6017
	Contractor (DC/2018/07)	Environmental Engineer	Ms. Tiffany Choi	9789 1027
JEC	Contractor (DE/2018/03)	Environmental Officer	Ms. Juliet Ting	6826 7319
Bestwise	Contractor (DE/2018/04)	Environmental Officer	Mr. Albus Cheung	9731 0831
Meinhardt Infrastructure and Environment Ltd.	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Ms. Claudine Lee	9612 9229
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939

## 2.3 Construction Activities

2.3.1 In the reporting month, the principal work activities conducted of individual contracts are as follow. The layout plans showing the locations of reported construction activities, key PME used for the works contracts and site record photos are shown in [Appendix 2.1](#).

### Contract No. DC/2018/06 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sludge Treatment Facilities and 132 kV Primary Substation

- RC works
- Backfilling
- Sewage, utility and pipe works
- ABWF works
- ELS sheet pipe removal
- Construction of Outfall at Ng Tung River

### Contract No. DC/2018/07 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sewage Treatment Facilities

- ELS works
- Sheet piling
- Excavation
- RC works
- Pile laying

### Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- Superstructure works
- Electrical Installation
- Pipework Installation
- MFA and AFA Installation
- SPR Installation
- Plumbing installation
- MVAC Installation
- EOT and Monorail Installation
- Bio-Gas Holding tank Installation
- Penstock and Stoplog Installation
- Delivery and Installation of THP System

Contract No. DE/2018/04 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – E&M Works for Sewage Treatment Facilities

- Improvement Works for Temporary Primary Sludge Thickener and its accessories
- E&M works for Leachate Pre-treatment Plant at existing compressor house.

2.3.2 The number of key PME and their working locations are shown in **Table 2.2**.

**Table 2.2 Summary of key PME and working locations of works contracts**

Works Contract	Key PME	Number	Working locations
DC/2018/06	Excavator	6	Section 4, SDB, Utility Corridor, Transformer and Switchroom
	Tower Crane	1	Near Workshop No.2
	Mobile generator	1	Near Workshop No.2
	Air Compressor	1	Utility Corridor (Near Gate 1)
	Scissor lift platform	4	SDB and CHP
DC/2018/07	Excavator	13	BR2, Inlet, MFB, PST and SAS
	Generator	3	BR2, MFB, PST and Inlet
	Air compressor	1	Inlet
	Mobile Crane	4	PST, MFB and Inlet
	Handheld breaker	1	Area D
DE/2018/03	Generator	6	UV No.1, Sidestream and Workshop No.2
	Tower Crane	1	Sidestream
DE/2018/04	-	-	-

2.3.3 In coming reporting month, the scheduled construction activities of individual contracts are listed as follows:

Contract No. DC/2018/06 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – Civil Works for Sludge Treatment Facilities and 132 kV Primary Substation

- RC works

- Sewage, utility and pipe works
- ABWF works

Contract No. DC/2018/07 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –  
Civil Works for Sewage Treatment Facilities

- ELS works
- Sheet piling
- RC works
- Excavation
- Pile Laying

Contract No. DE/2018/03 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –  
Sidestream Treatment Facilities and EM&M Works for Sludge Treatment Facilities

- Superstructure works
- Electrical Installation
- Pipework Installation
- MFA and AFA Installation
- SPR Installation
- Plumbing installation
- MVAC Installation
- EOT and Monorail Installation
- Bio-Gas Holding tank Installation
- Penstock and Stoplog Installation
- Delivery and Installation of THP System

Contract No. DE/2018/04 – Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 –  
E&M Works for Sewage Treatment Facilities

- Improvement works for Temporary Primary Sludge Thickener and its accessories.
- E&M & civil works for Leachate Pre-treatment Plant at existing compressor house and BR No 3&4.
- E&M works at Portion B-7, including DOU No.3A, Emergency Generator House and FS & Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant & Booster Pump Room and Temporary Chemical System.
- E&M works at Portion B-4, BR 2A & 2B.
- E&M works at Portion B-2, Inert works.

### 3 Status of Regulatory Compliance

#### 3.1 Status of Environmental Licensing and Permitting under the Project

3.1.1. A summary of the current status on licences and/or permits on environmental protection pertinent to the Project is shown in **Table 3.1 to 3.4**.

**Table 3.1 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DC/2018/06**

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210 (Portion A & C)	23 Sep 2019	N/A	Valid
	449211 (WM1)	23 Sep 2019	N/A	Valid
Water Pollution Ordinance Licence	WT00035431-2019 (Portion C)	27 Jul 2020	31 Jan 2025	Valid
	WT00035718-2020 (Portion A)	02 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035390	11 Oct 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-01	14 Nov 2019	N/A	Valid
Construction Noise Permit	GW-RN0219-23	1 Mar 2023	30 Jun 2023	Valid

**Table 3.2 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DC/2018/07**

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210	23 Sep 2019	N/A	Valid
Water Pollution Ordinance Licence	WT00035727-2020	1 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035985	9 Dec 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-02	6 Jan 2020	N/A	Valid
Special Waste	17144	17 Nov 2022	16 May 2023	Valid
Construction Noise Permit	GW-RN0219-23	1 Mar 2023	30 Jun 2023	Valid

**Table 3.3 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DE/2018/03**

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	455843 (WA3)	6 May 2020	N/A	Valid
	457212 (WA1-B)	15 Jun 2020	N/A	Valid
	460065 (Sidestream)	16 Sep 2020	N/A	Valid
Water Pollution Ordinance Licence	WT00037220-2020	16 Mar 2021	31 Jan 2026	Valid
Billing Account for Disposal of Construction Waste	7035700	6 Nov 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-T3861-01	14 Apr 2020	N/A	Valid
Construction Noise Permit	GW-RN1190-22	8 Dec 2022	7 Apr 2023	Expired
	GW-RN0306-23	24 Mar 2023	4 July 2023	Valid

**Table 3.4 Summary of the current status on licences and/or permits on environmental protection pertinent to the Project under Contract No. DE/2018/04**

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	460181	17 Sep 2020	N/A	Valid
Billing Account for Disposal of Construction Waste	703621912	2 Jan 2020	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-B2592-01	7 Jul 2020	N/A	Valid

3.1.2. Implementation status of the recommended mitigation measures during this report month is presented in [Appendix 3.1](#).



**3.2 Summary of submission status under FEP-02/474/2013**

3.2.1 A summary of the current status on submission under FEP-02/474/2013 is shown in **Table 3.5**.

**Table 3.5 Summary of submission status under FEP-02/474/2013**

EP Condition	Submission	Status
Condition 1.12	Commencement date of construction of the Project	Notified EPD on 8 Oct 2019
Condition 2.3 & 3.1	Updated EM&A Manual	The Manual was confirmed of no further comments by EPD on 17 Jan 2020
Condition 2.4	Management Organization of Main Construction Companies for Contract No.DC/2018/06	Informed EPD on 19 Nov 2019
Condition 2.4	Management Organization of Main Construction Companies for Contract No. DC/2018/07	Informed EPD on 20 Dec 2019
Condition 2.4	Management Organization of Main Construction Companies for Contract No. DE/2018/03	Informed EPD on 19 Feb 2020
Condition 2.4	Management Organization of Main Construction Companies for Contract No. DE/2018/04	Informed EPD on 15 Feb 2020
Condition 2.4	Replacement of Environmental Team Leader	Informed EPD on 13 Sep 2021
Condition 2.4	Replacement of Independent Environmental Checker	Informed EPD on 13 Sep 2021
Condition 2.5	Location Plans for Contract No. DC/2018/06	Deposited to EPD on 19 Nov 2019
Condition 2.5	Location Plans for Contract No. DC/2018/07	Deposited to EPD on 20 Dec 2019
Condition 2.5	Location Plans for Contract No. DE/2018/03	Deposited to EPD on 15 Feb 2020
Condition 2.5	Location Plans for Contract No. DE/2018/04	Deposited to EPD on 18 Sep 2020
Condition 2.6	Submission of Landscape Plan	Pending for revision
Condition 3.3	Baseline Monitoring Report (Ecology)	The Report was first submitted to IEC for review on 22 Nov 2019, and verified on 29 Nov 2019
Condition 3.3	Baseline Monitoring Report	The Report will be submitted to EPD at least 6 weeks before the commencement of corresponding parts of landscape and visual mitigation measures of the Project

**4 Monitoring Requirements**

**4.1 Noise Monitoring**

NOISE MONITORING STATIONS

4.1.1. The noise monitoring stations for the Project are listed and shown in **Table 4.1** and **Figure 4.1**. **Appendix 4.1** shows the established Action/Limit Levels for the monitoring works.

**Table 4.1 Noise Monitoring Station**

Monitoring Station ID	Location
NM1	Wai Loi Tsuen
NM2	Fu Tei Au
NM3	Man Kok Village

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

4.1.2. The monitoring parameters, frequency and duration of noise monitoring are summarized in **Table 4.2**.

**Table 4.2 Noise Monitoring Parameters, Frequency and Duration**

Monitoring Period	Duration	Sampling Parameter	Sampling Period <sup>(1)</sup>	Frequency
Impact Monitoring	Throughout the construction phase	1 set of Leq (30 min)	between 0700-1900 hours on normal weekdays;	on a per week basis when noise generating activities are underway

Remark (1): Additional weekly impact monitoring shall be carried out during evening and night-time works if construction works are extended to include works during the hours of 1900-0700

MONITORING EQUIPMENT

4.1.3. Noise monitoring was performed using sound level meter at the designated monitoring locations. The sound level meters shall comply with the International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator shall be deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment is given in **Table 4.3**.

**Table 4.3 Noise Monitoring Equipment**

Equipment	Brand and Model	Series Number	Expiry Date
Integrated Sound Level Meter	Nti XL2	A2A-15269-EO	9-Mar-2024
	Larson Davis LxT1	0004797	4-Nov-2023
Acoustic Calibrator	LD CAL200	13437	04-Nov-2023

4.1.4. The calibration certificates of the noise monitoring equipment are attached in [Appendix 4.2](#).

#### SAMPLING PROCEDURE AND MONITORING EQUIPMENT

##### 4.1.5. Monitoring Procedure

- (a) Noise measurements shall not be made in fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s. The wind speed shall be checked with a portable wind speed meter capable of measuring the wind speed in m/s
- (b) The monitoring station shall normally be at a point 1 m from the exterior of the sensitive receiver building facade and be at a position 1.2 m above the ground. If there is problem with access to the normal monitoring position, an alternative position may be chosen, and a correction to the measurements shall be made. For reference, a correction of +3 dB(A) shall be made to the free field measurements.
- (c) The battery condition was checked to ensure the correct functioning of the meter.
- (d) Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - Frequency weighting: A
  - Time weighting: Fast
  - Time measurement: Leq (30min) for noise monitoring
- (e) Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
- (f) The wind speed was checked with the portable wind meter before noise monitoring.
- (g) At the end of the monitoring period, the Leq, L90 and L10 were recorded. In addition, site conditions and noise sources were recorded on a record sheet.

##### 4.1.6. Maintenance and Calibration

- (a) The microphone head of the sound level and calibrator would be cleaned with soft cloth regularly.
- (b) The noise monitoring equipment shall be calibrated annually.

CONSTRUCTION NOISE LEVEL

4.1.7. The construction noise level refers the corrected noise level based on the calculated difference between SPL of the Measured Noise Level and the SPL of the Baseline Noise Level. In the event of the Baseline Noise Level exceeds the Measured Noise Level, no correction would be applied and the Construction Noise Level would be indicated as below baseline noise level (<BL).

EVENT AND ACTION PLAN

4.1.8. Noise Standards for Daytime Construction Activities are specified under EIAO-TM. The Action and Limit levels for construction noise are defined in **Table 4.4** and [Appendix 4.1](#). Should non-compliance of the criteria occurs, action in accordance with the Event and Action Plan in [Appendix 6.1](#) shall be carried out.

**Table 4.4 Action and Limit Level for Noise Monitoring**

Time Period	Action Level	Limit Level
0700-1900 hrs on normal weekdays	When one documented complaint is received	75 dB

**4.2 Air Monitoring**

AIR QUALITY MONITORING STATIONS

4.2.1. The air monitoring stations for the Project are listed and shown in **Table 4.5** and [Figure 4.2](#).

**Table 4.5 Air Monitoring Station**

Monitoring Station ID	Location	Measurement
AM1	House No. 15, Wai Loi Tsuen	1-hour TSP
AM2	Fu Tei Au	1-hour TSP
AM1a* <sup>(1)</sup>	Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW	24-hour TSP
AM2a	Site boundary of the Shek Wu Hui STW (North)	24-hour TSP

(1) Due to close proximity to construction works and heavy machines, presence of physical barrier and safety concerns, find adjustment for the location of AM1a was proposed in accordance to Section 2.2.4.6 of the EM&A Manual. It was adjusted from the ground level near the control room of SWHSTW to the roof floor of that control room. The proposal has sought approval from ER and IEC, and agreement from EPD in May 2022.

AIR MONITORING PARAMETERS, FREQUENCY AND DURATION

4.2.2. 24-hour TSP shall be sampled at least once in every 6 days, while sampling for 1-hour TSP shall be at least 3 times in every 6 days when the highest dust impact takes place.

4.2.3. One-hour and 24-hour TSP levels should be measured to indicate the impacts of construction dust on air quality.

SAMPLING PROCEDURE AND MONITORING EQUIPMENT

4.2.4. 24-hour TSP Measuring Installation (HVS)

- (a) 0.6 – 1.7 m<sup>3</sup> per minute adjustable flow range
- (b) Equipped with a timing / control device with +/- 5 minutes accuracy for 24 hours operation;
- (c) Installed with elapsed-time meter with +/- 2 minutes accuracy for 24 hours operation;
- (d) Capable of providing a minimum exposed area of 406 cm<sup>2</sup>;
- (e) Flow control accuracy: +/- 2.5% deviation over 24-hour sampling period;
- (f) Equipped with a shelter to protect the filter and sampler;
- (g) Incorporated with an electronic mass flow rate controller or other equivalent devices;
- (h) Equipped with a flow recorder for continuous monitoring;
- (i) Provided with a peaked roof inlet;
- (j) Incorporated with a manometer;
- (k) Able to hold and seal the filter paper to the sampler housing at horizontal position;

- (l) Easily changeable filter; and
- (m) Capable of operating continuously for a 24-hour period

Initial calibration of dust monitoring equipment shall be conducted upon installation and thereafter at bi-monthly intervals. The transfer standard shall be traceable to the internationally recognized primary standard and be calibrated annually. All the data should be converted into standard temperature and pressure condition.

#### 24-hour Measuring Procedures

- (a) Check the power supply to ensure the sampler works properly.
- (b) Remove the filter hold down by loosening the four nuts and carefully centre a new filter, with stamped number upward, on a supporting screen.
- (c) Properly align the filter on the screen so that the gasket will form an airtight seal on the outer edges of the filter.
- (d) Fasten the filter hold down frame to the filter holder with swing bolts. The pressure applied should be sufficient to avoid air leakage at the edges.
- (e) Close shelter lid and secure catch with the aluminum strip.
- (f) Record the flow indicator reading and determine the sampler flow rate. If it is outside the acceptable range, adjust the sampler flow rate.
- (g) Set the programmable timer and record the starting sampling time, weather condition and the filter identification number.
- (h) At the end of sampling, the filter was transferred from the filter holder of the HVS to a filter bag and sent to the accredited laboratory for weighing. The elapsed time was also recorded.

#### 4.2.5. 1-hour Measuring Procedures

Portable dust meter will be proposed and sufficient information will be submitted to IC (E) to prove that the instrument is capable of achieving a comparable result as that of the HVS and used for 1-hour sampling

- (a) Slide the power switch to turn the power on
- (b) Select the period of measurement to 60mins
- (c) Check and set the correct time
- (d) Select the appropriate unit display for the equipment
- (e) Collected the sampled data for analysis

The portable dust meter is calibrated at 2-years interval and checked with HVS yearly to determine the accuracy and validity of the results measured. The checking of portable dust meter will be carried out in order to determine the conversion factor between the portable dust meter and the standard equipment, HVS.

The calibration check is to be considered valid if the calculated correlation coefficient is >0.90.

4.2.6. Maintenance and Calibration

- (a) The direct reading dust meter was calibrated at 2-years interval and checked with High Volume Sampler (HVS) yearly to determine the accuracy and validity of the results measured.
- (b) Checking of direct reading dust meter will be carried out in order to determine the conversion factor between the direct reading dust meter and the standard equipment, HVS. The comparison check is to be considered valid based on correlation coefficient checked by HOKLAS laboratory

4.2.7. Laboratory measurement / analysis

- (a) A clean laboratory with constant temperature and humidity control, and equipped with necessary measuring and conditioning instruments to handle the dust samples collected, shall be available for sample analysis, and equipment calibration and maintenance. The laboratory should be HOKLAS accredited.
- (b) Filter paper of size 8” x 10” shall be labelled before sampling. It shall be a clean filter paper with no pinholes, and shall be conditioned in a humidity-controlled chamber for over 24 hours and be pre-weighed before use for the sampling.
- (c) After sampling, the filter paper loaded with dust shall be kept in a clean and tightly sealed plastic bag. The filter paper shall then be returned to the laboratory for reconditioning in the humidity-controlled chamber followed by accurate weighing by an electronic balance with readout down to 0.1 mg. The balance shall be regularly calibrated against a traceable standard.

4.2.8. High Volume Sampler (HVS – Model TE-5025A) completed with the appropriate sampling inlets were installed for the 24-hour TSP sampling. 1-hour TSP air quality monitoring was performed by using portable direct reading dust meters at each designated monitoring station. The brand and model of the equipment are given in **Table 4.6**.

**Table 4.6 Air Quality Monitoring Equipment**

Equipment	Brand and model	Series Number	Expiry Date
Portable direct reading dust meter	Met One BT- 645 / Met One AEROCET831	C15622 Y23153	3-Feb-2024
Calibration Kit	Tisch Environmental (Calibration Model: TE-5025A)	3880	28-Jun-2023

High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model no. G3101)	2036 & 774	7-May-2023
Wind Anemometer	YGY-FSXY1	YG 21071630T0924	22-Sep-2023

4.2.9. The calibration certificates of the air quality monitoring equipment are attached in [Appendix 4.2](#).

WIND DATA

4.2.10. Wind data monitoring equipment was set up at roof floor (about 4/F) of the SWHSTW control room for logging wind speed and wind direction such that the wind sensors were clear of obstructions or turbulence caused by building. The wind data monitoring equipment was re-calibrated at least once every six months and the wind directions were divided into 16 sections of 22.5 degrees each. The wind data obtained from the on-site wind station during the reporting period is provided in [Appendix 4.3](#).

EVENT AND ACTION PLAN

4.2.11. The Action and Limit Levels for construction air quality are defined in **Table 4.7** and [Appendix 4.1](#). Should non-compliance of the air quality criteria occur, action in accordance with the Event and Action Plan in Appendix 6.1 shall be carried out.

**Table 4.7 Action and Limit Level for Air Quality Monitoring**

Parameter	Monitoring Station	Action Level (µgm-3)	Limit Level (µgm-3)
24-hour TSP Level	Site boundary of the Shek Wu Hui STW (East), Root Floor	189	260.0
	Site boundary of the Shek Wu Hui STW (North)	187	
1-hour TSP Level	House No. 15, Wai Loi Tsuen	320	500.0
	Fu Tei Au	322	



**4.3 Ecological Monitoring**

- 4.3.1. According to the Updated EM&A Manual, weekly transect at both high and low tides shall be undertaken to identify and enumerate all bird species utilising the river channels and identify any sources of actual or potential disturbance to birds due to construction activities throughout the construction period. [Appendix 4.1](#) shows the established Action/Limit Levels for ecological monitoring works.
- 4.3.2. The monitoring should be conducted by the ET and supervised by a qualified ecologist who will be a member of the ET.

MONITORING LOCATIONS

- 4.3.3. Transect and point count surveys were proposed within the 500m boundary of Ng Tung River, Sheung Yue River and Shek Sheung River of the assessment area. Three transects and seven-point count locations during high and low tides were applied. These locations are shown in [Figure 4.3](#) and summarized in [Table 4.8](#) The photo of each transect is provided in [Appendix 5.5](#).

**Table 4.8 Ecological Monitoring Stations**

Monitoring Stations	Descriptions	Influenced by Tidal Action
Transect T1	Along Ng Tung River	No
Point Count Location P1		
Point Count Location P2		
Transect T2		Yes
Point Count Location P3		
Point Count Location P4		
Point Count Location P5	At Shek Sheung River (Low-flow Channel)	No
Transect T3	Along Shek Sheung River & Sheung Yue River	Yes
Point Count Location P6	At Shek Sheung River	Yes

Point Count Location P7	At Intersection between Sheung Yue River and Shek Sheung River	Yes
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MONITORING PARAMETERS, FREQUENCY AND DURATION

4.3.4. Monitoring surveys were conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station). The magnitude of how much above or below 1.5m was subject to tidal conditions of that week as it varied throughout different times of the year. Nonetheless, the high and low tide relative to that week’s tidal condition were taken into consideration. The ecological monitoring schedule is shown in [Appendix 5.1](#).

MONITORING METHODOLOGY

4.3.5. Transect survey was undertaken along the concerned rivers (Ng Tung River, Sheung Yue River and Shek Sheung River) adjacent to proposed construction activities. As the sensitive receivers (large waterbirds) are easily visible and the surveyor has used auxiliary equipment such as camera(s) and binoculars (magnification 7-10x). The transect route only follows one bank of these rivers.

4.3.6. At point count locations, surveyors identified and recorded bird species which were seen or heard along the river channel. For each point count, surveyors quantitatively recorded all species seen and heard for the duration of five minutes up to the distance where birds were still detectable. All avifauna along the walk transect were recorded. Noticeable behaviours (e.g. breeding behaviours such as nesting and presence of recently fledged juveniles, roosting and feeding activities, etc.) were recorded as well.

4.3.7. Ornithological nomenclature used in report should follow *The Avifauna of Hong Kong (Carey et al. (2001))*, *The Birds of Hong Kong and South China (Viney et al. (2005))* and the most recent updated list from other sources (e.g. Hong Kong Bird Watching Society).

4.3.8. Weather conditions, tidal information at the time of the survey and other noticeable activities occurring within or in the vicinity of the survey areas (e.g. ongoing routine drainage channel maintenance works and other human activities that could create disturbances to birds) were recorded.

ANALYTICAL METHODOLOGY

4.3.9. The number and species of waterbirds utilizing the rivers fluctuate every day naturally. Therefore, the survey data were collectively analyzed on a monthly basis to increase the sample size and to reduce random error on one survey day. Since occurrence of waterbirds has distinctive seasonal pattern, the construction phase data for all waterbirds and

representative waterbirds were compared with the baseline data for the respective month and season. The representatives of waterbirds are listed in **Table 4.9**.

**Table 4.9 Representative Waterbirds**

Species Name	Common Name	Chinese Name
<i>Egretta garzetta</i>	Little Egret	小白鷺
<i>Ardea cinerea</i>	Grey Heron	蒼鷺
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿
<i>Ardea alba</i>	Great Egret	大白鷺
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺

4.3.10. When a decline in abundance of all or representative waterbird is identified, one-tailed Student t-test was adopted to statistically analyse whether the drop is significant. If the collected data for the reporting month fails to show no significant difference from that in the baseline phase at 95% confidence level, the action level will be triggered. Likewise, the limit level is set at 99% confidence level.

4.3.11. In addition, if important behaviours such as breeding, brooding, nesting and presence of recently fledged juveniles of species of conservation importance are observed, the Resident Engineer, Contractor and IEC should be notified immediately after the survey. The Contractor should review current construction programme and minimize disturbance due to construction activities

**4.4 Water Quality Monitoring**

WATER QUALITY MONITORING STATIONS

4.4.1. Water quality monitoring was undertaken at 2 monitoring stations in the reporting month. The proposed water quality monitoring stations of the Project are shown in **Table 4.10** and [Figure 4.4](#).

**Table 4.10 Water Quality Stations for Water Quality Monitoring**

Stations	Description
M1	Impact Station, downstream of the proposed outfall
C1	Control Station, upstream of the proposed outfall

WATER QUALITY PARAMETERS, FREQUENCY AND DURATION

- 4.4.2. The levels of dissolved oxygen (DO), salinity, temperature, turbidity and pH shall be measured in situ while suspended solids (SS) is determined by laboratory analysis at all the designated monitoring stations.
- 4.4.3. In association with the water quality parameters, other relevant data shall also be recorded, such as monitoring location / position, time, DO saturation, weather conditions, and any special phenomena underway near the monitoring station.
- 4.4.4. During the course of the construction works at the outfall at Ng Tung River, impact monitoring shall be undertaken three days per week, with sampling/measurement at the monitoring stations. The ET should carry out spot check to ensure that the Contractor has undertaken all recommended control measures to prevent direct contact of pollutants with rainwater or runoff, and measures to abate contaminants in the stormwater runoff.
- 4.4.5. The interval between two sets of monitoring should not be less than 36 hours except where there are exceedances of Action and/or Limit Levels, in which case the monitoring frequency will be increased.
- 4.4.6. Replicate in-situ measurements should be carried out in each sampling event.

SAMPLING PROCEDURES AND MONITORING EQUIPMENT

Dissolved Oxygen and Temperature Measuring Equipment

- 4.4.7. The instrument should be a portable, weatherproof dissolved oxygen measuring instrument complete with cable, sensor, comprehensive operation manuals, and use a DC power source. It should be capable of measuring:
  - a dissolved oxygen level in the range of 0-20 mg/l and 0-200% saturation
  - a temperature of 0-45 degree Celsius

- 4.4.8. It should have a membrane electrode with automatic temperature compensation complete with a cable. Sufficient stocks of spare electrodes and cables should be available for replacement where necessary. (e.g. YSI model 59 meter, YSI 5739 probe, YSI 5795A submersible stirrer with reel and cable or an approved similar instrument).
- 4.4.9. Should salinity compensation not be build-in in the DO equipment, in-situ salinity shall be measured to calibrate the DO equipment prior to each DO measurement.

#### Turbidity Measurement Instrument

- 4.4.10. The instrument should be a portable, weatherproof turbidity-measuring instrument complete with comprehensive operation manual. The equipment should use a DC power source. It should have a photoelectric sensor capable of measuring turbidity between 0-1000 NTU and be complete with a cable (e.g. Hach model 2100P or an approved similar instrument).

#### Sampler

- 4.4.11. Due to low water level as mentioned in Section 6.4.3 of the EIA report, bucket sampler (Approximate 1L) will be use instead of water sampler in order to obtain surface water sample without disturb the stream sediment and collect representative results.

#### Salinity

- 4.4.12. A portable salinometer capable of measuring salinity in the range of 0-70 ppt shall be provided for measuring salinity of the water at each of monitoring location.

### MONITORING METHODOLOGY

#### 4.4.13. Monitoring Procedure

- (a) The condition near the monitoring stations shall be observed and recorded on the data log sheet.
- (b) Check of sensors and electrodes with certified standard solutions before each use.
- (c) Wet bulb calibration for a DO meter should be carried out before measurement.
- (d) Sample would be taken using bucket sampler at surface level.
- (e) Transfer the sampled water carefully into cleaned water bottles (2x 1000ml) provided by the laboratory at the spot after the collection of the water sample for the subsequent laboratory Suspended Solid testing.
- (f) Transfer the sampled water from the bucket sampler to the rinsed water container for in-situ measurement (In case of the in-situ measurement cannot be carried at spot due to safety and adverse weather condition, sampled water from the bucket sampler will be transfer to cleaned water bottles provided by laboratory. Then, In-situ measurement will be conducted at a safe location which sampled water inside cleaned water bottle will be transfer to the rinsed water container for in-situ measurement) In-situ measurement shall be measured in duplicate.

- (g) Parameters including Water Temperature (°C), pH (units), Salinity (ppt), DO (mg/L), DO saturation (%) will be measured by the Multifunctional Meter and Turbidity (NTU) will be measured by turbid meter. (Water Temperature and Salinity will be measured as reference parameters)
- (h) Record the result on the data log sheet and record any special finding during / after in-situ measurement.
- (i) The water sample bottles will be stored in a cool box (at cooled to 4°C without being frozen), which shall be delivered to HOKLAS laboratory (ALS Technichem (HK) Pty Ltd) for further testing to determine the level of SS.

4.4.14. Maintenance and Calibration

- (a) The responses of sensors and electrodes of the water quality monitoring equipment were cleaned and checked at regular intervals.
- (b) DO meter (Multifunctional Meter) and turbid meter was certified by a laboratory accredited under HOKLAS or any other international accreditation scheme, and subsequently re-calibrated at three monthly intervals.

4.4.15. Brand and model of the equipment are given in **Table 4.11**.

**Table 4.11 Water Quality Monitoring Equipment**

Equipment	Brand and model	Series Number	Expiry Date
Multifunctional Meter	YSI Professional Plus	19H100656 / 14E101065	8-May-2023
Turbidimeter	Xin Rui WGZ-3B	1807073	10-Jun-2023

4.4.16. The calibration certificates of the water quality monitoring equipment are attached in [Appendix 4.2](#).

LABORATORY MEASUREMENT / ANALYSIS

4.4.17. Analysis of suspended solids has been carried out in a HOKLAS accredited laboratory, which is ALS Technichem (HK) Pty Ltd.

EVENT AND ACTION PLAN

4.4.18. The Action and Limit levels for water quality are defined in **Table 4.12**. Should the monitoring results of the water quality parameters at impact station exceed the water quality criteria, action in accordance with the Event and Action Plan in [Appendix 6.1](#) shall be carried out.

**Table 4.12 Action and Limit Level for Water Quality Monitoring**

Parameter (Unit)	Depth	Action Level	Limit Level
DO (mg/L)	Depth-average	<b>≤ 7.8 mg/L</b>	<b>≤ 7.7 mg/L</b>
Turbidity (NTU)	Depth-average	<b>≥ 14.6 NTU</b> or 120% of upstream control station's Turbidity at the same tide of the same day	<b>≥ 15.6 NTU</b> or 130% of upstream control station's Turbidity at the same tide of the same day
SS (mg/L)	Depth-average	<b>≥ 18.8 mg/L</b> or 120% of upstream control station's SS at the same tide of the same day	<b>≥ 19.5 mg/L</b> or 130% of upstream control station's SS at the same tide of the same day

## 5 Monitoring Results

- 5.0.1 The environmental monitoring will be implemented based on the division of works areas of each designed projects. Overall layout showing work areas and monitoring stations is shown in [Figure 2.1](#) and [Figure 4.1 – 4.4](#) respectively.
- 5.0.2 The environmental monitoring schedules for reporting month and coming month are presented in [Appendix 5.1](#).

### 5.1 Noise Monitoring Results

- 5.1.1 Noise monitoring results measured in this reporting period are reviewed and summarized. Details of noise monitoring results and graphical presentation are shown in **Table 5.1** and [Appendix 5.2](#).

**Table 5.1 Summary Table of Noise Monitoring Results**

Monitoring Location	Range, Leq (30min) dB(A)	Limit Level
NM1	55.7 – 61.4	75 dB
NM2	55.9 – 70.0	
NM3	61.3 – 64.1	

Remark: +3dB(A) façade correction included

- 5.1.2 No action or limit level exceedance was recorded in this reporting month.
- 5.1.3 According to our field observations, the major noise source identified were nearby road traffic and human activities.
- 5.1.4 The noise monitoring result measured in reporting month was similar to previous months. The noise monitoring result was slightly varied in the reporting month, and no increasing trend was identified due to the construction works conducted in the reporting month. No correlation between the project's construction work and the monitoring data was identified.



**5.2 Air Quality Monitoring Results**

5.2.1 Air quality monitoring results measured in this reporting period are reviewed and summarized. Details of air monitoring results and graphical presentation can be referred in **Table 5.2**, **Table 5.3** and [Appendix 5.3](#).

**Table 5.2 Summary Table of 1-hour TSP Monitoring Results**

Monitoring Station	Concentration (µg/m <sup>3</sup> )		Action Level, (µg/m <sup>3</sup> )	Limit Level, (µg/m <sup>3</sup> )
	Average	Range		
AM1	32	17 – 50	320	500
AM2	28	17 – 40	322	500

**Table 5.3 Summary Table of 24-hour TSP Monitoring Results**

Monitoring Station	Concentration (µg/m <sup>3</sup> )		Action Level, (µg/m <sup>3</sup> )	Limit Level, (µg/m <sup>3</sup> )
	Average	Range		
AM1a*	47	30 - 78	189	500
AM2a	56	32 - 76	187	500

- 5.2.2 Power failure was encountered at AM2a on 10 April 2023, so the 24hr AQM for AM2a was temporarily suspended and has been resumed on 15 April 2023.
- 5.2.3 No action or limit level exceedance was recorded in this reporting period.
- 5.2.4 According to our field observations, the major dust source identified were nearby road traffic.
- 5.2.5 The air quality monitoring result measured in reporting month was similar to previous months. The air quality monitoring result was slightly varied in the reporting month, and no increasing trend was identified due to the construction works conducted in the reporting month. No correlation between the project’s construction work and the monitoring data was identified.

5.3 Ecology Monitoring Results

5.3.1 For this reporting month, the numbers of species and individuals recorded were provided in **Table 5.4** and the abundance of representative species were shown in **Table 5.5**.

**Table 5.4 Total Bird Species and Abundance in the Reporting Month**

	Number of Species	Abundance
All Avifauna	38	1249
Waterbirds	13	206

**Table 5.5 Abundance of Representative Waterbirds in the Reporting Month**

Species Name	Common Name	Chinese Name	Abundance
<i>Egretta garzetta</i>	Little Egret	小白鷺	82
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	7
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	41
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	2
<i>Ardea alba</i>	Great Egret	大白鷺	8
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	27
<b>Total</b>			<b>167</b>

Ecological Analysis

5.3.2 The result of student t-tests for all waterbirds and representative waterbirds are compiled in **Table 5.6** and **Table 5.7** respectively. Further details are provided in **Appendix 5.4**.

**Table 5.6 T-test Result for All Waterbirds in the Reporting Month**

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
Abundance	Monthly	0.244	✓	✓
	Seasonal	0.529	✓	✓

Remarks:

- ✓ = T-value falls within the confidence level; the impact monitoring data shows no significant difference to the baseline data.
- ✗ = T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

**Table 5.7 T-test Result for Representative Waterbirds in the Reporting Month**

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall**
	Monthly	95% (-2.353)	99% (-4.541)	Seasonal	95% (-2.353)	99% (-4.541)	
Little Egret	-0.095	✓	✓	0.095	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-1.230	✓	✓	-1.885	✓	✓	✓
Great Cormorant	NA*						
Great Egret	-1.754	✓	✓	-1.754	✓	✓	✓
Eastern Cattle Egret	-0.130	✓	✓	1.950	✓	✓	✓

Remarks:

✓ = T-value falls within the confidence level; the impact monitoring data shows no significant difference to the baseline data.

✗ = T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

\* Great Cormorant (*Phalacrocorax carbo*) and Grey Heron (*Ardea cinerea*) were not recognised as representative waterbird species during wet season.

\*\*According to section 7.2 of the approved ecological baseline report, action/Limit level shall be triggered if reduction in bird abundance is found in both the respective month and season.

- 5.3.3 No Action Level and Limit Level was triggered for ecological monitoring in the reporting month.
- 5.3.4 Site observation in the reporting month shows that construction activities are similar to previous months. The photos are provided in [Appendix 5.5](#).
- 5.3.5 In recent months, it is found that there are different construction sites for example construction of footbridge, excavation and sheet-piling, and human activities including cycling, fishing and landscape planting around the project site. The photos are provided in [Appendix 5.5](#). These construction and human activities may affect activities of the waterbird. Although, there is no significant impact reduction in number of waterbirds, but it is recommended that construction site should continue keeping the good site practice to minimize disturbance caused to waterbirds.
- 5.3.6 Nesting and breeding behaviours were observed during the monitoring in reporting month. There was at least two nests observed along transects. Although the location of the nest is quite near to the project site but there was no significant impact observed on the nest in the month reported.

Observations

5.3.7 Waterbird behaviour observed during ecological monitoring are listed below:

- Flying
- Foraging
- Soraing
- Resting
- Breeding

5.3.8 The anthropogenic activities observed during ecological monitoring are listed in **Table 5.8**.

**Table 5.8 Observations during Ecological Monitoring in the Reporting Month**

Location(s)	Observations	
	Project Related	Non-project Related
<b>T1 (PC1, PC2)</b>	N/A	Human Activities such as Cycling, and Fishing  Construction activities such as footbridge construction, excavation, and breaking works
<b>T2 (PC3, PC4)</b>	Construction activities such as generator & welding works, Scaffolding, sedimentation tank, Excavation and crane	Human Activities such as Fishing, Cycling, and Landscape Planting  Construction activities such as Sheet-piling, generator & welding works, Scaffolding, sedimentation tank, Excavation, crane and breaking works
<b>PC5</b>	Construction activities such as Excavation and crane	N/A
<b>T3 (PC6, PC7)</b>	Construction activities such as Sheet-piling	Human Activities such as Cycling and Fishing  Construction activities such as Excavation, Sheet-piling, generator & welding works, Scaffolding, lifting works

**5.4 Water Quality Monitoring Results**

5.4.1 Water quality monitoring results measured in this reporting period are reviewed and summarized. Details of water monitoring results and graphical presentation can be referred in **Table 5.9** and [Appendix 5.7](#). The laboratory analysis results can be referred in [Appendix 5.8](#).

**Table 5.9 Summary Table of Water Quality Monitoring Results**

Parameter	M1		C1		Action Level, (µg/m3)	Limit Level, (µg/m3)
	Range	Average	Range	Average		
DO (mg/L)	3.9 – 9.2	7.5	7.9 – 10.4	8.8	≤ 7.8 mg/L	≤ 7.7 mg/L
Turbidity (NTU)	3.4 – 26.4	11.4	3.6 – 26.4	11.3	≥ 14.6 NTU or When M1 ≥ 120% of C1	≥ 15.6 NTU or When M1 ≥ 130% of C1
SS (mg/L)	5.2 – 24.5	11.3	4.4 – 24.7	10.0	≥ 18.8 mg/L or When M1 ≥ 120% of C1	≥ 19.5 mg/L or When M1 ≥ 130% of C1

5.4.2 Eleven (11) limit level exceedances and one (1) action level exceedance were recorded in the reporting month. **Table 5.10** shown all exceedances recorded in the reporting month.

**Table 5.10 Summary Table of Exceedance**

Date	Action Level (AL) / Limit Level (LL) Exceedance			Construction Works at Outfall (extracted from Site Diary of ER)
	DO	Turbidity	SS	
3 Apr 2023	-	LL	LL	No activity
6 Apr 2023	-	-	LL	No activity
11 Apr 2023	-	-	LL	1. Erecting formwork to staircase beside outfall
13 Apr 2023	LL	-	-	1. Pouring concrete to staircase beside outfall
15 Apr 2023	LL	-	-	No activity
17 Apr 2023	LL	-	-	No activity
19 Apr 2023	-	LL	LL	1. Erecting formwork to staircase and slab
21 Apr 2023	AL	-	-	No activity
24 Apr 2023	-	LL	LL	1. Erecting formwork and placing steel mesh for U-channel reinstatement
26 Apr 2023	-	-	-	1. Striking formwork for U-channel reinstatement
28 Apr 2023	-	-	-	No activity

5.4.3 After the exceedances were recorded, the ET had taken the action required in the Event and Action Plan, the taken actions are mentioned in [Appendix 6.2](#). The investigation result was provided in the following sections.

- 5.4.4 According to the Project Layout, no physical works from the project were expected to interface with the nearby watercourse (Ng Tung River), except for the construction of the outfall. In fact, according to Section 5.3.5.4 of the Updated EM&A Manual, only during the course of the construction works at the outfall at Ng Tung River, impact water quality monitoring shall be undertaken. The Project Layout and the location of the constructed outfall are shown in [Figure 2.1](#).
- 5.4.5 ET conducted site investigations after the record of each exceedance. No other works under the Project except for the outfall construction were identified to interface with the Ng Tung River. The photo record of the site boundary next to the Ng Tung River taken at each water quality monitoring were annexed in [Appendix 5.10b](#).
- 5.4.6 Considered only construction works for Outfall may affect the water quality of Ng Tung River, so the investigation should be focused on on-site practice and implementation of mitigation measures for outfall work instead of the entire Project area.
- 5.4.7 According to the site diary from ER and ET's photo record, the main construction works (excavation and sheet piling) for the outfall were completed in December 2022. No excavation or sheet piling work was conducted in April 2023. The site diary shows that the main construction work for the outfall conducted in April 2023 is formwork erection. The site diary from ER and the photo record taken by the ET for the outfall were annexed in [Appendix 5.10a](#) and [Appendix 5.10b](#) respectively.
- 5.4.8 After reviewing the site diary for Outfall and the photo recorded taken during the water quality monitoring process, considering the main construction work for the outfall in this reporting month is formwork erection, which took place well above the water level, and water mitigation measures (provision of concrete blocks and plastic barriers) have been implemented by the Contractor, there was no evidence showing the exceedance recorded in April 2023 were related to the Project's work, so the exceedances recorded in the reporting month should be considered as non-project related.
- 5.4.9 A trend plot of the ambient temperature in comparison with the DO levels was conducted by the ET. The trend plot showed that higher ambient temperatures recorded during the water quality monitoring process, the lower DO levels would be measured. According to the result of the trend plot, the low DO levels measured during WQM might be caused by the high ambient temperature. The trend plot of ambient temperature in comparison with the DO levels was annexed in [Appendix 5.7](#).

**5.5 Waste Management**

5.5.1 The quantities of waste for disposal in the Reporting Period are summarized in **Table 5.11** to **5.14**. The Monthly Summary Waste Flow Table is shown in [Appendix 5.9](#). Whenever possible, materials were reused on-site as far as practicable.

**Table 5.11 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/06**

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Hard Rock and Large Broken Concrete (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m <sup>3</sup> )	2.528	1.633	5.984
Metals (in '000kg)	0.000	0.000	0.000
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.000
Plastics (in '000kg)	0.000	0.000	0.000
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m <sup>3</sup> )	0.090	0.083	0.313

**Table 5.12 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DC/2018/07**

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Hard Rock and Large Broken Concrete (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Reused in this Contract (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m <sup>3</sup> )	0.341	0.213	13.464
Metals (in '000kg)	0.000	0.000	0.000
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.000
Plastics (in '000kg)	0.000	0.000	0.000
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m <sup>3</sup> )	0.074	0.047	0.215

**Table 5.13 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/03**

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000kg)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000kg)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000kg)	0.000	0.000	0.000
Metals (in '000kg)	0.000	4.810	4.810



Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Paper / Cardboard Packing (in '000kg)	0.155	0.000	0.285
Plastics (in '000kg)	0.010	0.000	0.01
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000kg )	18.310	12.62	58.77

**Table 5.14 Summary of Quantities of Inert C&D Materials and C&D Wastes for Contract No. DE/2018/04**

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000kg)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m <sup>3</sup> )	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m <sup>3</sup> )	0.000	0.000	7.260
Metals (in '000kg)	0.000	24.400	24.400
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.000
Plastics (in '000kg)	0.000	0.000	0.000
Chemical Wastes (in '000kg)	0.000	0.800	0.800
General Refuses (in '000kg)	0.000	0.000	1.970

## 6 Compliance Audit

6.0.1 The Event Action Plan for construction noise, air quality and ecological monitoring are presented in [Appendix 6.1](#).

6.0.2 The summary of exceedance is presented in [Appendix 6.2](#).

### 6.1 Noise Monitoring

6.1.1 No action or limit level exceedance was recorded in this reporting period.

### 6.2 Air Quality Monitoring

6.2.1 No action or limit level exceedance was recorded in this reporting period.

6.2.2 Power failure was encountered at AM2a on 10 April 2023, so the 24hr AQM for AM2a was temporarily suspended and has been resumed on 15 April 2023.

### 6.3 Ecological Monitoring

6.3.1 No action Level or Limit level was triggered for ecological monitoring in the reporting month.

### 6.4 Water Quality Monitoring

6.4.1 Eleven (11) limit level exceedances and one (1) action level exceedance were recorded in the reporting month.

6.4.2 Investigation for the exceedances recorded in the reporting month was conducted, after investigation all recorded exceedances were considered non-project related.

6.4.3 The details of investigation results can be referred to Section 5.4. The follow-up action for recorded exceedances can be referred to [Appendix 6.2](#).

### 6.5 Review of the Reasons for and the Implications of Non-compliance

6.5.1 No environmental non-compliance was recorded in the reporting month

### 6.6 Summary of action taken in the event of and follow-up on non-compliance

6.6.1 There was no particular action taken since no non-compliance was recorded in the reporting period.

**7 Environmental Site Audit**

7.1.1. Within this reporting month, weekly environmental site audits were conducted on 4, 11(DE/2018/03 and DE/2018/04), 13(DC/2018/06 and DC/2018/07), 18, 24(DC/2018/06 and DC/2018/07) and 27(DE/2018/03 and DE/2018/04) April 2023 and biweekly landscape inspection on 4 and 18 April 2023. IEC attended the joint site inspection on 24 and 27 April 2023.

7.1.2. No non-compliance was found during the environmental site inspection while reminders on environmental measures were recommended. Results and findings of these inspections in this reporting month are listed below in **Table 7.1 to 7.4**.

**Table 7.1 Summary of Environmental Inspections of Contract No. DC/2018/06**

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20230413_1	13-Apr-2023	Contractor was reminded to review the wastewater treatment capacity to ensure no muddy water discharge in the upcoming rainy season.	N/A	N/A
20230418_1	18-Apr-2023	Silt and stockpile was observed at site boundary near outfall. The Contractor was advised to remove the silt and stockpile near site boundary.	Silt and stockpile at site boundary near outfall were removed.	Rectified on 24-Apr-23.
20230424_1	24-Apr-2023	The Contractor was reminded to provide a drip tray to the chemical container stored at SDB.	Oil drums have been removed.	Rectified on 4-May-23.

**Table 7.2 Summary of Environmental Inspections of Contract No. DC/2018/07**

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
-	-	-	-	-

**Table 7.3 Summary of Environmental Inspections of Contract No. DE/2018/03**

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20230411_1	11-Apr-2023	The Contractor was reminded to replace the decolored NRMM label on the generator at the sidestream.	A new NRMM label was affixed on the generator at sidestream.	Rectified on 18-Apr-2023.

**Table 7.4 Summary of Environmental Inspections of Contract No. DE/2018/04**

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20230427_1	27- Apr- 2023	Contractor was reminded to provide proper storage for reusable materials and general refuse.	The recyclable materials have been separated from the general refuse and removed.	Rectified on 2-May-2023.

**8 Complaints, Notification of Summons and Prosecution**

- 8.1.1. No environmental complaint, notification of summons and successful prosecution regarding construction works was recorded in the reporting period.
- 8.1.2. The details environmental complaints for the Project are summarized by complaint log in [Appendix 8.1](#).
- 8.1.3. Cumulative statistics on complaints and successful prosecutions are summarized in **Table 8.1** and **Table 8.2** respectively.

**Table 8.1 Cumulative Statistics on Complaints in the Reporting Month**

Reporting Period	No. of Complaints
Commencement works (Feb 2018) to last reporting month	4
April 2023	0
<b>Total</b>	<b>4</b>

**Table 8.2 Cumulative Statistics on Successful Prosecutions**

Environmental Parameters	Cumulative no. Brought Forward	No. of Successful Prosecutions this month (Offence Date)	Cumulative No. Project-to-Date
Air	-	0	0
Noise	-	0	0
Water	-	0	0
Waste	-	0	0
<b>Total</b>	<b>-</b>	<b>0</b>	<b>0</b>

**9 Conclusion**

- 9.1.1. The EM&A programme was carried out in accordance with the EM&A Manual requirements, minor alterations to the programme proposed were made in response to changing circumstances.
- 9.1.2. Mitigation measures according to the environmental mitigation implementation schedule and the EIA were generally implemented by the Contractor. Hence, the EM&A programme was considered effective and shall be maintained.
- 9.1.3. The scheduled construction activities and the recommended mitigation measures for the coming 3 months are listed in **Table 9.1**. The construction programmes of individual activities are provided in [Appendix 9.1](#).

**Table 9.1 Construction Activities and Recommended Mitigation Measures in Coming Reporting Month**

Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	<ul style="list-style-type: none"> <li>• RC works</li> <li>• Sewage, utility and pipe works</li> <li>• ABWF works</li> </ul>	<ul style="list-style-type: none"> <li>• Implement proper dust mitigation measures on dusty surface, stockpiles and related dusty works</li> <li>• Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies</li> <li>• Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers</li> <li>• Proper maintenance of the on-site drainage system</li> <li>• Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system</li> <li>• Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>• Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal</li> <li>• Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.</li> </ul>
DC/2018/07	<ul style="list-style-type: none"> <li>• ELS works</li> <li>• Sheet piling</li> </ul>	<ul style="list-style-type: none"> <li>• Implement proper dust mitigation measures on dusty surface and stockpiles</li> </ul>

Contract No.	Key Construction Works	Recommended Mitigation Measures
	<ul style="list-style-type: none"> <li>• RC works</li> <li>• Excavation</li> <li>• Pile laying</li> </ul>	<ul style="list-style-type: none"> <li>• Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies</li> <li>• Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities</li> <li>• Proper maintenance of the on-site drainage system</li> <li>• Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system</li> <li>• Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>• Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> <li>• Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.</li> </ul>
DE/2018/03	<ul style="list-style-type: none"> <li>• Superstructure works</li> <li>• Electrical Installation</li> <li>• Pipework Installation</li> <li>• MFA and AFA Installation</li> <li>• SPR Installation</li> <li>• Plumbing installation</li> <li>• MVAC Installation</li> <li>• EOT and Monorail Installation</li> <li>• Bio-Gas Holding tank Installation</li> <li>• Penstock and Stoplog Installation</li> <li>• Delivery and Installation of THP System</li> </ul>	<ul style="list-style-type: none"> <li>• Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers</li> <li>• Implement proper waste mitigation measures to prevent accidental leakage of chemical</li> <li>• Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>• Proper maintenance of the on-site drainage system</li> <li>• Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> <li>• Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.</li> </ul>

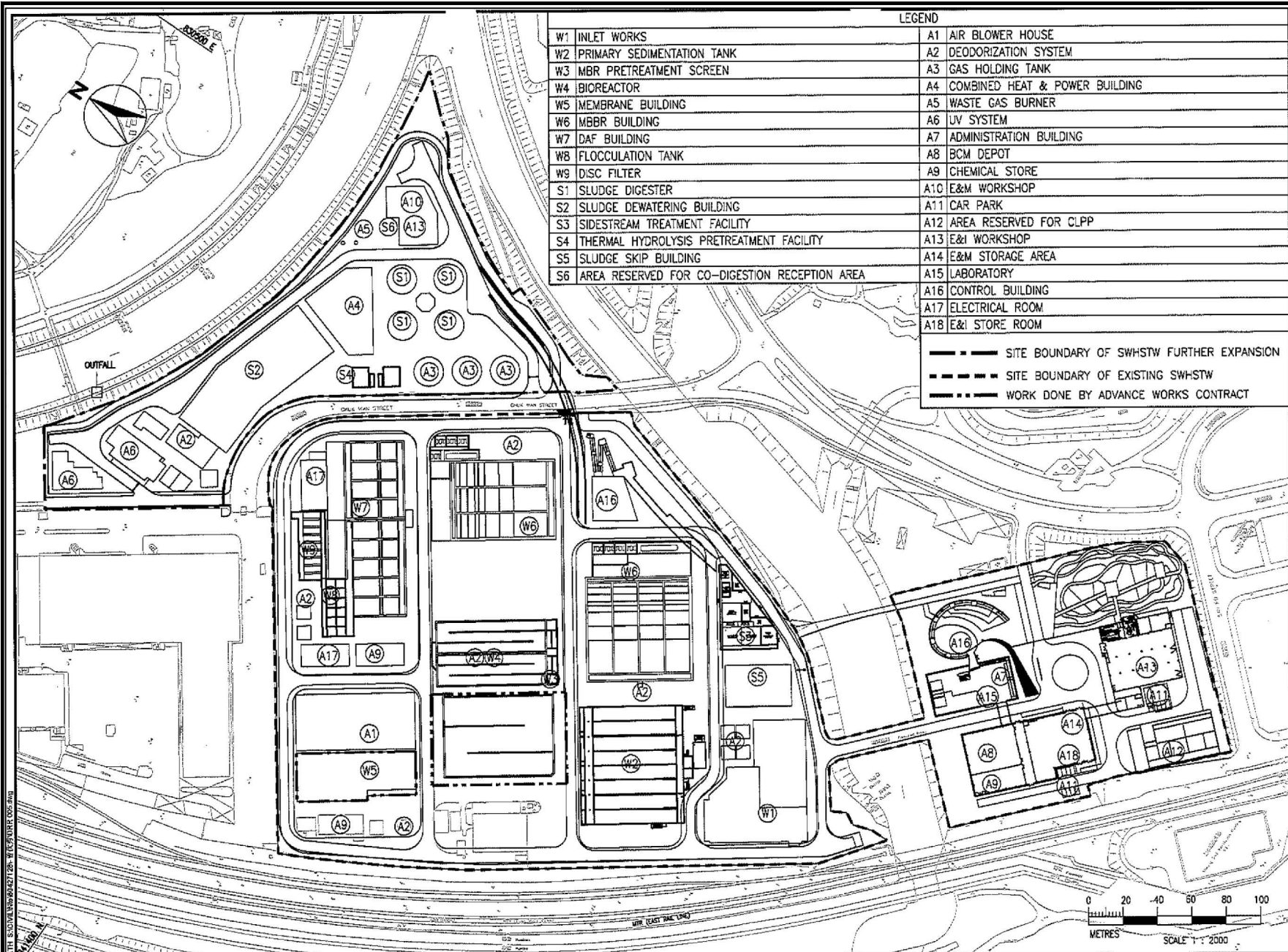
Contract No.	Key Construction Works	Recommended Mitigation Measures
DE/2018/04	<ul style="list-style-type: none"> <li>• Improvement works for Temporary Primary Sludge Thickener and its accessories.</li> <li>• E&amp;M &amp; civil works for Leachate Pre-treatment Plant at existing compressor house and BR No 3&amp;4.</li> <li>• E&amp;M works at Portion B-7, including DOU No.3A, Emergency Generator House and FS &amp; Sprinkler Pumping Room, Chemical System No.1, Street Fire Hydrant &amp; Booster Pump Room and Temporary Chemical System.</li> <li>• E&amp;M works at Portion B-4, BR 2A &amp; 2B.</li> <li>• E&amp;M works at Portion B-2, Inert works.</li> </ul>	<ul style="list-style-type: none"> <li>• Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas.</li> <li>• Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal.</li> </ul>





## ***Figure 2.1***

# ***Project Layout***



LEGEND			
W1	INLET WORKS	A1	AIR BLOWER HOUSE
W2	PRIMARY SEDIMENTATION TANK	A2	DEODORIZATION SYSTEM
W3	MBR PRETREATMENT SCREEN	A3	GAS HOLDING TANK
W4	BIOREACTOR	A4	COMBINED HEAT & POWER BUILDING
W5	MEMBRANE BUILDING	A5	WASTE GAS BURNER
W6	MBBR BUILDING	A6	UV SYSTEM
W7	DAF BUILDING	A7	ADMINISTRATION BUILDING
W8	FLOCCULATION TANK	A8	BCM DEPOT
W9	DISC FILTER	A9	CHEMICAL STORE
S1	SLUDGE DIGESTER	A10	E&M WORKSHOP
S2	SLUDGE DEWATERING BUILDING	A11	CAR PARK
S3	SIDESTREAM TREATMENT FACILITY	A12	AREA RESERVED FOR CLPP
S4	THERMAL HYDROLYSIS PRETREATMENT FACILITY	A13	E&I WORKSHOP
S5	SLUDGE SKIP BUILDING	A14	E&M STORAGE AREA
S6	AREA RESERVED FOR CO-DIGESTION RECEPTION AREA	A15	LABORATORY
		A16	CONTROL BUILDING
		A17	ELECTRICAL ROOM
		A18	E&I STORE ROOM
		- - - - - SITE BOUNDARY OF SWHSTW FURTHER EXPANSION - - - - - SITE BOUNDARY OF EXISTING SWHSTW - - - - - WORK DONE BY ADVANCE WORKS CONTRACT	

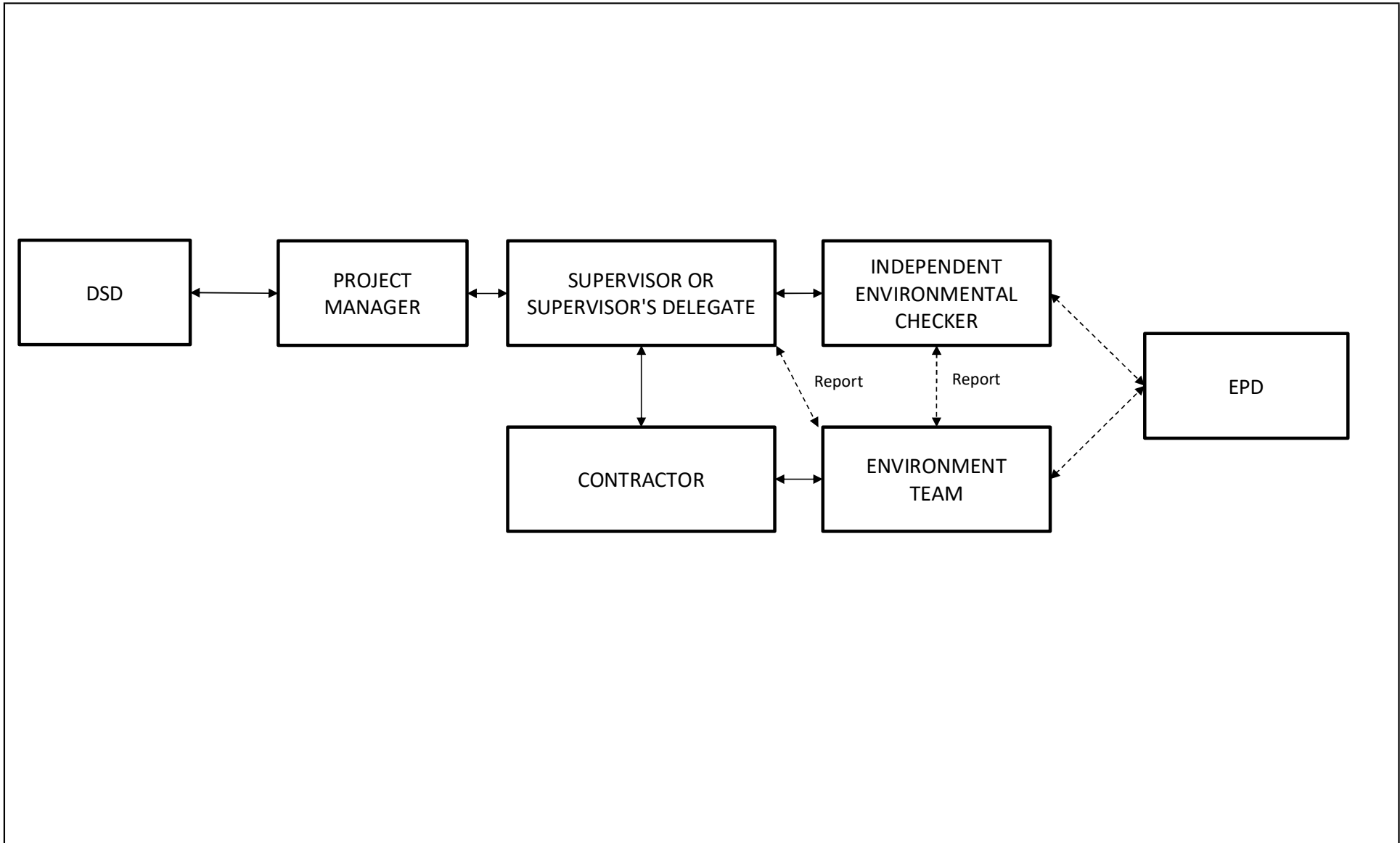
Shek Wu Hui Effluent Polishing Plant  
General Site Layout Of SWHEPP

SCALE	As Shown	DATE	SEP 2019
CHECK	JM	DRAWN	SY
JOB No.		FIGURE NO.	1.1
		REV	-



## ***Figure 2.2***

# ***Project Organization Chart***

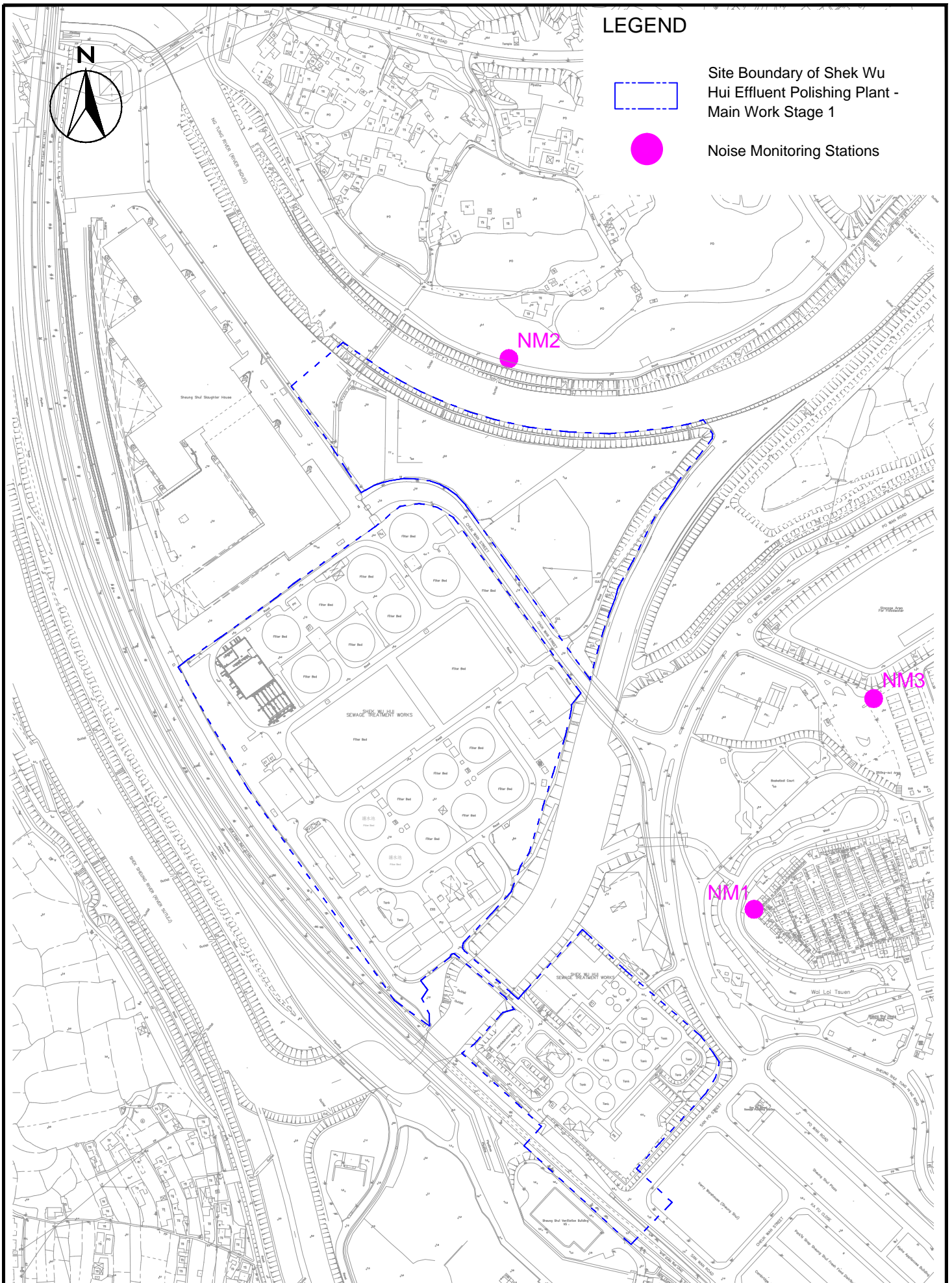


Shek Wu Hui Effluent Polishing Plant - <b>Project Organisation For Environmental Monitoring and Audit</b>	SCALE	N.T.S.	DATE	Sep 2019
	CHECK	JW	DRAWN	SY
	JOB NO.		FIGURE NO.	1.2

## ***Figure 4.1***

# ***Locations of Noise Monitoring Stations***

---



**LEGEND**



Site Boundary of Shek Wu Hui Effluent Polishing Plant - Main Work Stage 1



Noise Monitoring Stations

NM2

NM3

NM1

Shek Wu Hui Effluent Polishing Plant

Location of Noise Monitoring Stations

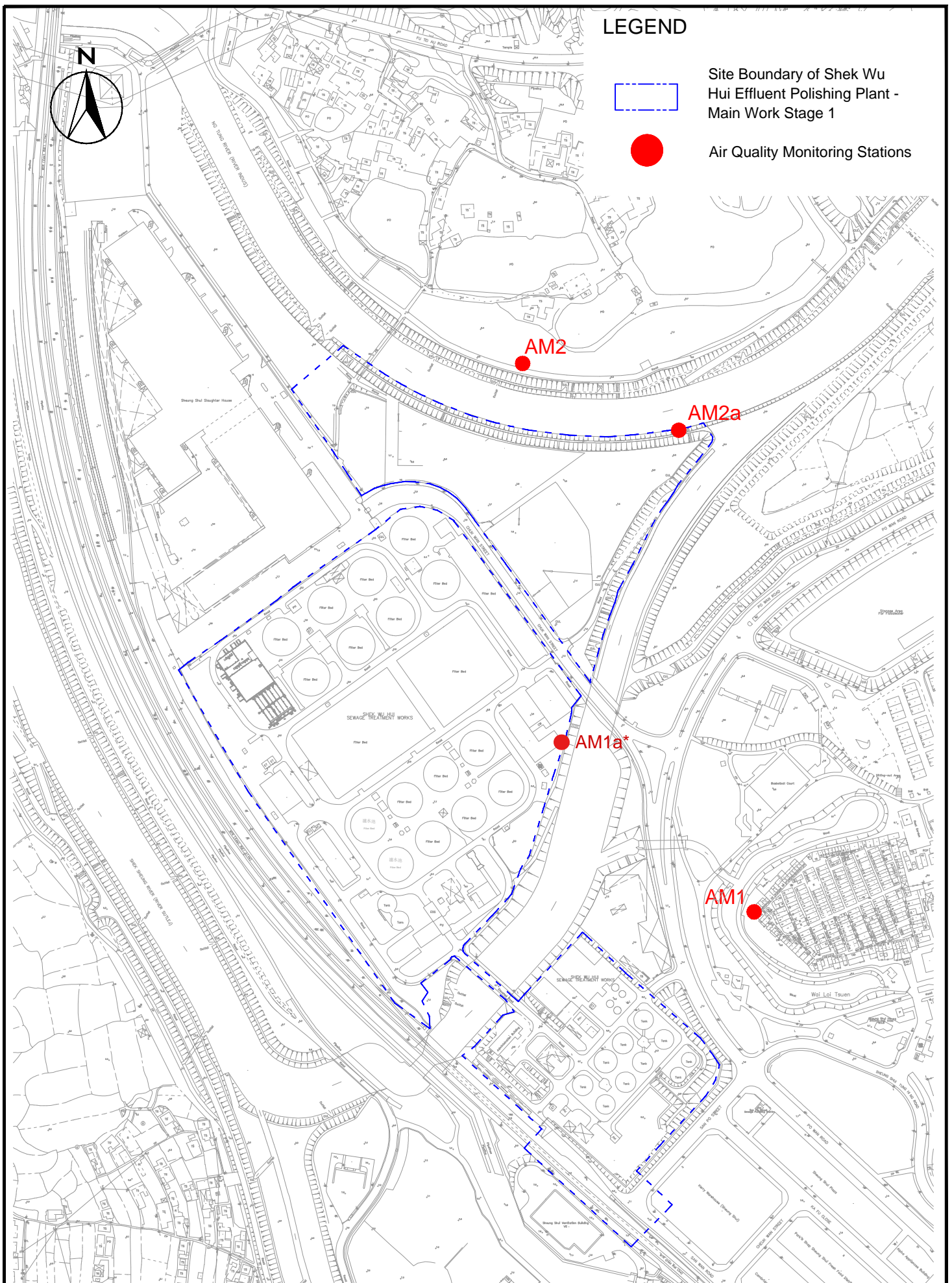
SCALE	1:4000@A4	DATE	SEP 2019	
CHECK	JM	DRAWN	SY	
JOB No.	MA19019	FIGURE NO.	3	REV
				-

## ***Figure 4.2***

# ***Locations of Air Quality Monitoring Stations***

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Shek Wu Hui Effluent Polishing Plant -  
Location of Air Quality Monitoring Stations

SCALE	1:400@A4	DATE	SEP 2019	
CHECK	JM	DRAWN	SY	
JOB No.		FIGURE NO.	2	REV
				-

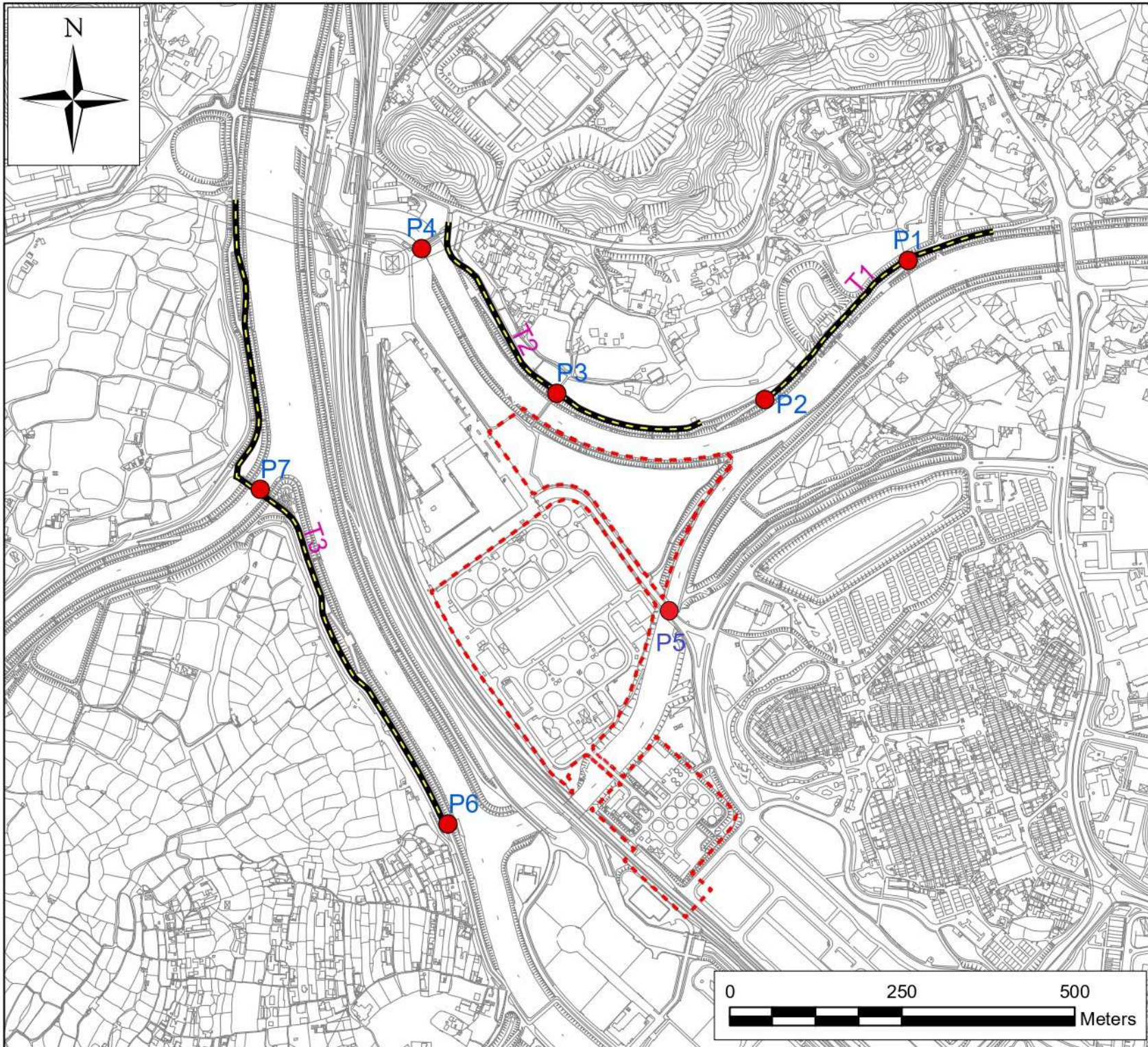


## ***Figure 4.3***

# ***Locations of Ecological Monitoring Stations***

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- Legend**
- - - Project Site Boundary
  - - - Walk Transects
  - Point Count Locations

**PREPARED BY**  
*Lam Environmental Services Limited*  
 19/F Remex Centre  
 42 Wong Chuk Hang Road,  
 Hong Kong  
 Telephone: (852) 2882-3939  
 Facsimile: (852) 2882-3331  
 E-mail: [info@lamenviro.com](mailto:info@lamenviro.com)  
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**CONTRACT NO.**  
**SPW 12/2021**

**PROJECT TITLE**  
**Shek Wu Hui Effluent Polishing  
 Plant - Main Works  
 Survey Location for Ecological  
 Monitoring**

SCALE <b>1:7500@A4</b>	DATE <b>Sept 2021</b>
DRAWN BY <b>AL</b>	CHECK BY <b>MC</b>
FIGURE NO. <b>1</b>	REVISION NO. <b>-</b>



## ***Figure 4.4***

# ***Locations of Water Quality Monitoring Stations***

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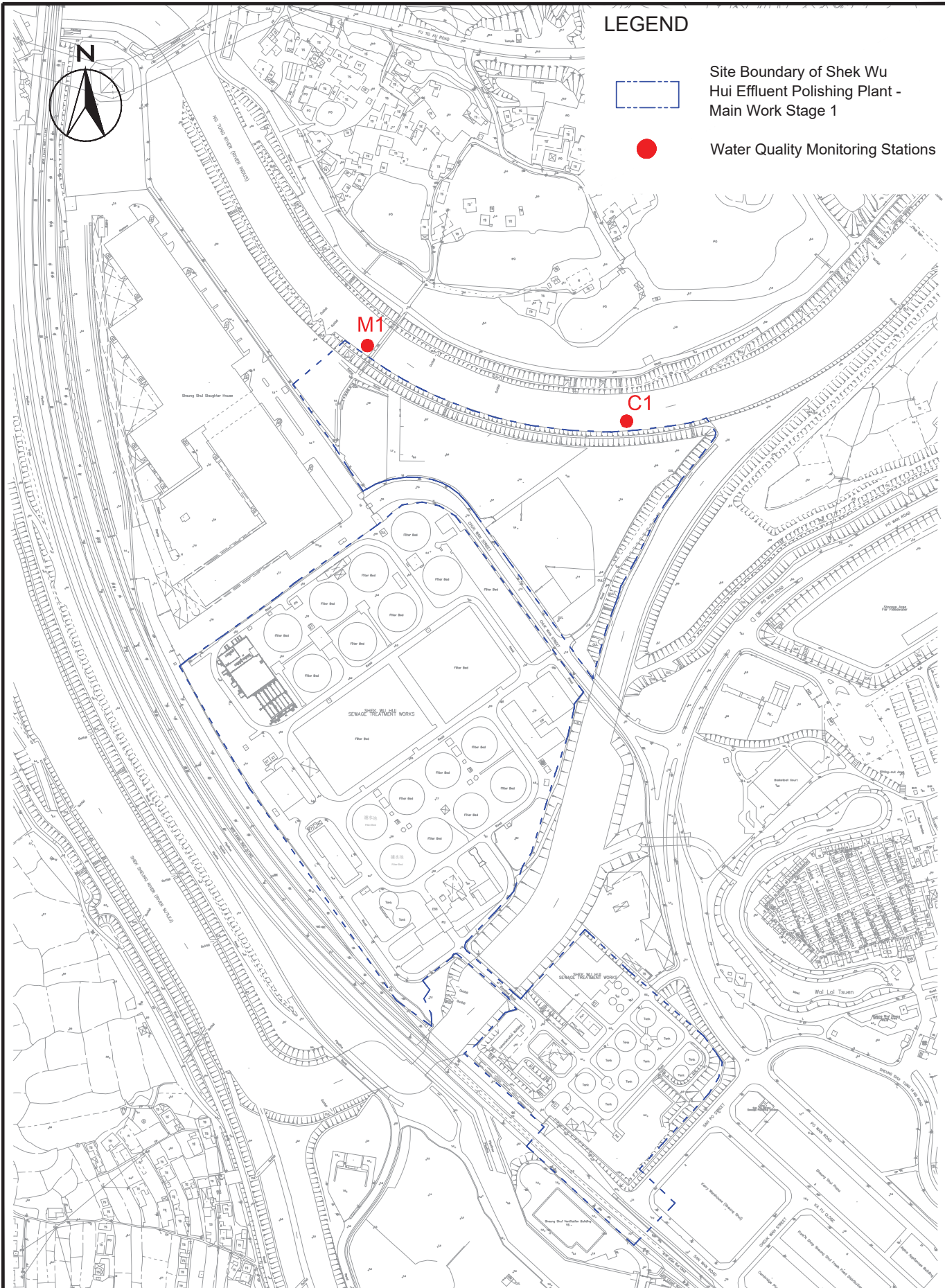
**LEGEND**



Site Boundary of Shek Wu Hui Effluent Polishing Plant - Main Work Stage 1



Water Quality Monitoring Stations



Shek Wu Hui Effluent Polishing Plant -  
Location of Water Quality Monitoring Stations

SCALE	1:400@A4	DATE	OCT 2019
CHECK	JM	DRAWN	SY
JOB No.		FIGURE NO.	5
		REV	-



## ***Appendix 2.1***

# ***Layout Plan of Construction Activities and Site Record Photos***

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## Site Record Photos









**DC/2018/06**

			
SD&THP	CHP	SDB	Outfall

**DC/2018/07**

			
BR2	MFB	PST	Inlet





**DE/2018/03**



Sidestream



Bio Gas Tank

**DE/2018/04**



Compressor House



# Portion C

**Section 4**  
- Pipe work  
- PME: 1 excavator

**Ng Tung River Outfall**  
- Outfall construction work  
- No PMEs used

**Section 4**  
- Pipe work  
- PME: 1 excavator

**Transformer and Switchroom**  
- ESL  
- PME: 1 excavator

Dull green barrier

**SDB**  
- ABWF works  
- PME: 2 scissor lift platforms,

**CHP**  
- ABWF  
- PME: 2 scissor lift platforms

PMEs: Tower crane with generator

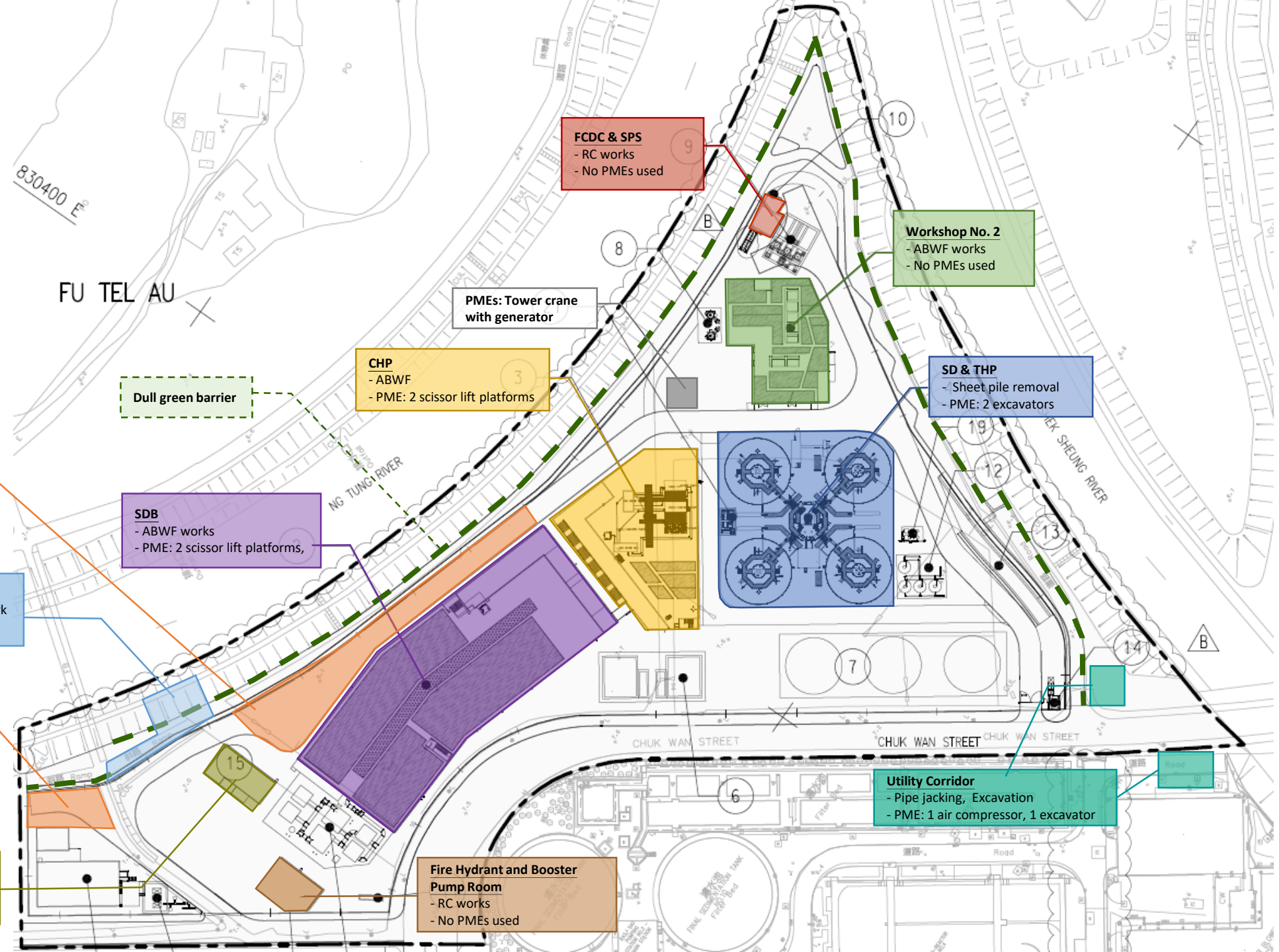
**FCDC & SPS**  
- RC works  
- No PMEs used

**Workshop No. 2**  
- ABWF works  
- No PMEs used

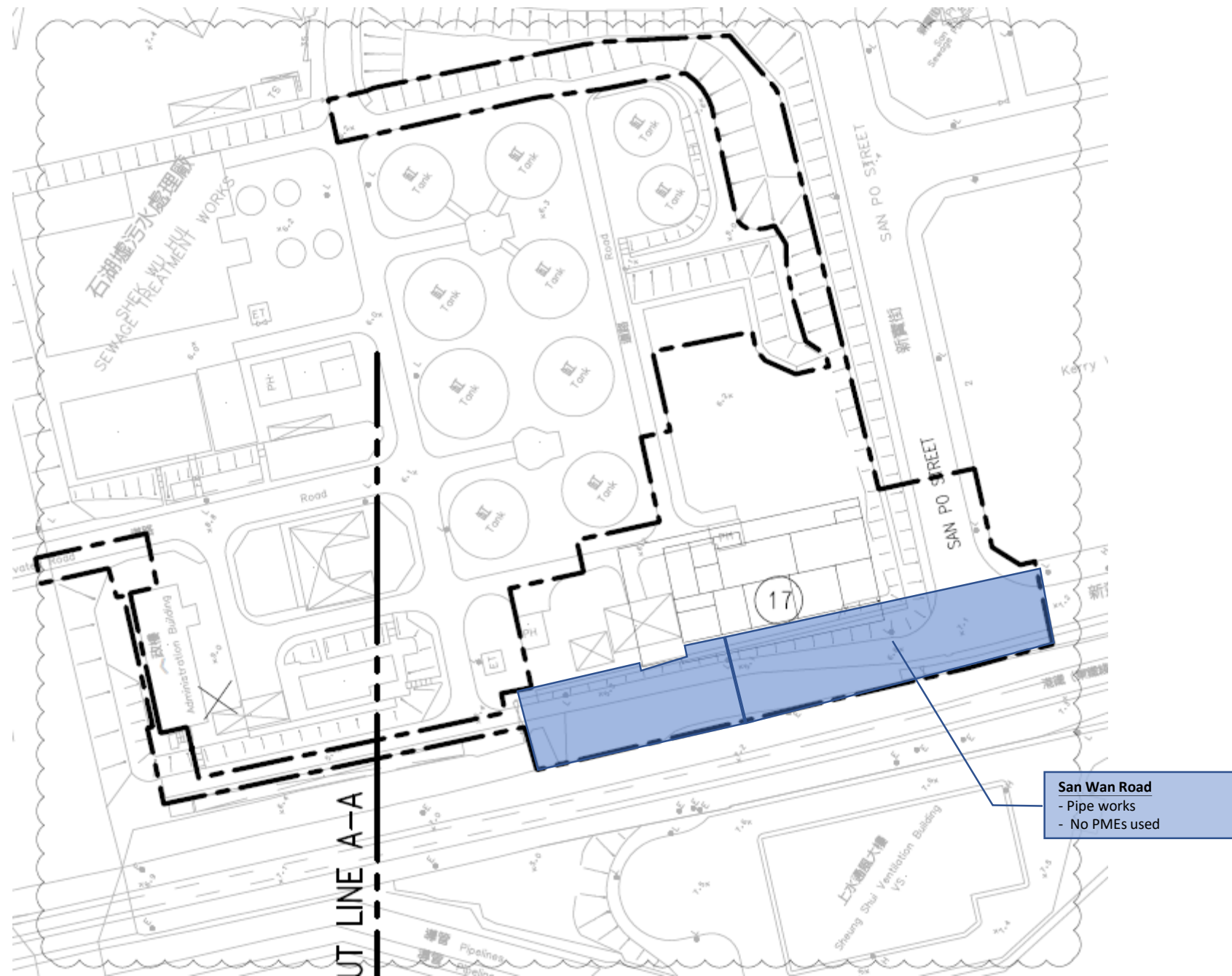
**SD & THP**  
- Sheet pile removal  
- PME: 2 excavators

**Utility Corridor**  
- Pipe jacking, Excavation  
- PME: 1 air compressor, 1 excavator

**Fire Hydrant and Booster Pump Room**  
- RC works  
- No PMEs used

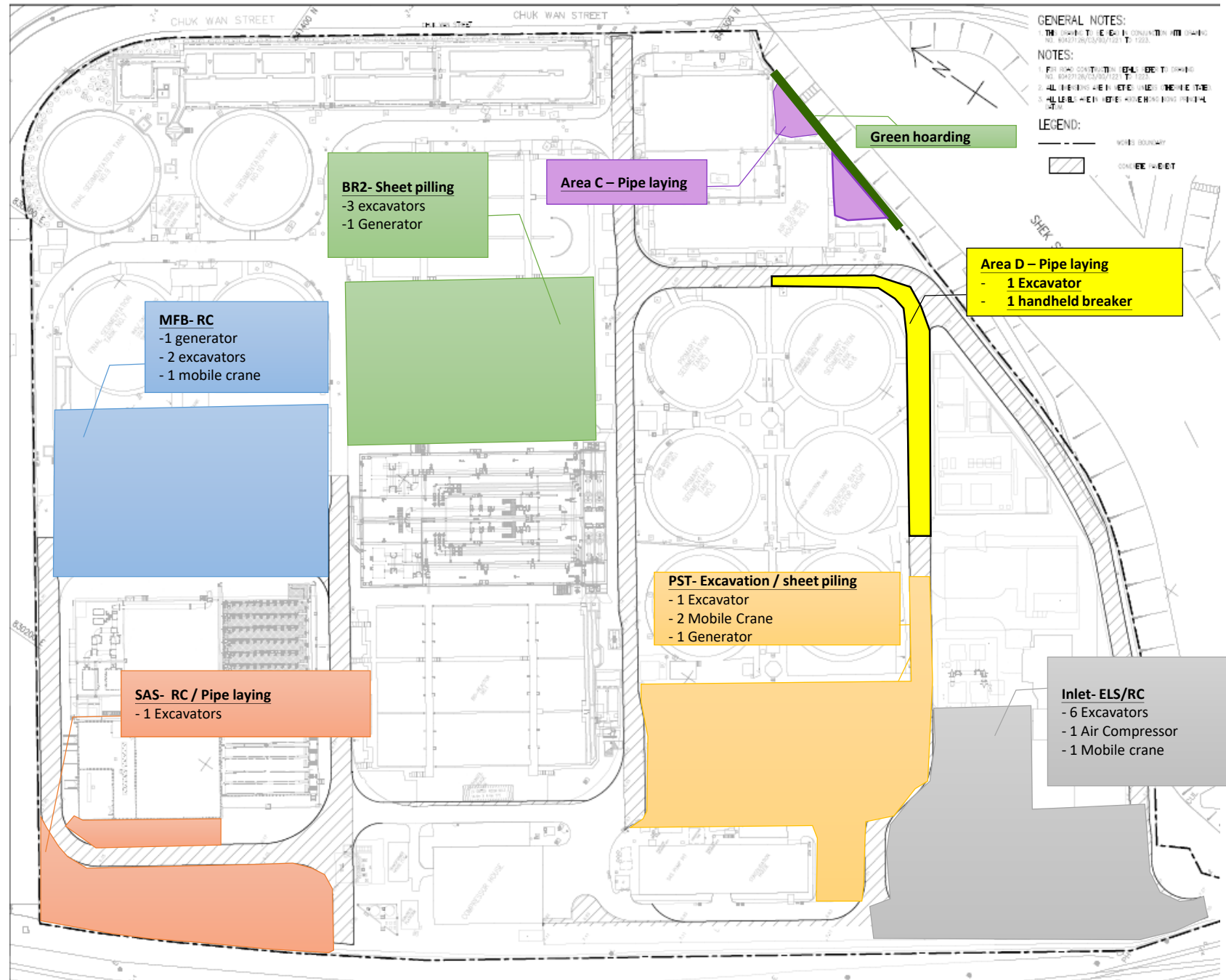


# Portion A



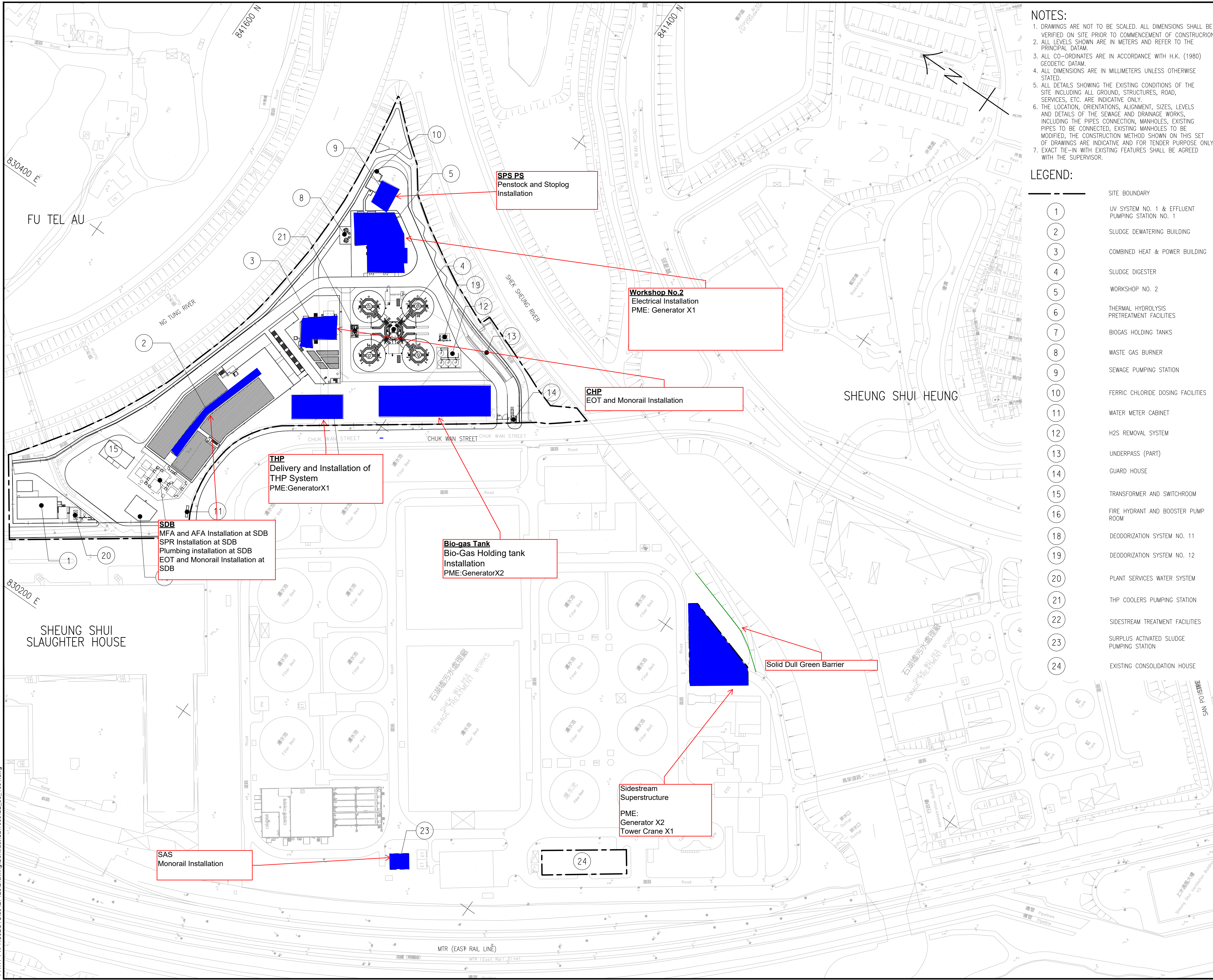
**San Wan Road**  
- Pipe works  
- No PMEs used

# Portion B





Plot File by: GuoX 26/03/2019  
 PATH: P:\PROJECTS\60427128\Drawing\Contract\C21000\C2\_00\_1001.dwg  
 Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM  
 ISO A1 594mm x 841mm



**NOTES:**

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL LEVELS SHOWN ARE IN METERS AND REFER TO THE PRINCIPAL DATUM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH H.K. (1980) GEODETIC DATUM.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED.
5. ALL DETAILS SHOWING THE EXISTING CONDITIONS OF THE SITE INCLUDING ALL GROUND, STRUCTURES, ROAD, SERVICES, ETC. ARE INDICATIVE ONLY.
6. THE LOCATION, ORIENTATIONS, ALIGNMENT, SIZES, LEVELS AND DETAILS OF THE SEWAGE AND DRAINAGE WORKS, INCLUDING THE PIPES CONNECTION, MANHOLES, EXISTING PIPES TO BE CONNECTED, EXISTING MANHOLES TO BE MODIFIED, THE CONSTRUCTION METHOD SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE AND FOR TENDER PURPOSE ONLY.
7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

**LEGEND:**

---	SITE BOUNDARY
①	UV SYSTEM NO. 1 & EFFLUENT PUMPING STATION NO. 1
②	SLUDGE DEWATERING BUILDING
③	COMBINED HEAT & POWER BUILDING
④	SLUDGE DIGESTER
⑤	WORKSHOP NO. 2
⑥	THERMAL HYDROLYSIS PRETREATMENT FACILITIES
⑦	BIOGAS HOLDING TANKS
⑧	WASTE GAS BURNER
⑨	SEWAGE PUMPING STATION
⑩	FERRIC CHLORIDE DOSING FACILITIES
⑪	WATER METER CABINET
⑫	H2S REMOVAL SYSTEM
⑬	UNDERPASS (PART)
⑭	GUARD HOUSE
⑮	TRANSFORMER AND SWITCHROOM
⑯	FIRE HYDRANT AND BOOSTER PUMP ROOM
⑰	DEODORIZATION SYSTEM NO. 11
⑱	DEODORIZATION SYSTEM NO. 12
⑳	PLANT SERVICES WATER SYSTEM
㉑	THP COOLERS PUMPING STATION
㉒	SIDESTREAM TREATMENT FACILITIES
㉓	SURPLUS ACTIVATED SLUDGE PUMPING STATION
㉔	EXISTING CONSOLIDATION HOUSE



**PROJECT**  
 SHEK WU HUI EFFLUENT POLISHING PLANT

**CONTRACT TITLE**  
 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 - SIDESTREAM TREATMENT FACILITIES AND E&M WORKS FOR SLUDGE TREATMENT FACILITIES

**CLIENT**  
 渠務署  
 Drainage Services Department

**CONSULTANT**  
 AECOM Asia Company Ltd.  
 www.aecom.com

**SUB-CONSULTANTS**  
 分判工程師有限公司

**ISSUE/REVISION**

NO.	DATE	DESCRIPTION	CHK.
1	MAR. 19	TENDER DRAWING	TLST

**SCALE**  
 A1 1:1000

**DIMENSION UNIT**  
 METRES

**KEY PLAN**

**PROJECT NO.**  
 60427128

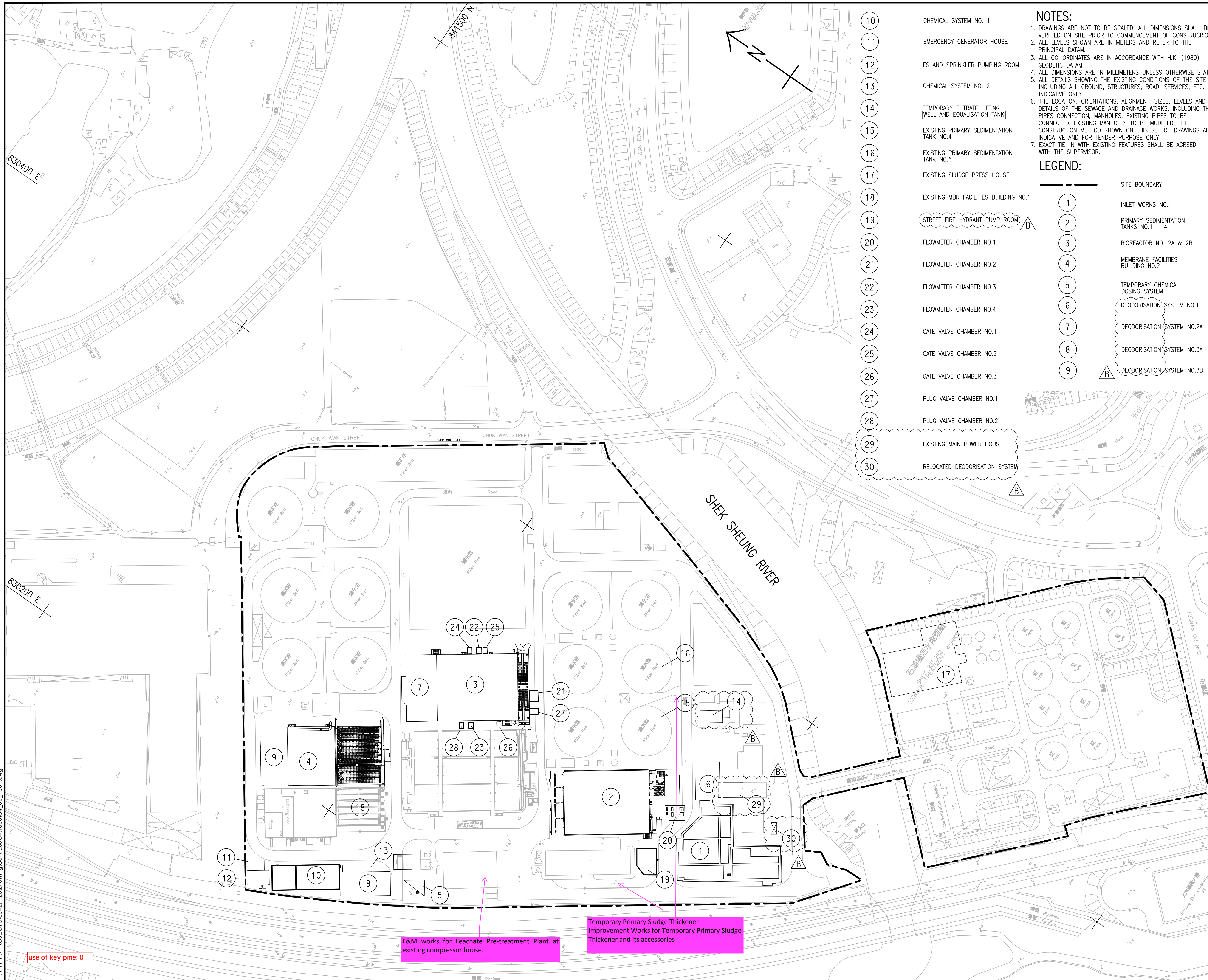
**CONTRACT NO.**  
 DE/2018/03

**SHEET TITLE**  
 SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

**SHEET NUMBER**  
 60427128/C2/00/1001

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- 10 CHEMICAL SYSTEM NO. 1
- 11 EMERGENCY GENERATOR HOUSE
- 12 FS AND SPRINKLER PUMP ROOM
- 13 CHEMICAL SYSTEM NO. 2
- 14 TEMPORARY FILTRATE LIFTING WELL AND EQUALISATION TANK
- 15 EXISTING PRIMARY SEDIMENTATION TANK NO.4
- 16 EXISTING PRIMARY SEDIMENTATION TANK NO.6
- 17 EXISTING SLUDGE PRESS HOUSE
- 18 EXISTING MBR FACILITIES BUILDING NO.1
- 19 STREET FIRE HYDRANT PUMP ROOM
- 20 FLOWMETER CHAMBER NO.1
- 21 FLOWMETER CHAMBER NO.2
- 22 FLOWMETER CHAMBER NO.3
- 23 FLOWMETER CHAMBER NO.4
- 24 GATE VALVE CHAMBER NO.1
- 25 GATE VALVE CHAMBER NO.2
- 26 GATE VALVE CHAMBER NO.3
- 27 PLUG VALVE CHAMBER NO.1
- 28 PLUG VALVE CHAMBER NO.2
- 29 EXISTING MAIN POWER HOUSE
- 30 RELOCATED DEODORISATION SYSTEM

**NOTES:**

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7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

- LEGEND:**
- 1 SITE BOUNDARY
  - 2 INLET WORKS NO.1
  - 3 PRIMARY SEDIMENTATION TANKS NO.1 - 4
  - 4 BIOREACTOR NO. 2A & 2B
  - 5 MEMBRANE FACILITIES BUILDING NO.2
  - 6 TEMPORARY CHEMICAL DOSING SYSTEM
  - 7 DEODORISATION SYSTEM NO.1
  - 8 DEODORISATION SYSTEM NO.2A
  - 9 DEODORISATION SYSTEM NO.3A
  - 10 DEODORISATION SYSTEM NO.3B

**AECOM**

**PROJECT**  
 SHEK WU HUI EFFLUENT POLISHING PLANT

CONTRACT TITLE  
 SHEK WU HUI EFFLUENT POLISHING PLANT - MAIN WORKS STAGE 1 - E&M WORKS FOR SEWAGE TREATMENT FACILITIES

**CLIENT**  
 渠務署  
 Drainage Services Department

**CONSULTANT**  
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**ISSUE/REVISION**

REV	DATE	DESCRIPTION	CHK.
B	AUG. 19	TENDER ADDENDUM NO. 3	TLST
A	JUL. 19	TENDER ADDENDUM NO. 2	TLST
-	APR. 19	TENDER DRAWING	TLST

**STATUS**  
 階段

**SCALE**  
 比例: A1 1 : 1000

**DIMENSION UNIT**  
 尺寸單位: METRES

**KEY PLAN**  
 索引圖

**PROJECT NO.**  
 項目編號: 60427128

**CONTRACT NO.**  
 合約編號: DE/2018/04

**SHEET TITLE**  
 圖紙名稱: GENERAL LAYOUT PLAN

**SHEET NUMBER**  
 圖紙編號: 60427128/C4/00/1001B

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Use of key pme: 0

E&M works for Leachate Pre-treatment Plant at existing compressor house.

Temporary Primary Sludge Thickener Improvement Works for Temporary Primary Sludge Thickener and its accessories





## ***Appendix 3.1***

# ***Environmental Mitigation Implementation Schedule***

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### Appendix 3.1 Environmental Mitigation Implementation Schedule

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
<b>Air Quality Monitoring</b>							
S2.4.1.3	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:						
	<ul style="list-style-type: none"> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> </ul>	To minimize the dust impact	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Air Pollution Control Ordinance (APCO) and Air Pollution Control (Construction Dust)	^
	<ul style="list-style-type: none"> <li>Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> </ul>						^
	<ul style="list-style-type: none"> <li>A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</li> </ul>						^
	<ul style="list-style-type: none"> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</li> </ul>						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period.</li> </ul>						^
	<ul style="list-style-type: none"> <li>The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Any skip hoist for material transport should be totally enclosed by impervious sheeting;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed;</li> </ul>						^



	<ul style="list-style-type: none"> <li>• Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> </ul>						^
	<ul style="list-style-type: none"> <li>• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies</li> </ul>						^



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
<b>Ecological Impact</b>							
S4.2.1.1	Solid dull green noise/visual barriers of at least 2m high shall be erected and maintained between active works area and all areas of ecological importance.	Minimize noise and human disturbances during construction phase.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.2	Avoid unnecessary lighting.	Minimize mortality impacts on birds.	Design / Contractor/ Plant Operator	Work Sites	Construction and operation phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.3	Good construction site practice to minimise dust generation should be followed on all construction sites. Measures to avoid, minimise and mitigate impacts on air quality are detailed in this schedule.	Minimize dust generation from construction sites.	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
S4.2.1.4	The following measures to avoid, minimise and mitigate impact on water quality during construction phase shall be implemented						
	<ul style="list-style-type: none"> <li>Temporary sewerage and drainage to be designed and installed to collect wastewater and prevent it from entering water bodies;</li> </ul>	Avoid, minimise and mitigate impact on water quality	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM	^
	<ul style="list-style-type: none"> <li>Proper locations well away from nearby water bodies should be used for temporary storage of materials (i.e. equipment, filling materials, chemicals and fuel) and temporary stockpiles of construction debris and spoil, and these should be identified before commencement of works;</li> </ul>						^
	<ul style="list-style-type: none"> <li>To prevent muddy water entering nearby water bodies, work sites close to nearby water bodies should be isolated, using such items as sandbags or silt curtains with lead edge at bottom and properly supported props. Other protective measures should also be taken to ensure that no pollution or siltation occurs to the water gathering grounds of the work sites;</li> </ul>						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>Construction debris and spoil should be covered and/or properly disposed of as soon as possible to avoid these being washed into nearby water bodies;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Proper locations for discharge outlets of temporary wastewater treatment facilities well away from sensitive receivers should be identified;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Adequate lateral support should be erected where necessary in order to prevent soil/mud from slipping into water bodies;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Site boundaries should be clearly marked and any works beyond the boundary strictly prohibited;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Regular water monitoring and site audit should be carried out at adequate points along any watercourses where construction works are underway upstream within their catchments and also on the Ng Tung, Sheung Yue and Shek Sheung Rivers. If the monitoring and audit results show that pollution occurs, adequate measures including temporarily cessation of works should be considered;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Excavation profiles should be properly designed and executed with attention to the relevant requirements for environment, health and safety;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Where soil to be excavated is situated beneath the groundwater table, it may be necessary to lower the groundwater table by installing well points or similar means; Stockpiling sites should be lined with impermeable sheeting and bunded. Stockpiles should be properly covered by impermeable sheeting to reduce dust emission during dry season or contaminated run-off during rainy season. Watering should be avoided on stockpiles of</li> </ul>						^
	<ul style="list-style-type: none"> <li>contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and</li> </ul>						^
	<ul style="list-style-type: none"> <li>Supply of suitable clean backfill material after excavation, if required.</li> </ul>						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>• Vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or contaminated run-off, and truck bodies and tailgates should be sealed to prevent discharge during transport or during wet season;</li> </ul>						^
	<ul style="list-style-type: none"> <li>• Speed control for the trucks carrying contaminated materials should be enforced;</li> </ul>						^
	<ul style="list-style-type: none"> <li>• Vehicle wheel washing facilities at construction sites' exit points should be established and used, where necessary; and</li> </ul>						^
	<ul style="list-style-type: none"> <li>• Other measures as detailed in this schedule.</li> </ul>						^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
<b>Water Quality Impact</b>							
S5.2.2.1	<b>Construction Site Runoff</b> Practices and measures provided in the Practice Note for Professional Persons on Construction Site Drainage, (PROPECC PN1/94) should be followed where applicable.	Control construction runoff	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^
S5.2.2.2 – S5.2.2.3	<b>Sewage from Workforce</b> <ul style="list-style-type: none"> <li>Portable chemical toilets and 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 and be responsible for appropriate disposal and maintenance;</li> <li>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 construction site should be conducted in order 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</li> </ul>	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^  ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
<b>Waste Management</b>							
S6.2.2.1	<p><b>Good Site Practices and Waste Reduction Measures</b></p> <ul style="list-style-type: none"> <li>Nomination of an approved person, such as a site manager, to be responsible for the implementation of good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site;</li> <li>Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;</li> <li>Provision of sufficient waste disposal points and regular collection for disposal;</li> <li>Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;</li> <li>Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;</li> <li>An Environmental Management Plan (EMP) should be prepared by the contractor and submitted to the Supervisor for approval.</li> </ul>	Minimize waste generation during construction	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal Ordinance (WDO)	^  ^  ^  ^  ^
S6.2.3.1	<p><b>Waste Reduction Measures</b></p> <ul style="list-style-type: none"> <li>Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;</li> <li>Proper storage and site practices to minimize the potential for damage and contamination of construction materials;</li> <li>Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;</li> <li>Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); and</li> <li>Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.</li> </ul>	Reduce waste generation	Contractors	Work Sites	Prior to the commencement of construction of Main Works Stage 1, Stage 2 and Stage 3	WDO	*  ^  ^  ^  ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S6.2.4.1	Storage, Collection and Transportation of Waste Should any temporary storage or stockpiling of waste is required, recommendations to minimize the impacts include:	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	<ul style="list-style-type: none"> <li>Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Stockpiling area should be provided with covers and water spraying system to prevent materials from windblown or being washed away; and</li> </ul>						^
	<ul style="list-style-type: none"> <li>Different locations should be designated to stockpile each material to enhance reuse.</li> </ul>						^
S6.2.4.2	Storage, Collection and Transportation of Waste (con't)	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	<ul style="list-style-type: none"> <li>Remove waste in timely manner;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Employ the trucks with cover or enclosed containers for waste transportation;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Obtain relevant waste disposal permits from the appropriate authorities; and</li> </ul>						^
S6.2.5.2	C&D Materials from Site Formation	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
	<ul style="list-style-type: none"> <li>Maintain temporary stockpiles and reuse excavated fill material for backfilling;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Carry out on-site sorting;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;</li> </ul>						^
	<ul style="list-style-type: none"> <li>Adopt "selective demolition" technique to demolish the existing structure and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; and</li> </ul>						^
S6.2.5.3	C&D Material from Buildings Demolition and New Building Construction						



EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>The Contractor should recycle as much as possible of the C&amp;DM on-site. Public fill and C&amp;DM waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. For example, concrete and masonry can be crushed and used as fill, and steel reinforcing bar can be used by scrap steel mills. Different areas of the work sites should be designated for such segregation and storage.</li> <li>The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used.</li> <li>Government has developed a charging policy for the disposal of waste to landfill at present. It will provide additional incentive to reduce the volume of generated waste and ensure proper segregation to allow reuse of the inert material on site when implemented.</li> <li>In order to minimize the impacts of the demolition works, the generated wastes must be cleared as quickly as possible after demolition. Therefore, the demolition and clearance works should be undertaken simultaneously. To facilitate proper segregation of inert and non-inert C&amp;D material arising from demolition works, selective demolition method should be adopted.</li> </ul>	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Land (Miscellaneous Provisions) Ordinance, WDO, ETWB TCW No. 19/2005	^
							^
							^
							^
S6.2.5.4	Chemical Waste						
	<ul style="list-style-type: none"> <li>If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers.</li> <li>Chemical wastes should be stored in appropriate containers and collected by a licensed chemical waste contractor. Chemical wastes (e.g. spent lubricant oil) should be recycled at an appropriate facility as far as possible, while the chemical waste that cannot be recycled should be disposed of at either the Chemical Waste Treatment Centre, or another licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.</li> </ul>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal (Chemical Waste General) Regulation, Code of Practice on the Packaging, Labelling and Storage of Chemical Waste	^
							*
S6.2.5.5	General Refuse						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>• General refuse should be stored in enclosed bins separately from construction and chemical wastes.</li> <li>• Recycling bins should also be placed to encourage recycling.</li> <li>• Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.</li> <li>• A reputable waste collector should be employed to remove general refuse on a daily basis.</li> </ul>	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal (Chemical Waste General) Regulation	^ ^ ^ ^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
<b>Landscape and Visual</b>							
S7.3.1.1	<p>Good Site Practices Measures</p> <ul style="list-style-type: none"> <li>For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.</li> <li>With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.</li> </ul>	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
							N/A
S7.3.2.1	<p>MM4 - Tree Protection &amp; Preservation</p> <ul style="list-style-type: none"> <li>Existing trees to be retained within the Project Site should be carefully protected during construction. In particular Old and Valuable Trees (OVTs) will be preserved according to ETWB TC (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.</li> </ul>	Protect and Preserve Trees	Designer / Contractor	Work Sites	Prior to construction and construction phase	ETWB TCW No. 29/2004 and DEVB TC(W) No.7/2015	^

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S7.3.2.1	<p>MM5 - Tree Transplantation</p> <ul style="list-style-type: none"> <li>Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC No. 2/2004 and DEVB TC(W) No. 7/2015 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.</li> </ul>	Transplant Trees where suitable for transplantation	Designer / Contractor	Work Sites where possible. Otherwise consider offsite locations	Prior to construction, construction phase and operation phase	DEVB TC(W) No. 7/2015 and ETWB TCW No.2/2004 HyD HQ/GN/13 Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit	N/A
S7.3.2.1	<p>MM6 - Slope Landscaping</p> <ul style="list-style-type: none"> <li>Site formation should be reduced as far as possible. Hydroseeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/or shrubs should be planted where slope gradient and site conditions allow.</li> <li>In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping</li> </ul>	To avoid substantial slope cutting and fill slopes. To prevent erosion and subsequent loss of landscape resources and character. To ensure manmade slopes are as visually amenable as possible.	Designer / Contractor	Work Sites	Prior to construction, construction phase and operation phase	GEO Publication (1999) - Use of Vegetation as Surface Protection on Slope; GEO Publication No. 1/2011- Technical Guidelines on Landscape Treatment for Slopes	N/A
S7.3.2.1	MM7 - Compensatory Planting						

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
	<ul style="list-style-type: none"> <li>Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under DEVB TC(W) No. 7/2015.</li> <li>Compensatory planting is proposed at the potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots.</li> <li>Compensatory planting for shrubs should be considered in suitable locations. Native species such as <i>Melastoma malabathricum</i>, <i>Diospyros vaccinioides</i>, <i>Gardenia jasminoides</i>, <i>Ixora chinensis</i>, <i>Ligustrum sinense</i>, <i>Litsea rotundifolia</i>, <i>Melastoma dodecandrum</i>, <i>Atalantia buxifolia</i>, <i>Rhodomyrtus tomentosa</i>, <i>Rhaphiolepis indica</i>, and <i>Rhododendron simsii</i> are suggested.</li> </ul>	Compensate for trees and shrubs lost due to the Project	Designer / Contractor	Work Sites where possible. Otherwise consider offsite locations	Prior to construction, construction phase and operation phase	DEVB TC(W) No. 7/2015 and ETWB TCW No. 2/2004	N/A
							N/A
							N/A
S7.3.2.1	<b>MM9 - Vertical Greening</b> <ul style="list-style-type: none"> <li>Planting of climbers to grow up vertical surfaces were appropriate.</li> </ul>	Soften hard surfaces and facilities	Designer / Contractor	On appropriate structures	Prior to construction, construction phase and operation phase	ETWB TCW No.11/2004 – Cyber Manual for Greening	N/A
S7.3.2.1	<b>MM10 - Green Roof</b> <ul style="list-style-type: none"> <li>Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.</li> </ul>	Reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to visually sensitive receivers (VSRs) at high levels. Provide greening	Designer / Contractor	On appropriate buildings	Prior to construction, construction phase and operation phase	CIBSE HK Branch, Technical Guidelines for Green Roof Systems in Hong Kong (2011); ArchSD/Urbis Study on Green Roof Application in HK (2007)	N/A

EM&A Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concern to Address	Who to implement the measures?	Location of the measure	When to implement the measures?	What requirements or standards for the measure to achieve	Remark
S7.3.2.1	<p>MM11 - Screen Planting</p> <ul style="list-style-type: none"> <li>Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.</li> </ul>	To screen proposed structures such as roads and buildings. Improve compatibility with the surrounding environment and create a pleasant pedestrian environment	Designer / Contractor	Along roads, around suitable built structures, or around VSRs to contain their view out to the structures.	Prior to construction, construction phase and operation phase	ETWB TCW No. 10/2013 and 3/2006	N/A
S7.3.2.1	<p>MM16 - Screen Hoarding</p> <ul style="list-style-type: none"> <li>Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment. [Chapter 13 of the EIA Report of NENT NDAs (Register No. AEIAR-175- 2013)]</li> </ul>	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		N/A
S7.3.2.1	<p>MM17 - Light Control</p> <ul style="list-style-type: none"> <li>Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.</li> </ul>	To minimize glare impact to adjacent VSRs.	Designer / Contractor	Work Sites and/or the Plant	Construction phase and operation phase		N/A

Remarks:

- ^ Implemented
- \* To be followed-up by Contractor
- # Not Implemented
- N/A Not Applicable



## ***Appendix 4.1***

### ***Action and Limit Level***



## Action and Limit Levels

### Air Quality Monitoring

Monitoring Station	1-hour TSP Level in $\mu\text{g}/\text{m}^3$		24-hour TSP Level in $\mu\text{g}/\text{m}^3$	
	Action Level	Limit Level	Action Level	Limit Level
AM1	320	500	189	260
AM2	322	500	187	260

### Noise Monitoring

Monitoring Stations	Leq(30min),dB(A)	
	Action Level (dB(A))	Limit Level (dB(A))
NM1	When one documented complaint is received	75*
NM2		
NM3		

\*Notes: (1) If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) used by the Noise Control Authority should be followed.

(2) The limit level shall be 70 dB(A) and 65 dB(A) for educational institute during normal teaching periods and school examination periods, respectively.

### Ecological Monitoring of Waterbirds using Ng Tung, Sheung Yue and Shek Sheung Rivers during Construction Phase

Action Level	Limit Level
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that Action Level response is triggered.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level Response is triggered.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.

\*Note: Whether numbers are significant depend on species and season after collection and evaluation of baseline data.





### Water Quality Monitoring

Parameter (Unit)	Depth	Action Level	Limit Level
DO (mg/L)	Middle	<b><math>\leq 7.8</math> mg/L</b>	<b><math>\leq 7.7</math> mg/L</b>
Turbidity (NTU)	Depth- average	<b><math>\geq 14.6</math> NTU</b> or 120% of upstream control station's Turbidity at the same tide of the same day	<b><math>\geq 15.6</math> NTU</b> or 130% of upstream control station's Turbidity at the same tide of the same day
SS (mg/L)	Depth- average	<b><math>\geq 18.8</math> mg/L</b> or 120% of upstream control station's SS at the same tide of the same day	<b><math>\geq 19.5</math> mg/L</b> or 130% of upstream control station's SS at the same tide of the same day



## ***Appendix 4.2***

# ***Copies of Calibration Certificates***

# Certificate of Calibration

Calibration Certification Information			
Cal. Date: June 28, 2022	Rootsmeter S/N: 438320	Ta: 296	°K
Operator: Jim Tisch		Pa: 755.1	mm Hg
Calibration Model #: TE-5025A	Calibrator S/N: <b>3880</b>		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4500	3.2	2.00
2	3	4	1	1.0240	6.4	4.00
3	5	6	1	0.9130	7.9	5.00
4	7	8	1	0.8690	8.8	5.50
5	9	10	1	0.7180	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)	$\sqrt{\Delta H (Ta/Pa)}$ (y-axis)	
0.9961	0.6870	1.4144	0.9958	0.6867	0.8854	
0.9918	0.9686	2.0003	0.9915	0.9683	1.2522	
0.9899	1.0842	2.2364	0.9895	1.0838	1.4000	
0.9887	1.1377	2.3456	0.9883	1.1373	1.4683	
0.9834	1.3696	2.8289	0.9830	1.3691	1.7708	
<b>QSTD</b>	m=	<b>2.07013</b>	<b>QA</b>	m=	<b>1.29628</b>	
	b=	<b>-0.00727</b>		b=	<b>-0.00455</b>	
	r=	<b>0.99999</b>		r=	<b>0.99999</b>	

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

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



Lam Environmental Services Limited

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : AM1a  
 Equipment no. : 2036

Calibration Date : 7-Mar-23  
 Calibration Due Date : 7-May-23

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	295	Kelvin	Pressure, P <sub>a</sub>
			1017 mmHg

Orifice Transfer Standard Information					
Equipment No.	3880	Slope, m <sub>c</sub>	2.07013	Intercept, b <sub>c</sub>	-0.00727
Last Calibration Date	28-Jun-22	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-23				

Calibration of TSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	1.0	1.0	2.0	0.6914	36	36.2486
2	1.5	1.5	3.0	0.8460	42	42.2900
3	2.3	2.3	4.6	1.0467	50	50.3453
4	3.1	3.1	6.2	1.2146	54	54.3729
5	4.0	4.0	8.0	1.3793	60	60.4143

By Linear Regression of Y on X

Slope, m = 34.6587      Intercept, b = 12.8419  
 Correlation Coefficient\* = 0.9970  
 Calibration Accepted = Yes/No\*\*

\* if Correlation Coefficient &lt; 0.990, check and recalibration again.

\*\* Delete as appropriate.

Remarks : Serial No.:2036

Calibrated by : William Cheung  
 Date : 7-Mar-23

Checked by : Derek Lo  
 Date : 7-Mar-23



Lam Environmental Services Limited

**Calibration Data for High Volume Sampler (TSP Sampler)**

Location : AM2a  
 Equipment no. : 774

Calibration Date : 7-Mar-23  
 Calibration Due Date : 7-May-23

**CALIBRATION OF CONTINUOUS FLOW RECORDER**

Ambient Condition			
Temperature, T <sub>a</sub>	295	Kelvin	Pressure, P <sub>a</sub>
			1017 mmHg

Orifice Transfer Standard Information					
Equipment No.	3880	Slope, m <sub>c</sub>	2.07013	Intercept, b <sub>c</sub>	-0.00727
Last Calibration Date	28-Jun-22	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28-Jun-23				

Calibration of TSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC (W(P <sub>a</sub> /1013.3x298/T <sub>a</sub> ) <sup>1/2</sup> /35.31) Y-axis
	(up)	(down)	(difference)			
1	1.0	1.0	2.0	0.6914	10	10.0691
2	1.7	1.7	3.4	0.9004	20	20.1381
3	2.7	2.7	5.4	1.1338	30	30.2072
4	3.3	3.3	6.6	1.2531	34	34.2348
5	4.3	4.3	8.6	1.4299	40	40.2762

By Linear Regression of Y on X

Slope, m = 41.0046      Intercept, b = -17.3701  
 Correlation Coefficient\* = 0.9970  
 Calibration Accepted = Yes/No\*\*

\* if Correlation Coefficient &lt; 0.990, check and recalibration again.

\*\* Delete as appropriate.

Remarks : Serial No.:774

Calibrated by : William Cheung  
 Date : 7-Mar-23

Checked by : Derek Lo  
 Date : 7-Mar-23

# Certificate of Calibration

BT-645  
Particulate Monitor

*Recommended calibration interval is 24 months from first day of use.*

## Unit Info

Model: BT-645 81865 Firmware Rev: 1.3.0  
Serial Number: C15622 81113 0.2.4  
Calibrated By: J. Walker AT28 Cal. Date: 07/07/2022  
Quality Inspector: Coni Chuske Date: 07/07/2022  
Calibration Hz/ $\mu\text{g}/\text{m}^3$ : 7.10

## Final Test

Flow (2.0 L/M): Pass Ambient T (C) 23.8  
RH, % 38.7  
Serial Communication: Pass  
BT-645 Conc.: 425.64 Standard Conc.: 420.49

## Calibration Standards

Standards	Manufacturer	Model	SN	Cal Due
RMS Multimeter	Fluke	189 Multimeter	94060816	11/08/2022
RH & TEMPERATURE	Met One Instruments	083E-1-35	GP-679	05/17/2023
Primary Flow Meter	TSI	4040	40401945009	01/31/2023
Digital Dust Indicator	SIBATA	LD-3	476795	08/23/2022

The standards used for this calibration have accuracy equal to or greater than the instrument tested. These standards are on record and traceable to NIST to the extent allowed by the institute's calibration facility. Unless otherwise stated, all instruments are calibrated to meet the manufacturer's published specifications.



# Calibration Certificate

Certificate No. **211036**

Page 1 of 2 Pages

**Customer :** Lam Environmental Services Limited

**Address :** 19/F, Remex Centre, 42 Wong Chuk Hang Road, Hong Kong

**Order No. :** Q24331

**Date of receipt :** 24-Nov-22

## Item Tested

**Description :** Aerosol Mass Monitor

**Manufacturer :** Met One

**I.D. :** --

**Model :** Aerocet 831

**Serial No. :** Y23153

## Test Conditions

**Date of Test :** 13-Dec-22

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Calibration procedure : Manufacturer recommended method (gravimetric), Z28.

## Test Results

All results were within the tolerance(s).

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

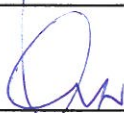
Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S136B	Stop Watch	201879	SCL-HKSAR
S238	Micro Balance	108228	NIM-PRC
S201	Std. Test Dust	61291	NIST
S207B	Std. Flowmeter	LL-2104002489	NIM-PRC

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

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.

The test results apply to the above Unit-Under-Test only

Calibrated by :   
Kin Wong

Approved by :   
Steve Kwan

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646

Date: 13-Dec-22



# Calibration Certificate

Certificate No. 211036

Page 2 of 2 Pages

Results :

## 1. General

Internal Filters : checked and found clean.

## 2. Flow Meter

UUT Nominal Value (LPM)	Measured Value (LPM)	Tolerance (LPM)	Uncertainty
2.83	2.80	$\pm 0.15$	$\pm 0.05$

## 3. Timer

Reference Value	UUT Reading	Tolerance	Uncertainty
10' 00" 40	10 min	$\pm 2$ sec/hr	$\pm 0.5$ sec/hr

## 4. Dust Particle (PM<sub>10</sub>)

Applied Value ( $\mu\text{g}/\text{m}^3$ )	UUT Reading ( $\mu\text{g}/\text{m}^3$ ) K Factor : 1.26	Tolerance	Uncertainty
350	364	$\pm 20\%$	$\pm 10\%$

- Remark :
1. UUT: Unit-Under-Test
  2. The uncertainty claimed is for a confidence probability of not less than 95%.
  3. ISO 12103-1 A1 respirable standard test dust was used for the calibration.
  4. The K Factor had been adjusted from 3.00 to 1.26.

----- END -----





**Calibration Data for High Volume Sampler (TSP Sampler)**

Equipment no.	2493
Calibration Date	3/2/2023
Calibration Due Date	3/4/2023
Location	G/FL;No.20,Pak Kung Street,Hung Hom ,Kowloon.

Ambient Condition			
Temperature, T <sub>a</sub>	292	Kelvin	Pressure, P <sub>a</sub>
			1018 mmHg

Orifice Transfer Standard Information					
Equipment No.	3880	Slope, m <sub>c</sub>	2.07013	Intercept, b <sub>c</sub>	-0.00727
Last Calibration Date	28/6/2022	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$ $= m_c \times Q_{std} + b_c$			
Next Calibration Date	28/6/2023				

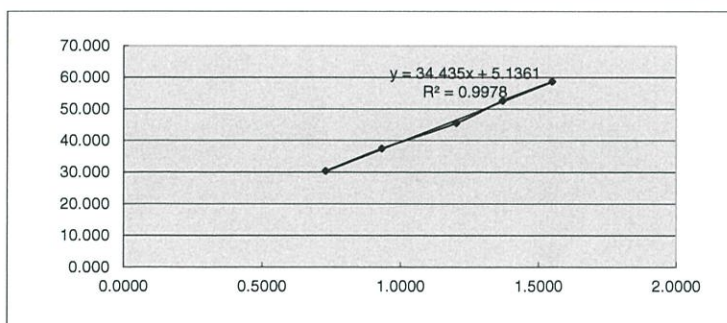
Calibration of TSP						
Calibration Point	Manometer Reading			Q <sub>std</sub> (m <sup>3</sup> / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ Y-axis
	(up)	(down)	(difference)			
1	1.1	1.1	2.2	0.7290	30	30.3769
2	1.8	1.8	3.6	0.9316	37	37.4648
3	3.0	3.0	6.0	1.2016	45	45.5653
4	3.9	3.9	7.8	1.3696	52	52.6532
5	5.0	5.0	10.0	1.5503	58	58.7286

By Linear Regression of Y on X

Slope, m = 34.4355      Intercept, b = 5.1361

Correlation Coefficient\* = 0.9989

Calibration Accepted = Yes/No\*\*



\* if Correlation Coefficient < 0.990, check and recalibration again.

\*\* Delete as appropriate.

Remarks : \_\_\_\_\_

Calibrated by : Wai Hung Poon  
 Poon Wai Hung

Checked by : Lo Kam Chuen  
 Lo Kam Chuen

Date : 3/4/2023

Date : 3/4/2023



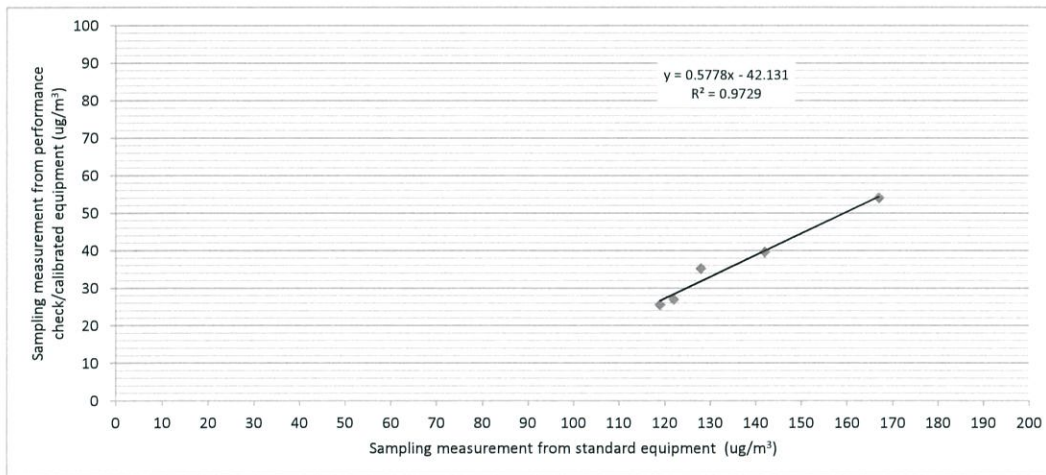
Equipment	Portable Dust Meter	Standard Equipment (High Volume Sampler)
Manufacturer	MET ONE INSTRUMENTS	TISCH
Model Number	BT-645	TE-5170
Serial Number	C15622	2493
Date	3/2/2023	3/2/2023
Location	GCE laboratory - G/FL; No.20, Pak Kung Street, Hung Hom, Kowloon.	

**Portable Dust Meter Performance Check Results**

Check Point	Date & Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m <sup>3</sup> (Standard equipment) (X - Axis)	Concentration in ug/m <sup>3</sup> (Performance Check / Calibrated equipment) (Y - Axis)
1	3/2/2023 9:30 -10:30	18	1019	167	54
2	3/2/2023 11:32 -12:32	18	1019	142	40
3	3/2/2023 12:34 - 13:34	18	1019	128	35
4	3/2/2023 13:36 - 14:36	18	1019	122	27
5	3/2/2023 14:38 - 15:38	18	1019	119	25

**Linear Regression of Y on X**

Slope (K- factor) : 1.7000  
 Correlation Coefficient : 0.9863  
 Validity of Performance Check / Calibration Record : 3/2/2024



Operator: Poon Wai Hung Date: 9/2/2023  
 Checked by: Ho Kam Chuen Date: 9/2/2023



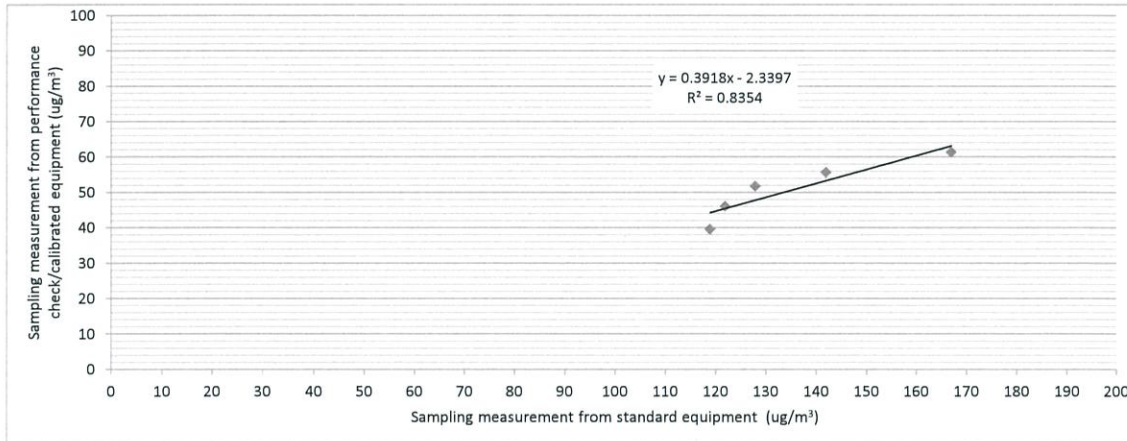
Equipment	Portable Dust Meter	Standard Equipment (High Volume Sampler)
Manufacturer	MET ONE INSTRUMENTS	TISCH
Model Number	AEROGET831	TE-5170
Serial Number	Y23153	2493
Date	3/2/2023	3/2/2023
Location	GCE laboratory-G/FL;No.20 Pak Kung Street., Hung Hom, Kowloon	

**Portable Dust Meter Performance Check Results**

Check Point	Date & Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m <sup>3</sup> (Standard equipment) (X - Axis)	Concentration in ug/m <sup>3</sup> (Performance Check / Calibrated equipment) (Y - Axis)
1	3/2/2023 9:30 -10:30	18	1019	167	61
2	3/2/2023 11:32 -12:32	18	1019	142	56
3	3/2/2023 12:34 - 13:34	18	1019	128	52
4	3/2/2023 13:36 - 14:36	18	1019	122	46
5	3/2/2023 14:38 - 15:38	18	1019	119	40

**Linear Regression of Y on X**

Slope (K- factor) : 2.2000  
 Correlation Coefficient : 0.9140  
 Validity of Performance Check / Calibration Record : 3/2/2024



Operator: Poon Wai Hung Poon Wai Hung

Date: 9/2/2023

Checked by: Lo Kam Chuen Lo Kam Chuen

Date: 9/2/2023





## CERTIFICATE OF CALIBRATION

Certificate No.: 23CA0308 01 Page 1 of 2

## Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone	Preamp
Manufacturer:	Nti	,	Nti Andio	
Type/Model No.:	XL2	,	MC230A	MA220
Serial/Equipment No.:	A2A-15269-EO	,	A16673	8034
Adaptors used:	-	,		

## Item submitted by

Customer Name: Lam Environmental Services Limited.  
Address of Customer: -  
Request No.: -  
Date of receipt: 08-Mar-2023

Date of test: 09-Mar-2023

## Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2023	CIGISMEC
Signal generator	DS 360	61227	08-Jun-2023	CEPREI

## Ambient conditions

Temperature:  $22 \pm 1$  °C  
Relative humidity:  $55 \pm 10$  %  
Air pressure:  $1010 \pm 5$  hPa

## Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of  $\pm 20\%$ .
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsess of the Sound Level Meter.

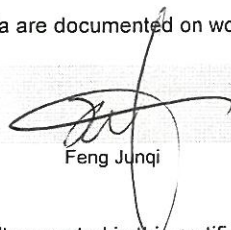
## Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

  
Feng Junqi

Date: 13-Mar-2023

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

23CA0308 01

Page 2 of 2

### 1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	2.1
	C	Pass	0.8	
	Lin	Pass	1.6	
Linearity range for Leq	At reference range , Step 5 dB at 4 kHz	Pass	0.3	2.2
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range , Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Time weightings	Lin	Pass	0.3	
	Single Burst Fast	Pass	0.3	
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
R.M.S. accuracy	Crest factor of 3	Pass	0.3	
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 <sup>3</sup> at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 <sup>4</sup> at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

### 2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

### 3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

Calibrated by:

Date:

Fung Chi Yip  
09-Mar-2023

- End -

Checked by:

Date:

Chan Yuk Yiu  
13-Mar-2023

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.





Test Data for Sound Level Meter

Page 1 of 6

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023  
Microphone type: MC230A Serial No. A16673  
Report: 23CA0308 01

### SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting	11.5	dB
Noise level in C weighting	15.4	dB
Noise level in Lin	20.4	dB

### LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals.(SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	39.0	39.0	0.7	0.0	0.0
34.0	34.1	34.1	0.7	0.1	0.1
33.0	33.1	33.1	0.7	0.1	0.1



Test Data for Sound Level Meter

Page 2 of 6

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023  
Microphone type: MC230A Serial No. A16673

Report: 23CA0308 01

32.0	32.2	32.2	0.7	0.2	0.2
31.0	31.2	31.2	0.7	0.2	0.2
30.0	30.3	30.3	0.7	0.3	0.3

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
40-140	94.0	94.0	0.7	0.0
20-120	94.0	94.0	0.7	0.0
0-100	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
40-140	51.0	51.7	0.7	0.7
	138.0	138.0	0.7	0.0
20-120	30.0	30.3	0.7	0.3
	118.0	118.0	0.7	0.0
0-100	30.0	30.0	0.7	0.0
	98.0	98.0	0.7	0.0

## FREQUENCY WEIGHTING TEST

The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.4	1.5	1.5	-0.2
63.1	94.0	67.8	67.7	1.5	1.5	-0.1
125.9	94.0	77.9	77.8	1.0	1.0	-0.1
251.2	94.0	85.4	85.3	1.0	1.0	-0.1
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.0	1.0	1.0	0.0
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.5	3.0	6.0	-0.2

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB





Test Data for Sound Level Meter

Page 3 of 6

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023  
Microphone type: MC230A Serial No. A16673

Report: 23CA0308 01

1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	90.8	1.5	1.5	-0.2
63.1	94.0	93.2	93.1	1.5	1.5	-0.1
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	93.9	1.0	1.0	-0.1
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	93.8	93.8	1.0	1.0	0.0
3981.0	94.0	93.2	93.2	1.0	1.0	0.0
7943.0	94.0	91.0	91.0	1.5	3.0	0.0
12590.0	94.0	87.8	87.6	3.0	6.0	-0.2

Frequency weighting Lin:

Frequency Hz	Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
				+	-	
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	93.8	1.5	1.5	-0.2
63.1	94.0	94.0	93.9	1.5	1.5	-0.1
125.9	94.0	94.0	93.9	1.0	1.0	-0.1
251.2	94.0	94.0	93.9	1.0	1.0	-0.1
501.2	94.0	94.0	93.9	1.0	1.0	-0.1
1995.0	94.0	94.0	93.9	1.0	1.0	-0.1
3981.0	94.0	94.0	94.0	1.0	1.0	0.0
7943.0	94.0	94.0	94.0	1.5	3.0	0.0
12590.0	94.0	94.0	93.9	3.0	6.0	-0.1

Note: No corrections for the frequency response of the microphone, instrument case and windshield are made to the sound level meter.

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
			+	-	
116.0	115.0	114.9	1.0	1.0	-0.1

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
			+	-	
116.0	111.9	111.9	1.0	1.0	0.0





Test Data for Sound Level Meter

Page 4 of 6

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023  
Microphone type: MC230A Serial No. A16673

Report: 23CA0308 01

### PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting Z, set the generator signal to single, Lzpeak)

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.5	2.0	0.5

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.5	2.0	0.5

### RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency: 2000 Hz  
Amplitude: 2 dB below the upper limit of the primary indicator range.  
Burst repetition frequency: 40 Hz  
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

Time weighting	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
	dB	dB	indication(dB)	+/- dB	dB
Slow	118.0+6.6	118.0	117.9	0.5	-0.1

### TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency: 2000 Hz  
Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burst indication		Tolerance	Deviation
	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	111.2	111.1	2.0	-0.1

Repeated at 100 Hz

Ref. Level	Repeated burst indication		Tolerance	Deviation
	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	117.3	117.1	1.0	-0.2

### TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks



Test Data for Sound Level Meter

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023  
Microphone type: MC230A Serial No. A16673  
Report: 23CA0308 01

msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	90.0	1.0	0.0	60s integ.
10000	80.0	80.0	80.0	1.0	0.0	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz  
Integration time: 10 sec

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	88.0	58.0	58.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	88.0	68.0	68.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency: 2000 Hz  
Amplitude: 2 dB below the upper limit of the primary indicator range.  
Burst repetition frequency: 40 Hz  
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
121.5	120.5	117.5	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following:  
The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz  
Integration time: 10 sec  
Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
127.5	126.5	86.5	86.5	2.2	0.0

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level	Tolerance (dB)		Deviation
Hz	dB	Measured (dB)	+	-	dB



Test Data for Sound Level Meter

Page 6 of 6

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 09-Mar-2023

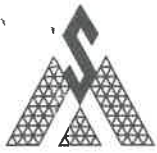
Microphone type: MC230A Serial No. A16673

Report: 23CA0308 01

1000	94.0	94.0	0.0	0.0	0.0
125	77.9	77.9	1.0	1.0	0.0
8000	92.9	92.6	1.5	3.0	-0.3

-----END-----





## CERTIFICATE OF CALIBRATION

Certificate No.: 22CA1101 02-01 Page 1 of 2

### Item tested

Description:	Sound Level Meter (Type 1)	Microphone	Preamp
Manufacturer:	Larson Davis	PCB	PCB
Type/Model No.:	LxT1	377B02	PRMLxT1L
Serial/Equipment No.:	0004797	340739	042622
Adaptors used:	-	-	-

### Item submitted by

Customer Name: Lam Environmental Services Limited.  
Address of Customer: -  
Request No.: -  
Date of receipt: 01-Nov-2022

Date of test: 04-Nov-2022

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2023	CIGISMEC
Signal generator	DS 360	33873	21-Jan-2023	CEPREI

### Ambient conditions

Temperature:  $22 \pm 1$  °C  
Relative humidity:  $55 \pm 10$  %  
Air pressure:  $1005 \pm 5$  hPa

### Test specifications

- 1, The Sound Level Meter has been calibrated in accordance with the requirements as specified in BS 7580: Part 1: 1997 and the lab calibration procedure SMTP004-CA-152.
- 2, The electrical tests were performed using an electrical signal substituted for the microphone which was removed and replaced by an equivalent capacitance within a tolerance of  $\pm 20\%$ .
- 3, The acoustic calibration was performed using an B&K 4226 sound calibrator and corrections was applied for the difference between the free-field and pressure responsiveness of the Sound Level Meter.

### Test results

This is to certify that the Sound Level Meter conforms to BS 7580: Part 1: 1997 for the conditions under which the test was performed.

Details of the performed measurements are presented on page 2 of this certificate.

Actual Measurement data are documented on worksheets.

Approved Signatory:

Feng Junqi

Date: 05-Nov-2022

Company Chop:



Comments: The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.



## CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.:

22CA1101 02-01

Page 2 of 2

### 1, Electrical Tests

The electrical tests were performed using an equivalent capacitance substituted for the microphone. The results are given in below with test status and the estimated uncertainties. The "Pass" means the result of the test is inside the tolerances stated in the test specifications. The "-" means the result of test is outside these tolerances.

Test:	Subtest:	Status:	Expanded Uncertainty (dB)	Coverage Factor
Self-generated noise	A	Pass	0.3	
	C	Pass	0.8	2.1
	Lin	Pass	1.6	2.2
Linearity range for Leq	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	Reference SPL on all other ranges	Pass	0.3	
	2 dB below upper limit of each range	Pass	0.3	
	2 dB above lower limit of each range	Pass	0.3	
Linearity range for SPL	At reference range, Step 5 dB at 4 kHz	Pass	0.3	
	A	Pass	0.3	
	C	Pass	0.3	
Frequency weightings	Lin	Pass	0.3	
	Time weightings	Single Burst Fast	Pass	0.3
	Single Burst Slow	Pass	0.3	
Peak response	Single 100µs rectangular pulse	Pass	0.3	
	R.M.S. accuracy	Crest factor of 3	Pass	0.3
Time weighting I	Single burst 5 ms at 2000 Hz	Pass	0.3	
	Repeated at frequency of 100 Hz	Pass	0.3	
Time averaging	1 ms burst duty factor 1/10 <sup>3</sup> at 4kHz	Pass	0.3	
	1 ms burst duty factor 1/10 <sup>4</sup> at 4kHz	Pass	0.3	
Pulse range	Single burst 10 ms at 4 kHz	Pass	0.4	
Sound exposure level	Single burst 10 ms at 4 kHz	Pass	0.4	
Overload indication	SPL	Pass	0.3	
	Leq	Pass	0.4	

### 2, Acoustic tests

The complete sound level meter was calibrated on the reference range using a B&K 4226 acoustic calibrator with 1000Hz and SPL 94 dB. The sensitivity of the sound level meter was adjusted. The test result at 125 Hz and 8000 Hz are given in below with test status and the estimated uncertainties.

Test:	Subtest	Status	Expanded Uncertainty (dB)	Coverage Factor
Acoustic response	Weighting A at 125 Hz	Pass	0.3	
	Weighting A at 8000 Hz	Pass	0.5	

### 3, Response to associated sound calibrator

N/A

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:		Checked by:	
Date:	04-Nov-2022	Date:	05-Nov-2022

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



Sound level meter type:	LxT1	Serial No.	0004797	Date	04-Nov-2022
Microphone type:	377B02	Serial No.	340739		
Preamp type:	PRMLxT1L	Serial No.	042622	Report:	22CA1101 02-01

### SELF GENERATED NOISE TEST

The noise test is performed in the most sensitive range of the SLM with the microphone replaced by an equivalent impedance.

Noise level in A weighting	8.7	dB
Noise level in C weighting	12.1	dB
Noise level in Lin	20.4	dB

### LINEARITY TEST

The linearity is tested relative to the reference sound pressure level using a continuous sinusoidal signal of frequency 4 kHz. The measurement is made on the reference range for indications at 5 dB intervals starting from the 94 dB reference sound pressure level. And until within 5 dB of the upper and lower limits of the reference range, the measurements shall be made at 1 dB intervals.(SLM set to LEQ/SPL)

Reference/Expected level	Actual level		Tolerance	Deviation	
	non-integrated	integrated		non-integrated	integrated
dB	dB	dB	+/- dB	dB	dB
94.0	94.0	94.0	0.7	0.0	0.0
99.0	99.0	99.0	0.7	0.0	0.0
104.0	104.0	104.0	0.7	0.0	0.0
109.0	109.0	109.0	0.7	0.0	0.0
114.0	114.0	114.0	0.7	0.0	0.0
115.0	115.0	115.0	0.7	0.0	0.0
116.0	116.0	116.0	0.7	0.0	0.0
117.0	117.0	117.0	0.7	0.0	0.0
118.0	118.0	118.0	0.7	0.0	0.0
119.0	119.0	119.0	0.7	0.0	0.0
120.0	120.0	120.0	0.7	0.0	0.0
89.0	89.0	89.0	0.7	0.0	0.0
84.0	84.0	84.0	0.7	0.0	0.0
79.0	79.0	79.0	0.7	0.0	0.0
74.0	74.0	74.0	0.7	0.0	0.0
69.0	69.0	69.0	0.7	0.0	0.0
64.0	64.0	64.0	0.7	0.0	0.0
59.0	59.0	59.0	0.7	0.0	0.0
54.0	54.0	54.0	0.7	0.0	0.0
49.0	49.0	49.0	0.7	0.0	0.0
44.0	44.0	44.0	0.7	0.0	0.0
39.0	38.9	38.9	0.7	-0.1	-0.1
34.0	34.0	34.0	0.7	0.0	0.0
33.0	33.0	33.0	0.7	0.0	0.0



Test Data for Sound Level Meter

Page 2 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 04-Nov-2022  
Microphone type: 377B02 Serial No. 340739  
Preamp type: PRMLxT1L Serial No. 042622 Report: 22CA1101 02-01

32.0	32.0	32.0	0.7	0.0	0.0
31.0	30.9	30.9	0.7	-0.1	-0.1
30.0	30.0	30.0	0.7	0.0	0.0

Measurements for an indication of the reference SPL on all other ranges which include it

Other ranges	Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-120	94.0	94.0	0.7	0.0

Measurements on all level ranges for indications 2 dB below the upper limit and 2 dB above the lower limit

Ranges	Reference/Expected level	Actual level	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
20-120	30.0	30.0	0.7	0.0
	118.0	118.0	0.7	0.0

**FREQUENCY WEIGHTING TEST**

The frequency response of the weighting networks are tested at octave intervals over the frequency ranges 31.5 Hz to 12500 Hz. The signal level at 1000 Hz is set to give an indication of the reference SPL.

Frequency weighting A:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	54.6	54.6	1.5	1.5	0.0
63.1	94.0	67.8	67.8	1.5	1.5	0.0
125.9	94.0	77.9	77.9	1.0	1.0	0.0
251.2	94.0	85.4	85.4	1.0	1.0	0.0
501.2	94.0	90.8	90.7	1.0	1.0	-0.1
1995.0	94.0	95.2	95.2	1.0	1.0	0.0
3981.0	94.0	95.0	95.0	1.0	1.0	0.0
7943.0	94.0	92.9	92.9	1.5	3.0	0.0
12590.0	94.0	89.7	89.7	3.0	6.0	0.0

Frequency weighting C:

Frequency	Ref. level	Expected level	Actual level	Tolerance(dB)		Deviation
				+	-	
Hz	dB	dB	dB			dB
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	91.0	91.0	1.5	1.5	0.0
63.1	94.0	93.2	93.1	1.5	1.5	-0.1
125.9	94.0	93.8	93.8	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0



Test Data for Sound Level Meter

Sound level meter type:	LxT1	Serial No.	0004797	Date	04-Nov-2022
Microphone type:	377B02	Serial No.	340739		
Preamp type:	PRMLxT1L	Serial No.	042622	Report:	22CA1101 02-01

1995.0	94.0	93.8	93.8	1.0	1.0	0.0
3981.0	94.0	93.2	93.2	1.0	1.0	0.0
7943.0	94.0	91.0	91.0	1.5	3.0	0.0
12590.0	94.0	87.8	87.7	3.0	6.0	-0.1

Frequency weighting Lin:

Frequency Hz	Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
				+	-	
1000.0	94.0	94.0	94.0	0.0	0.0	0.0
31.6	94.0	94.0	93.9	1.5	1.5	-0.1
63.1	94.0	94.0	94.0	1.5	1.5	0.0
125.9	94.0	94.0	94.0	1.0	1.0	0.0
251.2	94.0	94.0	94.0	1.0	1.0	0.0
501.2	94.0	94.0	94.0	1.0	1.0	0.0
1995.0	94.0	94.0	94.0	1.0	1.0	0.0
3981.0	94.0	94.0	94.0	1.0	1.0	0.0
7943.0	94.0	94.0	94.0	1.5	3.0	0.0
12590.0	94.0	94.0	94.0	3.0	6.0	0.0

TIME WEIGHTING FAST TEST

Time weighting F is tested on the reference range with a single sinusoidal burst of duration 200 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
			+	-	
116.0	115.0	114.9	1.0	1.0	-0.1

TIME WEIGHTING SLOW TEST

Time weighting S is tested on the reference range with a single sinusoidal burst of duration 500 ms at a frequency 2000 Hz and an amplitude which produces an indication 4 dB below the upper limit of the primary indicator range when the signal is continuous. (Weight A, Maximum hold)

Ref. level dB	Expected level dB	Actual level dB	Tolerance(dB)		Deviation dB
			+	-	
116.0	111.9	111.8	1.0	1.0	-0.1

PEAK RESPONSE TEST

The onset time of the peak detector is tested on the reference range by comparing the response to a 100 us rectangular test pulse with the response to a 10 ms reference pulse of the same amplitude. The amplitude of the 10 ms reference pulse is such as to produce an indication 1 dB below the upper limit of the primary indicator range.

Positive polarities: (Weighting Z, set the generator signal to single, Lzpeak)

Ref. level dB	Response to 10 ms dB	Response to 100 us dB	Tolerance	Deviation dB
			+/- dB	
119.0	119.0	118.5	2.0	-0.5





Test Data for Sound Level Meter

Page 4 of 5

Sound level meter type: LxT1 Serial No. 0004797 Date 04-Nov-2022  
Microphone type: 377B02 Serial No. 340739  
Preamp type: PRMLxT1L Serial No. 042622 Report: 22CA1101 02-01

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	118.5	2.0	-0.5

RMS ACCURACY TEST

The RMS detector accuracy is tested on the reference range for a crest factor of 3.

Test frequency: 2000 Hz  
Amplitude: 2 dB below the upper limit of the primary indicator range.  
Burst repetition frequency: 40 Hz  
Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz. (Set to INT)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time weighting	dB	dB	indication(dB)	+/- dB	dB
Slow	114.0+6.6	114.0	113.9	0.5	-0.1

TIME WEIGHTING IMPULSE TEST

Time weighting I is tested on the reference range (Set the SLM to LAImax)

Test frequency: 2000 Hz  
Amplitude: The upper limit of the primary indicator range.

Single sinusoidal burst of duration 5 ms:

Ref. Level	Single burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	111.2	111.1	2.0	-0.1

Repeated at 100 Hz

Ref. Level	Repeated burst indication		Tolerance	Deviation
dB	Expected (dB)	Actual (dB)	+/- dB	dB
120.0	117.3	117.1	1.0	-0.2

TIME AVERAGING TEST

This test compares the SLM reading for continuous sine signals with readings obtained from a sine tone burst sequence having the same RMS level. The test level is 30 dB below the upper limit of the linearity range and repeated for Type 1 SLM with 40 dB below the upper limit of the linearity.

Frequency of tone burst: 4000 Hz

Duration of tone burst: 1 ms

Repetition Time	Level of tone burst	Expected Leq	Actual Leq	Tolerance	Deviation	Remarks
msec	dB	dB	dB	+/- dB	dB	
1000	90.0	90.0	89.9	1.0	-0.1	60s integ.
10000	80.0	80.0	79.9	1.0	-0.1	6min. integ.

PULSE RANGE AND SOUND EXPOSURE LEVEL TEST

The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range

Test frequency: 4000 Hz

Integration time: 10 sec



Test Data for Sound Level Meter

Sound level meter type:	LxT1	Serial No.	0004797	Date	04-Nov-2022
Microphone type:	377B02	Serial No.	340739		
Preamp type:	PRMLxT1L	Serial No.	042622	Report:	22CA1101 02-01

The integrating sound level meter set to Leq:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10	90.0	60.0	60.0	1.7	0.0

The integrating sound level meter set to SEL:

Duration	Rms level of	Expected	Actual	Tolerance	Deviation
msec	tone burst (dB)	dB	dB	+/- dB	dB
10.0	90.0	70.0	70.0	1.7	0.0

OVERLOAD INDICATION TEST

For SLM capable of operating in a non-integrating mode.

Test frequency: 2000 Hz  
 Amplitude: 2 dB below the upper limit of the primary indicator range.  
 Burst repetition frequency: 40 Hz  
 Tone burst signal: 11 cycles of a sine wave of frequency 2000 Hz.

Level	Level reduced by	Further reduced	Difference	Tolerance	Deviation
at overload (dB)	1 dB	3 dB	dB	dB	dB
113.2	112.2	109.2	3.0	1.0	0.0

For integrating SLM, with the instrument indicating Leq.

For integrating SLM, with the instrument indicating Leq and set to the reference range. The test signal as following:  
 The test tone burst signal is superimposed on a baseline signal corresponding to the lower limit of reference range  
 Test frequency: 4000 Hz  
 Integration time: 10 sec  
 Single burst duration: 1 msec

Rms level	Level reduced by	Expected level	Actual level	Tolerance	Deviation
at overload (dB)	1 dB	dB	dB	dB	dB
119.9	118.9	78.9	78.9	2.2	0.0

ACOUSTIC TEST

The acoustic test of the complete SLM is tested at the frequency 125 Hz and 8000 Hz using a B&K type 4226 Multifunction Acoustic Calibrator. The test is performed in A weighting.

Frequency	Expected level	Actual level		Tolerance (dB)	Deviation
		Hz	Measured (dB)		
	dB			+	-
1000	94.0	94.0	94.0	0.0	0.0
125	77.9	77.9	77.9	1.0	1.0
8000	92.9	93.9	93.9	1.5	3.0

-----END-----



## CERTIFICATE OF CALIBRATION

Certificate No.:

22CA1101 02-02

Page: 1 of 2

### Item tested

Description: Acoustical Calibrator (Class 1)  
Manufacturer: Larson Davis  
Type/Model No.: CAL200  
Serial/Equipment No.: 13437  
Adaptors used: -

### Item submitted by

Customer: Lam Environmental Services Ltd.  
Address of Customer: -  
Request No.: -  
Date of receipt: 01-Nov-2022

Date of test: 04-Nov-2022

### Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2412857	23-May-2023	SCL
Preamplifier	B&K 2673	2743150	28-Jun-2023	CEPREI
Measuring amplifier	B&K 2610	2346941	30-Jun-2023	CEPREI
Signal generator	DS 360	33873	21-Jan-2023	CEPREI
Digital multi-meter	34401A	US36087050	30-May-2023	CEPREI
Audio analyzer	8903B	GB41300350	06-Jul-2023	CEPREI
Universal counter	53132A	MY40003662	13-Jun-2023	CEPREI

### Ambient conditions

Temperature:  $22 \pm 1$  °C  
Relative humidity:  $55 \pm 10$  %  
Air pressure:  $1005 \pm 5$  hPa

### Test specifications

- 1, The Sound Calibrator has been calibrated in accordance with the requirements as specified in IEC 60942 1997 Annex B and the lab calibration procedure SMTP004-CA-156.
- 2, The calibrator was tested with its axis vertical facing downwards at the specific frequency using insert voltage technique.
- 3, The results are rounded to the nearest 0.01 dB and 0.1 Hz and have not been corrected for variations from a reference pressure of 1013.25 hectoPascals as the maker's information indicates that the instrument is insensitive to pressure changes.

### Test results

This is to certify that the sound calibrator conforms to the requirements of annex B of IEC 60942: 1997 for the conditions under which the test was performed. This does not imply that the sound calibrator meets IEC 60942 under any other conditions.

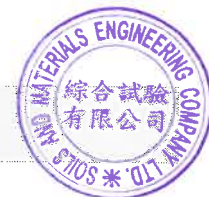
Details of the performed measurements are presented on page 2 of this certificate.

Approved Signatory:

Feng Junqi

Date: 05-Nov-2022

Company Chop:



**Comments:** The results reported in this certificate refer to the condition of the instrument on the date of calibration and carry no implication regarding the long-term stability of the instrument. The results apply to the item as received.

**CERTIFICATE OF CALIBRATION**

(Continuation Page)

Certificate No.: 22CA1101 02-02

Page: 2 of 2

**1, Measured Sound Pressure Level**

The output Sound Pressure Level in the calibrator head was measured at the setting and frequency shown using a calibrated laboratory standard microphone and insert voltage technique. The results are given in below with the estimated uncertainties.

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	(Output level in dB re 20 µPa)
			Estimated Expanded Uncertainty dB
1000	94.00	93.76	0.10

**2, Sound Pressure Level Stability - Short Term Fluctuations**

The Short Term Fluctuations was determined by measuring the maximum and minimum of the fast weighted DC output of the B&K 2610 measuring amplifier over a 20 second time interval as required in the standard. The Short Term Fluctuation was found to be:

At 1000 Hz **STF = 0.011 dB**  
Estimated expanded uncertainty 0.005 dB

**3, Actual Output Frequency**

The determination of actual output frequency was made using a B&K 4180 microphone together with a B&K 2673 preamplifier connected to a B&K 2610 measuring amplifier. The AC output of the B&K 2610 was taken to an universal counter which was used to determine the frequency averaged over 20 second of operation as required by the standard. The actual output frequency at 1 KHz was:

At 1000 Hz **Actual Frequency = 1000.0 Hz**  
Estimated expanded uncertainty 0.1 Hz Coverage factor k = 2.2

**4, Total Noise and Distortion**

For the Total Noise and Distortion measurement, the unfiltered AC output of the B&K 2610 measuring amplifier was connected to an Agilent Type 8903 B distortion analyser. The TND result at 1 KHz was:

At 1000 Hz **TND = 0.7%**  
Estimated expanded uncertainty 0.7 %

The expanded uncertainties have been calculated in accordance with the ISO Publication "Guide to the expression of uncertainty in measurement", and gives an interval estimated to have a level of confidence of 95%. A coverage factor of 2 is assumed unless explicitly stated.

- End -

Calibrated by:

Fung Chi Yip

Date: 04-Nov-2022

Checked by:

Chan Yuk Yiu

Date: 05-Nov-2022

The standard(s) and equipment used in the calibration are traceable to national or international recognised standards and are calibrated on a schedule to maintain the required accuracy level.



**Wind Station Performance Check Record**

Type : Weather Station

Manufacturer : 武汉辰云科技有限公司

Model Number : YGY-FSXY1

Serial Number : YG 21071630T0924

Performance Check Date : 22-Mar-2023

**Performance Check Results**

Wind Speed Range (m/s)	Reading Value (V1, m/s)	Anemometer Value (V2, m/s)	Difference (V1 - V2, m/s)
Zero Check	0.0	0.0	0.0
1 - 2	1.5	1.8	-0.3
3 - 4	4.1	4.0	0.1
5 - 6	5.8	5.1	0.7
7 - 8	7.4	7.3	0.2

Wind Direction (°)	Reading Value (W1, °)	Compass Value (W2, °)	Difference (W1 - W2, °)
0	0	0	0
90	89	90	-1
180	181	180	1
270	270	270	0

Test Reference:

1. Wind Speed Check - Speed reading checked on-site against anemometer logged value.
2. Wind Direction Check - Direction reading checked on on-site against compass marked reading.

Conducted by: William Cheung

Checked by: Raymond Dai



## REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

**CONTACT:** DEREK LO  
**CLIENT:** LAM ENVIRONMENTAL SERVICES LTD  
**ADDRESS:** 19/F, REMEX CENTRE,  
42 WONG CHUK HANG ROAD,  
HONG KONG

**WORK ORDER:** HK2303761  
**SUB-BATCH:** 0  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 31-Jan-2023  
**DATE OF ISSUE:** 09-Feb-2023

### SPECIFIC COMMENTS

Equipment information (Brand name, Model No., Serial No. and Equipment No.) is provided by client. The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.

The "Tolerance Limit" quoted is the acceptance criteria applicable for similar equipment used by the laboratory or quoted from relevant international standards.

The "Next Calibration Date" is recommended according to best practice principle as practised by the laboratory or quoted from relevant international standards.

The validity of equipment/ meter performance only applies to the result(s) stated in the report.

Equipment Type: Multifunctional Meter  
Service Nature: Performance Check  
Scope: Dissolved Oxygen, pH Value, Salinity and Temperature  
Brand Name/ Model No.: [YSI]/ [Professional Plus]  
Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]  
Date of Calibration: 08-February-2023

### GENERAL COMMENTS

This report superseded any previous report(s) with same work order number.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

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# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2303761  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 09-Feb-2023  
**CLIENT:** LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [Professional Plus]  
Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]  
Date of Calibration: 08-February-2023 Date of Next Calibration: 08-May-2023

## PARAMETERS:

### Dissolved Oxygen

Method Ref: APHA (23rd edition), 4500O: G

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)
2.79	2.61	-0.18
5.24	5.34	+0.10
7.60	7.65	+0.05
	Tolerance Limit (mg/L)	±0.20

### pH Value

Method Ref: APHA (23rd edition), 4500H: B

Expected Reading (pH unit)	Displayed Reading (pH unit)	Tolerance (pH unit)
4.0	3.91	-0.09
7.0	7.02	+0.02
10.0	9.90	-0.10
	Tolerance Limit (pH unit)	±0.20

### Salinity

Method Ref: APHA (23rd edition), 2520B

Expected Reading (ppt)	Displayed Reading (ppt)	Tolerance (%)
0	0.01	--
10	9.58	-4.2
20	19.84	-0.8
30	29.16	-2.8
	Tolerance Limit (%)	±10.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics

# REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION



**WORK ORDER:** HK2303761  
**SUB-BATCH:** 0  
**DATE OF ISSUE:** 09-Feb-2023  
**CLIENT:** LAM ENVIRONMENTAL SERVICES LTD

Equipment Type: Multifunctional Meter  
Brand Name/ Model No.: [YSI]/ [Professional Plus]  
Serial No./ Equipment No.: [19H100656/14E101065]/ [N/A]  
Date of Calibration: 08-February-2023 Date of Next Calibration: 08-May-2023

## PARAMETERS:

### Temperature

**Method Ref: Section 6 of International Accreditation New Zealand Technical Guide No. 3 Second edition March 2008: Working Thermometer Calibration Procedure.**

Expected Reading (°C)	Displayed Reading (°C)	Tolerance (°C)
11.5	10.9	-0.6
22.0	21.2	-0.8
38.0	37.3	-0.7
	Tolerance Limit (°C)	±2.0

Remark: "Displayed Reading" presents the figures shown on item under calibration / checking regardless of equipment precision or significant figures.

Ms. Lin Wai Yu, Iris  
Assistant Manager - Inorganics





REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

Information supplied by customer:

CONTACT: MR. DEREK LO JOB REFERENCE NO.: 22777053-C03D3701  
CLIENT: LAM ENVIRONMENTAL SERVICES LTD.  
DATE RECEIVED: 03/03/2023  
DATE OF ISSUE: 13/03/2023  
ADDRESS: 19/F, REMAX CENTRE, 42 WONG CHUK HANG ROAD,  
HONG KONG  
PROJECT: ---

METHOD OF PERFORMANCE CHECK/ CALIBRATION:

Ref: APHA22nd ed 2130B

COMMENTS


It is certified that the item under performance check/calibration has been calibrated/checked by corresponding calibrated equipment in the laboratory.  
Maximum Tolerance and calibration frequency stated in the report, unless otherwise stated, the internal acceptance criteria of FT Laboratories Ltd will be followed.

Scope of Test:	Turbidity
Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1807073
Equipment No.:	---
Date of Calibration:	10/03/2023

Remarks:

This is the Final Report. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

Certified By:

  
WONG Chi Wai Sanio  
Senior Chemist

Issue Date:

13/03/2023

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Form No.: HG022-002 Rev 0 20190101

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REPORT OF EQUIPMENT PERFORMANCE CHECK / CALIBRATION

WORK ORDER: 22777053-C03D3701  
DATE OF ISSUE: 13/03/2023  
CLIENT: LAM ENVIRONMENTAL SERVICES LTD.

Equipment Type:	Turbidimeter
Brand Name:	Xin Rui
Model No.:	WGZ-3B
Serial No.:	1807073
Equipment No.:	---
Date of Calibration:	10/03/2023
Date of next Calibration:	10/06/2023
Lab I.D.:	H230010-01

Parameters:

Turbidity

Method Ref: APHA 22<sup>nd</sup> ed. 2130B

Expected Reading (NTU)	Display Reading (NTU)	Tolerance
0	0.00	---
4	4.00	0.0%
10	9.98	-0.2%
40	40.00	0.0%
100	98.86	-1.1%
400	400	0.0%
1000	994	-0.6%
	Tolerance Limit ( $\pm$ )	10%

Remark: "Displayed Reading" presents the figures shown on item under calibration/checking regardless of equipment precision or significant figures.



## ***Appendix 4.3***

### ***Wind Data***



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
1-Apr-23	00:00	2.5	110(ESE)
	01:00	3.9	124(SE)
	02:00	0.9	202(SSW)
	03:00	0.9	277(W)
	04:00	1.7	94(E)
	05:00	3.3	83(E)
	06:00	1.9	75(ENE)
	07:00	2.5	75(ENE)
	08:00	1.3	115(ESE)
	09:00	2.5	94(E)
	10:00	1.7	157(SSE)
	11:00	2.3	156(SSE)
	12:00	1.9	145(SE)
	13:00	1.5	230(SW)
	14:00	2.5	127(SE)
	15:00	2.9	134(SE)
	16:00	1.5	81(E)
	17:00	2.3	59(ENE)
	18:00	2.1	92(E)
	19:00	1.9	86(E)
	20:00	2.5	78(ENE)
	21:00	1.7	137(SE)
	22:00	4.5	107(ESE)
23:00	0.0	277(W)	
2-Apr-23	00:00	1.5	99(E)
	01:00	2.9	88(E)
	02:00	2.3	67(ENE)
	03:00	0.9	147(SSE)
	04:00	1.7	151(SSE)
	05:00	2.3	61(ENE)
	06:00	2.1	110(ESE)
	07:00	2.1	119(ESE)
	08:00	1.1	308(NW)
	09:00	1.7	74(ENE)
	10:00	2.1	68(ENE)
	11:00	0.9	175(S)
	12:00	0.9	288(WNW)
	13:00	1.5	124(SE)
	14:00	1.1	142(SE)
	15:00	2.3	97(E)
	16:00	1.7	118(ESE)
	17:00	1.3	116(ESE)
	18:00	1.1	90(E)
	19:00	2.5	117(ESE)
	20:00	2.3	107(ESE)
	21:00	1.3	79(E)
	22:00	0.7	111(ESE)
23:00	1.3	136(SE)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
3-Apr-23	00:00	2.1	91(E)
	01:00	2.3	115(ESE)
	02:00	1.9	90(E)
	03:00	2.1	75(ENE)
	04:00	2.1	125(SE)
	05:00	2.3	85(E)
	06:00	1.7	71(ENE)
	07:00	1.7	221(SW)
	08:00	0.7	239(WSW)
	09:00	1.5	161(SSE)
	10:00	0.7	33(NNE)
	11:00	2.5	131(SE)
	12:00	0.9	268(W)
	13:00	2.3	119(ESE)
	14:00	7.5	100(E)
	15:00	0.9	214(SW)
	16:00	2.5	108(ESE)
	17:00	1.9	157(SSE)
	18:00	0.9	132(SE)
	19:00	2.5	279(W)
	20:00	0.9	205(SSW)
	21:00	2.5	129(SE)
	22:00	2.1	164(SSE)
23:00	0.9	161(SSE)	
4-Apr-23	00:00	1.3	252(WSW)
	01:00	2.3	106(ESE)
	02:00	3.5	172(S)
	03:00	0.9	158(SSE)
	04:00	1.7	134(SE)
	05:00	0.7	139(SE)
	06:00	0.0	123(ESE)
	07:00	0.5	64(ENE)
	08:00	0.7	279(W)
	09:00	2.9	148(SSE)
	10:00	1.1	109(ESE)
	11:00	1.1	274(W)
	12:00	1.5	162(SSE)
	13:00	1.3	302(WNW)
	14:00	3.1	195(SSW)
	15:00	3.5	92(E)
	16:00	1.9	97(E)
	17:00	1.3	192(SSW)
	18:00	0.9	308(NW)
	19:00	1.3	180(S)
	20:00	1.1	127(SE)
	21:00	0.9	10(N)
	22:00	0.0	257(WSW)
23:00	0.0	172(S)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
5-Apr-23	00:00	0.0	288(WNW)
	01:00	1.3	96(E)
	02:00	0.5	74(ENE)
	03:00	0.7	121(ESE)
	04:00	0.9	171(S)
	05:00	0.0	183(S)
	06:00	0.0	121(ESE)
	07:00	0.5	126(SE)
	08:00	0.9	83(E)
	09:00	0.0	308(NW)
	10:00	0.0	279(W)
	11:00	1.1	147(SSE)
	12:00	0.0	130(SE)
	13:00	3.1	200(SSW)
	14:00	1.1	335(NNW)
	15:00	0.9	231(SW)
	16:00	0.9	225(SW)
	17:00	1.3	303(WNW)
	18:00	1.3	197(SSW)
	19:00	1.3	297(WNW)
	20:00	0.0	192(SSW)
	21:00	0.5	111(ESE)
	22:00	0.0	231(SW)
23:00	0.7	285(WNW)	
6-Apr-23	00:00	1.5	100(E)
	01:00	0.5	261(W)
	02:00	1.1	71(ENE)
	03:00	0.0	115(ESE)
	04:00	0.7	111(ESE)
	05:00	1.3	77(ENE)
	06:00	0.0	275(W)
	07:00	1.3	89(E)
	08:00	0.7	43(NE)
	09:00	1.3	181(S)
	10:00	1.1	217(SW)
	11:00	2.1	260(W)
	12:00	1.9	290(WNW)
	13:00	2.5	136(SE)
	14:00	2.7	217(SW)
	15:00	3.5	280(W)
	16:00	2.5	282(WNW)
	17:00	2.5	294(WNW)
	18:00	0.9	224(SW)
	19:00	0.0	242(WSW)
	20:00	0.5	295(WNW)
	21:00	2.7	300(WNW)
	22:00	0.9	246(WSW)
23:00	1.5	306(NW)	





## Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
7-Apr-23	00:00	2.7	41(NE)
	01:00	2.7	65(ENE)
	02:00	2.1	243(WSW)
	03:00	3.1	67(ENE)
	04:00	2.5	58(ENE)
	05:00	3.5	81(E)
	06:00	3.5	81(E)
	07:00	3.5	75(ENE)
	08:00	5.7	79(E)
	09:00	2.7	74(ENE)
	10:00	1.1	59(ENE)
	11:00	3.5	83(E)
	12:00	0.9	114(ESE)
	13:00	1.3	278(W)
	14:00	2.3	77(ENE)
	15:00	0.5	181(S)
	16:00	1.3	297(WNW)
	17:00	1.5	86(E)
	18:00	0.9	112(ESE)
	19:00	2.9	95(E)
	20:00	2.1	70(ENE)
	21:00	2.7	90(E)
	22:00	0.7	71(ENE)
23:00	1.3	114(ESE)	
8-Apr-23	00:00	1.3	86(E)
	01:00	1.5	51(NE)
	02:00	2.7	61(ENE)
	03:00	2.5	100(E)
	04:00	2.5	88(E)
	05:00	1.5	70(ENE)
	06:00	1.9	101(E)
	07:00	0.0	66(ENE)
	08:00	1.7	99(E)
	09:00	1.5	105(ESE)
	10:00	1.7	94(E)
	11:00	1.3	57(ENE)
	12:00	0.9	137(SE)
	13:00	1.3	261(W)
	14:00	0.7	107(ESE)
	15:00	1.1	17(NNE)
	16:00	0.0	246(WSW)
	17:00	0.9	107(ESE)
	18:00	1.7	95(E)
	19:00	1.1	85(E)
	20:00	2.5	115(ESE)
	21:00	0.0	78(ENE)
	22:00	0.0	44(NE)
23:00	0.0	58(ENE)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
9-Apr-23	00:00	1.9	69(ENE)
	01:00	0.9	91(E)
	02:00	1.3	72(ENE)
	03:00	1.7	99(E)
	04:00	1.7	61(ENE)
	05:00	0.9	74(ENE)
	06:00	1.5	65(ENE)
	07:00	1.7	64(ENE)
	08:00	1.7	68(ENE)
	09:00	1.3	186(S)
	10:00	0.0	160(SSE)
	11:00	0.0	279(W)
	12:00	0.0	306(NW)
	13:00	1.9	48(NE)
	14:00	0.0	317(NW)
	15:00	0.5	297(WNW)
	16:00	2.9	139(SE)
	17:00	2.5	107(ESE)
	18:00	3.1	95(E)
	19:00	0.9	35(NE)
	20:00	1.3	50(NE)
	21:00	0.0	105(ESE)
	22:00	1.1	102(ESE)
23:00	0.0	32(NNE)	
10-Apr-23	00:00	0.0	55(NE)
	01:00	1.5	94(E)
	02:00	2.5	62(ENE)
	03:00	1.9	82(E)
	04:00	2.3	93(E)
	05:00	2.3	106(ESE)
	06:00	3.5	130(SE)
	07:00	2.3	71(ENE)
	08:00	1.3	123(ESE)
	09:00	1.5	113(ESE)
	10:00	1.1	249(WSW)
	11:00	1.9	116(ESE)
	12:00	1.9	128(SE)
	13:00	1.7	89(E)
	14:00	2.1	96(E)
	15:00	1.3	121(ESE)
	16:00	1.5	74(ENE)
	17:00	2.7	142(SE)
	18:00	1.3	118(ESE)
	19:00	2.5	113(ESE)
	20:00	2.1	103(ESE)
	21:00	1.9	68(ENE)
	22:00	1.1	83(E)
23:00	1.3	100(E)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
11-Apr-23	00:00	3.1	126(SE)
	01:00	2.1	103(ESE)
	02:00	2.5	126(SE)
	03:00	2.3	106(ESE)
	04:00	1.5	72(ENE)
	05:00	0.0	81(E)
	06:00	0.5	147(SSE)
	07:00	0.9	157(SSE)
	08:00	0.9	70(ENE)
	09:00	2.1	177(S)
	10:00	2.1	145(SE)
	11:00	2.1	137(SE)
	12:00	0.0	306(NW)
	13:00	2.1	82(E)
	14:00	2.1	91(E)
	15:00	0.5	113(ESE)
	16:00	2.1	100(E)
	17:00	1.3	141(SE)
	18:00	1.9	152(SSE)
	19:00	1.5	95(E)
	20:00	2.5	118(ESE)
	21:00	1.1	66(ENE)
	22:00	2.5	52(NE)
23:00	0.9	60(ENE)	
12-Apr-23	00:00	0.0	94(E)
	01:00	0.0	68(ENE)
	02:00	0.0	128(SE)
	03:00	0.0	96(E)
	04:00	0.0	105(ESE)
	05:00	0.0	143(SE)
	06:00	0.0	260(W)
	07:00	0.0	290(WNW)
	08:00	0.0	139(SE)
	09:00	0.0	288(WNW)
	10:00	0.0	302(WNW)
	11:00	0.0	94(E)
	12:00	0.0	97(E)
	13:00	2.9	128(SE)
	14:00	0.9	286(WNW)
	15:00	1.5	253(WSW)
	16:00	1.3	289(WNW)
	17:00	1.5	281(W)
	18:00	2.1	89(E)
	19:00	0.5	120(ESE)
	20:00	2.3	110(ESE)
	21:00	0.9	146(SE)
	22:00	2.5	120(ESE)
23:00	3.5	115(ESE)	



## Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
13-Apr-23	00:00	3.1	127(SE)
	01:00	2.3	61(ENE)
	02:00	1.7	55(NE)
	03:00	2.7	112(ESE)
	04:00	1.7	80(E)
	05:00	0.0	75(ENE)
	06:00	1.7	117(ESE)
	07:00	0.9	116(ESE)
	08:00	2.1	132(SE)
	09:00	4.5	160(SSE)
	10:00	5.7	111(ESE)
	11:00	0.7	337(NNW)
	12:00	2.7	139(SE)
	13:00	1.5	254(WSW)
	14:00	1.9	211(SSW)
	15:00	2.1	142(SE)
	16:00	2.5	181(S)
	17:00	1.5	108(ESE)
	18:00	1.7	212(SSW)
	19:00	1.1	104(ESE)
	20:00	0.0	93(E)
	21:00	1.3	33(NNE)
	22:00	0.5	260(W)
23:00	2.1	78(ENE)	
14-Apr-23	00:00	0.9	62(ENE)
	01:00	2.1	77(ENE)
	02:00	2.5	71(ENE)
	03:00	0.5	213(SSW)
	04:00	2.1	107(ESE)
	05:00	1.3	96(E)
	06:00	1.3	129(SE)
	07:00	0.9	138(SE)
	08:00	2.5	127(SE)
	09:00	2.3	84(E)
	10:00	2.7	80(E)
	11:00	1.1	118(ESE)
	12:00	1.3	179(S)
	13:00	1.5	212(SSW)
	14:00	0.0	118(ESE)
	15:00	1.7	302(WNW)
	16:00	3.7	300(WNW)
	17:00	1.1	308(NW)
	18:00	1.3	286(WNW)
	19:00	0.0	284(WNW)
	20:00	0.0	288(WNW)
	21:00	1.1	320(NW)
	22:00	0.0	271(W)
23:00	0.0	267(W)	



## Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
15-Apr-23	00:00	0.0	264(W)
	01:00	0.0	281(W)
	02:00	0.0	274(W)
	03:00	0.0	294(WNW)
	04:00	0.0	296(WNW)
	05:00	0.0	280(W)
	06:00	0.0	289(WNW)
	07:00	0.0	266(W)
	08:00	0.0	277(W)
	09:00	0.0	266(W)
	10:00	2.9	34(NE)
	11:00	2.1	62(ENE)
	12:00	0.9	147(SSE)
	13:00	1.3	297(WNW)
	14:00	3.7	311(NW)
	15:00	1.9	33(NNE)
	16:00	0.0	311(NW)
	17:00	2.1	63(ENE)
	18:00	0.0	86(E)
	19:00	2.1	163(SSE)
	20:00	0.0	111(ESE)
	21:00	0.0	24(NNE)
	22:00	1.3	128(SE)
23:00	0.0	278(W)	
16-Apr-23	00:00	1.5	59(ENE)
	01:00	0.7	83(E)
	02:00	0.0	252(WSW)
	03:00	0.0	308(NW)
	04:00	0.0	179(S)
	05:00	0.0	191(S)
	06:00	0.0	221(SW)
	07:00	0.0	240(WSW)
	08:00	0.0	266(W)
	09:00	2.3	76(ENE)
	10:00	0.0	258(WSW)
	11:00	0.7	124(SE)
	12:00	0.7	232(SW)
	13:00	2.7	109(ESE)
	14:00	2.3	177(S)
	15:00	4.1	136(SE)
	16:00	2.1	192(SSW)
	17:00	3.3	109(ESE)
	18:00	1.3	122(ESE)
	19:00	1.1	53(NE)
	20:00	1.9	109(ESE)
	21:00	0.0	55(NE)
	22:00	2.1	81(E)
23:00	0.0	52(NE)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
17-Apr-23	00:00	0.7	54(NE)
	01:00	0.0	52(NE)
	02:00	1.5	87(E)
	03:00	0.9	131(SE)
	04:00	0.0	73(ENE)
	05:00	0.5	99(E)
	06:00	0.0	208(SSW)
	07:00	1.3	84(E)
	08:00	1.5	92(E)
	09:00	1.1	117(ESE)
	10:00	3.1	76(ENE)
	11:00	2.7	123(ESE)
	12:00	2.3	164(SSE)
	13:00	2.1	91(E)
	14:00	1.7	134(SE)
	15:00	1.5	114(ESE)
	16:00	0.7	90(E)
	17:00	2.1	127(SE)
	18:00	1.5	61(ENE)
	19:00	1.3	171(S)
	20:00	2.3	133(SE)
	21:00	2.5	117(ESE)
	22:00	0.7	175(S)
23:00	1.3	71(ENE)	
18-Apr-23	00:00	2.1	85(E)
	01:00	1.3	148(SSE)
	02:00	0.0	276(W)
	03:00	0.9	122(ESE)
	04:00	0.0	143(SE)
	05:00	0.0	88(E)
	06:00	0.0	94(E)
	07:00	1.3	87(E)
	08:00	0.0	187(S)
	09:00	0.7	303(WNW)
	10:00	1.1	145(SE)
	11:00	1.7	160(SSE)
	12:00	2.1	250(WSW)
	13:00	3.5	296(WNW)
	14:00	1.1	177(S)
	15:00	2.1	290(WNW)
	16:00	1.9	220(SW)
	17:00	0.7	165(SSE)
	18:00	0.0	272(W)
	19:00	0.7	145(SE)
	20:00	0.0	310(NW)
	21:00	0.0	100(E)
	22:00	1.1	313(NW)
23:00	1.1	63(ENE)	





Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
19-Apr-23	00:00	0.0	293(WNW)
	01:00	0.0	234(SW)
	02:00	2.7	271(W)
	03:00	1.1	283(WNW)
	04:00	0.0	277(W)
	05:00	1.1	243(WSW)
	06:00	1.1	269(W)
	07:00	1.9	278(W)
	08:00	1.5	281(W)
	09:00	2.1	282(WNW)
	10:00	1.5	219(SW)
	11:00	3.9	309(NW)
	12:00	2.3	172(S)
	13:00	1.1	70(ENE)
	14:00	1.1	277(W)
	15:00	1.3	280(W)
	16:00	1.3	302(WNW)
	17:00	0.5	243(WSW)
	18:00	1.1	107(ESE)
	19:00	2.3	55(NE)
20:00	1.7	83(E)	
21:00	1.3	52(NE)	
22:00	0.5	81(E)	
23:00	0.9	36(NE)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
20-Apr-23	00:00	0.0	274(W)
	01:00	1.3	78(ENE)
	02:00	1.1	77(ENE)
	03:00	0.5	87(E)
	04:00	0.7	110(ESE)
	05:00	1.1	123(ESE)
	06:00	0.0	152(SSE)
	07:00	0.9	58(ENE)
	08:00	1.9	100(E)
	09:00	1.5	101(E)
	10:00	1.9	128(SE)
	11:00	1.3	28(NNE)
	12:00	0.9	152(SSE)
	13:00	2.5	207(SSW)
	14:00	1.7	112(ESE)
	15:00	1.3	82(E)
	16:00	2.1	197(SSW)
	17:00	1.5	154(SSE)
	18:00	1.7	179(S)
	19:00	1.5	105(ESE)
	20:00	1.9	36(NE)
	21:00	4.9	215(SW)
	22:00	3.3	93(E)
23:00	2.9	135(SE)	
21-Apr-23	00:00	0.7	72(ENE)
	01:00	1.7	68(ENE)
	02:00	0.0	160(SSE)
	03:00	1.3	261(W)
	04:00	0.5	274(W)
	05:00	0.0	228(SW)
	06:00	0.7	272(W)
	07:00	1.3	26(NNE)
	08:00	1.3	120(ESE)
	09:00	2.7	102(ESE)
	10:00	0.9	237(WSW)
	11:00	0.9	144(SE)
	12:00	1.7	96(E)
	13:00	1.9	149(SSE)
	14:00	3.9	132(SE)
	15:00	0.5	297(WNW)
	16:00	0.5	164(SSE)
	17:00	2.3	118(ESE)
	18:00	1.7	177(S)
	19:00	1.3	90(E)
	20:00	2.5	108(ESE)
	21:00	5.3	181(S)
	22:00	2.9	92(E)
23:00	1.9	98(E)	



## Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
22-Apr-23	00:00	1.9	89(E)
	01:00	2.9	58(ENE)
	02:00	5.7	92(E)
	03:00	2.9	112(ESE)
	04:00	2.1	135(SE)
	05:00	4.1	129(SE)
	06:00	3.7	89(E)
	07:00	3.1	116(ESE)
	08:00	2.5	125(SE)
	09:00	2.5	146(SE)
	10:00	5.7	88(E)
	11:00	3.5	118(ESE)
	12:00	5.9	115(ESE)
	13:00	1.7	188(S)
	14:00	2.7	130(SE)
	15:00	1.5	181(S)
	16:00	1.1	104(ESE)
	17:00	3.3	130(SE)
	18:00	2.5	112(ESE)
	19:00	1.7	39(NE)
	20:00	1.9	56(NE)
	21:00	1.5	212(SSW)
	22:00	2.1	74(ENE)
23:00	2.3	78(ENE)	
23-Apr-23	00:00	2.5	158(SSE)
	01:00	2.1	85(E)
	02:00	2.9	99(E)
	03:00	1.5	112(ESE)
	04:00	1.9	127(SE)
	05:00	3.3	118(ESE)
	06:00	3.1	66(ENE)
	07:00	1.9	171(S)
	08:00	5.5	120(ESE)
	09:00	3.7	198(SSW)
	10:00	2.5	127(SE)
	11:00	3.3	158(SSE)
	12:00	2.1	137(SE)
	13:00	2.7	87(E)
	14:00	2.9	45(NE)
	15:00	2.3	241(WSW)
	16:00	1.1	144(SE)
	17:00	2.7	66(ENE)
	18:00	1.7	107(ESE)
	19:00	1.9	58(ENE)
	20:00	2.3	114(ESE)
	21:00	3.3	81(E)
	22:00	2.7	156(SSE)
23:00	1.3	170(S)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
24-Apr-23	00:00	1.7	124(SE)
	01:00	2.3	127(SE)
	02:00	1.7	125(SE)
	03:00	1.1	112(ESE)
	04:00	2.5	159(SSE)
	05:00	2.1	87(E)
	06:00	0.7	84(E)
	07:00	2.3	78(ENE)
	08:00	1.7	65(ENE)
	09:00	1.9	100(E)
	10:00	2.7	139(SE)
	11:00	1.3	165(SSE)
	12:00	2.5	60(ENE)
	13:00	0.0	237(WSW)
	14:00	1.3	180(S)
	15:00	2.5	62(ENE)
	16:00	0.5	295(WNW)
	17:00	1.1	104(ESE)
	18:00	1.3	117(ESE)
	19:00	3.1	107(ESE)
	20:00	1.3	33(NNE)
	21:00	0.9	93(E)
	22:00	0.5	140(SE)
23:00	0.0	235(SW)	
25-Apr-23	00:00	0.5	118(ESE)
	01:00	0.0	286(WNW)
	02:00	0.7	80(E)
	03:00	0.5	100(E)
	04:00	1.1	120(ESE)
	05:00	0.9	134(SE)
	06:00	0.0	104(ESE)
	07:00	1.1	70(ENE)
	08:00	0.7	323(NW)
	09:00	1.1	79(E)
	10:00	1.5	116(ESE)
	11:00	1.3	55(NE)
	12:00	2.1	56(NE)
	13:00	1.5	71(ENE)
	14:00	1.1	42(NE)
	15:00	0.9	339(NNW)
	16:00	2.1	240(WSW)
	17:00	1.1	19(NNE)
	18:00	0.7	200(SSW)
	19:00	1.3	46(NE)
	20:00	1.3	16(NNE)
	21:00	1.5	320(NW)
	22:00	2.3	60(ENE)
23:00	1.5	89(E)	



## Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
26-Apr-23	00:00	2.5	67(ENE)
	01:00	2.3	66(ENE)
	02:00	1.7	87(E)
	03:00	0.9	33(NNE)
	04:00	2.7	65(ENE)
	05:00	3.1	81(E)
	06:00	3.1	80(E)
	07:00	2.7	83(E)
	08:00	3.3	83(E)
	09:00	6.5	70(ENE)
	10:00	1.3	98(E)
	11:00	4.5	82(E)
	12:00	1.3	51(NE)
	13:00	1.9	70(ENE)
	14:00	2.5	65(ENE)
	15:00	0.7	340(NNW)
	16:00	1.5	144(SE)
	17:00	0.0	128(SE)
	18:00	0.9	165(SSE)
	19:00	1.7	96(E)
	20:00	0.7	130(SE)
	21:00	1.7	182(S)
	22:00	1.1	183(S)
23:00	1.1	87(E)	
27-Apr-23	00:00	1.3	157(SSE)
	01:00	3.3	155(SSE)
	02:00	1.9	97(E)
	03:00	1.7	109(ESE)
	04:00	3.1	85(E)
	05:00	0.9	91(E)
	06:00	2.1	104(ESE)
	07:00	3.1	114(ESE)
	08:00	4.3	98(E)
	09:00	5.1	81(E)
	10:00	2.5	117(ESE)
	11:00	2.5	113(ESE)
	12:00	2.3	124(SE)
	13:00	3.3	100(E)
	14:00	2.3	90(E)
	15:00	2.7	94(E)
	16:00	0.9	227(SW)
	17:00	1.1	135(SE)
	18:00	2.3	78(ENE)
	19:00	1.9	88(E)
	20:00	1.5	100(E)
	21:00	2.7	200(SSW)
	22:00	2.1	96(E)
23:00	0.7	92(E)	



Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
28-Apr-23	00:00	2.3	138(SE)
	01:00	0.9	214(SW)
	02:00	1.9	125(SE)
	03:00	0.7	8(N)
	04:00	2.3	61(ENE)
	05:00	5.1	97(E)
	06:00	2.9	142(SE)
	07:00	1.5	40(NE)
	08:00	1.7	101(E)
	09:00	0.7	221(SW)
	10:00	3.5	146(SE)
	11:00	1.5	139(SE)
	12:00	5.1	199(SSW)
	13:00	2.5	181(S)
	14:00	1.9	136(SE)
	15:00	0.7	129(SE)
	16:00	2.3	72(ENE)
	17:00	2.5	83(E)
	18:00	2.3	48(NE)
	19:00	2.3	79(E)
	20:00	0.5	23(NNE)
	21:00	0.7	89(E)
	22:00	0.7	156(SSE)
23:00	1.3	91(E)	
29-Apr-23	00:00	0.5	121(ESE)
	01:00	0.7	135(SE)
	02:00	1.1	56(NE)
	03:00	0.7	79(E)
	04:00	0.5	278(W)
	05:00	1.1	91(E)
	06:00	1.1	98(E)
	07:00	1.1	160(SSE)
	08:00	1.3	106(ESE)
	09:00	0.0	162(SSE)
	10:00	0.5	121(ESE)
	11:00	1.9	211(SSW)
	12:00	0.0	303(WNW)
	13:00	1.9	324(NW)
	14:00	0.0	233(SW)
	15:00	1.7	121(ESE)
	16:00	0.7	280(W)
	17:00	0.0	226(SW)
	18:00	0.9	284(WNW)
	19:00	1.1	147(SSE)
	20:00	1.3	298(WNW)
	21:00	0.9	122(ESE)
	22:00	1.1	91(E)
23:00	0.0	234(SW)	





Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
30-Apr-23	00:00	1.9	95(E)
	01:00	1.3	202(SSW)
	02:00	3.9	52(NE)
	03:00	2.7	41(NE)
	04:00	2.9	27(NNE)
	05:00	5.1	65(ENE)
	06:00	2.7	52(NE)
	07:00	1.7	17(NNE)
	08:00	1.9	164(SSE)
	09:00	2.3	90(E)
	10:00	3.3	55(NE)
	11:00	2.3	43(NE)
	12:00	0.9	76(ENE)
	13:00	1.3	297(WNW)
	14:00	3.5	87(E)
	15:00	1.9	101(E)
	16:00	1.7	105(ESE)
	17:00	4.1	123(ESE)
	18:00	0.9	67(ENE)
	19:00	1.5	95(E)
20:00	2.7	48(NE)	
21:00	1.3	155(SSE)	
22:00	0.0	26(NNE)	
23:00	0.0	205(SSW)	



## ***Appendix 5.1***

# ***Monitoring Schedule for Reporting Month and Next Reporting Month***

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**Contract No. SPW 12/2021**  
**Environmental Team (2021-2024)**  
**for Shek Wui Effluent Polishing Plant - Main Works**  
**Impact Monitoring Schedule**  
**Apr 2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1-Apr AQM + 1hr TSP
2-Apr	3-Apr Water Quality Monitoring	4-Apr AQM+24hr TSP	5-Apr	6-Apr AQM + 1hr TSP NM Water Quality Monitoring Ecological Monitoring	7-Apr	8-Apr
9-Apr	10-Apr AQM+24hr TSP	11-Apr AQM + 1hr TSP NM Water Quality Monitoring Ecological Monitoring	12-Apr	13-Apr Water Quality Monitoring	14-Apr	15-Apr AQM+24hr TSP Water Quality Monitoring
16-Apr	17-Apr AQM + 1hr TSP NM Water Quality Monitoring	18-Apr	19-Apr Water Quality Monitoring Ecological Monitoring	20-Apr	21-Apr AQM+24hr TSP Water Quality Monitoring	22-Apr AQM + 1hr TSP
23-Apr	24-Apr Water Quality Monitoring Ecological Monitoring	25-Apr	26-Apr Water Quality Monitoring	27-Apr AQM+24hr TSP	28-Apr AQM + 1hr TSP NM Water Quality Monitoring	29-Apr
30-Apr						

Remarks

- AQM: Air Quality Monitoring
- Power failure was encountered at AM2a on 10 April 2023, so the 24hr AQM for AM2a was temporarily suspended and has been resumed on 15 April 2023.
- NM: Noise Monitoring, the monitoring dates are tentative and subject to change
- Ecological Monitoring dates are tentative and subject to change based on real-time tide.
- No outfall work was conducted during Ching Ming Festival and Easter Holiday, the related WQM monitoring was cancelled.



**Contract No. SPW 12/2021**  
**Environmental Team (2021-2024)**  
**for Shek Wui Effluent Polishing Plant - Main Works**  
**Tentative Impact Monitoring Schedule**  
**May 2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1-May	2-May	3-May	4-May	5-May	6-May
			AQM+24hr TSP Water Quality Monitoring	AQM + 1hr TSP NM Ecological Monitoring	Water Quality Monitoring	
7-May	8-May	9-May	10-May	11-May	12-May	13-May
	Water Quality Monitoring	AQM+24hr TSP	AQM + 1hr TSP NM Ecological Monitoring Water Quality Monitoring		Water Quality Monitoring	
14-May	15-May	16-May	17-May	18-May	19-May	20-May
	AQM+24hr TSP Water Quality Monitoring	AQM + 1hr TSP NM	Ecological Monitoring Water Quality Monitoring		Water Quality Monitoring	AQM+24hr TSP
21-May	22-May	23-May	24-May	25-May	26-May	27-May
	AQM + 1hr TSP NM Water Quality Monitoring		Water Quality Monitoring	AQM+24hr TSP Ecological Monitoring		AQM + 1hr TSP Water Quality Monitoring
28-May	29-May	30-May	31-May			
	Water Quality Monitoring		AQM+24hr TSP Water Quality Monitoring			

Remarks

-Considering no outfall works were conducted on 1 May 2023, the related WQM was cancelled.



**Contract No. SPW 12/2021**  
**Environmental Team (2021-2024)**  
**for Shek Wui Effluent Polishing Plant - Main Works**  
**Tentative Impact Monitoring Schedule**  
**Jun 2023**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1-Jun AQM + 1hr TSP NM	2-Jun Water Quality Monitoring Ecological Monitoring	3-Jun
4-Jun	5-Jun Water Quality Monitoring	6-Jun AQM+24hr TSP Ecological Monitoring	7-Jun AQM + 1hr TSP NM Water Quality Monitoring	8-Jun	9-Jun Water Quality Monitoring	10-Jun
11-Jun	12-Jun AQM+24hr TSP Water Quality Monitoring	13-Jun AQM + 1hr TSP NM	14-Jun Water Quality Monitoring	15-Jun	16-Jun Water Quality Monitoring Ecological Monitoring	17-Jun AQM+24hr TSP
18-Jun	19-Jun AQM + 1hr TSP NM Water Quality Monitoring	20-Jun	21-Jun Water Quality Monitoring Ecological Monitoring	22-Jun	23-Jun AQM+24hr TSP Water Quality Monitoring	24-Jun AQM + 1hr TSP
25-Jun	26-Jun Water Quality Monitoring	27-Jun Ecological Monitoring	28-Jun Water Quality Monitoring	29-Jun AQM+24hr TSP	30-Jun AQM + 1hr TSP NM Water Quality Monitoring	

Remarks

- AQM: Air Quality Monitoring
- NM: Noise Monitoring, the monitoring dates are tentative and subject to change
- Ecological Monitoring dates are tentative and subject to change based on real-time tide.



## ***Appendix 5.2***

# ***Noise Monitoring Results and Graphical Presentations***

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### Noise Monitoring Result

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)									
06/04/2023	11:15	Cloudy	0.0	55.7	57.8	52.4	63.4	55.7	75
11/04/2023	12:35	Cloudy	0.0	58.3	59.9	52.2	63.4	58.3	75
17/04/2023	9:00	Cloudy	0.0	61.4	62.8	57.7	63.4	61.4	75
28/04/2023	8:15	Fine	0.0	57.6	60.4	53.4	63.4	57.6	75

Location: NM2 - G/F, Fu Tei Au

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30-min)									
06/04/2023	9:45	Cloudy	3.3	60.1	61.7	57.5	58.0	55.9	75
11/04/2023	11:15	Cloudy	0.0	62.9	64.8	58.5	58.0	61.2	75
17/04/2023	9:45	Cloudy	0.0	60.3	62.5	56.4	58.0	56.4	75
28/04/2023	9:00	Fine	0.0	70.3	76.2	57.1	58.0	70.0	75

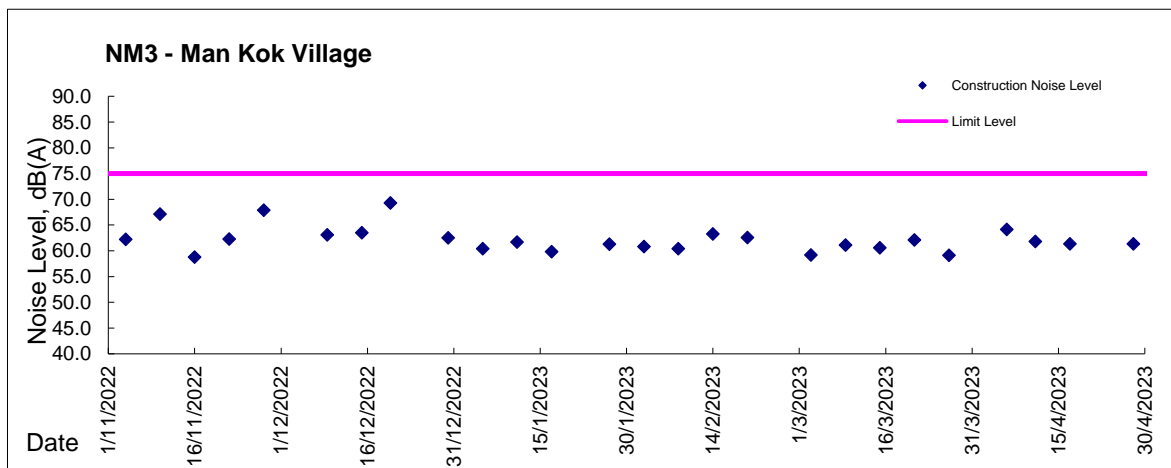
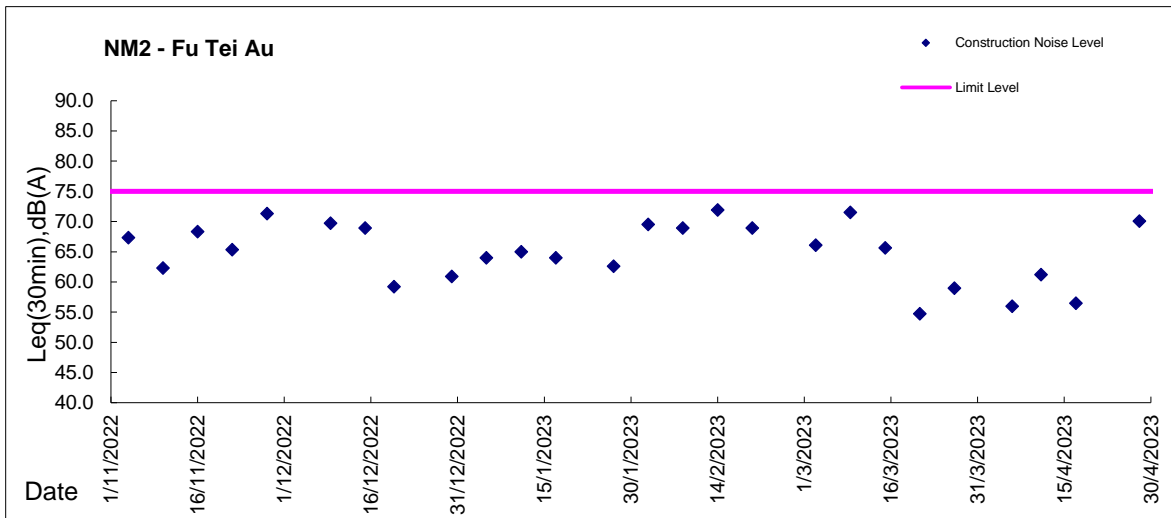
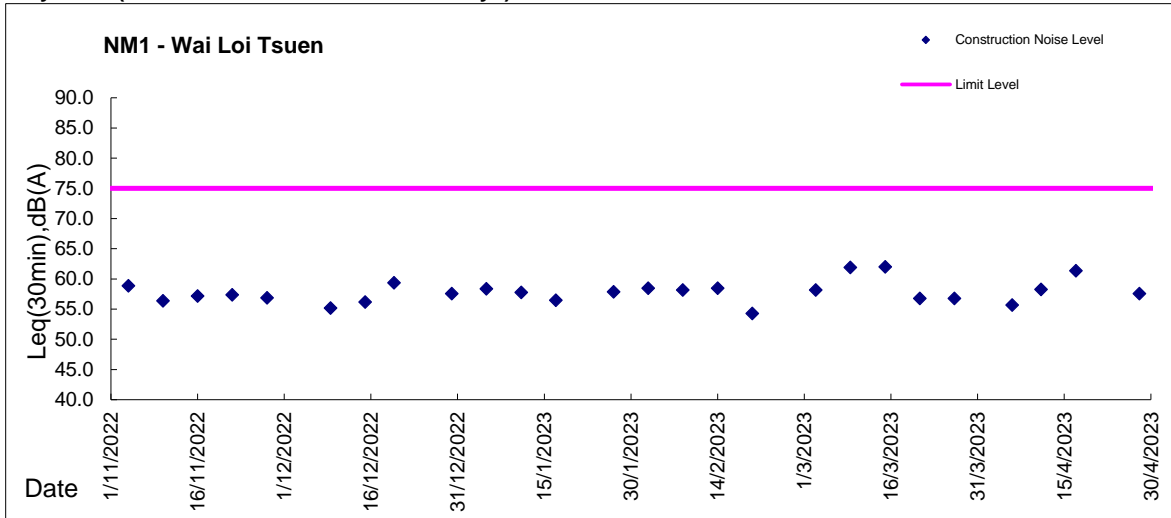
Location: NM3 - G/F, Man kok Village

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
Unit: dB(A), (30min)									
06/04/2023	10:25	Cloudy	0.0	66.8	68.9	54.9	63.4	64.1	75
11/04/2023	10:30	Cloudy	0.0	61.8	63.5	55.6	63.4	61.8	75
17/04/2023	11:55	Cloudy	0.0	65.5	68.2	56.6	63.4	61.3	75
28/04/2023	10:35	Fine	0.0	65.5	65.6	52.1	63.4	61.3	75

\* Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result



**Graphic Presentation of Noise Monitoring Result**  
**Day Time (0700 - 1900hrs on normal weekdays)**





## ***Appendix 5.3***

# ***Air Quality Monitoring Results and Graphical Presentations***

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Report on 1-hour TSP monitoring at AM1 - Wai Loi Tsuen  
Action Level ( $\mu\text{g}/\text{m}^3$ ) - 320  
Limit Level ( $\mu\text{g}/\text{m}^3$ ) - 500

Date	Weather Condition	Time	Mass Concentration ( $\mu\text{g}/\text{m}^3$ )	Model No.	Serial No.
1-Apr-23	Fine	8:48	50	AEROCET 831	C15622
1-Apr-23	Fine	9:49	42		
1-Apr-23	Fine	10:50	33		
6-Apr-23	Cloudy	9:07	43		
6-Apr-23	Cloudy	10:08	35		
6-Apr-23	Cloudy	11:09	25		
11-Apr-23	Cloudy	8:38	22		
11-Apr-23	Cloudy	9:39	18		
11-Apr-23	Cloudy	10:41	18		
17-Apr-23	Cloudy	8:52	48		
17-Apr-23	Cloudy	9:54	40		
17-Apr-23	Cloudy	10:55	38		
22-Apr-23	Cloudy	8:25	46		
22-Apr-23	Cloudy	9:26	24		
22-Apr-23	Cloudy	10:27	25		
28-Apr-23	Fine	8:14	27		
28-Apr-23	Fine	9:15	21		
28-Apr-23	Fine	10:16	17		



Report on 1-hour TSP monitoring at AM2 - Fu Tei Au

Action Level ( $\mu\text{g}/\text{m}^3$ ) - 322  
Limit Level ( $\mu\text{g}/\text{m}^3$ ) - 500

Date	Weather Condition	Time	Mass Concentration ( $\mu\text{g}/\text{m}^3$ )	Model No.	Serial No.
1-Apr-23	Fine	9:17	35	AEROCET 831	Y23153
1-Apr-23	Fine	10:18	37		
1-Apr-23	Fine	11:19	27		
6-Apr-23	Cloudy	9:15	35		
6-Apr-23	Cloudy	10:16	29		
6-Apr-23	Cloudy	11:17	22		
11-Apr-23	Cloudy	8:47	20		
11-Apr-23	Cloudy	9:48	18		
11-Apr-23	Cloudy	10:50	18		
17-Apr-23	Cloudy	9:00	40		
17-Apr-23	Cloudy	10:01	36		
17-Apr-23	Cloudy	11:02	35		
22-Apr-23	Cloudy	8:33	33		
22-Apr-23	Cloudy	9:34	25		
22-Apr-23	Cloudy	10:35	26		
28-Apr-23	Fine	8:27	25		
28-Apr-23	Fine	9:28	19		
28-Apr-23	Fine	10:29	17		



Location: AM1a\* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW  
 Impact Monitoring Result on 24-hour TSP monitoring

Date	Sampling Time	Weather Condition	Pressure, hPa		Temp., °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m <sup>3</sup> /min			Total Volume, m <sup>3</sup>	TSP Level, ug/m <sup>3</sup>	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial, Qsi	Final, Qsf		Average						
04-Apr-23	8:00	Cloudy	1009.3	1009.5	23.7	25.3	AM1a_24hr_011157	2.7828	2.8471	16726.10	16750.10	24.00	1.02	1.01	1.01	1461	44	G3101	2036
10-Apr-23	8:00	Cloudy	1014.9	1012.9	21.4	24.2	AM1a_24hr_011169	2.7847	2.8481	16750.10	16774.10	24.00	1.02	0.97	1.00	1433	44		
15-Apr-23	8:00	Cloudy	1009.3	1009.5	26.9	26.7	AM1a_24hr_011160	2.7796	2.8812	16774.10	16798.10	24.00	1.01	0.79	0.90	1299	78		
21-Apr-23	8:00	Cloudy	1007.3	1010.5	24.1	23.1	AM1a_24hr_011162	2.7757	2.8378	16798.10	16822.10	24.00	1.23	1.02	1.13	1621	38		
27-Apr-23	8:00	Cloudy	1015.2	1013.8	22.7	24.1	AM1a_24hr_011164	2.7600	2.7939	16822.10	16846.10	24.00	0.80	0.79	0.80	1145	30		

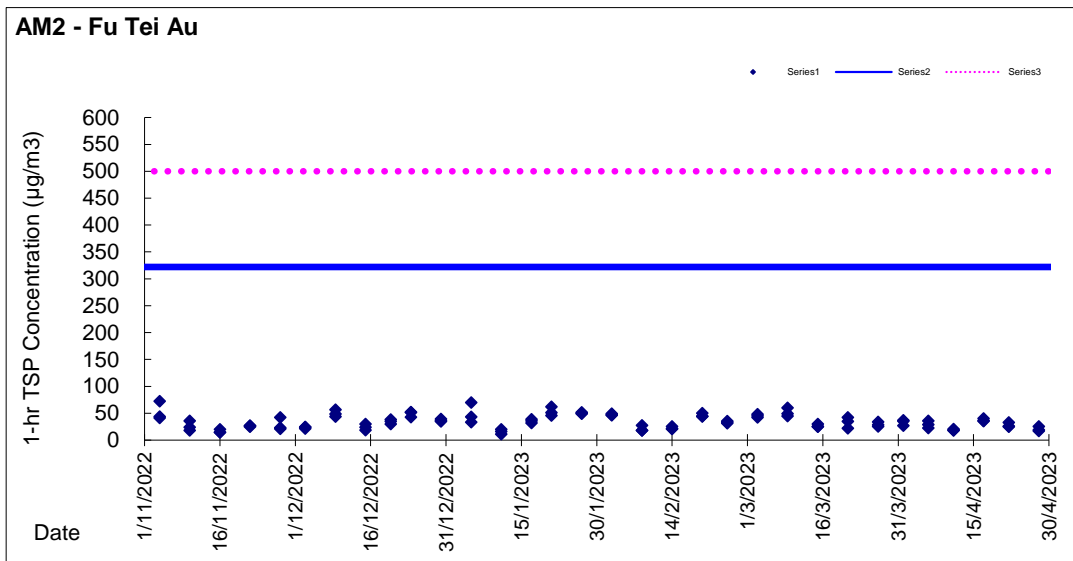
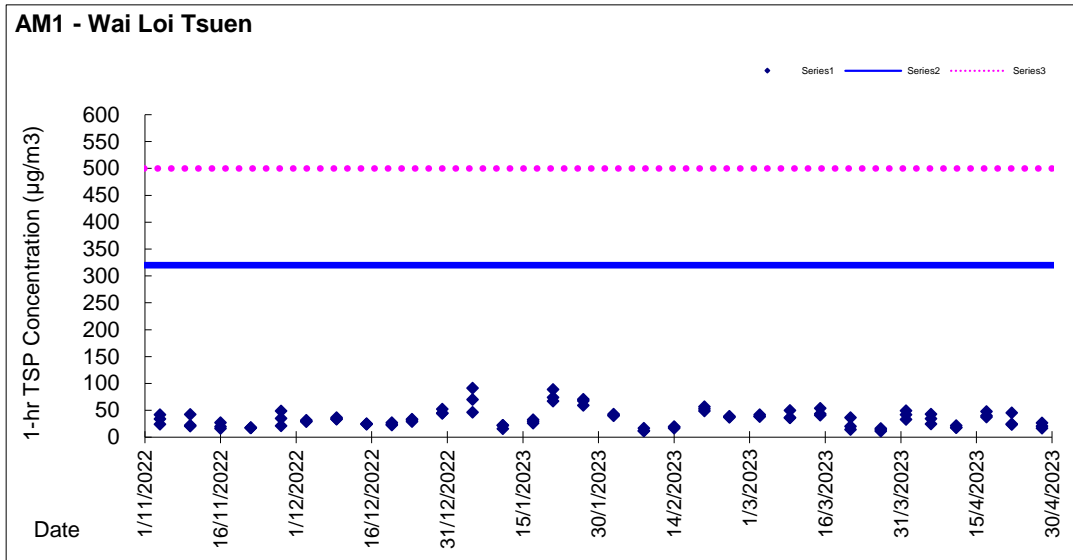


Location: AM2a - Site Boundary of the Shek Wu Hui STW (North)  
 Impact Monitoring Result on 24-hour TSP monitoring

Date	Sampling Time	Weather Condition	Pressure, hPa		Temp., °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m <sup>3</sup> /min			Total Volume, m <sup>3</sup>	TSP Level, ug/m <sup>3</sup>	Model No.	Serial No.	
			Initial	Final	Initial	Final		Initial	Final	Initial, Qsi	Final, Qsf		Average							
04-Apr-23	8:00	Cloudy	1009.3	1009.5	23.7	25.3	AM2a_24hr_011158	2.7836	2.8913	13208.09	13232.09	24.00	1.53	1.53	1.53	2204	49	G3101	774	
10-Apr-23	24hr-TSP monitoring was suspended due to power failure																			
15-Apr-23	8:00	Cloudy	1009.3	1009.5	26.9	26.7	AM2a_24hr_011161	2.7797	2.9433	13232.09	13256.09	24.00	1.48	1.50	1.49	2150	76			
21-Apr-23	8:00	Cloudy	1007.3	1010.5	24.1	23.1	AM2a_24hr_011163	2.7740	2.8440	13256.09	13280.09	24.00	1.51	1.51	1.51	2173	32			
27-Apr-23	8:00	Cloudy	1015.2	1013.8	22.7	24.1	AM2a_24hr_011165	2.7753	2.9115	13280.09	13304.09	24.00	1.44	1.44	1.44	2078	66			

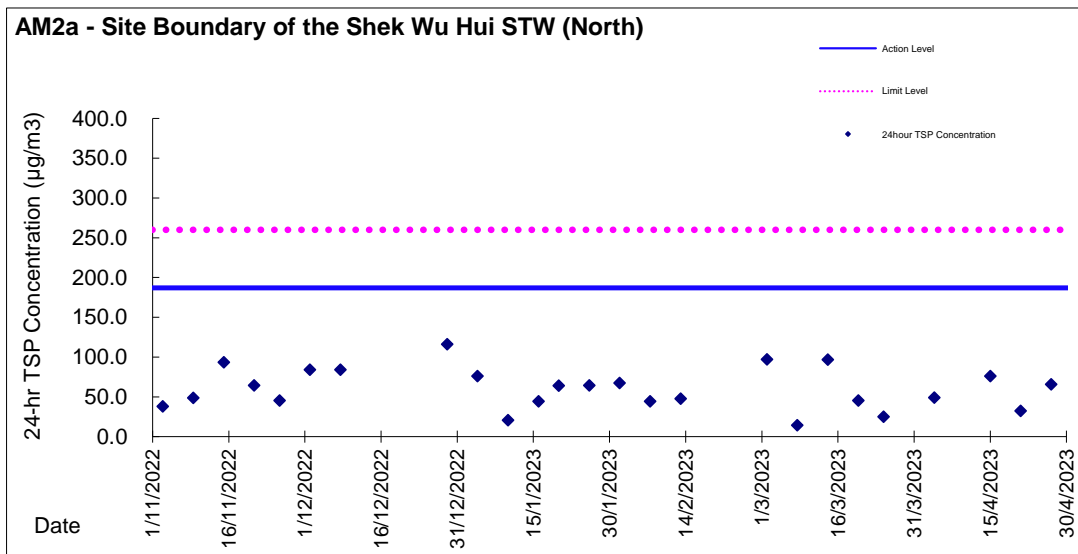
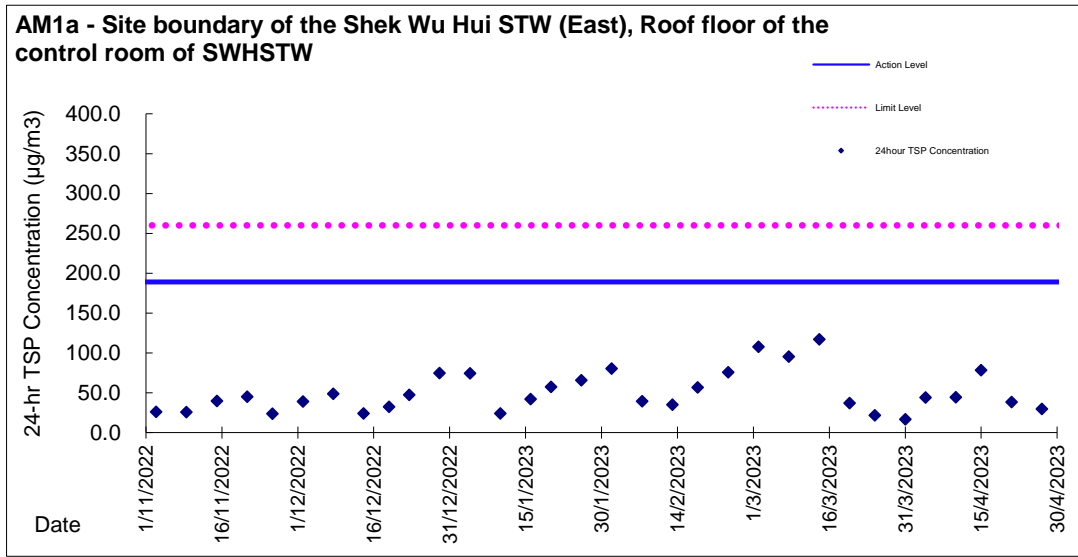


Graphic Presentation of TSP Result





Graphic Presentation of TSP Result



1. 24hr-TSP monitoring at AM2a was suspended on 10 Apr 2023 due to power failure.



## ***Appendix 5.4***

### ***Details of Ecological Monitoring Results in the Reporting Month***

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### Summary data of the Ecological Monitoring

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	X	41	+++++
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	X	27	++
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	X	7	+
<i>Ardea alba</i>	Great Egret	大白鷺	X	8	+
<i>Egretta garzetta</i>	Little Egret	小白鷺	X	82	+++++
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	X	2	+
<i>Milvus migrans</i>	Black Kite	黑鳶	X	7	++
<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	白胸苦惡鳥	X	1	+
<i>Tringa nebularia</i>	Common Greenshank	青腳鵞	X	6	+
<i>Actitis hypoleucos</i>	Common Sandpiper	磯鵞	X	20	+++
<i>Spilopelia chinensis</i>	Spotted Dove	珠頸斑鳩		54	+++++
<i>Centropus sinensis</i>	Greater Coucal	褐翅鴉鵂		6	+
<i>Eudynamis scolopaceus</i>	Asian Koel	噪鵲		28	++++
<i>Hierococcyx sparveroides</i>	Large Hawk Cuckoo	大鷹鵂		3	+
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	白胸翡翠	X	1	+

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
<i>Alcedo atthis</i>	Common Kingfisher	普通翠鳥	X	3	+
<i>Ceryle rudis</i>	Pied Kingfisher	斑魚狗	X	1	+
<i>Dicrurus macrocercus</i>	Black Drongo	黑卷尾		1	+
<i>Urocissa erythroryncha</i>	Red-billed Blue Magpie	紅嘴藍鵲		11	+
<i>Pica pica</i>	Eurasian Magpie	喜鵲		2	+
<i>Parus cinereus</i>	Cinereous Tit	蒼背山雀		3	+
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	紅耳鸛		61	+++++
<i>Pycnonotus sinensis</i>	Chinese Bulbul	白頭鸛		17	+++
<i>Hirundo rustica</i>	Barn Swallow	家燕		42	+++++
<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	黃眉柳鶯		1	+
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	黃腹鷦鶯		8	++
<i>Prinia inornata</i>	Plain Prinia	純色鷦鶯		7	+
<i>Orthotomus sutorius</i>	Common Tailorbird	長尾縫葉鶯		22	+++
<i>Garrulax perspicillatus</i>	Masked Laughingthrush	黑臉噪鶯		34	+++++
<i>Zosterops japonicus</i>	Japanese White-eye	暗綠繡眼鳥		29	+++
<i>Acridotheres cristatellus</i>	Crested Myna	八哥		280	+++++

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
<i>Gracupica nigricollis</i>	Black-collared Starling	黑領椋鳥		50	+++++
<i>Copsychus saularis</i>	Oriental Magpie Robin	鵲鴝		3	+
<i>Passer montanus</i>	Eurasian Tree Sparrow	樹麻雀		31	+++++
<i>Motacilla tschutschensis</i>	Eastern Yellow Wagtail	東黃鵲鴝		1	+
<i>Motacilla cinerea</i>	Grey Wagtail	灰鵲鴝		2	+
<i>Motacilla alba</i>	White Wagtail	白鵲鴝		26	++++
<i>Anthus godlewskii</i>	Olive-backed Pipit	樹鵲		0	+

Remarks:

X: Waterbird ;

Transect abundance, +: <10, ++: 11-20, +++: 21-30, ++++: 31-40, +++++: >40

According to S4.7 of the approved Baseline Monitoring Report (Ecology), "waterbirds" was defined as "waterbirds and wetland-dependent species", which was referenced to Monthly Waterbird Monitoring Biannual Reports prepared by the Hong Kong Bird Watching Society (Anon, 2020).

Also, S.13.11.3.2 of NENT NDA EIA Study requires "Monitoring of Measures to Mitigate for Impacts of the Project on Wetland-dependent Fauna using the Ng Tung, Sheung Yue and Shek Sheung Rivers". Therefore, "wetland-dependent birds" should be considered as "waterbirds". As raptors and Collared Crow are "wetland-dependent species", they should be taken into consideration in data analysis and impact assessment on waterbirds.

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**Waterbird Ecological Monitoring Result**

Total Bird Abundance from Point Count						
Survey Information				Total Bird Abundance from Point Count		
No.	Date	Time	Tide Level	Individuals Recorded	Total	Species Recorded
1	6/4/2023	12:00	H	76	189	20
		14:00	L	113		26
2	11/4/2023	14:30	H	97	218	19
		17:15	L	121		24
3	19/4/2023	11:15	H	89	262	22
		15:30	L	173		24
4	24/4/2023	11:15	H	126	259	25
		16:45	L	133		21

Remarks: H: High Tide; L: Low Tide

Total Waterbird Abundance from Point Count					
Survey Information				Total Waterbird Abundance from Point Count	
No.	Date	Time	Tide Level	Individuals Recorded	Total
1	6/4/2023	12:15	H	8	36
		10:00	L	28	
2	11/4/2023	14:30	H	20	38
		17:15	L	18	
3	19/4/2023	11:15	H	20	73
		15:30	L	53	
4	24/4/2023	11:15	H	38	59
		16:45	L	21	

Remarks: H: High Tide; L: Low Tide

## T-Test Analysis for All Waterbirds

### **Baseline Data**

Monthly Average Abundance (April)	48.13
Seasonal Average Abundance (Summer season)	44.18

### T-Test

The following hypothesis was made and a one-tail t-test will be used to test the data collected from the monitoring:

H<sub>0</sub>: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H<sub>1</sub>: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is **smaller** than the critical value, then rejects H<sub>0</sub>.

For the data in the reporting month, the critical values are:

Crit. Value = -2.353 (95% Confidence Level)

Crit. Value = -4.541 (99% Confidence Level)

T-values of Data in Reporting Month			Confidence Level (Critical Value)	
			95% (-2.353)	99% (-4.541)
Abundance	Monthly	0.244	✓	✓
	Seasonal	0.529	✓	✓

Remarks:

✓ = T-value falls within the confidence level; the impact monitoring data shows no significant difference to the baseline data.

✗ = T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data



Abundance of Representative Waterbirds from Point Count										
Representative Species			Recorded Abundance				Total	Avg.	Baseline Data	
			Week 1	Week2	Week 3	Week 4			Avg (Apr)	Avg (Summer)
Species Name	Common Name	Chinese Name	6/4/2023	11/4/2023	19/4/2023	24/4/2023				
<i>Egretta garzetta</i>	Little Egret	小白鷺	14	17	25	26	82	21	21	20
<i>Ardea cinerea</i>	Grey Heron	蒼鷺	2	0	5	0	7	2	0	1
<i>Ardeola bacchus</i>	Chinese Pond Heron	池鷺	7	12	16	6	41	10	14	16
<i>Phalacrocorax carbo</i>	Great Cormorant	普通鸕鶿	0	0	2	0	2	1	0	0
<i>Ardea alba</i>	Great Egret	大白鷺	2	1	2	3	8	2	3	3
<i>Bubulcus coromandus</i>	Eastern Cattle Egret	牛背鷺	5	4	8	10	27	7	7	3

### **T-test Analysis for Representative Waterbirds from Point Count**

The following hypothesis was made and a one-tail t-test will be used to test the data collected from the monitoring:

H<sub>0</sub>: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H<sub>1</sub>: The data collected does not falls within the normal distribution when compared to the baseline monitoring data.

If t-test value is **smaller** than the critical value, then rejects H<sub>0</sub>.

For the data in the reporting month, the critical values are:

Crit. Value = -2.353 (95% Confidence Level)

Crit. Value = -4.541 (99% Confidence Level)

Common Name of Representative Waterbird	T-value	Confidence Level (Critical Value)		T-value	Confidence Level (Critical Value)		Overall
	Monthly	95%	99%	Seasonal	95%	99%	
Little Egret	-0.095	✓	✓	0.095	✓	✓	✓
Grey Heron	NA*						
Chinese Pond Heron	-1.230	✓	✓	-1.885	✓	✓	✓
Great Cormorant	NA*						
Great Egret	-1.754	✓	✓	-1.754	✓	✓	✓
Eastern Cattle Egret	-0.130	✓	✓	1.950	✓	✓	✓

Remarks:

✓ = T-value falls within the confidence level; the impact monitoring data shows no significant difference to the baseline data.

✗ = T-value falls outside the confidence level; the impact monitoring data shows significant difference to the baseline data.

\* Great Cormorant (*Phalacrocorax carbo*) and Grey Heron (*Ardea cinerea*) were not recognised as representative waterbird species during wet season.



***Appendix 5.5  
Photo Record of Ecological  
Monitoring***

**Conditions of Rivers**



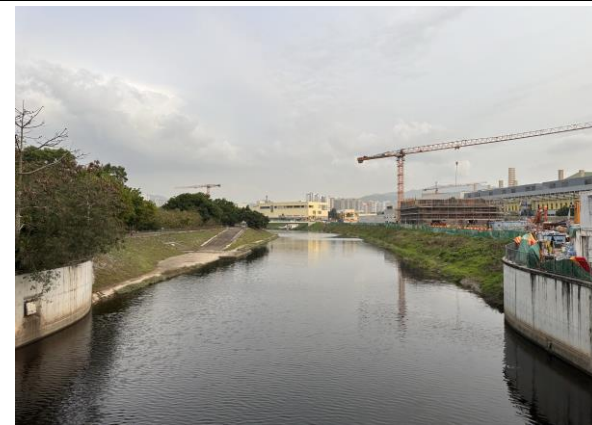
**Sheung Yue River – Survey Point 7 (Taken on 19 Apr 2023)**



**Shek Sheung River – Survey Point 6 (Taken on 24 Apr 2023)**



**Shek Sheung River - Survey Point 5 (Taken on 6 Apr 2023)**



**Ng Tung River - Survey Point 4 (Taken on 11 Apr 2023)**

**Human Activities & Site Conditions**



**Construction Activities (Ng Tung River)**  
**(Project-related, taken on 24 Apr 2023)**



**Construction Activities (Shek Sheung River)**  
**(Project-related, taken on 6 Apr 2023)**



**Construction Activities (Sheung Yue River)**  
**(Non-project-related, taken on 19 Apr 2023)**



**Construction Activities (Ng Tung River)**  
**(Non-Project-related, taken on 24 Apr 2023)**

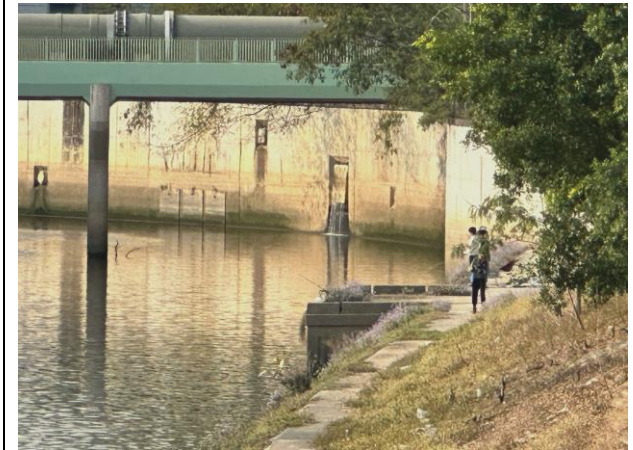




**Human Activities (Sheung Yue River)**  
**(Non-project-related, taken on 24 Apr 2023)**



**Human Activities ( Ng Tung River)**  
**(Non- project-related, taken on 11 Apr 2023)**



**Human Activities ( Ng Tung River)**  
**(Non-project-related, taken on 6 Apr 2023 )**



**Construction Activities (Ng Tung River)**  
**(Non-Project-related, taken on 19 Apr 2023)**



**Construction Activities (Sheung Yue River)**  
**(Non-project-related, taken on 6 Apr 2023)**



**Construction Activities (Sheung Yue River)**  
**(Non-project-related, taken on 19 Apr 2023 )**



**Waterbird Species**



**White-breasted Waterhen**



**Great Cormorant**



**Little Egret**



**Eastern Cattle Egret**



**Common Sandpiper**



**Waterbird in Shek Sheung River**



## ***Appendix 5.7***

# ***Water Quality Monitoring Result***

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Data Sheet for Impact Water Quality Monitoring - SPW 12/2021

Date of Sampling: 3-Apr-23 Weather Condition: Cloudy Ambient Temperature, °C: 21

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	9:30	Middle	Pale Green	24.3	24.3	7.17	7.17	0.23	0.23	95.9	96.0	8.01	8.01	8.01	14.04	14.04	14.04	14.04	17.3	17.00		
	M1 DUP	9:32			24.3	24.3	7.17	7.17	0.23	0.23	96.0	96.0	8.01	8.01		14.04	14.04			16.7			
C1 Control Station, Upstream of the proposed outfall	C1	10:00	Middle	Pale Green	23.1	23.1	7.22	7.22	0.20	0.20	94.8	94.5	7.80	7.87	7.87	10.79	10.56	10.60	5.8	5.85			
	C1 DUP	10:02			23.1	23.1	7.22	7.22	0.20	0.20	94.9	94.8	7.91	7.90		10.56	10.50		5.9				

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 6-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 22

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	10:15	Middle	Pale Green	24.5	24.5	7.15	7.15	0.17	0.17	94.6	94.8	7.88	7.90	7.87	11.23	11.60	11.42	16.5	14.25			
	M1 DUP	10:17			24.5	24.5	7.15	7.15	0.17	0.17	94.9	94.7	7.81	7.89		11.63	11.23		12.0				
C1 Control Station, Upstream of the proposed outfall	C1	10:43	Middle	Pale Green	24.0	24.0	7.09	7.09	0.13	0.13	95.1	95.3	7.93	7.95	7.97	9.87	9.88	9.92	7.5	7.00			
	C1 DUP	10:47			24.0	24.0	7.09	7.09	0.13	0.13	95.5	95.9	7.97	8.01		9.95	9.97		6.5				

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 11-Apr-23 Weather Condition: Cloudy Ambient Temperature, °C: 29

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	11:30	Middle	Pale Green	27.2	27.2	7.06	7.06	0.21	0.21	97.6	97.3	7.83	7.81	7.85	12.54	12.99	12.66	12.3	10.85			
	M1 DUP	11:32			27.2	27.2	7.06	7.06	0.21	0.21	97.7	98.3	7.86	7.89		12.72	12.40		9.4				
C1 Control Station, Upstream of the proposed outfall	C1	11:55	Middle	Pale Green	26.5	26.5	7.10	7.10	0.18	0.18	100.1	99.0	8.09	7.95	8.00	10.73	10.99	10.84	3.9	4.40			
	C1 DUP	11:59			26.5	26.5	7.10	7.10	0.19	0.18	99.0	99.9	7.95	8.02		11.02	10.62		4.9				

Action Level Exceedance  
Limit Level Exceedance



Data Sheet for Impact Water Quality Monitoring - SPW 12/2021

Date of Sampling: 13-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 28

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L	mg/L	NTU	NTU	mg/L	mg/L									
M1 Impact Station, Downstream of the proposed outfall	M1	12:15	Middle	Pale Green	27.3	27.3	7.02	7.02	0.23	0.24	81.0	81.3	6.41	6.43	6.40	7.88	7.69	7.66	6.5	5.55			
	M1 DUP	12:16			27.3	27.3	7.02	7.02	0.29	0.24	80.7	80.5	6.38	6.37		7.53	7.55		4.6				
C1 Control Station, Upstream of the proposed outfall	C1	11:45	Middle	Pale Green	26.8	26.8	7.19	7.19	0.09	0.05	10.9	108.2	8.72	8.65	8.54	15.22	16.21	15.76	11.6	10.30			
	C1 DUP	11:46			27.6	27.6	7.55	7.55	0.09	0.09	108.0	105.3	8.51	8.29		15.77	15.85		9.0				

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 15-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 31

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L	mg/L	NTU	NTU	mg/L	mg/L									
M1 Impact Station, Downstream of the proposed outfall	M1	10:05	Middle	Pale Green	27.1	27.1	6.90	6.88	0.31	0.31	49.0	49.2	3.90	3.91	3.92	7.42	7.66	7.57	6.8	7.15			
	M1 DUP	10:07			27.1	27.0	6.88	6.87	0.31	31.00	49.1	49.7	3.90	3.95		7.68	7.53		7.5				
C1 Control Station, Upstream of the proposed outfall	C1	9:45	Middle	Pale Green	25.9	25.9	7.52	7.52	0.12	0.12	127.3	127.8	10.34	10.34	10.37	12.02	12.14	12.11	12.3	12.95			
	C1 DUP	9:48			25.9	25.9	7.53	7.54	0.12	0.12	127.9	128.0	10.39	10.39		12.22	12.05		13.6				

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 17-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 30

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L	mg/L	NTU	NTU	mg/L	mg/L									
M1 Impact Station, Downstream of the proposed outfall	M1	9:45	Middle	Pale Green	27.2	27.2	7.05	7.05	0.26	0.26	62.1	62.1	4.93	4.93	4.92	11.90	11.95	11.97	10.9	11.20			
	M1 DUP	9:47			27.2	27.2	7.06	7.05	0.26	0.23	61.8	62.0	4.90	4.92		11.99	12.05		11.5				
C1 Control Station, Upstream of the proposed outfall	C1	11:00	Middle	Pale Green	29.2	29.2	8.69	8.69	0.16	0.16	109.0	108.2	8.71	8.66	8.54	11.98	12.01	12.01	13.1	13.15			
	C1 DUP	11:01			29.2	29.2	8.70	8.71	0.16	0.16	108.0	105.3	8.50	8.29		12.02	12.01		13.2				

Action Level Exceedance  
Limit Level Exceedance



Data Sheet for Impact Water Quality Monitoring - SPW 12/2021

Date of Sampling: 19-Apr-23 Weather Condition: Rainy Ambient Temperature, °C: 27

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	10:25	Middle	Pale Green	26.7	26.7	6.81	6.81	0.30	0.30	109.4	116.5	9.07	9.26	9.08	26.40	26.41	26.41	24.2	24.8	24.50		
	M1 DUP	10:29			26.7	26.7	6.81	6.81	0.30	0.30	113.6	112.6	9.03	8.96		26.42	26.42						
C1 Control Station, Upstream of the proposed outfall	C1	10:00	Middle	Pale Green	27.0	27.0	6.81	6.81	0.27	0.27	121.2	118.9	9.56	9.37	9.22	26.47	26.45	26.45	24.4	25.0	24.70		
	C1 DUP	10:03			27.0	27.0	6.81	6.82	0.27	0.27	115.9	113.0	9.03	8.91		26.44	26.43						

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 21-Apr-23 Weather Condition: Cloudy Ambient Temperature, °C: 26

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	8:30	Middle	Pale Green	25.1	25.1	7.04	7.04	0.20	0.12	94.4	97.3	7.74	7.97	7.72	12.89	12.89	12.84	10.4	9.90			
	M1 DUP	8:33			25.1	25.1	7.05	7.04	0.12	0.12	94.6	90.6	7.75	7.42		12.79	12.77						
C1 Control Station, Upstream of the proposed outfall	C1	9:00	Middle	Pale Green	25.2	25.2	7.15	7.15	0.11	0.11	110.1	113.5	8.95	9.23	9.07	11.72	11.59	11.58	9.4	9.40			
	C1 DUP	9:02			25.2	25.2	7.14	7.15	0.11	0.11	109.9	112.7	8.93	9.15		11.51	11.48						

Action Level Exceedance  
Limit Level Exceedance

Date of Sampling: 24-Apr-23 Weather Condition: Cloudy Ambient Temperature, °C: 25

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS	SS Average	Remarks / Observations
					°C	-	ppt	%	mg/L		NTU		mg/L										
M1 Impact Station, Downstream of the proposed outfall	M1	11:49	Middle	Pale Green	26.8	26.7	6.70	6.80	0.29	0.29	110.5	112.8	8.83	9.02	8.96	14.00	13.40	13.40	11.2	12.4	11.80		
	M1 DUP	11:51			26.7	26.7	6.80	6.80	0.23	0.23	113.4	111.5	9.07	8.93		13.00	13.20						
C1 Control Station, Upstream of the proposed outfall	C1	11:15	Middle	Pale Green	26.7	26.7	6.60	6.70	0.19	0.17	91.0	92.3	8.08	8.19	8.08	5.53	5.78	5.57	7.6	8.3	7.95		
	C1 DUP	11:15			26.7	26.7	6.70	6.70	0.17	0.15	101.1	89.7	8.09	7.96		5.70	5.27						

Action Level Exceedance  
Limit Level Exceedance



Data Sheet for Impact Water Quality Monitoring - SPW 12/2021

Date of Sampling: 26-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 25

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS		SS Averages	Remarks / Observations
					°C		-		ppt		%		mg/L		NTU		mg/L							
M1 Impact Station, Downstream of the proposed outfall	M1	10:25	Middle	Pale green	26.4	26.3	6.30	6.40	0.20	0.20	102.2	99.0	8.23	7.97	8.39	4.01	3.55	3.43	5.2	5.20				
	M1 DUP	10:28			26.3	26.3	6.70	6.80	0.24	0.23	106.1	109.3	8.55	8.81		3.31	2.83		5.2					
C1 Control Station, Upstream of the proposed outfall	C1	10:06	Middle	Pale green	24.6	24.6	6.40	6.50	0.09	0.10	124.3	122.1	10.35	10.16	10.09	4.03	3.35	3.55	5.5	5.75				
	C1 DUP	10:07			24.6	24.6	6.60	6.70	0.10	0.09	119.9	118.4	9.98	9.85		3.57	3.26		6.0					

Action Level Exceedance  
Limit Level Exceedance

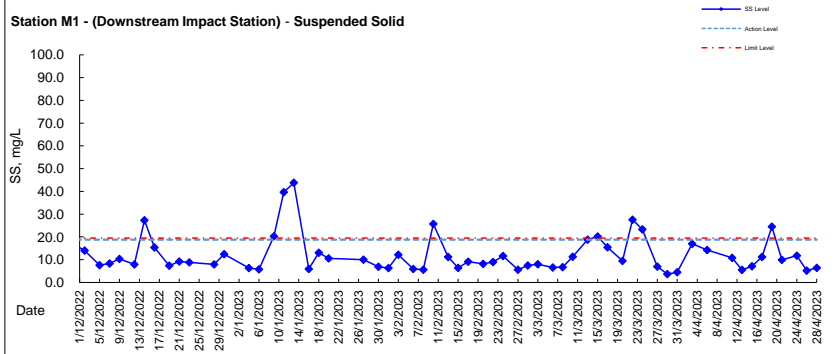
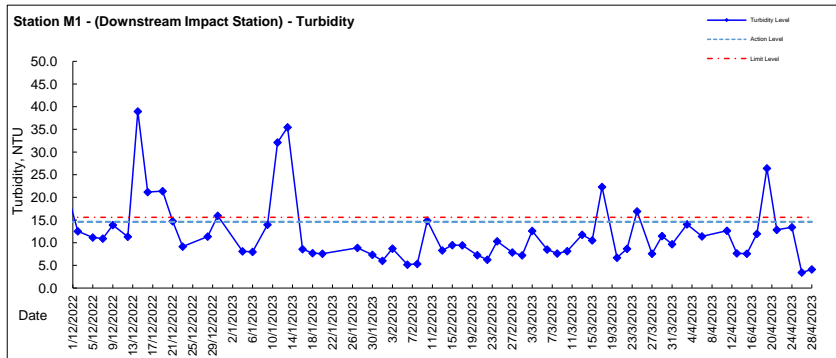
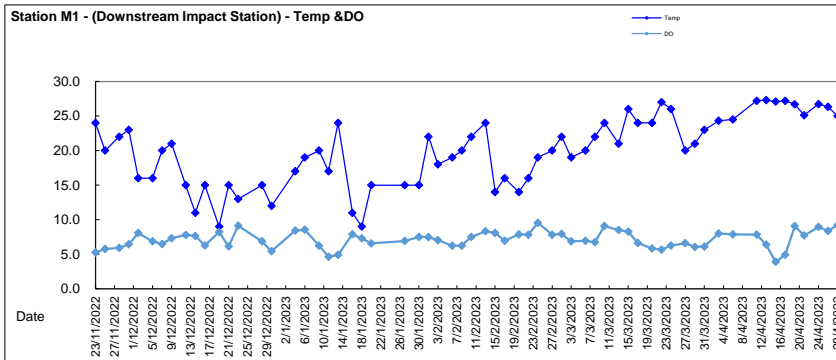
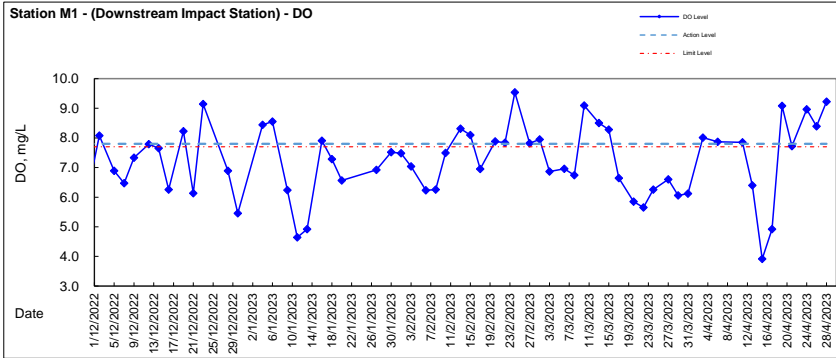
Date of Sampling: 28-Apr-23 Weather Condition: Fine Ambient Temperature, °C: 30

Station Reference	Sample ID	Time	Sampling Depth	Appearance	Temperature		pH		Salinity		DO Saturation		DO		DO Average		Turbidity		Turb Average		SS		SS Averages	Remarks / Observations
					°C		-		ppt		%		mg/L		NTU		mg/L							
M1 Impact Station, Downstream of the proposed outfall	M1	9:10	Middle	Pale green	25.0	25.0	7.40	7.40	0.17	0.17	112.6	112.4	9.29	9.27	9.23	3.82	4.23	4.12	6.1	6.45				
	M1 DUP	9:12			25.0	25.0	7.50	7.50	0.17	0.17	111.3	111.0	9.18	9.16		4.32	4.12		6.8					
C1 Control Station, Upstream of the proposed outfall	C1	10:00	Middle	Pale green	26.0	26.1	6.90	7.00	0.08	0.09	123.0	117.7	9.97	9.61	9.58	6.13	5.76	5.74	9.1	8.90				
	C1 DUP	10:03			26.1	26.1	7.00	7.00	0.08	0.09	117.1	114.6	9.48	9.27		5.57	5.51		8.7					

Action Level Exceedance  
Limit Level Exceedance

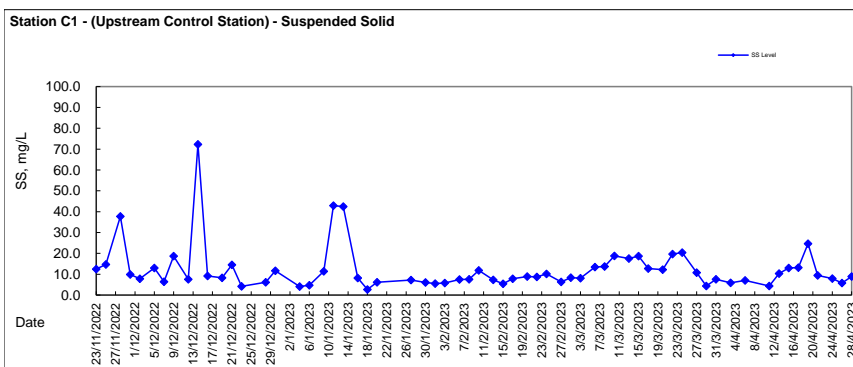
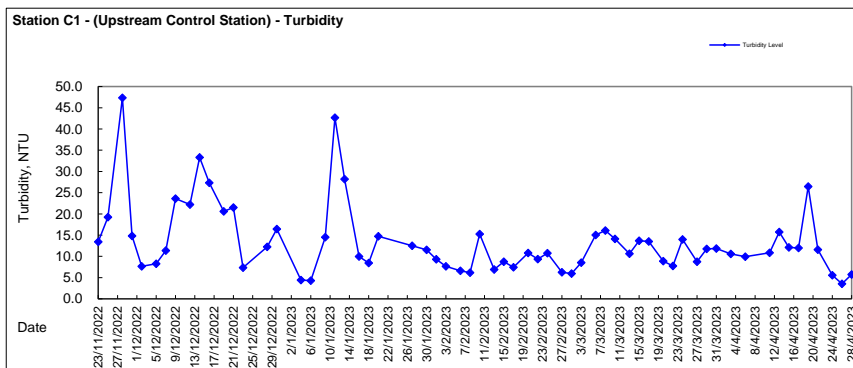
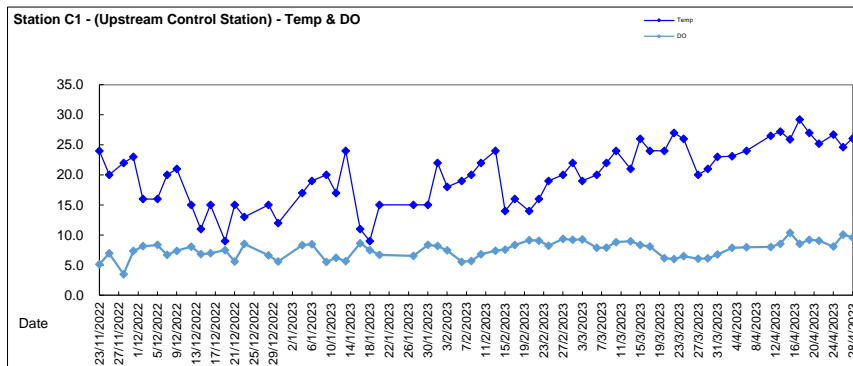
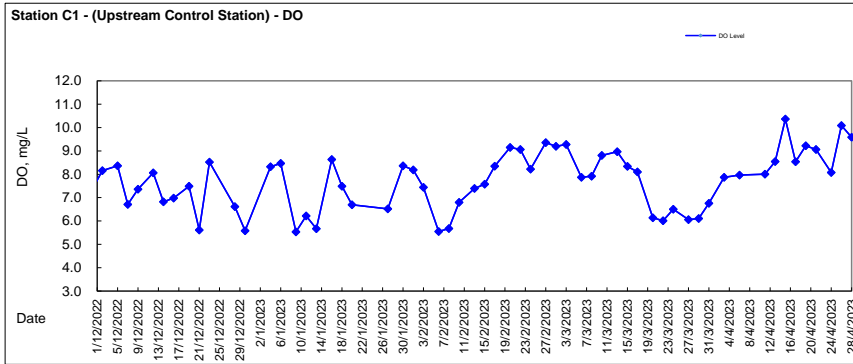


Graphic Presentation of WQM Result





Graphic Presentation of WQM Result





## ***Appendix 5.8***

# ***Laboratory Analysis Result***





### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2312886
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 04-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 13-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

This report supersedes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 04-Apr-2023 to 13-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2312886**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	03-Apr-2023	03-Apr-2023	03-Apr-2023	03-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2312886-001	HK2312886-002	HK2312886-003	HK2312886-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		5.8	5.9	17.3	16.7	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4984811)</b>								
HK2307565-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.1	4.1
HK2312886-003	M1	EA025: Suspended Solids (SS)	----	0.5	mg/L	17.3	17.8	2.7

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

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4984811)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2313104
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 06-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 13-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

This report supersedes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 06-Apr-2023 to 13-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2313104**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	06-Apr-2023	06-Apr-2023	06-Apr-2023	06-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2313104-001	HK2313104-002	HK2313104-003	HK2313104-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		7.5	6.5	16.5	12.0	---





**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4984811)</b>								
HK2307565-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.8	8.1	4.1
HK2312886-003	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	17.3	17.8	2.7

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

Matrix: WATER			Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4984811)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2313483
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 12-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 19-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

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Testing period is from 12-Apr-2023 to 19-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2313483**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	11-Apr-2023	11-Apr-2023	11-Apr-2023	11-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2313483-001	HK2313483-002	HK2313483-003	HK2313483-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		3.9	4.9	12.3	9.4	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>								
HK2313483-001	C1	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.7	18.7
HK2314373-003	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.9	2.2

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2314056
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 14-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 19-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

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Testing period is from 14-Apr-2023 to 19-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2314056**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	13-Apr-2023	13-Apr-2023	13-Apr-2023	13-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2314056-001	HK2314056-002	HK2314056-003	HK2314056-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		11.6	9.0	6.5	4.6	---





**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>								
HK2313483-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.7	18.7
HK2314373-003	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.9	2.2

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2314373
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 15-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 19-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

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Testing period is from 15-Apr-2023 to 19-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2314373**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	15-Apr-2023	15-Apr-2023	15-Apr-2023	15-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2314373-001	HK2314373-002	HK2314373-003	HK2314373-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		12.3	13.6	6.8	7.5	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>								
HK2313483-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.7	18.7
HK2314373-003	M1	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.9	2.2

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

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2314516
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 17-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 19-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

This report supersedes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 17-Apr-2023 to 19-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2314516**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	17-Apr-2023	17-Apr-2023	17-Apr-2023	17-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2314516-001	HK2314516-002	HK2314516-003	HK2314516-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		13.1	13.2	10.9	11.5	---





**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>								
HK2313483-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	3.9	4.7	18.7
HK2314373-003	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	6.8	6.9	2.2

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 4996608)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	102	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2314935
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 19-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 25-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

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Testing period is from 19-Apr-2023 to 25-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2314935**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	19-Apr-2023	19-Apr-2023	19-Apr-2023	19-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2314935-001	HK2314935-002	HK2314935-003	HK2314935-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		24.4	25.0	24.2	24.8	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5007428)</b>								
HK2314935-001	C1	EA025: Suspended Solids (SS)	----	0.5	mg/L	24.4	24.2	0.8

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5007428)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.5	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2315507
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 21-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 25-Apr-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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Fung Lim Chee, Richard	Managing Director	Inorganics



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Testing period is from 21-Apr-2023 to 25-Apr-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2315507**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	21-Apr-2023	21-Apr-2023	21-Apr-2023	21-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2315507-001	HK2315507-002	HK2315507-003	HK2315507-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		9.4	9.4	10.4	9.4	---





**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5007428)</b>								
HK2314935-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	24.4	24.2	0.8

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5007428)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.5	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2315759
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 24-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 02-May-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

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Testing period is from 24-Apr-2023 to 02-May-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2315759**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	24-Apr-2023	24-Apr-2023	24-Apr-2023	24-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2315759-001	HK2315759-002	HK2315759-003	HK2315759-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		7.6	8.3	11.2	12.4	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5016949)</b>								
HK2315759-001	C1	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	8.2	8.9

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5016949)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	95.5	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2316006
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 26-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 02-May-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### **General Comments**

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Testing period is from 26-Apr-2023 to 02-May-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2316006**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	26-Apr-2023	26-Apr-2023	26-Apr-2023	26-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2316006-001	HK2316006-002	HK2316006-003	HK2316006-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		5.5	6.0	5.2	5.2	---





**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5016949)</b>								
HK2315759-001	Anonymous	EA025: Suspended Solids (SS)	----	0.5	mg/L	7.6	8.2	8.9

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5016949)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	95.5	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



### CERTIFICATE OF ANALYSIS

Client	: LAM ENVIRONMENTAL SERVICES LTD	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: ALEX CHAN	Contact	: Richard Fung	Work Order	: HK2316328
Address	: 19/F, REMEX CENTRE, 42 WONG CHUK HANG ROAD, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: alexchan@lamenviro.com	E-mail	: richard.fung@alsglobal.com		
Telephone	: 2839 5629	Telephone	: +852 2610 1044		
Facsimile	: 2882 3331	Facsimile	: +852 2610 2021		
Project	: CONTRACT NO. SPW 12/2021 - SHEK WU HUI EFFLUENT POLISHING PLANT			Date Samples Received	: 28-Apr-2023
Order number	: ---	Quote number	: HKE/2224/2021_V3	Issue Date	: 05-May-2023
C-O-C number	: ---			No. of samples received	: 4
Site	:			No. of samples analysed	: 4

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<i>Signatories</i>	<i>Position</i>	<i>Authorised results for</i>
		
Fung Lim Chee, Richard	Managing Director	Inorganics



### ***General Comments***

This report supersedes any previous report(s) with the same work order number. All pages of this report have been checked and approved for release. When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Testing period is from 28-Apr-2023 to 05-May-2023.

Key: LOR = Limit of reporting; CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

#### **Specific Comments for Work Order: HK2316328**

Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.

Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.

Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified.

---



**Analytical Results**

Sub-Matrix: FRESH WATER

				Sample ID	C1	C1 - DUP	M1	M1 - DUP	---
				Sampling date / time	28-Apr-2023	28-Apr-2023	28-Apr-2023	28-Apr-2023	---
Compound	CAS Number	LOR	Unit		HK2316328-001	HK2316328-002	HK2316328-003	HK2316328-004	-----
<b>EA/ED: Physical and Aggregate Properties</b>									
EA025: Suspended Solids (SS)	---	2.0	mg/L		9.1	8.7	6.1	6.8	---



**Laboratory Duplicate (DUP) Report**

Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5027300)</b>								
HK2316328-001	C1	EA025: Suspended Solids (SS)	----	0.5	mg/L	9.1	8.9	1.9

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

Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits(%)		RPD (%)	
						LCS	DCS	Low	High	Value	Control Limit
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 5027300)</b>											
EA025: Suspended Solids (SS)	----	0.5	mg/L	<0.5	20 mg/L	96.0	----	85.1	116	----	----

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

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



## ***Appendix 5.9***

### ***Monthly Summary Waste Flow Table***

### Monthly Summary Waste Flow Table for 2023

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0.442	0.000	0.000	0.000	0.442	3.796	0.000	0.000	0.000	0.000	0.061
Feb	1.381	0.000	0.000	0.000	1.381	2.962	0.000	0.000	0.000	0.000	0.078
Mar	2.528	0.000	0.000	0.000	2.528	3.530	0.000	0.000	0.000	0.000	0.090
Apr	1.633	0.000	0.000	0.000	1.633	0.280	0.000	0.000	0.000	0.000	0.083
May											
Jun											
<b>Sub-total</b>	<b>5.984</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>5.984</b>	<b>10.568</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.313</b>
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
<b>Total</b>	<b>5.984</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>5.984</b>	<b>10.568</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.313</b>

- Notes:
1. Assume the density of soil fill is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>.
  3. Assume the density of general refuse is 0.9 ton/m<sup>3</sup>.
  4. Assume density of waste oil is assumed to be 0.8 kg/L.
  5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38.
  6. The non-inert C&D wastes are disposed at NENT.

### Monthly Summary Waste Flow Table for 2023

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	8.960	0.000	0.000	0.000	8.960	0.089	0.00	0.000	0.000	0.000	0.025
Feb	3.950	0.000	0.000	0.000	3.950	0.043	0.00	0.000	0.000	0.000	0.070
Mar	0.341	0.000	0.000	0.000	0.341	0.000	0.00	0.000	0.000	0.000	0.074
Apr	0.213	0.000	0.000	0.000	0.213	0.000	0.00	0.000	0.000	0.000	0.047
May											
Jun											
<b>Sub-total</b>											
Jul											
Aug											
Sep											
Oct											
Nov											
Dec											
<b>Total</b>	13.464	0.000	0.000	0.000	13.464	0.132	0.000	0.000	0.000	0.000	0.215

- Notes:
1. Assume the density of soil fill and special waste (i.e. sediment from DSD sedimentation tank) is 2 ton/m<sup>3</sup>.
  2. Assume the density of rock and broken concrete is 2.5 ton/m<sup>3</sup>
  3. Assume the density of general refuse is 0.9 ton/m<sup>3</sup>
  4. Density of waste oil is assumed to be 0.8 kg/L. Chemical waste includes waste oil.
  5. The inert C&D materials except slurry and bentonite are disposed at Tuen Mun 38
  6. The slurry and bentonite are disposed at Tseung Kwun O 137
  7. The non-inert C&D wastes, including general refuse & special waste (i.e. sediment from DSD sedimentation tank) are disposed at NENT



## EM&A Monthly Reporting Template (cut-off at the end of each month)

Name of Department: ArchSD/CEDD/DSD/EMSD/HyD/WSD

Contract No.: DE/2018/03

### Monthly Summary Waste Flow Table for 2023 (year)

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 3)	Chemical Waste	Others, e.g. general refuse
	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan	0	0	0	0	0	0	0	0.13	0	0	10.51T
Feb	0	0	0	0	0	0	0	0	0	0	17.33T
Mar	0	0	0	0	0	0	0	0.155	0.01	0	18.31T
Apr	0	0	0	0	0	0	4.81	0	0	0	12.62T
May											
June											
Sub-total											
July											
Aug											
Sept											
Oct											
Nov											
Dec											
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.81</b>	<b>0.285</b>	<b>0.01</b>	<b>0</b>	<b>58.77T</b>

### Monthly Summary Waste Flow Table for 2023 (year)

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	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (see Note 2)	Chemical Waste	Others, e.g. general refuse
	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000 kg)
Jan	7.26	0	0	0	7.26	0	0	0	0	0	
Feb	0	0	0	0	0	0	0	0	0	1.97	
Mar	0	0	0	0	0	0	0	0	0	0	
Apr	0	0	0	0	0	0	24.4	0	0	0.8	0
May											
June											
Sub-total	7.26	0	0	0	7.26	0	24.4	0	0	0.8	1.97
July											
Aug											
Sept											
Oct											
Nov											
Dec											
Total	7.26	0	0	0	7.26	0	24.4	0	0	0.8	1.97



## ***Appendix 5.10***

# ***Exceedance Investigation Finding***

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**Appendix 5.10a**  
**Site Diary**  
**From Engineer Respective**

Diary Date	Section	Location	Sub Location	Period	Activity
2023/04/30	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Sunday
2023/04/29	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/28	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/27	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/26	Portion C	Portion C	Outfall	08:00 - 18:00	Striking formwork for U-channel reinstatement
2023/04/25	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork, placing steel mesh and pouring concrete for U-channel reinstatement
2023/04/24	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork and pacing steel mesh for U-channel reinstatement
2023/04/23	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Sunday
2023/04/22	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/21	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/20	Portion C	Portion C	Outfall	08:00 - 18:00	Excavation and compaction to formation for reinstatement of existing U-channel
2023/04/19	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork to staircase and slab
2023/04/18	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/17	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/16	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Sunday
2023/04/15	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/14	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork and pouring concrete for reinstatement of existing catch pit
2023/04/13	Portion C	Portion C	Outfall	08:00 - 18:00	Pouring concrete to staircase beside outfall
2023/04/12	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork to staircase beside outfall
2023/04/11	Portion C	Portion C	Outfall	08:00 - 18:00	Erecting formwork to staircase beside outfall
2023/04/10	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Public Holiday
2023/04/09	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Sunday
2023/04/08	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Public Holiday
2023/04/07	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Public Holiday
2023/04/06	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/05	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Public Holiday
2023/04/04	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/03	Portion C	Portion C	Outfall	08:00 - 18:00	No activity
2023/04/02	Portion C	Portion C	Outfall	08:00 - 18:00	No activity on Sunday
2023/04/01	Portion C	Portion C	Outfall	08:00 - 18:00	No activity

**Appendix 5.10b**  
**Site Photo Record**  
**Taken During exceedances of WQM**

Photo record for WQM on 3 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



Photo record for WQM on 6 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



Photo record for WQM on 11 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River

Photo record for WQM on 13 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



Photo record for WQM on 15 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River

Photo record for WQM on 17 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



Photo record for WQM on 19 April 2023



Control Station



Monitoring Station



Upstream of the Control Station



Outfall and the Project Site boundary along Ng Tung River

Photo record for WQM on 21 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



Photo record for WQM on 24 April 2023



Control Station



Monitoring Station



Rubbish and debris trapped between the control station and monitoring station



Outfall and the Project Site boundary along Ng Tung River



## ***Appendix 6.1***

### ***Event and Action Plans***



## Event and Action Plan

### Event and Action Plan for Construction Noise

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

### Event and Action Plan for Construction Dust Monitoring

Event	Action			
	ET	IEC	ER	Contractor
<b>Action Level</b>				
Action level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of complaint and propose remedial measures;</li> <li>2. Inform IEC and ER;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify the Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rectify any unacceptable practices.</li> <li>2. Amend working methods agreed with the ER as appropriate.</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Identify sources.</li> <li>2. Inform the IEC and ER.</li> <li>3. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings.</li> <li>5. Increase monitoring frequency to daily.</li> <li>6. Discuss with the IEC, ER and Contractor on remedial action required.</li> <li>7. If exceedance continues, arrange meeting with the IEC, Contractor and ER.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ET on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise Implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol>
<b>Limit Level</b>				
Limit level being exceeded by one sampling	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform Contractor, IEC, ER, and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Amend proposal if appropriate.</li> </ol>



Event	Action			
	ET	IEC	ER	Contractor
	ER informed of the results.			
Limit level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing;</li> <li>2. Notify Contractor;</li> <li>3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within three working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>

**Event and Action Plan for Ecological Monitoring**

Action level	Response	Limit Level	Response
<b>Construction Phase</b>			
Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Action Level response is triggered.	Investigate cause and if cause identified as related to the Project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of all waterbird species relative to numbers during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to the Project instigate remedial action.
Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Action Level response is triggered	Investigate cause and if cause identified as related to the Project instigate remedial action to remove or reduce source of disturbance.	Decline in numbers of any one waterbird species occurring in significant numbers* during Baseline Monitoring such that the Limit Level response is triggered.	Investigate cause and if caused identified as related to the Project instigate remedial action.

**Event and Action Plan for Landscape and Visual**

Event	Action			
	ET	IEC	ER	Contractor
Non-conformity on one occasion	<ol style="list-style-type: none"> <li>1. Inform the Contractor, IEC and ER;</li> <li>2. Discuss remedial actions with IEC, ER and Contractor</li> <li>3. Monitor remedial actions until rectification has been completed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check inspection report;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise ER on effectiveness of proposed remedial measures..</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Review and agree on the remedial measures proposed by the Contractor;</li> <li>3. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the non-conformity;</li> <li>2. Implement remedial measures;</li> <li>3. Amend working methods agreed with ER as appropriate;</li> <li>4. Rectify damage and undertake any necessary replacement.</li> </ol>
Repeated Non-conformity	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD;</li> <li>3. Discuss inspection frequency;</li> <li>4. Discuss remedial actions with IEC, ER and Contractor;</li> <li>5. Monitor remedial actions until rectification has been completed;</li> <li>6. If non-conformity stops, cease additional monitoring</li> </ol>	<ol style="list-style-type: none"> <li>1. Check inspection report;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET, ER and Contractor on possible remedial measures;</li> <li>4. Advise ER on effectiveness of proposed remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Notify the Contractor;</li> <li>2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>3. Supervise implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify source and investigate the non-conformity;</li> <li>2. Implement remedial measures;</li> <li>3. Amend working methods agreed with ER as appropriate;</li> <li>4. Rectify damage and undertake any necessary replacement. Stop relevant portion of works as determined by ER until the non-conformity is abated.</li> </ol>

### Event and Action Plan for Water Quality Monitoring

Event	Action			
	ET	IEC	ER	Contractor
<b>Action Level</b>				
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>Identify source(s) of impact and record in notification of exceedance;</li> <li>Inform IEC, Contractor(s) and ER</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>Inform EPD.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Check plant and equipment and rectify unacceptable practice</li> </ol>
Action level being exceeded by two or more consecutive sampling	<ol style="list-style-type: none"> <li>Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>Identify source(s) of impact and record in notification of exceedance;</li> <li>Inform IEC, Contractor(s) and ER;</li> <li>Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>Inform EPD;</li> <li>Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>Ensure additional mitigation measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Check plant and equipment and rectify unacceptable practice;</li> <li>Consider changes of working methods;</li> <li>Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>Implement the agreed.</li> </ol>



Event	Action			
	ET	IEC	ER	Contractor
<b>Limit Level</b>				
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>Identify source(s) of impact and record in notification of exceedance;</li> <li>Inform IEC, Contractor(s) and ER;</li> <li>Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>Inform EPD;</li> <li>Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>Ensure additional mitigation measures are properly implemented.</li> <li>Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Check plant and equipment and rectify unacceptable practice;</li> <li>Critically review the need to change working methods;</li> <li>Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ol>
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>Repeat in situ measurement on the next day of exceedance to confirm findings;</li> <li>Check monitoring data, plant, equipment and Contractor(s)'s working methods;</li> <li>Identify source(s) of impact and record in notification of exceedance;</li> <li>Inform IEC, Contractor(s) and ER;</li> <li>Discuss with IEC and Contractor(s) on additional mitigation measures and ensure that they are implemented.</li> </ol>	<ol style="list-style-type: none"> <li>Check monitoring data submitted by ET and Contractor(s)'s working methods;</li> <li>Inform EPD;</li> <li>Discuss with ET and Contractor(s) on additional mitigation measures and advise ER accordingly;</li> <li>Assess the effectiveness of the implemented mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Discuss with the IEC on the proposed additional mitigation measures and agree on the mitigation measures to be implemented.</li> <li>Ensure additional mitigation measures are properly implemented.</li> <li>Request Contractor(s) to critically review the working methods.</li> </ol>	<ol style="list-style-type: none"> <li>Confirm receipt of notification of exceedance in writing;</li> <li>Check plant and equipment and rectify unacceptable practice;</li> <li>Critically review the need to change working methods;</li> <li>Discuss with ET and IEC on additional mitigation measures and propose them to ER within 3 working days;</li> <li>Implement the agreed mitigation measures.</li> </ol>



## ***Appendix 6.2***

# ***Summary of Notification of Exceedance***

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### Summary for Notification of Exceedance

Reporting Period: April 2023

Ref No.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up Action
-	-	-	-	-	-	-	-

Ref. No.	Date	Time	Location	Construction Noise Level	Parameter	Action Level	Limit Level	Follow-up action
-	-	-	-	-	-	-	-	-

Ref no.	Date	Location	Parameters (Unit)	Measured	Action Level	Limit Level	Follow-up action	Ref no.
SWH_047_w	3-Apr-23	M1	Turbidity (NTU)	<b>14.04 NTU (Limit Level Exceedance)</b>	>12.72 NTU (>120% of C1)	>13.78 NTU (>130% of C1)	<b>Cause of Exceedance:</b>	Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.
			SS (mg/L)	<b>17.00 mg/L (Limit Level Exceedance)</b>	>7.02 mg/L (>120% of C1)	>7.61 mg/L (>130% of C1)	<b>ET's conclusions and recommendations for mitigation:</b> <b>Contractor's actions to implement the mitigation:</b>	Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.  Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.
		C1 (Control Station for comparing to the impact station - M1)	Turbidity (NTU) SS (mg/L)	10.60 NTU 5.85 mg/L			<b>Action taken under EAP:</b>	<ol style="list-style-type: none"> <li>1. ET repeated in situ measurement immediately to confirm findings, the difference between 1st and 2nd monitoring results was very small.</li> <li>2. ET checked the monitoring data, plant and equipment, and no abnormality was identified.</li> <li>3. According to ET's field staff's on site observation and the record of ER's site diary, no works have been conducted at the outfall.</li> <li>4. ET checked the site boundary near the Ng Tung River and did not discover any discharge of muddy water or site runoff from the site.</li> <li>5. After the recording of the exceedance, ET tried to identify the source of the exceedance immediately, the only pollution identified was the large amount of rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</li> <li>6. Notification of Exceedance was sent to IEC and ER.</li> </ol>





SWH_048_w	6-Apr-23	M1	SS (mg/L)	<b>14.25 mg/L (Limit Level Exceedance)</b>	>8.40 mg/L (>120% of C1)	>9.10 mg/L (>130% of C1)	<p><b>Cause of Exceedance:</b></p> <p>Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</p> <p>Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.</p> <p>Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.</p>
		C1 (Control Station for comparing to the impact station - M1)	SS (mg/L)	7.00 mg/L			<p><b>Action taken under EAP:</b></p> <ol style="list-style-type: none"> <li>ET repeated in situ measurement immediately to confirm findings, the difference between 1st and 2nd monitoring results was very small.</li> <li>ET checked the monitoring data, plant and equipment, and no abnormality was identified.</li> <li>According to ET's field staff's on site observation and the record of ER's site diary, no works have been conducted at the outfall.</li> <li>ET checked the site boundary near the Ng Tung River and did not discover any discharge of muddy water or site runoff from the site.</li> <li>After the recording of the exceedance, ET tried to identify the source of the exceedance immediately, the only pollution identified was the large amount of rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</li> <li>Notification of Exceedance was sent to IEC and ER.</li> </ol>
SWH_049_w	11-Apr-23	M1	SS (mg/L)	<b>10.85 mg/L (Limit Level Exceedance)</b>	>5.28 mg/L (>120% of C1)	>5.72 mg/L (>130% of C1)	<p><b>Cause of Exceedance:</b></p> <p>Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</p> <p>Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.</p> <p>Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.</p>
		C1 (Control Station for comparing to the impact station - M1)	SS (mg/L)	4.40 mg/L			<p><b>Action taken under EAP:</b></p> <ol style="list-style-type: none"> <li>ET repeated in situ measurement immediately to confirm findings, the difference between 1st and 2nd monitoring results was very small.</li> <li>ET checked the monitoring data, plant and equipment, and no abnormality was identified.</li> <li>According to the record of ER's site diary, the only work conducted at the outfall was to erect formwork to staircase beside outfall.</li> <li>According to ET's field staff's on site observation, the formwork erection only took place well-above the water level with water mitigation measures implemented (provision of concrete blocks and plastic barriers), therefore it should not cause any negative impact on the water quality.</li> <li>ET checked the site boundary near the Ng Tung River and did not discover any discharge of muddy water or site runoff from the site.</li> <li>After the recording of the exceedance, ET tried to identify the source of the exceedance immediately, the only pollution identified was the large amount of rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</li> <li>Notification of Exceedance was sent to IEC and ER.</li> </ol>



SWH_050_w	13-Apr-23	M1	DO (mg/L)	<b>6.40 mg/L (Limit Level Exceedance)</b>	<7.8 mg/L	<7.7 mg/L	<p><b>Cause of Exceedance:</b> Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</p> <p><b>ET's conclusions and recommendations for mitigation:</b> Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.</p> <p><b>Contractor's actions to implement the mitigation:</b> Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.</p>
			C1 (Control Station for comparing to the impact station - M1)	DO (mg/L)	8.54 mg/L		
SWH_051_w	15-Apr-23	M1	DO (mg/L)	<b>3.92 mg/L (Limit Level Exceedance)</b>	<7.8 mg/L	<7.7 mg/L	<p><b>Cause of Exceedance:</b> Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.</p> <p><b>ET's conclusions and recommendations for mitigation:</b> Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.</p> <p><b>Contractor's actions to implement the mitigation:</b> Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.</p>
			C1 (Control Station for comparing to the impact station - M1)	DO (mg/L)	10.37 mg/L		



SWH_052_w	17-Apr-23	M1	DO (mg/L)	<b>4.92 mg/L (Limit Level Exceedance)</b>	<7.8 mg/L	<7.7 mg/L	<b>Cause of Exceedance:</b>  Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.  <b>ET's conclusions and recommendations for mitigation:</b>  Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.  <b>Contractor's actions to implement the mitigation:</b>  Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.
			C1 (Control Station for comparing to the impact station - M1)	DO (mg/L)	8.54 mg/L		
SWH_053_w	19-Apr-23	M1	Turbidity (NTU)	<b>26.41 NTU (Limit Level Exceedance)</b>	>14.6 NTU	>15.6 NTU	<b>Cause of Exceedance:</b>  Unknown pollution source from upstream of control station
			SS (mg/L)	<b>24.50 mg/L (Limit Level Exceedance)</b>	>18.8 mg/L	>19.5 mg/L	<b>ET's conclusions and recommendations for mitigation:</b>  Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.  <b>Contractor's actions to implement the mitigation:</b>  Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.
			C1 (Control Station for comparing to the impact station - M1)	Turbidity (NTU)	26.45 NTU		



SWH_054_w	21-Apr-23	M1	DO (mg/L)	<b>7.72 mg/L (Action Level Exceedance)</b>	<7.8 mg/L	<7.7 mg/L	<b>Cause of Exceedance:</b> Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.  Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.  Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.
		C1 (Control Station for comparing to the impact station - M1)	DO (mg/L)	9.07 mg/L			
SWH_055_w	24-Apr-23	M1	Turbidity (NTU)	<b>13.40 NTU (Limit Level Exceedance)</b>	>6.68 NTU (>120% of C1)	>7.24 NTU (>130% of C1)	<b>Cause of Exceedance:</b> Rubbish and debris trapped by the concrete blocks placed between the control station and the monitoring station.  Exceedance not related to project, advised contractor to maintain on-going water mitigation measures.  Construction activities were checked; Outfall was checked and no soil or water dropped from outfall was observed.
		C1 (Control Station for comparing to the impact station - M1)	SS (mg/L)	<b>11.80 mg/L (Limit Level Exceedance)</b>	>9.54 mg/L (>120% of C1)	>10.34 mg/L (>130% of C1)	
			Turbidity (NTU)	5.57 NTU			
			SS (mg/L)	7.95 mg/L			



## ***Appendix 8.1***

## ***Complaint Log***



**Summary of Environmental Complaints Log**

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
1	18 March 2020	EPD	Expansion Site of SWHSTP (Portion C)	Water contamination	<p>Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none"><li>- Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River</li><li>- Arranged to repair the wastewater treatment system</li><li>- Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity</li><li>- Clean the slurry sediment released from the outlet regularly by suction trucks</li><li>- Avoid damage of underground drains and pipes caused by existing construction works</li><li>- Avoid illegal discharge from the Site into foul drains and manholes</li></ul>	Closed
2	19 February 2021	EPD	SWHEPP	Odour nuisance	<p>Significant odour nuisance was suspected to be emitted from the construction activities of SWHEPP</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none"><li>- Ensured only PMEs with valid NRMM label were used on-site</li><li>- Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart</li><li>- Used ULSD for diesel-powered equipment</li><li>- Provided water spraying and water sprinklers system for haul road access and demolition works</li><li>- Used battery powered solution to provide power to the tower crane</li><li>- Provided cover for all rubbish bins on-site</li><li>- Separated general refuse from construction waste</li></ul>	Closed



Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
3	9 August 2021	EPD	SWHEPP	Air Quality	<p>Air nuisance was suspected to be originated from the construction activities of SWHEPP</p> <p>The investigation and mitigation measures included</p> <ul style="list-style-type: none"><li>- Ensured only PMEs with valid NRMM label were used on-site</li><li>- Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart</li><li>- Used ULSD for diesel-powered equipment</li><li>- Used battery powered solution to provide power to the tower crane</li><li>- Carried out plant maintenance in a timely manner</li></ul>	Closed
20220304	4 March 2022	EPD	SWHEPP	Odour nuisance	<p>The complainant alleged the odour nuisance was sourced from the construction site of Shek Wu Hui Effluent Polishing Plant on 4 March 2022. Thus, all four contracts (Contract Nos. DC/2018/06, DC/2018/07, DE/2018/03 and DE/2018/04) were involved in the complaint investigation.</p> <p>After investigation, no construction activities undertaken by all four contracts was associated with the odour nuisance received on 4 March 2022. Nevertheless, the contractors were reminded and recommended to:</p> <ul style="list-style-type: none"><li>• Ensure only equipment with valid NRMM label is allowed to be used at site and regular maintenance of equipment</li><li>• Provide regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart</li><li>• Use ULSD as fuel for diesel-powered equipment</li><li>• Maintain proper segregation and storage of general refuse</li></ul>	Closed on 22 April 2022 as confirmed with EPD.



## ***Appendix 9.1***

# ***Construction Programme of Individual Contracts***



ID	Activity ID	KD	Task Name	Inclment Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan	Gantt Chart (2020 H1 to 2026 H1)											
34	PD-00000	*	Planned Completion - Key Date (cal. day)			2114 days	Fri 1/11/19	Thu 14/8/25	Fri 1/11/19	NA			29%		1/11 2020 H1 2022 H1 2024 H1 2026 H1											
35	PKD-00000	*	Planned Completion - Key Dates			707.8 days	Wed 12/5/21	Wed 19/4/23	Wed 12/5/21	NA			0%		12/5 19/4											
36	PKD-01000	KD1A	KD1A			0 days	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21 301FF		19FF	100%		12/5											
37	PKD-02000	KD2A	KD2A			0 days	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22 661FF		20FF	100%		3/1											
38	PKD-03000	KD3A	KD3A			0 days	Fri 2/9/22	Fri 2/9/22	Fri 2/9/22	Fri 2/9/22 331FF		21FF	100%		2/9											
39	PKD-04000	KD3B	KD3B			0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22 367FF		22FF	100%		7/6											
40	PKD-05000	KD3C	KD3C			0 days	Wed 26/10/22	Wed 26/10/22	Wed 26/10/22	Wed 26/10/22 389FF		23FF	100%		26/10											
41	PKD-06000	KD3D	KD3D			0 days	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21 421FF		24FF	100%		20/11											
42	PKD-07000	KD3E	KD3E			0 days	Wed 19/4/23	Wed 19/4/23	NA	NA 436FF,445FF,455FF,465FF,50:25FF			0%		19/4											
43	PCD-00000	*	Planned Completion - Section of the Works (cal. day)			1239 days	Fri 25/3/22	Thu 14/8/25	Fri 25/3/22	NA			0%		25/3 14/8											
44	PCD-01000	SW1	Section 1 of Works			0 days	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22 557FF,589FF,590FF,591FF,59:27FF		28FF	100%		25/3											
45	PCD-02000	SW2	Section 2 of Works			0 days	Fri 15/9/23	Fri 15/9/23	NA	NA 682FF,694FF			0%		15/9											
46	PCD-03000	SW3	Section 3 of Works			0 days	Fri 18/8/23	Fri 18/8/23	NA	NA 205FF,391FF,405FF,423FF,444:627,29FF			0%		18/8											
47	PCD-04000	SW4	Section 4 of Works			0 days	Tue 27/6/23	Tue 27/6/23	NA	NA 558FF,346FF,372FF,392FF,404:30FF			0%		27/6											
48	PCD-05000	SW5	Section 5 of Works			0 days	Wed 14/8/24	Wed 14/8/24	NA	NA 308FF,347FF,373FF,393FF,40:49,50,31FF			0%		14/8											
49	PCD-06000	DLP	Defect Liability Period			365 days	Thu 15/8/24	Thu 14/8/25	NA	NA 48,628FF			0%		14/8											
56	IWKD1A-01040	KD1A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21 55			100%		16/6											
64	IWKD2A-01040	KD2A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22 63			100%		21/2											
72	IWKD3A-01040	KD3A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Tue 2/8/22	Tue 2/8/22	Tue 2/8/22	Tue 2/8/22 71			100%		2/8											
81	IWKD3B-01040	KD3B	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22			100%		5/7											
89	IWKD3C-01040	KD3C	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Fri 8/7/22	Fri 8/7/22	Fri 8/7/22	NA			99%		8/7											
97	IWKD3D-01040	KD3D	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22			100%		13/1											
104	IWKD3E-01040	KD3E	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Mon 26/9/22	Mon 26/9/22	NA	NA 103			0%		26/9											
112	IWSW1-01040	SW1	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Tue 24/5/22	Tue 24/5/22	Tue 24/5/22	Tue 24/5/22 111			100%		24/5											
121	IWSW1-01040	SW2	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Thu 7/12/23	Thu 7/12/23	NA	NA 120			0%		7/12											
130	IWSW3-01040	SW3	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Sat 19/8/23	Sat 19/8/23	NA	NA 129			0%		19/8											
139	IWSW4-01040	SW4	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Mon 9/1/23	Mon 9/1/23	NA	NA 138			0%		9/1											
148	IWSW5-01040	SW5	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for January 2023			0 days	Sun 1/12/24	Sun 1/12/24	NA	NA 147			0%		1/12											
266	CWPC-00000	*	Construction Works of Portion C of the Site			1753.8 days	Mon 16/9/19	Mon 11/8/25	Mon 16/9/19	NA			53%		16/9 11/8											
267	CUV1-00000	*	UV System No. 1 & Effluent Pumping Station No. 1 (1)			971 days	Mon 16/9/19	Thu 22/12/22	Mon 16/9/19	Thu 22/12/22			100%		16/9 22/12											
298	CUV1-09041	KD1A	Walls, Stabs and staircase Construction @+7.4mPD to 16.4mPD [Additional SPI-3 puddle (DN100 x 2 & DN80) (204),(228)	(204),(228)	(108), (146), (148), (179), (182)	41 days	Sat 20/3/21	Wed 12/5/21	Sat 20/3/21	Wed 12/5/21 295		301,302,300,304	100%		20/3 12/5											
299	CUV1-10000	KD1A	Construction of Switch room			51 days	Tue 23/3/21	Wed 12/5/21	Tue 23/3/21	Wed 12/5/21			100%		23/3 12/5											
301	CUV1-11000	KD1A	Allow access to Contractor DE/2018/03 for E&M Installation			0 days	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21 298		36FF	100%		12/5											
302	CUV1-12000	SW1	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining	(95), (296), (367), 359		256 days	Tue 18/5/21	Fri 25/3/22	Tue 18/5/21	Fri 25/3/22 245SS,168SS,298		621,622,303,620	100%		18/5 25/3											
305	CUV1-12200	SW1	Effluent Chamber (including Additional Works from PMI)			163 days	Tue 7/9/21	Fri 25/3/22	Tue 7/9/21	Fri 25/3/22 304FS+1 day		44FF,306	100%		7/9 25/3											
307	CUV1-12500	SW4	Underground utilities works - Revised Cable Ducts plan			47 days	Tue 30/8/22	Wed 26/10/22	NA	NA 303FF			0%		30/8 26/10											
308	CUV1-13000	SW5	Surrounding Site formation works and road works	318, 276, 219, 248, 207		180 days	Thu 21/12/23	Sat 10/8/24	NA	NA 347FF		48FF	0%		21/12 10/8											
309	CSDC-00000	*	Sludge Digesters and Distribution Chamber (4)			1376.8 days	Sat 7/12/19	Sat 10/8/24	Sat 7/12/19	NA			64%		7/12 10/8											
331	CSDC-12000	KD3A	Allow access to Contractor DE/2018/03 for E&M Installation			0 days	Fri 2/9/22	Fri 2/9/22	Fri 2/9/22	Fri 2/9/22 322,330		38FF	100%		2/9											
342	CSDC-12050	SW3	Civil & Structural works at G/F			45 days	Fri 10/3/23	Sun 23/4/23	NA	NA 340FF+29 days		46FF,343FF	0%		10/3 23/4											
345	CSDC-15000	SW3	ABWF Works & BS Works	(173),594		127 days	Wed 23/11/22	Wed 29/3/23	Wed 23/11/22	NA 245SS,168SS,322FS+15 days,46FF			0%		23/11 29/3											
346	CSDC-15500	SW4	Surrounding sewerage, utility and process pipe works	358,298,222,248,205,206		131 days	Thu 15/12/22	Tue 30/5/23	Thu 15/12/22	NA 341		47FF,621FF,622FF,347,540FF,	0%		15/12 30/5											
347	CSDC-16000	SW5	Surrounding Site formation works and road works			350 days	Wed 31/5/23	Sat 10/8/24	NA	NA 346		48FF,373FF,393FF,407FF,425F	0%		31/5 10/8											
348	CSDB-00000	*	Sludge Dewatering Building (2)			875.8 days?	Tue 26/11/19	Wed 9/11/22	Tue 26/11/19	NA			68%		26/11 9/11											
367	CSDB-12000	KD3B	Allow access to Contractor DE/2018/03 for E&M Installation			0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22 366		39FF,368FS+62 days,370	100%		7/6											
371	CSDB-14000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining	(95), (173),594		288 days	Sat 30/4/22	Fri 18/8/23	Sat 30/4/22	NA 245SS,168SS,366SS+37 days		46FF	10%		30/4 18/8											
372	CSDB-14500	SW4	Surrounding sewerage, utility and process pipe works	(335),(53),219,248,205,206,207		167 days	Fri 12/8/22	Sat 4/3/23	Fri 12/8/22	NA 368SS,369SS-45 days		47FF,621FF,622FF,620FF	30%		12/8 4/3											
373	CSDB-15000	SW5	Surrounding Site formation works and road works			180 days	Tue 13/2/24	Sat 10/8/24	NA	NA 347FF			0%		13/2 10/8											
374	CHPB-00000	*	Combined Heat Power Building (3)			1374.8 days	Tue 10/12/19	Sat 10/8/24	Tue 10/12/19	NA			51%		10/12 10/8											
389	CHPB-09000	KD3C	Allow access to Contractor DE/2018/03 for E&M Installation			0 days	Wed 26/10/22	Wed 26/10/22	NA	NA 388		40FF,392FS-17 days	0%		26/10											
391	CHPB-11000	SW3	ABWF Works & BS Works with additional/change to works information	(173)		156 days	Mon 10/10/22	Wed 7/6/23	Mon 10/10/22	NA 245SS,168SS,388FS-15 days		46FF	20%		10/10 7/6											
392	CHPB-11500	SW4	Surrounding sewerage, utility and process pipe works	221,219,220,248,205,206		98 days	Fri 7/10/22	Sat 4/2/23	Fri 7/10/22	NA 389FS-17 days		47FF,621FF,622FF,620FF	20%		7/10 4/2											
393	CHPB-12000	SW5	Surrounding Site formation works and road works			180 days	Tue 13/2/24	Sat 10/8/24	NA	NA 347FF			0%		13/2 10/8											
394	CSPS-00000	*	Sewage Pumping Station (9)			1395.8 days	Fri 15/11/19	Sat 10/8/24	Fri 15/11/19	NA			62%		15/11 10/8											
404	CSPS-09000	KD3E	R.C. Structure & waterproofing works - Change to Work Information (Additional Puddle Flange and Civil Provision)	268, 338,	(63), (303), (341)	297 days	Tue 26/1/21	Wed 26/1/22	Tue 26/1/21	Wed 26/1/22 402,166,238,239,240,403SS-2		405,42FF	100%		26/1 26/1											
405	CSPS-10000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining			250 days	Tue 3/5/22	Thu 20/4/23	Tue 3/5/22	NA 245SS,168SS,167,404		46FF	36% 3		3/5 20/4											
406	CSPS-10500	SW4	Surrounding sewerage, utility and process pipe works	386, 299		45 days	Mon 13/6/22	Thu 4/8/22	Mon 13/6/22	Thu 4/8/22 328FS-38 days		47FF,621FF,622FF,424FS-4 da	100%		13/6 4/8											
407	CSPS-11000	SW5	Surrounding Site formation works and road works			180 days	Tue 13/2/24	Sat 10/8/24	NA	NA 347FF			0%		13/2 10/8											
408	CWS2-00000	*	Workshop No. 2 (5)			1362.8 days	Tue 24/12/19	Sat 10/8/24	Tue 24/12/19	NA			76%		24/12 10/8											
420	CWS2-08030	KD3D	Roof Construction @+19.00mPD - Revised Civil Requirements in R/F	(302)		14 days	Fri 5/11/21	Sat 20/11/21	Fri 5/11/21	Sat 20/11/21 419		421	100%		5/11 20/11											
421	CWS2-09000	KD3D	Allow access to Contractor DE/2018/03 for E&M Installation			0 days	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21 420		41FF,422	100%		20/11											
423	CWS2-11000	SW3	ABWF Works & BS Works - Revised Architectural Layout & Schedule for Doors, Louvers and Windows	(95), (173), (406,407,408)		415 days	Mon 22/11/21	Thu 20/4/23	Mon 22/11/21	NA 245SS,168SS		46FF	80%		22/11 20/4											
424	CWS2-11500	SW4	Surrounding sewerage, utility and process pipe works	221,219,220,205,206,207		41 days	Mon 1/8/22	Thu 17/9/22	Mon 1/8/22	Sat 17/9/22 406FS-4 days		47FF,621FF,622FF,447FS+34	100%		1/8 17/9											
425	CWS2-12000	SW5	Surrounding Site formation works and road works			180 days	Tue 13/2/24	Sat 10/8/24	NA	NA 347FF		48FF,620FF,621FF,622FF	0%		13/2 10/8											



識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	Re完成百分比
1	CD-1000			Contract Dates	1651.5 days	11月18日星期一	6月13日星期五	1747 days	11月18日星期一	9月24日星期三	月18日星期一-11	NA			0 days	0%
2	CD-1010			Starting Date	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-11		8,9,13FS+290 days,14FS+311 day	0 days	100%
3	CAD-1000			Access Dates (cal. day)	289 days	11月18日星期一	9月2日星期三	289 days	11月18日星期一	9月2日星期三	月18日星期一-11	月2日星期三-9			0 days	100%
4	CAD-1010			Portion B-1 (Access Road AR3)	0 days	1月10日星期五	1月10日星期五	0 days	1月10日星期五	1月10日星期五	月10日星期五-1	月10日星期五-12		223	0 days	100%
5	CAD-1020			Portion B-1A (Area for the works for Sidestream Treatment Facilities by Others)	0 days	1月10日星期五	1月10日星期五	0 days	1月10日星期五	1月10日星期五	月10日星期五-1	月10日星期五-12			0 days	100%
6	CAD-1030			Portion B-2 (Inlet Works No.1)	0 days	1月10日星期五	1月10日星期五	0 days	1月10日星期五	1月10日星期五	月10日星期五-1	月10日星期五-12		322,334	0 days	100%
7	CAD-1040			Portion B-2A (Area for the pipe-jacking works by others)	0 days	1月10日星期五	1月10日星期五	0 days	1月10日星期五	1月10日星期五	月10日星期五-1	月10日星期五-12			0 days	100%
8	CAD-1050			Portion B-3 (Primary Sedimentation Tanks No. 1-4)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		414	0 days	100%
9	CAD-1060			Portion B-4 (Bioreactor No. 2A & 2B)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		494	0 days	100%
10	CAD-1070			Portion B-5 (Membrane Facilities Building No.2)	0 days	3月17日星期二	3月17日星期二	0 days	3月17日星期二	3月17日星期二	月17日星期二-3	月17日星期二-32		582,646,655	0 days	100%
11	CAD-1080			Portion B-6 (SAS Pumping Station)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		736	0 days	100%
12	CAD-1090			Portion B-7 (Ancillary structures)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		774	0 days	100%
13	CAD-1100			Portion B-7A (Alternation works for existing Power House)	0 days	9月2日星期三	9月2日星期三	0 days	9月2日星期三	9月2日星期三	月2日星期三-9	月2日星期三-92FS+290 days		960FS-1 day,29FS+180 days	0 days	100%
14	CAD-1110			Portion B-8 (Alternation for existing Membrane Facilities Building No.1)	0 days	8月26日星期三	8月26日星期三	0 days	8月26日星期三	8月26日星期三	月26日星期三-8	月26日星期三-82FS+311 days		962FS-1 day	0 days	100%
15	CAD-1020			Portion B-8A (Alternation of air supply main for existing Air Blower House No.2)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		953	0 days	100%
16	CAD-1130			Portion B-9 (remainder works in Zone B)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112		963,1912	0 days	100%
17	CAD-1140			Portion B-9A (Area for the pipe-jacking works by others)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112			0 days	100%
18	CAD-1150			Portion B-9B (Area for underground pipework modification and connection works by others)	0 days	11月18日星期一	11月18日星期一	0 days	11月18日星期一	11月18日星期一	月18日星期一-11	月18日星期一-112			0 days	100%
19	CAD-1160			Portion B-9C (Area for the works for pipe works)	0 days	7月24日星期五	7月24日星期五	0 days	7月24日星期五	7月24日星期五	月24日星期五-7	月24日星期五-72FS+151 days		971	0 days	100%
20	CKD-1000			Key Dates (cal. day)	1144 days	11月27日星期五	1月15日星期一	1145 days	11月27日星期五	1月15日星期一	月27日星期五-11	NA			0 days	0%
21	CKD-1010			KD1A completion of AR3 in Portion B-1	0 days	11月27日星期五	11月27日星期五	0 days	11月27日星期五	11月27日星期五	月27日星期五-11	月27日星期五-112FS+376 days			0 days	100%
22	CKD-1020			KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2	0 days	1月30日星期六	1月30日星期六	0 days	1月30日星期六	1月30日星期六	月30日星期六-1	月30日星期六-12FS+439.5 days			0 days	100%
23	CKD-1030			KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2	0 days	10月22日星期六	10月22日星期六	0 days	1月28日星期六	1月28日星期六	NA	NA2FS+1167.5 days,44FF	67,64		-207 days	0%
24	CKD-1040			KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3	0 days	2月20日星期一	2月20日星期一	0 days	3月11日星期六	3月11日星期六	NA	NA2FS+1209.5 days,45FF	71		-169 days	0%
25	CKD-1050			KD1E completion of civil and structural works of Bioreactor in Portion B-4	0 days	1月1日星期日	1月1日星期日	0 days	4月20日星期四	4月20日星期四	NA	NA2FS+1250 days,46FF	80,77		-192 days	0%
26	CKD-1060			KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5	0 days	3月23日星期三	3月23日星期三	0 days	6月27日星期一	6月27日星期一	NA	NA2FS+952.5 days,47FF	86,83		-464 days	0%
27	CKD-1070			KD1G completion of civil and structural works of MFB in Portion B-5	0 days	8月17日星期三	8月17日星期三	0 days	11月23日星期三	11月23日星期三	NA	NA2FS+1102 days,48FF	89		-501 days	0%
28	CKD-1080			KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6	0 days	10月22日星期五	10月22日星期五	0 days	12月21日星期二	12月21日星期二	月21日星期二-12	月21日星期二-122FS+764.5 days,49FF	95		0 days	100%
29	CKD-1090			KD1I completion alternation works for existing Power House in Portion B-7A	0 days	3月1日星期一	3月1日星期一	0 days	2月28日星期日	2月28日星期日	月28日星期日-2	月28日星期日-213FS+180 days			0 days	100%
30	CKD-1100			KD1J completion of auxiliary facilities in Portion B-7	0 days	2月7日星期一	2月7日星期一	0 days	3月15日星期二	3月15日星期二	月15日星期二-3	月15日星期二-32FS+849 days,51FF	101		0 days	100%
31	CKD-1110			KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9	0 days	6月18日星期五	6月18日星期五	0 days	7月30日星期五	7月30日星期五	月30日星期五-7	月30日星期五-72FS+621 days	107		0 days	100%
32	CKD-1120			KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A	0 days	3月26日星期五	3月26日星期五	0 days	3月29日星期一	3月29日星期一	月29日星期一-3	月29日星期一-32FS+498 days			0 days	100%
33	CKD-1130			KD3A completion of all utilities and road works in Portion B-9A	0 days	1月15日星期一	1月15日星期一	0 days	1月15日星期一	1月15日星期一	NA	NA2FS+1520 days,54FF	113		0 days	0%
34	CCD-1000			Completion Date (cal. Day)	1056 days	7月23日星期六	6月13日星期五	1055 days	11月4日星期五	9月24日星期三	NA	NA			0 days	0%
35	CCD-1010			Section 1 of the Works	0 days	2月9日星期五	2月9日星期五	0 days	5月30日星期四	5月30日星期四	NA	NA2FS+1655.5 days,56FF	119		-199 days	0%
36	CCD-1020			Section 2 of the Works	0 days	7月23日星期六	7月23日星期六	0 days	11月4日星期五	11月4日星期五	NA	NA2FS+1082.5 days,57FF	126		-953 days	0%
37	CCD-1030			Section 3 of the Works	0 days	6月12日星期三	6月12日星期三	0 days	9月23日星期一	9月23日星期一	NA	NA2FS+1771.5 days,58FF	39FS+1 day,38FS+1 day,133		-425 days	0%
38	CCD-1040			Defects Liability Period	365 days	6月13日星期四	6月13日星期五	365 days	9月25日星期三	9月24日星期三	NA	NA37FS+1 day,59FF			0 days	0%
39	CCD-1050			Landscape Establishment Works	365 days	6月13日星期四	6月13日星期五	365 days	9月25日星期三	9月24日星期三	NA	NA37FS+1 day,60FF			0 days	0%
40	PD-1000			Planned Completion	2049 days	9月30日星期三	5月11日星期一	2126 days	1月28日星期二	11月22日星期一	月28日星期二-1	NA			0 days	52%
41	PCD-1000			Planned Completion - Key Dates (cal. day)	1202 days	9月30日星期三	1月15日星期一	1285 days	9月30日星期三	4月7日星期日	月30日星期三-9	NA			-83 days	0%
42	PKD-1010	KD1A		KD1A completion of AR3 in Portion B-1	0 days	9月30日星期三	9月30日星期三	0 days	9月30日星期三	9月30日星期三	月30日星期三-9	月30日星期三-9232FF			0 days	100%
43	PCD-1020	KD1B		KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2	0 days	1月22日星期五	1月22日星期五	0 days	1月22日星期五	1月22日星期五	月22日星期五-1	月22日星期五-1315FF,297FF			0 days	100%
44	PCD-1030	KD1C		KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2	0 days	12月1日星期四	12月1日星期四	0 days	8月23日星期三	8月23日星期三	NA	NA272FF,319FF,234FF,27423FF			-207 days	0%
45	PCD-1040	KD1D		KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3	0 days	2月20日星期一	2月20日星期一	0 days	8月27日星期日	8月27日星期日	NA	NA483FF	24FF		-188 days	0%
46	PCD-1050	KD1E		KD1E completion of civil and structural works of Bioreactor in Portion B-4	0 days	6月26日星期一	6月26日星期一	0 days	10月29日星期日	10月29日星期日	NA	NA570FF,562FF,564FF	25FF		-192 days	0%
47	PCD-1060	KD1F		KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5	0 days	9月17日星期六	9月17日星期六	0 days	10月4日星期三	10月4日星期三	NA	NA722FF,681FF	26FF		-464 days	0%
48	PCD-1070	KD1G		KD1G completion of civil and structural works of MFB in Portion B-5	0 days	1月16日星期一	1月16日星期一	0 days	4月7日星期日	4月7日星期日	NA	NA723FF	27FF		-501 days	0%
49	PCD-1080	KD1H		KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6	0 days	1月7日星期五	1月7日星期五	0 days	3月11日星期三	3月11日星期三	月11日星期五-3	月11日星期五-3761FF,759FF	28FF		0 days	100%
50	PCD-1090	KD1I		KD1I completion alternation works for existing Power House in Portion B-7A	0 days	1月29日星期五	1月29日星期五	0 days	1月29日星期五	1月29日星期五	月29日星期五-1	月29日星期五-1960FF			0 days	100%
51	PCD-1100	KD1J		KD1J completion of auxiliary facilities in Portion B-7	0 days	7月11日星期一	7月11日星期一	0 days	9月28日星期三	9月28日星期三	月28日星期三-9	月28日星期三-9893FF,892FF,917FF,90030FF			0 days	100%
52	PCD-1110	KD2A		KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9	0 days	7月20日星期二	7月20日星期二	0 days	7月20日星期二	7月20日星期二	月20日星期二-7	月20日星期二-7966FF,964FF			0 days	100%
53	PCD-1120	KD2B		KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A	0 days	3月26日星期五	3月26日星期五	0 days	3月26日星期五	3月26日星期五	月26日星期五-3	月26日星期五-3953FF,957FF,958FF,959			0 days	100%
54	PCD-1130	KD3A		KD3A completion of all utilities and road works in Portion B-9A	0 days	1月15日星期一	1月15日星期一	0 days	1月15日星期一	1月15日星期一	NA	NA962FF,961FF,1055FF	33FF		0 days	0%
55	PCD-1000			Planned Completion Date (cal. Day)	1077 days	6月30日星期四	6月11日星期三	342 days	12月16日星期五	11月22日星期一	NA	NA			-772 days	0%
56	PCD-1010	SW1		Section 1 of the Works	0 days	1月19日星期五	1月19日星期五	0 days	12月15日星期日	12月15日星期日	NA	NA949FF,951FF,764FF,87935FF			-199 days	0%
57	PCD-1020	SW2		Section 2 of the Works	0 days	6月30日星期四	6月30日星期四	0 days	6月14日星期六	6月14日星期六	NA	NA980FF,1014FF,1024FF,136FF			-953 days	0%
58	PCD-1030	SW3		Section 3 of the Works	0 days	6月11日星期二	6月11日星期二	0 days	11月22日星期六	11月22日星期六	NA	NA1914FF,1915FF,962FF,937FF			-425 days	0%
59	PCD-1040	DLP		Defects Liability Period	0 days	6月11日星期三	6月11日星期三	0 days	6月11日星期三	6月11日星期三	NA	NA1916FF,173FF	38FF		105 days	0%
60	PCD-1050			Landscape Establishment Works	0 days	6月11日星期三	6月11日星期三	0 days	6月11日星期三	6月11日星期三	NA	NA1916FF	39FF		105 days	0%
61	ET-1000			Effects from Inclement Weather and Other Time Affected Events	1158.5 days	6月18日星期一	8月19日星期一	1756 days	1月28日星期二	11月17日星期一	月28日星期二-1	NA			370 days	52%
62	ET1C-1000			Effects to KD1C	58.5 days	10月22日星期五	12月19日星期一	1152 days	1月28日星期二	3月24日星期五	月28日星期二-1	NA			974 days	47%
63	ET1C-1100			Inclement Weather to KD1C (cal. Day)	54.5 days	10月26日星期一	12月19日星期一	55 days	1月29日星期二	3月24日星期五	NA	NA			974 days	0%
64	ET1C-1110	421,429		Delay and Disruption of Works before February 2023	31.5 days	10月26日星期一	11月26日星期六	53 days	1月29日星期二	3月22日星期三	NA	NA23	65		974 days	0%
65	ET1C-1120			Delay and Disruption of Works in February 2023	23 days	11月27日星期日	12月19日星期一	2 days	3月23日星期四	3月24日星期五	NA	NA64			974 days	0%
66	ET1C-1200			Other Events to KD1C (not all)	4 days	10月22日星期五	10月26日星期三	791 days	1月28日星期二	3月28日星期一	月28日星期二-1	月28日星期二-3			0 days	100%
67																



識別碼	Activity ID	Key Date	NCE/(E)/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進程時間	RACI百分比	2019年1月   2019年8月   2020年3月   2020年10月   2021年5月   2021年12月   2022年7月   2023年2月   2023年9月   2024年4月   2024年11月   2025年6月   2026年1月											
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月
69	ET1D-1000			Effects to KD1D	0 days	2月20日星期一	2月20日星期一	382 days	2月1日星期二	5月20日星期六	月1日星期二	NA	NA	761 days	45%													
70	ET1D-1100			Inclement Weather to KD1D (cal. Day)	0 days	2月20日星期一	2月20日星期一	55 days	3月13日星期一	5月20日星期六	NA	NA	761 days	0%														
71	ET1D-1110	421,429		Delay and Disruption of Works before February 2023	0 days	2月20日星期一	2月20日星期一	53 days	3月13日星期一	5月18日星期四	NA	NA 24	72	761 days	0%													
72	ET1D-1120			Delay and Disruption of Works in February 2023	0 days	NA	2月20日星期一	2 days	5月19日星期五	5月20日星期六	NA	NA 71		761 days	0%													
73	ET1D-1200			Other Events to KD1D (not all)	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
74	ET1D-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
75	ET1E-1000			Effects to KD1E	57.5 days	1月3日星期二	3月14日星期二	412 days	2月1日星期二	6月27日星期二	月1日星期二	NA	NA	731 days	45%													
76	ET1E-1100			Inclement Weather to KD1E (cal. Day)	57.5 days	1月3日星期二	3月14日星期二	55 days	4月21日星期五	6月27日星期二	NA	NA	731 days	0%														
77	ET1E-1110	421,429		Delay and Disruption of Works before February 2023	36.5 days	1月3日星期二	2月17日星期五	53 days	4月21日星期五	6月24日星期六	NA	NA 25	78	731 days	0%													
78	ET1E-1120			Delay and Disruption of Works in February 2023	21 days	2月17日星期五	3月14日星期二	2 days	6月26日星期一	6月27日星期二	NA	NA 77		731 days	0%													
79	ET1E-1200			Other Events to KD1E (not all)	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
80	ET1E-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3-25	0 days	100%													
81	ET1F-1000			Effects to KD1F	64.5 days	3月23日星期三	5月26日星期四	202 days	2月1日星期二	8月21日星期日	月1日星期二	NA	NA	1189 da...	45%													
82	ET1F-1100			Inclement Weather to KD1F (cal. Day)	64.5 days	3月23日星期三	5月26日星期四	55 days	6月28日星期二	8月21日星期日	NA	NA	1189 da...	0%														
83	ET1F-1110	421,429		Delay and Disruption of Works before February 2023	43.5 days	3月23日星期三	5月5日星期四	53 days	6月28日星期二	8月19日星期五	NA	NA 26	84	1189 days	0%													
84	ET1F-1120			Delay and Disruption of Works in February 2023	21 days	5月6日星期五	5月26日星期四	2 days	8月20日星期六	8月21日星期日	NA	NA 83		1189 days	0%													
85	ET1F-1200			Other Events to KD1F (not all)	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
86	ET1F-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3-26	0 days	100%													
87	ET1G-1000			Effects to KD1G	61.5 days	8月17日星期三	10月17日星期一	351 days	2月1日星期二	1月17日星期二	月1日星期二	NA	NA	1040 da...	45%													
88	ET1G-1100			Inclement Weather to KD1G (cal. Day)	61.5 days	8月17日星期三	10月17日星期一	55 days	11月24日星期一	1月17日星期二	NA	NA	1040 da...	0%														
89	ET1G-1110	421,429		Delay and Disruption of Works before February 2023	40.5 days	8月17日星期三	9月26日星期一	53 days	11月24日星期一	1月15日星期日	NA	NA 27	90	1040 days	0%													
90	ET1G-1120			Delay and Disruption of Works in February 2023	21 days	9月27日星期二	10月17日星期一	2 days	1月16日星期一	1月17日星期二	NA	NA 89		1040 days	0%													
91	ET1G-1200			Other Events to KD1G (not all)	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
92	ET1G-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
93	ET1H-1000			Effects to KD1H	52.5 days	10月22日星期五	12月13日星期一	130 days	11月19日星期五	3月28日星期一	月19日星期五	11	月28日星期一	3	0 days	100%												
94	ET1H-1100			Inclement Weather to KD1H (cal. Day)	52.5 days	10月22日星期五	12月13日星期一	39 days	11月19日星期五	12月27日星期一	月19日星期五	11	月27日星期一	12	0 days	100%												
95	ET1H-1110	421,429		Delay and Disruption of Works before February 2023	39.5 days	10月22日星期五	11月30日星期二	0 days	11月19日星期五	11月19日星期五	月19日星期五	11	月19日星期五	11 28	0 days	100%												
96	ET1H-1120			Delay and Disruption of Works in February 2023	13 days	12月1日星期三	12月13日星期一	0 days	12月27日星期一	12月27日星期一	月27日星期一	12	月27日星期一	12 95	0 days	100%												
97	ET1H-1200			Other Events to KD1H (not all)	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
98	ET1H-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月28日星期一	月1日星期二	月28日星期一	3	0 days	100%													
99	ET1J-1000			Effects to KD1J	57 days	2月7日星期一	4月5日星期二	45 days	2月1日星期二	3月17日星期四	月1日星期二	NA	NA	1346 da...	99%													
100	ET1J-1100			Inclement Weather to KD1J (cal. Day)	57 days	2月7日星期一	4月5日星期二	0 days	3月15日星期日	3月15日星期日	NA	NA	1349 da...	0%														
101	ET1J-1110	421,429		Delay and Disruption of Works before February 2023	33 days	2月7日星期一	3月12日星期六	0 days	3月15日星期日	3月15日星期日	NA	NA 30	102	1349 days	0%													
102	ET1J-1120			Delay and Disruption of Works in February 2023	24 days	3月12日星期六	4月5日星期二	0 days	3月15日星期日	3月15日星期日	NA	NA 101		1349 days	0%													
103	ET1J-1200			Other Events to KD1J	0 days	NA	NA	36 days	2月1日星期二	3月17日星期四	月1日星期二	月17日星期四	3	0 days	100%													
104	ET1J-1210	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月17日星期四	月1日星期二	月17日星期四	3	0 days	100%													
105	ET2A-1000			Effects to KD2A	44.5 days	6月18日星期五	8月1日星期日	534.5 days	1月28日星期二	7月15日星期四	月28日星期二	1	月15日星期四	7	0 days	100%												
106	ET2A-1100			Inclement Weather to KD2A (cal. Day)	40.5 days	6月22日星期二	8月1日星期日	23 days	6月22日星期二	7月15日星期日	月22日星期二	6	月15日星期四	7	0 days	100%												
107	ET2A-1110			Delay and Disruption of Works before February 2023	40.5 days	6月22日星期二	8月1日星期日	0 days	6月22日星期二	6月22日星期二	月22日星期二	6	月22日星期二	6 31	0 days	100%												
108	ET2A-1120			Delay and Disruption of Works in February 2023	16 days	7月15日星期四	7月31日星期六	0 days	7月15日星期四	7月15日星期四	月15日星期四	7	月15日星期四	7 107	0 days	100%												
109	ET2A-1200			Other Events to KD2A (not all)	4 days	6月18日星期五	6月22日星期二	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
110	ET2A-1210	9		Special working arrangement due to COVID-19 in January 2020	4 days	6月18日星期五	6月22日星期二	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
111	ET3A-1000			Effects to KD3A	4 days	1月16日星期二	1月19日星期五	1449 days	1月28日星期二	1月15日星期一	月28日星期二	1	NA	677 days	99%													
112	ET3A-1100			Inclement Weather to KD3A (cal. Day)	0 days	1月19日星期一	1月19日星期一	0 days	1月15日星期日	1月15日星期日	NA	NA	677 days	0%														
113	ET3A-1110			Delay and Disruption of Works before February 2023	0 days	1月19日星期一	1月19日星期一	0 days	1月15日星期日	1月15日星期一	NA	NA 33	114	677 days	0%													
114	ET3A-1120			Delay and Disruption of Works in February 2023	0 days	1月19日星期一	1月19日星期一	0 days	1月15日星期日	1月15日星期一	NA	NA 113		677 days	0%													
115	ET3A-1200			Other Events to KD3A (not all)	4 days	1月16日星期二	1月19日星期五	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
116	ET3A-1210	9		Special working arrangement due to COVID-19 in January 2020	4 days	1月16日星期二	1月19日星期五	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
117	ETS1-1000			Effects to Section 1 of the Works	71.5 days	2月9日星期五	4月20日星期六	1640 days	1月28日星期二	7月24日星期三	月28日星期二	1	NA	486 days	47%													
118	ETS1-1100			Inclement Weather to Section 1 of the Works (cal. Day)	67.5 days	2月13日星期一	4月20日星期六	55 days	5月31日星期五	7月24日星期三	NA	NA	486 days	0%														
119	ETS1-1110	421,429		Delay and Disruption of Works before February 2023	43.5 days	2月13日星期一	3月27日星期三	53 days	5月31日星期五	7月22日星期一	NA	NA 35	120	486 days	0%													
120	ETS1-1120			Delay and Disruption of Works in February 2023	24 days	3月28日星期一	4月20日星期六	2 days	7月23日星期二	7月24日星期三	NA	NA 119		486 days	0%													
121	ETS1-1200			Other Events to Section 1 of the Works (not all)	4 days	2月9日星期五	2月13日星期一	780 days	1月28日星期二	3月17日星期四	月28日星期二	1	月17日星期四	3	0 days	100%												
122	ETS1-1210	9		Special working arrangement due to COVID-19 in January 2020	4 days	2月9日星期五	2月13日星期一	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
123	ETS1-1220	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月17日星期四	月1日星期二	月17日星期四	3	0 days	100%													
124	ETS2-1000			Effects to Section 2 of the Works	67.5 days	7月23日星期六	9月28日星期三	1067 days	1月28日星期二	12月29日星期四	月28日星期二	1	NA	1059 da...	47%													
125	ETS2-1100			Inclement Weather to Section 2 of the Works (cal. Day)	63.5 days	7月27日星期一	9月28日星期三	55 days	11月5日星期日	12月29日星期四	NA	NA	1059 da...	0%														
126	ETS2-1110	421,429		Delay and Disruption of Works before February 2023	39.5 days	7月27日星期一	9月4日星期六	53 days	11月5日星期日	12月27日星期二	NA	NA 36	127	1059 days	0%													
127	ETS2-1120			Delay and Disruption of Works in February 2023	24 days	9月5日星期一	9月28日星期三	2 days	12月28日星期三	12月29日星期四	NA	NA 126		1059 days	0%													
128	ETS2-1200			Other Events to Section 2 of the Works (not all)	4 days	7月23日星期六	7月27日星期三	780 days	1月28日星期二	3月17日星期四	月28日星期二	1	月17日星期四	3	0 days	100%												
129	ETS2-1210	9		Special working arrangement due to COVID-19 in January 2020	4 days	7月23日星期六	7月27日星期三	4 days	1月28日星期二	1月31日星期五	月28日星期二	1	月31日星期五	1	0 days	100%												
130	ETS2-1220	293		Special working arrangement due to 5th Wave of COVID-19 between Feb-May 2022	0 days	NA	NA	45 days	2月1日星期二	3月17日星期四	月1日星期二	月17日星期四	3	0 days	100%													
131	ETS3-1000			Effects to Section 3 of the Works	68.5 days	6月12日星期三	8月19日星期一	1756 days	1月28日星期二	11月17日星期日	月28日星期二	1	NA	370 days	47%													
132	ETS3-1100			Inclement Weather to Section 3 of the Works (cal. Day)	64.5 days	6月16日星期六	8月19日星期一	55 days	9月24日星期日	11月17日星期日	NA	NA	370 days	0%														
133	ETS3-1110	421,429		Delay and Disruption of Works before February 2023	40.5 days	6月16日星期六	7月26日星期五	53 days	9月24日星期日	11月15日星期日	NA	NA 37	134	370 days	0%													
134	ETS3-1120			Delay and Disruption of Works in February 2023	24 days	7月27日星期六	8月19日星期一	2 days	11月16日星期六	11月17日星期日	NA	NA 133		370 days	0%													
135	ETS3-1200			Other Events to Section 3 of the Works (not all)	4 days	6月12日星期三	6月16日星期六	780 days	1月28日星期二	3月17日星期四	月28日星期二	1	月17日星期四	3	0 days	100%												







識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	RACI百分比	Gantt Chart																																																																			
																	2019年1月	2019年2月	2019年3月	2019年4月	2019年5月	2019年6月	2019年7月	2019年8月	2019年9月	2019年10月	2019年11月	2019年12月	2020年1月	2020年2月	2020年3月	2020年4月	2020年5月	2020年6月	2020年7月	2020年8月	2020年9月	2020年10月	2020年11月	2020年12月	2021年1月	2021年2月	2021年3月	2021年4月	2021年5月	2021年6月	2021年7月	2021年8月	2021年9月	2021年10月	2021年11月	2021年12月	2022年1月	2022年2月	2022年3月	2022年4月	2022年5月	2022年6月	2022年7月	2022年8月	2022年9月	2022年10月	2022年11月	2022年12月	2023年1月	2023年2月	2023年3月	2023年4月	2023年5月	2023年6月	2023年7月	2023年8月	2023年9月	2023年10月	2023年11月	2023年12月	2024年1月	2024年2月	2024年3月	2024年4月	2024年5月	2024年6月	2024年7月	2024年8月
272	CIW-1458			Connection to existing Inlet Chamber	152 days	1月26日星期二	8月2日星期一	152 days	1月26日星期二	8月2日星期一	月26日星期二	月2日星期一	8-271FF	335,44FF	0 days	100%																																																																				
273	CIW-1500			Diversion of Leachate Rising Main, Sludge Pipes and Tank Drain	665 days	11月26日星期二	2月23日星期三	754 days	11月26日星期二	6月15日星期三	月26日星期二	11月15日星期三			0 days	100%																																																																				
274	CIW-1510	KD1B		Diversion of Tank Drain MHD9.5 (approx. 70m CHES1 & CHES2)	405 days	11月26日星期二	4月10日星期六	405 days	11月26日星期二	4月10日星期六	月26日星期二	11月10日星期六	4302	335,44FF	0 days	100%																																																																				
275	CIW-1500a			Diversion of Tank Drain MHD9.5 to MHA04 (approx. 70m 675mm dia concrete pipe, 24m DN250 DI leachate rising main, 90m CHES1&S2 DN250 CI)	195 days	11月26日星期二	7月25日星期六	195 days	11月26日星期二	7月25日星期六	月26日星期二	11月25日星期六	7236		0 days	100%																																																																				
276	CIW-1500b			Joint Initial Survey arrangement with MTRCL	158 days	11月26日星期二	6月10日星期三	31.6 days	11月26日星期二	1月4日星期六	月26日星期二	1月4日星期六			0 days	100%																																																																				
277	CIW-1500c			Site Clearance & inspection pit excavation under conforming alignments	36 days	6月12日星期五	7月25日星期六	36 days	6月12日星期五	7月25日星期六	月12日星期五	6月25日星期六			0 days	100%																																																																				
278	CIW-1511			Tank Drain Diversion near MTRCL track	247 days	6月11日星期四	4月10日星期六	247 days	6月11日星期四	4月10日星期六	月11日星期四	4月10日星期六			0 days	100%																																																																				
279	CIW-1511a	044	040	Excavation of trial pit near MHD9.5 (TP45 & 47)	12 days	7月27日星期一	8月8日星期六	12 days	7月27日星期一	8月8日星期六	月27日星期一	8月8日星期六	280,284		0 days	100%																																																																				
280	CIW-1511b	044		Uncharted cables found near MTRC track and identification	1 day	6月18日星期四	6月18日星期四	1 day	6月18日星期四	6月18日星期四	月18日星期四	6月18日星期四	6279		0 days	100%																																																																				
281	CIW-1511c			Excavation of trial pit near MHD9.5	5 days	6月19日星期五	6月24日星期三	5 days	6月19日星期五	6月24日星期三	月19日星期五	6月24日星期三	282		0 days	100%																																																																				
282	CIW-1511d	046	(046)	Lower the ground surface, opening and additional trial pit (TP38)	60 days	6月11日星期四	8月21日星期五	60 days	6月11日星期四	8月21日星期五	月11日星期四	8月21日星期五	283		0 days	100%																																																																				
283	CIW-1511e		040	Excavation of Trial Pits near Manhole MHA04 and MH09	60 days	6月11日星期四	8月21日星期五	0 days	6月11日星期四	6月11日星期四	月11日星期四	6月11日星期四	6282		0 days	100%																																																																				
284	CIW-1511f	095	040	Additional Trial Pit between MHD9.5 and MHA04	25 days	8月21日星期五	9月18日星期五	25 days	8月21日星期五	9月18日星期五	月21日星期五	9月18日星期五	9279		0 days	100%																																																																				
285	CIW-1511g			Sheetpile installation for MHD9.5	38 days	9月1日星期二	10月16日星期五	38 days	9月1日星期二	10月16日星期五	月1日星期二	10月16日星期五			0 days	100%																																																																				
286	CIW-1511h			Sheetpile installation between MHD9.5 & MHA04	25 days	9月8日星期二	10月8日星期四	25 days	9月8日星期二	10月8日星期四	月8日星期二	9月8日星期二			0 days	100%																																																																				
287	CIW-1511i			UU supporting & ELS works excavation between MHD9.5 & MHA04	73 days	10月7日星期三	1月4日星期一	73 days	10月7日星期三	1月4日星期一	月7日星期三	1月4日星期一			0 days	100%																																																																				
288	CIW-1511j	127	261	Unsuited excavated material from MHD9.5 to MHA04	4 days	11月20日星期五	11月24日星期二	4 days	11月20日星期五	11月24日星期二	月20日星期五	11月24日星期二			0 days	100%																																																																				
289	CIW-1511k	167	(167)	Revised design of manhole MHD9.5	20 days	1月7日星期四	1月29日星期五	20 days	1月7日星期四	1月29日星期五	月7日星期四	1月29日星期五			0 days	100%																																																																				
290	CIW-1511l			Break up opening and plugging existing concrete pipe at MHD9.5	6 days	1月18日星期一	1月23日星期六	6 days	1月18日星期一	1月23日星期六	月18日星期一	1月23日星期六			0 days	100%																																																																				
291	CIW-1511m			Trimming existing concrete pipe at MHD9.5	13 days	1月22日星期五	2月5日星期五	13 days	1月22日星期五	2月5日星期五	月22日星期五	2月5日星期五			0 days	100%																																																																				
292	CIW-1511n			Construction of manhole MHD9.5	49 days	2月6日星期六	4月10日星期六	49 days	2月6日星期六	4月10日星期六	月6日星期六	4月10日星期六			0 days	100%																																																																				
293	CIW-1511o	176	(176)	Additional work to prevent backflow from MH11 to MHD9.5	9 days	1月18日星期一	1月27日星期三	9 days	1月18日星期一	1月27日星期三	月18日星期一	1月27日星期三			0 days	100%																																																																				
294	CIW-1511p	180	(180)	Sewage overflow incident of MHD11	9 days	2月13日星期六	2月25日星期四	9 days	2月13日星期六	2月25日星期四	月13日星期六	2月25日星期四			0 days	100%																																																																				
295	CIW-1512			Additional Special manhole for tank drain (NCE)	35 days	8月24日星期一	10月5日星期一	35 days	8月24日星期一	10月5日星期一	月24日星期一	10月5日星期一	296,297		0 days	100%																																																																				
296	CIW-1513			Breaking of concrete surround of cables (0.8mX0.8mX70m) (NCE)	24 days	9月8日星期二	10月7日星期三	24 days	9月8日星期二	10月7日星期三	月8日星期二	10月7日星期三			0 days	100%																																																																				
297	CIW-1514		051	Construction of tank drain along revised alignment w/ concrete surround	10 days	1月5日星期二	1月15日星期五	10 days	1月5日星期二	1月15日星期五	月5日星期二	1月15日星期五	1295	43FF,335	0 days	100%																																																																				
298	CIW-1516			Backfilling trench between MHD9.5 & MHA04	20 days	1月16日星期六	2月8日星期一	20 days	1月16日星期六	2月8日星期一	月16日星期六	2月8日星期一			0 days	100%																																																																				
299	CIW-1520			Diversion of Sludge Pipes	364 days	5月11日星期一	7月29日星期四	509 days	5月11日星期一	1月21日星期五	月11日星期一	1月21日星期五			0 days	100%																																																																				
300	CIW-1520a	064	351	Excavation of trial pit and identification of connection point	103 days	5月11日星期一	9月9日星期三	103 days	5月11日星期一	9月9日星期三	月11日星期一	9月9日星期三	301		0 days	100%																																																																				
301	CIW-1520b	064	351	Trench excavation for twin DN250 sludge pipe, on hold due to encounter of uncharted sludge pipe	4 days	7月15日星期三	7月18日星期六	4 days	7月15日星期三	7月18日星期六	月15日星期三	7月18日星期六	7300	302	0 days	100%																																																																				
302	CIW-1520c			Additional hole drilling works and identification of connection point	53 days	7月20日星期一	9月18日星期五	53 days	7月20日星期一	9月18日星期五	月20日星期一	9月18日星期五	9301	274	0 days	100%																																																																				
303	CIW-1520d	120	202	Temporary diversion of substandard DI 250 Leachate raising main	127 days	10月20日星期二	3月24日星期三	51 days	10月20日星期二	12月18日星期五	月20日星期二	12月18日星期五	12250		0 days	100%																																																																				
304	CIW-1520e	133	302	Protection work for substandard DI 500 tank drain Pipe (near MHD 9.5)	93 days	11月18日星期三	3月12日星期五	0 days	11月18日星期三	11月18日星期三	月18日星期三	11月18日星期三	11250		0 days	100%																																																																				
305	CIW-1520f	123		Encounter of uncharted concrete pipe within sheetpile cofferdam at MHA04	2 days	11月10日星期二	11月11日星期三	2 days	11月10日星期二	11月11日星期三	月10日星期二	11月11日星期三	306		0 days	100%																																																																				
306	CIW-1520g			Resumption and construction of sludge pipe construction	253 days	9月19日星期六	7月29日星期四	396 days	9月19日星期六	1月21日星期五	月19日星期六	9月21日星期五	1305	335,44FF	0 days	100%																																																																				
307	CIW-1530			Diversion of Leachate Rising Main	60 days	12月9日星期四	2月23日星期三	1 day	12月3日星期五	12月3日星期五	月3日星期五	12月3日星期五	12263		0 days	100%																																																																				
308	CIW-1600			Diversion of pipelines near Primary Sludge Thickeners (approx. 180m long 150mm to 375mm concrete pipes)	370 days	8月1日星期六	10月28日星期三	754 days	11月26日星期二	6月15日星期三	月26日星期二	11月15日星期三			0 days	100%																																																																				
309	CIW-1610	87		Trench Excavation from MH MHD14 to MHD6 (approx. 90m long with M/Hs MHD1A, 1B, 1C, 1D & 1E) - realigned	0 days	3月27日星期三	3月27日星期三	0 days	4月26日星期一	4月26日星期一	月26日星期一	4月26日星期一			0 days	100%																																																																				
310	CIW-1621		034	Temporary Diversion of Existing DN200 Filtrate Rising Main	20 days	8月1日星期六	8月24日星期一	20 days	8月1日星期六	8月24日星期一	月1日星期六	8月24日星期一	311		0 days	100%																																																																				
311	CIW-1623	114	(114)	Pipeline Diversion Works near Primary Sludge Thickening Tank	30 days	4月16日星期五	5月22日星期六	30 days	4月16日星期五	5月22日星期六	月16日星期五	5月22日星期六	5310	312	0 days	100%																																																																				
312	CIW-1624			Uncharted underground utilities at Proposed MHD5B	41 days	5月24日星期一	7月12日星期一	41 days	5月24日星期一	7月12日星期一	月24日星期一	7月12日星期一	7311	313	0 days	100%																																																																				
313	CIW-1625	141	0260	Uncharted underground utilities near Proposed MHD5B	26 days	5月24日星期一	6月23日星期三	26 days	5月24日星期一	6月23日星期三	月24日星期一	6月23日星期三	6312	314	0 days	100%																																																																				
314	CIW-1630	012		Trench Excavation from MH (approx. 90m long with M/Hs M1A to M3B)	0 days	6月23日星期三	6月23日星期三	0 days	6月24日星期四	6月24日星期四	NA	NA	314,315,316SS+14 days	-330 days	0%																																																																					
315	CIW-1640	012		Manholes construction (M1A, M1B, M2B, M3B) and Pipe laying	0 days	6月23日星期三	6月23日星期三	12 days	3月14日星期一	3月14日星期一	NA	NA	314	-330 days	0%																																																																					
316	CIW-1650		(114)	Trench Excavation from MHD5 to MHD9.5 (approx. 90m long with M/Hs MHD5A & 5B)	60 days	4月28日星期三	8月28日星期六	60 days	4月28日星期三	8月24日星期二	月28日星期三	8月24日星期二	8314,323,328,330,332		0 days	100%																																																																				
317	CIW-1660		542	Provision of Pumping System from Screen to Flume Channel	287 days	11月10日星期二	10月28日星期四	380 days	3月3日星期三	6月15日星期三	月3日星期三	6月15日星期三			0 days	100%																																																																				
318	CIW-1670			Manholes construction (MHD5C) and Pipe laying	36 days	8月11日星期三	9月21日星期二	9 days	8月11日星期三	8月20日星期五	月11日星期三	8月20日星期五	8314SS+14 days	319	0 days	100%																																																																				
319	CIW-1680		267	Manholes construction (MHD5A, MHD5B) and Pipe laying	293 days	11月3日星期二	10月28日星期四	60 days	1月8日星期六	3月22日星期二	月8日星期六	3月22日星期二	3318,337	44FF,945,320	0 days	100%																																																																				
320	CIW-1690			Backfilling works for the trench	0 days	NA	NA	20 days	3月23日星期三	4月19日星期二	月23日星期三	4月19日星期二	4319	321	0 days	100%																																																																				
321	CIW-1700			Remedial Works for Pipe Laying between MHD5A and MHD5C	0 days	NA	NA	30 days	4月20日星期三	5月26日星期四	月20日星期三	5月26日星期四	5320		0 days	100%																																																																				
322	CIW-2000			Decommission and Demolition of Existing Facilities and Structures	222 days	3月19日星期四	12月16日星期二	222 days	3月19日星期四	12月16日星期二	月19日星期四	12月16日星期二	126,142,180		0 days	100%																																																																				
323	CIW-2100			Primary Sludge Thickening Tank No.1 and No.2	222 days	3月19日星期四	12月16日星期二	222 days	3月19日星期四	12月16日星期二	月19日星期四	12月16日星期二		316	0 days	100%																																																																				
324	CIW-2101	012		Additional Works for Temporary Diversion of Bypass Pipe near Primary Sludge Thickeners	45 days	3月19日星期四	5月17日星期日	0 days	3月19日星期四	3月19日星期四	月19日星期四	3月19日星期四			0 days	100%																																																																				
325	CIW-2110	020		Removal of E&M equipment of primary sludge thickening tank	1 day	6月4日星期四	6月4日星期四	1 day	6月4日星期四	6月4日星期四	月4日星期四	6月4日星期四	326		0 days	100%																																																																				
326	CIW-2120	052		Decommission and Demolition the tank	150 days	6月18日星期四	12月15日星期二	150 days	6月18日星期四	12月15日星期二	月18日星期四	12月15日星期二	12325	328	0 days	100%																																																																				
327	CIW-2130			Demolition of structure no 2	24 days	5月18日星期一	6月22日星期一	24 days	5月18日星期一	6月22日星期一	月18日星期一	6月22日星期一			0 days	100%																																																																				
328	CIW-2200			Primary Sludge Pump Pit	18 days	7月22日星期三	8月11日星期二	18 days	7月22日星期三	8月11日星期二	月22日星期三	8月11日星期二	8326	329,330,316,331	0 days	100%																																																																				
329	CIW-2300			Septic Tank	18 days	8月12日星期三	9月1日星期二	18 days	8月12日星期三	9月1日星期二	月12日星期三	9月1日星期二	9328		0 days	100%																																																																				
330	CIW-2400			Diesel Tank	53 days	7月2日星期四	9月1日星期二	53 days	7月2日星期四	9月1日星期二	月2日星期四	9月1日星期二	9328	316	0 days	10																																																																				

識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進程時間	R/AI百分比	2019年1月   2019年8月   2020年3月   2020年10月   2021年5月   2021年12月   2022年7月   2023年2月   2023年9月   2024年4月   2024年11月   2025年6月   2026年1月											
																	第一季	第二季	第三季	第四季	第一季	第二季	第三季	第四季	第一季	第二季	第三季	第四季
340	CIW-3300a			Sheetpile Installation at Phase C (900sq.m, 1trigs, 50sqm/rig/day)	30 days	9月10日星期五	10月18日星期一	77 days	9月10日星期五	12月11日星期六	月10日星期五9	月11日星期六12	338	344	0 days	100%												
341	CIW-3300b			Sheetpile Installation at Phase B ( 2300sq.m, 1trigs, 50sqm/rig/day)	50 days	11月27日星期六	1月27日星期四	120 days	12月28日星期二	5月27日星期五	月28日星期二12	月27日星期五5	339	343	0 days	100%												
342	CIW-3500			ELS works	161 days	10月19日星期二	5月6日星期五	378 days	12月28日星期二	4月11日星期二	月28日星期二12	NA	185SF,189SF	-78 days	5	96%												
343	CIW-3520			Phase B (Grid A1 to G3) - Excavation to -7.5mPD and blinding (strutting 4 layers, excavate soil 10000cu.m)	77 days	1月28日星期五	5月6日星期五	180 days	5月28日星期六	12月31日星期六	月28日星期六6	月31日星期六12	341	351FS-15 days,345	0 days	100%												
344	CIW-3510			Phase C (Grid G3 to L7) - Excavation to +2.6mPD and blinding (strutting 2 layers, excavate soil 2250 cu.m)	77 days	10月19日星期二	1月19日星期三	84 days	12月28日星期二	4月9日星期六	月28日星期二12	月9日星期六4	340	375	0 days	100%												
345	CIW-3530			Phase A (Grid G1 to L3) - Excavation to +6.5 mPD and blinding (excavate soil 726 cu. M)	30 days	10月23日星期六	11月26日星期五	10 days	3月27日星期一	4月11日星期二	NA	NA 343,356SS+7 days	387	-169 days	0%													
346	CIW-3590			Receiving of the First Edition of Civil Requirements from PM	1 day	8月30日星期一	8月30日星期一	1 day	8月30日星期一	8月30日星期一	月30日星期一-8	月30日星期一-8	0 days	0 days	100%													
347	CIW-3600			R.C. Structure works	300 days	11月27日星期六	12月1日星期四	405 days	4月11日星期一	8月23日星期三	月11日星期一-4	NA	NA	-115 days	5	46%												
348	CIW-3610			Phase B (Grid A1 to G3) South West Side	193 days	1月5日星期三	8月30日星期二	240 days	10月5日星期三	7月27日星期四	月5日星期三10	NA	NA	-105 days	34%													
349	CIW-3611			Rebar fix and formwork and concreting for the Inlet Works structure up to Ground Level (including ELS strut removal)	54 days	5月7日星期六	7月12日星期二	172 days	10月5日星期三	5月6日星期五	月5日星期三10	NA	NA	-37 days	48%													
350	CIW-NCE444	444		Enhancement work for Inlet Seepage Incident	0 days	NA	NA	36 days	10月5日星期三	11月15日星期二	月5日星期三10	月15日星期二11	0 days	100%														
351	CIW-3611a			Installation of capping plate	0 days	NA	NA	11 days	12月13日星期二	12月24日星期六	月13日星期二12	月24日星期六12	343FS-15 days	0 days	100%													
352	CIW-NCE444	444		Pile Cap works put on hold due to MTRCL	0 days	NA	NA	35 days	12月24日星期六	2月9日星期四	月24日星期六12	月9日星期四2	353FS-9 days	0 days	100%													
353	CIW-3611b			R.C. works of pile cap to -6.0mPD	0 days	NA	NA	40 days	1月31日星期二	3月17日星期五	月31日星期二1	NA 351FS+16 days,352FS-9	355SS+10 days,354SS+20 days,3	-169 days	1%													
354	CIW-3611c			Vertical Blinding	0 days	NA	NA	2 days	2月23日星期四	2月24日星期五	月23日星期四2	月24日星期五2	353SS+20 days	0 days	100%													
355	CIW-3611d			R.C. works of wall to -1.4mPD and cap with 500 kicker	0 days	NA	NA	19 days	2月11日星期六	3月4日星期六	月11日星期六2	NA 353SS+10 days,354FF	356FS+2 days	-160 days	0%													
356	CIW-3611e			Removal for 2nd and 3rd layer of ELS Strut	0 days	NA	NA	6 days	3月18日星期六	3月24日星期五	NA	NA 355FS+2 days,353	345SS+7 days,357	-169 days	0%													
357	CIW-NCE302a	302		Additional Work due to Change in works information on Updated Civil Requirement for Basement Floor	0 days	NA	NA	5 days	3月25日星期六	3月30日星期四	NA	NA 356	358	-151 days	0%													
358	CIW-3611f			R.C. works of wall up to +5.4mPD	0 days	NA	NA	7 days	3月31日星期五	4月12日星期三	NA	NA 357	359FS+2 days	-151 days	0%													
359	CIW-3611g			Backfill and ELS Removal for 1st layer of strut	0 days	NA	NA	5 days	4月15日星期六	4月20日星期四	NA	NA 358FS+2 days	360	-151 days	0%													
360	CIW-NCE302b	302		Additional Work due to Change in works information on Updated Civil Requirement for G/F	0 days	NA	NA	5 days	4月21日星期五	4月26日星期三	NA	NA 359	361	-151 days	0%													
361	CIW-3611i			R.C. works of wall, channel and slab to +7.46mPD	0 days	NA	NA	5 days	4月27日星期四	5月3日星期三	NA	NA 360	398,362	-151 days	0%													
362	CIW-PMI392	392		Additional Puddle	0 days	NA	NA	2 days	5月4日星期四	5月5日星期五	NA	NA 361	365	-151 days	0%													
363	CIW-3612			Rebar fix and formwork and concreting for the Inlet Works structure up to Roof Level	105 days	7月29日星期五	12月1日星期四	68 days	5月6日星期六	7月27日星期四	NA	NA	NA	-151 days	0%													
364	CIW-3612a			Lower ground floor to roof floor (+7.46mPD to +21.31mPD)	0 days	NA	NA	46 days	5月6日星期六	6月30日星期五	NA	NA	NA	-151 days	0%													
365	CIW-3612b			R.C. works of wall and column to +13.45mPD	0 days	NA	NA	12 days	5月6日星期六	5月19日星期五	NA	NA 362	366	-151 days	0%													
366	CIW-NCE302c	302		Additional Work due to Change in works information on Updated Civil Requirement	0 days	NA	NA	4 days	5月20日星期六	5月24日星期三	NA	NA 365	367	-151 days	0%													
367	CIW-3612c			R.C. works for wall, column, beam and slab to +20.11mPD	0 days	NA	NA	15 days	5月25日星期四	6月12日星期一	NA	NA 366	368,393FS-5 days	-151 days	0%													
368	CIW-3612d			R.C. works for wall and double slab to +21.31mPD	0 days	NA	NA	15 days	6月13日星期二	6月30日星期五	NA	NA 367	370	-151 days	0%													
369	CIW-3612e			Roof floor to upper roof floor (+21.36mPD to +27.5mPD)	0 days	NA	NA	22 days	7月3日星期一	7月27日星期四	NA	NA	NA	-151 days	0%													
370	CIW-3612f			R.C. works for wall, beam and slab to +25.8mPD	0 days	NA	NA	10 days	7月3日星期一	7月13日星期四	NA	NA 368	394SS,371	-151 days	0%													
371	CIW-NCE302d	302		Additional Work due to Change in works information on Updated Civil Requirement	0 days	NA	NA	4 days	7月14日星期五	7月18日星期二	NA	NA 370	372	-146 days	0%													
372	CIW-3612g			R.C. works for beam and double slab to +27.5mPD	0 days	NA	NA	5 days	7月19日星期三	7月24日星期一	NA	NA 371	373	-146 days	0%													
373	CIW-3612h			Remaining R.C. works	0 days	NA	NA	3 days	7月25日星期二	7月27日星期四	NA	NA 372	396,44FF	-146 days	0%													
374	CIW-3620			Phase C (Grid G3 to L7) North East Side	105 days	1月25日星期二	6月7日星期二	330 days	4月11日星期一	5月24日星期三	月11日星期一-4	NA	NA	-40 days	70%													
375	CIW-3621			Rebar fix and formwork and concreting for the pile cap (G/F) (including ELS strut removal)	40 days	1月25日星期二	3月15日星期二	230 days	4月11日星期一	1月18日星期三	月11日星期一-4	月18日星期三1	344	0 days	100%													
376	CIW-36210			Capping Plate Installation (52nos.)	0 days	NA	NA	11 days	4月11日星期一	4月26日星期二	月11日星期一-4	月26日星期二-4	377	0 days	100%													
377	CIW-3621a			R.C. works of pile cap +5.4mPD	0 days	NA	NA	53 days	4月27日星期三	6月30日星期四	月27日星期三3	月30日星期四6	376	0 days	100%													
378	CIW-3621b			Backfilling and removal for first layer of strut	0 days	NA	NA	15 days	7月2日星期六	7月19日星期二	月2日星期六7	月19日星期二7	377	0 days	100%													
379	CIW-3621c			R.C. works of wall and pile cap +7.53mPD	0 days	NA	NA	75 days	7月20日星期三	10月18日星期二	月20日星期三7	月18日星期二10	378	0 days	100%													
380	CIW-3621d			R.C. works of pile cap to +8.93mPD	0 days	NA	NA	76 days	10月19日星期三	1月18日星期三	月19日星期三10	月18日星期三1	379	0 days	100%													
381	CIW-3622			Rebar fix and formwork and concreting up to +13.45mPD (1/F)	25 days	3月16日星期三	4月14日星期四	60 days	1月19日星期四	4月1日星期六	月19日星期四1	NA 380	383,924,945,403	-121 days	2%													
382	CIW-3623			Rebar fix and formwork and concreting up to +25.80mPD (R/F)	40 days	4月19日星期二	6月7日星期二	40 days	4月3日星期一	5月24日星期六	NA	NA	NA	-94 days	0%													
383	CIW-3623a			R.C. works of column and wall (+13.45mPD to +20.11mPD)	0 days	NA	NA	15 days	4月3日星期一	4月24日星期一	NA	NA 381	384	-94 days	0%													
384	CIW-3623b			R.C. works of column, wall, beam and slab (+20.11mPD to +25.8mPD)	0 days	NA	NA	20 days	4月25日星期二	5月18日星期四	NA	NA 383	385	-94 days	0%													
385	CIW-3623c			Remaining R.C. works	0 days	NA	NA	5 days	5月19日星期五	5月24日星期三	NA	NA 384	396,44FF	-94 days	0%													
386	CIW-3630			Phase A (G1 to L3) ; South East Side	173 days	11月27日星期六	7月2日星期六	111 days	4月12日星期三	8月23日星期三	NA	NA	NA	-169 days	0%													
387	CIW-3631			Rebar fix and formwork and concreting for the Inlet Works structure up to Ground Level (including ELS demolition works)	54 days	11月27日星期六	2月4日星期五	54 days	4月12日星期三	6月15日星期四	NA	NA 345	NA	-169 days	0%													
388	CIW-36310			Capping Plate Installation (60nos.)	0 days	NA	NA	14 days	4月12日星期三	4月27日星期四	NA	NA	389	-169 days	0%													
389	CIW-3631a			R.C. works of pile cap to +7.46mPD	0 days	NA	NA	20 days	4月28日星期五	5月22日星期一	NA	NA 388	390	-169 days	0%													
390	CIW-3631b			R.C. works of pile cap to +9.04mPD	0 days	NA	NA	20 days	5月23日星期二	6月15日星期四	NA	NA 389	391	-169 days	0%													
391	CIW-3632			Rebar fix and formwork and concreting for the Inlet Works structure up to Roof Level	105 days	2月22日星期二	7月2日星期六	57 days	6月16日星期五	8月23日星期三	NA	NA 390	NA	-169 days	0%													
392	CIW-3632a			R.C. works for wall, beam and slab to +13.45mPD	0 days	NA	NA	15 days	6月16日星期五	7月5日星期三	NA	NA	393,401	-169 days	0%													
393	CIW-3632b			R.C. works of column and wall (+13.45mPD to +20.21mPD)	0 days	NA	NA	15 days	7月6日星期四	7月22日星期六	NA	NA 392,367FS-5 days	394	-169 days	0%													
394	CIW-3632c			R.C. works of column, wall, beam and slab (+20.21mPD to +25.8mPD)	0 days	NA	NA	20 days	7月24日星期一	8月15日星期二	NA	NA 393,370SS	395	-169 days	0%													
395	CIW-3632d			Remaining R.C. works	0 days	NA	NA	7 days	8月16日星期三	8月23日星期三	NA	NA 394	44FF,396	-169 days	0%													
396	CIW-3700	KD1C		Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	12月1日星期四	12月1日星期四	0 days	8月23日星期三	8月23日星期三	NA	NA 373,385,395	44FF,407,397	-169 days	0%													
397	CIW-3750			Removal of 4th Layer strut	0 days	NA	NA	7 days	8月24日星期四	8月31日星期四	NA	NA 396	398	171 days	0%													
398	CIW-4010			Application of waterproof coatings in Phase B	55 days	7月20日星期三	9月22日星期四	20 days	9月1日星期五	9月23日星期六	NA	NA 361,397	56FF,399FS+14 days	171 days	0%													
399	CIW-3800			Water tightness test in Phase B	14 days	7月4日星期一	7月19日星期二	14 days	10月13日星期五	10月30日星期一	NA	NA 398FS+14 days	56FF	171 days	0%													
400	CIW-4011			Water tightness test in Phase A	0 days	NA	NA	14 days	8月15日星期二	8月30日星期三	NA	NA 401FS+14 days	395	677 days	0%													
401	CIW-4012			Application of waterproof coatings in Phase A	0 days	NA	NA	20 days	7月6日星期四	7月28日星期五	NA	NA 392	400FS+14 days	677 days	0%													
402	CIW-4013			Water tightness test in Phase C	0 days	NA	NA	14 days	5月18日星期四	6月3日星期六	NA	NA 403FS+14 days	394	750 days	0%													
403	CIW-4014			Application of waterproof coatings in Phase C	0 days	NA	NA	20 days	4月3日星期一	4月29日星期六	NA	NA 381	402FS+14 days	750 days	0%													
404	CIW-NCE0485	485		Discrepancy between drawing specification and window schedule	0 days	NA	NA	100 days	4月25日星期二	8月24日星期四	NA	NA	NA	683 days	0%													
405	CIW-NCE0485a			Material manufacturing	0 days	NA	NA	20 days	4月25日星期二	5月19日星期五	NA	NA 406SF	394	763 days	0%													
406	CIW-NCE0																											







識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	RAC百分比	Gantt Chart																																																								
																	2019年1月	2019年2月	2019年3月	2020年3月	2020年4月	2020年5月	2020年6月	2020年7月	2020年8月	2020年9月	2020年10月	2020年11月	2020年12月	2021年1月	2021年2月	2021年3月	2021年4月	2021年5月	2021年6月	2021年7月	2021年8月	2021年9月	2021年10月	2021年11月	2021年12月	2022年1月	2022年2月	2022年3月	2022年4月	2022年5月	2022年6月	2022年7月	2022年8月	2022年9月	2022年10月	2022年11月	2022年12月	2023年1月	2023年2月	2023年3月	2023年4月	2023年5月	2023年6月	2023年7月	2023年8月	2023年9月	2023年10月	2023年11月	2023年12月	2024年1月	2024年2月	2024年3月	2024年4月	2024年5月	2024年6月	2024年7月	2024年8月
543	CBR-NCE-410		410	Unexpected Ground Condition	0 days	NA	NA	18 days	8月25日星期四	9月15日星期四	月25日星期四	月15日星期四	5442	544FF	0 days	100%																																																									
544	CBR-10000			ELS works (18100cu.m soil with 4 layers wailing / strutting)	80 days	8月9日星期二	11月12日星期六	128 days	8月25日星期四	1月31日星期二	月25日星期四	月31日星期二	1 155,531,187,191,542,545,546FF-3 emons,547,545FF		0 days	3 100%																																																									
545	CBR-NCE-441		441 (143)	Unsuitable Excavated Material	0 days	NA	NA	30 days	11月23日星期三	12月29日星期四	月23日星期三	月29日星期四	12 544FF		0 days	100%																																																									
546	CBR-10900			Receiving of Civil Requirements from PM	1 day	8月13日星期六	8月14日星期日	1 day	6月14日星期二	6月14日星期二	月14日星期二	月14日星期二	6 544FF-3 emons	547SS-3 emons	0 days	100%																																																									
547	CBR-11000			R.C. Structure works (including ELS strut removal)	136 days	11月14日星期三	5月3日星期三	221 days	2月1日星期三	10月29日星期五	月1日星期三	月29日星期五	NA 158,208,209,212,210,544,567SS+15 days		629 days	9%																																																									
548	CBR-11090			Capping Plate Installation	0 days	NA	NA	20 days	2月1日星期三	2月23日星期四	月1日星期三	月23日星期四		549,551FS-1 day	0 days	100%																																																									
549	CBR-11100			R.C. to tank bottom level (-1.08 mPD)	0 days	NA	NA	20 days	2月24日星期五	3月18日星期六	月24日星期五	月18日星期六	NA 548	574FS+14 days,552FF	238 days	15%																																																									
550	CBR-NCE-394a		394	Additional Work due to Change in works information on Updated Civil Requirement for Basement Floor	0 days	NA	NA	4 days	2月1日星期三	2月4日星期六		NA	NA		846 days	0%																																																									
551	CBR-11150			Backfilling up to -1.08mPD	0 days	NA	NA	7 days	2月23日星期四	3月2日星期四		NA	NA 548FS-1 day	557,553FS-2 days	-285 days	0%																																																									
552	CBR-NCE-427		427	Revised Details of 3 nos. of Chambers for CHP Pipeline	0 days	NA	NA	10 days	3月8日星期三	3月18日星期六		NA	NA 549FF		810 days	0%																																																									
553	CBR-11160			R.C. wall from -1.08mPD to +1.3mPD	0 days	NA	NA	18 days	3月1日星期三	3月21日星期二		NA	NA 551FS-2 days	554FS-1 day	-285 days	0%																																																									
554	CBR-11170			Backfilling up to +1.3mPD and removal of 2nd layer of strut	0 days	NA	NA	10 days	3月21日星期二	3月31日星期五		NA	NA 553FS-1 day	555FS-2 days	-285 days	0%																																																									
555	CBR-11180			R.C. Wall up to +5.2mPD	0 days	NA	NA	18 days	3月30日星期四	4月24日星期一		NA	NA 554FS-2 days	556FS-1 day	-285 days	0%																																																									
556	CBR-11190			Backfilling up to +5.2mPD and removal of 1st layer of strut	0 days	NA	NA	18 days	4月24日星期一	5月15日星期一		NA	NA 555FS-1 day	557	-285 days	0%																																																									
557	CBR-11200			R.C. to intermediate level (+6.40 mPD)	0 days	NA	NA	18 days	5月16日星期二	6月6日星期二		NA	NA 551,556	558,576FS+14 days,1406	-285 days	0%																																																									
558	CBR-11300			R.C. to coping level (+10.05mPD)	0 days	NA	NA	18 days	6月7日星期三	6月28日星期三		NA	NA 557	577FS+14 days,564,571FS+14 da	-204 days	0%																																																									
559	CBR-NCE-394b		394	Additional Work due to Change in works information on Updated Civil Requirement for Coping Level	0 days	NA	NA	22 days	6月29日星期四	7月25日星期二		NA	NA 558	560	0 days	0%																																																									
560	CBR-NCE-414		414	Additional Works on Revised Works Information on additional curb	0 days	NA	NA	6 days	7月26日星期三	8月1日星期二		NA	NA 559	561	0 days	0%																																																									
561	CBR-NCE-394c		394	Additional Work due to Change in works information on Updated Civil Requirement for Roof Floor	0 days	NA	NA	59 days	8月2日星期三	10月11日星期三		NA	NA 560	562FS-5 days	0 days	0%																																																									
562	CBR-11400			R.C. to roof level (+18.70mPD)	0 days	NA	NA	19 days	10月6日星期五	10月29日星期日		NA	NA 561FS-5 days	46FF,566FF,578FS+14 days,570	0 days	0%																																																									
563	CBR-12000		284	Process pipe CHO chainage 65-170, CHR chainage 60-130, CHO chainage 65-140, CHL chainage 0-35 and CHK chainage 0-50	0 days	NA	NA	60 days	4月19日星期三	6月30日星期四		NA	NA 530FF		1024 days	0%																																																									
564	CBR-13000		277	Additional backfill works after end wall construction at BR2 common channel	30 days	3月24日星期五	5月3日星期三	30 days	6月29日星期四	8月3日星期四		NA	NA 558	46FF	-86 days	0%																																																									
565	CBR-13500			Construction of Process Pipe CHO DN1000 air main	0 days	NA	NA	15 days	6月29日星期四	7月17日星期一		NA	NA 558	57FF	-204 days	0%																																																									
566	CBR-14000			Construction 2nos. Lightning earthing pits and 1no. earthing pit	35 days	5月3日星期三	6月13日星期二	35 days	9月15日星期五	10月29日星期日		NA	NA 562FF	56FF	172 days	0%																																																									
567	CBR-15000			Flowmeter no. 2-4	60 days	12月13日星期二	2月27日星期一	60 days	2月18日星期六	5月4日星期四		NA	NA 547SS+15 days	568FS-15 days,570	-101 days	0%																																																									
568	CBR-16000			Gate Valve Chamber no.1-3	60 days	2月13日星期一	4月27日星期四	60 days	4月17日星期一	6月28日星期三		NA	NA 567FS-15 days	569FS-15 days,570	-101 days	0%																																																									
569	CBR-17000			Plug Valve Chamber no.1-2	60 days	4月14日星期五	6月26日星期一	60 days	6月10日星期六	8月21日星期一		NA	NA 568FS-15 days	570	-101 days	0%																																																									
570	CBR-18000		KD1E	Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	6月26日星期一	6月26日星期一	0 days	10月29日星期日	10月29日星期日		NA	NA 562,567,568,569	46FF	-157 days	0%																																																									
571	CBR-20000			Application of waterproof coatings in the tanks	30 days	5月20日星期六	6月26日星期一	40 days	7月17日星期一	8月31日星期四		NA	NA 558FS+14 days	56FF,572FS+14 days	175 days	0%																																																									
572	CBR-19000			Water tightness test to the tanks of BR2A & 2B	14 days	5月4日星期四	5月19日星期五	30 days	9月18日星期一	10月25日星期三		NA	NA 571FS+14 days	56FF	175 days	0%																																																									
573	CBR-21000		SW1	ABWF Works + BS Works	171 days	6月27日星期二	1月19日星期五	308 days	4月6日星期四	4月22日星期一		NA	NA 211,161	56FF	31 days	0%																																																									
574	CBR-21010			Tank Bottom Level ABWF Works	0 days	NA	NA	101 days	4月6日星期四	8月9日星期三		NA	NA 549FS+14 days	56FF	238 days	0%																																																									
575	CBR-NCE-483		483	Redesign/ Resubmission of RC and Drainage System in Coping Level	0 days	NA	NA	15 days	6月6日星期二	6月24日星期六		NA	NA 576SF		277 days	0%																																																									
576	CBR-21020			Coping Level ABWF Works	0 days	NA	NA	93 days	6月24日星期六	10月13日星期五		NA	NA 557FS+14 days	56FF,575SF	184 days	0%																																																									
577	CBR-21030			Roof Level ABWF Works	0 days	NA	NA	68 days	7月17日星期一	10月5日星期四		NA	NA 558FS+14 days	56FF	191 days	0%																																																									
578	CBR-21040			External Works	0 days	NA	NA	127 days	11月15日星期三	3月22日星期一		NA	NA 562FS+14 days	56FF	31 days	0%																																																									
579	CMF-0000			Membrane Facilities Building No.2, B-5	1650 days	11月18日星期一	6月11日星期三	1258 days	1月6日星期一	4月7日星期日		月6日星期一	NA 2		44 days	73%																																																									
580	CMF-0500		26	Operation of existing Final Sedimentation Tanks no.3 & 4	98 days	11月18日星期一	3月17日星期二	98 days	1月6日星期一	5月8日星期五		月6日星期一	月8日星期五	52	0 days	100%																																																									
581	CMF-0100		370	Allow Access for Decommission of Existing Final Sedimentation Tanks No.3 & 4	0 days	11月18日星期一	11月18日星期一	0 days	3月17日星期二	3月17日星期二		月17日星期二	月17日星期二	32	588	0 days	100%																																																								
582	CMF-1000			Demolition of existing final sedimentation tanks no. 3 & 4	340 days	1月6日星期一	2月27日星期六	508 days	1月10日星期五	9月25日星期六		月10日星期五	月25日星期六	9 180,142,10	0 days	100%																																																									
583	CMF-NCE-003		3	NCE-003 : Additional Works to assist Decommissioning of Final Sedimentation Tank No.3 and 4	0 days	NA	NA	0 days	1月10日星期五	1月10日星期五		月10日星期五	月10日星期五	1	0 days	100%																																																									
584	CMF-NCE-003a			Advised by DSD/ST1 : Construction of Concrete End Wall at RAS Channel No.1 and associated temporary works for isolation of existing RAS Channel NO.1 (Further Rejected)	0 days	NA	NA	0 days	1月10日星期五	1月10日星期五		月10日星期五	月10日星期五	1	0 days	100%																																																									
585	CMF-NCE-003b			Advised by DSD/ST and representative of SWHSTW: Relocation of Existing Submersible Pump Sets to RAS Channel No.2 (Further Issued PMI-026)	0 days	NA	NA	0 days	1月10日星期五	1月10日星期五		月10日星期五	月10日星期五	1	0 days	100%																																																									
586	CMF-NCE-003c			Advised by DSD/ST and representative of SWHSTW: additional stoplogs (Further Rejected)	0 days	NA	NA	0 days	1月10日星期五	1月10日星期五		月10日星期五	月10日星期五	1	0 days	100%																																																									
587	CMF-1205		3	7,26	27 days	3月4日星期三	4月3日星期五	27 days	3月4日星期三	4月3日星期五		月4日星期三	月3日星期五	4 596	588	0 days	100%																																																								
588	CMF-1250			Demolition of structure no. 3 & 4	122 days	4月1日星期三	8月29日星期六	122 days	4月1日星期三	8月29日星期六		月1日星期三	月29日星期六	8 609FF,611FF,616FF,596625,597SS	0 days	100%																																																									
589	CMF-PMI-030		30	PMI-030 - Demolition of Existing Pillar Box and Concrete Plinth at Existing Leachate Pump Pit	58 days	4月4日星期六	3月4日星期六	59 days	8月4日星期六	10月4日星期六		月4日星期六	月4日星期六	10	0 days	400%																																																									
590	CMF-PMI-030a			Issuance of PMI	0 days	NA	NA	1 day	8月4日星期六	8月4日星期六		月4日星期六	月4日星期六	8	591	0 days	400%																																																								
591	CMF-PMI-030b			Demolition Works	0 days	NA	NA	58 days	8月3日星期一	10月10日星期六		月3日星期一	月10日星期六	10 690	592	0 days	400%																																																								
592	CMF-PMI-026		3	26	0 days	NA	NA	106 days	3月4日星期三	7月15日星期三		月4日星期三	月15日星期三	7 591	0 days	100%																																																									
593	CMF-PMI-026a		3		0 days	NA	NA	0 days	3月4日星期三	3月4日星期三		月4日星期三	月4日星期三	3	0 days	100%																																																									
594	CMF-PMI-026b			Issuance of PMI	0 days	NA	NA	0 days	7月15日星期三	7月15日星期三		月15日星期三	月15日星期三	7	595	0 days	100%																																																								
595	CMF-PMI-026c			Provision of New Submersible Pump System and disconnect power cables to the existing Submersible Pump at RAS Channel near FST No.1 and No.2	0 days	NA	NA	1 day	3月4日星期三	3月4日星期三		月4日星期三	月4日星期三	3 594	596	0 days	100%																																																								
596	CMF-PMI-026d			Provision of disconnect the existing Submersible Pump and deliver to designated storage location of RAS Channel near FST No.3 and No.4	27 days	3月4日星期三	4月3日星期五	30 days	4月15日星期三	5月21日星期四		月15日星期三	月21日星期四	5 595	587,588FF	0 days	100%																																																								
597	CMF-NCE-013		013	NCE-013 : Additional works before dismantling of FST No.3 and No.4	0 days	NA	NA	24 days	4月2日星期四	5月6日星期三		月2日星期四	月6日星期三	5 588SS	0 days	100%																																																									
598	CMF-NCE-013a			Email Record from DSD	0 days	NA	NA	0 days	4月2日星期四	4月2日星期四		月2日星期四	月2日星期四	4	0 days	100%																																																									
599	CMF-NCE-013b			NCE from Contractor	0 days	NA	NA	0 days	4月7日星期二	4月7日星期二		月7日星期二	月7日星期二	4	0 days	100%																																																									
600	CMF-NCE-013c			Additional dismantling works to retain specified electrical and mechanical equipment	21 days	4月7日星期二	5月6日星期三	21 days	4月7日星期二	5月6日星期三		月7日星期二	月6日星期三	5	0 days	100%																																																									
601	CMF-PMI-044		015	44	0 days	NA	NA	100 days	6月3日星期三	9月30日星期三		月3日星期三	月30日星期三	9	0 days	100%																																																									
602	CMF-PMI-044a			NCE from Contractor	0 days	NA	NA	0 days	6月3日星期三	6月3日星期三		月3日星期三	月3日星期三	6	0 days	100%																																																									
603	CMF-PMI-044b			Issuance of PMI	0 days	NA	NA	0 days	9月30日星期三	9月30日星期三		月30日星期三	月30日星期三	9	0 days	100%																																																									
604	CMF-PMI-044c			Additional plugging works for DN 1200 Conc. S&S pipe at wash water pumping station chamber	70 days	6月8日星期一	8月29日星期六	30 days	6月11日星期四	7月17日星期五		月11日星期四	月17日星期五	7	0 days	100%																																																									
605	CMF-1600		032		21 days	6月4日星期一	7月4日星期五	21 days</																																																																	



識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	RAC百分比	Gantt Chart											
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月
611	CMF-PMI-043b			Removal of DN1400 Bioreactor No. 2 Effluent Pipe	8 days	2月19日 星期五	2月27日 星期六	8 days	2月19日 星期五	2月27日 星期六	月19日 星期五	2月27日 星期六		588FF	0 days	100%												
612	CMF-PMI-038		007 038	NCE-007 / PMI-038 : Identifying, Exposing and Disconnecting Existing Cables between FST No.3 and No.4 (Critical Path)	0 days	NA	NA	201 days	2月28日 星期五	11月2日 星期一	月28日 星期五	2月2日 星期一			0 days	100%												
613	CMF-PMI-038a			RFI on potential conflict between construction drawing and site	0 days	NA	NA	0 days	2月28日 星期五	2月28日 星期五	月28日 星期五	2月28日 星期五			0 days	100%												
614	CMF-PMI-038b			NCE from Contractor	0 days	NA	NA	0 days	3月17日 星期二	3月17日 星期二	月17日 星期二	3月17日 星期二			0 days	100%												
615	CMF-PMI-038c			Issuance of PMI	0 days	NA	NA	0 days	11月2日 星期一	11月2日 星期一	月2日 星期一	11月2日 星期一			0 days	100%												
616	CMF-PMI-038d			Exposed and disconnect uncharted existing cable between FST3 and FST 4	20 days	7月2日 星期四	7月24日 星期五	66 days	5月7日 星期四	7月24日 星期五	月7日 星期四	7月24日 星期五	588FF	0 days	100%													
617	CMF-PMI-060		060	PMI-060 : Removal of Existing DN150 SAS Rising Main at RAS Channel No.1	0 days	NA	NA	283 days	10月14日 星期三	9月25日 星期六	月14日 星期三	10月9日 星期六			0 days	100%												
618	CMF-PMI-060a			Issuance of PMI	0 days	NA	NA	0 days	10月14日 星期三	10月14日 星期三	月14日 星期三	10月14日 星期三			0 days	100%												
619	CMF-PMI-060b			Removal of Existing DN150 SAS Rising Main at RAS Channel No. 1	22 days	8月31日 星期二	9月25日 星期六	22 days	8月31日 星期二	9月25日 星期六	月31日 星期二	9月25日 星期六	626	0 days	100%													
620	CMF-PMI-427		67 427	NCE-067 / PMI-427 : Plugging of Existing DN80 Pipe near Footpath of MFB No.1	0 days	NA	NA	271 days	8月4日 星期二	7月6日 星期一	月4日 星期二	7月6日 星期一			0 days	100%												
621	CMF-PMI-427a			Joint Site Inspection with Supervisor	0 days	NA	NA	1 day	8月4日 星期二	8月4日 星期二	月4日 星期二	8月4日 星期二			0 days	100%												
622	CMF-PMI-427b			NCE from Contractor	0 days	NA	NA	0 days	8月8日 星期六	8月8日 星期六	月8日 星期六	8月8日 星期六	624	0 days	100%													
623	CMF-PMI-427c			Issuance of PMI	0 days	NA	NA	0 days	7月5日 星期一	7月5日 星期一	月5日 星期一	7月5日 星期一			0 days	100%												
624	CMF-PMI-427d			Plugging Works	0 days	NA	NA	2 days	8月10日 星期一	8月11日 星期二	月10日 星期一	8月11日 星期二	8.622.625SS	0 days	100%													
625	CMF-2000		120	Predrilling (83hrs, 4rigs, 2.5days/drillhole/rig)	31 days	8月10日 星期一	9月14日 星期一	31 days	8月10日 星期一	9月14日 星期一	月10日 星期一	9月14日 星期一	9.147.588	0 days	100%													
626	CMF-3000		120	Pre-bored H piles (171nos, 2rigs, 1.5days/pile/rig) [Extended working hours 0700-1900 & shorten pile length]	96 days	9月28日 星期二	1月22日 星期六	90 days	10月7日 星期三	1月23日 星期六	月7日 星期三	1月23日 星期六	1.155.619	0 days	100%													
627	CMF-NCE-102		102 207	NCE-102 / PMI-207 : Change of Layout of Basement of MFB No.2	0 days	NA	NA	71 days	10月31日 星期六	1月25日 星期一	月31日 星期六	1月25日 星期一			0 days	100%												
628	CMF-NCE-102a			Instructed by the Supervisor in late of October 2020	0 days	NA	NA	0 days	10月31日 星期六	10月31日 星期六	月31日 星期六	10月31日 星期六			0 days	100%												
629	CMF-NCE-102b			NCE from Contractor	0 days	NA	NA	0 days	11月10日 星期二	11月10日 星期二	月10日 星期二	11月10日 星期二			0 days	100%												
630	CMF-NCE-102c			Socket H-pile works suiting the change of layout	17 days	11月3日 星期二	11月21日 星期六	17 days	11月3日 星期二	11月21日 星期六	月3日 星期二	11月21日 星期六			0 days	100%												
631	CMF-4000			Pile Load Test	19 days	1月4日 星期一	1月25日 星期一	19 days	1月4日 星期一	1月25日 星期一	月4日 星期一	1月25日 星期一	1.626	0 days	100%													
632	CMF-CE120		112,350 (120)	NCE-112/ NCE-350 / CE-120 : Additional Works to deal with High Rockhead Profile for Construction of Membrane Facilities Building No.2	0 days	NA	NA	495 days	10月24日 星期六	6月28日 星期二	月24日 星期六	6月28日 星期二	640FF	0 days	100%													
633	CMF-NCE-112			NCE-112 from Contractor	0 days	NA	NA	0 days	10月24日 星期六	10月24日 星期六	月24日 星期六	10月24日 星期六			0 days	100%												
634	CMF-NCE-350			NCE-350 from Contractor	0 days	NA	NA	0 days	6月28日 星期二	6月28日 星期二	月28日 星期二	6月28日 星期二			0 days	100%												
635	CMF-CE120a			Issuance of CE	0 days	NA	NA	0 days	11月9日 星期一	11月9日 星期一	月9日 星期一	11月9日 星期一			0 days	100%												
636	CMF-CE120b			Additional Rock Drilling on pre-boring of sheetpile	0 days	NA	NA	17 days	12月23日 星期三	1月14日 星期四	月23日 星期三	1月14日 星期四	1.647	0 days	100%													
637	CMF-6122a			Rock Excavation for High Rockhead Profile (Additional Rock Breaking and Grouting for ELS) [2600cu. m/group x2]	115 days	10月9日 星期六	2月28日 星期一	185 days	11月10日 星期三	6月28日 星期二	月10日 星期三	6月28日 星期二	6.649	0 days	100%													
638	CMF-6122b			Additional Time for High Rockhead Profile with Soil Omission	0 days	NA	NA	172 days	11月10日 星期三	6月13日 星期一	月10日 星期三	6月13日 星期一	6.637	0 days	100%													
639	CMF-PMI565		565	Clearance of Sludge in Works Area near RAS Pump Station	0 days	NA	NA	5 days	12月24日 星期五	12月31日 星期五	月24日 星期五	12月31日 星期五		0 days	100%													
640	CMF-PMI-788		788	Removal of Sludge near MFB2 due to Overflow Incident from the Existing MFB1 Facilities	0 days	NA	NA	7 days	1月5日 星期三	1月12日 星期三	月5日 星期三	1月12日 星期三	1.632FF	0 days	100%													
641	CMF-CNE-293		293, (124)(293)	EWN-124/ NCE-293 / CNE-293 : Shortage of Human Resources due to 5th wave of COVID-19 Outbreak	0 days	NA	NA	93 days	2月7日 星期一	6月2日 星期四	月7日 星期一	6月2日 星期四			0 days	100%												
642	CMF-CNE-293a			EWN from Contractor	0 days	NA	NA	0 days	2月16日 星期三	2月16日 星期三	月16日 星期三	2月16日 星期三			0 days	100%												
643	CMF-CNE-293b			NCE from Contractor	0 days	NA	NA	0 days	3月3日 星期四	3月3日 星期四	月3日 星期四	3月3日 星期四			0 days	100%												
644	CMF-CNE-293c			Issuance of CNE	0 days	NA	NA	0 days	6月2日 星期四	6月2日 星期四	月2日 星期四	6月2日 星期四			0 days	100%												
645	CMF-CNE-293d			Affected Period	0 days	NA	NA	45 days	2月7日 星期一	3月30日 星期三	月7日 星期一	3月30日 星期三			0 days	100%												
646	CMF-6000			ELS works	203 days	6月25日 星期五	2月28日 星期一	683 days	12月28日 星期四	4月20日 星期四	月28日 星期四	4月20日 星期四	NA 10	-378 days	5	89%												
647	CMF-6050		112 120	Installation of sheetpile [with pre-boring]	144 days	12月28日 星期一	6月24日 星期四	144 days	12月28日 星期一	6月24日 星期四	月28日 星期一	6月24日 星期四	649.636	0 days	100%													
648	CMF-6100		45	Phase A (A1 to N6) - Excavation to -9mPD and blinding	203 days	6月25日 星期五	2月28日 星期一	113 days	6月25日 星期五	11月8日 星期一	月25日 星期五	6月8日 星期一			0 days	100%												
649	CMF-6110		(120), 207	Soil Excavation [Extended working hours 0700-1900 & reduction of excavation volume]	88 days	6月25日 星期五	10月8日 星期五	88 days	6月25日 星期五	10月8日 星期五	月25日 星期五	10月8日 星期五	1.155.631	0 days	100%													
650	CFS-PMI-580b		258 580	Additional Cleaning and Pumping Works at Excavated Trench of MFB No.2 and EVA outside MFB No.1	0 days	NA	NA	7 days	11月1日 星期一	11月8日 星期一	月1日 星期一	11月8日 星期一		0 days	100%													
651	CMF-6200			Phase B (A6 to N10) - Excavation to -1.9mPD and blinding	100 days	6月25日 星期五	10月23日 星期六	30 days	3月13日 星期一	4月20日 星期四	NA	NA		-378 days	0%													
652	CMF-6210			ELS for A6-A8	0 days	NA	NA	20 days	3月13日 星期一	4月4日 星期二	NA	NA 676	653	-378 days	0%													
653	CMF-6220			Installation of Capping Plate	0 days	NA	NA	10 days	4月6日 星期四	4月20日 星期四	NA	NA 652	701	-378 days	0%													
654	CMF-6300			Receiving of Civil Requirements from PM	1 day	11月30日 星期二	11月30日 星期二	1 day	1月5日 星期三	1月5日 星期三	月5日 星期三	1月5日 星期三	1.655SS-3 emons	0 days	100%													
655	CMF-6400			RC Structure works	262 days	3月1日 星期二	1月16日 星期一	642 days	2月4日 星期五	4月7日 星期日	月4日 星期五	4月7日 星期日	NA 10	654SS-3 emons	44 days	5	43%											
656	CMF-6500			Phase A RC Structure Works (Left Hand Side)	0 days	NA	NA	57 days	6月13日 星期一	8月18日 星期四	月13日 星期一	8月18日 星期四			0 days	100%												
657	CMF-6510			Vertical Blinding	0 days	NA	NA	20 days	6月13日 星期一	7月6日 星期三	月13日 星期一	7月6日 星期三	7.637FF+7 days	658.659SS+7 days	0 days	100%												
658	CMF-6520			Application of waterproofing membrane after blinding layer	0 days	NA	NA	25 days	6月23日 星期四	7月22日 星期五	月23日 星期四	7月22日 星期五	7.657	0 days	100%													
659	CMF-6530			R.C. works for Pile Cap at -7.4mPD	0 days	NA	NA	45 days	6月21日 星期二	8月12日 星期五	月21日 星期二	8月12日 星期五	8.657SS+7 days	660SS+20 days	0 days	100%												
660	CMF-6540			Modification of ELS	0 days	NA	NA	30 days	7月15日 星期五	8月18日 星期四	月15日 星期五	8月18日 星期四	8.659SS+20 days	666	0 days	100%												
661	CMF-PMI-568		568,602	PMI-568 : Supply and Installation of Puddle for MFB No.2	0 days	NA	NA	185 days	2月4日 星期五	9月17日 星期六	月4日 星期五	9月17日 星期六			0 days	100%												
662	CMF-PMI-568a			Issuance of PMI	0 days	NA	NA	0 days	2月4日 星期五	2月4日 星期五	月4日 星期五	2月4日 星期五	663	0 days	100%													
663	CMF-PMI-568b			Procurement of Puddle	0 days	NA	NA	170 days	2月4日 星期五	8月30日 星期二	月4日 星期五	8月30日 星期二	8.662	0 days	100%													
664	CMF-PMI-568c			Installation of Puddle	0 days	NA	NA	15 days	8月31日 星期三	9月17日 星期六	月31日 星期三	9月17日 星期六	9.663.665SS	0 days	100%													
665	CMF-6600			Phase A - from B2 - Level 1 (including ELS demolition works)	90 days	3月1日 星期二	2月21日 星期二	482 days	8月19日 星期五	4月7日 星期日	月19日 星期五	4月7日 星期日	NA	664SS	44 days	27%												
666	CMF-6610			GL 1-6 (B2 to B1)	0 days	NA	NA	131 days	8月19日 星期五	1月28日 星期六	月19日 星期五	1月28日 星期六	NA 159,208,209,212,210,660	0 days	96%													
667	CMF-6611			R.C. works for wall, column and corbel at -3.22mPD	0 days	NA	NA	49 days	8月19日 星期五	10月18日 星期二	月19日 星期五	10月18日 星期二	669.668FF	0 days	100%													
668	CMF-NCE-387		387 755	Cast-in Bolt Issue for Wall Corbel at B2 of MFB No.2	0 days	NA	NA	2 days	10月17日 星期一	10月18日 星期二	月17日 星期一	10月18日 星期二	10.667FF	0 days	100%													
669	CMF-6612			Dismantle of scaffolding	0 days	NA	NA	6 days	10月19日 星期三	10月25日 星期二	月19日 星期三	10月25日 星期二	10.667	0 days	100%													
670	CMF-6613			Backfilling and removal of 3rd layer of strut	0 days	NA	NA	35 days	10月26日 星期三	12月5日 星期一	月26日 星期三	12月5日 星期一	12.669	0 days	100%													
671	CMF-6614			R.C. works for wall, column and slab at -0.05mPD	0 days	NA	NA	24 days	12月6日 星期二	1月5日 星期四	月6日 星期二	1月5日 星期四	NA 670	-291 days	80%													
672	CMF-NCE-443		443	Additional Works due to Separation of Pressurised Waste Water Pipe for Sump Pits	0 days	NA	NA	14 days	1月6日 星期五	1月21日 星期六	月6日 星期五	1月21日 星期六	1.671	0 days	100%													
673	CMF-6616			Backfilling to -0.05mPD with concrete	0 days	NA	NA	3 days	1月26日 星期四	1月28日 星期六	月26日 星期四	1月28日 星期六	1.672	0 days	100%													
674	CMF-6620			GL 1-5 (B1 to G/F)	0 days	NA	NA	103 days	1月30日 星期一	6月6日 星期一	月30日 星期一	6月6日 星期一	NA	-67 days	26%													
675	CMF-6621			R.C. Works for wall 01 and wall 03 (facing SSSH)	0 days	NA	NA	18 days	1月30日 星期一	2月18日 星期六	月30日 星期一	2月18日 星期六	2.673	0 days	100%													
676	CMF-6622			Backfilling and removal of 1st and 2nd layer of strut	0 days	NA	NA	18 days	2月20日 星期一	3月11日 星期六	月20日 星期一	3月11日 星期六	NA 675	652,716,677	-378 days	50%												
677	CMF-6623			R.C. Works for wall, column, water tank to first beam soffit level (+5.2mPD)	0 days	NA	NA	18 days	3月13日 星期一	4月1日 星期六	NA	NA 671,676	678	-344 days	0%													
678	CMF-6624			R.C. Works for wall, column, water tank to first beam soffit level (+6.6mPD)	0 days	NA	NA	18 days																				









Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1												Revised Works Programme (Status Date: 28/02/2023)																			
識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	Re-AI百分比	第一季		第二季		第三季		第四季		第一季		第二季				
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月	2026年1月		
883	CDS-3900			Receiving of Civil Requirements from PM	1 day	8月14日星期六	8月14日星期六	1 day	7月21日星期三	7月21日星期三	月21日星期三	7月21日星期三	7881FF-3 emons	892	0 days	100%															
884	CDS-4000		325	Allow access to Contractor DE/2018/04 for earthing works	0 days	NA	NA	14 days	4月19日星期二	5月5日星期四	月19日星期二	4月19日星期二	5881	885	0 days	100%															
885	CDS-5000			Grade 200 Rockfill under Raft Footing	0 days	NA	NA	5 days	7月7日星期四	7月12日星期二	月7日星期四	7月12日星期二	7884	886	0 days	100%															
886	CDS-PMI-0509		509	Civil Provision of Deodorization System No. 3A	0 days	NA	NA	7 days	7月13日星期三	7月20日星期三	月13日星期三	7月20日星期三	7885	887	0 days	100%															
887	CDS-PMI-0510		510	Revision of Structural Framing Plan of Deodorization System No.3A	0 days	NA	NA	7 days	7月21日星期四	7月28日星期四	月21日星期四	7月28日星期四	7886	888	0 days	100%															
888	CDS-PMI-0555		655	Additional Protection of Earth Rods at Deodorization System No. 3A	0 days	NA	NA	7 days	7月29日星期五	8月5日星期五	月29日星期五	8月5日星期五	8887	889	0 days	100%															
889	CDS-NCE-0297		297	Pumping and maintenance and replacement of rockfill due to unexpected water seepage	0 days	NA	NA	7 days	8月6日星期六	8月13日星期六	月6日星期六	8月13日星期六	8888	890	0 days	100%															
890	CDS-NCE-0304		304	Changing structural framing	0 days	NA	NA	7 days	8月15日星期一	8月22日星期一	月15日星期一	8月22日星期一	8889	891	0 days	100%															
891	CDS-NCE-0325		325	provide additional protection of earth rod	0 days	NA	NA	7 days	8月23日星期二	8月30日星期二	月23日星期二	8月30日星期二	8890		0 days	100%															
892	CDS-6000		304	509	Footing works	30 days	11月15日星期一	12月18日星期六	21 days	9月3日星期六	9月28日星期三	月3日星期六	9月28日星期三	9883	893,51FF	0 days	100%														
893	CDS-7000			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	12月18日星期六	12月18日星期六	1 day	9月28日星期三	9月28日星期三	月28日星期三	9月28日星期三	9892	51FF,897	0 days	100%															
894	CTC-0000			Temporary Chemical Dosing System (5)	312 days	9月9日星期四	9月28日星期三	466 days	6月3日星期四	12月23日星期五	月3日星期四	12月23日星期五	12	0 days	100%																
895	CTC-NCE-0297		297	delay of work starting time: water seepage between MHD7A to MHD7B	0 days	NA	NA	14 days	3月18日星期五	4月2日星期六	月18日星期五	4月2日星期六	4	0 days	100%																
896	CTC-1000			Plate load test (PLT9)	14 days	11月23日星期二	12月8日星期三	7 days	6月3日星期四	6月10日星期四	月3日星期四	6月10日星期四	6	0 days	100%																
897	CTC-2000			Excavation for Raft Footing (300cu.m)	30 days	9月16日星期四	10月24日星期日	3 days	8月16日星期二	8月18日星期四	月16日星期二	8月18日星期四	8893	898,899FF-3 emons	0 days	100%															
898	CTC-3000			Grade 200 Rockfill under Raft Footing	0 days	NA	NA	2 days	8月19日星期五	8月20日星期六	月19日星期五	8月20日星期六	8897	900	0 days	100%															
899	CTC-4000			Receiving of Civil Requirements from PM	1 day	9月9日星期四	9月9日星期四	1 day	7月21日星期三	7月21日星期三	月21日星期三	7月21日星期三	7897FF-3 emons	900,911	0 days	100%															
900	CTC-5000			R.C. structure works	45 days	12月9日星期四	2月5日星期六	32 days	8月22日星期一	9月28日星期三	月22日星期一	9月28日星期三	9899,898	51FF,911FS+2 days	0 days	100%															
901	CTC-5001			R.C. for base slab	0 days	NA	NA	14 days	8月22日星期一	9月6日星期二	月22日星期一	9月6日星期二	9	902	0 days	100%															
902	CTC-5002			R.C. for bund wall, plinth, and stairs	0 days	NA	NA	7 days	9月7日星期三	9月15日星期四	月7日星期三	9月15日星期四	9901	903	0 days	100%															
903	CTC-PMI-0524		524	advised concrete plinths, bund wall, sump pit, and finishes schedule	0 days	NA	NA	11 days	9月16日星期五	9月28日星期三	月16日星期五	9月28日星期三	9902		0 days	100%															
904	CTC-5050			Steel Member preparation	0 days	NA	NA	140 days	4月4日星期一	9月23日星期五	月4日星期一	9月23日星期五	9	0 days	100%																
905	CTC-6000			Procurement of steel in HK	0 days	NA	NA	21 days	4月4日星期一	5月3日星期二	月4日星期一	5月3日星期二	5888SS		0 days	100%															
906	CTC-7000		296,300,	Deliver steel material from HK to mainland factory	0 days	NA	NA	15 days	5月3日星期二	5月20日星期二	月3日星期二	5月20日星期二	5859SS		0 days	100%															
907	CTC-8000		289	Offsite Fabrication of steelwork	0 days	NA	NA	19 days	5月20日星期五	6月11日星期六	月20日星期五	6月11日星期六	6860SS		0 days	100%															
908	CTC-NCE-0300		300	delay of transportation time: lockdown in mainland china	0 days	NA	NA	14 days	9月7日星期三	9月23日星期五	月7日星期三	9月23日星期五	9909FF		0 days	100%															
909	CTC-9000			Transportation of fabricated steel to site	0 days	NA	NA	66 days	7月8日星期五	9月23日星期五	月8日星期五	9月23日星期五	9861SS	908FF,910FF	0 days	100%															
910	CTC-NCE-0269		269	change in works info: superstructure change from RC to steel	0 days	NA	NA	60 days	7月15日星期五	9月23日星期五	月15日星期五	9月23日星期五	9909FF	911	0 days	100%															
911	CTC-10000			Fabrication and installation of steelworks	0 days	NA	NA	76 days	9月24日星期六	12月23日星期五	月24日星期六	12月23日星期五	12899,900FS+2 days,910		0 days	100%															
912	CTC-PMI-0591		591	engage in HOKLAS lab to carry out tensile test and prof-load test of M36 bolt	0 days	NA	NA	2 days	9月24日星期六	9月26日星期一	月24日星期六	9月26日星期一	9915SS	913	0 days	100%															
913	CTC-NCE-0362		362	engage in independent private laboratory for testing for bolts&nuts	0 days	NA	NA	14 days	9月28日星期三	10月15日星期六	月28日星期三	10月15日星期六	10912,914	916	0 days	100%															
914	CTC-PMI-0563		563	revised steel roof details, and provide footing fixing detail	0 days	NA	NA	14 days	9月28日星期三	10月15日星期六	月28日星期三	10月15日星期六	10915	913	0 days	100%															
915	CTC-10010			installation of holding down bolt	0 days	NA	NA	3 days	9月24日星期六	9月27日星期二	月24日星期六	9月27日星期二	9	912SS,914,917FS+1 day	0 days	100%															
916	CTC-10011			installation of steel shelter	0 days	NA	NA	73 days	9月28日星期三	12月23日星期五	月28日星期三	12月23日星期五	12913		0 days	100%															
917	CTC-11000	KD1J		Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2月5日星期六	2月5日星期六	0 days	9月28日星期三	9月28日星期三	月28日星期三	9月28日星期三	9915FS+1 day	51FF,919	0 days	100%															
918	CTC-12000			ABWF Works + BS works	90 days	6月14日星期二	9月28日星期三	45 days	9月28日星期三	11月21日星期三	月28日星期三	11月21日星期三	11	0 days	100%																
919	CTC-12010			Floor Drain Works (By DE/2018/04)	0 days	NA	NA	14 days	9月28日星期三	10月15日星期六	月28日星期三	10月15日星期六	10917	920	0 days	100%															
920	CTC-12020			Inspection	0 days	NA	NA	1 day	10月17日星期一	10月17日星期一	月17日星期一	10月17日星期一	10919	921	0 days	100%															
921	CTC-12030			Bund Wall and Floor Finish	0 days	NA	NA	30 days	10月18日星期二	11月21日星期一	月18日星期二	11月21日星期一	11920	922	0 days	100%															
922	CTC-13000			Inspection and Handover	0 days	NA	NA	1 day	11月22日星期二	11月22日星期二	月22日星期二	11月22日星期二	11921	56FF	0 days	100%															
923	CFB-0000			Fire Hydrant and Booster Pump Room (13)*	193 days	2月5日星期六	9月28日星期三	536 days	10月29日星期五	8月21日星期一	月29日星期五	10月21日星期一	NA	228 days	3%																
924	CFB-1000			Excavation for Raft Footing (200cu.m)	30 days	2月24日星期四	3月30日星期三	20 days	4月3日星期一	4月29日星期六	月3日星期一	4月29日星期六	NA	381	926,927FF-3 emons	-111 days	0%														
925	CFB-2000			Plate load test (PLT 6)	10 days	4月20日星期三	5月3日星期二	7 days	10月29日星期五	11月5日星期五	月29日星期五	11月5日星期五	10	925	0 days	100%															
926	CTC-2500			Grade 200 Rockfill under Raft Footing	0 days	NA	NA	7 days	5月2日星期二	5月9日星期二	月2日星期二	5月9日星期二	924	928	-111 days	0%															
927	CFB-2900			Receiving of Civil Requirements from PM	1 day	2月5日星期六	2月6日星期日	1 day	1月27日星期四	1月27日星期四	月27日星期四	1月27日星期四	1924FF-3 emons	928	0 days	100%															
928	CFB-3000		306	R.C. structure works	30 days	5月7日星期六	6月13日星期一	30 days	5月10日星期三	6月14日星期三	月10日星期三	6月14日星期三	926,927	929FF,44FF	-111 days	1	0%														
929	CFB-PMI-638		638	revised general arrangement and associated works	0 days	NA	NA	14 days	5月30日星期二	6月14日星期三	月30日星期二	6月14日星期三	928FF	930FF	-111 days	0%															
930	CFB-PMI-590		590	revised structural layout	0 days	NA	NA	14 days	5月30日星期二	6月14日星期三	月30日星期二	6月14日星期三	929FF	931FF	-111 days	0%															
931	CFB-PMI-372		372																												



Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1		Revised Works Programme (Status Date: 28/02/2023)																												
識別碼	Activity ID	Key Date	NCE/(EV/PMI)/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總延遲時間	Re完成百分比	2019年1月 2019年8月 2020年3月 2020年10月 2021年5月 2021年12月 2022年7月 2023年2月 2023年9月 2024年4月 2024年11月 2025年6月 2026年1月													
951	CDS1-4000			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	12月16日星期二	12月16日星期四	0 days	6月27日星期二	6月27日星期二		NA	NA 950	56FF,44FF	-121 days	0%	◆ 27/6													
952	CAA-0000	*		<b>Additional and Alternation Works for Existing Facilities (B-7A, B-8, B-8A)</b>	<b>1074 days</b>	<b>11月18日星期一</b>	<b>7月6日星期四</b>	<b>961 days</b>	<b>10月19日星期一</b>	<b>1月15日星期一</b>		<b>1月19日星期一</b>	<b>NA</b>	<b>NA</b>	<b>0 days</b>	<b>68%</b>														
953	CAA-1000	KD2B		<b>B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)</b>	<b>359 days</b>	<b>10月19日星期一</b>	<b>1月3日星期一</b>	<b>315 days</b>	<b>10月19日星期一</b>	<b>11月9日星期二</b>		<b>1月19日星期一</b>	<b>1月9日星期二</b>	<b>11 15,162,206</b>	<b>53FF</b>	<b>0 days</b>	<b>100%</b>													
954	CAA-1100		057 (057)	Change of pipe bridge design	135 days	10月19日星期一	4月1日星期四	135 days	10月19日星期一	4月1日星期四	月19日星期一	10	月1日星期四	4	957,958,959	0 days	100%													
955	CAA-1200			Additional inspection pit to verify the connection point to existing (CE xxx)	135 days	10月19日星期一	4月1日星期四	135 days	10月19日星期一	4月1日星期四	月19日星期一	10	月1日星期四	4	957,958,959	0 days	100%													
956	CAA-1300			Additional MBV installation (CE xxx)	135 days	10月19日星期一	4月1日星期四	135 days	10月19日星期一	4月1日星期四	月19日星期一	10	月1日星期四	4	957,958,959	0 days	100%													
957	CAA-1400			Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)	212 days	4月20日星期二	1月3日星期一	168 days	4月20日星期二	11月9日星期二	月20日星期二	4	月9日星期二	11 954,955,956	53FF	0 days	100%													
958	CAA-1500	KD2B	064	Re-alignment of DN800 Temporary Air Main (CHTA) and Provision of FRP Staircases	212 days	4月20日星期二	1月3日星期一	168 days	4月20日星期二	11月9日星期二	月20日星期二	4	月9日星期二	11 954,955,956	53FF	0 days	100%													
959	CAA-1600	KD2B	017 062	Elevated Section of DN800 Temporary Air Main (CHTA) across existing Bioreactor's Distribution Chamber No. 2	212 days	4月20日星期二	1月3日星期一	168 days	4月20日星期二	11月9日星期二	月20日星期二	4	月9日星期二	11 954,955,956	53FF,960	0 days	100%													
960	CAA-2000	KD11		B7-A Alternation works for existing Power House	0 days	1月3日星期一	1月3日星期一	0 days	1月3日星期一	1月3日星期一	月3日星期一	1	月3日星期一	1 13FS-1 day,142,180,182,50FF,961FS+540 days	0 days	100%	◆ 3/1													
961	CAA-2100	SW3	224	Additional works for Power House	60 days	3月18日星期六	6月2日星期五	60 days	10月31日星期二	1月11日星期四		NA	NA 960FS+540 days	58FF,54FF	3 days	0%														
962	CAA-3000	SW3		Alternation works for existing Membrane Facilities Building No.1	360 days	4月19日星期二	7月6日星期三	359 days	10月31日星期二	1月15日星期一		NA	NA 14FS-1 day,195FS+160	58FF,54FF	0 days	0%														
963	C2AUU-0000	*		<b>External Underground Service, Utilities, Road/Drain (KD2A)</b>	<b>802 days</b>	<b>11月18日星期一</b>	<b>8月3日星期三</b>	<b>802 days</b>	<b>11月18日星期一</b>	<b>8月3日星期三</b>		<b>1月18日星期一</b>	<b>11</b>	<b>NA 16</b>	<b>996 days</b>	<b>81%</b>														
964	C2AUU-1000	KD2A	33, 222, 255	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)	530 days	10月19日星期一	8月3日星期三	530 days	10月19日星期一	8月3日星期三	月19日星期一	10	NA 206,162	52FF	996 days	72%														
965	C2AUU-1000a	KD2A	029 33	Special Treatment for Removing the Existing Abandoned DN1800 By-pass Pipe and the Concrete Mass in Conflict with the Proposed Sheetpile wall for trenching work of Process Pipeline CHR and CHS	54 days	11月18日星期一	1月22日星期三	54 days	11月18日星期一	1月22日星期三	月18日星期一	11	月22日星期三	1	0 days	100%														
966	C2AUU-1000b	KD2A	255	Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN900 D.I.)	60 days	12月21日星期一	3月6日星期六	60 days	12月21日星期一	3月6日星期六	月21日星期一	12	月6日星期六	3	52FF	0 days	100%													
967	C2AUU-1001	KD2A	033	Removal of Abandoned DN1800 Concrete Pipe and Concrete Mass near Existing UV Disinfection Channel at CHR & CHS Process Pipe Works Area	43 days	11月18日星期一	1月9日星期四	43 days	11月18日星期一	1月9日星期四	月18日星期一	11	月9日星期四	1	0 days	100%														
968	C2AUU-1002	KD2A	222	Grouting for Sheung Shui Slaughter House Boundary Walls along CHR & CHS Pipes Works Area	20 days	11月18日星期一	12月10日星期二	16.83 days	11月18日星期一	12月6日星期五	月18日星期一	11	月6日星期五	12	0 days	100%														
969	C2AUU-1004	KD2A	(076)	Delay Delivery of DI pipes due to COVID-19	75 days	11月18日星期一	2月19日星期三	75 days	11月18日星期一	2月19日星期三	月18日星期一	11	月19日星期三	2	0 days	100%														
970	CS2-0000	SW2		<b>External Underground Service, Utilities, Road/Drain (Section 2)</b>	<b>616 days</b>	<b>3月24日星期三</b>	<b>4月24日星期三</b>	<b>1609 days</b>	<b>1月20日星期一</b>	<b>6月14日星期六</b>		<b>1月20日星期一</b>	<b>1</b>	<b>NA</b>	<b>138 days</b>	<b>49%</b>														
971	CS2-0000			<b>Sewerage and utilities in Workfront A1</b>	<b>90 days</b>	<b>3月24日星期三</b>	<b>7月14日星期三</b>	<b>685 days</b>	<b>3月24日星期三</b>	<b>7月18日星期二</b>		<b>1月24日星期三</b>	<b>3</b>	<b>NA 19</b>	<b>-184 days</b>	<b>87%</b>														
972	CS2-0100a			<b>Workfront A1a: Construction of 7 nos. of process pipes (CHPS1&amp;CHPS2 CH236-250, CHT, CHW, CHX, CHY, CHZ CH0-CH15)</b>	<b>90 days</b>	<b>3月24日星期三</b>	<b>7月14日星期三</b>	<b>178 days</b>	<b>3月24日星期三</b>	<b>10月28日星期四</b>		<b>1月24日星期三</b>	<b>3</b>	<b>10月28日星期四</b>	<b>10</b>	<b>0 days</b>	<b>100%</b>													
973	CS2-0110a			Conduct underground utilities detection and setting out	7 days	3月24日星期三	3月31日星期三	7 days	3月24日星期三	3月31日星期三	月24日星期三	3	月31日星期三	3	974	0 days	100%													
974	CS2-0120a			Expose and abandon existing electric cable & trial pits	20 days	4月1日星期四	4月27日星期二	20 days	4月1日星期四	4月27日星期二	月1日星期四	4	月27日星期二	4 973	975	0 days	100%													
975	CS2-0130a			Installing sheetpiles and ELS works	20 days	4月28日星期三	5月22日星期六	20 days	4月28日星期三	5月22日星期六	月28日星期三	4	月22日星期六	6 974,1055	983,976	0 days	100%													
976	CS2-0140a			Process Pipes laying works : Fresh Water Supply Pipe Laying Works	0 days	NA	NA	7 days	5月24日星期一	5月31日星期一	月24日星期一	5	月31日星期一	5 987,975	978SS+2 days	0 days	100%													
977	CS2-PMI-0446		206 446	DC/2018/07 - Notification of Compensation Event:- Section 2 - Additional Works for Construction of 7 nos. of Process Pipes in Portion B-9C	0 days	NA	NA	26 days	5月5日星期三	6月4日星期五	月5日星期三	5	月4日星期五	6	0 days	100%														
978	CS2-0145a			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	6月17日星期四	6月24日星期四	月17日星期四	6	月24日星期四	6 976SS+2 days	979	0 days	100%													
979	CS2-0150a			Inspection and connection works	3 days	6月17日星期四	6月19日星期六	3 days	6月17日星期四	6月19日星期六	月17日星期四	6	月19日星期六	6 978	980SS+2 days	0 days	100%													
980	CS2-0160a			Backfilling and reinstatement works	20 days	6月21日星期一	7月14日星期三	33 days	9月1日星期三	10月11日星期一	月1日星期三	9	月11日星期一	10 979SS+2 days	981,57FF	0 days	100%													
981	CS2-0170a			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	7月14日星期三	7月14日星期三	14 days	10月12日星期二	10月28日星期四	月12日星期二	10	月28日星期四	10 980	0 days	100%														
982	CS2-0100b			<b>Workfront A1b: Construction of 7 nos. of process pipes (CHPS1&amp;CHPS2 CH224-236, CHT, CHW, CHX, CHY, CHZ CH16-CH29), watermains</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>305 days</b>	<b>7月8日星期五</b>	<b>7月18日星期二</b>		<b>1月8日星期五</b>	<b>7</b>	<b>NA</b>	<b>-184 days</b>	<b>75%</b>														
983	CS2-NCE-0343	343		DC/2018/07 - Notification of Compensation Event:- Section 2 - (WF-A1) Uncharted and Unforeseen Concrete Surround of Master Water Meter Cabinet near Gate	0 days	NA	NA	10 days	7月8日星期五	7月19日星期二	月8日星期五	7	月19日星期二	7 975	984	0 days	100%													
984	CS2-NCE-0333	333		DC/2018/07 - Notification of Compensation Event:- Section 2 - (WF-A1) Revise Details of Master Water Meter Cabinet	0 days	NA	NA	11 days	9月6日星期二	9月19日星期一	月6日星期二	9	月19日星期一	9 983	985	0 days	100%													
985	CS2-NCE-0428A	428		DC/2018/07 - Notification of Compensation Event:- (Section 2 WF-A1&A2) Additional Works due to Site Condition and Revised Utility Trough Arrangement near Main Entrance (7 no. process pipes)	0 days	NA	NA	10 days	9月8日星期四	9月20日星期二	月8日星期四	9	月20日星期二	9 984	986	0 days	100%													
986	CS2-PMI-0628		628	Revised Cable Duct and Drawpits for CLP 11kV and HV Works in Portion B of the Site	0 days	NA	NA	5 days	9月21日星期三	9月26日星期一	月21日星期三	9	月26日星期一	9 985	987	0 days	100%													
987	CS2-NCE-0425	425		DC/2018/07 - Notification of Compensation Event:- (Section 2 WF-A1) Additional Works due to the Unforeseen Concrete Surround near Main Entrance (7 nos. process pipes)	0 days	NA	NA	21 days	9月27日星期二	10月22日星期一	月27日星期二	9	月22日星期一	9 986	976	0 days	100%													
988	CS2-0110b			Conduct underground utilities detection and setting out	0 days	NA	NA	5 days	9月21日星期三	9月26日星期一	月21日星期三	9	月26日星期一	9 999	989	0 days	100%													
989	CS2-NCE-425			Additional Works due to Unforeseen Concrete Surround	0 days	NA	NA	21 days	9月27日星期二	10月22日星期一	月27日星期二	9	月22日星期一	9 988	990	0 days	100%													
990	CS2-0120b			Expose and abandon existing electric cable & trial pits	0 days	NA	NA	10 days	10月24日星期一	11月3日星期四	月24日星期一	10	月3日星期四	11 989	991	0 days	100%													
991	CS2-0130b			Installing sheetpiles and ELS works	0 days	NA	NA	10 days	11月4日星期五	11月15日星期二	月4日星期五	11	月15日星期二	11 990,1055	992	0 days	100%													
992	CS2-0140b			Process Pipes laying works	0 days	NA	NA	7 days	11月16日星期三	11月23日星期三	月16日星期三	11	月23日星期三	11 991	993SS+2 days	0 days	100%													
993	CS2-0145b			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	11月18日星期五	11月25日星期五	月18日星期五	11	月25日星期五	11 992SS+2 days	994	0 days	100%													
994	CS2-0150b			Inspection and connection works	0 days	NA	NA	3 days	11月26日星期六	11月29日星期二	月26日星期六	11	月29日星期二	11 993	0 days	100%														
995				Fresh Water Supply Pipe Laying Works	0 days	NA	NA	15 days	6月1日星期四	6月17日星期六		NA	NA	996	-205 days	0%														
996	CS2-0160b			Backfilling and reinstatement works	0 days	NA	NA	10 days	6月19日星期一	6月30日星期五		NA	NA 995	997,57FF	-205 days	0%														
997	CS2-0170b			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	14 days	7月3日星期一	7月18日星期二		NA	NA 996	57FF	-205 days	0%														
998	CS2-1000	SW2		<b>Sewerage and utilities in Workfront A2</b>	<b>179 days</b>	<b>6月30日星期三</b>	<b>2月4日星期五</b>	<b>536 days</b>	<b>6月30日星期三</b>	<b>4月21日星期五</b>		<b>1月30日星期三</b>	<b>6</b>	<b>NA</b>	<b>785 days</b>	<b>94%</b>														
999	CS2-1010			<b>Workfront A2a : Construction of 2 nos. of DN250 DI sludge pipe (CHPS1, CHPS2 CH190-224), 2 nos. of DN350 DI sewage pipe (CHT CH29-62, CHY CH29-62) and 3 nos. of DN150 DI pipe (CHW, CHX, CHZ CH29-62)</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>197 days</b>	<b>3月4日星期五</b>	<b>11月1日星期二</b>		<b>1月4日星期五</b>	<b>3</b>	<b>1月1日星期二</b>	<b>11 1016</b>	<b>988</b>	<b>0 days</b>	<b>100%</b>												
1000	CS2-1019a	313		Temporary Diversion of DN40, DN50 and DN80 irrigation pipe near Air Blower House	0 days	NA	NA	11 days	3月24日星期四	4月6日星期三	月24日星期四	3	月6日星期三	4	1001	0 days	100%													
1001	CS2-1020			Conduct underground utilities detection and setting out	0 days	NA	NA	7 days	4月7日星期四	4月14日星期四	月7日星期四	4	月14日星期四	4 1000	1002	0 days	100%													
1002	CS2-1030			Expose and abandon utilities detection and setting out & breaking of existing utility trough	0 days	NA	NA	15 days	3月4日星期五	3月21日星期一	月4日星期五	3	月21日星期一	3 1001	1003	0 days	100%													
1003	CS2-1040			Installing sheetpiles and ELS works	0 days	NA	NA	40 days	5月7日星期六	6月24日星期五	月7日星期六	5	月24日星期五	6 1002	1004	0 days	100%													
1004	CS2-NCE-0344	344		DC/2018/07 - Notification of Compensation Event:- Section 2 - (WF-A2) Additional Work for Utility Trough	0 days	NA	NA	20 days	6月24日星期五	7月18日星期一	月24日星期五	6	月18日星期一	7 1003	1005	0 days	100%													
1005	CS2-1045	331		Additional Work of Temporary Support for Cable Duct Relocation near Air Blower No.2	0 days	NA	NA	7 days	6月25日星期六	7月4日星期一	月25日星期六	6	月4日星期一	7 1004	1006	0 days	100%													
1006	CS2-1046			Utility Trough for 7 pipes	0 days	NA	NA	30 days	7月5日星期二	8月8日星期一	月5日星期二	7	月8日星期一	8 1005	1011FF,1007	0 days	100%													
1007	CS2-PMI-0607	313 607		DC/2018/07 - Notification of Compensation Event:- Section 2 - Temporary Diversion of DN40, DN80 Irrigation Pipe near Air Blower House	0 days	NA	NA	76 days	8月2日星期二	11月1日星期二	月2日星期二	8	月1日星期二	11 1006	1008	0 days	100%													
10																														



Contract No. DC/2018/07 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1												Revised Works Programme (Status Date: 28/02/2023)																			
識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進項時間	完成百分比	第一季		第二季		第三季		第四季		第一季		第二季				
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月	2026年1月		
1085	CS2-3320a			Expose and abandon existing electric cable & trial pits	0 days	NA	NA	10 days	6月20日星期四	7月3日星期三	NA	NA	NA 1084FS-2 days	1086FS-2 days	-630.25 ...	0%															
1086	CS2-3330a			Installing sheetpiles and ELS works	0 days	NA	NA	90 days	6月29日星期六	10月17日星期四	NA	NA	NA 1085FS-2 days	1087FS-2 days	-630.25 ...	0%															
1087	CS2-3335a			Process Pipes Laying Works; Fire Service Water; Street Fire Hydrant Water	0 days	NA	NA	40 days	10月15日星期二	11月30日星期六	NA	NA	NA 1086FS-2 days	1088	-630.25 ...	0%															
1088	CS2-3345a			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	10 days	11月30日星期六	12月12日星期四	NA	NA	NA 1087	1089FF+2 days	-630.25 ...	0%															
1089	CS2-3350a			Inspection and connection works	0 days	NA	NA	3 days	12月11日星期三	12月14日星期六	NA	NA	NA 1088FF+2 days	1090FF+4 days	-630.25 ...	0%															
1090	CS2-3360a			Backfilling and reinstatement works	0 days	NA	NA	10 days	12月7日星期六	12月19日星期四	NA	NA	NA 1089FF+4 days	57FF, 1091FF+4 days	-630.25 ...	0%															
1091	CS2-3370a			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	14 days	12月7日星期六	12月24日星期二	NA	NA	NA 1090FF+4 days	1752	-342.25 ...	0%															
1092	<b>CS2-3400a</b>			<b>Construction of Cable Duct &amp; Cable Draw Pits</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>89 days</b>	<b>10月6日星期四</b>	<b>1月20日星期五</b>	<b>月6日星期四10</b>	<b>月20日星期五1</b>			<b>0 days</b>	<b>100%</b>															
1093	CS2-3410a			Cable Duct Laying Works (HV 2x4x200 uPVC Cable Ducts, CLP 2x3x200 uPVC+ 2x2x100 Cable Duct, LV 3x4x150 Cable Ducts) ; with Cable Draw Pit Construction (CLPCP6, LVCP15, LVCP15A)	0 days	NA	NA	70 days	10月6日星期四	12月28日星期三	月6日星期四10	月28日星期三12	1109SS+20 days	1094	0 days	100%															
1094	CS2-NCE-438		438	Additional Concrete Surround and Steel Plate	0 days	NA	NA	13 days	12月29日星期四	1月13日星期五	月29日星期四12	月13日星期五1	1093	1095	0 days	100%															
1095	CS2-3420a			Inspection and connection works	0 days	NA	NA	3 days	1月14日星期六	1月17日星期二	月14日星期六1	月17日星期二2	1094	1096	0 days	100%															
1096	CS2-3430a			Backfilling and reinstatement works	0 days	NA	NA	3 days	1月18日星期三	1月20日星期五	月18日星期三1	月20日星期五1	1095	57FF	0 days	100%															
1097	<b>CS2-3301</b>			<b>Sewerage and utilities in Workfront A6b (Vertical Portion)</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>606.25 days</b>	<b>7月23日星期六</b>	<b>8月8日星期四</b>	<b>月23日星期六6</b>	<b>月23日星期六7</b>	<b>NA</b>		<b>-452.25 ...</b>	<b>40%</b>															
1098	<b>CS2-3310</b>			<b>Construction of CHC CH0-15.383, CHD CH0-15.844, CHU CH 67.72-103.223 and Manhole OF1, OF2</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>560.25 days</b>	<b>9月16日星期五</b>	<b>8月8日星期四</b>	<b>月16日星期五9</b>	<b>NA 1160,1179</b>			<b>-519.25 ...</b>	<b>9%</b>															
1099	CS2-3310b		418	Additional Demolition and Trimming Works for Existing Underground Utilities at Jacking Pit of CHU	0 days	NA	NA	14 days	9月16日星期五	10月3日星期一	月16日星期五9	月3日星期一10	1102	0 days	100%																
1100	CS2-3320b			Conduct underground utilities detection and setting out	0 days	NA	NA	3 days	9月26日星期一	9月28日星期三	月26日星期一9	月28日星期三9			0 days	100%															
1101	CS2-3330b			Expose and abandon existing electric cable & trial pits	0 days	NA	NA	10 days	2月3日星期六	2月19日星期一	NA	NA	NA 1185,1170	1102	-630.25 ...	0%															
1102	CS2-3335b			Installing sheetpiles and ELS works	0 days	NA	NA	90 days	2月19日星期一	6月11日星期二	NA	NA	NA 1101,1099	1103,1083	-630.25 ...	0%															
1103	CS2-3345b			Process Pipes Laying Works; Fire Service Water; Street Fire Hydrant Water	0 days	NA	NA	40 days	6月11日星期二	7月29日星期一	NA	NA	NA 1102	1104FF+3 days	-519.25 ...	0%															
1104	CS2-3350b			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	10 days	7月20日星期六	8月1日星期四	NA	NA	NA 1103FF+3 days	1105FF+3 days	-519.25 ...	0%															
1105	CS2-3360b			Inspection and connection works	0 days	NA	NA	3 days	8月1日星期四	8月5日星期一	NA	NA	NA 1104FF+3 days	1106FF+3 days	-519.25 ...	0%															
1106	CS2-3370b			Backfilling and reinstatement works	0 days	NA	NA	10 days	7月27日星期六	8月8日星期四	NA	NA	NA 1105FF+3 days	1107FF	-519.25 ...	0%															
1107	CS2-3380b			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	0 days	8月8日星期四	8月8日星期四	NA	NA	NA 1106FF	57FF	-519.25 ...	0%															
1108	<b>CS2-3400b</b>			<b>Construction of Cable Duct &amp; Cable Draw Pits</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>154 days</b>	<b>7月23日星期六</b>	<b>1月28日星期六</b>	<b>月23日星期六7</b>	<b>月28日星期六1</b>			<b>0 days</b>	<b>100%</b>															
1109	CS2-3410b			Cable Duct Laying Works (HV 2x3x200 uPVC Cable Ducts, CLP 2x4x200 + 2x2x100 Cable Duct, LV 2x2x150) ; with Cable Draw Pit Construction (HVCP5A, HVCP5, HVCP4, CLPCP11, CLPCP10, CLPCP9, CLPCP8, CLPCP7, LVCP32, LVCP31, LVCP15B)	0 days	NA	NA	24 days	9月9日星期五	10月10日星期一	月9日星期五9	月10日星期一10	1112FS+30 days	1114,1111FF,1113,1093SS+20 days,1110FF	0 days	100%															
1110	CS2-NCE462		462	Additional Cutting Works due to blockage of Existing Sheet Pile	0 days	NA	NA	5 days	1月5日星期四	1月10日星期二	月5日星期四4	月10日星期二1	1109FF		0 days	100%															
1111	CS2-NCE-438		433	Cable Pit Cover Issue	0 days	NA	NA	30 days	10月18日星期二	11月21日星期一	月18日星期二10	月21日星期一11	1109FF	1114	0 days	100%															
1112	CS2-3420b		405	Additional Trial Pit Excavation and Backfilling	0 days	NA	NA	11 days	7月23日星期六	8月4日星期四	月23日星期六7	月4日星期四8	1109FS+30 days		0 days	100%															
1113	CS2-3430b		438	Additional Concrete Surround and Steel Plate	0 days	NA	NA	13 days	1月11日星期三	1月28日星期六	月11日星期三1	月28日星期六1	1109		0 days	100%															
1114	CS2-3440b			Inspection and connection works	0 days	NA	NA	5 days	1月11日星期三	1月16日星期一	月11日星期三1	月16日星期一1	1109,1111	1115	0 days	100%															
1115	CS2-3450b			Backfilling and reinstatement works	0 days	NA	NA	5 days	1月17日星期三	1月21日星期六	月17日星期三2	月21日星期六1	1114	57FF,1065,1077	0 days	100%															
1116	<b>CS2-4000</b>	<b>SW2</b>		<b>Sewerage and utilities in Workfront B1</b>	<b>49 days</b>	<b>9月1日星期三</b>	<b>10月30日星期六</b>	<b>928.25 days</b>	<b>8月4日星期三</b>	<b>9月20日星期三</b>	<b>月4日星期三8</b>	<b>NA</b>			<b>363.75 ...</b>	<b>28%</b>															
1117	<b>CS2-4010</b>			<b>Workfront B1a : Construction of 2 nos. of DN350 DI sewage pipe (CHT, CHY CH189-219) and manhole MHSS1 and discharge chamber</b>	<b>49 days</b>	<b>9月1日星期三</b>	<b>10月30日星期六</b>	<b>145 days</b>	<b>8月4日星期三</b>	<b>1月26日星期三</b>	<b>月4日星期三8</b>	<b>月26日星期三1</b>			<b>0 days</b>	<b>100%</b>															
1118	CS2-4020		254	Diversion of existing wash water pipe	0 days	NA	NA	3 days	8月4日星期三	8月6日星期五	月4日星期三8	月6日星期五8			0 days	100%															
1119	CS2-4030			Conduct underground utilities detection and setting out	2 days	9月1日星期三	9月2日星期四	2 days	9月25日星期六	9月27日星期一	月25日星期六9	月27日星期一9			0 days	100%															
1120	CS2-4040			Expose and abandon existing electric cable & trial pits	7 days	9月3日星期五	9月10日星期五	3 days	9月28日星期二	9月30日星期四	月28日星期二9	月30日星期四9	1121		0 days	100%															
1121	CS2-PMI594		594	Diversion of Existing Water Main and Fire Hydrant	0 days	NA	NA	7 days	10月11日星期一	10月19日星期二	月11日星期一10	月19日星期二10	1120	1123,1122	0 days	100%															
1122	DC/2018/07 - Notification of Compensation Event- Section 2 - Additional Pipe Diversion Works for Pipe Laying (i.e. CHT & CHY) near Flume Channel in Portion B-9		254	594	0 days	NA	NA	6 days	10月11日星期一	10月18日星期一	月11日星期一10	月18日星期一10	1127,1121	1140	0 days	100%															
1123	CS2-4050			Installing sheetpiles and ELS works	20 days	9月11日星期六	10月6日星期三	20 days	10月2日星期六	10月26日星期二	月2日星期六10	月26日星期二10	1121	1124	0 days	100%															
1124	CS2-4055			Process Pipes Laying Works	0 days	NA	NA	6 days	12月16日星期四	12月22日星期三	月16日星期四12	月22日星期三12	1123	1125	0 days	100%															
1125	CS2-4070			Pipe testing (Pressure Test)	0 days	NA	NA	1 day	12月31日星期五	12月31日星期五	月31日星期五12	月31日星期五12	1124	1126	0 days	100%															
1126	CS2-4080			Inspection and connection works	3 days	10月20日星期三	10月22日星期五	4 days	1月3日星期一	1月6日星期四	月3日星期一1	月6日星期四1	1125	1127	0 days	100%															
1127	CS2-4090			Backfilling and reinstatement works	7 days	10月23日星期六	10月30日星期六	14 days	1月7日星期五	1月22日星期六	月7日星期五1	月22日星期六1	1126	57FF,1122	0 days	100%															
1128	CS2-4095			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	3 days	1月24日星期一	1月26日星期三	月24日星期一1	月26日星期三1	1140	57FF	0 days	100%															
1129	<b>CS2-4100</b>	<b>SW2</b>		<b>Workfront B1b: DN600 concrete pipe (CHU CH0-9.81)</b>	<b>0 days</b>	<b>NA</b>	<b>NA</b>	<b>122 days</b>	<b>2月3日星期六</b>	<b>7月8日星期一</b>	<b>NA</b>	<b>NA 1145,1171</b>			<b>-555.25 ...</b>	<b>0%</b>															















識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進程時間	完成百分比	Gantt Chart												
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月	2026年1月
1422	CS2-17100a	SW2		Workfront F1a: Process Pipe CHPSW-1 CH100-108 , DN150 DI SAS pipe CH2B, Bioreactor Tank Drain CHTD1	50 days	10月3日星期一	11月30日星期三	435 days	5月5日星期四	10月19日星期四	5月5日星期四	NA	NA	1436	-344 days	41%	[Gantt Chart for Activity 1422]												
1423	CS2-PMI-0213		291 213	DC/2018/07 - Notification of Compensation Event- Section 2 & WF-F1 - Additional Trimming Works for Concrete Surround of existing DN800 Tank Drain in the Footprint of Manhole MHD7C	0 days	NA	NA	14 days	5月5日星期四	5月21日星期六	5月5日星期四	5月21日星期六	NA	NA	0 days	100%	[Gantt Chart for Activity 1423]												
1424	CS2-PMI-0670		328 670	DC/2018/07 - Notification of Compensation Event- Section 2 & Workfront F1 - Diversion of DN80 permeate pipe in the footprint of manhole MHD7C	0 days	NA	NA	21 days	5月16日星期一	6月9日星期四	5月16日星期一	6月9日星期四	NA	NA	0 days	100%	[Gantt Chart for Activity 1424]												
1425	CS2-PMI-0702		372 702	DC/2018/07 - Notification of Compensation Event- Section 2 - (WF-F1) Diversion Works for Existing Cable Duct due to Obstruction encountered during DN450 Drainage Pipe Construction near Compressor House and BR no. 1	0 days	NA	NA	47 days	6月28日星期二	8月22日星期一	6月28日星期二	8月22日星期一	NA	NA	0 days	100%	[Gantt Chart for Activity 1425]												
1426	CS2-PMI-532		532	Modification of Temporary Sump Pipes from BR1 to Existing SAS Consolidation House	0 days	NA	NA	1 day	7月2日星期六	7月2日星期六	7月2日星期六	7月2日星期六	NA	NA	0 days	100%	[Gantt Chart for Activity 1426]												
1427	CS2-17110a		328	Conduct underground utilities detection and setting out	2 days	10月3日星期一	10月5日星期三	10 days	6月24日星期六	7月6日星期二	6月24日星期六	7月6日星期二	NA	NA 1544	1428	-367 days	0%	[Gantt Chart for Activity 1427]											
1428	CS2-17120a			Expose and abandon existing electric cable&trial pits	7 days	10月6日星期四	10月13日星期四	10 days	7月7日星期五	7月18日星期二	7月7日星期五	7月18日星期二	NA	NA 1427	1429	-367 days	0%	[Gantt Chart for Activity 1428]											
1429	CS2-17130a			Installing sheetpiles and ELS works	25 days	10月14日星期五	11月11日星期五	25 days	7月19日星期三	8月16日星期三	7月19日星期三	8月16日星期三	NA	NA 1428	1430	-367 days	0%	[Gantt Chart for Activity 1429]											
1430	CS2-17140a			Process Pipes Laying Works	0 days	NA	NA	40 days	8月17日星期四	10月4日星期三	8月17日星期四	10月4日星期三	NA	NA 1429	1431	-367 days	0%	[Gantt Chart for Activity 1430]											
1431	CS2-17145a			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	10月5日星期四	10月12日星期四	10月5日星期四	10月12日星期四	NA	NA 1430	1432FF+2 days	-367 days	0%	[Gantt Chart for Activity 1431]											
1432	CS2-17150a			Inspection and connection works	2 days	11月21日星期一	11月22日星期二	5 days	10月10日星期二	10月14日星期六	10月10日星期二	10月14日星期六	NA	NA 1431FF+2 days	1433FF+2 days	-367 days	0%	[Gantt Chart for Activity 1432]											
1433	CS2-17160a			Backfilling and reinstatement works	7 days	11月23日星期三	11月30日星期三	7 days	10月10日星期二	10月17日星期二	10月10日星期二	10月17日星期二	NA	NA 1432FF+2 days	1434FF+2 days,57FF	-367 days	0%	[Gantt Chart for Activity 1433]											
1434	CS2-17170a			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	11月30日星期三	11月30日星期三	14 days	10月4日星期三	10月19日星期四	10月4日星期三	10月19日星期四	NA	NA 1433FF+2 days	NA	-367 days	0%	[Gantt Chart for Activity 1434]											
1435	CS2-17100b	SW2		Workfront F1b: Process Pipe CHPSW-1, DN150 DI SAS pipe CH2B, Bioreactor Tank Drain CHTD1	0 days	NA	NA	86 days	10月20日星期五	2月1日星期四	10月20日星期五	NA	NA	NA	-367 days	0%	[Gantt Chart for Activity 1435]												
1436	CS2-17120b			Expose and abandon existing electric cable&trial pits	0 days	NA	NA	10 days	10月20日星期五	11月1日星期三	10月20日星期五	11月1日星期三	NA	NA 1422	1437	-367 days	0%	[Gantt Chart for Activity 1436]											
1437	CS2-17130b			Installing sheetpiles and ELS works	0 days	NA	NA	25 days	11月2日星期四	11月30日星期四	11月2日星期四	11月30日星期四	NA	NA 1436	1438	-367 days	0%	[Gantt Chart for Activity 1437]											
1438	CS2-17140b			Process Pipes Laying Works	0 days	NA	NA	40 days	12月1日星期五	1月19日星期五	12月1日星期五	1月19日星期五	NA	NA 1437	1439	-367 days	0%	[Gantt Chart for Activity 1438]											
1439	CS2-17145b			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	5 days	1月20日星期六	1月25日星期四	1月20日星期六	1月25日星期四	NA	NA 1438	1440FF+2 days	-367 days	0%	[Gantt Chart for Activity 1439]											
1440	CS2-17150b			Inspection and connection works	0 days	NA	NA	10 days	1月17日星期三	1月27日星期六	1月17日星期三	1月27日星期六	NA	NA 1439FF+2 days	1441FF+2 days	-367 days	0%	[Gantt Chart for Activity 1440]											
1441	CS2-17160b			Backfilling and reinstatement works	0 days	NA	NA	7 days	1月23日星期二	1月30日星期二	1月23日星期二	1月30日星期二	NA	NA 1440FF+2 days	1442FF+2 days,57FF	-367 days	0%	[Gantt Chart for Activity 1441]											
1442	CS2-17170b			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	14 days	1月17日星期三	2月1日星期四	1月17日星期三	2月1日星期四	NA	NA 1441FF+2 days	NA	550 days	0%	[Gantt Chart for Activity 1442]											
1443	CS2-18000	SW2		Sewerage and utilities in Workfront F2	48 days	2月4日星期五	3月31日星期四	566 days	2月4日星期五	12月30日星期六	2月4日星期五	12月30日星期六	NA	NA	577 days	63%	[Gantt Chart for Activity 1443]												
1444	CS2-18100	SW2		Workfront F2a: Construction of Process Pipe CHPSW-4	48 days	2月4日星期五	3月31日星期四	274 days	2月4日星期五	1月5日星期四	2月4日星期五	1月5日星期四	NA	NA	0 days	100%	[Gantt Chart for Activity 1444]												
1445	CS2-18110			Conduct underground utilities detection and setting out	2 days	2月4日星期五	2月5日星期六	2 days	2月4日星期五	2月5日星期六	2月4日星期五	2月5日星期六	NA	NA	0 days	100%	[Gantt Chart for Activity 1445]												
1446	CS2-NCE-407		407	Additional Concrete Trimming works due to unforeseen concrete	0 days	NA	NA	5 days	9月15日星期四	9月20日星期二	9月15日星期四	9月20日星期二	NA	NA	0 days	100%	[Gantt Chart for Activity 1446]												
1447	CS2-18120			Expose and abandon existing electric cable&trial pits	7 days	2月7日星期一	2月14日星期一	4 days	9月21日星期三	9月24日星期六	9月21日星期三	9月24日星期六	NA	NA 1446	1448	0 days	100%	[Gantt Chart for Activity 1447]											
1448	CS2-18130			Installing sheetpiles and ELS works	23 days	2月15日星期二	3月12日星期六	25 days	9月26日星期一	10月26日星期三	9月26日星期一	10月26日星期三	NA	NA 1447	1449	0 days	100%	[Gantt Chart for Activity 1448]											
1449	CS2-PMI-0754		407 754	DC/2018/07 - (Section 2 WF-F2) Additional Concrete Trimming Works due to Uncharted Concrete Surround near Compressor House	0 days	NA	NA	6 days	10月17日星期六	10月22日星期四	10月17日星期六	10月22日星期四	NA	NA 1448	1450	0 days	100%	[Gantt Chart for Activity 1449]											
1450	CS2-18135			Process Pipes Laying Works	0 days	NA	NA	40 days	10月24日星期一	12月8日星期四	10月24日星期一	12月8日星期四	NA	NA 1449	1451	0 days	100%	[Gantt Chart for Activity 1450]											
1451	CS2-18142			Watermains ( Sprinkler Water, Street Fire Hydrant Water)	0 days	NA	NA	10 days	12月9日星期五	12月20日星期二	12月9日星期五	12月20日星期二	NA	NA 1450	1452,1453	0 days	100%	[Gantt Chart for Activity 1451]											
1452	CS2-18144		332	Additional Plugging works for Existing DN75 Potable pipe and DN150 wash water pipe	0 days	NA	NA	1 day	10月19日星期三	10月19日星期三	10月19日星期三	10月19日星期三	NA	NA 1451	1453	0 days	100%	[Gantt Chart for Activity 1452]											
1453	CS2-18145			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	5 days	12月21日星期三	12月28日星期三	12月21日星期三	12月28日星期三	NA	NA 1452	1454	0 days	100%	[Gantt Chart for Activity 1453]											
1454	CS2-18150			Inspection and connection works	2 days	3月22日星期二	3月23日星期三	7 days	12月21日星期三	12月30日星期五	12月21日星期三	12月30日星期五	NA	NA 1453	1455	0 days	100%	[Gantt Chart for Activity 1454]											
1455	CS2-18160			Backfilling and reinstatement works	7 days	3月24日星期四	3月31日星期四	7 days	12月23日星期五	1月3日星期二	12月23日星期五	1月3日星期二	NA	NA 1454	1456	0 days	100%	[Gantt Chart for Activity 1455]											
1456	CS2-18170			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	3月31日星期四	3月31日星期四	14 days	12月17日星期六	1月5日星期四	12月17日星期六	1月5日星期四	NA	NA 1455	1457	0 days	100%	[Gantt Chart for Activity 1456]											
1457	CS2-18200			Workfront F2b: Construction of Cable Duct & Cable Draw Pits	0 days	NA	NA	43 days	11月9日星期四	12月30日星期四	11月9日星期四	12月30日星期四	NA	NA 1385	NA	-342 days	0%	[Gantt Chart for Activity 1457]											
1458	CS2-PMI-0628		628	Revised Cable Duct and Drawings for CLP 11kV and HV Works in Portion B of the Site	0 days	NA	NA	30 days	11月9日星期四	12月13日星期三	11月9日星期四	12月13日星期三	NA	NA	590 days	0%	[Gantt Chart for Activity 1458]												
1459	CS2-NCE-438		438	Additional Concrete Surround and Steel Plate	0 days	NA	NA	13 days	11月9日星期四	11月23日星期四	11月9日星期四	11月23日星期四	NA	NA	1460	-342 days	0%	[Gantt Chart for Activity 1459]											
1460	CS2-18220			Inspection and connection works	0 days	NA	NA	15 days	11月24日星期五	12月11日星期一	11月24日星期五	12月11日星期一	NA	NA 1459	1461	-342 days	0%	[Gantt Chart for Activity 1460]											
1461	CS2-18230			Backfilling and reinstatement works	0 days	NA	NA	15 days	12月12日星期二	12月30日星期六	12月12日星期二	12月30日星期六	NA	NA 1460	57FF	-342 days	0%	[Gantt Chart for Activity 1461]											
1462	CS2-19000	SW2		Sewerage and utilities in Workfront F3	125 days	9月1日星期三	1月31日星期一	743 days	1月5日星期二	7月11日星期二	1月5日星期二	7月11日星期二	NA	NA	720 days	64%	[Gantt Chart for Activity 1462]												
1463	CS2-19100			Construction of sewerage manhole MHD7A-MHD7B-MHD8	0 days	NA	NA	509 days	1月5日星期二	9月22日星期四	1月5日星期二	9月22日星期四	NA	NA	35 days	96%	[Gantt Chart for Activity 1463]												
1464	CS2-PMI-0083		327 83	DC/2018/07 - Notification of Compensation Event- Section 2 (Workfront F3) - Provision of Plugging Works of DN675 Pipe inside MHD8 & MHD8A and Plank Removal Works inside MHD8A	0 days	NA	NA	14 days	1月5日星期二	1月20日星期三	1月5日星期二	1月20日星期三	NA	NA	0 days	100%	[Gantt Chart for Activity 1464]												
1465	CS2-PMI-0528		241 528	DC/2018/07 - Notification of Compensation Event- Section 2 - Additional Breaking Works for concrete plinth from MHD30 to MHD01A	0 days	NA	NA	3 days	8月23日星期一	8月25日星期三	8月23日星期一	8月25日星期三	NA	NA	0 days	100%	[Gantt Chart for Activity 1465]												
1466	CS2-19110			Conduct underground utilities detection and setting out	0 days	NA	NA	2 days	12月1日星期三	12月2日星期四	12月1日星期三	12月2日星期四	NA	NA	0 days	100%	[Gantt Chart for Activity 1466]												
1467	CS2-19120			Expose and abandon existing electric cable&trial pits	0 days	NA	NA	5 days	12月3日星期五	12月8日星期三	12月3日星期五	12月8日星期三	NA	NA	0 days	100%	[Gantt Chart for Activity 1467]												
1468	CS2-19130			Installing sheetpiles and ELS works	0 days	NA	NA	34 days	12月10日星期五	1月21日星期五	12月10日星期五	1月21日星期五	NA	NA 1467	1469	0 days	100%	[Gantt Chart for Activity 1468]											
1469	CS2-19140			Manhole works and Pipelaying works	0 days	NA	NA	160 days	1月22日星期六	8月9日星期二	1月22日星期六	8月9日星期二	NA	NA 1468	1473FF+3 days	0 days	100%	[Gantt Chart for Activity 1469]											
1470	CS2-PMI-0646		646	Trial Pit Excavation for Identification of the Existing DN250 Leachate Rising Main near Existing Compressor House	0 days	NA	NA	4 days	5月24日星期二	5月27日星期五	5月24日星期二	5月27日星期五	NA	NA	0 days	100%	[Gantt Chart for Activity 1470]												
1471	CS2-NCE-0334A		334	DC/2018/07 - Notification of Compensation Event- Section 2 & Workfront I4, F3 - Additional works of pipeline diversion between MHD6 to MHD8	0 days	NA	NA	13 days	6月1日星期三	6月16日星期四	6月1日星期三	6月16日星期四	NA	NA	0 days	100%	[Gantt Chart for Activity 1471]												
1472	CS2-PMI-674b		337 674	Additional Cleaning and Pumping Works for Sewage Pipelines laying and reinstatement works	0 days	NA	NA	7 days	6月9日星期四	6月16日星期四	6月9日星期四	6月16日星期四	NA	NA 1469	1473FF	0 days	100%	[Gantt Chart for Activity 1472]											
1473	CS2-19145			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	8月5日星期五	8月12日星期五	8月5日星期五	8月12日星期五	NA	NA 1470	1478	0 days	100%	[Gantt Chart for Activity 1473]											
1474	CS2-PMI-0653B		653	Trial Pit Excavation for Identification of Existing Tree Roots near Existing MTRC fencing	0 days	NA	NA	7 days	6月21日星期二	6月28日星期二	6月21日星期二	6月28日星期二	NA	NA	0 days	100%	[Gantt Chart for Activity 1474]												
1475	CS2-PMI-0662A		378 662	DC/2018/07 - Notification of Compensation Event- Section 2 (WF-I3 & F3) Handover Date to CLP - Site Idling and Delay of Site Progress due to Insufficient Working Areas within Site Boundary near the Auxiliary Building and the MTRC	0 days	NA	NA	28 days	7月19日星期二	8月19日星期五	7月19日星期二	8月19日星期五	NA	NA	0 days	100%	[Gantt Chart for Activity 1475]												
1476	CS2-PMI-0698		397 698	DC/2018/07 - Notification of Compensation Event- Section 2 (WF-F3) - Demolition of Existing Leachate Chamber adjacent to Existing Auxiliary Pumping Station	0 days	NA	NA	5 days	8月20日星期六	8月25日星期四	8月20日星期六	8月25日星期四	NA	NA	0 days	100%	[Gantt Chart for Activity 1476]												
1477	CS2-PMI-0660		338 660	DC/2018/07 - Notification of Compensation Event- Section2 (Workfront F3) - Installation of a DN250 Gate Valve and Ball Valve on the existing DN250 Leachate Pipe near Compressor House	0 days	NA	NA	9 days	9月12日星期一	9月22日星期四	9月12日星期一	9																	



識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總延遲時間	Re-AI百分比	2019年1月   2019年8月   2020年3月   2020年10月   2021年5月   2021年12月   2022年7月   2023年2月   2023年9月   2024年4月   2024年11月   2025年6月   2026年1月											
																	第一季	第二季	第三季	第四季	第一季	第二季	第三季	第四季	第一季	第二季	第三季	第四季
1556	CS2-22140			Pipelaying works (Process Pipes and Street Fire Hydrant Water)	14 days	12月23日 星期四	1月11日 星期二	92 days	2月8日 星期三	6月1日 星期四		NA	NA 1553	1558FF+3 days, 1557, 1526SS+30	-781 days	0%												
1557	CS2-NCE-460		460	Additional Grade 200 Rockfill bedding in twin DN1400 (CHK/CHL)	0 days	NA	NA	7 days	6月2日 星期五	6月9日 星期五		NA	NA 1556	1558FF	-367 days	0%												
1558	CS2-22145			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	6月2日 星期五	6月9日 星期五		NA	NA 1556FF+3 days, 1557FF	1560, 1559FF	-367 days	0%												
1559	CS2-NCE-436		436	Anticipation for Additional Manhole for Diversion of Sewerage Pipe from MFB2 to MHTD2	0 days	NA	NA	30 days	5月5日 星期五	6月9日 星期五		NA	NA 1558FF	1560	-367 days	0%												
1560	CS2-22150			Inspection and connection works	3 days	1月12日 星期三	1月14日 星期五	3 days	6月10日 星期六	6月13日 星期二		NA	NA 1558, 1559	1561FF+4 days	-367 days	0%												
1561	CS2-22160			Backfilling and reinstatement works	14 days	1月15日 星期六	1月31日 星期一	2 days	6月16日 星期六	6月17日 星期六		NA	NA 1560FF+4 days	1562FF+4 days, 57FF	-367 days	0%												
1562	CS2-22170			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	1月31日 星期一	1月31日 星期一	1 day	6月23日 星期五	6月23日 星期五		NA	NA 1561FF+4 days		-367 days	0%												
1563	CS2-22200			Construction of Cable Duct & Cable Draw Pits	0 days	NA	NA	68 days	11月4日 星期一	1月23日 星期四		NA	NA		-781 days	0%												
1564	CS2-22210			Cable Ducts Laying Works (LV Cable 6x4x4x150 Cable Duct) ; with Cable Draw Pit Construction (LVCP43)	0 days	NA	NA	30 days	11月4日 星期一	12月7日 星期六		NA	NA 205FF, 1593	1565	-781 days	0%												
1565	CS2-PMI-0628		628	Revised Cable Duct and Drawpits for CLP 11kV and HV Works in Portion B of the Site	0 days	NA	NA	15 days	12月9日 星期一	12月27日 星期五		NA	NA 1564	1566	-781 days	0%												
1566	CS2-NCE-438		438	Additional Concrete Surround and Steel Plate	0 days	NA	NA	13 days	12月28日 星期六	1月11日 星期六		NA	NA 1565	1567	-781 days	0%												
1567	CS2-22220			Inspection and connection works	0 days	NA	NA	5 days	1月13日 星期一	1月17日 星期五		NA	NA 1566	1568	-781 days	0%												
1568	CS2-22230			Backfilling and reinstatement works	0 days	NA	NA	5 days	1月18日 星期六	1月23日 星期四		NA	NA 1567	57FF, 1537	-781 days	0%												
1569	CS2-23000	SW2		Sewerage and utilities in Workfront G4	157 days	6月25日 星期五	12月31日 星期五	390 days	6月30日 星期三	10月21日 星期五	月30日 星期三	6月21日 星期五	10		0 days	100%												
1570	CS2-23100	SW2		DN700 CHER CH0-38	157 days	6月25日 星期五	12月31日 星期五	390 days	6月30日 星期三	10月21日 星期五	月30日 星期三	6月21日 星期五	10		0 days	100%												
1571	CS2-23110			Conduct underground utilities detection and setting out	2 days	6月25日 星期五	6月26日 星期六	2 days	6月30日 星期三	7月2日 星期五	月30日 星期三	7月2日 星期五	7	1572	0 days	100%												
1572	CS2-23120			Expose and abandon existing electric cable&trial pits	16 days	6月28日 星期一	7月16日 星期五	20 days	6月30日 星期三	7月23日 星期五	月30日 星期三	7月23日 星期五	1571	1574, 1573	0 days	100%												
1573	CS2-PMI-0489		489	Proposed Inter-Connection of Existing Twin DN700 RAS Pipes near RAS Pumping Station	0 days	NA	NA	18 days	8月16日 星期一	9月4日 星期六	月16日 星期一	9月4日 星期六	1579, 1572	1578	0 days	100%												
1574	CS2-23130			Installing sheetpiles and ELS works	100 days	7月17日 星期六	11月13日 星期六	84 days	7月17日 星期六	10月26日 星期二	月17日 星期六	10月26日 星期二	1572	1575	0 days	100%												
1575	CS2-23140			Pipelaying works	21 days	11月15日 星期一	12月8日 星期三	21 days	10月27日 星期三	11月19日 星期五	月27日 星期三	11月19日 星期五	1574	1576	0 days	100%												
1576	CS2-23145			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	3 days	11月20日 星期六	11月23日 星期二	月20日 星期六	11月23日 星期二	1575	1577	0 days	100%												
1577	CS2-23150			Inspection and connection works	3 days	12月9日 星期四	12月11日 星期六	3 days	11月24日 星期三	11月26日 星期五	月24日 星期三	11月26日 星期五	1576	1579, 1578	0 days	100%												
1578	CS2-PMI-0423	283	423	DC/2018/07 - Notification of Compensation Event:- Section 2 & KD1E - Unexpected limited suspension time of existing CHER DN700 RAS pipe for pipe diversion	0 days	NA	NA	3 days	12月16日 星期一	12月18日 星期三	月16日 星期一	12月18日 星期三	1577, 1577	1580	0 days	100%												
1579	CS2-23160			Backfilling and reinstatement works	15 days	12月13日 星期一	12月31日 星期五	8 days	12月21日 星期二	12月31日 星期五	月21日 星期二	12月31日 星期五	1577	57FF, 1573	0 days	100%												
1580	CS2-PMI-0671		671	Removal of Sewage in the Trial Trench of Process Pipe CHP due to Leakage from Existing SAS Manhole MHC01	0 days	NA	NA	1 day	10月21日 星期五	10月21日 星期五	月21日 星期五	10月21日 星期五	1578	1581	0 days	100%												
1581	CS2-23170			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	12月31日 星期五	12月31日 星期五	14 days	1月3日 星期一	1月18日 星期二	月3日 星期一	1月18日 星期二	1580		0 days	100%												
1582	CS2-24000	SW2		Sewerage and utilities in Workfront G5	189 days	8月2日 星期一	3月19日 星期六	1143 days	8月17日 星期二	6月14日 星期六	月17日 星期二	8月14日 星期六	21	138 days	55%													
1583	CS2-24100	SW2	310	489	Process Pipe CHM, CHN, CHO, CHP, CHQ, CHV	189 days	8月2日 星期一	3月19日 星期六	965 days	8月17日 星期二	11月16日 星期六	月17日 星期二	8月16日 星期六	1614, 1623	316 days	61%												
1584	CS2-PMI-0644		310	644	DC/2018/07 - Notification of Compensation Event:- Section 2 - Temporary plug to abandoned DN700 RAS pipe near RAS Pumping Station	0 days	NA	NA	14 days	9月23日 星期四	10月9日 星期六	月23日 星期四	10月9日 星期六	1585	0 days	100%												
1585	CS2-NCE-0284		284		DC/2018/07 - Notification of Compensation Event:- Section 2, KD1J - Revised details of MHFB51, MHFB51A and Flowmeter Chamber near SSSH	0 days	NA	NA	75 days	8月17日 星期二	11月15日 星期三	月17日 星期二	11月15日 星期三	1597	0 days	100%												
1586	CS2-NCE388		388		Uncharted Cable Found near RAS Pumping Station and Transformer Room	0 days	NA	NA	10 days	2月17日 星期六	2月28日 星期三		NA	NA	530 days	0%												
1587	CS2-24110			Conduct underground utilities detection and setting out	2 days	8月2日 星期一	8月3日 星期二	4 days	2月17日 星期六	2月21日 星期三		NA	NA	1588	-781 days	0%												
1588	CS2-24120			Expose and abandon existing electric cable&trial pits	21 days	8月4日 星期三	8月27日 星期五	21 days	2月22日 星期四	3月16日 星期六		NA	NA 1587	1589	-781 days	0%												
1589	CS2-24130		272		Installing sheetpiles and ELS works	128 days	8月28日 星期六	1月31日 星期一	128 days	3月18日 星期一	8月22日 星期四		NA	NA 1588	1590	-781 days	0%											
1590	CS2-PMI-569		569		Strengthening to the Existing RAS Channel of RAS Pumping Station	0 days	NA	NA	7 days	8月23日 星期五	8月30日 星期五		NA	NA 1589	1591	-781 days	0%											
1591	CS2-24140			Pipelaying Works	21 days	2月4日 星期五	2月28日 星期一	30 days	8月31日 星期六	10月7日 星期一		NA	NA 1590	1592	-781 days	0%												
1592	CS2-PMI-709		709		Additional Plugging Works for Strengthening of Existing RAS Channel	0 days	NA	NA	17 days	10月8日 星期二	10月28日 星期一		NA	NA 1591	1593	-781 days	0%											
1593	CS2-24145			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	5 days	10月29日 星期二	11月2日 星期六		NA	NA 1592	1594FF+4 days, 1564	-781 days	0%												
1594	CS2-24150			Inspection and connection works	3 days	3月1日 星期二	3月3日 星期四	5 days	11月2日 星期六	11月7日 星期四		NA	NA 1593FF+4 days	1595FF+4 days	-661 days	0%												
1595	CS2-24160			Backfilling and reinstatement works	14 days	3月4日 星期五	3月19日 星期六	14 days	10月28日 星期一	11月12日 星期二		NA	NA 1594FF+4 days	1596FF+4 days, 57FF, 1602	-661 days	0%												
1596	CS2-24170			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	3月19日 星期六	3月19日 星期六	1 day	11月16日 星期六	11月16日 星期六		NA	NA 1595FF+4 days		316 days	0%												
1597	CS2-PMI-0671B		341	671	DC/2018/07 - Notification of Compensation Event:- Section 2 (Workfront G3, G5 & G6) - Pipe Diversion Works for existing DN150 DI Pipe due to Obstruction during the Process Pipes Construction	0 days	NA	NA	40 days	6月17日 星期五	8月3日 星期三	月17日 星期五	8月3日 星期三	1585	0 days	100%												
1598	CS2-PMI-0572		572		Temporary Diversion of DN300 Tank Drain outside MFB No. 1	0 days	NA	NA	85 days	8月17日 星期三	11月26日 星期二	月17日 星期三	11月26日 星期二	1599	0 days	100%												
1599	CS2-NCE-0356C		356		DC/2018/07 - Notification of Compensation Event:- Section 2 (WF - G2, G3 & G5) - Revised Pipeline Alignment on DN250 SAS Pipe and Associated Pipelaying Works	0 days	NA	NA	30 days	9月21日 星期三	10月27日 星期二	月21日 星期三	10月27日 星期二	1598	0 days	100%												
1600	CS2-NCE-0326		326		DC/2018/07 - Notification of Compensation Event:- Section 2 (Workfront G5) - Additional Grouting Works to the Movement Joint at RAS Channel	0 days	NA	NA	129 days	7月21日 星期四	12月21日 星期三	月21日 星期四	12月21日 星期三	1597	0 days	100%												
1601	CS2-24200			Construction of Cable Duct & Cable Draw Pits	0 days	NA	NA	62 days	4月4日 星期五	6月14日 星期六		NA	NA		-781 days	0%												
1602	CS2-24210			Cable Ducts Laying Works (LV Cable 4x6x4x150 Cable Duct) ; with Cable Draw Pit Construction (LVCP41, LVCP41A, LVCP42, LVCP42A)	0 days	NA	NA	30 days	4月4日 星期五	5月8日 星期四		NA	NA 1595, 205FF, 1536	1603	-781 days	0%												
1603	CS2-PMI-0628		628		Revised Cable Duct and Drawpits for CLP 11kV and HV Works in Portion B of the Site	0 days	NA	NA	17 days	5月9日 星期五	5月28日 星期三		NA	NA 1602	1604	-781 days	0%											
1604	CS2-NCE-438		438		Additional Concrete Surround and Steel Plate	0 days	NA	NA	5 days	5月29日 星期四	6月3日 星期二		NA	NA 1603	1605	-781 days	0%											
1605	CS2-24220			Inspection and connection works	0 days	NA	NA	5 days	6月4日 星期三	6月9日 星期一		NA	NA 1604	1606	-781 days	0%												
1606	CS2-24230			Backfilling and reinstatement works	0 days	NA	NA	5 days	6月10日 星期二	6月14日 星期六		NA	NA 1605	57FF	-781 days	0%												
1607	CS2-25000	SW2		Sewerage and utilities in Workfront G6	158 days	3月21日 星期一	9月30日 星期五	771 days	7月27日 星期二	3月1日 星期五	月27日 星期二	3月1日 星期五	7	1867	-106 days	8%												
1608	CS2-PMI-213		213		Additional Manhole for Tank Drain Diversion near Proposed SAS Pumping Station	0 days	NA	NA	14 days	5月5日 星期四	5月21日 星期六	月5日 星期四	5月21日 星期六	1600	0 days	100%												
1609	CS2-25100a	SW2		Workfront G6a: Process Pipe CHN, CHPSW-1, CHSS1, CHSS2	158 days	3月21日 星期一	9月30日 星期五	707 days	7月27日 星期二	12月11日 星期五	月27日 星期二	12月11日 星期五	36	1667	-702 days	3%												
1610	CS2-PMI-0511B		234	511	DC/2018/07 - Notification of Compensation Event:- Section 2 & Section B-4 - Additional works during DN700 RAS pipe diversion works (CHER) & construction of MHTD1 & MHTD2	0 days	NA	NA	5 days	7月27日 星期二	7月31日 星期六	月27日 星期二	7月31日 星期六	1613	0 days	100%												
1611	CS2-25110a			Conduct underground utilities detection and setting out	2 days	3月21日 星期一	3月22日 星期二	2 days	5月22日 星期一	5月23日 星期二		NA	NA	1612	-781 days	0%												
1612	CS2-25120a			Expose and abandon existing electric cable&trial pits	21 days	3月23日 星期三	4月20日 星期三	21 days	5月24日 星期三	6月17日 星期六		NA	NA 1611	1613	-781 days	0%												
1613	CS2-25130a			Installing sheetpiles and ELS works	104 days	4月21日 星期四	8月24日 星期三	104 days	6月19日 星期一	10月21日 星期六		NA	NA 1612	1610, 1614	-781 days	0%												
1614	CS2-25140a			Process Pipes & Street Fire Hydrant Water Pipe Laying Works	0 days	NA	NA	30 days	10月24日 星期二	11月27日 星期一		NA	NA 1613	1615FF+2 days, 1224, 1583	-781 days	0%												
1615	CS2-25145a			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	20 days	11月7日 星期二	11月29日 星期三		NA	NA 1614FF+2 days	1616FF+2 days	-781 days	0%												
1616	CS2-25150a			Inspection and connection works	3 days	9月10日 星期六	9月14日 星期三	3 days	11月29日 星期三	12月1日 星期五		NA	NA 1615FF+2 days	1617FF+4 days	-781 days	0%												
1617	CS2-25160a			Backfilling and reinstatement works	14 days	9月15日 星期四	9月30日 星期五	14 days	11月21日 星期二	12月6日 星期三		NA	NA															







識別碼	Activity ID	Key Date	NCE/EV/PMI/(CE)	Task Name	比較基準工期	比較基準開始時間	比較基準完成時間	工期	開始時間	完成時間	實際開始時間	實際完成時間	前置任務	後續任務	總進程時間	RACI百分比	第一季		第二季		第三季		第四季		第一季		第二季			
																	2019年1月	2019年8月	2020年3月	2020年10月	2021年5月	2021年12月	2022年7月	2023年2月	2023年9月	2024年4月	2024年11月	2025年6月	2026年1月	
1758	CS3-2500a			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	5月20日星期二	5月28日星期三	NA	NA	NA 1757		-342.25 ...	0%														
1759	<b>CS3-3000</b>			<b>Drainage and utilities in Workfront C1</b>	<b>152 days</b>	<b>7月2日星期六</b>	<b>12月31日星期六</b>	<b>120 days</b>	<b>2月3日星期六</b>	<b>7月5日星期五</b>	NA	NA	NA 1144		<b>-67.25 d...</b>	<b>0%</b>														
1760	CS3-3100			Manhole works for CP32-MHD13, CP35-MHD14	0 days	NA	NA	100 days	2月3日星期六	6月11日星期二	NA	NA		1761FF+20 days	-67.25 d...	0%														
1761	CS3-3110			Drainage Pipes laying works	0 days	NA	NA	60 days	4月22日星期一	7月5日星期五	NA	NA	NA 1760FF+20 days		-67.25 d...	0%														
1762	CS3-3200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	2月3日星期六	2月15日星期四	NA	NA		1763FF+1 day	41.75 d...	0%														
1763	CS3-3300			Inspection and connection works	0 days	NA	NA	2 days	2月14日星期三	2月16日星期五	NA	NA	NA 1762FF+1 day	1764FF+2 days	41.75 d...	0%														
1764	CS3-3400			Backfilling and reinstatement works	0 days	NA	NA	10 days	2月3日星期六	2月19日星期一	NA	NA	NA 1763FF+2 days	1765FF+1 day	41.75 d...	0%														
1765	CS3-3500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	2月8日星期四	2月20日星期二	NA	NA	NA 1764FF+1 day	58	41.75 d...	0%														
1766	<b>CS3-4000</b>			<b>Drainage and utilities in Workfront C2</b>	<b>77 days</b>	<b>7月2日星期六</b>	<b>9月30日星期五</b>	<b>45 days</b>	<b>7月15日星期一</b>	<b>9月6日星期四</b>	NA	NA	NA 1186		<b>-120.25 ...</b>	<b>0%</b>														
1767	CS3-4100			Manhole works for MHD13A, MHD13B	0 days	NA	NA	25 days	7月15日星期一	8月13日星期二	NA	NA		1768FF+20 days	-120.25 ...	0%														
1768	CS3-4110			Drainage Pipes laying works	0 days	NA	NA	20 days	8月13日星期二	9月5日星期四	NA	NA	NA 1767FF+20 days		-120.25 ...	0%														
1769	CS3-4200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	7月15日星期一	7月23日星期二	NA	NA		1770FF+1 day	-86.25 d...	0%														
1770	CS3-4300			Inspection and connection works	0 days	NA	NA	2 days	7月22日星期一	7月24日星期三	NA	NA	NA 1769FF+1 day	1771FF+2 days	-86.25 d...	0%														
1771	CS3-4400			Backfilling and reinstatement works	0 days	NA	NA	10 days	7月15日星期一	7月26日星期五	NA	NA	NA 1770FF+2 days	1772FF+1 day	-86.25 d...	0%														
1772	CS3-4500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	7月19日星期五	7月27日星期六	NA	NA	NA 1771FF+1 day	58	-86.25 d...	0%														
1773	<b>CS3-5000</b>			<b>Drainage and utilities in Workfront C3</b>	<b>219 days</b>	<b>5月7日星期六</b>	<b>1月31日星期二</b>	<b>90 days</b>	<b>10月8日星期二</b>	<b>1月23日星期四</b>	NA	NA	NA 1204		<b>-236 days</b>	<b>0%</b>														
1774	CS3-5100			Construction of manhole MHD04-CP11	0 days	NA	NA	40 days	10月8日星期二	11月23日星期六	NA	NA		1775	-236 days	0%														
1775	CS3-5110			Drainage Pipes laying works	0 days	NA	NA	40 days	11月25日星期一	1月11日星期一	NA	NA	NA 1774	1776	-236 days	0%														
1776	CS3-5200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	1月13日星期一	1月20日星期一	NA	NA	NA 1775	1777FF+1 day	-236 days	0%														
1777	CS3-5300			Inspection and connection works	0 days	NA	NA	2 days	1月20日星期一	1月21日星期二	NA	NA	NA 1776FF+1 day	1778FF+1 day	-236 days	0%														
1778	CS3-5400			Backfilling and reinstatement works	0 days	NA	NA	15 days	1月6日星期一	1月22日星期三	NA	NA	NA 1777FF+1 day	1779FF+1 day	-236 days	0%														
1779	CS3-5500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	1月16日星期四	1月23日星期四	NA	NA	NA 1778FF+1 day	58	-236 days	0%														
1780	<b>CS3-6000</b>			<b>Drainage and utilities in Workfront D1</b>	<b>91 days</b>	<b>6月1日星期三</b>	<b>9月17日星期六</b>	<b>220 days</b>	<b>8月5日星期五</b>	<b>5月4日星期四</b>	<b>5月9日星期五</b>	NA	NA		<b>279 days</b>	<b>16%</b>														
1781	CS3-NCE-398			Additional work to trim the unforeseen concrete surround	0 days	NA	NA	21 days	8月5日星期五	8月29日星期一	月5日星期五8	月29日星期一-8	1782		0 days	100%														
1782	CS3-NCE-409			Additional work to expose the thickness of unforeseen concrete surround	0 days	NA	NA	5 days	8月31日星期三	9月5日星期一	月31日星期三8	月5日星期一-9	1783		0 days	100%														
1783	CS3-NCE-506	506		Additional works of concrete Trimming due to Unforeseen Concrete Surround and Obstruction of Existing Cable Duct near Manhole no. MHD16 near Main Control Room	0 days	NA	NA	12 days	12月28日星期三	1月11日星期三	月28日星期三12	月11日星期三1	1782	1784	0 days	100%														
1784	CS3-6100			Manhole works for CP38-MHD16-CP38A, CP31-MHD18-CP57-CP31A	0 days	NA	NA	150 days	8月30日星期二	3月2日星期四	月30日星期二8	NA	NA 1783	1786FF+20 days	279 days	0%														
1785	CS3-NCE-502	502		Concrete Trimming Works for Two Uncharted Concrete Blocks near Manhole no. MHD15 in front of Main Control Room	0 days	NA	NA	5 days	2月27日星期一	3月3日星期五	月27日星期一-2	月3日星期五3			0 days	100%														
1786	CS3-6110			Drainage Pipes laying works	0 days	NA	NA	40 days	2月8日星期三	3月25日星期六	NA	NA	NA 1784FF+20 days	1787	279 days	0%														
1787	CS3-6200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	3月27日星期一	4月3日星期一	NA	NA	NA 1786	1788FF+1 day	279 days	0%														
1788	CS3-6300			Inspection and connection works	0 days	NA	NA	2 days	4月3日星期一	4月4日星期二	NA	NA	NA 1787FF+1 day	1789	279 days	0%														
1789	CS3-6400			Backfilling and reinstatement works	0 days	NA	NA	20 days	4月6日星期四	5月3日星期三	NA	NA	NA 1788	1790FF+1 day	279 days	0%														
1790	CS3-6500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	4月26日星期三	5月4日星期四	NA	NA	NA 1789FF+1 day	58	279 days	0%														
1791	<b>CS3-7000</b>			<b>Drainage and utilities in Portion D3</b>	<b>64 days</b>	<b>2月4日星期五</b>	<b>4月23日星期六</b>	<b>44 days</b>	<b>9月23日星期一</b>	<b>11月14日星期四</b>	NA	NA	NA 1232		<b>-178 days</b>	<b>0%</b>														
1792	CS3-7100			Drainage Pipes laying works	0 days	NA	NA	40 days	9月23日星期一	11月9日星期六	NA	NA		1793FF+1 day	-178 days	0%														
1793	CS3-7200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	11月4日星期一	11月11日星期一	NA	NA	NA 1792FF+1 day	1794FF+1 day	-178 days	0%														
1794	CS3-7300			Inspection and connection works	0 days	NA	NA	2 days	11月11日星期一	11月12日星期二	NA	NA	NA 1793FF+1 day	1795FF+1 day	-178 days	0%														
1795	CS3-7400			Backfilling and reinstatement works	0 days	NA	NA	10 days	11月2日星期六	11月13日星期三	NA	NA	NA 1794FF+1 day	1796FF+1 day	-178 days	0%														
1796	CS3-7500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	11月7日星期四	11月14日星期四	NA	NA	NA 1795FF+1 day	58	-178 days	0%														
1797	<b>CS3-8000</b>			<b>Drainage and utilities in Portion D4</b>	<b>75 days</b>	<b>9月1日星期三</b>	<b>11月30日星期二</b>	<b>438 days</b>	<b>9月1日星期三</b>	<b>2月23日星期四</b>	<b>月1日星期三9</b>	NA	NA		<b>334 days</b>	<b>94%</b>														
1798	CS3-8100			Construction of manhole MHD06-MHD06A-CP13, MHD05A, MHD05, CP09-MHD02	0 days	NA	NA	45 days	9月1日星期三	10月26日星期二	月1日星期三9	月26日星期二10	1799		0 days	100%														
1799	CS3-8200			Pipe testing (CCTV and Pressure Test)	0 days	NA	NA	7 days	11月19日星期五	11月26日星期五	月19日星期五11	月26日星期五11	1798	1800FF+1 day	0 days	100%														
1800	CS3-8300			Inspection and connection works	0 days	NA	NA	5 days	11月26日星期五	12月1日星期三	月26日星期五11	月1日星期三12	1799FF+1 day	1801FF+1 day	0 days	100%														
1801	CS3-8400			Backfilling and reinstatement works	0 days	NA	NA	5 days	11月27日星期六	12月2日星期四	月27日星期六11	月2日星期四12	1800FF+1 day	1802FF+1 day	0 days	100%														
1802	CS3-8500			Liaison and handover to DSD/ST1 and DSD/BCM	0 days	NA	NA	7 days	12月1日星期三	12月8日星期三	月1日星期三12	NA	NA 1801FF+1 day	58	690 days	43%														
1803	CS3-NCE-469	469		Additional Drainage works due to Site Condition near SAS Consolidation House	0 days	NA	NA	1 day	2月23日星期四	2月23日星期四	月23日星期四2	月23日星期四2			0 days	100%														
1804	<b>CS3-9000</b>			<b>Drainage and utilities in Portion E2</b>	<b>86 days</b>	<b>9月19日星期一</b>	<b>12月31日星期六</b>	<b>49 days</b>	<b>11月13日星期三</b>	<b>1月10日星期五</b>	NA	NA	NA 1339		<b>-225 days</b>	<b>0%</b>														
1805	CS3-9100			Manhole works for MHD17E	0 days	NA	NA	15 days	11月13日星期三	11月29日星期五	NA	NA	NA 1806FF+20 days		-225 days	0%														



































































































































































Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
<b>Drawing Submission for Key Dates</b>												
KD1A: Submission of civil and dimensional requirement drawing, electrical schematic drawings, etc. from formation level up to +8mPD in accordance with the contract requirement of Contract No. DC/2018/07 to carry out civil works construction	KD1A: Submission of Civil Requirement Drawing (Final)	28/8/2020	18/9/2020	5/11/2020	5/11/2020	Task Completed	no.	26	26	100%		
	KD1A: Submission of Electrical Schematic Drawing (Final)	15/7/2020	15/7/2020	5/11/2020	5/11/2020	Task Completed	no.	11	11	100%		
	KD1A: 6 November 2020											
KD1B: Submission of remaining civil and dimensional requirement drawings, electrical schematic drawing, etc. in accordance with the contract requirement of Contract No. DC/2018/07 to carry out civil works construction	KD1B: Submission of Civil Requirement Drawing (First Draft)	30/9/2020	28/9/2020	30/12/2020	31/3/2021	Task Completed	no.	47	47	100%		
	KD1B: Submission of Civil Requirement Drawing (Final)	6/11/2020	5/11/2020	4/6/2021	4/6/2021	Task Completed	no.	47	47	100%		All the CWR Drawings were submitted.
	KD1B: 4 June 2021											
KD3A: 04SC010 - Dismantle & Removal of Emergency Generators in existing Power House	Submission of subletting package for acceptance (C9)	1/3/2020	24/2/2020	14/3/2020	22/4/2020	Task Completed				100%	-	Bestwise resubmitted on 22 April 2020
	Acceptance of subletting package (C9)	14/3/2020	6/5/2020	1/4/2020	5/5/2020	Task Completed				100%	-	AECOM accepted subletting package on 5 May 2020
	Tender invitation (C9)	1/4/2020	15/5/2020	15/4/2020	22/5/2020	Task Completed				100%	-	Invitation to tender was commenced on 12 May 2020 and tender returned on 22 May 2020
	Tender award (C9)	15/4/2020	22/5/2020	29/4/2020	26/5/2020	Task Completed				100%	-	Bestwise submitted tender report on 26 May 2020
	Acceptance of tender award (C9)	-	-	-	6/6/2020	Task Completed				100%	-	AECOM accepted tender report on 2 June 2020, Letter of Acceptance was issued on 6 June
	Dismantle of existing BS equipment		15/6/2020		25/7/2020	Task Completed				100%		
	Removal of emergency generators	1/6/2020	15/6/2020	30/6/2020	25/7/2020	Task Completed				100%		
KD3A: 04SC010 - Dismantle & Removal of Emergency Generators in existing Power House	KD3A: Testing and Commissioning	1/7/2020	3/7/2020	29/7/2020	29/7/2020	Task Completed				100%		First test was conducted on 3 July 2020. Remaining test would be subjected to completion of civil works. KD3A - 29 July 2020. Joint Site Inspection was conducted on 24 July 2020 and Notice of completion of work was submitted on 28 July 2020
	KD3A: 29 July 2020											
KD3B: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	Submission of onsite survey plan on E&M aspects for	1/3/2020	25/3/2020	30/3/2020	27/4/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 27 April 2020
	Acceptance of submission of onsite survey plan	1/3/2020	25/3/2020	30/3/2020	22/5/2020	Task Completed				100%	-	AECOM accepted the onsite survey plan on 22 May 2020. Onsite coordination with ST1
	KD3B: Submission of onsite survey report	11/7/2020	20/7/2020	16/7/2020	30/7/2021	Task Completed				100%	Bestwise	- Onsite survey conducted from 20 July 2020 to 22 July 2020. Bestwise submitted survey report on 5 August 2020. AECOM commented on 19 Aug 2020. Bestwise to resubmit upon conducting the remaining onsite survey. (Done) - Bestwise revised survey plan for remaining onsite checking of PST No. 6 on 1 Sep 2020. After discussion with plant operator, the remaining survey would be conducted after the dismantling work of PSTs. Formal survey record for PST No.4 was submitted on 24 May 2021. - Remaining survey (level of bridge & scraper) for PST 6 completed. - Formal survey report shall be submitted on 30 Jul 2021.
	KD3B: Acceptance of onsite survey report	17/7/2020	6/8/2020	23/7/2020	6/8/2021	Task Completed				-		Acceptance for the center point, vertical and horizontal alignment of ductfoot installation of PST No.4 shall subject to joint site meeting conducted on 2 June 2021. Refer to E-RISC no. 000014A & 000016 result for details.
	KD3B: Preparation of procurement package (C11)	2/12/2019	1/8/2020	13/4/2020	7/8/2020	Task Completed				100%		
	KD3B: Tender invitation - Clarifier (C11)	2/12/2019	14/8/2020	13/4/2020	26/8/2020	Task Completed				100%		
	KD3B: Tender Award - Clarifier (C11)	2/12/2019	26/8/2020	13/4/2020	25/9/2020	Task Completed				100%		
	KD3B: Acceptance of tender award (C11)	2/12/2019	11/9/2020	13/4/2020	18/9/2020	Task Completed				-		
	KD3B: Tender invitation - DI Pipe (C11)	2/12/2019	13/1/2021	13/4/2020	19/1/2021	Task Completed				100%		
	KD3B: Tender Award - DI Pipe (C11)	2/12/2019	21/1/2021	13/4/2020	23/1/2021	Task Completed				100%		
	KD3B: Tender invitation - LCP (C11)	2/12/2019	3/2/2021	13/4/2020	5/2/2021	Task Completed				100%		
	KD3B: Tender Award - LCP (C11)	2/12/2019	6/2/2021	13/4/2020	8/2/2021	Task Completed				100%		
	KD3B: Preparation of subletting package for dismantling work (C9)	2/12/2019	21/9/2020	13/4/2020	21/10/2020	Task Completed				100%		
	KD3B: Tender invitation for dismantling work (C9)	2/12/2019	12/11/2020	13/4/2020	19/11/2020	Task Completed				100%		
	KD3B: Tender Award for dismantling work (C9)	2/12/2019	20/11/2020	13/4/2020	22/11/2020	Task Completed				100%		
KD3B: Acceptance of tender award for dismantling work (C9)	2/12/2019	23/11/2020	13/4/2020	1/12/2020	Task Completed				100%			

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	KD3B: Preparation and Acceptance of subletting package for installation work (C9)	2/12/2019	15/12/2020	13/4/2020	1/3/2021	Task Completed				100%		
	KD3B: Tender invitation for installation work (C9)	2/12/2019	3/3/2021	13/4/2020	10/3/2021	Task Completed				100%		
	KD3B: Tender Award for installation work (C9)	2/12/2019	12/3/2021	13/4/2020	15/3/2021	Task Completed				100%		
	KD3B: Acceptance of tender award for installation work (C9)	2/12/2019	15/3/2021	13/4/2020	19/3/2021	Task Completed				100%		
	Submission and Acceptance of Drawing Submission	14/4/2020	5/8/2020	10/9/2020	11/1/2021	Task Completed				100%		
	Submission and Acceptance of P&M Submission	14/4/2020	5/8/2020	10/9/2020	30/6/2021	Task Completed						Formal resubmission of P&M for Rotating Bridge Scraper P&M-0024 (Rev.1) was submitted to AECOM on 24 June 2021 and is accepted by AECOM. P&M submission for Local Control Panel Rev.3 was submitted on 20 Mar 2021 and AECOM accepted on 26 Mar 2021.
	Submission and Acceptance of FAT Plan	1/12/2020	27/1/2021	15/12/2020	16/2/2021	Task Completed				100%		
	Submission and Acceptance of SAT Plan	1/3/2021	1/3/2021	1/4/2021	5/5/2021	Task Completed				100%		Bestwise submitted on 13 Apr 2021. AECOM accepted with comments on 5 May 2021.
	Submission and Acceptance of Design Submission (Support to DN700 Feed Pipe)	N/A	22/2/2021	N/A	13/5/2021	Task Completed						Advanced Calculation was provided on 17 Mar 2021 and revised on 18 Mar 2021. Bestwise proposed to use the existing support. Calculation was provided on 1 Apr 2021 via email. Dimension of support column was checked again on 14 Apr 2021. Proposal submitted on 30 Apr 2021. AECOM accepted with comments on 13 May 2021.
	Submission and Acceptance of Design Submission (Stainless steel support to FRP Cover of Effluent	N/A	24/2/2021	N/A	19/4/2021	Task Completed				100%		Advanced Calculation was provided on 17 Mar 2021 and revised on 18 Mar 2021. Bestwise formal submitted on 26 Mar 2021. AECOM accepted with comment on 19 Apr 2021.
	KD3B: Dismantle and Removal of E&M Equipment at PST No. 6	9/2/2021	21/12/2020	19/2/2021	15/1/2021	Task Completed				100%		
	Flow Diversion and drain out PST No.4	N/A	25/1/2021	N/A	26/3/2021	Task Completed				100%		
	KD3B: Dismantle and Removal of E&M Equipment at PST No. 4	9/2/2021	5/3/2021	19/2/2021	1/4/2021	Task Completed				100%		
	KD3B: Material Manufacturing (Clarifier)	12/9/2020	16/12/2020	12/12/2020	20/2/2021	Task Completed				100%		The clarifier would be manufactured in 2 batches (rotating bridge related and FRP launder cover). Manufacturing instruction was issued on 16 Dec 2020. Jash suggested 1st batch of material (clarifier) would be ready for shipping on 20 Feb 2021 and 2nd batch of material (FRP Launder Cover) would be ready for shipping on 13 Mar 2021. (To be confirmed by Jash by providing shipment booking, but supplier cannot provide updated information at this moment due to second surge of COVID-19 in india)
	KD3B: FAT of the Clarifier	N/A	24/2/2021	N/A	1/3/2021	Task Completed				100%		FAT Report submitted on 24 Feb 2021 and AECOM accepted subject to comment on 1 Mar 2021
	KD3B: Material Delivery (Clarifier)	13/12/2020	27/2/2021	18/1/2021	6/4/2021	Task Completed				100%		
	KD3B: Material Deliver to Site (Clarifier)	N/A	6/4/2021	N/A	8/4/2021	Task Completed				100%		
	KD3B: Material Manufacturing (DI pipes and fittings)	11/9/2020	26/1/2021	18/1/2021	15/3/2021	Task Completed				100%		Extracted from C9 package to C11 package to suit the installation programme
	KD3B: Material Delivery (DI pipes and fittings)	11/9/2020	16/3/2021	18/1/2021	24/3/2021	Task Completed				100%		
	KD3B: Material Delivery (FRP Cover)	N/A	26/3/2021	N/A	21/6/2021	Task Completed				100%		All the FRP covers were delivered to site.
	KD3B: Material Manufacturing (LCP)	11/9/2020	4/3/2021	18/1/2021	16/4/2021	Task Completed				100%		
	KD3B: Material Delivery (LCP)	11/9/2020	17/4/2021	18/1/2021	30/4/2021	Task Completed				100%		
	KD3B: Retrofitting Concrete Structure of PST No. 4	N/A	2/4/2021	N/A	22/4/2021	Task Completed				100%		
	KD3B: Installation of E&M Equipment at PST No. 4	27/2/2021	5/4/2021	10/5/2021	17/5/2021	Task Completed						
	KD3B: Testing and Commissioning for PST No. 4	11/5/2021	19/4/2021	9/6/2021	26/7/2021	Task Completed						Wet test for PST 4 completed on 26 July 2021.
	Flow Diversion from PST No.6 to Temporary Filtrate Equalization Tank	N/A	19/5/2021	N/A	20/5/2021	Task Completed				100%		Filtrate feeding to TFES was resumed on 19/5/2021 with fine-tuned control.
	Removal of Accumulated Sludge Inside PST No. 6	N/A	19/5/2021	N/A	30/5/2021	Task Completed				100%		NCE-0229, this includes removal of floating scum/ sludge and clearance of blockage of drain pipe
	KD3B: Retrofitting Concrete Structure of PST No. 6	N/A	28/5/2021	N/A	24/6/2021	Task Completed				100%		
	KD3B: Mechanical Installation of E&M Equipment at PST No. 6	27/2/2021	31/5/2021	10/5/2021	21/7/2021	Task Completed				100%		This includes PST Influent feed pipe, center bearing & slip ring assembly, motor & gearbox assembly, rotating bridge sludge & scum scraper assembly, circular baffle diffuser box, v-notched weir plate, scum baffle plate, scum collection box and FRP cover.
	KD3B: Electrical Installation of E&M Equipment at PST No. 6	27/2/2021	9/6/2021	10/5/2021	21/7/2021	Task Completed				100%		This includes installation of LCP, cable laying & terminations.

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	KD3B: Testing and Commissioning for PST No. 6	11/5/2021	22/6/2021	9/6/2021	20/8/2021	Task Completed				100%		Wet test (1st) completed on 20 Aug 2021 and wet test (2nd) completed on 3 Sep 2021.
KD3B: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	KD3B: System Commissioning for PST No. 4 & 6	N/A	22/6/2021	N/A	3/9/2021	Task Completed				100%		Wet test (2nd) for PST#6 completed on 3 Sep 2021 and pre-handover inspection arranged on 30 Aug 2021. Defect list (final) received on 17 Sep 2021 and defect rectification was completed. Site training/ demonstration shall be conducted by end Feb and PMI modification work shall be completed by end March.
	KD3B: 9 June 2021											
<b>Section 1 of Works (outstanding works list)</b>												
6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	1/3/2020	25/3/2020	30/3/2020	21/4/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	1/3/2020	25/3/2020	30/3/2020	12/5/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	21/5/2020	21/5/2020	29/5/2020	29/5/2020	Task Completed				100%		
	Acceptance of onsite survey report	30/5/2020	30/5/2020	15/6/2020	15/6/2020	Task Completed				-		
	Preparation of procurement package (C11)	22/6/2020	22/6/2020	6/7/2020	14/7/2020	Task Completed				100%		
	Tender invitation (C11)	15/7/2020	15/7/2020	22/7/2020	24/7/2020	Task Completed				100%		
	Tender Award (C11)	23/7/2020	25/7/2020	29/7/2020	31/7/2020	Task Completed				100%		Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical
	Material Submission	21/8/2020	21/8/2020	28/8/2020	7/12/2020	Task Completed				100%		Material submission (Rev.1) resubmitted on 7 Dec 2020. AECOM accepted subject to comments on 24 Dec 2020. Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Delivery	1/12/2020	1/12/2020	8/8/2021	8/8/2021	Task Completed				-		"Filter Press Plates and Cloths" were handed over to DSD.
6B.2.12 Provision of Membrane Filter Press System at Existing Sludge Press House	Submission of onsite survey plan for acceptance	1/3/2020	25/3/2020	30/3/2020	Task to be deleted	Task to be deleted				-	-	PPMI No.5 was issued by PM on 24 April 2020. Bestwise is requested to submit quotation on delete the provision of one (1) no. of membrane filter press system in pursuant to Particular Specification Clause 6B.2.12.
6B.2.16 Temporary Filtrate Equalisation System (Sub-programme was provided by Bestwise)	Submission of onsite survey plan on E&M aspects for acceptance	1/3/2020	1/4/2020	30/3/2020	7/5/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 7 May 2020
	Acceptance of submission of onsite survey plan	1/3/2020	1/4/2020	30/3/2020	23/5/2020	Task Completed				100%	-	AECOM accepted the onsite survey plan on 23 May 2020
6B.2.16 Temporary Filtrate Equalisation System (Sub-programme was provided by Bestwise)	Submission and Acceptance of ELS Design for Lifting Well	15/06/2020 -> 17/08/2020*	2/9/2020	30/07/2020 -> 30/11/2020*	9/2/2021	Task Completed				100%	Bestwise	- * = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. Bestwise submitted Rev.0 on 21 Oct 2020 and resubmitted Rev.2 on 23 Jan 2021. - AECOM provide consent for the ELS temporary works on 9 Feb 2021. AECOM accepted on 9 Feb 2021.
	Submission and Acceptance of Design for Filtrate Lifting Well Construction	15/06/2020 -> 17/08/2020*	2/9/2020	30/07/2020 -> 30/11/2020*	15/1/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. AECOM commented on 21 Dec 2020. Bestwise submitted Rev.0 on 2 Nov 2020 and Rev.1 on 8 Jan 2021.
	Submission and Acceptance of Design of FRP Filtrate Equalization Tank	15/06/2020 -> 07/09/2020**	2/9/2020	30/07/2020 -> 22/10/2020*	15/1/2021	Task Completed				100%		** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. - Bestwise submitted Rev.0 on 08 Jan 2020.
	Submission and Acceptance of Design of footing for FRP Filtrate Equalization Tank	15/06/2020 -> 07/09/2020**	2/9/2020	30/07/2020 -> 22/10/2020*	19/2/2021	Task Completed				100%		** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Re-design work was proceeded and the planned start date was revised to 17 Aug 2020. - Design of Footing was submitted on 8 Feb 2021.
	Submission and Acceptance of Design of Formwork & Flasework Design for Construction of Lifting Well	15/06/2020 -> 17/08/2020*	2/9/2020	30/07/2020 -> 30/11/2020*	15/1/2021	Task Completed				100%		- * = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. - Bestwise submitted Rev.0 on 12 Jan 2020.

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	Submission and Acceptance of Contractor's Design for Temporary Filtrate Equalisation System (E&M Works) (CDS010-2)	01/06/2020 -> 7/9/2020**	5/7/2020	30/07/2020 -> 30/11/2020*	30/7/2021	Task Completed				-	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - Bestwise submitted (CDS 0010 Rev.0) on 6 August 2020, AECOM commented on 27 Aug 2020. Bestwise to resubmit (Separate submissions P&M0049, DWG0038, CDS0026, P&M0008, P&M0004, CDS0037, CDS0027, DWG0040 were submitted) - Control philosophy (CDS0027 Rev.0) was submitted on 22 Dec 2020. AECOM commented on 13 Jan 2021, Bestwise resubmitted on 27 May 2021 formally, AECOM accepted with comments on 4 Jun 2021.
	Drawing Submission	01/06/2020 -> 17/08/2020*	29/9/2020	30/07/2020 -> 30/11/2020*	5/3/2021	Task Completed				100%	Bestwise	- * = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. - Bestwise submitted (rev.0) on 29 Oct 2020 and resubmitted (rev.2) on 25 Jan 2021, AECOM accepted on 5 Feb 2021.
	Material Submission	01/06/2020 -> 17/08/2020*	29/11/2020	30/07/2020 -> 30/11/2020*	25/2/2021	Task Completed				100%	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 07 Sep 2020. - P&M submission of temporary filtrate equalization tank (P&M 0030 Rev.1) on 29 Jan 2021. AECOM accepted subject to comments on 25 Feb 2021.
Subletting Package for Temporary Filtrate Equalization System	Tender invitation (C11) (EQT-002 & EQT-004)	17/4/2020	17/4/2020	7/5/2020	7/5/2020	Task Completed				100%		
	Tender award (C11) (EQT-002 & EQT-004)	14/4/2020	24/4/2020	13/5/2020	13/5/2020	Task Completed				100%	Bestwise	Bestwise submitted tender report on 29 April 2020 for filtrate pumps, AECOM commented on 29 May 2020, Bestwise to resubmit. Bestwise submitted tender report of instrument on 13 May 2020, AECOM noted on 26 May
	Acceptance of tender award (C11) (EQT-002 & EQT-004)	25/4/2020	25/4/2020	21/5/2020	21/5/2020	Task Completed				100%	Bestwise	
	Material Submission	20/07/2020 ->	16/10/2020	20/08/2020 ->	5/2/2021	Task Completed				-	Bestwise	** = Change of material of temporary filtrate equalization tank from concrete to FRP on 18
	Submission of subletting package for acceptance (C9)	1/3/2020	13/7/2020	14/3/2020	13/7/2020	Task Completed				100%		
	Acceptance of subletting package (C9)	15/3/2020	14/7/2020	28/3/2020	14/7/2020	Task Completed				100%		
	Tender invitation (C9)	29/3/2020	15/7/2020	11/4/2020	22/7/2020	Task Completed				100%		
	Tender award (C9)	12/4/2020	23/7/2020	25/4/2020	13/8/2020	Task Completed				100%		
	Acceptance of tender award for civil construction work (C9)	26/04/2020	14/8/2020	5/5/2020	2/9/2020	Task Completed				100%		
	Preparation of subletting package for mech work (C9)	01/08/2020 -> 01/12/2020*	25/1/2021	08/08/20 -> 08/12/2020*	1/3/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. Subletting package would be submitted on 25 Feb 2021 and AECOM accepted on 1 Mar
	Tender invitation for mech work (C9)	08/08/20 ->	2/3/2021	15/08/2020 ->	9/3/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021
	Tender Award for mech work (C9)	15/08/2020 ->	10/3/2021	22/08/2020 ->	15/3/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021
	Acceptance of tender award for mech work (C9)	22/08/2020 ->	15/3/2021	29/08/2020 ->	19/3/2021	Task Completed				100%		Tender award on 19 Mar 2021.
	Preparation of subletting package for elect work (C9)	01/08/2020 -> 01/12/2020*	2/2/2021	08/08/20 -> 08/12/2020*	1/3/2021	Task Completed				100%		* = PMI014 - Revised Location for Construction of Temporary Filtrate Equalization System received on 17 Aug 2020. Subletting package resubmitted on 26 Feb 2021 and AECOM accepted on 1 Mar 2021..
Tender invitation for elect work (C9)	01/08/2020 ->	2/3/2021	15/08/2020 ->	9/3/2021	Task Completed				100%		Tender invitation was conducted on 2 Mar 2021 and returned on 9 Mar 2021	
Tender Award for elect work (C9)	08/08/20 ->	10/3/2021	22/08/2020 ->	15/3/2021	Task Completed				100%		Tender report was submitted on 15 Mar 2021	
Acceptance of tender award for elect work (C9)	15/08/2020 -> 15/12/2020*	15/3/2021	29/08/2020 -> 29/12/2020*	19/3/2021	Task Completed				100%		Tender award on 19 Mar 2021.	
Construction of Temporary Filtrate Equalisation System	Construction of minor civil works under PMI 014	22/08/2020 -> 22/12/2020*	5/10/2020	15/10/2020	31/3/2021	Task Completed				100%	Bestwise	Utilities survey report of lifting well and EQ tank were submitted on 23 Sept 2020 and 29 Sept 2020. AECOM commented lifting well on 29 Sept 2020.
	RC Structure Works of lifting well	7/11/2020	12/1/2021	30/12/2020	25/2/2021	Task Completed				100%		
	Construction of concrete plinth for filtrate EQ tank	23/1/2021	8/2/2021	1/2/2021	26/2/2021	Task Completed				100%		
	Offsite fabrication and delivery of filtrate EQ tank	31/10/2020	16/1/2021	2/2/2021	4/3/2021	Task Completed				100%		First batch of filtrate EQ tank panel was delivered on 4 Mar 2021.
	Onsite assembly of filtrate EQ tank	2/2/2021	1/3/2021	12/3/2021	16/4/2021	Task Completed				100%		
6B.2.16 Temporary Filtrate Equalisation System	Mechanical Installation	17/3/2021	30/3/2021	12/4/2021	14/5/2021	Task Completed				-		
	Electrical Installation	13/3/2021	29/3/2021	15/4/2021	10/12/2021	Task Completed				-		PLC programme for water spray system (stage 1) is on-going, motorized gate valve for stage 2 under PMI is being fabricated and the delivery lead time is by end November.
	Testing and Commissioning	15/4/2021	22/4/2021	1/5/2021	30/11/2022	Completed				-		Defect rectification for BCM comments was partially completed and Site Acceptance Test (72 hours) was completed.
6B.1.17 Overall plant treatment process review by the Treatment Process Specialist	Submission of Treatment Process Specialist's review report	1/6/2020	1/6/2020	30/6/2020	2/7/2020	Task Completed				-	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial process design evaluation was submitted on 20 May 2020. Design calculation submitted on
	Acceptance of submission for further design	14/6/2020	3/7/2020	30/6/2020	17/7/2020	Task Completed				-		



Contract No. DE/2018/04  
 Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1  
 - E&M Works for Sewage Treatment Facilities  
 3 Month Rolling Programme (From 01/04/2023 to 01/07/2023)

Updated on: **20-Apr-23**

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
6B Overall plant process equipment sizing review	Submission of Contractor's Design Calculation for Acceptance of submission for further detail design	1/6/2020 14/6/2020	1/6/2020 3/7/2020	30/6/2020 30/6/2020	2/7/2020 17/7/2020	Task Completed Task Completed				- -	Bestwise	Preliminary Draft submitted, meeting completed on 15 May 2020 with SRE and TPS. Initial
6B.2.1 Inlet Works	Submission of Contractor's Design for Inlet Works No. 1	6/9/2020	16/11/2020	14/5/2021	30/4/2023	99%				-	Bestwise	All finalized design calculations for Inlet Works no.1 shall be submitted by 20 Jan 2023.
	Submission of P&M Submission	6/9/2020	7/9/2020	14/5/2021	30/4/2023	99%						P&M0022 - Inlet Pumps (status: B) P&M0003 - Coarse Screens & Fine Screens (status: B) P&M0085 - Grit Traps (status: B) P&M0084 - Screw Compactor (status: B) P&M0042 - Screw Conveyors for Coarse Screens and Fine Screens (status: B) All P&M for Inlet Works no.1 shall be submitted by 20 Jan 2023.
	Submission of P&ID Drawing	6/9/2020	6/9/2020	14/5/2021	29/12/2020	Task Completed						PID (rev.B) submitted on 13 Nov 2020. AECOM accepted subject to comments on 29 Dec 2020.
	Submission of GA Drawing	6/9/2020	5/1/2021	14/5/2021	30/4/2023	99%						E&M GA submission DWG0082 resubmitted on 9 July 2021. AECOM commented on 19 Feb 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. Electrical GA DWG0095 resubmitted on 3 July 2021. AECOM commented on 21 Apr 2021. Bestwise reviewed GA in BIM with AECOM on 12 Jan 2022. All finalized drawings for Inlet Works no.1 shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 5, 12, 19/5/2022.
	Submission of Electrical Drawing	6/9/2020	15/1/2021	14/5/2021	30/4/2023	99%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for Inlet Works no.1 shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%				-		
	Submission of detailed design for electrical installation for Inlet Works No. 1 (CDS021)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for LV Switchboards for Inlet Works No. 1 (CDS025-1)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for electrical installation BS for Inlet Works No. 1 (CDS034-1)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of civil work requirements for Inlet Works No. 1 up to +8.0 mPD (CDS080-1)	1/9/2020	1/9/2020	30/10/2020	30/10/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (First Draft)	15/7/2020	15/7/2020	15/8/2020	17/9/2020	Task Completed	no.	3	3	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for Inlet Works No. 1 up to +8.0 mPD (Final)	28/8/2020	18/9/2020	5/11/2020	5/11/2020	Task Completed	no.	3	3	100%	Bestwise	Bestwise resubmitted (rev.A) on 27 Oct 2020.
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (First Draft)	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	2	2	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for Inlet Works No. 1 (Final)	7/9/2020	1/10/2020	5/11/2020	20/10/2020	Task Completed	no.	2	2	100%	Bestwise	Bestwise submitted on 20 Oct 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.2 Primary Sedimentation Tank No. 1-4	Submission of Contractor's Design for Primary Sedimentation Tanks No. 1-4	6/9/2020	28/12/2020	14/5/2021	30/4/2023	99%				-	Bestwise	PFD (rev.B) under DWG0004 submitted on 22 June 2021. Finalized design calculations for PST shall be submitted by 20 Jan 2023.
	Submission of P&M Submission	6/9/2020	26/11/2020	14/5/2021	30/4/2023	99%						P&M0058 - Lamella Plate Settler (status: B) P&M0097 - Scum Skimmer and Scum Collection Pipe (status: C) P&M0086 - Sludge Bottom Scraper (status: B) P&M0051 - Drain Pump (status: B) P&M0044 - Primary Sludge Pump (status: B) Finalized material submissions for PST shall be submitted by 20 Jan 2023.
	Submission of P&ID Drawing	6/9/2020	2/10/2020	14/5/2021	24/6/2021	Task Completed						PID under DWG0037 (rev.1) submitted on 24 June 2021 and is accepted by AECOM.

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status	
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %			
	Submission of GA Drawing	6/9/2020	3/2/2021	14/5/2021	30/4/2023	99%						Mechanical GA was submitted on 19 Jun 2021. Electrical GA under DWG0103 (rev.1) was submitted on 6 Jul 2021 and is accepted by AECOM. Finalized drawings for PST shall be submitted by 30 Aug 2022.	
	Submission of Electrical Drawing	6/9/2020	15/1/2021	14/5/2021	30/4/2023	99%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawings for PST shall be submitted by 20 Jan 2023.	
	Acceptance of submission	15/5/2021	2/4/2021	29/5/2021	30/4/2023	99%				-		Refer to outstanding list under "Certificate of completion no.1 - section 1 of the works".	
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of detailed design for LV Switchboards for Primary Sedimentation Tanks (CDS025-2)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of civil work requirements for Primary Sedimentation Tanks up to +8.0 mPD (CDS080-2)	1/9/2020	1/9/2020	30/10/2020	30/10/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	4	4	100%		1st part of drafted drawing (2 nos.) was submitted on 23 Sept 2020. Remaining drawings (2 nos.) were submitted on 30 Sept 2020.	
	KD1A: Submission of civil requirement drawing for Primary Sedimentation Tanks No. 1-4 up to +8.0 mPD	28/8/2020	1/10/2020	5/11/2020	5/11/2020	Task Completed	no.	4	4	100%	Bestwise	Bestwise resubmitted (Rev.A) on 27 Oct & 13 Nov 2020.	
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (First Draft)	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 30 September 2020	
	KD1A: Submission of electrical schematic drawings for Primary Sedimentation Tanks No. 1-4 (Final)	7/9/2020	1/10/2020	5/11/2020	20/10/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise submitted on 20 Oct 2020	
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020	
6B.2.3 Chemical Storage and Dosing System	Submission of Contractor's Design for Chemical Dosing System (CDS006)	6/9/2020	7/1/2021	14/5/2021	29/10/2021	Task Completed					-	Bestwise	Design calculation (rev.0) of CHS1 and TCHS submitted on 2 Sep 2020 and 28 Aug 2020, AECOM commented on 24 Sep and 6 Oct 2020, Bestwise submitted CDS0060 on 15 Jul 2021 and CDS0044 on 19 Jul 2021. Finalized design calculation for chemical systems was submitted on 29 Oct 2021.
	Submission of P&M Submission	6/9/2020	6/9/2020	14/5/2021	30/10/2021	Task Completed							Finalized material submissions for chemical system was submitted on 30 Oct 2021.
	Submission of P&ID Drawing	6/9/2020	11/12/2020	14/5/2021	29/6/2021	Task Completed							PID resubmitted under DWG0053 (rev.1) on 28 Jun 2021, DWG0057 (rev.1) on 29 Jun 2021 and DWG0058 (rev.1) on 29 Jun 2021.
	Submission of GA Drawing	6/9/2020	8/2/2021	14/5/2021	30/4/2023	99%							Electrical GA drawings for CS1 under DWG0096 submitted on 10 April 2021. AECOM accepted subject to comments on 17 Apr 2021. Mechanical GA drawings for CS1 submitted on 1 April 2021. AECOM commented on 24 April 2021. Bestwise resubmitted DWG0093 (rev.1) on 30 Jun 2021 and is accepted by AECOM. Mechanical GA for Temp CS submitted on 12 Jun 2021. All finalized drawings for chemical systems shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 17, 21, 28/4/2022.
	Submission of Electrical Drawing	6/9/2020	15/1/2021	14/5/2021	30/4/2023	99%							Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. All finalized drawings for chemical system shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%					-		
	Submission of detailed design for electrical installations	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of detailed design for electrical installations	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of detailed design for electrical installations	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed							
	KD1A: Submission of civil requirement drawing for	15/7/2020	15/7/2020	15/8/2020	16/9/2020	Task Completed	no.	2	2	100%			1st draft of drawing submitted on 15 September for CHS1 and 16 September 2020 for
	KD1A: Submission of civil requirement drawing for	7/9/2020	17/9/2020	5/11/2020	5/11/2020	Task Completed	no.	2	2	100%			Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	15/7/2020	15/7/2020	15/8/2020	15/9/2020	Task Completed							1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for Chemical System No. 1 and No. 2 (Final)	7/9/2020	16/9/2020	5/11/2020	5/11/2020	Task Completed							
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (First	15/7/2020	15/7/2020	15/8/2020	15/9/2020	Task Completed	no.	1	1	100%			1st draft of drawing submitted on 15 September 2020



Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	KD1A: Submission of civil requirement drawing for Temporary Chemical System up to +8.0 mPD (Final)	7/9/2020	16/9/2020	5/11/2020	5/11/2020	Task Completed	no.	1	1	100%		Bestwise resubmitted (Rev.A) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for Temporary Chemical System (First Draft)	15/7/2020	15/7/2020	15/8/2020	15/9/2020	Task Completed				-		1st draft of drawing to be submitted by 16 September 2020
	KD1A: Submission of electrical schematic drawings for KD1A: 6 November 2020	7/9/2020	16/9/2020	5/11/2020	5/11/2020	Task Completed						Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Bio Reactor 2A and 2B	Submission of Contractor's Design for Bioreactor 2A and 2B (CDS004)	6/9/2020	12/1/2021	14/5/2021	30/4/2023	99%				-	Bestwise	PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 7 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Electrical CDS submitted on 23 Jun 2021. Finalized design calculations shall be submitted by 20 Jan 2023.
	Submission of P&M Submission	6/9/2020	26/11/2020	14/5/2021	30/4/2023	99%						P&M0060 - Pre-treatment Fine Screen (status: B) P&M0053 - MLR Pump (status: B) P&M0118 - Scum Skimmer & Scum Pump (status: C) P&M0088 - Fine Bubble Air Diffuser (status: B) P&M0xxx - Wash Compactor (status: B) P&M0041 - Submersible Mixer (status: B) Finalized material submission shall be submitted by 20 Jan 2023.
	Submission of P&ID Drawing	6/9/2020	2/11/2020	14/5/2021	2/7/2021	Task Completed						PID (Rev.1) under DWG0042 resubmitted on 6 July 2021.
	Submission of GA Drawing	6/9/2020	17/2/2021	14/5/2021	30/4/2023	99%						Mechanical GA under DWG0132 submitted on 26 Jun 2021 and is accepted by AECOM. Electrical GA submitted on 23 Jun 2021. Finalized drawing shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing	6/9/2020	15/1/2021	14/5/2021	30/4/2023	99%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%					-	
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for LV Switchboards for BR 2A and 2B (CDS025-3)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of civil work requirements for BR 2A and 2B up to +8.0 mPD (CDS080-3)	1/9/2020	1/9/2020	30/10/2020	30/10/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (First Draft)	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	2	2	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of civil requirement drawing for BR 2A and 2B up to +8.0 mPD (Final)	28/8/2020	1/10/2020	5/11/2020	5/11/2020	Task Completed	no.	2	2	100%	Bestwise	AECOM commented on 23 Oct 2020, Bestwise resubmitted on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for BR 2A and 2B (First Draft)	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed				-		1st draft of drawing was sent to AECOM via email on 15 September 2020
	KD1A: Submission of electrical schematic drawings for KD1A: 6 November 2020	7/9/2020	1/10/2020	5/11/2020	5/11/2020	Task Completed						Notice of completion works was submitted on 17 Nov 2020
6B.2.4 Membrane Bioreactor (MBR) System - Membrane Filtration System No. 2 (MFB No. 2)	Submission of Contractor's Design for Membrane Filtration System (CDS005)	6/9/2020	11/1/2021	14/5/2021	30/4/2023	99%				-	Bestwise	PFD (rev.1) submitted on 3 Nov 2020. AECOM accepted on 10 Dec 2020 subject to comment. MBR system process and design calculation (rev.2) submitted on 6 Nov 2020. AECOM accepted on 17 Nov 2020 subject to comments. Finalized design calculations shall be submitted by 30 Aug 2022.
	Submission of P&M Submission	6/9/2020	19/11/2020	14/5/2021	30/4/2023	99%						P&M0072 - Membrane Module (status: B) P&M0069 - Permeate Pump (status: B) P&M0047 - RAS Pump (status: B) P&M0050 - Drain Pump (status: B) P&M0074 - Air Scour Blower (status: C) P&M0073 - Aeration Blower (status: C) P&M0093 - Air Compressor (status: B) P&M0091 - Chemical Pump (status: B) P&M0xxx - Chemical Tank (to be submitted) Finalized material submission shall be submitted by 20 Jan 2023.
	Submission of P&ID Drawing	6/9/2020	30/10/2020	14/5/2021	2/7/2021	Task Completed						DWG0049 (Rev.1) was resubmitted on 2 Jul 2021.
	Submission of GA Drawing	31/3/2021	18/2/2021	14/5/2021	30/4/2023	99%						DWG0121 (rev.1) was resubmitted to AECOM on 17 Jul 2021 Finalized drawings shall be submitted by 30 June 2022. BIM GA review meeting is scheduled on 19, 26/5/2022 and 2/6/2022 (Lower part) BIM GA review meeting is scheduled on 16, 23, 30/6/2022 (Upper part)

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	Submission of Electrical Drawing	15/4/2021	15/1/2021	14/5/2021	30/4/2023	99%						Electrical SLD submitted on 5 Feb 2021. AECOM commented on 20 Feb 2021. Bestwise to resubmit. Electrical GA under DWG0079 (rev.1) was resubmitted on 8 Jul 2021. Finalized drawings shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%				-		
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for LV Switchboards for	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for electrical installation BS for MFB (CDS034-4)	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of civil work requirements for MFB up to	1/9/2020	1/9/2020	30/9/2020	30/9/2020	Task Completed						
	KD1A: Submission of civil requirement drawing for	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	7	7	100%		1st draft of drawing submitted on 30 September
	KD1A: Submission of civil requirement drawing for MFB No. 2 up to +8.0 mPD (Final)	28/8/2020	1/10/2020	5/11/2020	5/11/2020	Task Completed	no.	7	7	100%	Bestwise	Bestwise resubmitted (Rev.1) on 5 Nov 2020.
	KD1A: Submission of electrical schematic drawings for	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed	no.	3	3	100%		1st draft of drawing submitted on 30 September 2020
	KD1A: Submission of electrical schematic drawings for MFB No. 2 (Final)	7/9/2020	1/10/2020	5/11/2020	20/10/2020	Task Completed	no.	3	3	100%	Bestwise	Bestwise submitted (Rev.1) on 20 Oct 2020
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender invitation (C11)	17/4/2020	17/4/2020	24/4/2020	24/4/2020	Task Completed				100%		
6B.2.6 Deodorisation System (EQT-001 - Deodorization Unit)	Tender award (C11)	25/4/2020	25/4/2020	12/5/2020	12/5/2020	Task Completed				100%	Bestwise	Bestwise submitted tender report on 13 May 2020. AECOM commented on 23 July 2020, Bestwise to resubmit.
	Acceptance of tender award (C11)	13/5/2020	13/5/2020	21/5/2020	21/5/2020	Task Completed				100%		
	Submission of Contractor's Design for Deodorisation System , DOU No. 1 (CDS0019 & CDS0045 )	6/9/2020	6/9/2020	14/5/2021	31/12/2021	Task Completed				-		Design Calculation (Rev.0) was submitted on 24 Nov 2020. AECOM commented on 6 Jan 2021, Bestwise to resubmit. Bestwise submitted CDS0045 on 3 June 2021. Finalized design was completed.
	Submission of P&ID Drawing of DOU No. 1	6/9/2020	5/8/2020	14/5/2021	2/7/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 1	6/9/2020	6/9/2020	14/5/2021	30/4/2023	99%						GA submitted on 21 Jun 2021 Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 11, 18, 25/5/2022.
	Submission of Electrical Drawing of DOU No. 1	21/3/2021	30/1/2021	14/5/2021	30/4/2023	99%						Control wiring diagrams was resubmitted on 1 April 2021. AECOM commented on 23 Apr 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%				-		
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (First Draft)	15/7/2020	15/7/2020	15/8/2020	28/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 1 up to +8.0 mPD (Final)	28/8/2020	29/9/2020	2/11/2020	5/11/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of Contractor's Design for Deodorisation System , DOU No. 2A (CDS0019 & CDS0048)	6/9/2020	6/9/2020	14/5/2021	10/12/2021	Task Completed				-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0048: Design Calculation on DOU2A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 2A	6/9/2020	5/8/2020	14/5/2021	2/7/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 2A	6/9/2020	3/8/2020	14/5/2021	30/4/2023	99%				-	Bestwise	Bestwise submitted (rev.1) on 30 Nov 2020. AECOM commented on 16 Dec 2020. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 1, 8, 15/6/2022.
	Submission of Electrical Drawing of DOU No. 2A	21/3/2021	26/1/2021	14/5/2021	30/4/2023	99%						Bestwise submitted (rev.0) on 26 Jan 2021, AECOM commented on 4 Feb 2021. Bestwise to resubmit. Finalized drawing shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%				-		
	Submission of Contractor's Design for Deodorisation System , DOU No. 3A (CDS0019 & CDS0055)	6/9/2020	6/9/2020	14/5/2021	10/12/2021	Task Completed				-		CDS0019: Design Calculation for Deodorisation System (status: B) CDS0055: Design Calculation on DOU3A - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3A	6/9/2020	5/8/2020	14/5/2021	2/7/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	Submission of GA Drawing of DOU No. 3A	6/9/2020	8/7/2020	14/5/2021	30/4/2023	99%				-	Bestwise	Bestwise submitted (rev.1) on 28 Oct 2020. AECOM commented on 16 Dec 2020. Bestwise resubmitted on 24 June 2021. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 27/4/2022, 4, 11/5/2022.
	Submission of Electrical Drawing of DOU No. 3A	21/3/2021	26/2/2021	14/5/2021	30/4/2023	99%						Bestwise submitted on 17 Apr 2021. AECOM commented on 27 Apr 2021. Bestwise to resubmit. GA submitted on 24 Jun 2021. Finalized drawing shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	31/3/2023	103%						
	KD1A: Submission of civil requirement drawing for Deodorisation System , DOU No. 3A up to +8.0 mPD	15/7/2020	15/7/2020	15/8/2020	28/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing was submitted on 28 September 2020
	KD1A: Submission of civil requirement drawing for Submission of Contractor's Design for Deodorisation System , DOU No. 3B (CDS0019 & CDS0049)	28/8/2020	29/9/2020	2/11/2020	5/11/2020	Task Completed	no.	1	1	100%	Bestwise	Bestwise resubmitted (rev.1) on 5 Nov 2020.
	Submission of P&ID Drawing of DOU No. 3B	6/9/2020	6/9/2020	14/5/2021	10/12/2021	Task Completed						CDS0019: Design Calculation for Deodorisation System (status: B) CDS0049: Design Calculation on DOU3B - air extraction fan (status: B)
	Submission of P&ID Drawing of DOU No. 3B	6/9/2020	5/8/2020	14/5/2021	2/7/2021	Task Completed				-	Bestwise	Bestwise resubmitted rev.3 on 29 Mar 2021. AECOM accepted subject to comments on 13 Apr 2021.
	Submission of GA Drawing of DOU No. 3B	6/9/2020	6/9/2020	14/5/2021	30/4/2023	99%						Bestwise submitted DWG0081 (rev.0) on 5 Feb 2021. AECOM commented on 12 Mar 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA review meeting is scheduled on 16, 23, 30/6/2022.
	Submission of Electrical Drawing of DOU No. 3B	21/3/2021	22/2/2021	14/5/2021	30/4/2023	99%						GA submitted on 24 Jun 2021. Finalized drawing shall be submitted by 20 Jan 2023.
	Acceptance of submission	15/5/2021	15/5/2021	29/5/2021	30/4/2023	99%				-		
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for LV Switchboards for	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of detailed design for electrical installation	6/9/2020	6/9/2020	14/5/2021	14/5/2021	Task Completed						
	Submission of civil work requirements for MFB up to	1/9/2020	1/9/2020	30/9/2020	30/9/2020	Task Completed						
	Submission of civil requirement drawing for MFB up to	28/8/2020	28/8/2020	2/11/2020	2/11/2020	Task Completed						
	KD1A: Submission of electrical schematic drawings for	15/7/2020	15/7/2020	15/8/2020	30/9/2020	Task Completed				-		1st draft of drawing to be submitted by 30 September 2020
	KD1A: Submission of electrical schematic drawings for	7/9/2020	1/10/2020	5/11/2020	5/11/2020	Task Completed						
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
04SC008 - Design, Supply and Installation of detailed design for lifting appliances	Acceptance of tender award (C9)	-	-	-	6/7/2020	Task Completed				100%	-	AECOM accepted tender report on 6 July 2020.
	Submission of detailed design for lifting appliances for Inlet Works No. 1 (CDS050-1)	6/9/2020	5/12/2020	6/9/2020	30/4/2023	99%						DWG 0055 (Rev.0) was submitted on 13 Mar 2021. AECOM commented on 20 Apr 2021. Bestwise to resubmit. Bestwise submitted P&M0025 on 15 June 2021. Finalized design shall be submitted by 20 Jan 2023.
	Submission of detailed design for lifting appliances for Primary Sedimentation Tanks (CDS050-2)	6/9/2020	5/12/2020	6/9/2020	30/4/2023	99%						DWG 0054 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 20 Jan 2023.
	Submission of detailed design for lifting appliances for BR 2A and 2B (CDS050-3)	6/9/2020	5/12/2020	6/9/2020	30/4/2023	99%						DWG 0065 (Rev.0) was submitted on 18 Jan 2021. AECOM commented on 9 Mar 2021. Bestwise to resubmit. P&M-0026 (Rev.1) received status B. Finalized design calculation shall be submitted by 20 Jan 2023.
	Submission of detailed design for lifting appliances for MFB (CDS050-4)	6/9/2020	5/12/2020	6/9/2020	30/4/2023	99%						DWG 0066 (Rev.1) was submitted on 1 Mar 2021. AECOM commented on 5 Mar 2021. Bestwise to resubmit. P&M-0027 (Rev.1) received status B. Finalized design calculation shall be submitted by 20 Jan 2023.
	Submission of detailed design for lifting appliances for Temporary Filtration Tank (CDS050-5)	6/9/2020	5/12/2020	6/9/2020	21/5/2021	Task Completed						DWG 0051 (Rev.2) was resubmitted on 7 May 2021 and acceptance by AECOM subject to condition on 21 May 2021. Bestwise submitted P&M0021 on 21 June 2021.
Building Services System	Submission for MVAC system	N/A	10/12/2020	N/A	30/4/2023	99%						Design calculations and drawings for inlet works was submitted on 16 Dec 2020. AECOM commented on 15 Jan 2021 and 20 Jan 2021. Design calculations and drawings for PST was submitted on 30 Dec 2020. AECOM commented on 22 Jan 2021 and 26 Jan 2021. Design calculations and drawings for MFB2 was submitted on 29 Jan 2021. AECOM commented on 26 Mar 2021. Subletting package resubmitted by 18 Mar 2021. AECOM accepted on 19 Mar 2021. Finalized design shall be submitted by 20 Jan 2023.





Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
Lightning Protection System for DOU3A (underground)	Submission and Acceptance for Lightning Protection System Design	6/12/2021	6/12/2021	31/1/2022	31/1/2022	Task Completed						
	Material Delivery	7/2/2022	7/2/2022	28/2/2022	28/2/2022	Task Completed						
	Installation Work	31/3/2022	26/4/2022	5/5/2022	5/5/2022	Task Completed						
	Testing & Commissioning	7/1/2023	7/1/2023	31/1/2023								
Lightning Protection System for Inlet Works (underground)	Submission and Acceptance for Lightning Protection System Design	20/12/2021	20/12/2021	31/1/2022	31/1/2022							
	Material Delivery	15/12/2022	1/10/2022	31/3/2022	31/10/2022							
	Installation Work	15/3/2022	1/11/2022	30/10/2022	14/12/2022							
	Testing & Commissioning	1/11/2022	15/12/2022	15/11/2022	31/12/2022							
MFB No.2	Rail Beam Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023	7/7/2023							
	MVAC Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023	7/7/2023							
	Fire Services Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023	7/7/2023							
<b>Section 3 of Works</b>												
6B.2.12 Provision of New Replacement Filter Plates	Submission of onsite survey plan for acceptance	1/3/2020	25/3/2020	30/3/2020	21/4/2020	Task Completed				100%	-	Bestwise resubmitted onsite survey plan on 21 April 2020
	Acceptance of submission of onsite survey plan	1/3/2020	25/3/2020	30/3/2020	12/5/2020	Task Completed				100%	-	Survey plan acceptance received on 12 May 2020. Onsite discussion with ST1 was
	Submission of onsite survey report	21/5/2020	21/5/2020	29/5/2020	29/5/2020	Task Completed				100%		
	Acceptance of onsite survey report	30/5/2020	30/5/2020	15/6/2020	15/6/2020	Task Completed				-		
	Preparation of procurement package (C11)	22/6/2020	22/6/2020	6/7/2020	14/7/2020	Task Completed				100%		
	Tender invitation (C11)	15/7/2020	15/7/2020	22/7/2020	24/7/2020	Task Completed				100%		
	Tender Award (C11)	23/7/2020	25/7/2020	29/7/2020	31/7/2020	Task Completed				100%		Revised survey report (second draft) was sent to AECOM on 21 Oct 2020. Technical
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Submission	21/8/2020	21/8/2020	28/8/2020	7/12/2020	Task Completed				100%		Material submission (Rev.1) resubmitted on 7 Dec 2020. AECOM accepted subject to comments on 24 Dec 2020. Material submission (Rev. 2) resubmitted on 12 Jan 2021. AECOM accepted subject to comment on 22 Jan 2021.
6B.2.12 Provision of New Replacement Filter Plates for Existing Membrane Filter Presses at Existing Sludge Press House	Material Delivery	1/12/2020	1/12/2020	8/8/2021	13/7/2021	Task Completed				-		Handed over to DSD.
	Completion Date of Section 3: 22 September 2021											
<b>Subcontracting</b>												
	Submission of subletting package for acceptance	1/1/2020	6/3/2020	30/3/2020	6/3/2020	Task Completed				100%	-	
	Acceptance of subletting package	1/3/2020	21/3/2020	30/3/2020	21/3/2020	Task Completed				100%	-	
	Tender invitation	1/3/2020	24/3/2020	1/4/2020	30/3/2020	Task Completed				100%	-	
	Tender award	22/3/2020		14/4/2020	6/4/2020	Task Completed				100%	-	Bestwise submitted tender report on 6 April 2020
	Acceptance of tender award	-	-	-	15/4/2020	Task Completed				100%		AECOM accepted tender report on 15 April 2020
Construction of Contractor's site accommodation in WA1-C	Design of MiC	15/4/2020	16/4/2020	1/6/2020	15/8/2020	Task Completed				100%		Revised layout drawings received from AluHouse on 28 May 2020. Comments provided to AluHouse on 2 June 2020.
	Submission of detailed design including foundation works, septic tank	1/7/2020	1/7/2020	14/7/2020	4/9/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on 27 July 2020. Bestwise to resubmit.
	Site Clearance Work	15/7/2020	20/7/2020	31/7/2020	15/8/2020	Task Completed				100%		Tender invitation commenced on 29 May 2020 and tenders received on 4 June 2020. Tender
	Off-site fabrication of Septic tank	15/7/2020	20/7/2020	31/7/2020	31/7/2020	Task Completed				100%		Site clearance work started on 20 July 2020
	Submission of method statement with ICE certificate	1/8/2020	1/8/2020	7/8/2020	8/10/2020	Task Completed				100%		CV of ICE was submitted on 4 August 2020 and accepted on 25 August 2020
	Submission of design calculation with ICE certificate	1/8/2020	1/8/2020	7/8/2020	8/10/2020	Task Completed				100%		Design calculation of foundation work was submitted on 7 July 2020, comment received on
	Acceptance of method statement and design calculation	8/8/2020	9/10/2020	14/8/2020	16/10/2020	Task Completed				100%		Method Statement and Design Calculation was submitted on 8 Oct 2020.
	Submission of method statement with ICE certificate	1/8/2020	1/8/2020	7/8/2020	23/11/2020	Task Completed				100%		
	Submission of design calculation with ICE certificate	1/8/2020	1/8/2020	7/8/2020	23/11/2020	Task Completed				100%		
	Acceptance of method statement and design calculation	8/8/2020	24/11/2020	14/8/2020	27/11/2020	Task Completed				100%		
	Excavation work	17/8/2020	21/10/2020	18/8/2020	21/10/2020	Task Completed				100%		
	Installation of septic tank	19/8/2020	21/10/2020	20/8/2020	22/10/2020	Task Completed				100%		
	Construction of RC foundation	21/8/2020	23/10/2020	31/8/2020	12/11/2020	Task Completed				100%		
Off-site fabrication and delivery of MiC Office	1/6/2020	30/9/2020	31/7/2020	4/12/2020	Task Completed				100%			

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	On-site installation of MiC Office	1/8/2020	4/12/2020	30/8/2020	5/1/2021	Task Completed				100%		
	Installation of car park shelter	4/1/2021	7/1/2021	11/1/2021	9/1/2021	Task Completed				100%		Subject to the completion of car park shelter of PM office and JEC office.
04SC003 - Building Information Modeling (BIM)	Submission of subletting package for acceptance (C9)	1/3/2020	25/3/2020	14/3/2020	25/3/2020	Task Completed				100%	-	
	Acceptance of subletting package (C9)	14/3/2020	2/4/2020	30/3/2020	2/4/2020	Task Completed				100%	-	
	Tender invitation (C9)	1/4/2020	1/4/2020	8/4/2020	9/4/2020	Task Completed				100%	-	
	Tender award (C9)	-	-	-	15/4/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Submission of subletting package for acceptance	14/3/2020	16/3/2020	30/3/2020	20/4/2020	Task Completed				100%	-	Bestwise resubmitted on 20 April 2020
	Acceptance of subletting package	28/3/2020	4/5/2020	13/4/2020	13/5/2020	Task Completed				100%	-	AECOM accepted subletting package on 13 May 2020
	Tender invitation	11/4/2020	19/6/2020	27/4/2020	26/6/2020	Task Completed				-		Invitation to tender was commenced on 19 June 2020 and tender returned on 26 June 2020
	Tender award	25/4/2020	27/6/2020	11/5/2020	4/7/2020	Task Completed				-		Bestwise submitted tender report on 30 June 2020
	Acceptance of tender award	-	-	-	18/7/2020					-		
04SC007 - Independent Beam Plus Consultant	Submission of subletting package for acceptance	1/3/2020	30/3/2020	14/3/2020	30/3/2020	Task Completed				100%	-	
	Acceptance of subletting package	14/3/2020	3/4/2020	30/3/2020	3/4/2020	Task Completed				100%	-	
	Tender invitation	30/3/2020	30/3/2020	9/4/2020	9/4/2020	Task Completed				100%	-	
	Tender award	-	-	-	15/4/2020	Task Completed				100%	-	Bestwise submitted tender report on 15 April 2020
	Acceptance of tender award	-	-	-	17/4/2020	Task Completed				100%	-	AECOM accepted tender report on 17 April 2020
	Introduction meeting with IBPC, Cinotech	-	-	-	28/4/2020	Task Completed				100%	-	Meeting completed on 28 April 2020 followed by planning work progress
04SC008 - Design, Supply and Installation of detailed	Submission of subletting package for acceptance (C9)	1/4/2020	17/3/2020	14/4/2020	17/3/2020	Task Completed				100%	-	Bestwise submitted subletting package on 3 April 2020
	Acceptance of subletting package (C9)	14/4/2020	17/4/2020	30/4/2020	28/4/2020	Task Completed				100%	-	AECOM accepted subletting package on 28 April 2020
	Tender invitation (C9)	30/4/2020	6/5/2020	14/5/2020	28/5/2020	Task Completed				100%	-	Invitation to tender was commenced on 6 May 2020 and tender returned on 28 May 2020
	Tender award (C9)	14/5/2020	29/5/2020	30/5/2020	9/6/2020	Task Completed				100%	-	Bestwise submitted tender report on 9 June 2020.
Temporary Primary Sludge Thickener and its	Submission of subletting package (C9) for acceptance	15/05/2020 ->	14/8/2020	15/05/2020 -	27/8/2020	Task Completed				100%	Bestwise	- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020.
	Acceptance of subletting package (C9) (Mech)	30/05/2020 ->	15/8/2020	15/06/2020->	16/9/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Mech)	15/06/2020->	9/9/2020	22/06/2020->	14/10/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation for FRP Tank was conducted on 9 Sep 2020, tender returned on 16 Sep 2020. - Tender invitation for mechanical installation was conducted on 29 Sept 2020, tender returned on 14 Oct 2020.
	Tender award (C9) (Mech)	22/06/2020->	17/9/2020	29/06/2020->	22/10/2020	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report for FRP Tank was submitted on 24 Sep 2020 and accepted on 9 Oct 2020. - Tender report for mechanical installation submitted on 22 Oct 2020 and accepted on 16 Nov 2020.
	Acceptance of tender award (C9) (Mech)	-	-	-	16/11/2020	Task Completed				100%		
	Submission of subletting package (C9) for acceptance (Elect)	15/05/2020 ->	9/12/2020	15/05/2020 ->	28/1/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Bestwise resubmitted subcontracting package of electrical installation on 28 Jan 2021
	Acceptance of subletting package (C9) (Elect)	30/05/2020 ->	29/1/2021	15/06/2020->	1/2/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
	Tender invitation (C9) (Elect)	15/06/2020->	1/2/2021	22/06/2020->	11/2/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender invitation commenced on 1 Feb 2021 and returned on 11 Feb 2021
	Tender award (C9) (Elect)	22/06/2020->	11/2/2021	29/06/2020->	23/2/2021	Task Completed				100%		- *=Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Tender report target submitted on 23 Feb 2021 and accepted on 24 Feb 2021
	Acceptance of tender award (C9) (Elect)	-	-	-	26/2/2021	Task Completed				100%		



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		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
Tender invitation (C11)		30/04/2020->15/07/2020*	30/4/2020	30/06/2020->15/09/2020*	18/11/2020	Task Completed				100%	Bestwise	- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. -Tender invitation of Primary Sludge Thickener commenced on 22 April 2020 and tender was received on 29 April 2020. Tender queries was requested on 5 May 2020 and received on 7 May 2020. Tender report was commented by PM and resubmitted on 22 May 2020. Accepted by AECOM on 12 Jun 2020. - Tender Invitation of process pumps for the thickening system was commenced on 5 Jun 2020 and tenders were received on 10 June 2020. Tender report submitted to PM on 2 July 2020. - Tender Invitation of activated carbon filter was commenced on 22 Oct 2020 and to be returned on 2 Nov 2020. Tender report submitted on 5 Nov 2020 and accepted on 16 Nov 2020 - Tender Invitation of FRP platform was commenced on 13 Nov 2020 and to be returned on 20 Nov 2020. Tender report submitted on 30 Nov 2020 and accepted on 11 Jan 2020 - Tender Invitation of instrument was commenced on 18 Nov 2020 and to be returned on 25 Nov 2020. Tender report submitted on 30 Nov 2020 - Based on the control philosophy agreed on 23 Dec 2020, motorized and solenoid valves were selected
Tender award (C11)		15/05/2020->29/07/2020*	30/5/2020	15/07/2020->15/09/2020*	30/11/2020	Task Completed				100%		- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020.
Acceptance of tender award (C11)		-	-	-	18/9/2020					-		
Design Submission		03/07/2020 ->15/07/2020*	5/8/2020	21/09/2020->02/10/2020*	10/5/2021	Task Completed				100%	Bestwise	- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. -Design submission of Process Pumps (Rev.3) resubmitted on 14 Apr 2021, AECOM accepted with comments on 7 May 2021. -Design submission of electrical calculation (rev.2) was resubmitted on 29 Apr 2021. AECOM accepted with comments on 10 May 2021. -Control Philosophy (Rev.2) resubmitted on 5 Mar 2021. AECOM accepted subject to comments on 26 Mar 2021.
Plant and Material Submission		21/07/2020 ->30/07/2020*	21/7/2020	31/08/2020 ->31/10/2020*	30/6/2021	Task Completed					Bestwise	- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Plant and Material submission of primary sludge thickener was resubmitted on 1 Sep 2020 (Rev. 3) and AECOM accepted on 8 Sep 2020. - Plant and Material submission P&M0002 (Rev.2) of process pumps was submitted on 5 August 2020 and AECOM commented on 26 Aug 2020, Bestwise to re-submitted to AECOM. - Plant and Material submission (Rev.0) for valves was submitted on 16 Nov 2020. AECOM accepted on 14 Dec 2020 subject to comments - Plant and Material submission (Rev.1) for DI pipes and fittings was resubmitted on 3 Dec 2020. AECOM accepted on 14 Dec 2020 - Plant and Material submission (Rev.0) for primary sludge equalization tank was submitted on 5 Feb 2021. AECOM accepted subject to comments on 25 Feb 2021. - Plant and Material submission (Rev.0) for activated carbon filter was submitted on 28 Jan 2021. AECOM accepted subject to comments on 5 Feb 2021. - Plant and Material submission (Rev. 1) for instruments was resubmitted on 13 Mar 2021. AECOM accepted subject to comments on 7 Apr 2021.
Drawing Submission		03/07/2020 ->30/07/2020*	3/8/2020	21/09/2020 ->21/11/2020*	10/2/2021	Task Completed				100%	Bestwise	- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - PFD, P&ID, Schematic GA (Rev.3) resubmitted on 22 Jan 2021 according to the finalized control philosophy. AECOM accepted subject to comment on 29 Jan 2021. - Electrical drawing - Bestwise resubmitted electrical drawing (Rev.5) on 22 Mar 2021. AECOM accepted on 16 Apr 2021.
Material Manufacturing		31/07/2020 ->30/09/2020*	4/8/2020	21/10/2020 ->21/12/2020*	20/4/2021	Task Completed				100%		- *Corresponding PMI No.009 and CE No.009 were issued by AECOM on 14 July 2020. CE was implemented on 15 July 2020. - Manufacturing instruction of PS thickener was issued on 3 August 2020. - Manufacturing instruction of process pumps was issued on 24 September 2020 - Electrical sub-contractor is awarded and manufacturing LCP
Material Delivery		05/09/2020 ->	4/11/2020	16/11/2020 ->	21/6/2021	Task Completed						

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	Mechanical Installation	01/10/2020 -> 01/12/2020*	2/2/2021	15/11/2020 -> 15/01/2021*	17/5/2021	Task Completed				-		
	Offsite Fabrication and Delivery of FRP Tank		16/1/2021		7/4/2021	Task Completed				100%		First batch to be delivered on 23 Mar 2021
	Onsite Installation of FRP Tank		7/4/2021		30/7/2021	Task Completed						Water filling to tank completed; Tank hydraulic test completed.
	Electrical Installation	01/10/2020 -> 01/12/2020*	19/3/2021	15/11/2020 -> 15/01/2021*	19/7/2021	Task Completed				-		Energize of all LCPs on 24 May 2021 and isolated prior to system commissioning.
Temporary Primary Sludge Thickener and its accessories (Sub-programme was provided by Bestwise)	Testing and Commissioning	15/11/2020 -> 15/01/2021*	8/5/2021	22/11/2020 -> 22/01/2021*	30/9/2022	Completed				-		Improvement works under PMI are on-going and defect rectification for BCM comments was partially completed. - Testing and Commissioning (3 x 24hrs) completed by End September.
Modification of Existing Emergency Generator Electrical Works	Submission of subletting package (C9) for acceptance	15/10/2020	15/10/2020	31/10/2020	11/12/2020	Task Completed				100%		
	Acceptance of subletting package (C9)	1/11/2020	5/11/2020	15/11/2020	2/1/2021	Task Completed				100%		
	Tender invitation (C9)	16/11/2020	26/1/2021	30/11/2020	5/2/2021	Task Completed				100%		Tender invitation commenced on 26 Jan 2021, and returned on 5 Feb 2021
	Tender award (C9)	30/11/2020	18/2/2021	7/12/2020	18/2/2021	Task Completed				100%		Tender report was submitted on 18 Feb 2021 and accepted on 26 Feb 2021
	Acceptance of tender award (C9)	8/12/2020	18/2/2021	15/12/2020	26/2/2021	Task Completed				100%		
	Design Submission	15/12/2020	15/3/2021	15/1/2021	23/4/2021	Task Completed				100%		DWG-0100 was submitted on 23 Apr 2021. AECOM accepted with comments on 30 Apr
	Transportation of existing dismantled genset no. 2 (Genset No.2) to subcontractor (Click Ltd.)'s workshop	9/3/2021	9/3/2021	9/3/2021	9/3/2021	Task Completed				100%		
	Drawing submission (Drawing of General Layout for Existing 600kVA Genset Container)	23/4/2021	23/4/2021	30/4/2021	30/4/2021	Task Completed				100%		
	Drawing submission (Cable route ,general arrangement, etc)	14/5/2021	28/5/2021	21/5/2021	5 July 2021	Task Completed				100%		
	Material submission P431 P&M-0087	21 May 2021	19 June 2021	28 May 2021	12 July 2021	Task Completed				100%		
	Fabrication of container at PRC	21 June 2021	21 June 2021	TBC	12/8/2021	Task Completed				100%		
	Container deliver to HK	TBC	12/8/2021	10/8/2021	12/8/2021	Task Completed				100%		
	Off site modification work at HK factory	TBC	16/8/2021	24/8/2021	24/8/2021	Task Completed				100%		
	FAT plan of modified Genset No.2 P431 MS-036	12/7/2021	12/7/2021	20/8/2021	20/8/2021	Task Completed				100%		
	FAT of Genset No.2 after modification works	25/8/2021	25/8/2021	25/8/2021	25/8/2021	Task Completed				100%		
	Installation Work of I-beam Support	26/8/2021	26/8/2021	26/8/2021	26/8/2021	Task Completed				100%		
	Transportation of Genset No. 2 to existing power house in SWHSTW and completion of the Genset No.2 installation on I-beam supporting frame	27/8/2021	27/8/2021	27/8/2021	27/8/2021	Task Completed				100%		
	Provision of one (1) can of 160L diesel and a diesel hand pump placed at diesel daily tank of Genset No.1 for standby top up (PPMI-012 item L) Location to be coordinated and advised by SWHSTW operator DSD/ST1	27/7/2021	27/7/2021	31/8/2021								Location to be further coordinated with DSD.
	Modification works of existing switchboard	1/9/2021	1/9/2021	8/9/2021	8/9/2021	Task Completed				100%		
	Cables (including control cable and power cables) laying and installation of cable containment, busbar chamber	21/7/2021	30/7/2021	8/9/2021	8/9/2021	Task Completed				100%		
Supply of busbar chamber/ connection box	10/8/2021	10/8/2021	3/9/2021	3/9/2021	Task Completed				100%			
Completion of all Genset cables and cable termination work to existing power house in SWHSTW after the completion of Genset No. 2 installation work	1/9/2021	1/9/2021	8/9/2021	8/9/2021	Task Completed				100%			
Delivery of dummy load and self-test	9/9/2021	9/9/2021	14/9/2021	15/9/2021	Task Completed				100%			
SAT and T&C (witness by AECOM and DSD/ST1) Please allow 1 week advance notice for coordination with DSD/ST1, e.g. genset signal start, etc.)	15/9/2021	15/9/2021	15/9/2021	16/9/2021	Task Completed				100%			
04SC009 - Design, Supply and Installation of HVSB	Submission of subletting package for acceptance	21/4/2020		1/5/2020		-						
	Acceptance of subletting package	21/5/2020		30/5/2020		-						

Item	Major Activities & Submission in coming 3 months	Time					Progress (E&M contract)				Action	Remarks / Status
		Contract Planned Commencement Date	Anticipated / Actual Commencement Date	Contract Planned Finish Date	Anticipated / Actual Finish Date	% of time elapsed based on "updated date")	Unit	Total Quantity	Completed Quantity	Actual Progress %		
	Tender invitation	1/6/2020		14/6/2020		-						
	Tender award	1/7/2020		14/7/2020		-						
04SC010 - Design, Supply and Installation of LVSB	Submission of subletting package for acceptance	1/5/2020		14/5/2020		-						
	Acceptance of subletting package	1/6/2020		14/6/2020		-						
	Tender invitation	14/6/2020		30/6/2020		-						
	Tender award	1/7/2020		14/7/2020		-						
04SC011 - Design and Installation of Building	Submission of subletting package for acceptance	14/4/2020		30/4/2020		-						
	Acceptance of subletting package	14/5/2020		30/5/2020		-						
	Tender invitation	30/5/2020		14/6/2020		-						
	Tender award	21/6/2020		30/6/2020		-						
04SC012 - Facility Computerized Systems	Submission of subletting package for acceptance	14/5/2020		30/5/2020		-						
	Acceptance of subletting package	14/6/2020		30/6/2020		-						
	Tender invitation	1/7/2020		14/7/2020		-						
	Tender award	21/7/2020		14/8/2020		-						
<b>Plant and Materials (Marking Scheme)</b>												
PS Clause no. 6B.2.1 Inlet Pump	Submission of marking scheme for PM's acceptance (fourth draft)	1/5/2020	1/5/2020	1/9/2020	19/8/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020.
	Submission of marking scheme for PM's acceptance	1/5/2020	1/5/2020	1/9/2020	19/8/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020.
	Acceptance of marking scheme by the PM	15/5/2020	20/8/2020	15/9/2020	1/9/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	29/5/2020	9/9/2020	29/9/2020	18/9/2020	Task Completed				100%		Tender invitation was conducted on 9 Sept 2020 and returned on 18 Sept 2020.
PS Clause no. 6B.2.1 Inlet Pump	Tender award	5/6/2020	19/9/2020	5/10/2020	7/10/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 5 Oct 2020, Tender report was submitted on 7 Oct 2020. AECOM noted on 8 Oct 2020.
	Acceptance of tender award	19/6/2020	17/10/2020	19/10/2020	15/11/2020	Task Completed				-		
	Submission of marking scheme for PM's acceptance (third draft)	1/5/2020	14/5/2020	1/9/2020	19/8/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	1/5/2020	14/5/2020	1/9/2020	19/8/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4 MBR Pre-treatment Screen	Acceptance of marking scheme by the PM	15/5/2020	20/8/2020	15/9/2020	1/9/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	29/5/2020	20/11/2020	29/9/2020	11/12/2020	Task Completed				100%		Tender invitation was conducted on 20 Nov 2020 and returned on 11 Dec 2020. Tender Technical Submission Evaluation Report was submitted on 12 Jan 2021. AECOM noted on 22 Jan 2021.
	Tender award	5/6/2020	13/12/2020	5/10/2020	3/3/2021	Task Completed				100%		Tender Report was submitted on 4 Feb 2021, AECOM commented on 19 Feb 2021, Bestwise submitted supplementary information on 26 Feb 2021. AECOM noted on 3 Mar
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	1/5/2020	14/5/2020	1/9/2020	2/9/2020	Task Completed				100%		AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
	Submission of marking scheme for PM's acceptance	1/5/2020	3/9/2020	1/9/2020	2/9/2020	Task Completed				100%		Bestwise resubmitted on 2 Sep 2020
PS Clause no. 6B.2.4 Air Diffusion System	Acceptance of marking scheme by the PM	15/5/2020	20/8/2020	15/9/2020	1/9/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020, subject to conditions.
	Tender invitation	29/5/2020	17/2/2021	29/9/2020	12/3/2021	Task Completed				100%		Procurement package would follow the approved format (i.e. aeration blower) Tender invitation was conducted on 17 Feb 2021. Addendum No. 1 was issued on 18 Feb 2021. Tender return date was extended from 26 Feb 2021 to 12 Mar 2021. Tender returned on 12 Mar 2021
	Tender award	5/6/2020	18/3/2021	5/10/2020	20/4/2021	Task Completed				-		Technical Submission Evaluation Report was submitted on 18 Mar 2021. AECOM noted on 30 Mar 2021. Tender Report was submitted on 8 Apr 2021. LOI was issued to supplier.
	Acceptance of tender award	19/6/2020	20/2/2021	19/10/2020	12/3/2021	Task Completed				-		
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	14/5/2020	14/5/2020	14/9/2020	19/8/2020	Task Completed				100%		AECOM commented on 14 August 2020, Bestwise resubmitted on 19 Aug 2020
	Submission of marking scheme for PM's acceptance	14/5/2020	14/5/2020	14/9/2020	19/8/2020	Task Completed				100%		Bestwise resubmitted on 19 Aug 2020
PS Clause no. 6B.2.4 BR Aeration Blower	Acceptance of marking scheme by the PM	28/5/2020	20/8/2020	28/9/2020	1/9/2020	Task Completed				100%		AECOM accepted on 1 Sep 2020
	Tender invitation	11/6/2020	3/2/2021	12/10/2020	3/3/2021	Task Completed				100%		Procurement package was submitted to AECOM under CGS-066. AECOM replied on 29 Jan 2021. Tender invitation was conducted on 3 Feb 2021. Tender returned on 3 Mar 2021
	Tender award	18/6/2020	4/3/2021	19/10/2020	12/4/2021	Task Completed				-		Technical Submission Evaluation Report was submitted on 10 Mar 2021. AECOM noted on 19 Mar 2021. Tender Report was submitted on 24 Mar 2021. LOI was issued to supplier.
	Acceptance of tender award	2/7/2020	4/3/2021	2/11/2020	25/3/2021	Task Completed				-		AECOM accepted on 1 Sep 2020, subject to conditions.
PS Clause no. 6B.2.4	Submission of marking scheme for PM's acceptance	14/5/2020	1/5/2020	14/9/2020	2/9/2020	Task Completed				100%		AECOM commented on 1 September 2020, Bestwise resubmitted on 2 Sep 2020
	Submission of marking scheme for PM's acceptance	14/5/2020	3/9/2020	14/9/2020	2/9/2020	Task Completed				100%		Bestwise resubmitted on 2 Sep 2020

