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

DECEMBER 2023

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Contract No. SPW 13/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

December 2023

(January 2024)

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EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – December 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 28th 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 December 2023 to 31 December 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
- Pipe jacking
- Sewage, utility and pipe works
- Road works
- ABWF works
- ELS

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

- RC works
- ABWF 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

- Construction of Superstructure
- Electrical Installation
- MVAC Installation
- Plumbing System Installation
- MFA and AFA installation
- SPR Installation
- EOT and Monorail Installation
- Bio-Gas Holding Tank Installation
- Genset Installation
- Penstock and Stoplog Installation
- Pipework Installation
- Draft Tube Mixer Installation

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

- E&M works for Leachate Pre-treatment Plant at existing compressor house, BR No 3&4 and MFB1
- E&M works at Portion B-5, MFB2.
- 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

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.

Noise Monitoring

v. Noise monitoring was conducted at three noise monitoring stations once per week in the reporting month.

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

Ecological Monitoring

vii. 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.

viii. No Action or Limit level was triggered in the reporting month.

Site Inspections and Audit

ix. The Environmental Team (ET) conducted weekly site inspections on 7, 12(DE/2018/03 and DE/2018/04), 14(DC/2018/06 and DC/2018/07), 19 and 28 December 2023 and biweekly landscape inspection on 12 and 28 November 2023. IEC attended the joint site inspection on 28 December 2023. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

Complaints, Notifications of Summons and Successful Prosecutions

x. One environmental complaint regarding construction dust and polluting effluent was reported to EPD on 19 December 2023 and received by ET on 20 December 2023 in the reporting period. After investigation, the part for construction dust was considered project-related, while the part for discharging polluting effluent was considered non-project related.

xi. No notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.

Reporting Changes

xii. There are no particular reporting changes.

Future Key Issues

xiii. 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
- Pipe jacking
- Sewage, utility and pipe works
- Road works
- ABWF works
- ELS

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

- RC works
- ABWF 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

- Construction of Superstructure
- Electrical Installation
- MVAC Installation
- Plumbing System Installation
- MFA and AFA installation
- SPR Installation

- EOT and Monorail Installation
- Bio-Gas Holding Tank Installation
- Transportation and Installation of Steam Boiler System
- Penstock and Stoplog Installation
- Pipework Installation
- Draft Tube Mixer Installation

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

- E&M works for Leachate Pre-treatment Plant at existing compressor house, BR No 3&4 and MFB1
- E&M works at Portion B-5, MFB2.
- 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, Inlet Works.
- E&M works at Portion B-3, PST No. 1-4.

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 (m^3 /day) at Average Dry Weather Flow (ADWF). In 2001, Stage II of SWHSTW was completed with design capacity enhanced to 80,000 m^3 /day at ADWF. In 2009, the expansion of SWHSTW was completed and its design capacity was increased to 93,000m^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 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	Ms. Li Lin	2594 7463
AECOM	Supervisor Representative	Resident Engineer	Ms. Ada Chan	3907 1134
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Manager	Mr. Clarence Yeung	3758 8551
		Environmental Engineer	Mr. Terence Lai	9829 8605
		Assistance Environmental Engineer	Mr. Timothy To	6203 7133
	Contractor (DC/2018/07)	Environmental Engineer	Ms. Barbara Yiu	9758 2034
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
- Pipe jacking
- Sewage, utility and pipe works
- Road works
- ABWF works
- ELS

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

- RC works
- ABWF 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

- Construction of Superstructure
- Electrical Installation
- MVAC Installation
- Plumbing System Installation
- MFA and AFA installation
- SPR Installation
- EOT and Monorail Installation
- Bio-Gas Holding Tank Installation
- Genset Installation
- Penstock and Stoplog Installation
- Pipework Installation
- Draft Tube Mixer Installation

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

- E&M works for Leachate Pre-treatment Plant at existing compressor house, BR No 3&4 and MFB1

- E&M works at Portion B-5, MFB2.
  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

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	1	Section 4
	Scissor lift platform	4	SDB and CHP
	Roller	1	Section 4
DC/2018/07	Excavator	7	Area C, Area D, Inlet, SAS, MFB
	Generator	3	PST, MFB
	Mobile Crane	1	PST
	Tower crane	2	Inlet, MFB
	Enertainer	1	Inlet
DE/2018/03	Generator	7	Sidestream, THP and Bio-gas Tank
	Tower Crane	1	Sidestream
DE/2018/04	Generator	1	MFB

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
- Pipe jacking
- Sewage, utility and pipe works
- Road works
- ABWF works
- ELS

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

- RC works
- ABWF 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

- Construction of Superstructure
- Electrical Installation
- MVAC Installation
- Plumbing System Installation
- MFA and AFA installation
- SPR Installation
- EOT and Monorail Installation
- Bio-Gas Holding Tank Installation
- Transportation and Installation of Steam Boiler System
- Penstock and Stoplog Installation
- Pipework Installation
- Draft Tube Mixer Installation

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

- E&M works for Leachate Pre-treatment Plant at existing compressor house, BR No 3&4 and MFB1
- E&M works at Portion B-5, MFB2.
- 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, Inlet Works.
- E&M works at Portion B-3, PST No. 1-4.

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-RN1056-23	9 Oct 2023	8 Jan 2024	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
Construction Noise Permit	GW-RN1056-23	9 Oct 2023	8 Jan 2024	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-RN1123-23	23 Oct 2023	22 Jan 2024	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	Verified by IEC on 30 Oct 2023
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(1)	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 Larson Davis LxT1	A2A-15269-EO 0003737	9-Mar-2024 11-May-2024
Acoustic Calibrator	LD CAL200	13098	20-Mar-2024

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* (1)	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^3 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 cm2;

(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)	3166	31-Mar-2024

High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model no. G3101)	2036	8-Jan-2024
		774	7-Feb-2024
Wind Anemometer	YGY-FSXY1	YG 21071630T0924	17-Mar-2024

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

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
Egretta garzetta	Little Egret	小白鷺
Ardea cinerea	Grey Heron	蒼鷺
Ardeola bacchus	Chinese Pond Heron	池鷺
Phalacrocorax carbo	Great Cormorant	普通鸕鷀
Ardea alba	Great Egret	大白鷺
Bubulcus coromandus	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

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	54.3 – 57.6	75 dB
NM2	41.7 – 68.3	
NM3	58.6 – 62.4	

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 variated 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/m3)		Action Level, (µg/m3)	Limit Level, (µg/m3)
	Average	Range		
AM1	28	14 – 46	320	500
AM2	30	15 – 50	322	500

Table 5.3 Summary Table of 24-hour TSP Monitoring Results

Monitoring Station	Concentration (µg/m3)		Action Level, (µg/m3)	Limit Level, (µg/m3)
	Average	Range		
AM1a*	82	56 – 112	189	500
AM2a	96	68 - 125	187	500

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

5.2.3 According to our field observations, the major dust source identified were nearby road traffic.

5.2.4 The air quality monitoring result measured in reporting month was similar to previous months. The air quality monitoring result was slightly variated 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	40	1390
Waterbirds	16	321

Table 5.5 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	57
Ardea cinerea	Grey Heron	蒼鷺	75
Ardeola bacchus	Chinese Pond Heron	池鷺	44
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	38
Ardea alba	Great Egret	大白鷺	18
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	34
		Total	**266**

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%	99%
Abundance	**Monthly**	**-0.035**	✓	✓
	Seasonal	**0.516**	✓	✓

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	0.369	✓	✓	-0.222	✓	✓	✓
Grey Heron	0.391	✓	✓	1.286	✓	✓	✓
Chinese Pond Heron	0.689	✓	✓	0.689	✓	✓	✓
Great Cormorant	-0.901	✓	✓	0.901	✓	✓	✓
Great Egret	-1.110	✓	✓	-0.370	✓	✓	✓
Eastern Cattle Egret	0.986	✓	✓	1.775	✓	✓	✓

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 excavation and sheet-piling, and human activities including cycling, fishing, grazing 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.

Observations

5.3.6 Waterbird behaviour observed during ecological monitoring are listed below:

- Flying
- Foraging
- Soaring
- Resting
- Fighting

5.3.7 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**
T1 (PC1, PC2)	N/A	Human Activities such as Cycling, Grazing and Fishing Construction activities such as excavation, and breaking works
T2 (PC3, PC4)	Construction activities such as generator & welding works, Scaffolding, sedimentation tank, Excavation and crane	Human Activities such as Fishing, Cycling, Grazing and Landscape Planting Construction activities such as Sheet-piling, generator & welding works, Scaffolding, sedimentation tank, Excavation, crane and breaking works
PC5	Construction activities such as Excavation and crane	N/A
T3 (PC6, PC7)	Construction activities such as Sheet-piling	Human Activities such as Cycling, Grazing and Fishing Construction activities such as Excavation, Sheet-piling, generator & wielding works, Scaffolding, lifting works

5.4 Waste Management

5.4.1 The quantities of waste for disposal in the Reporting Period are summarized in ***Table 5.9*** to ***5.12***. The Monthly Summary Waste Flow Table is shown in ***Appendix 5.9***. Whenever possible, materials were reused on-site as far as practicable.

Table 5.9 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^3)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000m^3)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m^3)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m^3)	0.399	0.626	14.321
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^3)	0.036	0.022	0.830

Table 5.10 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^3)	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^3)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m^3	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m^3)	0.569	0.380	24.284
Metals (in '000kg)	0.000	8.04	8.040
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^3)	0.131	0.116	0.936

Table 5.11 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 '000m^3)	0.000	0.000	638.380
Metals (in '000kg)	3.070	0	146.200

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2023)
Paper / Cardboard Packing (in '000kg)	0.257	0	1.495
Plastics (in '000kg)	0.010	0	0.090
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000kg)	60.980	38.08	356.42

Table 5.12 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^3)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000m^3)	0.000	0.000	119.590
Metals (in '000kg)	0.000	0.000	36.230
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.200
Plastics (in '000kg)	0.000	0.000	0.000
Chemical Wastes (in '000kg)	0.000	0.000	0.800
General Refuses (in '000kg)	0.000	6.07	20.04

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.

6.3 Ecological Monitoring

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

6.4 Review of the Reasons for and the Implications of Non-compliance

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

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

6.5.1 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 7, 12(DE/2018/03 and DE/2018/04), 14(DC/2018/06 and DC/2018/07), 19 and 28 December 2023 and biweekly landscape inspection on 12 and 28 December 2023. IEC attended the joint site inspection on 28 December 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
20231219_2	19-Dec-2023	The dull green barrier should be keep intact.	-	To be rectified by Contractor
20231219_3	19-Dec-2023	Contractor was reminded to affix the NRMM label on the roller.	NRMM label has been affixed on the roller.	Rectified on 28-Dec-2023.
20231228_1	28-Dec-2023	Screen hoarding shall be erected along areas of the site boundary.	Screen hoarding has been erected to minimize dust and visual impacts.	Rectified on 3-Jan-2023.
20231228_2	28-Dec-2023	Drip tray should be provided to the oil drums.	Oil drums have been removed.	Rectified on 3-Jan-2023.

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20231214_2	14-Dec-2023	NRMM label should be affixed on the generator (MFB2).	NRMM label has been affixed on the generator.	Rectified on 19-Dec-2023.
20231219_4	19-Dec-2023	Drip tray should be provided to the chemical container	Unused chemical container was covered by impervious sheeting to prevent leakage.	Rectified on 3-Jan-2023.
20231228_4	28-Dec-2023	Site runoff should be properly treated by Wetsep before discharge.	Contractor has removed the pump and stop the direct discharge of site runoff.	Rectified on 3-Jan-2023.

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

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

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20231219_5	19-Dec-2023	Contractor was reminded to provide sufficient waste bins/skips at MFB2.	Waste bag has been provided for waste collection.	Rectified on 28-Dec-2023.

8 Complaints, Notification of Summons and Prosecution

8.1.1. One environmental complaint regarding construction dust and polluting effluent was reported to EPD on 19 December 2023 and received by ET on 20 December 2023 in the reporting period. After investigation, the part for construction dust was considered project-related, while the part for discharging polluting effluent was considered non-project related. Details is provided in the Complaint Investigation Report in ***Appendix 8.2***.

8.1.2. No notification of summons and successful prosecution regarding the construction works was recorded in the reporting period.

8.1.3. The details environmental complaints for the Project are summarized by complaint log in ***Appendix 8.1.***

8.1.4. 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
December 2023	1
Total	**5**

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
Total	**-**	**0**	**0**

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

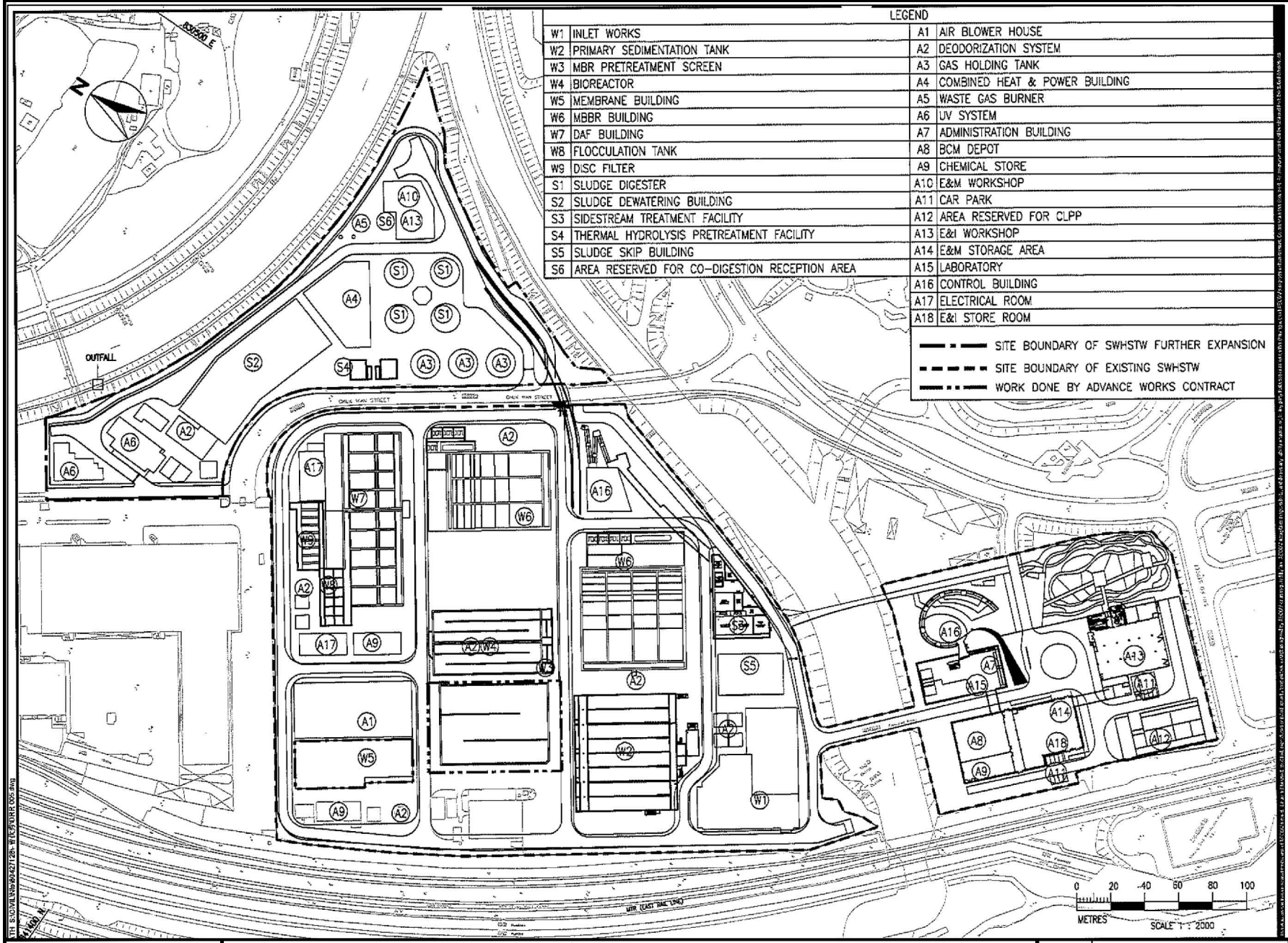
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	• RC works • Pipe jacking • Sewage, utility and pipe works • Road works • ABWF works • ELS	• Implement proper dust mitigation measures on dusty surface, stockpiles and related dusty works • Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers • Proper maintenance of the on-site drainage system • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
DC/2018/07	• RC works • ABWF works	• Implement proper dust mitigation measures on dusty surface and stockpiles

Contract No.	Key Construction Works	Recommended Mitigation Measures
	• Pile laying	• Implement proper measures to prevent excavated material, silt or debris being deposited or washed into existing drainage systems and waterbodies • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers, especially screening noise during piling related activities • Proper maintenance of the on-site drainage system • Provision of protection to ensure no runoff out of site area or direct discharge into public drainage system • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal. • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
DE/2018/03	• Construction of Superstructure • Electrical Installation • MVAC Installation • Plumbing System Installation • MFA and AFA installation • SPR Installation • EOT and Monorail Installation • Bio-Gas Holding Tank Installation • Transportation and Installation of Steam Boiler System • Penstock and Stoplog	• Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers • Implement proper waste mitigation measures to prevent accidental leakage of chemical • Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Proper maintenance of the on-site drainage system • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal. • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.

Contract No.	Key Construction Works	Recommended Mitigation Measures
	Installation • Pipework Installation • Draft Tube Mixer Installation	
DE/2018/04	• E&M works for Leachate Pre-treatment Plant at existing compressor house, BR No 3&4 and MFB1 • E&M works at Portion B-5, MFB2. • 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, Inlet Works. • E&M works at Portion B-3, PST No. 1-4.	• Good site practices should be adopted to check for any accumulation of waste materials on site and dispose waste materials at designated areas. • Segregate and store different types of waste to enhance reuse or recycling of materials and their proper disposal. • Implement proper dust mitigation measures during the demolition of existing compressor house. • Implement proper noise mitigation measures to prevent potential noise nuisances to nearby sensitive receivers. • Ensure all on-site regulated machines have displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.

Figure 2.1

Project Layout



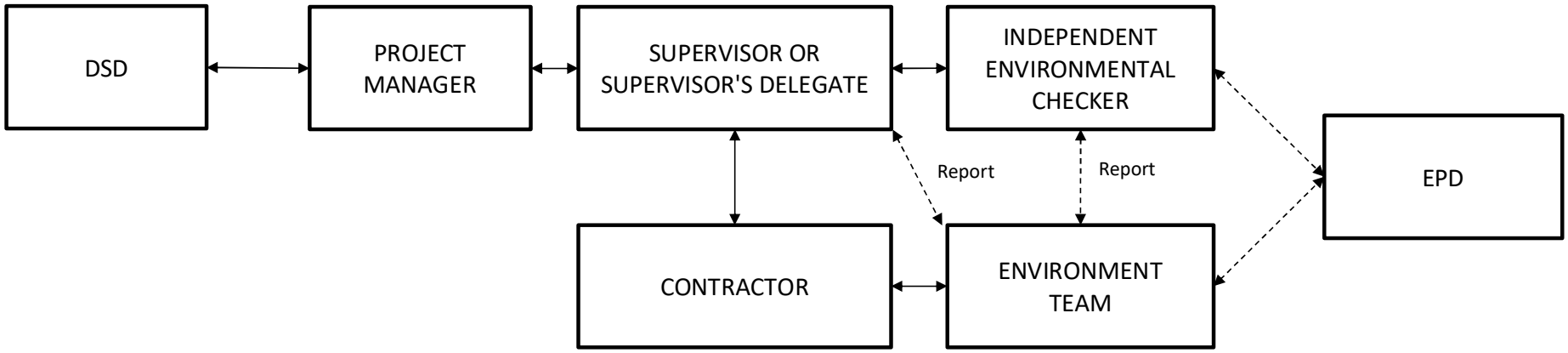
Shek Wu Hui Effluent Polishing Plant

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

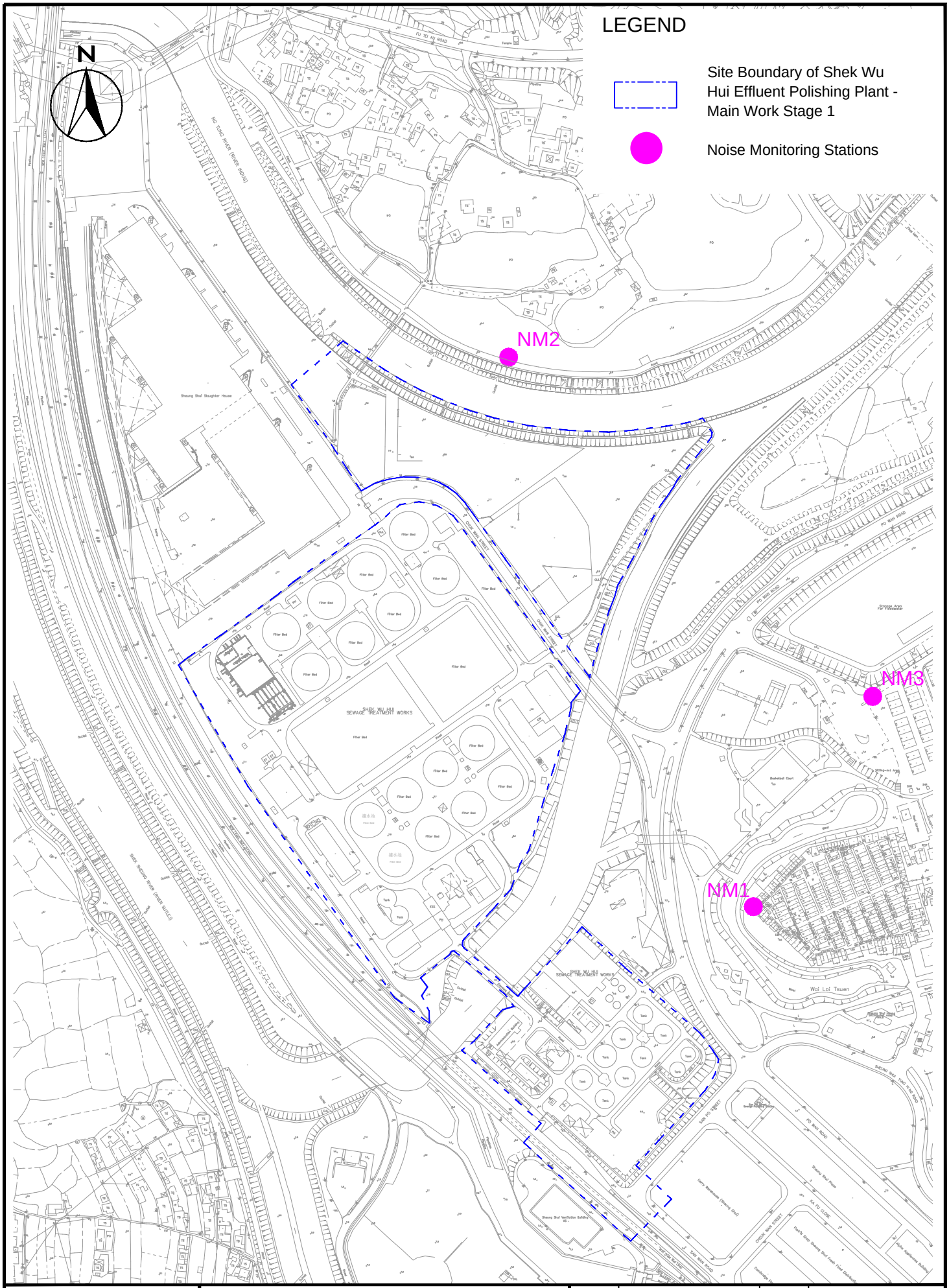
Project Organization Chart



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

Figure 4.1

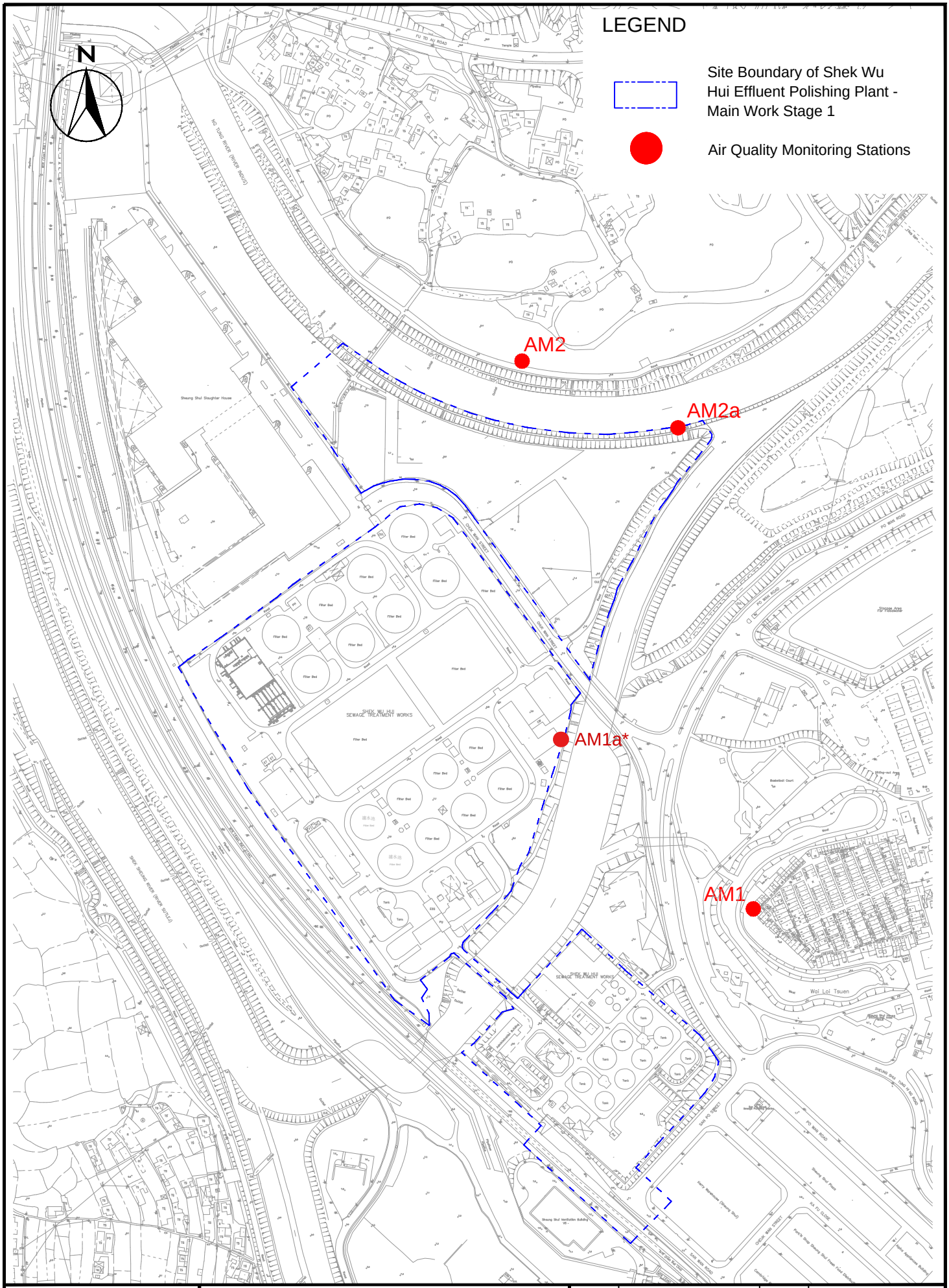
Locations of Noise Monitoring Stations



	Shek Wu Hui Effluent Polishing Plant	SCALE	1:4000@A4	DATE	SEP 2019
		CHECK	JM	DRAWN	SY
	Location of Noise Monitoring Stations	JOB No.	MA19019	FIGURE NO. 3	REV -

Figure 4.2

Locations of Air Quality Monitoring Stations

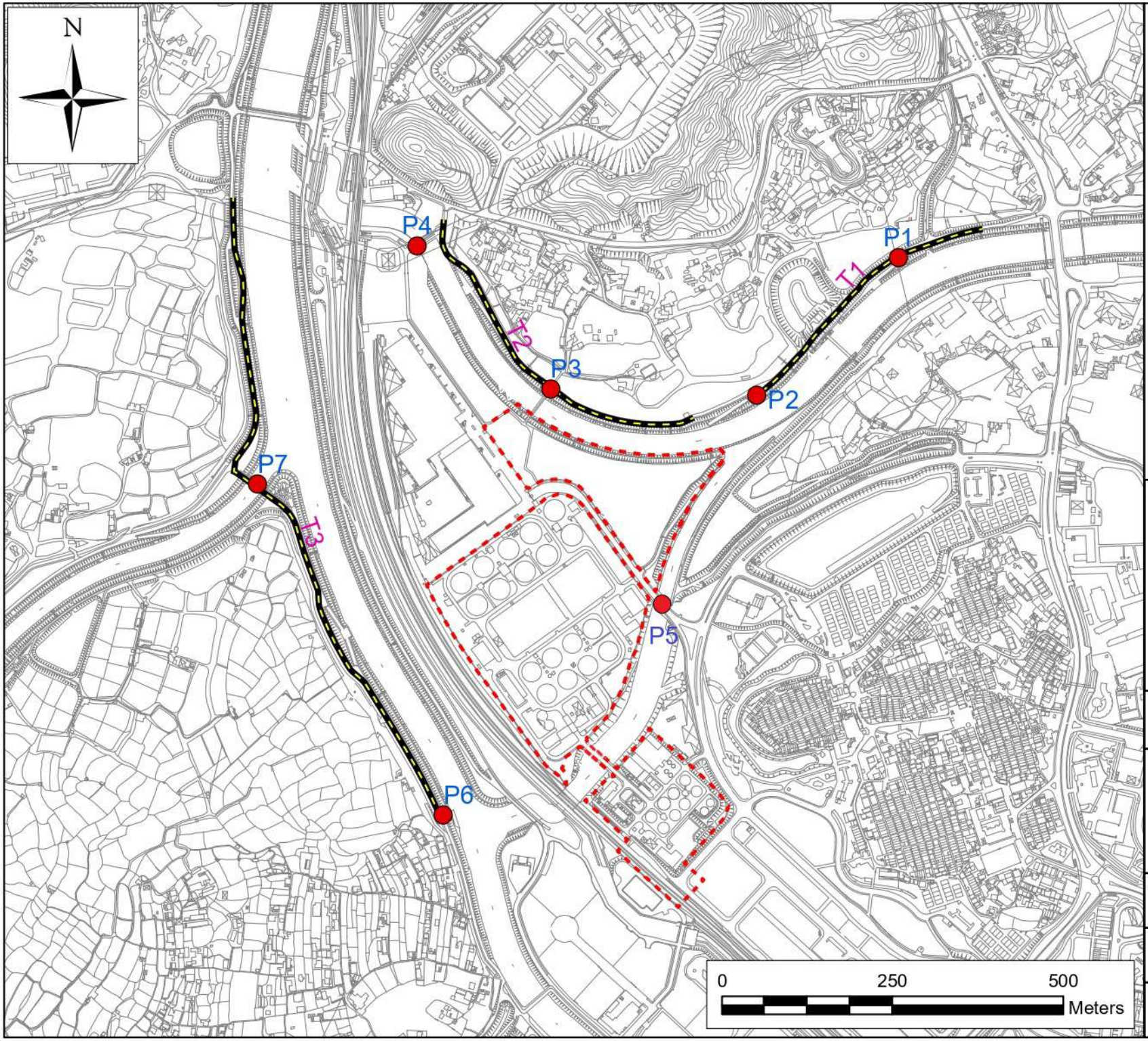


Shek Wu Hui Effluent Polishing Plant - Location of Air Quality Monitoring Stations	SCALE	1:400@A4	DATE	SEP 2019
	CHECK	JM	DRAWN	SY
	JOB No.		FIGURE NO. 2	REV -

F:/Project_drawings

Figure 4.3

Locations of Ecological Monitoring Stations



Legend

- Project Site Boundary
- Walk Transects
- Point Count Locations

PREPARED BY

Lam Environmental Services Limited

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42 Wong Chuk Hang Road,
Hong Kong

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E-mail: info@lamenviro.com
Website: http://www.lamenviro.com

CONTRACT NO.

SPW 12/2021

PROJECT TITLE

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

SCALE	DATE
1:7500@A4	***Sept 2021***
DRAWN BY ***AL***	CHECK BY ***MC***
FIGURE NO. ***1***	REVISION NO. ***-***

Appendix 2.1

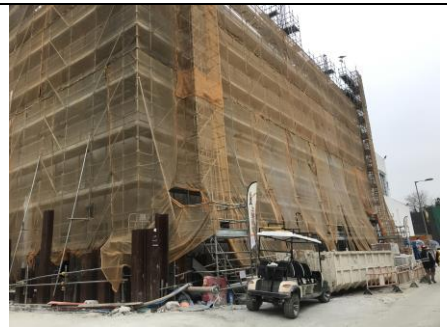
Layout Plan of Construction Activities and Site Record Photos

Site Record Photos

DC/2018/06

SD&THP	CHP	SDB

DC/2018/07

			
BR2	MFB	PST	Inlet

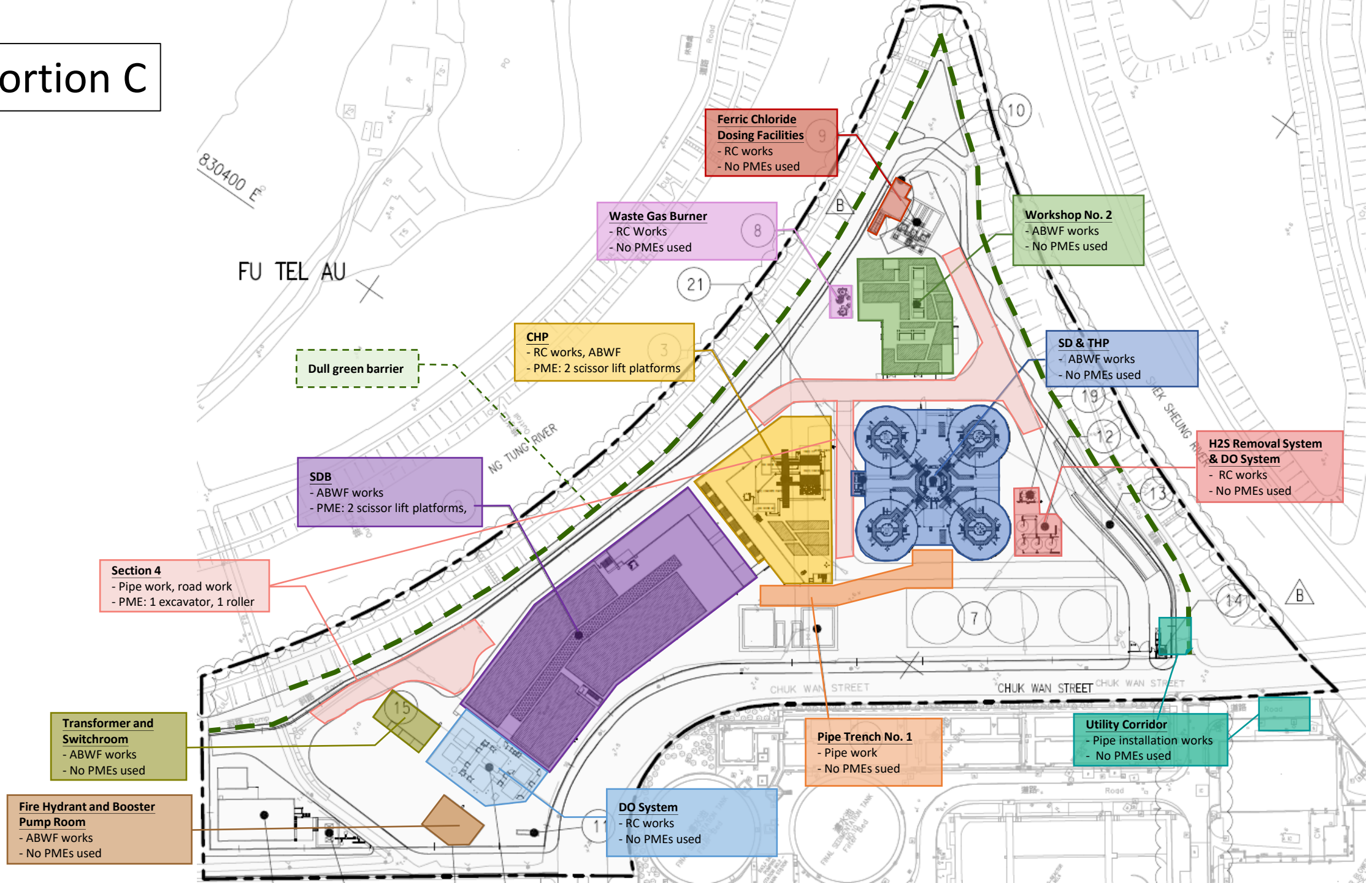
DE/2018/03

Sidestream	Bio Gas Tank

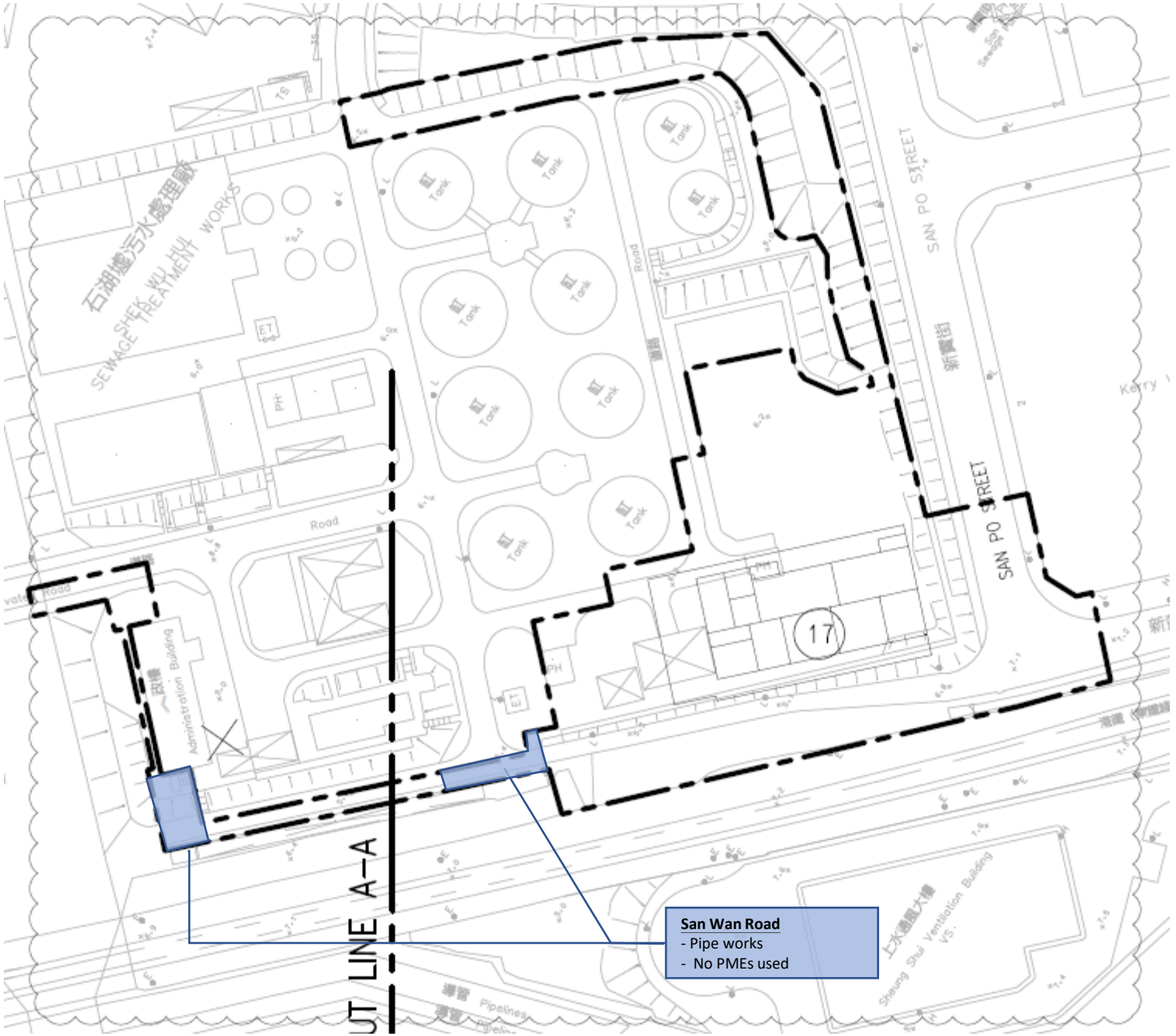
DE/2018/04

Compressor House

Portion C

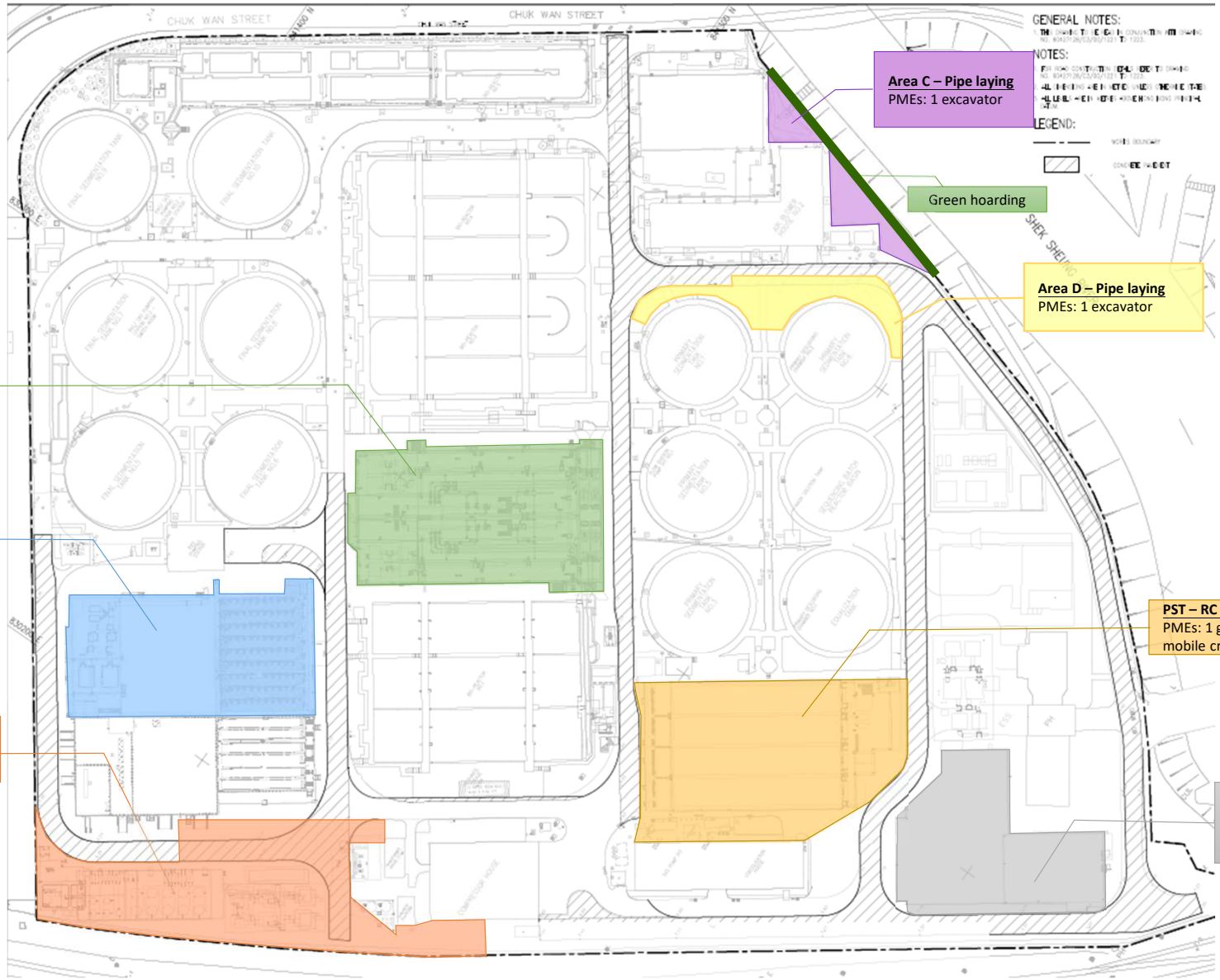

830400 E
FU TEL AU
NG TUNG RIVER
SHEK SHEUNG RIVER
CHUK WAN STREET
CHUK WAN STREET
CHUK WAN STREET
Ferric Chloride Dosing Facilities
- RC works
- No PMEs used
Waste Gas Burner
- RC Works
- No PMEs used
Workshop No. 2
- ABWF works
- No PMEs used
Dull green barrier
CHP
- RC works, ABWF
- PME: 2 scissor lift platforms
SD & THP
- ABWF works
- No PMEs used
H2S Removal System & DO System
- RC works
- No PMEs used
SDB
- ABWF works
- PME: 2 scissor lift platforms,
Section 4
- Pipe work, road work
- PME: 1 excavator, 1 roller
Transformer and Switchroom
- ABWF works
- No PMEs used
Fire Hydrant and Booster Pump Room
- ABWF works
- No PMEs used
DO System
- RC works
- No PMEs used
Pipe Trench No. 1
- Pipe work
- No PMEs sued
Utility Corridor
- Pipe installation works
- No PMEs used

Portion A



San Wan Road
- Pipe works
- No PMEs used
SAN PO STREET
SAN PO STREET
17
Tank
Road
Administration Building
Pipelines

Portion B



Area C – Pipe laying
PMEs: 1 excavator

Green hoarding

Area D – Pipe laying
PMEs: 1 excavator

BR2 – RC works
No PME used

MFB – RC works
PMEs: 2 generators,
2 excavators, 1 tower crane

PST – RC works
PMEs: 1 generator, 1 mobile crane

SAS - ABWF works / Pipe laying
PMEs: 2 excavators

Inlet – RC works
PMEs: 1 excavator, 1 tower crane, 1 enertainer

Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM

ISO A1 594mm x 841mm

841600 N

841400 N

830400 E

830200 E

FU TEL AU

SHEUNG SHUI HEUNG

SHEUNG SHUI SLAUGHTER HOUSE

NG TUNG RIVER

SHEK SHEUNG RIVER

PO WAN ROAD

CHUK WAN STREET

MTR (EAST RAIL LINE)

SPS PS
Penstock and Stoplog Installation

Workshop No.2
Electrical Installation

CHP
EOT and Monorail Installation

THP
Delivery and Installation of THP System
PME:GeneratorX1

SDB
MFA and AFA Installation at SDB
SPR Installation at SDB
Plumbing installation at SDB
EOT and Monorail Installation at SDB

Bio-gas Tank
Bio-Gas Holding tank Installation
PME:GeneratorX2

Solid Dull Green Barrier

Sidestream Superstructure

PME:
Generator X4
Tower Crane X1

SAS
Monorail Installation

NOTES:

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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
18	DEODORIZATION SYSTEM NO. 11
19	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

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AECOM

PROJECT
項目

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
業主

渠務署
Drainage Services Department

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
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SUB-CONSULTANTS
分判工程顧問公司

ISSUE/REVISION
修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
-	MAR. 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/2018/03

SHEET TITLE
圖紙名稱
SHEK WU HUI EFFLUENT POLISHING PLANT GENERAL LAYOUT PLAN

SHEET NUMBER
圖紙編號
60427128/C2/00/1001

Plot File by: GuoX 26/03/2019
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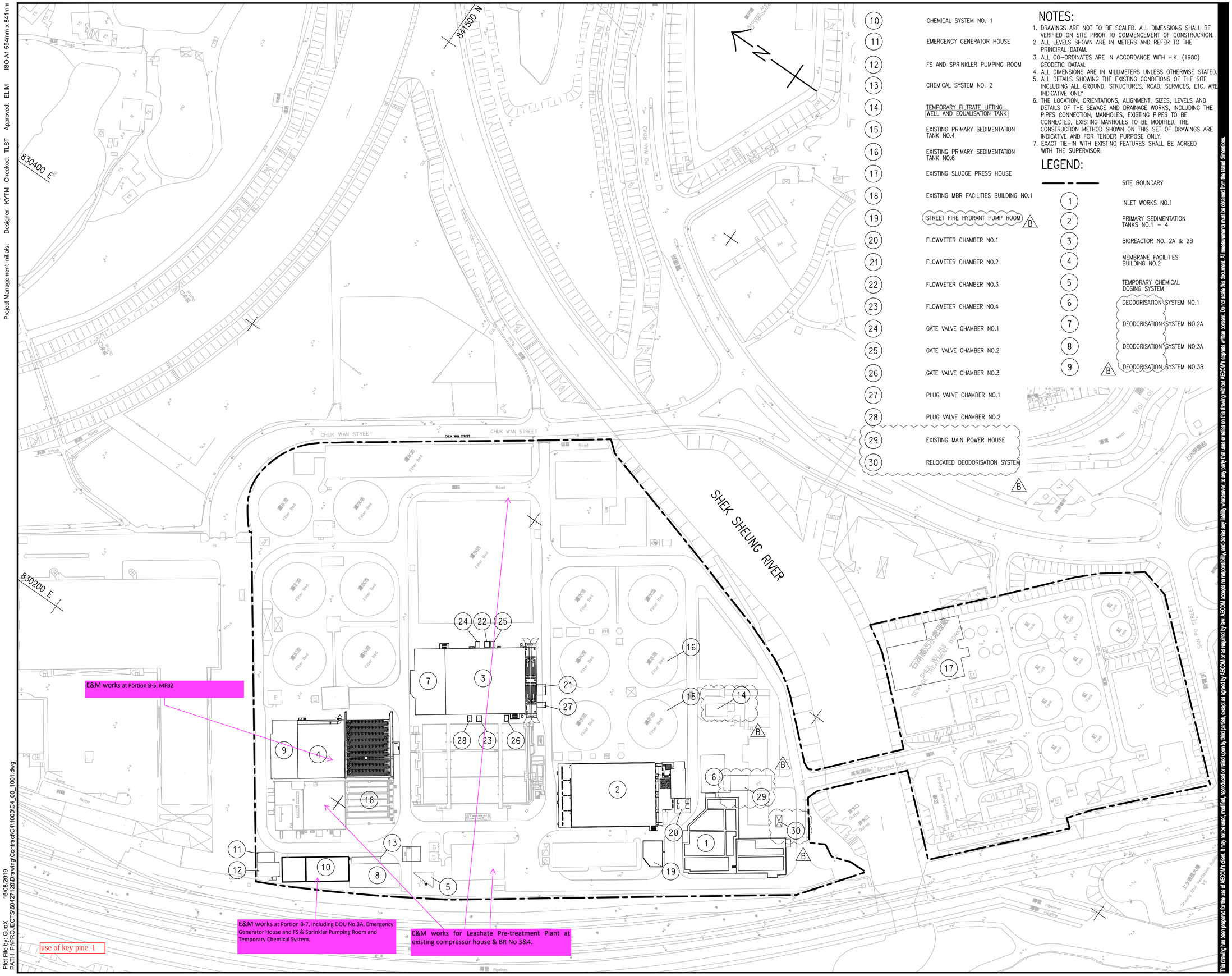
Project Management Initials: Designer: KYTM Checked: TLST Approved: ELIM ISO A1 594mm x 841mm



10 CHEMICAL SYSTEM NO. 1
11 EMERGENCY GENERATOR HOUSE
12 FS AND SPRINKLER PUMPING 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 B
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:

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

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PROJECT 項目

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 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
B	AUG. 19	TENDER ADDENDUM NO. 3	TLST
A	JUL. 19	TENDER ADDENDUM NO. 2	TLST
-	APR. 19	TENDER DRAWING	TLST

STATUS 用途

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

Plot File by: GuoX 15/08/2019
PATH: P:\PROJECTS\60427128\Drawing\Contract\C4\1000\C4_00_1001.dwg

use of key pme: 1

Appendix 3.1

Environmental Mitigation Implementation Schedule

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
Air Quality Monitoring							
S2.4.1.3	Dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation and good site practices:						
	• 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;	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)	^
	• Any dusty material remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;						^
	• A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;						^
	• 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;						^
	• 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;						^

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
	• 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.						*
	• 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;						^
	• 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;						^
	• 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;						^
	• 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;						^
	• Any skip hoist for material transport should be totally enclosed by impervious sheeting;						^
	• 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;						^
	• 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;						^

	• 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						^
	• 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						^

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
Noise Impact							
S3.4.1.1	Use of movable barrier, enclosure, acoustic mat and quiet plant. Use of wooden frames barrier with a small-cantilevered upper portion of superficial density not less than 14kg/m² on a skid footing with 25mm thick internal sound absorptive lining.	To minimize construction noise impact arising from the Project at the affected noise sensitive receivers (NSRs)	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, Noise Control Ordinance (NCO)	^
S3.4.1.2	Good Site Practice:						
	• Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction program.	To minimize construction noise impact arising from the Project at the affected NSRs	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, NCO	^
	• Silencers or mufflers on construction equipment should be utilized and should be properly maintained during the construction program.						^
	• Mobile plant, if any, should be sited as far away from NSRs as possible.						^
	• Machines and plant (such as trucks) that may be in intermittent use should be shut down between works periods or should be throttled down to a minimum.						^
	• Plant known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs.						^
	• Material stockpiles and other structures should be effectively utilized, wherever practicable, in screening noise from on-site construction activities.						^

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
Ecological Impact							
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						
	• Temporary sewerage and drainage to be designed and installed to collect wastewater and prevent it from entering water bodies;	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	^
	• 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;						^
	• 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;						^

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
	• 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;						^
	• Proper locations for discharge outlets of temporary wastewater treatment facilities well away from sensitive receivers should be identified;						^
	• Adequate lateral support should be erected where necessary in order to prevent soil/mud from slipping into water bodies;						^
	• Site boundaries should be clearly marked and any works beyond the boundary strictly prohibited;						^
	• 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;						^
	• Excavation profiles should be properly designed and executed with attention to the relevant requirements for environment, health and safety;						^
	• 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						^
	• contaminated soil to minimize contaminated runoff and construction materials should be properly covered and located away from nearby water bodies; and						^
	• Supply of suitable clean backfill material after excavation, if required.						^

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
	• 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;						^
	• Speed control for the trucks carrying contaminated materials should be enforced;						^
	• Vehicle wheel washing facilities at construction sites' exit points should be established and used, where necessary; and						^
	• Other measures as detailed in this 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
Water Quality Impact							
S5.2.2.1	<u>Construction Site Runoff</u> 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	Sewage from Workforce						
	• 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;	Handling of site sewage	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	EIAO-TM, WPCO, EIAO	^
	• 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						^

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
Waste Management							
S6.2.2.1	Good Site Practices and Waste Reduction Measures						
	• 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;	Minimize waste generation during construction	Contractors	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	Waste Disposal Ordinance (WDO)	^
	• Training of site personnel in site cleanliness, appropriate waste management procedures and concepts of waste reduction, reuse and recycling;						^
	• Provision of sufficient waste disposal points and regular collection for disposal;						^
	• Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers;						^
	• Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors;						^
	• An Environmental Management Plan (EMP) should be prepared by the contractor and submitted to the Supervisor for approval.						^
S6.2.3.1	Waste Reduction Measures						
	• Segregate and store different types of waste in different containers, skip or stockpiles to enhance reuse or recycling of materials and their proper disposal;	Reduce waste generation	Contractors	Work Sites	Prior to the commencement of construction of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	• Proper storage and site practices to minimize the potential for damage and contamination of construction materials;						^
	• Plan and stock construction materials carefully to minimize amount of waste generated and avoid unnecessary generation of waste;						^
	• Sort out demolition debris and excavated materials from demolition works to recover reusable/recyclable portions (i.e. soil, broken concrete, metal etc.); and						^
	• Provide training to workers on the importance of appropriate waste management procedures, including waste reduction, reuse and recycling.						^

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	^
	• Waste, such as soil, should be handled and stored well to ensure secure containment, thus minimizing the potential of pollution;						^
	• Stockpiling area should be provided with covers and water spraying system to prevent materials from windblown or being washed away; and						^
	• Different locations should be designated to stockpile each material to enhance reuse.						^
S6.2.4.2	Storage, Collection and Transportation of Waste (con't)						
	• Remove waste in timely manner;	Minimize waste impacts arising from waste storage	Contractor	Work Sites	Construction phase of Main Works Stage 1, Stage 2 and Stage 3	WDO	^
	• Employ the trucks with cover or enclosed containers for waste transportation;						^
	• Obtain relevant waste disposal permits from the appropriate authorities; and						^
	• Disposal of waste should be done at licensed waste disposal facilities						^
S6.2.5.2	C&D Materials from Site Formation						
	• Maintain temporary stockpiles and reuse excavated fill material for backfilling;	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	^
	• Carry out on-site sorting;						^
	• Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;						^
	• 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						^
	• Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified.						^
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
	• The Contractor should recycle as much as possible of the C&DM on-site. Public fill and C&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.	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	^
	• The use of wooden hoardings shall not be allowed. An alternative material, such as metal, aluminium or alloy etc, could be used.						^
	• 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.						^
	• 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&D material arising from demolition works, selective demolition method should be adopted.						^
S6.2.5.4	Chemical Waste						
	• If chemical wastes are produced at the construction site, the Contractors should register with EPD as chemical waste producers.	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	^
	• 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.						*
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
	• General refuse should be stored in enclosed bins separately from construction and chemical wastes.	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	^
	• Recycling bins should also be placed to encourage recycling.						^
	• Preferably enclosed and covered areas should be provided for general refuse collection and routine cleaning for these areas should also be implemented to keep areas clean.						^
	• A reputable waste collector should be employed to remove general refuse on a daily basis.						^

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
Landscape and Visual							
S7.3.1.1	Good Site Practices Measures						
	• For areas unavoidably disturbed by the Project on a short term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to.	Minimize the impact to the landscape and visual	Contractor	Work Sites	Prior to construction and construction phase		N/A
	• 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.						N/A
S7.3.2.1	MM4 - Tree Protection & Preservation • 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.	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	MM5 - Tree Transplantation • 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.	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	MM6 - Slope Landscaping						
	• 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 recourses and charter. Woodland tree seedings and/or shrubs should be planted where slope gradient and site conditions allow.	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
	• In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping						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
	• 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.	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
	• 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.						N/A
	• Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum, Diospyros vaccinioides, Gardenia jasminoides, Ixora chinensis, Ligustrum sinense, Litsea rotundifolia, Melastoma dodecandrum, Atalantia buxifolia, Rhodomyrtus tomentosa, Rhaphiolepis indica, and Rhododendron simsii are suggested.*						N/A
S7.3.2.1	MM9 - Vertical Greening • Planting of climbers to grow up vertical surfaces were appropriate.	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	MM10 - Green Roof • 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.	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	MM11 - Screen Planting • Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	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	MM16 - Screen Hoarding • 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)]	To screen undesirable views of the works site.	Designer	Work Sites	Construction phase		*
S7.3.2.1	MM17 - Light Control • 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.	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 μg/m^3		24-hour TSP Level in μg/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.

Appendix 4.2

Copies of Calibration Certificates

TISCH Environmental

RECALIBRATION DUE DATE:
March 31, 2024

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	March 31, 2023	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 749.0	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **3166**		

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	1.0210	6.4	4.00
3	5	6	1	0.9120	8.0	5.00
4	7	8	1	0.8710	8.8	5.50
5	9	10	1	0.7170	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9947	0.6860	1.4135	0.9957	0.6867	0.8860
0.9905	0.9701	1.9990	0.9915	0.9711	1.2530
0.9883	1.0837	2.2349	0.9893	1.0848	1.4009
0.9873	1.1335	2.3440	0.9883	1.1346	1.4693
0.9819	1.3695	2.8270	0.9829	1.3709	1.7720
QSTD	**m=**	**2.07036**	**QA**	**m=**	**1.29643**
	b=	**-0.00719**		**b=**	**-0.00451**
	r=	**0.99999**		**r=**	**0.99999**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$

Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootsmeter manometer reading (mm Hg)	
Ta: actual absolute temperature (°K)	
Pa: actual barometric pressure (mm Hg)	
b: intercept	
m: slope	

RECALIBRATION

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

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145 South Miami Avenue
Village of Cleves, OH 45002

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TOLL FREE: (877)263-7610
FAX: (513)467-9009

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM1a*	**Calbration Date**	:	8-Nov-23
Equipment no.	:	2036	**Calbration Due Date**	:	8-Jan-24

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	298	Kelvin	**Pressure, P_a**	1016	mmHg

Orifice Transfer Standard Information					
Equipment No.	**3166**	**Slope, m_c**	2.07036	**Intercept, bc**	-0.00719
Last Calibration Date	31-Mar-23	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	30-Mar-24	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.)	**Continuous Flow Recorder, W**	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	**X-axis**	(CFM)	**Y-axis**
1	1.5	1.5	3.0	0.8412	30	30.0399
2	2.6	2.6	5.2	1.1064	39	39.0519
3	3.6	3.6	7.2	1.3012	47	47.0626
4	4.7	4.7	9.4	1.4863	55	55.0732
5	5.7	5.7	11.4	1.6365	59	59.0786

By Linear Regression of Y on X

Slope, m = 37.6133 Intercept, b = -1.8700

Correlation Coefficient* = 0.9982

Calibration Accepted = Yes/~~No~~**

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

** Delete as appropriate.

Remarks : Serial No.:2036

Calibrated by	:	William Cheung	**Checked by**	:	Derek Lo
Date	:	8-Nov-23	**Date**	:	8-Nov-23

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM2a	**Calbration Date**	:	10-Oct-23
Equipment no.	:	774	**Calbration Due Date**	:	10-Dec-23

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	298	Kelvin	**Pressure, P_a**	1016	mmHg

Orifice Transfer Standard Information					
Equipment No.	**3166**	**Slope, m_c**	2.07036	**Intercept, bc**	-0.00719
Last Calibration Date	31-Mar-23	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	30-Mar-24	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.)	**Continuous Flow Recorder, W**	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	**X-axis**	(CFM)	**Y-axis**
1	1.2	1.2	2.4	0.7526	20	20.0227
2	1.8	1.8	3.6	0.9210	27	27.0306
3	2.5	2.5	5.0	1.0847	34	34.0386
4	3.5	3.5	7.0	1.2828	41	41.0465
5	4.8	4.8	9.6	1.5017	48	48.0544

By Linear Regression of Y on X

Slope, m	=	37.5214	Intercept, b	=	-7.5564
Correlation Coefficient*	=	0.9980			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks : Serial No.:774

Calibrated by	:	William Cheung	**Checked by**	:	Derek Lo
Date	:	10-Oct-23	**Date**	:	10-Oct-23

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM2a	**Calbration Date**	:	8-Dec-23
Equipment no.	:	774	**Calbration Due Date**	:	7-Feb-24

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	294	Kelvin	**Pressure, P_a**	1017	mmHg

Orifice Transfer Standard Information					
Equipment No.	**3166**	**Slope, m_c**	2.07036	**Intercept, bc**	-0.00719
Last Calibration Date	31-Mar-23	$(H \times P_a / 1013.3 \times 298 / T_a)^{1/2}$			
Next Calibration Date	30-Mar-24	$= m_c \times Q_{std} + b_c$			

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.)	**Continuous Flow Recorder, W**	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$
	(up)	(down)	(difference)	**X-axis**	(CFM)	**Y-axis**
1	1.4	1.4	2.8	0.8187	22	22.1896
2	2.0	2.0	4.0	0.9778	29	29.2499
3	2.9	2.9	5.8	1.1767	37	37.3188
4	3.8	3.8	7.6	1.3465	43	43.3705
5	4.9	4.9	9.8	1.5286	50	50.4308

By Linear Regression of Y on X

Slope, m = 39.4658 Intercept, b = -9.6494

Correlation Coefficient* = 0.9993

Calibration Accepted = Yes/~~No~~**

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

** Delete as appropriate.

Remarks : Serial No.:774

Calibrated by	:	William Cheung	**Checked by**	:	Derek Lo
Date	:	8-Dec-23	**Date**	:	8-Dec-23

Met One Instruments, Inc.
1600 NW Washington Blvd, Grants Pass, OR
TEL (541) 471-7111 Fax (541) 471-7116

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:	*Joni Chuckel*	**Date:**	*07/07/2022*
Calibration Hz/µg/m³:	*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.

Hong Kong Calibration Ltd.
香 港 校 正 有限公司

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:

Equipment No.	Description	Cert. No.	Traceable to
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

Date: 13-Dec-22

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

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O

Calibration Certificate

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	± 0.15	± 0.05

3. Timer

Reference Value	UUT Reading	Tolerance	Uncertainty
10′ 00″ 40	10 min	± 2 sec/hr	± 0.5 sec/hr

4. Dust Particle (PM_{10})

Applied Value ($\mu g/m^3$)	UUT Reading ($\mu g/m^3$) K Factor : 1.26	Tolerance	Uncertainty
350	364	± 20 %	± 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 ----------

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GEOTECHNICS & CONCRETE ENGINEERING (H.K.) LTD.
6 KO SHAN RD., GROUND FL., HUNG HOM, KOWLOON, HONG KONG.
TEL.: 852-2365 9123 FAX NO.: 852-2765 8034

Calibration Data for High Volume Sampler (TSP Sampler)

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

Ambient Condition					
Temperature, T_a	292	Kelvin	**Pressure, P_a**	1018	mmHg

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

Calibration of TSP

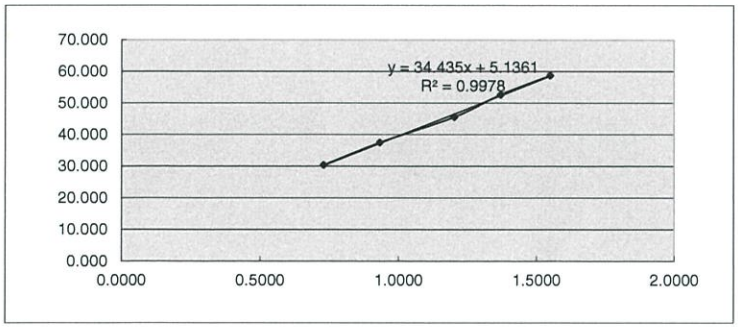
Calibration Point	Manometer Reading H (inches of water) (up)	(down)	(difference)	Q_{std} (m^3 / min.) X-axis	Continuous Flow Recorder, W (CFM)	IC $(W(P_a/1013.3x298/T_a)^{1/2}/35.31)$ Y-axis
1	1.1	1.1	2.2	0.7290	30	30.3769
2	1.8	1.8	3.6	0.9316	37	37.4648
3	3.0	3.0	6.0	1.2016	45	45.5653
4	3.9	3.9	7.8	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 : Poon Wai Hung

Date : 3/4/2023

Checked by : Lo Kam Chuen

Date : 3/4/2023

GEOTECHNICS & CONCRETE ENGINEERING (H.K.) LTD.
6 KO SHAN RD., GROUND FL., HUNG HOM, KOWLOON, HONG KONG.
TEL.: 852-2365 9123 FAX NO.: 852-2765 8034

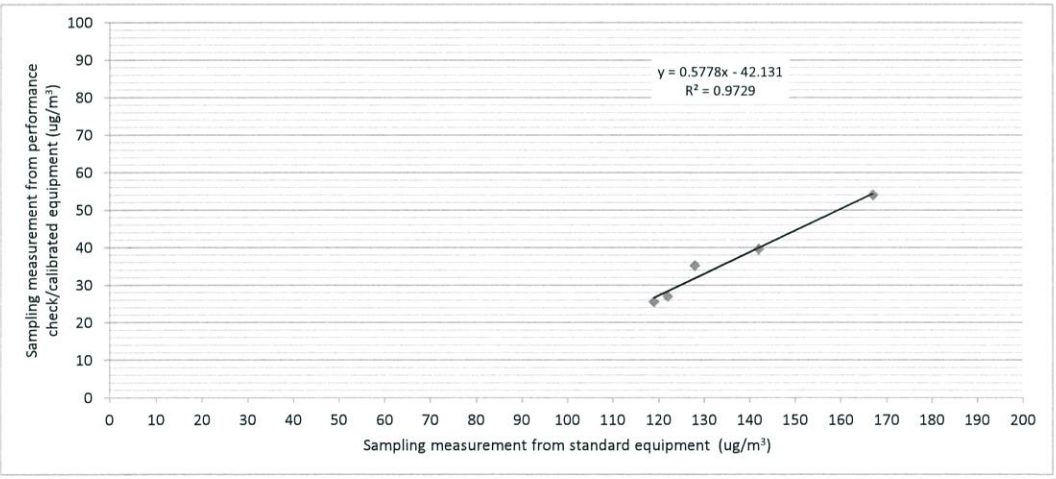
Equipment	Portable Dust Meter	Standard Equipment (High Volume Sampler)
Manufacturer	MET ONE INSTRUMENTS	TISCH
Model Number	BT-645	TE-5170
Serial Number	C15622	2493
Date	3/2/2023	3/2/2023
Location	GCE laboratory - G/FL; No.20, Pak Kung Street, Hung Hom,Kowloon.	

Portable Dust Meter Performance Check Results

Check Point	Date & Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard equipment) (X - Axis)	Concentration in ug/m^3 (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: Ko Kam Chuen Date: 9/2/2023

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6 KO SHAN RD., GROUND FL., HUNG HOM, KOWLOON, HONG KONG.
TEL.: 852-2365 9123 FAX NO.: 852-2765 8034

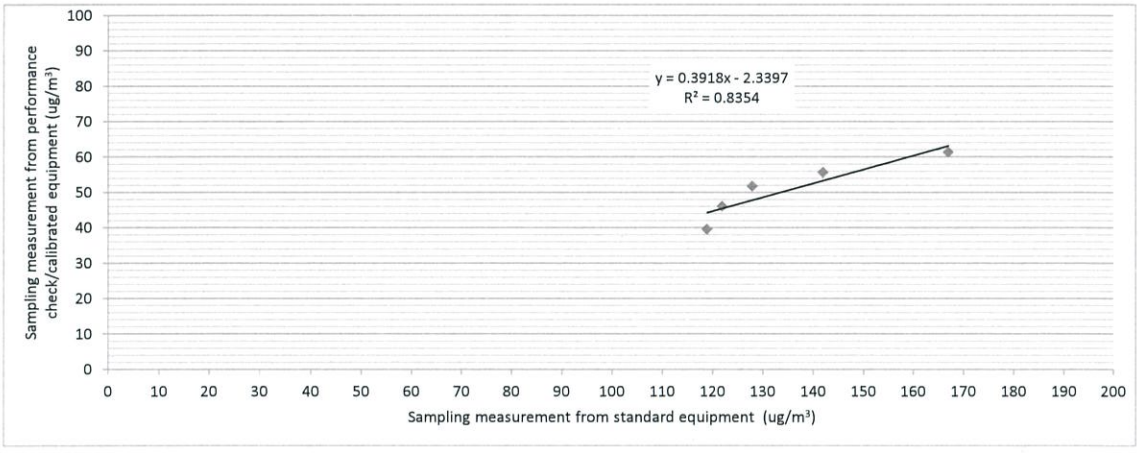
Equipment	Portable Dust Meter	Standard Equipment (High Volume Sampler)
Manufacturer	MET ONE INSTRUMENTS	TISCH
Model Number	AEROCET831	TE-5170
Serial Number	Y23153	2493
Date	3/2/2023	3/2/2023
Location	GCE laboratory-G/FL;No.20 Pak Kung Street., Hung Hom, Kowloon	

Portable Dust Meter Performance Check Results

Check Point	Date & Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard equipment) (X - Axis)	Concentration in ug/m^3 (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 Date: 9/2/2023

Checked by: Lo Kam Chuen Date: 9/2/2023

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
香港新界葵涌永基路22-24號好爸爸創科大廈
Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong
Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

HOKLAS 028 CAL

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	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 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1010 ± 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 ±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:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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.

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Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong
Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 23CA0308 01 **Page** 2 **of** 2

1, Electrical Tests

The electrical tests were perfomed 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	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	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 $1/10^3$ at 4kHz	Pass	0.3	
	1 ms burst duty factor $1/10^4$ 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: Fung Chi Yip **Date:** 09-Mar-2023

Checked by: Chan Yuk Yiu **Date:** 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.

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HKAS has accredited this laboratory (Reg. No. HOKLAS 028) under HOKLAS for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. The results relate only to the item(s) calibrated. This certificate shall not be reproduced except in full without approval of the laboratory.

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Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong
Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

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

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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

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 netwoks 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

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Good Ba Ba Hitech Building, Nos. 22-24 Wing Kei Road, Kwai Chung, New Territories, Hong Kong
Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

SMECLab

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

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SMECLab

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)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time wighting	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
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

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SMECLab

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

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SMECLab

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

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---------

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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 23CA0508 02-01

Item tested

Description:	Sound Level Meter (Type 1)	,	Microphone	Preamp
Manufacturer:	Larson Davis	,	PCB	PCB
Type/Model No.:	LxT1	,	377B02	PRMLxT1L
Serial/Equipment No.:	0003737	,	340739	042622
Adaptors used:	-	,	-	-

Item submitted by

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

Date of test: 11-May-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 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 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 ±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-May-2023 **Company Chop:** SOILS AND MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

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.

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HKAS has accredited this laboratory (Reg. No. HOKLAS 028) under HOKLAS for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. The results relate only to the item(s) calibrated. This certificate shall not be reproduced except in full without approval of the laboratory.

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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 23CA0508 02-01 **Page** 2 **of** 2

1, Electrical Tests

The electrical tests were perfomed 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	
Frequency weightings	A	Pass	0.3	
	C	Pass	0.3	
	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 $1/10^3$ at 4kHz	Pass	0.3	
	1 ms burst duty factor $1/10^4$ 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: Fung Chi Yip **Date:** 11-May-2023

Checked by: Chan Yuk Yiu **Date:** 13-May-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.

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SMECLab

Sound level meter type:	LxT1	Serial No.	0003737	Date	11-May-2023
Microphone type:	377B02	Serial No.	340739		
				Report:	23CA0508 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	10.6	dB
Noise level in C weighting	13.3	dB
Noise level in Lin	22.2	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	34.0	34.0	0.7	0.0	0.0
33.0	32.9	32.9	0.7	-0.1	-0.1

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Test Data for Sound Level Meter

Sound level meter type: LxT1 Serial No. 0003737 Date 11-May-2023
Microphone type: 377B02 Serial No. 340739
Report: 23CA0508 02-01

32.0	31.9	31.9	0.7	-0.1	-0.1
31.0	30.9	30.9	0.7	-0.1	-0.1
30.0	29.9	29.9	0.7	-0.1	-0.1

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	29.9	0.7	-0.1
	118.0	118.0	0.7	0.0

FREQUENCY WEIGHTING TEST

The frequency response of the weighting netwoks 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	54.5	1.5	1.5	-0.1
63.1	94.0	67.8	67.7	1.5	1.5	-0.1
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	90.8	1.0	1.0	0.0
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	89.6	3.0	6.0	-0.1

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	90.9	1.5	1.5	-0.1
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

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SMECLab

Sound level meter type: LxT1 Serial No. 0003737 Date 11-May-2023

Microphone type: 377B02 Serial No. 340739

Report: 23CA0508 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	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	94.0	93.9	1.5	1.5	-0.1
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	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	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	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	Expected level	Actual level	Tolerance(dB)		Deviation
dB	dB	dB	+	-	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	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

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SMECLab

Sound level meter type: LxT1 Serial No. 0003737 Date 11-May-2023
Microphone type: 377B02 Serial No. 340739
Report: 23CA0508 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	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)

	Ref. Level	Expected level	Tone burst signal	Tolerance	Deviation
Time wighting	dB	dB	indication(dB)	+/- dB	dB
Slow	114.0+6.6	114.0	113.8	0.5	-0.2

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	89.8	1.0	-0.2	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

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SMECLab

Test Data for Sound Level Meter

Sound level meter type: LxT1 Serial No. 0003737 Date 11-May-2023
Microphone type: 377B02 Serial No. 340739
Report: 23CA0508 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	88.0	58.0	57.9	1.7	-0.1

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	67.9	1.7	-0.1

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
115.0	114.0	111.0	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
121.5	120.5	80.5	80.4	2.2	-0.1

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
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	90.4	1.5	3.0	-2.5

---------END---------

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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

Certificate No.: 23CA0317 02-04 **Page:** 1 **of** 2

Item tested

Description:	Acoustical Calibrator (Class 1)
Manufacturer:	Larson Davis
Type/Model No.:	CAL200
Serial/Equipment No.:	13098
Adaptors used:	-

Item submitted by

Curstomer:	Lam Environmental Services Limited.
Address of Customer:	-
Request No.:	-
Date of receipt:	17-Mar-2023

Date of test: 20-Mar-2023

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	61227	08-Jun-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 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1010 ± 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:** 21-Mar-2023 **Company Chop:** SOILS & MATERIALS ENGINEERING COMPANY LTD. 綜合試驗有限公司

Comments: The results reported in this certificate refer to the conditon 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.

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HKAS has accredited this laboratory (Reg. No. HOKLAS 028) under HOKLAS for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. The results relate only to the item(s) calibrated. This certificate shall not be reproduced except in full without approval of the laboratory.

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Tel: (852) 2873 6860 Fax: (852) 2555 7533 E-mail: smec@cigismec.com Website: www.cigismec.com

HOKLAS 028
CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 23CA0317 02-04 **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.

(Output level in dB re 20 μPa)

Frequency Shown Hz	Output Sound Pressure Level Setting dB	Measured Output Sound Pressure Level dB	Estimated Expanded Uncertainty dB
1000	94.00	93.82	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 = 999.9 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:** 20-Mar-2023

Checked by: Chan Yuk Yiu **Date:** 21-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.

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HKAS has accredited this laboratory (Reg. No. HOKLAS 028) under HOKLAS for specific calibration activities as listed in the HOKLAS directory of accredited laboratories. The results shown in this certificate are traceable to the International System of Units (SI) or recognised measurement standards. The results relate only to the item(s) calibrated. This certificate shall not be reproduced except in full without approval of the laboratory.

Lam Environmental Services Limited

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 : 18-Sep-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	4.2	4.4	-0.2
5 - 6	5.5	5.3	0.2
7 - 8	7.7	7.5	0.2

Wind Direction (^{o})	Reading Value (W1, ^{o})	Compass Value (W2, ^{o})	Difference (W1 - W2, ^{o})
0	0	0	0
90	90	90	0
180	183	180	3
270	268	270	-2

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: Harry Po

Checked by: William Cheung

Appendix 4.3

Wind Data

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
1-Dec-23	00:00	0.0	230(SW)
	01:00	0.0	212(SSW)
	02:00	0.0	232(SW)
	03:00	0.0	197(SSW)
	04:00	0.0	284(WNW)
	05:00	0.0	178(S)
	06:00	0.0	175(S)
	07:00	0.0	278(W)
	08:00	0.7	302(WNW)
	09:00	0.0	336(NNW)
	10:00	1.5	222(SW)
	11:00	0.5	147(SSE)
	12:00	0.0	286(WNW)
	13:00	0.0	312(NW)
	14:00	0.0	72(ENE)
	15:00	2.1	213(SSW)
	16:00	0.0	242(WSW)
	17:00	0.0	123(ESE)
	18:00	0.0	343(NNW)
	19:00	0.5	49(NE)
	20:00	0.0	214(SW)
	21:00	0.7	282(WNW)
	22:00	0.0	243(WSW)
	23:00	0.0	309(NW)
2-Dec-23	00:00	0.0	328(NNW)
	01:00	0.0	316(NW)
	02:00	0.7	93(E)
	03:00	0.0	248(WSW)
	04:00	0.0	114(ESE)
	05:00	0.0	223(SW)
	06:00	0.0	193(SSW)
	07:00	0.0	140(SE)
	08:00	0.0	180(S)
	09:00	0.5	212(SSW)
	10:00	0.0	58(ENE)
	11:00	0.0	66(ENE)
	12:00	0.0	204(SSW)
	13:00	0.0	85(E)
	14:00	0.0	161(SSE)
	15:00	0.0	105(ESE)
	16:00	1.1	50(NE)
	17:00	0.0	187(S)
	18:00	0.0	150(SSE)
	19:00	0.0	97(E)
	20:00	0.7	230(SW)
	21:00	0.7	279(W)
	22:00	0.0	94(E)
	23:00	0.0	171(S)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
3-Dec-23	00:00	0.0	257(WSW)
	01:00	0.0	151(SSE)
	02:00	0.0	204(SSW)
	03:00	0.0	48(NE)
	04:00	0.0	74(ENE)
	05:00	0.0	188(S)
	06:00	0.0	328(NNW)
	07:00	0.0	286(WNW)
	08:00	0.0	76(ENE)
	09:00	0.0	76(ENE)
	10:00	0.0	197(SSW)
	11:00	0.0	79(E)
	12:00	0.0	120(ESE)
	13:00	0.0	89(E)
	14:00	0.0	100(E)
	15:00	0.0	93(E)
	16:00	0.5	192(SSW)
	17:00	0.0	115(ESE)
	18:00	0.0	193(SSW)
	19:00	0.0	99(E)
	20:00	0.0	167(SSE)
	21:00	0.0	51(NE)
	22:00	0.0	1(N)
	23:00	0.7	190(S)
4-Dec-23	00:00	0.0	75(ENE)
	01:00	0.0	76(ENE)
	02:00	0.0	130(SE)
	03:00	0.0	96(E)
	04:00	0.0	72(ENE)
	05:00	0.0	67(ENE)
	06:00	0.0	320(NW)
	07:00	0.0	77(ENE)
	08:00	0.0	154(SSE)
	09:00	0.0	197(SSW)
	10:00	0.0	246(WSW)
	11:00	0.0	142(SE)
	12:00	0.0	220(SW)
	13:00	1.9	47(NE)
	14:00	1.3	249(WSW)
	15:00	1.9	292(WNW)
	16:00	1.5	300(WNW)
	17:00	1.1	299(WNW)
	18:00	0.0	307(NW)
	19:00	0.0	193(SSW)
	20:00	0.0	64(ENE)
	21:00	0.0	170(S)
	22:00	0.0	20(NNE)
	23:00	0.0	342(NNW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
5-Dec-23	00:00	0.0	319(NW)
	01:00	0.0	33(NNE)
	02:00	0.0	17(NNE)
	03:00	0.0	82(E)
	04:00	0.0	44(NE)
	05:00	0.0	107(ESE)
	06:00	0.0	33(NNE)
	07:00	1.7	67(ENE)
	08:00	1.7	104(ESE)
	09:00	1.3	28(NNE)
	10:00	0.0	144(SE)
	11:00	0.0	123(ESE)
	12:00	1.7	105(ESE)
	13:00	1.7	290(WNW)
	14:00	0.7	327(NNW)
	15:00	0.5	303(WNW)
	16:00	2.1	339(NNW)
	17:00	1.1	247(WSW)
	18:00	0.0	239(WSW)
	19:00	0.0	228(SW)
	20:00	0.0	6(N)
	21:00	0.0	9(N)
	22:00	0.0	237(WSW)
	23:00	0.0	237(WSW)
6-Dec-23	00:00	0.0	237(WSW)
	01:00	0.0	237(WSW)
	02:00	0.0	237(WSW)
	03:00	0.0	237(WSW)
	04:00	0.0	237(WSW)
	05:00	0.0	238(WSW)
	06:00	0.0	162(SSE)
	07:00	0.0	38(NE)
	08:00	0.0	354(N)
	09:00	0.0	277(W)
	10:00	0.0	33(NNE)
	11:00	0.9	36(NE)
	12:00	1.1	3(N)
	13:00	1.7	303(WNW)
	14:00	1.1	64(ENE)
	15:00	2.3	38(NE)
	16:00	2.3	106(ESE)
	17:00	0.9	333(NNW)
	18:00	1.7	93(E)
	19:00	3.9	94(E)
	20:00	1.1	30(NNE)
	21:00	1.3	128(SE)
	22:00	0.0	64(ENE)
	23:00	1.9	34(NE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
7-Dec-23	00:00	3.3	79(E)
	01:00	3.3	99(E)
	02:00	2.1	74(ENE)
	03:00	2.7	69(ENE)
	04:00	1.3	40(NE)
	05:00	2.9	73(ENE)
	06:00	0.9	30(NNE)
	07:00	2.5	57(ENE)
	08:00	3.1	67(ENE)
	09:00	2.1	90(E)
	10:00	4.9	61(ENE)
	11:00	1.5	336(NNW)
	12:00	2.5	55(NE)
	13:00	0.0	182(S)
	14:00	1.3	215(SW)
	15:00	0.0	322(NW)
	16:00	0.5	113(ESE)
	17:00	0.0	204(SSW)
	18:00	0.7	70(ENE)
	19:00	0.5	83(E)
	20:00	0.0	143(SE)
	21:00	0.0	205(SSW)
	22:00	0.0	63(ENE)
	23:00	0.0	40(NE)
8-Dec-23	00:00	0.0	30(NNE)
	01:00	0.0	261(W)
	02:00	0.0	261(W)
	03:00	0.0	268(W)
	04:00	0.0	88(E)
	05:00	0.0	45(NE)
	06:00	0.0	175(S)
	07:00	0.0	282(WNW)
	08:00	0.0	148(SSE)
	09:00	0.0	104(ESE)
	10:00	1.5	199(SSW)
	11:00	1.1	65(ENE)
	12:00	2.3	77(ENE)
	13:00	0.9	279(W)
	14:00	1.7	254(WSW)
	15:00	1.9	149(SSE)
	16:00	1.1	106(ESE)
	17:00	0.7	229(SW)
	18:00	2.3	101(E)
	19:00	0.9	72(ENE)
	20:00	1.5	120(ESE)
	21:00	0.0	115(ESE)
	22:00	0.0	111(ESE)
	23:00	1.7	77(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
9-Dec-23	00:00	0.0	302(WNW)
	01:00	0.0	315(NW)
	02:00	0.0	6(N)
	03:00	0.0	208(SSW)
	04:00	0.0	166(SSE)
	05:00	0.0	57(ENE)
	06:00	0.0	342(NNW)
	07:00	0.0	67(ENE)
	08:00	1.9	111(ESE)
	09:00	2.1	102(ESE)
	10:00	0.0	102(ESE)
	11:00	0.0	178(S)
	12:00	1.3	71(ENE)
	13:00	1.3	142(SE)
	14:00	2.3	126(SE)
	15:00	1.1	96(E)
	16:00	0.5	253(WSW)
	17:00	0.0	106(ESE)
	18:00	1.1	106(ESE)
	19:00	0.0	75(ENE)
	20:00	0.0	164(SSE)
	21:00	0.0	157(SSE)
	22:00	1.3	39(NE)
	23:00	1.9	70(ENE)
10-Dec-23	00:00	0.0	129(SE)
	01:00	2.7	104(ESE)
	02:00	0.0	290(WNW)
	03:00	0.0	143(SE)
	04:00	1.3	68(ENE)
	05:00	0.9	31(NNE)
	06:00	0.0	83(E)
	07:00	1.5	97(E)
	08:00	0.0	60(ENE)
	09:00	1.1	161(SSE)
	10:00	0.0	128(SE)
	11:00	1.1	221(SW)
	12:00	1.5	139(SE)
	13:00	2.3	58(ENE)
	14:00	1.9	57(ENE)
	15:00	1.1	335(NNW)
	16:00	2.3	146(SE)
	17:00	1.1	99(E)
	18:00	0.0	344(NNW)
	19:00	0.0	269(W)
	20:00	0.0	88(E)
	21:00	1.9	75(ENE)
	22:00	0.0	124(SE)
	23:00	0.0	72(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
11-Dec-23	00:00	0.7	114(ESE)
	01:00	0.0	115(ESE)
	02:00	0.0	180(S)
	03:00	0.0	82(E)
	04:00	0.0	80(E)
	05:00	0.0	184(S)
	06:00	0.0	83(E)
	07:00	1.7	108(ESE)
	08:00	0.0	175(S)
	09:00	0.0	81(E)
	10:00	0.0	101(E)
	11:00	1.1	278(W)
	12:00	0.5	281(W)
	13:00	0.0	249(WSW)
	14:00	1.1	132(SE)
	15:00	0.0	292(WNW)
	16:00	0.0	257(WSW)
	17:00	1.1	242(WSW)
	18:00	0.0	71(ENE)
	19:00	0.0	171(S)
	20:00	0.0	169(S)
	21:00	0.0	145(SE)
	22:00	0.0	123(ESE)
	23:00	0.0	186(S)
12-Dec-23	00:00	0.0	186(S)
	01:00	0.0	185(S)
	02:00	0.0	185(S)
	03:00	0.0	185(S)
	04:00	0.0	185(S)
	05:00	0.0	185(S)
	06:00	0.0	185(S)
	07:00	0.0	186(S)
	08:00	0.0	185(S)
	09:00	3.3	108(ESE)
	10:00	0.5	62(ENE)
	11:00	1.7	250(WSW)
	12:00	2.7	61(ENE)
	13:00	2.5	103(ESE)
	14:00	1.5	68(ENE)
	15:00	2.3	100(E)
	16:00	5.1	104(ESE)
	17:00	2.5	71(ENE)
	18:00	4.5	106(ESE)
	19:00	1.9	86(E)
	20:00	0.0	46(NE)
	21:00	0.0	78(ENE)
	22:00	2.5	147(SSE)
	23:00	0.7	68(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
13-Dec-23	00:00	0.0	121(ESE)
	01:00	1.3	134(SE)
	02:00	2.3	162(SSE)
	03:00	0.9	116(ESE)
	04:00	1.7	84(E)
	05:00	0.0	119(ESE)
	06:00	0.7	105(ESE)
	07:00	3.1	67(ENE)
	08:00	2.3	131(SE)
	09:00	1.7	67(ENE)
	10:00	2.5	102(ESE)
	11:00	0.0	121(ESE)
	12:00	2.5	110(ESE)
	13:00	0.9	319(NW)
	14:00	2.1	134(SE)
	15:00	1.1	244(WSW)
	16:00	2.3	142(SE)
	17:00	1.5	141(SE)
	18:00	0.0	159(SSE)
	19:00	0.5	131(SE)
	20:00	1.1	55(NE)
	21:00	1.9	54(NE)
	22:00	1.1	123(ESE)
	23:00	0.5	119(ESE)
14-Dec-23	00:00	0.0	101(E)
	01:00	0.0	133(SE)
	02:00	0.7	93(E)
	03:00	0.0	148(SSE)
	04:00	1.3	58(ENE)
	05:00	1.1	96(E)
	06:00	1.9	81(E)
	07:00	0.0	72(ENE)
	08:00	0.0	84(E)
	09:00	1.9	20(NNE)
	10:00	0.0	103(ESE)
	11:00	0.0	169(S)
	12:00	0.0	286(WNW)
	13:00	0.9	228(SW)
	14:00	0.7	188(S)
	15:00	0.0	92(E)
	16:00	0.9	267(W)
	17:00	0.0	242(WSW)
	18:00	1.1	111(ESE)
	19:00	0.0	58(ENE)
	20:00	0.7	33(NNE)
	21:00	0.0	95(E)
	22:00	0.0	126(SE)
	23:00	0.7	5(N)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
15-Dec-23	00:00	0.0	52(NE)
	01:00	0.9	104(ESE)
	02:00	0.0	105(ESE)
	03:00	0.0	348(NNW)
	04:00	0.0	40(NE)
	05:00	0.0	166(SSE)
	06:00	0.0	18(NNE)
	07:00	0.0	14(NNE)
	08:00	2.1	137(SE)
	09:00	1.9	137(SE)
	10:00	0.7	55(NE)
	11:00	1.7	118(ESE)
	12:00	2.1	75(ENE)
	13:00	2.5	120(ESE)
	14:00	0.0	155(SSE)
	15:00	2.1	131(SE)
	16:00	1.5	157(SSE)
	17:00	1.1	138(SE)
	18:00	1.9	116(ESE)
	19:00	1.1	157(SSE)
	20:00	1.9	179(S)
	21:00	1.7	112(ESE)
	22:00	0.5	90(E)
	23:00	0.0	60(ENE)
16-Dec-23	00:00	1.1	142(SE)
	01:00	0.0	282(WNW)
	02:00	1.1	92(E)
	03:00	0.5	71(ENE)
	04:00	1.7	80(E)
	05:00	0.0	109(ESE)
	06:00	1.1	75(ENE)
	07:00	5.9	40(NE)
	08:00	7.1	44(NE)
	09:00	5.5	98(E)
	10:00	3.1	69(ENE)
	11:00	2.1	260(W)
	12:00	1.7	183(S)
	13:00	4.7	87(E)
	14:00	2.3	61(ENE)
	15:00	2.3	79(E)
	16:00	1.9	89(E)
	17:00	2.9	140(SE)
	18:00	4.9	74(ENE)
	19:00	3.1	96(E)
	20:00	3.9	78(ENE)
	21:00	8.5	50(NE)
	22:00	6.3	56(NE)
	23:00	2.7	206(SSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
17-Dec-23	00:00	13.	69(ENE)
	01:00	5.9	40(NE)
	02:00	3.7	104(ESE)
	03:00	2.1	112(ESE)
	04:00	2.3	43(NE)
	05:00	1.9	69(ENE)
	06:00	2.3	118(ESE)
	07:00	2.5	92(E)
	08:00	2.3	96(E)
	09:00	3.9	72(ENE)
	10:00	2.1	42(NE)
	11:00	2.3	49(NE)
	12:00	1.3	86(E)
	13:00	3.5	54(NE)
	14:00	2.7	78(ENE)
	15:00	3.1	73(ENE)
	16:00	1.5	129(SE)
	17:00	2.3	162(SSE)
	18:00	1.9	37(NE)
	19:00	4.3	44(NE)
	20:00	2.9	39(NE)
	21:00	2.5	56(NE)
	22:00	1.7	58(ENE)
	23:00	1.1	351(N)
18-Dec-23	00:00	1.5	69(ENE)
	01:00	0.5	89(E)
	02:00	1.5	124(SE)
	03:00	0.9	0(N)
	04:00	1.9	72(ENE)
	05:00	1.5	88(E)
	06:00	2.1	84(E)
	07:00	1.5	50(NE)
	08:00	1.3	51(NE)
	09:00	2.5	52(NE)
	10:00	1.7	77(ENE)
	11:00	0.7	297(WNW)
	12:00	1.1	67(ENE)
	13:00	1.9	49(NE)
	14:00	0.7	160(SSE)
	15:00	1.1	23(NNE)
	16:00	1.7	99(E)
	17:00	1.9	45(NE)
	18:00	1.1	67(ENE)
	19:00	1.1	90(E)
	20:00	0.0	125(SE)
	21:00	0.0	139(SE)
	22:00	0.0	34(NE)
	23:00	0.0	329(NNW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
19-Dec-23	00:00	0.0	10(N)
	01:00	1.3	84(E)
	02:00	0.0	21(NNE)
	03:00	0.0	356(N)
	04:00	0.9	217(SW)
	05:00	0.0	0(N)
	06:00	1.1	26(NNE)
	07:00	3.9	69(ENE)
	08:00	1.1	268(W)
	09:00	1.3	125(SE)
	10:00	1.3	132(SE)
	11:00	0.7	211(SSW)
	12:00	2.9	111(ESE)
	13:00	2.5	49(NE)
	14:00	2.3	73(ENE)
	15:00	1.7	17(NNE)
	16:00	2.1	256(WSW)
	17:00	2.5	223(SW)
	18:00	0.7	291(WNW)
	19:00	1.9	264(W)
	20:00	2.3	152(SSE)
	21:00	3.1	44(NE)
	22:00	2.3	22(NNE)
	23:00	3.9	53(NE)
20-Dec-23	00:00	1.3	330(NNW)
	01:00	4.7	63(ENE)
	02:00	3.3	136(SE)
	03:00	2.7	54(NE)
	04:00	3.1	45(NE)
	05:00	1.3	293(WNW)
	06:00	3.3	80(E)
	07:00	3.7	73(ENE)
	08:00	2.3	190(S)
	09:00	4.1	52(NE)
	10:00	1.5	323(NW)
	11:00	4.1	98(E)
	12:00	2.3	103(ESE)
	13:00	2.3	48(NE)
	14:00	5.5	40(NE)
	15:00	3.3	54(NE)
	16:00	2.3	68(ENE)
	17:00	2.9	78(ENE)
	18:00	2.3	32(NNE)
	19:00	3.5	45(NE)
	20:00	4.9	74(ENE)
	21:00	3.7	55(NE)
	22:00	1.1	221(SW)
	23:00	4.5	86(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
21-Dec-23	00:00	5.5	39(NE)
	01:00	5.9	85(E)
	02:00	2.9	39(NE)
	03:00	3.5	69(ENE)
	04:00	4.7	52(NE)
	05:00	5.5	81(E)
	06:00	2.9	92(E)
	07:00	3.3	92(E)
	08:00	5.7	107(ESE)
	09:00	3.7	65(ENE)
	10:00	2.5	60(ENE)
	11:00	5.1	70(ENE)
	12:00	2.5	49(NE)
	13:00	4.1	76(ENE)
	14:00	0.7	66(ENE)
	15:00	3.9	193(SSW)
	16:00	1.1	70(ENE)
	17:00	3.3	77(ENE)
	18:00	6.7	74(ENE)
	19:00	5.3	96(E)
	20:00	5.9	97(E)
	21:00	2.3	56(NE)
	22:00	6.3	77(ENE)
	23:00	6.9	109(ESE)
22-Dec-23	00:00	4.9	65(ENE)
	01:00	4.3	62(ENE)
	02:00	3.7	70(ENE)
	03:00	1.3	281(W)
	04:00	5.5	63(ENE)
	05:00	3.9	102(ESE)
	06:00	3.3	88(E)
	07:00	6.3	48(NE)
	08:00	1.7	75(ENE)
	09:00	4.1	44(NE)
	10:00	4.5	55(NE)
	11:00	4.3	49(NE)
	12:00	3.9	72(ENE)
	13:00	3.7	68(ENE)
	14:00	2.7	244(WSW)
	15:00	1.1	353(N)
	16:00	3.1	63(ENE)
	17:00	0.7	114(ESE)
	18:00	0.0	76(ENE)
	19:00	0.9	77(ENE)
	20:00	1.5	77(ENE)
	21:00	3.5	45(NE)
	22:00	4.1	95(E)
	23:00	2.1	31(NNE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
23-Dec-23	00:00	3.1	53(NE)
	01:00	1.5	62(ENE)
	02:00	1.5	43(NE)
	03:00	0.0	43(NE)
	04:00	1.3	90(E)
	05:00	0.9	41(NE)
	06:00	1.9	93(E)
	07:00	3.7	56(NE)
	08:00	1.7	47(NE)
	09:00	2.3	83(E)
	10:00	1.3	50(NE)
	11:00	2.3	65(ENE)
	12:00	1.1	173(S)
	13:00	1.7	107(ESE)
	14:00	1.1	21(NNE)
	15:00	1.1	130(SE)
	16:00	4.5	52(NE)
	17:00	3.7	55(NE)
	18:00	3.7	79(E)
	19:00	4.1	86(E)
	20:00	7.1	77(ENE)
	21:00	1.3	25(NNE)
	22:00	3.9	60(ENE)
	23:00	0.9	85(E)
24-Dec-23	00:00	3.1	90(E)
	01:00	4.5	64(ENE)
	02:00	2.9	67(ENE)
	03:00	2.3	152(SSE)
	04:00	1.7	138(SE)
	05:00	1.5	91(E)
	06:00	2.9	69(ENE)
	07:00	2.1	69(ENE)
	08:00	2.5	107(ESE)
	09:00	3.1	73(ENE)
	10:00	2.3	12(NNE)
	11:00	1.9	337(NNW)
	12:00	3.3	52(NE)
	13:00	4.5	92(E)
	14:00	1.1	320(NW)
	15:00	1.9	289(WNW)
	16:00	1.5	313(NW)
	17:00	0.9	209(SSW)
	18:00	0.7	45(NE)
	19:00	0.5	50(NE)
	20:00	0.0	48(NE)
	21:00	0.0	52(NE)
	22:00	1.9	50(NE)
	23:00	1.3	245(WSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
25-Dec-23	00:00	2.5	107(ESE)
	01:00	3.3	65(ENE)
	02:00	2.3	62(ENE)
	03:00	1.9	78(ENE)
	04:00	1.5	50(NE)
	05:00	0.7	170(S)
	06:00	1.9	134(SE)
	07:00	1.7	62(ENE)
	08:00	2.7	45(NE)
	09:00	2.1	55(NE)
	10:00	0.9	327(NNW)
	11:00	1.5	68(ENE)
	12:00	0.0	46(NE)
	13:00	0.7	121(ESE)
	14:00	1.1	97(E)
	15:00	1.7	314(NW)
	16:00	1.9	70(ENE)
	17:00	0.5	16(NNE)
	18:00	0.7	23(NNE)
	19:00	0.9	78(ENE)
	20:00	0.0	351(N)
	21:00	0.0	354(N)
	22:00	1.3	57(ENE)
	23:00	0.9	93(E)
26-Dec-23	00:00	0.0	206(SSW)
	01:00	0.0	64(ENE)
	02:00	0.0	59(ENE)
	03:00	0.0	64(ENE)
	04:00	0.0	58(ENE)
	05:00	0.0	54(NE)
	06:00	0.0	343(NNW)
	07:00	0.0	252(WSW)
	08:00	0.0	207(SSW)
	09:00	0.0	237(WSW)
	10:00	0.0	103(ESE)
	11:00	2.9	9(N)
	12:00	3.7	133(SE)
	13:00	1.1	285(WNW)
	14:00	1.1	351(N)
	15:00	0.7	118(ESE)
	16:00	0.0	343(NNW)
	17:00	1.7	120(ESE)
	18:00	2.5	103(ESE)
	19:00	0.9	347(NNW)
	20:00	0.9	129(SE)
	21:00	0.7	87(E)
	22:00	0.9	66(ENE)
	23:00	0.0	64(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
27-Dec-23	00:00	1.3	13(NNE)
	01:00	1.1	67(ENE)
	02:00	1.3	136(SE)
	03:00	0.0	339(NNW)
	04:00	0.0	145(SE)
	05:00	0.0	190(S)
	06:00	0.0	218(SW)
	07:00	0.0	160(SSE)
	08:00	0.0	230(SW)
	09:00	0.0	124(SE)
	10:00	1.3	55(NE)
	11:00	1.3	27(NNE)
	12:00	0.5	207(SSW)
	13:00	1.3	47(NE)
	14:00	1.3	222(SW)
	15:00	0.5	190(S)
	16:00	1.1	202(SSW)
	17:00	1.3	61(ENE)
	18:00	1.5	134(SE)
	19:00	0.0	153(SSE)
	20:00	0.0	25(NNE)
	21:00	0.0	104(ESE)
	22:00	1.3	180(S)
	23:00	0.7	69(ENE)
28-Dec-23	00:00	1.3	141(SE)
	01:00	1.9	106(ESE)
	02:00	1.5	95(E)
	03:00	0.0	145(SE)
	04:00	0.0	332(NNW)
	05:00	0.0	86(E)
	06:00	0.0	128(SE)
	07:00	0.0	71(ENE)
	08:00	0.0	92(E)
	09:00	1.1	51(NE)
	10:00	1.5	131(SE)
	11:00	1.3	101(E)
	12:00	2.1	112(ESE)
	13:00	1.3	62(ENE)
	14:00	1.5	291(WNW)
	15:00	1.3	253(WSW)
	16:00	0.0	34(NE)
	17:00	0.0	171(S)
	18:00	0.0	105(ESE)
	19:00	0.0	158(SSE)
	20:00	1.7	109(ESE)
	21:00	0.9	219(SW)
	22:00	0.7	125(SE)
	23:00	0.9	81(E)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
29-Dec-23	00:00	0.0	81(E)
	01:00	0.0	49(NE)
	02:00	0.0	220(SW)
	03:00	0.0	86(E)
	04:00	0.0	86(E)
	05:00	0.0	91(E)
	06:00	0.0	78(ENE)
	07:00	0.0	157(SSE)
	08:00	0.0	156(SSE)
	09:00	0.0	114(ESE)
	10:00	0.0	270(W)
	11:00	1.7	96(E)
	12:00	0.9	21(NNE)
	13:00	0.9	100(E)
	14:00	1.5	307(NW)
	15:00	2.7	181(S)
	16:00	1.9	136(SE)
	17:00	0.5	283(WNW)
	18:00	1.9	94(E)
	19:00	1.5	82(E)
	20:00	0.0	125(SE)
	21:00	0.0	112(ESE)
	22:00	1.1	159(SSE)
	23:00	0.0	279(W)
30-Dec-23	00:00	0.0	110(ESE)
	01:00	0.0	208(SSW)
	02:00	0.0	76(ENE)
	03:00	0.0	83(E)
	04:00	0.0	74(ENE)
	05:00	0.0	118(ESE)
	06:00	0.0	21(NNE)
	07:00	2.1	160(SSE)
	08:00	0.0	102(ESE)
	09:00	0.0	205(SSW)
	10:00	0.5	5(N)
	11:00	1.1	278(W)
	12:00	0.9	261(W)
	13:00	0.0	221(SW)
	14:00	0.9	251(WSW)
	15:00	1.7	290(WNW)
	16:00	0.0	289(WNW)
	17:00	0.0	305(NW)
	18:00	1.1	105(ESE)
	19:00	0.0	60(ENE)
	20:00	0.0	29(NNE)
	21:00	0.0	321(NW)
	22:00	0.0	342(NNW)
	23:00	0.0	65(ENE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
31-Dec-23	00:00	0.0	78(ENE)
	01:00	0.0	253(WSW)
	02:00	0.0	265(W)
	03:00	0.0	356(N)
	04:00	0.0	121(ESE)
	05:00	0.0	195(SSW)
	06:00	0.0	180(S)
	07:00	0.0	232(SW)
	08:00	0.0	62(ENE)
	09:00	0.0	213(SSW)
	10:00	1.3	122(ESE)
	11:00	0.9	151(SSE)
	12:00	0.7	255(WSW)
	13:00	0.5	306(NW)
	14:00	0.9	319(NW)
	15:00	1.1	260(W)
	16:00	2.3	304(NW)
	17:00	0.7	242(WSW)
	18:00	0.0	116(ESE)
	19:00	1.5	65(ENE)
	20:00	1.9	62(ENE)
	21:00	2.3	58(ENE)
	22:00	2.5	47(NE)
	23:00	2.3	70(ENE)

Appendix 5.1

Monitoring Schedule for Reporting Month and Next Reporting Month

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

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

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.

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

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

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

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

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

Noise Monitoring Result

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30min)					
01/12/2023	11:50	Cloudy	0.0	54.3	55.3	50.2	63.4	54.3	75
07/12/2023	14:00	Fine	0.0	57.6	59.1	53.7	63.4	57.6	75
13/12/2023	12:15	Fine	0.0	57.4	58.3	51.7	63.4	57.4	75
19/12/2023	14:30	Fine	0.0	55.8	57.8	51.8	63.4	55.8	75
29/12/2023	15:00	Fine	0.0	55.5	56.1	51.2	63.4	55.5	75

Location: NM2 - G/F, Fu Tei Au

Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30-min)					
01/12/2023	9:25	Cloudy	2.6	68.7	71.5	59.7	58.0	68.3	75
07/12/2023	16:00	Fine	0.0	57.3	58.4	54.2	58.0	57.3	75
13/12/2023	10:00	Fine	0.0	58.1	59.2	55.4	58.0	41.7	75
19/12/2023	15:20	Fine	0.0	61.3	60.6	54.2	58.0	58.6	75
29/12/2023	14:10	Fine	0.0	60.7	61.2	54.2	58.0	57.4	75

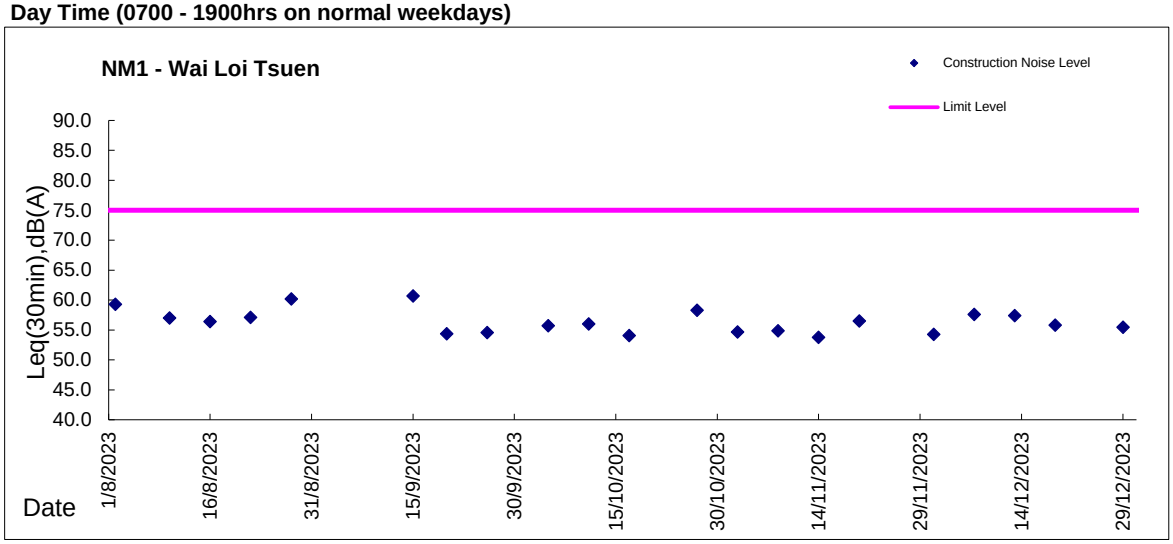
Location: NM3 - G/F, Man kok Village

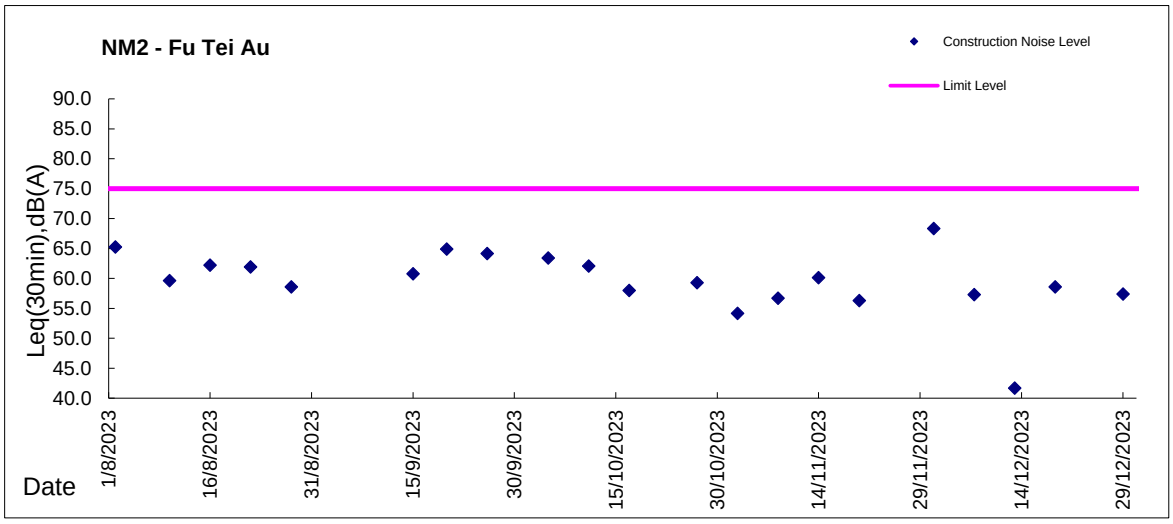
Date	Time	Weather	Wind Speed (m/s)	Measurement Noise Level Leq	L10	L90	Baseline Level Leq	Construction Noise Level Leq	Limit Level Leq
				Unit: dB(A), (30min)					
01/12/2023	10:20	Cloudy	2.5	58.6	60.6	51.8	63.4	58.6	75
07/12/2023	15:15	Fine	0.0	60.1	62.4	55.6	63.4	60.1	75
13/12/2023	11:25	Fine	0.0	60.0	64.9	51.6	63.4	60.0	75
19/12/2023	11:05	Fine	0.0	62.4	67.6	51.1	63.4	62.4	75
29/12/2023	13:35	Fine	0.0	59.1	61.5	54.2	63.4	59.1	75

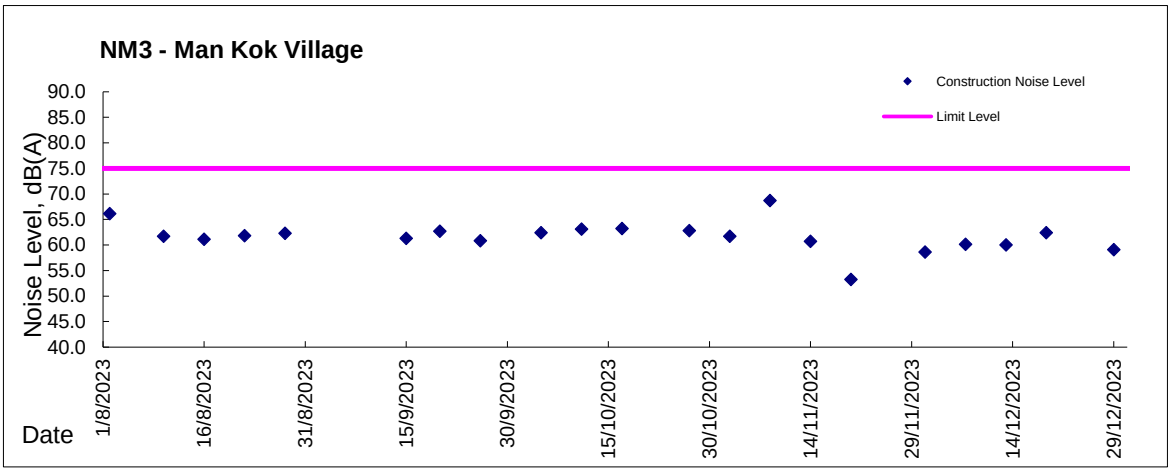
* Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result

Graphic Presentation of Noise Monitoring Result

Day Time (0700 - 1900hrs on normal weekdays)







Appendix 5.3

Air Quality Monitoring Results and Graphical Presentations

Report on 1-hour TSP monitoring at AM1 - Wai Loi Tsuen
Action Level (μg/m3) - 320
Limit Level (μg/m3) - 500

Date	Weather Condition	Time	Mass Concentration (μg/m3)	Model No.	Serial No.
1-Dec-23	Fine	8:54	42	AEROCET 831	C15622
1-Dec-23	Fine	9:55	39		
1-Dec-23	Fine	10:56	37		
7-Dec-23	Fine	8:14	14		
7-Dec-23	Fine	9:15	14		
7-Dec-23	Fine	10:16	15		
13-Dec-23	Fine	9:23	31		
13-Dec-23	Fine	10:24	27		
13-Dec-23	Fine	11:24	27		
19-Dec-23	Fine	8:16	21		
19-Dec-23	Fine	9:17	17		
19-Dec-23	Fine	10:18	19		
23-Dec-23	Fine	8:31	27		
23-Dec-23	Fine	9:32	30		
23-Dec-23	Fine	10:33	33		
29-Dec-23	Fine	9:55	46		
29-Dec-23	Fine	10:56	34		
29-Dec-23	Fine	11:57	25		

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

Action Level (μg/m3) - 322
Limit Level (μg/m3) - 500

Date	Weather Condition	Time	Mass Concentration (μg/m3)	Model No.	Serial No.
1-Dec-23	Fine	9:06	43	AEROCET 831	Y23153
1-Dec-23	Fine	10:07	40		
1-Dec-23	Fine	11:08	38		
7-Dec-23	Fine	8:26	15		
7-Dec-23	Fine	9:27	15		
7-Dec-23	Fine	10:28	17		
13-Dec-23	Fine	9:37	35		
13-Dec-23	Fine	10:38	29		
13-Dec-23	Fine	11:39	30		
19-Dec-23	Fine	8:27	23		
19-Dec-23	Fine	9:28	19		
19-Dec-23	Fine	10:29	23		
23-Dec-23	Fine	8:42	29		
23-Dec-23	Fine	9:43	33		
23-Dec-23	Fine	10:44	37		
29-Dec-23	Fine	10:05	50		
29-Dec-23	Fine	11:06	35		
29-Dec-23	Fine	12:07	26		

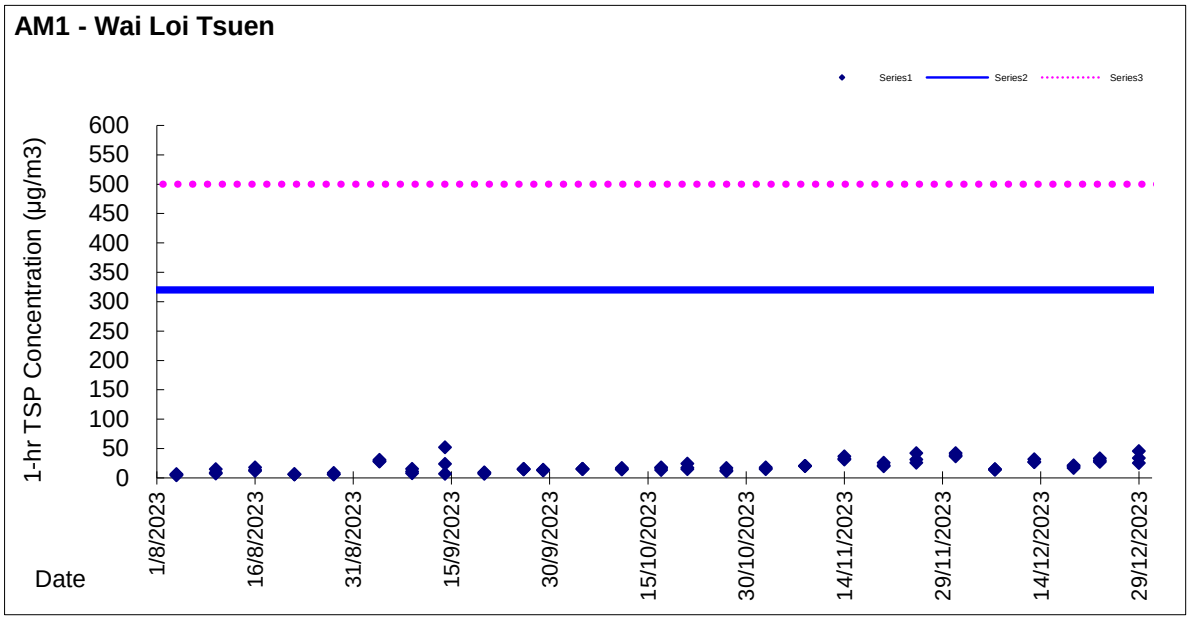
Location: AM1a* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW
Impact Monitoring Result on 24-hour TSP monitoring

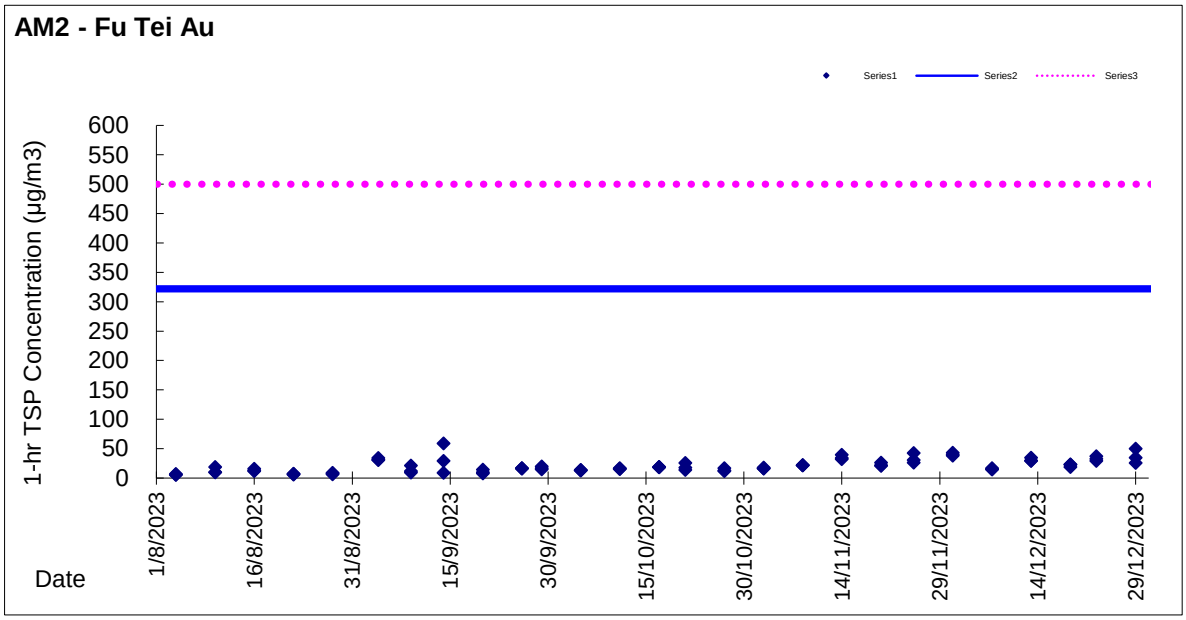
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
06-Dec-23	8:00	Fine	1017.6	1017.8	21.5	21.0	AM1a_24hr_008003	2.6340	2.7635	17747.87	17771.87	24.00	1.29	1.24	1.27	1823	71	G3101	2036
12-Dec-23	8:00	Fine	1016.2	1019.4	24.7	22.3	AM1a_24hr_008005	2.6550	2.7583	17771.87	17795.87	24.00	1.28	1.29	1.28	1850	56		
18-Dec-23	8:00	Fine	1022.1	1021.2	17.3	16.8	AM1a_24hr_008007	2.6521	2.8616	17795.87	17819.87	24.00	1.30	1.30	1.30	1866	112		
22-Dec-23	8:00	Fine	1030.1	1029.9	10.5	11.0	AM1a_24hr_008009	2.6535	2.8366	17819.87	17843.87	24.00	1.26	1.35	1.31	1886	97		
28-Dec-23	8:00	Fine	1022.3	1021.1	20.1	19.4	AM1a_24hr_008011	2.6682	2.8075	17819.87	17843.87	24.00	1.29	1.29	1.29	1861	75		

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

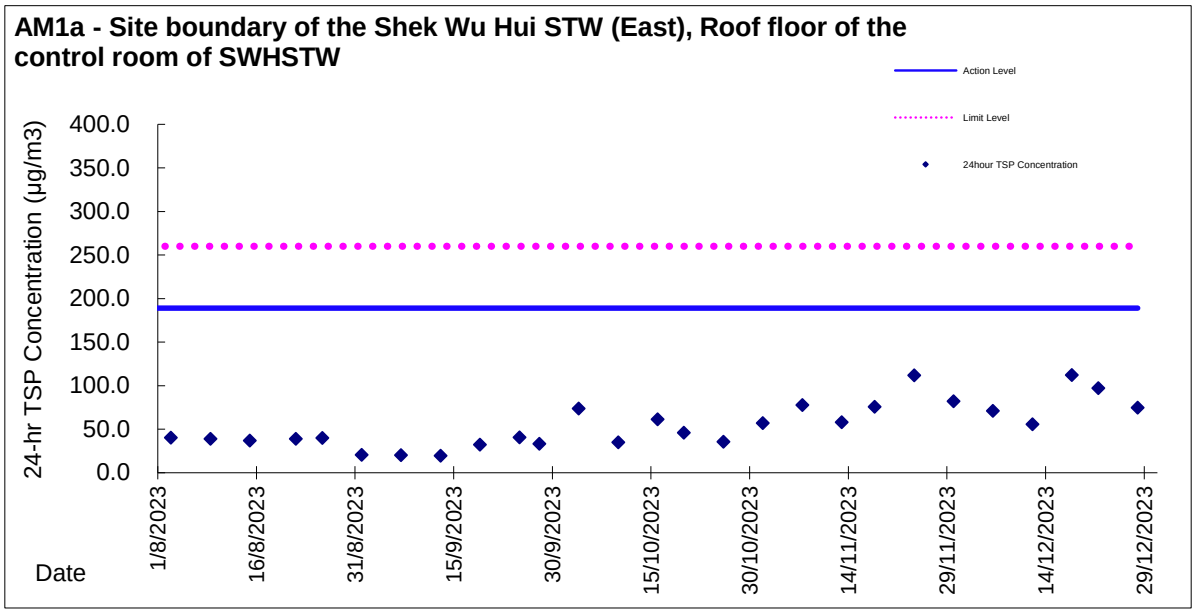
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
06-Dec-23	8:00	Fine	1017.6	1017.8	21.5	21.0	AM2a_24hr_008004	2.6334	2.7903	14065.40	14089.40	24.00	1.61	1.61	1.61	2316	68	G3101	774
12-Dec-23	8:00	Fine	1016.2	1019.4	24.7	22.3	AM2a_24hr_008006	2.6703	2.8776	14113.40	14137.40	24.00	1.53	1.54	1.54	2212	94		
18-Dec-23	8:00	Fine	1022.1	1021.2	17.3	16.8	AM2a_24hr_008008	2.6656	2.9617	14137.40	14161.40	24.00	1.64	1.64	1.64	2363	125		
22-Dec-23	8:00	Fine	1030.1	1029.9	10.5	11.0	AM2a_24hr_008010	2.6664	2.9172	14161.40	14185.40	24.00	1.70	1.70	1.70	2452	102		
28-Dec-23	8:00	Fine	1022.3	1021.1	20.1	19.4	AM2a_24hr_008012	2.6567	2.8650	14185.40	14209.40	24.00	1.59	1.59	1.59	2289	91		

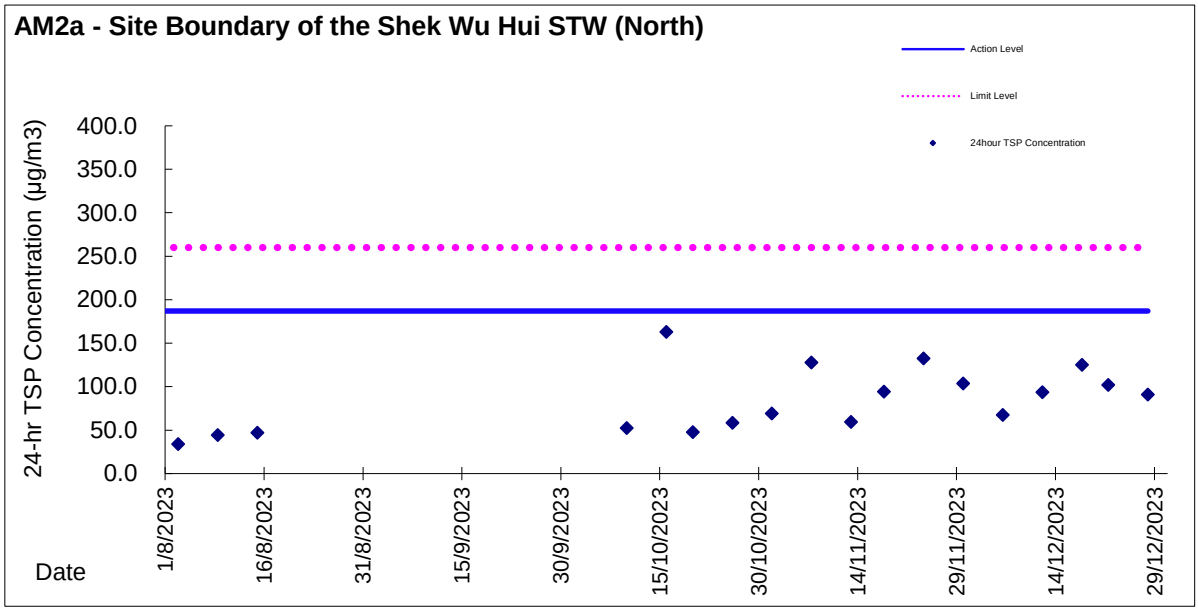
Graphic Presentation of TSP Result





Graphic Presentation of TSP Result





Appendix 5.4

Details of Ecological Monitoring Results in the Reporting Month

Summary data of the Ecological Monitoring

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Ardeola bacchus	Chinese Pond Heron	池鷺	X	44	+++++
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	X	34	++++
Ardea cinerea	Grey Heron	蒼鷺	X	75	+++++
Ardea alba	Great Egret	大白鷺	X	18	++
Egretta garzetta	Little Egret	小白鷺	X	57	+++++
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	X	38	+++++
Milvus migrans	Black Kite	黑鳶	X	5	+
Amaurornis phoenicurus	White-breasted Waterhen	白胸苦惡鳥	X	2	+
Himantopus himantopus	Black-winged Stilt	黑翅長腳鷸	X	12	++
Tringa stagnatilis	Marsh Sandpiper	澤鷸	X	2	N/A
Tringa nebularia	Common Greenshank	青腳鷸	X	1	+
Actitis hypoleucos	Common Sandpiper	磯鷸	X	22	+++
Spilopelia chinensis	Spotted Dove	珠頸斑鳩		49	+++++
Centropus sinensis	Greater Coucal	褐翅鴉鵑		1	N/A
Halcyon smyrnensis	White-throated Kingfisher	白胸翡翠	X	8	+
Alcedo atthis	Common Kingfisher	普通翠鳥	X	0	+
Ceryle rudis	Pied Kingfisher	斑魚狗	X	2	+

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Psittacula krameri	Rose-ringed Parakeet	紅領綠鸚鵡		3	+
Urocissa erythroryncha	Red-billed Blue Magpie	紅嘴藍鵲		1	+
Pica pica	Eurasian Magpie	喜鵲		10	+
Corvus torquatus	Collared Crow	白頸鴉	X	1	+
Parus cinereus	Cinereous Tit	蒼背山雀		2	+
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		118	+++++
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		72	+++++
Hirundo rustica	Barn Swallow	家燕		0	+
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯		4	+
Phylloscopus proregulus	Pallas's Leaf Warbler	黃腰柳鶯		9	++
Phylloscopus inornatus	Yellow-browed Warbler	黃眉柳鶯		10	++
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		5	+
Prinia inornata	Plain Prinia	純色鷦鶯		10	+
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		24	+++
Garrulax perspicillatus	Masked Laughingthrush	黑臉噪鶥		47	+++++
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		31	++++

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Acridotheres cristatellus	Crested Myna	八哥		282	+++++
Gracupica nigricollis	Black-collared Starling	黑領椋鳥		41	+++++
Copsychus saularis	Oriental Magpie Robin	鵲鴝		9	+
Passer montanus	Eurasian Tree Sparrow	樹麻雀		33	+++++
Motacilla alba	White Wagtail	白鶺鴒		51	+++++
Chloris sinica	Grey-capped Greenfinch	金翅雀		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.

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	6/12/2023	15:45	H	134	270	21
		13:30	L	136		27
2	13/12/2023	12:00	H	110	317	22
		14:30	L	207		27
3	19/12/2023	15:00	H	124	274	22
		13:00	L	150		26
4	27/12/2023	11:15	H	111	272	20
		15:30	L	161		25

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	6/12/2023	12:15	H	40	86
		10:00	L	46	
2	13/12/2023	12:00	H	16	57
		14:30	L	41	
3	19/12/2023	15:00	H	21	67
		13:00	L	46	
4	27/12/2023	11:15	H	16	73
		15:30	L	57	

Remarks: H: High Tide; L: Low Tide

T-Test Analysis for All Waterbirds

Baseline Data

Monthly Average Abundance (December)	71.33
Seasonal Average Abundance (Winter season)	62.15

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_0: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H_1: 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_0.

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	-0.035	✓	✓
	Seasonal	0.516	✓	✓

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 d

Abundance of Representative Waterbirds from Point Count										
Representative Species			**Recorded Abundance**					**Average**	**Baseline Data**	
Species Name	**Common Name**	**Chinese Name**	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Total**		**Average (Dec)**	**Avg (winter)**
Egretta garzetta	Little Egret	小白鷺	17	12	16	12	57	14	13	15
Ardea cinerea	Grey Heron	蒼鷺	24	18	17	16	75	19	17	13
Ardeola bacchus	Chinese Pond Heron	池鷺	16	8	11	9	44	11	9	9
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	14	10	10	4	38	10	12	7
Ardea alba	Great Egret	大白鷺	2	5	7	4	18	5	6	5
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	7	8	5	14	34	9	6	4

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_0: The data collected in the reporting month falls within the normal distribution when compared to the baseline monitoring data;

H_1: 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_0.

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% (-2.353)	99% (-4.541)	Seasonal	95% (-2.353)	99% (-4.541)	
Little Egret	0.369	✓	✓	-0.222	✓	✓	✓
Grey Heron	0.391	✓	✓	1.286	✓	✓	✓
Chinese Pond Heron	0.689	✓	✓	0.689	✓	✓	✓
Great Cormorant	-0.901	✓	✓	0.901	✓	✓	✓
Great Egret	-1.110	✓	✓	-0.370	✓	✓	✓
Eastern Cattle Egret	0.986	✓	✓	1.775	✓	✓	✓

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

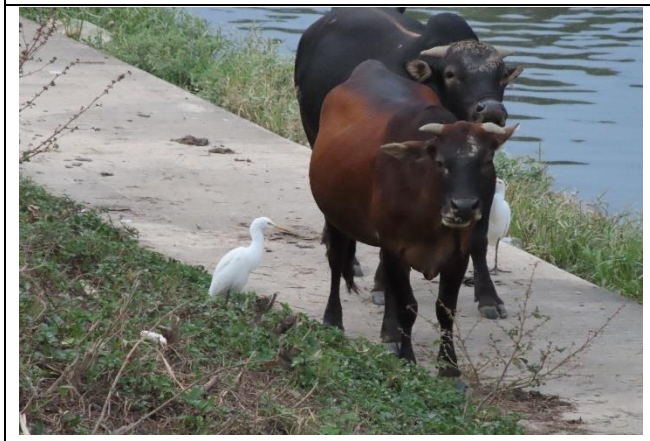
Sheung Yue River – Survey Point 7 (Taken on 13 Dec 2023)	**Shek Sheung River – Survey Point 6 (Taken on 27 Dec 2023)**
Shek Sheung River - Survey Point 5 (Taken on 6 Dec 2023)	**Ng Tung River - Survey Point 4 (Taken on 13 Dec 2023)**

Human Activities & Site Conditions

Construction Activities (Ng Tung River) **(Project-related, taken on 19 Dec 2023)**	**Construction Activities (Shek Sheung River)** **(Project-related, taken on 27 Dec 2023)**
Construction Activities (Sheung Yue River) **(Non-project-related, taken on 6 Dec2023)**	**Construction Activities (Ng Tung River)** **(Non-Project-related, taken on 27 Dec 2023)**

Human Activities (Sheung Yue River) **(Non-project-related, taken on 19 Dec 2023)**	**Human Activities (Ng Tung River)** **(Non-project-related, taken on 6 Dec2023)**	**Human Activities (Ng Tung River)** **(Non-project-related, taken on 13 Dec 2023)**
Construction Activities (Ng Tung River) **(Non-Project-related, taken on 6 Dec 2023)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 27 Dec 2023)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 19 Dec 2023)**

Waterbird Species

Grey Heron	**Great Cormorant**	**White-throated Kingfisher**
		
Eastern Cattle Egret	**Common Greenshank**	**Waterbird in Shek Sheung River**

Appendix 5.9

Monthly Summary Waste Flow Table

Name of Department: DSD

Contract No. DC/2018/06

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 '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000m3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
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	2.067	0.000	0.000	0.000	2.067	0.791	0.000	0.000	0.000	0.000	0.073
Jun	1.013	0.000	0.000	0.000	1.013	0.250	0.000	0.000	0.000	0.000	0.084
Sub-total	9.064	0.000	0.000	0.000	9.064	11.609	0.000	0.000	0.000	0.000	0.469
Jul	1.310	0.000	0.000	0.000	1.310	0.111	0.000	0.000	0.000	0.000	0.054
Aug	1.114	0.000	0.000	0.000	1.114	0.112	0.000	0.000	0.000	0.000	0.091
Sep	0.862	0.000	0.000	0.000	0.862	0.036	0.000	0.000	0.000	0.000	0.108
Oct	0.947	0.000	0.000	0.000	0.947	0.309	0.000	0.000	0.000	0.000	0.049
Nov	0.399	0.000	0.000	0.000	0.399	0.087	0.000	0.000	0.000	0.000	0.036
Dec	0.626	0.000	0.000	0.000	0.626	0.036	0.000	0.000	0.000	0.000	0.022
Total	14.321	0.000	0.000	0.000	14.321	12.301	0.000	0.000	0.000	0.000	0.830

Notes:

1. Assume the density of soil fill is 2 ton/m3.
2. Assume the density of rock and broken concrete is 2.5 ton/m3.
3. Assume the density of general refuse is 0.9 ton/m3.
4. Assume density of waste oil is assued 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.
7. The quantities of C&D material disposed at Public Fill Facilities and Landfill was until 19/10/2023.

Name of Department: DSD

Contract No. DC/2018/07

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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m3)
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	1.877	0.000	0.000	0.000	1.877	0.000	0.00	0.000	0.000	0.000	0.072
Jun	1.004	0.000	0.000	0.000	1.004	0.093	0.00	0.000	0.000	0.000	0.065
Sub-total	16.346	0.000	0.000	0.000	16.346	0.225	0.000	0.000	0.000	0.000	0.352
Jul	2.555	0.000	0.000	0.000	2.555	0.070	0.00	0.000	0.000	0.000	0.093
Aug	3.369	0.000	0.000	0.000	3.369	0.134	0.00	0.000	0.000	0.000	0.061
Sep	0.913	0.000	0.000	0.000	0.913	0.088	0.00	0.000	0.000	0.000	0.085
Oct	0.152	0.000	0.000	0.000	0.152	0.057	0.00	0.000	0.000	0.000	0.098
Nov	0.569	0.000	0.000	0.000	0.569	0.197	0.00	0.000	0.000	0.000	0.131
Dec	0.380	0.000	0.000	0.000	0.380	0.030	8.04	0.000	0.000	0.000	0.116
Total	24.284	0.000	0.000	0.000	24.284	0.800	8.040	0.000	0.000	0.000	0.936

Notes:

1. Assume the density of soil fill and special waste (i.e. sediment from DSD sedimentation tank) is 2 ton/m3.
2. Assume the density of rock and broken concrete is 2.5 ton/m3
3. Assume the density of general refuse is 0.9 ton/m3
4. Density of waste oil is assued 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^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000m^3)	(in '000 kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m^3)
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	0	0	0	0	0	0	8.66	0.154	0	0	15.69T
June	0	0	0	0	0	0	75.09	0.155	0.01	0	19.34T
Sub-total	0	0	0	0	0	0	88.56	0.594	0.02	0	93.8T
July	62.33	0	0	0	62.33	0	41.04	0.156	0	0	24.83T
Aug	576.05	0	0	0	576.05	0	12.52	0.251	0.04	0	21.41T
Sept	0	0	0	0	0	0	0	0.108	0	0	54.34T
Oct	0	0	0	0	0	0	1.01	0.129	0.02	0	62.98T
Nov	0	0	0	0	0	0	3.07	0.257	0.01	0	60.98T
Dec	0	0	0	0	0	0	0	0	0	0	38.08T
Total	638.38	0	0	0	638.38	0	146.20	1.495	0.09	0	356.42T

Name of Department: DSD Contract No.: DE/2018/04

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	0
Feb	0	0	0	0	0	0	0	0	0	0	1.97
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	36.23	0	0	0.8	0
May	0	0	0	0	0	0	0	0	0	0	1.06
June	74.73	0	0	0	74.73	0	0	0	0	0	2.05
Sub-total	81.99	0	0	0	81.99	0	36.23	0	0	0.8	5.08
July	28.34	0	0	0	28.34	0	0	0	0	0	0
Aug	9.26	0	0	0	9.26	0	0	0	0	0	7.97
Sept	0	0	0	0	0	0	0	0.2	0	0	0.92
Oct	0	0	0	0	0	0	0	0	0	0	0
Nov	0	0	0	0	0	0	0	0	0	0	0
Dec	0	0	0	0	0	0	0	0	0	0	6.07
Total	119.59	0	0	0	119.59	0	36.23	0.2	0	0.8	20.04

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	1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness;	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.
Limit Level exceeded	1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 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.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Construction Dust Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level				
Action level being exceeded by one sampling	1. Identify source, investigate the causes of complaint and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify the Contractor.	1. Rectify any unacceptable practices. 2. Amend working methods agreed with the ER as appropriate.
Action level being exceeded by two or more consecutive sampling	1. Identify sources. 2. Inform the IEC and ER. 3. Advise the ER on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings. 5. Increase monitoring frequency to daily. 6. Discuss with the IEC, ER and Contractor on remedial action required. 7. If exceedance continues, arrange meeting with the IEC, Contractor and ER. 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
Limit level being exceeded by one sampling	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event	Action			
	ET	IEC	ER	Contractor
	ER informed of the results.			
Limit level being exceeded by two or more consecutive sampling	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 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.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Event and Action Plan for Ecological Monitoring

Action level	Response	Limit Level	Response
Construction Phase			
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	1. Inform the Contractor, IEC and ER; 2. Discuss remedial actions with IEC, ER and Contractor 3. Monitor remedial actions until rectification has been completed.	1. Check inspection report; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise ER on effectiveness of proposed remedial measures..	1. Confirm receipt of notification of failure in writing; 2. Review and agree on the remedial measures proposed by the Contractor; 3. Supervise implementation of remedial measures.	1. Identify source and investigate the non-conformity; 2. Implement remedial measures; 3. Amend working methods agreed with ER as appropriate; 4. Rectify damage and undertake any necessary replacement.
Repeated Non-conformity	1. Identify source; 2. Inform IEC, ER, EPD; 3. Discuss inspection frequency; 4. Discuss remedial actions with IEC, ER and Contractor; 5. Monitor remedial actions until rectification has been completed; 6. If non-conformity stops, cease additional monitoring	1. Check inspection report; 2. Check Contractor's working method; 3. Discuss with ET, ER and Contractor on possible remedial measures; 4. Advise ER on effectiveness of proposed remedial measures.	1. Notify the Contractor; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise implementation of remedial measures.	1. Identify source and investigate the non-conformity; 2. Implement remedial measures; 3. Amend working methods agreed with ER as appropriate; 4. Rectify damage and undertake any necessary replacement. Stop relevant portion of works as determined by ER until the non-conformity is abated.

Appendix 6.2

Summary of Notification of Exceedance

Summary for Notification of Exceedance

Reporting Period: December 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
-	-	-	-	-	-	-	-	-

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	Muddy water was suspected to be discharged from the expansion site of SWHSTP to Shek Sheung River, manholes and foul drains nearby The investigation and mitigation measures included - Employed suction truck and dump truck to clear the silt and mud at Shek Sheung River - Arranged to repair the wastewater treatment system - Installed additional sedimentation tanks and wastewater treatment system to increase the on-site treatment capacity - Clean the slurry sediment released from the outlet regularly by suction trucks - Avoid damage of underground drains and pipes caused by existing construction works - Avoid illegal discharge from the Site into foul drains and manholes	Closed
2	19 February 2021	EPD	SWHEPP	Odour nuisance	Significant odour nuisance was suspected to be emitted from the construction activities of SWHEPP The investigation and mitigation measures included - Ensured only PMEs with valid NRMM label were used on-site - Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart - Used ULSD for diesel-powered equipment - Provided water spraying and water sprinklers system for haul road access and demolition works - Used battery powered solution to provide power to the tower crane - Provided cover for all rubbish bins on-site - Separated general refuse from construction waste	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	Air nuisance was suspected to be originated from the construction activities of SWHEPP The investigation and mitigation measures included - Ensured only PMEs with valid NRMM label were used on-site - Conducted regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart - Used ULSD for diesel-powered equipment - Used battery powered solution to provide power to the tower crane - Carried out plant maintenance in a timely manner	Closed
20220304	4 March 2022	EPD	SWHEPP	Odour nuisance	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. 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: • Ensure only equipment with valid NRMM label is allowed to be used at site and regular maintenance of equipment • Provide regular visual checking against emission quality of exhaust pipe of equipment by using the Ringlemann Chart • Use ULSD as fuel for diesel-powered equipment • Maintain proper segregation and storage of general refuse	Closed

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
231214	14 December 2023	EPD	BR2 of SWHEPP; SWHSTW Administration Building	Air Pollution & Water Pollution	EPD received a complaint on 19 December 2023, mentioned that dust netting was not provided to a building known as BR2 under the construction by Contract DC/2018/07; also polluting effluent was being discharged by a construction site near the SWHSTW Administration Building. Upon the receipt of the complaint, BR2 has just finishing forming the first layer of building structure and dust netting is about to be provided, major works included formwork erection and removal. No significant air quality impact has been made by the works as no action nor limit level exceedance of air quality monitoring was recorded at AM1 and AM1a* which are the closest impact air quality monitoring stations to BR2. For the illegal discharge issue, ET did not observed the discharge of wastewater at the concerned location after the receipt of the complaint. Works carried out and water quality mitigation measures implemented by each Contractor were also investigated, no non-compliance was observed. Yet one observation related to water quality has been made during the weekly environmental site inspection on 14 December 2023 to Contact DC/2018/07 and Contactor of DC/2018/07 has immediately rectified the situation. After the receipt of the complaint, Contractor of DC/2018/07 has taken the following actions: • Provision of effective dust screening or netting to enclose the scaffolding of building under construction • All wastewater generated on site should be properly treated before discharge ET also reminded all Contractors to implement the following measures: • Regular maintenance of sedimentation tanks and Wetsep to ensure their effectiveness for treating wastewater generated on site • Provision of sandbags, bunds or other effective	Pending for EPD's review and comment on the complaint investigation report as submitted on 8/1/2024

Complaint Log No.	Date of Complaint	Received From and Received By	Location of Complainant	Nature of Complaint	Outcome	Status
					measures to U-channels, manholes and gully to prevent direct discharge of site runoff • **Provide water spraying on haul road to suppress dust emission, frequency of water spraying should also be reviewed to keep the road surface wet at all time.**	

Appendix 8.2

Complaint Investigation Report

SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS **COMPLAINT LOG SHEET**

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

COMPLAINT DETAILS & INVESTIGATION (provided by CLC / RSS / Contractor)

Name of Complainant: Not specified
Contact Phone Number: Not specified

Source of Report: ☐Letter ☐ Phone ☑ Others: EPD

Time of Incident / Non-Conformance: 14 December 2023, 9:08

Location of Incident / Non-Conformance: Shek Wu Hui Effluent Polishing Plant (SWHEPP) BR2, Shek Wu Hui Sewage Treatment Works (SWHSTW) Administration Building

Nature of Impact / Complaint: ☑ Air ☐ Noise ☑ Water ☐ Waste ☐ Others:

Details of Incident / Non-Conformance:

A public complain was referred to the Environmental Team (ET) by EPD on 20 December 2023, entitled “Environmental complaint associated with construction dust and polluting effluent discharged from construction site at Shek Wu Hui Sewage Treatment Works Administration Building.” The complaint description is "無棚網", and the natures of complaint are "Air Pollution - 施工現場 & Water Pollution - 非法排放污水". The following photo taken on 9:08 AM, 14 December 2023, showing a building under construction with scaffold erected around its perimeter is provided by the complainant, while no more details regarding the illegal discharge of wastewater is provided.

SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS **COMPLAINT LOG SHEET**

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Investigation findings:

Regarding the construction dust issue, ET recognized the building in concern is the BR2 under the Contract DC/2018/07, ET had requested RSS and Contractor to provide necessary information for investigation. As confirmed by the RSS, the major work activity at BR2 during 7/12/2023 to 21/12/2023 is formwork removal (Photo 2); other than that, ET also observed formwork construction and rebar fixing (Photo 1) during the weekly environmental inspection on 28 November, 7, 14 & 19 December 2023, no significant amount of dust emission were identified from the above-mentioned work activities. ET also observed dust suppression measures such as water spraying on haul road (Photo 4) and regular cleaning of deposited dust (Photo 5) has been carried out by the Contractor of DC/2018/07, and no construction dust related observations have been made during those inspections. Moreover, during the regular 24-hour TSP and 1-hour TSP air quality monitoring conducted on 6, 7, 12, 13, 18 & 19 December 2023, no exceedance of action nor limit level has been recorded, even at the impact air quality monitoring station AM1a* located on the roof of the Control Room of SWHSTW and is right next to BR2. (Please refer to Appendix A). Based on the above findings, ET concluded that formwork and re-bar were erected at BR2 of which these works activities did not result in any unacceptable air quality impacts to the surrounding environment, whereas dust netting surrounding the top layer of building structure of BR2 is about to be provided by the Contractor of DC/2018/07 upon the formwork is concreted to form the first layer of building structure of BR2 (Photo 6).

And for the issue of discharging polluting effluent, there are several work areas in this Project that are located near the SWHSTW Administration Building, including Portion A under Contract DC/2018/06, Inlet under Contract DC/2018/07 and Sidestream under Contract DE/2018/03 (Please refer to Appendix C). Joint site inspection was carried out by EPD, ET and Contractor of DC/2018/06 and DC/2018/07 on 22/12/2023, no sign of silt plume was observed at Shek Sheung River near the SWHSTW Administration Building (Photo 15). Nonetheless, ET has requested RSS and relevant Contractors to provide necessary information for investigation. Below are the findings for each Contract:

Contract DC/2018/06

The major work activity during 7/12/2023 to 21/12/2023 in Portion A under Contract DC/2018/06 is cable trench construction (Photo 7), which include works of excavation, formwork erection, concreting and installation of pre-cast unit. Site inspections at Portion A was conducted by ET on 22 December 2023, and ET did not observed any generation of wastewater from the work activities. Although discharge license WT0035431-2019 was granted by the Contractor of DC/2018/06 at Portion A, since there are no generation or discharge of wastewater, self-monitoring result for the effluent is not available at Portion A.

Contract DC/2018/07

The major work activities during 7/12/2023 to 21/12/2023 in Inlet under Contract DC/2018/07 are rebar fixing and formwork erection for the construction of the building (Photo 8), no generation of wastewater is anticipated from these works. Site inspections at Inlet was conducted by ET on 22 December 2023, no discharge of wastewater from Inlet was observed (Photo 13 & 14), and water quality mitigation measures such as sandbag bunding and covering of gully by impervious sheeting (Photo 12); deployment of sedimentation tanks and Wetsep (Photo 13) have been implemented by the Contractor of DC/2018/07. Self-monitoring of effluent was conducted by the Contractor of DC/2018/07 on 1/12/2023, all the results comply with the conditions of the discharge license WT00035727-2020 (Please refer to Appendix B). However, there is one observation related to water quality was made during the regular environmental site inspection on 14/12/2023, as ET observed direct discharge connection from a pipe trench into a storm drain without treatment (Photo 16 & 17), and Contractor of DC/2018/07 has immediately rectified the situation (Phot 18), ET reminded Contractor of DC/2018/07 that all wastewater generated in the site should be properly treated before discharge.

Contract DE/2018/03

The major work activities during 7/12/2023 to 21/12/2023 in Sidestream under Contract DE/2018/03 are rebar fixing, formwork and falsework erection and concreting for the construction of the building (Photo 9). Weekly environmental inspections were made at Sidestream on 7, 14 & 19 December 2023, ET did not observed any generation nor discharge of wastewater. Although discharge license WT00037220-2020 was granted by the Contractor of DE/2018/03 at Sidestream, since there are no generation or discharge of wastewater, self-monitoring result for the effluent is not available at Sidestream.

Contract DE/2018/04

The major work activities during 7/12/2023 to 21/12/2023 under Contract DE/2018/04 are E&M installation at existing Compressor House, Leachate Pre-treatment Plant and MFB2, which mainly include works like wiring of cables, bolts and nuts works for the installation of monorail crane, etc. (Photo 10 & 11). No generation of wastewater is anticipated from these works. Also no observation related to water quality is made by ET under Contract DE/2018/04 during the weekly inspection on 7, 12 & 19 December 2023.

Recorded by: Name: William Cheung Position: ET Representative Date: 29 December 2023

SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS **COMPLAINT LOG SHEET**

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

VALIDITY OF COMPLIANT & REMEDIAL ACTION(S) (as reviewed by ET)

Validity of Complaint:

Regarding the construction dust issue, the complaint was considered as project-related, since the building in concern is under the management of Contract DC/2018/07. After investigation, ET concluded that dust net was pending to be enclosed around the first layer of building structure of BR2 to be formed, works activities on formwork and re-bar erection at BR2 did not result in any unacceptable air quality impacts to the surrounding environment with no exceedance of action nor limit level has been recorded, even at the impact air quality monitoring station AM1a* located on the roof of the Control Room of SWHSTW and is right next to BR2. Nevertheless, Contractor of DC/2018/07 has provided dust netting to the concerned building immediately upon receipt of the complaint before first layer of building structure of BR2 is formed and will continue to implement relevant dust suppression measures.

Regarding the issue of discharging polluting effluent, no discharge source could be identified in the vicinity of Administration Building on investigation as the specific location of discharge observed was not available. With respect to the direct discharge connection into a storm drain without treatment by the Contractor of DC/2018/07 observed by ET during weekly site inspection on 14 Dec 2023, Contractor of DC/2018/07 has immediately rectified the situation.

Therefore the complaint of discharging polluting effluent is considered as non-project related.

Remedial Action(s) taken/to be taken:

ET reminded all contractors on the follow-up action as detailed below:

Corrective Action (if applicable)	Action taken by	Proposed Completion Date
1. Provision of effective dust screening or netting to enclose the scaffolding of building under construction	KL-CW JV (Contractor of DC/2018/07)	Immediate and on-going
2. All wastewater generated on site should be properly treated before discharge	KL-CW JV (Contractor of DC/2018/07)	Immediate and on-going
Preventive Action (if applicable)	**Action taken by**	**Proposed Completion Date**
1. Regular maintenance of sedimentation tanks and Wetsep to ensure their effectiveness for treating wastewater generated on site	All Contractors	On-going
2. Provision of sandbags, bunds or other effective measures to U-channels, manholes and gully to prevent direct discharge of site runoff	All Contractors	On-going
3. Provide water spraying on haul road to suppress dust emission, frequency of water spraying should also be reviewed to keep the road surface wet at all time.	KL-CW JV (Contractor of DC/2018/06 & DC/2018/07)	On-going

Checked by: Name: Raymond Dai Position: Environmental Team Leader Date: 4 January 2024

VERIFICATION AND CLOSING-OUT (to be completed by ET / IEC)

Follow-up Check on Complaint Status and Response:

ET will continue to monitor the performance of air and water quality mitigation measures implemented by all Contractors under this Project via routine monitoring and site inspection. [Subject to further update as checked with EPD after interim report submission]

ET Leader Signature:

Date: 8 January 2024

IEC Signature:

Claudine Lee

Date: 8 January 2024

DISTRIBUTION:	COPIED:

SHEK WU HUI EFFLUENT POLISHING PLANT – MAIN WORKS **COMPLAINT LOG SHEET**

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Site Photo

Photo 1

BR2, DC/2018/07, 28/11/2023, formwork erection

Photo 2

BR2, DC/2018/07, 19/12/2023, formwork removal

Photo 3

BR2, DC/2018/07, 19/11/2023

Photo 4

Water spraying was provided to keep the surface of haul road in wet condition to suppress dust emission, DC/2018/07, 14/12/2023

Photo 5

Cleaning of deposited dust on road surface, DC/2018/07

Photo 6

BR2, DC/2018/07, 22/11/2023, installing dust netting

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Photo 7

Portion A, DC/2018/06, 22/12/2023, construction of cable trench

Photo 8

Inlet, DC/2018/07, 14/12/2023, superstructure construction

Photo 9

Sidestream, DE/2018/03, 7/12/2023, superstructure construction

Photo 10

Compressor House, DE/2018/04, 15/12/2023, E&M works

Photo 11

MFB2, DE/2018/04, 19/12/2023, E&M works

Photo 12

Covering of gully by DC/2018/07

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Photo 13

DC/2018/07, Wetsep tank at Inlet, no discharge, 22/12/2023

Photo 14

DC/2018/07, Designated discharge point at Inlet, no discharge, 22/12/2023

Photo 15

Shek Sheung River near SWHSTW Administration Building, 22/12/2023

Photo 16 & 17

DC/2018/07, Direct discharge connection into a storm drain without treatment observed by ET during inspection on 14/12/2023

Photo 18

Contractor of DC/2018/07 has immediately removed the pump connection during the site inspection on 14/12/2023

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Appendix A – Air quality monitoring result at AM1 and AM1a* during 1/12/2023 to 19/12/2023

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Air Quality monitoring result

1hr TSP monitoring:
Air quality monitoring station: AM1
Action Level: 320
Limit Level: 500

Date	Time	Concentration
1-Dec-23	8:54	42
1-Dec-23	9:55	39
1-Dec-23	10:56	37
7-Dec-23	8:14	14
7-Dec-23	9:15	14
7-Dec-23	10:16	15
13-Dec-23	9:23	31
13-Dec-23	10:24	27
13-Dec-23	11:24	27
19-Dec-23	8:16	21
19-Dec-23	9:17	17
19-Dec-23	10:18	19

24hr TSP monitoring
Air quality monitoring station: AM1a*
Action Level: 189
Limit Level: 260

Date	Time	Concentration
6-Dec-23	8:00	71
12-Dec-23	8:00	56
18-Dec-23	8:00	112

Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Appendix B – Latest result of self-monitoring of effluent by DC/2018/07 under condition of discharge license WT00035727-2020

CASTCO 佳力高試驗中心有限公司
CASTCO TESTING CENTRE LIMITED

香港粉嶺安居街30號新寧中心1樓
香港粉嶺安居街33號得利中心6樓
香港粉嶺安全街29A號

1/F, Sun Ling Plaza, 30 On Kui Street, Fanling, H.K.
6/F, Techno Centre, 33 On Kui Street, Fanling, H.K.
29A On Chuen Street, Fanling, H.K.

Email: info@castco.com.hk
Website: www.castco.com.hk
Tel : 2597 8333 Fax: 2597 8399

HOKLAS 032 TEST

CASTCO TESTING CENTRE LTD. Preliminary Report

Test Report

Water Analysis

Preliminary Report

Date of issue: 06-12-2023

Castco LRN: 231109-2580

Report: 1688132

Details as supplied by customer

Customer: AECOM

Address: AECOM,
No. 260, Castle Peak Road,
San Tin, New Territories

Job Title: Project no. 0992 - DC/2018/07 Shek Wu Hui Effluent Polishing Plant-Main Works Stage 1 - Civil Works for Sewage (PO#0992-PO-22-0065-R2)

Contract No.: DC/2018/07 Customer Ref. No.: --

Sample details

Received Condition: Chilled Storage Condition: Chilled

Test period: 01-12-2023 to 06-12-2023

Sampling Location: Shek Wu Hui Effluent Polishing Plant

Laboratory Test Results

Castco Sample ID: ENVM-231109-2580-001-1 Customer Sample ID: Portion B

Sampling Date: 01-12-2023 Sample Receipt Date by Lab: 01-12-2023

Location of Sample Obtained: Shek Wu Hui Effluent Polishing Plant

Sample Description: --

Test	Method	Unit	Results
Chemical Oxygen Demand (COD)	ASTM D1252B : 2000	mg/L	5
pH value at 25°C	APHA 21e, 4500-H+B	-	7.9
Total suspended solids	APHA 21e 2540 D	mg/L	<3.1

Remarks:

1.Test results only relate to the specimen tested.

Approved Signatory:

End of Report

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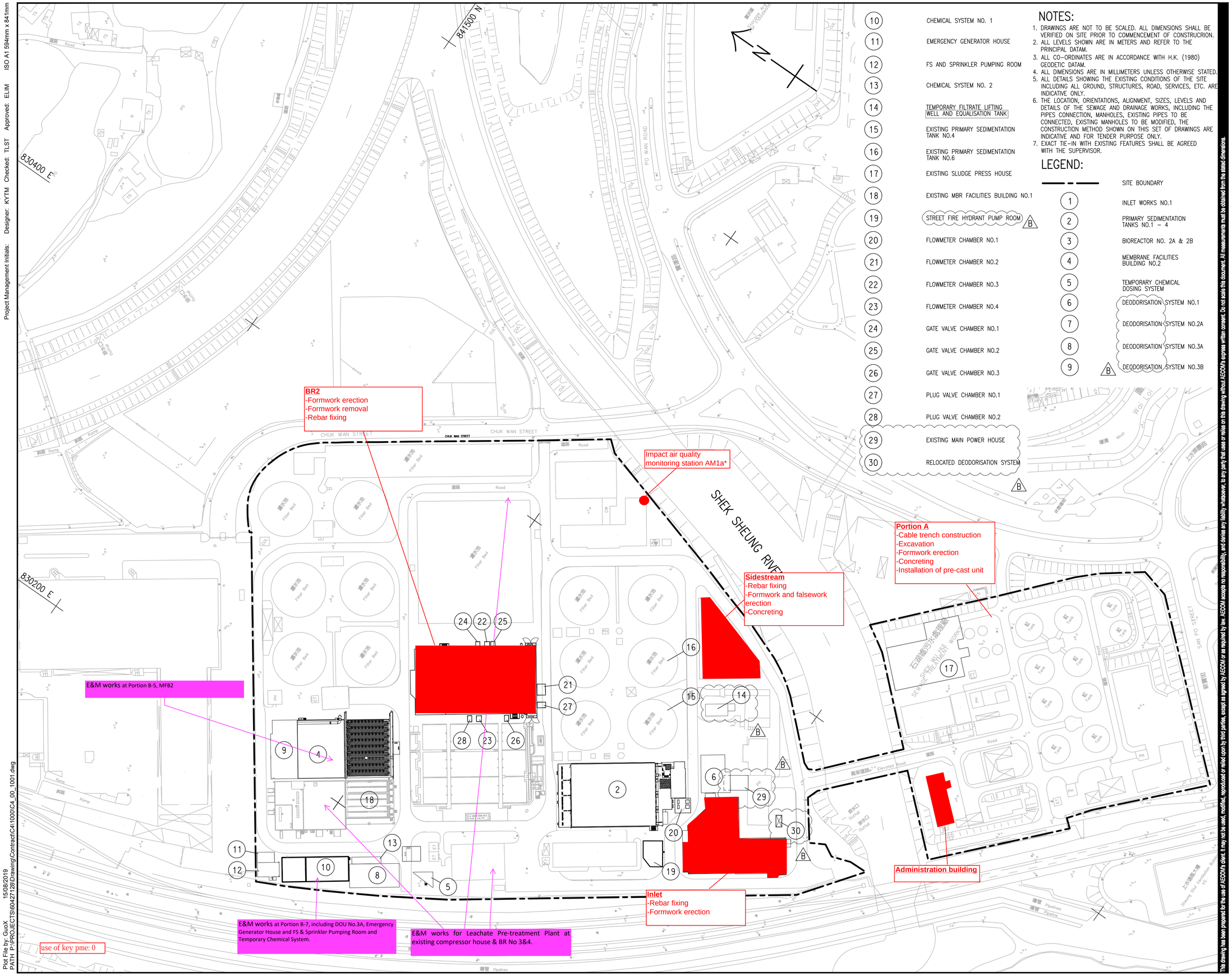
Complaint Date and Time:	2023	12	14	9:08	231214	EP Ref: FEP-02/474/2013
	YYYY	MM	DD	Time	ET Log Ref.	Contract No. SPW12/2021

Appendix C – Site Layout Plan

Project Management Initials: KYTM Designer: KYTM Checked: TLST Approved: ELIM ISO A1 594mm x 841mm



10	CHEMICAL SYSTEM NO. 1
11	EMERGENCY GENERATOR HOUSE
12	FS AND SPRINKLER PUMPING 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 (B)
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 (B)

NOTES:

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCRION.
2. ALL LEVELS SHOWN ARE IN METERS AND REFER TO THE PRINCIPAL DATAM.
3. ALL CO-ORDINATES ARE IN ACCORDANCE WITH H.K. (1980) GEODETIC DATAM.
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	INLET WORKS NO.1
2	PRIMARY SEDIMENTATION TANKS NO.1 – 4
3	BIOREACTOR NO. 2A & 2B
4	MEMBRANE FACILITIES BUILDING NO.2
5	TEMPORARY CHEMICAL DOSING SYSTEM
6	DEODORISATION SYSTEM NO.1
7	DEODORISATION SYSTEM NO.2A
8	DEODORISATION SYSTEM NO.3A
9	DEODORISATION SYSTEM NO.3B (B)

AECOM

PROJECT 項目

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 業主

渠務署 Drainage Services Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

ISSUE/REVISION 修訂

I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核
B	AUG. 19	TENDER ADDENDUM NO. 3	TLST
A	JUL. 19	TENDER ADDENDUM NO. 2	TLST
-	APR. 19	TENDER DRAWING	TLST

STATUS 用投

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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Plot File by: GueX 15/08/2019
PATH: P:\PROJECTS\60427128\Drawing\Contract\C4\1000\C4_00_1001.dwg

Appendix 9.1

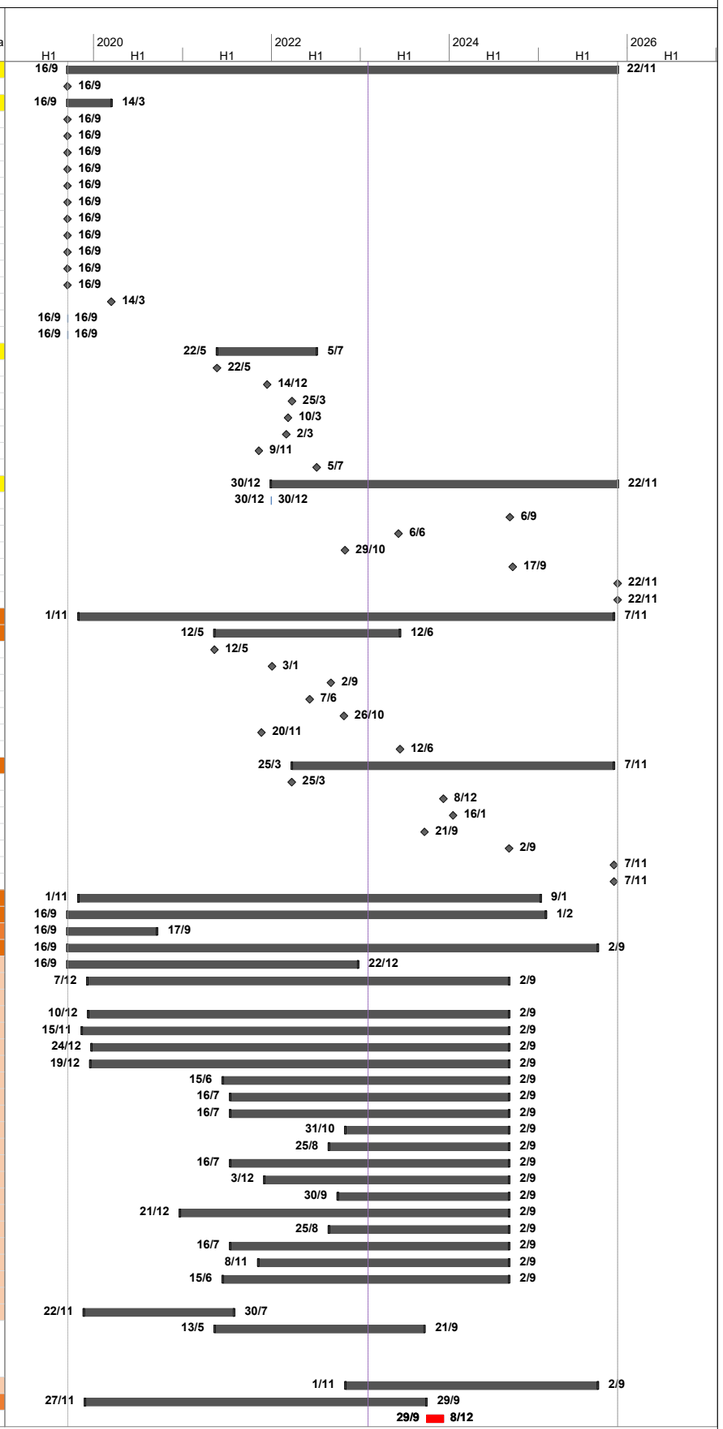
Construction Programme of Individual Contracts

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

Revised Programme (Status Date:31/03/2023)

群利－俊和聯營體
KL－CW JV

ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowa
1	**CD-00000**		**Contract Dates**			**1842.8 day**	**Mon 16 Sep '1**	**Sat 22 Nov '25**	**Mon 16 Sep '19**	**NA**			**0%**	
2	CD-01000		Starting Date			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19		4,5FS+181 days,6,7,8,9,11,12	100%	
3	**CAD-00000**		**Access Date (cal. day)**			**147 days**	**Mon 16 Sep '1**	**Sat 14 Mar '20**	**Mon 16 Sep '19**	**Sat 14 Mar '20**			**100%**	
4	CAD-01000		Portion A-1			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
5	CAD-02000		Portion A-2			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2FS+181 days		100%	
6	CAD-03000		Portion C-1A			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
7	CAD-04000		Portion C-1B			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
8	CAD-05000		Portion C-2A			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
9	CAD-06000		Portion C-2B			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
10	CAD-07000		Portion C-2C			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
11	CAD-08000		Portion C-2D			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
12	CAD-09000		Portion C-3			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
13	CAD-10000		Portion C-4			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
14	CAD-11000		Portion C-5			0 days	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
15	CAD-12000		Portion C-6			0 days	Sat 14 Mar '20	Sat 14 Mar '20	Sat 14 Mar '20	Sat 14 Mar '20	2FS+181 days	581	100%	
16	CAD-13000		Works Area WA1			1 day	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
17	CAD-14000		Works Area WA2-A			1 day	Mon 16 Sep '1	Mon 16 Sep '19	Mon 16 Sep '19	Mon 16 Sep '19	2		100%	
18	**CKD-00000**		**Key Date (cal. day)**			**332 days**	**Sat 22 May '2**	**Tue 5 Jul '22**	**Sat 22 May '21**	**NA**			**0%**	
19	CKD-01000		KD1A (613.5days after starting date)			0 days	Sat 22 May '2	Sat 22 May '21	Sat 22 May '21	Sat 22 May '21	2FS+614.5 days,36FF	53	100%	
20	CKD-02000		KD2A (820 days after starting date)			0 days	Tue 14 Dec '2	Tue 14 Dec '21	Tue 14 Dec '21	Tue 14 Dec '21	2FS+821 days,37FF	61	100%	
21	CKD-03000		KD3A (921 days after starting date)			0 days	Fri 25 Mar '22	Fri 25 Mar '22	Fri 25 Mar '22	Fri 25 Mar '22	2FS+922 days,38FF	69	100%	
22	CKD-04000		KD3B (906 days after starting date)			0 days	Thu 10 Mar '2	Thu 10 Mar '22	Thu 10 Mar '22	Thu 10 Mar '22	2FS+907 days,39FF	78	100%	
23	CKD-05000		KD3C (898 days after starting date)			0 days	Wed 2 Mar '22	Wed 2 Mar '22	Wed 2 Mar '22	Wed 2 Mar '22	2FS+899 days,40FF	86	100%	
24	CKD-06000		KD3D (785 days after starting date)			0 days	Tue 9 Nov '21	Tue 9 Nov '21	Tue 9 Nov '21	Tue 9 Nov '21	2FS+786 days,41FF	94	100%	
25	CKD-07000		KD3E (1022.5days after starting date)			0 days	Tue 5 Jul '22	Tue 5 Jul '22	NA	NA	2FS+1023.5 days,42FF	101	0%	
26	**CCD-00000**		**Completion Date (cal. day)**			**1163.8 day**	**Thu 30 Dec '2**	**Sat 22 Nov '25**	**Thu 30 Dec '21**	**NA**			**0%**	
27	CCD-01000		Section 1 of Works (836 days after starting date)			1 day	Thu 30 Dec '2	Thu 30 Dec '21	Thu 30 Dec '21	Thu 30 Dec '21	2FS+837 days,44FF	109	100%	
28	CCD-02000		Section 2 of Works (1,467 days after starting date)			0 days	Fri 6 Sep '24	Fri 6 Sep '24	NA	NA	2FS+1468 days,45FF	118	0%	
29	CCD-03000		Section 3 of Works (1,358.5 days after starting date)			0 days	Tue 6 Jun '23	Tue 6 Jun '23	NA	NA	2FS+1359.5 days,46FF	127	0%	
30	CCD-04000		Section 4 of Works (1,138.5 days after starting date)			0 days	Sat 29 Oct '22	Sat 29 Oct '22	NA	NA	2FS+1139.5 days,47FF	136	0%	
31	CCD-05000		Section 5 of Works (1,827.5 days after starting date)			0 days	Tue 17 Sep '2	Tue 17 Sep '24	NA	NA	2FS+1828.5 days,48FF	32,33,145	0%	
32	CCD-06000		Defect Liability Period			365 days	Thu 19 Sep '2	Sat 22 Nov '25	NA	NA	31		0%	
33	CCD-07000		Soft Landscape Establishment Works			365 days	Thu 19 Sep '2	Sat 22 Nov '25	NA	NA	31		0%	
34	**PD-00000**	*	**Planned Completion - Key Date (cal. day)**			**1791.8 day**	**Fri 1 Nov '19**	**Fri 7 Nov '25**	**Fri 1 Nov '19**	**NA**			**26%**	
35	**PKD-00000**	*	**Planned Completion - Key Dates**			**618.8 days**	**Wed 12 May '**	**Mon 12 Jun '23**	**Wed 12 May '21**	**NA**			**0%**	
36	PKD-01000	KD1A	KD1A			0 days	Wed 12 May '2	Wed 12 May '21	Wed 12 May '21	Wed 12 May '21	306FF	19FF	100%	
37	PKD-02000	KD2A	KD2A			0 days	Mon 3 Jan '22	Mon 3 Jan '22	Mon 3 Jan '22	Mon 3 Jan '22	686FF	20FF	100%	
38	PKD-03000	KD3A	KD3A			0 days	Fri 2 Sep '22	Fri 2 Sep '22	Fri 2 Sep '22	Fri 2 Sep '22	338FF	21FF	100%	
39	PKD-04000	KD3B	KD3B			0 days	Tue 7 Jun '22	Tue 7 Jun '22	Tue 7 Jun '22	Tue 7 Jun '22	376FF	22FF	100%	
40	PKD-05000	KD3C	KD3C			0 days	Wed 26 Oct '2	Wed 26 Oct '22	Wed 26 Oct '22	Wed 26 Oct '22	401FF	23FF	100%	
41	PKD-06000	KD3D	KD3D			0 days	Sat 20 Nov '21	Sat 20 Nov '21	Sat 20 Nov '21	Sat 20 Nov '21	434FF	24FF	100%	
42	PKD-07000	KD3E	KD3E			0 days	Mon 12 Jun '2	Mon 12 Jun '23	NA	NA	450FF,460FF,470FF,480FF,5	25FF	0%	
43	**PCD-00000**	*	**Planned Completion - Section of the Works (cal. day)**			**1081.8 day**	**Fri 25 Mar '22**	**Fri 7 Nov '25**	**Fri 25 Mar '22**	**NA**			**0%**	
44	PCD-01000	SW1	Section 1 of Works			0 days	Fri 25 Mar '22	Fri 25 Mar '22	Fri 25 Mar '22	Fri 25 Mar '22	578FF,609FF,610FF,611FF,6	27FF	100%	
45	PCD-02000	SW2	Section 2 of Works			0 days	Fri 8 Dec '23	Fri 8 Dec '23	NA	NA	715FF,727FF,699FF	28FF	0%	
46	PCD-03000	SW3	Section 3 of Works			0 days	Tue 16 Jan '24	Tue 16 Jan '24	NA	NA	205FF,403FF,418FF,436FF,4	648,29FF	0%	
47	PCD-04000	SW4	Section 4 of Works			0 days	Thu 21 Sep '2	Thu 21 Sep '23	NA	NA	579FF,355FF,381FF,405FF,4	30FF	0%	
48	PCD-05000	SW5	Section 5 of Works			0 days	Mon 2 Sep '24	Mon 2 Sep '24	NA	NA	313FF,356FF,382FF,406FF,4	49,50,31FF	0%	
49	PCD-06000	DLP	Defect Liability Period			365 days	Tue 3 Sep '24	Fri 7 Nov '25	NA	NA	48,649FF		0%	
50	PCD-07000		Soft Landscape Establishment Works			365 days	Tue 3 Sep '24	Fri 7 Nov '25	NA	NA	48,641,642,643		0%	
51	**DE-00000**		**Delaying Events Other than Change of Works Information to be considered**			**1532.8 day**	**Fri 1 Nov '19**	**Thu 9 Jan '25**	**Fri 1 Nov '19**	**NA**			**43%**	
153	**SUB-00000**		**Submissions (cal. day)**			**1590 days**	**Mon 16 Sep '1**	**Sat 1 Feb '25**	**Mon 16 Sep '19**	**NA**			**93%**	
264	**CPW-00000**		**Site Preliminary Works**			**300 days**	**Mon 16 Sep '1**	**Thu 17 Sep '20**	**Mon 16 Sep '19**	**Thu 17 Sep '20**			**100%**	
270	**CWPC-00000**	*	**Construction Works of Portion C of the Site**			**1772.8 day**	**Mon 16 Sep '1**	**Tue 2 Sep '25**	**Mon 16 Sep '19**	**NA**			**57%**	
271	**CUV1-00000**	*	**UV System No. 1 & Effluent Pumping Station No. 1 (1)**			**971 days?**	**Mon 16 Sep '1**	**Thu 22 Dec '22**	**Mon 16 Sep '19**	**Thu 22 Dec '22**			**100%**	
314	**CSDC-00000**	*	**Sludge Digesters and Distribution Chamber (4)**			**1395.8 day**	**Sat 7 Dec '19**	**Mon 2 Sep '24**	**Sat 7 Dec '19**	**NA**			**67%**	
357	**CSDB-00000**	*	**Sludge Dewatering Building (2)**			**875.8 days**	**Tue 26 Nov '1**	**Wed 9 Nov '22**	**Tue 26 Nov '19**	**NA**			**65%**	
383	**CHPB-00000**	*	**Combined Heat Power Building (3)**			**1393.8 day**	**Tue 10 Dec '1**	**Mon 2 Sep '24**	**Tue 10 Dec '19**	**NA**			**51%**	
407	**CSPS-00000**	*	**Sewage Pumping Station (9)**			**1414.8 day**	**Fri 15 Nov '19**	**Mon 2 Sep '24**	**Fri 15 Nov '19**	**NA**			**79%**	
421	**CWS2-00000**	*	**Workshop No. 2 (5)**			**1381.8 day**	**Tue 24 Dec '1**	**Mon 2 Sep '24**	**Tue 24 Dec '19**	**NA**			**74%**	
440	**CTHP-00000**	*	**Thermal Hydrolysis Pretreatment (6)**			**1385.8 day**	**Thu 19 Dec '1**	**Mon 2 Sep '24**	**Thu 19 Dec '19**	**NA**			**35%**	
454	**CFCD-00000**	*	**Ferric Chloride Dosing Facilities (10)**			**949.8 days**	**Tue 15 Jun '2**	**Mon 2 Sep '24**	**Tue 15 Jun '21**	**NA**			**42%**	
464	**CFHB-00000**	*	**Fire Hydrant and Booster Pump Room (16)**			**923.8 days**	**Fri 16 Jul '21**	**Mon 2 Sep '24**	**Fri 16 Jul '21**	**NA**			**28%**	
475	**CTFS-00000**	*	**Transformer and Switchroom (15)**			**923.8 days**	**Fri 16 Jul '21**	**Mon 2 Sep '24**	**Fri 16 Jul '21**	**NA**			**43%**	
484	**CUC-00000**	*	**Utility Corridor (13)**		**204**	**539 days**	**Mon 31 Oct '2**	**Mon 2 Sep '24**	**Mon 31 Oct '22**	**NA**			**13%**	
497	**CWMC-00000**	*	**Water Meter Cabinet (11)**		**204**	**593.8 days**	**Thu 25 Aug '2**	**Mon 2 Sep '24**	**Thu 25 Aug '22**	**NA**			**21%**	
504	**CGH-00000**	*	**Guard House (14)**			**923.8 days**	**Fri 16 Jul '21**	**Mon 2 Sep '24**	**Fri 16 Jul '21**	**NA**			**0%**	
511	**CCPS-00000**	*	**THP Coolers Pumping Station (21)**			**806.8 days**	**Fri 3 Dec '21**	**Mon 2 Sep '24**	**Fri 3 Dec '21**	**NA**			**52%**	
518	**CWGB-00000**	*	**Waste Gas Burner (8)**			**563 days**	**Fri 30 Sep '22**	**Mon 2 Sep '24**	**Fri 30 Sep '22**	**NA**			**27%**	
527	**CPSW-00000**	*	**Plant Services Water System (20)**			**1087.8 day**	**Mon 21 Dec '2**	**Mon 2 Sep '24**	**Mon 21 Dec '20**	**NA**			**48%**	
535	**CDS11-00000**	*	**Deodorization System No. 11 (18)**			**593.8 days**	**Thu 25 Aug '2**	**Mon 2 Sep '24**	**Thu 25 Aug '22**	**NA**			**39%**	
545	**CBGH-00000**	*	**Biogas Holder (7)**			**923.8 days**	**Fri 16 Jul '21**	**Mon 2 Sep '24**	**Fri 16 Jul '21**	**NA**			**44%**	
553	**CH2S-00000**	*	**H2S Removal System (12)**			**828.8 days**	**Mon 8 Nov '2**	**Mon 2 Sep '24**	**Mon 8 Nov '21**	**NA**			**16%**	
562	**CDS12-00000**	*	**Deodorization System No. 12 (19)**			**949.8 days**	**Tue 15 Jun '2**	**Mon 2 Sep '24**	**Tue 15 Jun '21**	**NA**			**9%**	
570	CUPH-00000	SW5	Underpass & Pump House			711 days	Thu 20 Feb '2	Sat 16 Jul '22	NA	NA		47FF	0%	
571	**CPWU-00000**	*	**Pipe Works and Utility Installation**			**498 days**	**Fri 22 Nov '19**	**Fri 30 Jul '21**	**Fri 22 Nov '19**	**Fri 30 Jul '21**			**100%**	
602	**CPWU-02160**	**SW4**	Cable & Other Underground Utility Pipeworks	**17, 21, 22, 33, 45, 46, 257, 333, 258, 268, 338, (92), (112), (204), (228)**	**(283)**	**702.8 days**	**Thu 13 May '21**	**Thu 21 Sep '23**	**Thu 13 May '21**	**NA**	**171,367,428**	**47FF**	**74%**	
640	**CRWL-00000**	*	**Remaining Works & Landscape Works**			**846 days**	**Tue 1 Nov '22**	**Tue 2 Sep '25**	**Tue 1 Nov '22**	**NA**			**15%**	
650	**CWPA-00000**	*	**Construction of Portion A of the Site**			**1138 days**	**Wed 27 Nov '**	**Fri 29 Sep '23**	**Wed 27 Nov '19**	**NA**			**90%**	
727	C132SE-06000		Inspection and Handover to DSD			57 days	Fri 29 Sep '23	Fri 8 Dec '23	NA	NA	688,714,715,723	48FF,45FF	0%	



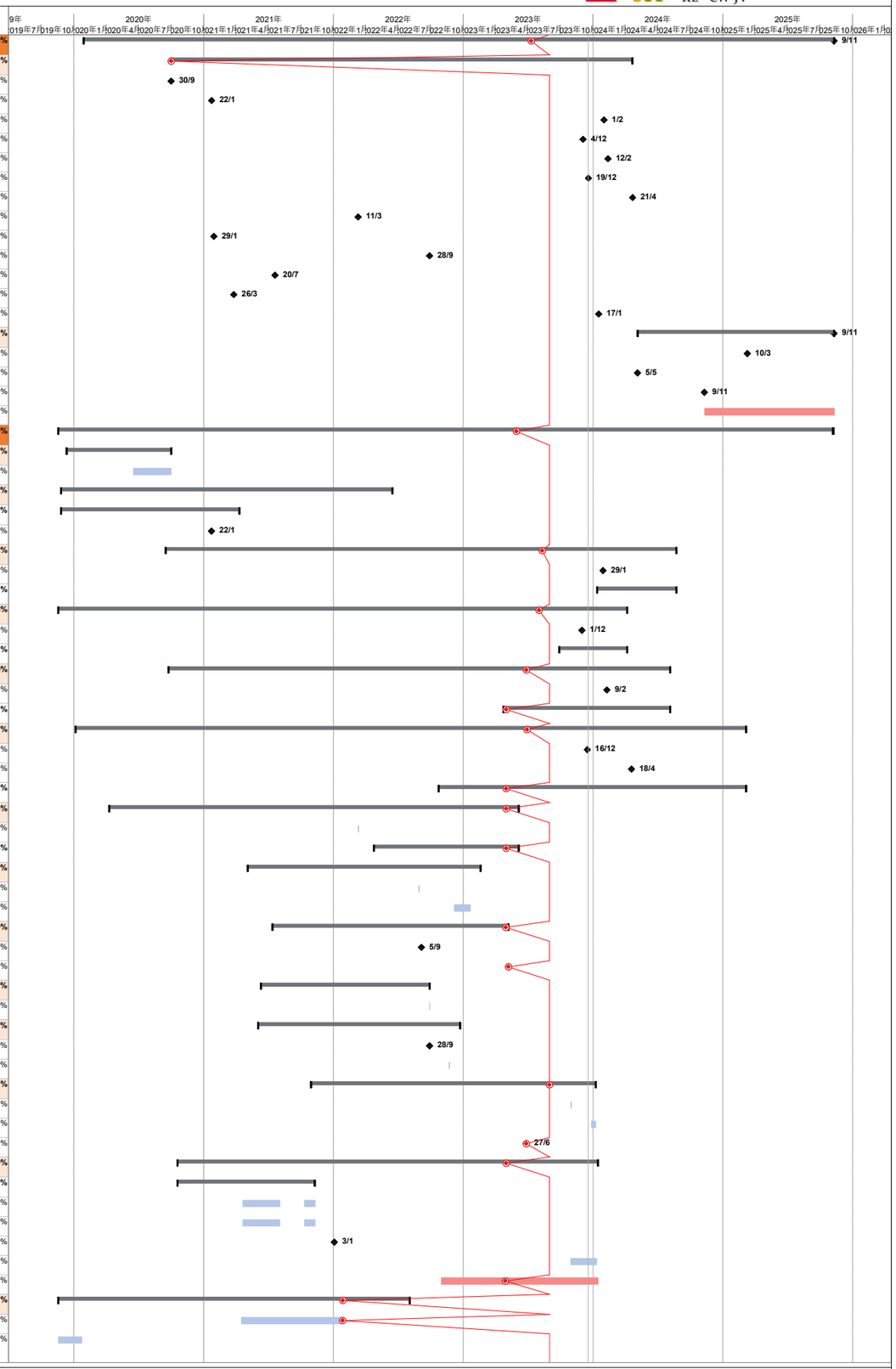
Critical Split · · · · · · · · · · · · · · · Task ▬▬ Milestone ◆ Summary ▬▬ Critical ▬▬

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

Revised Master Programme (Status Date: 30/09/2023)

群利－俊和聯營體 KL－CW JV

識別碼	Activity ID	Key Date	NCE/(EW	PMI/(CE)	Task Name	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	總寬限時間	Risk Allowa	完成百分比
40	**PD-1000**	*			**Planned Completion**	**2113 days**	**2020年1月28日星期**	**2025年11月9日,**	**年1月28日星期二2020**	**NA**			**0 days**		**49%**
41	**PCD-1000**	*			**Planned Completion - Key Dates (cal. day)**	**1298.79 days**	**2020年9月30日星期三**	**2024年4月21日星期日**	**年9月30日星期三2020**	**NA**			**-96.79 days**		**0%**
42	PKD-1010	KD1A			KD1A completion of AR3 in Portion B-1	0 days	2020年9月30日星	2020年9月30日	年9月30日星期三2020	年9月30日星期三2020	290FF	21FF,56FF+3.39 day	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	2021年1月22日星期五	2021年1月22日星期五	年1月22日星期五2021	年1月22日星期五2021	373FF,355FF	22FF,56FF+3.39 days,2210	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	2024年2月1日星期	2024年2月1日星	NA	NA	480FF+3.19 days,1100	23FF,56FF+3.39 day	-324.39 days		0%
45	PCD-1040	KD1D			KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3	0 days	2023年12月4日星期一	2023年12月4日星期一	NA	NA	587FF+3.33 days	24FF,56FF+3.39 days	-215.53 days		0%
46	PCD-1050	KD1E			KD1E completion of civil and structural works of Bioreactor in Portion B-4	0 days	2024年2月12日星	2024年2月12日	NA	NA	694FF+2.97 days	25FF,56FF+3.39 day	-249.17 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	2023年12月19日星期二	2023年12月19日星期二	NA	NA	877FF+3.39 days	26FF,56FF+3.39 days	-539.59 days		0%
48	PCD-1070	KD1G			KD1G completion of civil and structural works of MFB in Portion B-5	0 days	2024年4月21日星	2024年4月21日	NA	NA	878FF+3.39 days	27FF,56FF+3.39 day	-471.79 days		0%
49	PCD-1080	KD1H			KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6	0 days	2022年3月11日星期五	2022年3月11日星期五	年3月11日星期五2022	年3月11日星期五2022	924FF,921FF	28FF,56FF+3.39 days	0 days		100%
50	PCD-1090	KD1I			KD1I completion alternation works for existing Power House in Portion B-7A	0 days	2021年1月29日星	2021年1月29日	年1月29日星期五2021	年1月29日星期五2021	1125FF	29FF,56FF+3.39 day	0 days		100%
51	PCD-1100	KD1J			KD1J completion of auxiliary facilities in Portion B-7	0 days	2022年9月28日星	2022年9月28日	年9月28日星期二2022	年9月28日星期二2022	1058FF,1082FF,1065F	30FF,56FF+3.39 day	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	2021年7月20日星期二	2021年7月20日星期二	年7月20日星期二2021	年7月20日星期二2021	1131FF,1129FF	31FF,57FF+2.33 days	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	2021年3月26日星期五	2021年3月26日星期五	年3月26日星期五2021	年3月26日星期五2021	1118FF,1122FF,1123F	32FF,57FF+2.33 days	0 days		100%
54	PCD-1130	KD3A			KD3A completion of all utilities and road works in Portion B-9A	0 days	2024年1月17日星	2024年1月17日	NA	NA	1127FF+2.33 days,112	33FF	-1.53 days		0%
55	**PCD-1000**	*			**Planned Completion Date (cal. Day)**	**553.47 days**	**2024年5月5日星**	**2025年11月9日,**	**NA**	**NA**			**-512.53 da...**		**0%**
56	PCD-1010	SW1			Section 1 of the Works	0 days	2025年3月10日星	2025年3月10日	NA	NA	1116FF+3.39 days,927	35FF	-235.79 days		0%
57	PCD-1020	SW2			Section 2 of the Works	0 days	2024年5月5日星期	2024年5月5日星	NA	NA	689FF+2.33 days,690F	36FF	-512.53 days		0%
58	PCD-1030	SW3			Section 3 of the Works	0 days	2024年11月9日星	2024年11月9日	NA	NA	2238FF+2.33 days,223	37FF,59	0 days		0%
59	PCD-1040	DLP			Defects Liability Period	365 days	2024年11月10日	2025年11月9日	NA	NA	58	38FF	0 days		0%
275	**C-1000**	*			**Construction Works (Working day)**	**2181.67 days**	**2019年11月18日,**	**2025年11月7日,**	**年11月18日星期一2019**	**NA**			**2.33 days**		**68%**
281	**CAR-0000**	*			**Access Road (AR3), B-1**	**238 days**	**2019年12月12日,**	**2020年9月30日,**	**年12月12日星期四2019**	**年9月30日星期三2020**	**4,230**	**1218SS**	**0 days**		**100%**
290	CAR-3000	KD1A			Roadworks	133 days	2020年4月24日星	2020年9月30日	年4月24日星期五2020	年9月30日星期三2020	200,289,288	42FF	0 days		100%
291	**CIW-0000**	*			**Inlet Works No.1, B-2**	**754 days**	**2019年11月26日,**	**2022年6月15日,**	**年11月26日星期二2019**	**年6月15日星期三2022**			**0 days**		**100%**
332	**CIW-1510**	**KD1B**			**Diversion of Tank Drain MHD9.5 (approx. 70m CHES1 & CHES2)**	**405 days**	**2019年11月26日,**	**2021年4月10日,**	**年11月26日星期二2019**	**年4月10日星期六2021**	**360**	**393**	**0 days**		**100%**
391	CIW-2500	KD1B			Conditions to be met for KD1B	0 days	2021年1月22日星	2021年1月22日	年1月22日星期五2021	年1月22日星期五2021	389	390	0 days		100%
392	**CIW-3000**	*			**Inlet Works No.1 Building (1)**	**1167 days**	**2020年9月15日星**	**2024年8月23日,**	**年9月15日星期二2020**	**NA**	**6**		**374.8 days**		**62%**
480	CIW-3700	KD1C			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2024年1月29日星	2024年1月29日	NA	NA	411,465,447	44FF+3.19 days	-264.19 days		0%
494	**CIW-4000**	SW1			**ABWF Works**	**180 days**	**2024年1月13日星**	**2024年8月23日,**	**NA**	**NA**	**265,215**	**56FF+3.39 days**	**-34.2 days**		**0%**
502	**CPS-0000**	*			**Primary Sedimentation Tanks, B-3 (2)**	**1297 days**	**2019年11月18日,**	**2024年4月6日星**	**年11月18日星期一2019**	**NA**	**8**		**489.8 days**		**76%**
587	CPS-9000	KD1D			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2023年12月1日星	2023年12月1日	NA	NA	536	45FF+3.33 days	-178.33 days		0%
592	**CPS-10000**	**SW1**			**ABWF works + BS works**	**152 days**	**2023年9月28日星**	**2024年4月6日星**	**NA**	**NA**	**265,215**	**56FF+3.39 days**	**80.8 days**		**0%**
600	**CBR-0000**	*			**Bioreactors No.2A & 2B, B-4 (3)**	**1144 days**	**2020年9月23日星**	**2024年8月5日星**	**年9月23日星期三2020**	**NA**	**9**		**390.8 days**		**65%**
694	CBR-18000	KD1E			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2024年2月9日星	2024年2月9日	NA	NA	686,691,692,693,657	46FF+2.97 days	-206.97 days		0%
698	**CBR-21000**	**SW1**			**ABWF Works + BS Works**	**381 days**	**2023年4月25日星**	**2024年8月5日星**	**年4月25日星期二2023**	**NA**	**265,215**	**56FF+3.39 days**	**-18.2 days**		**1%**
704	**CMF-0000**	*			**Membrane Facilities Building No.2 , B-5 (4)**	**1536.2 days**	**2020年1月6日星**	**2025年3月7日星**	**年1月6日星期一2020**	**NA**	**2**		**211.6 days**		**57%**
877	CMF-8000	KD1F			Allow access to Contractor DE/2018/04 for E&M installation and T&C works (from B1 to 1/F)	0 days	2023年12月16日星期六	2023年12月16日星期六	NA	NA	855,827,847	47FF+3.39 days	-442.39 days		0%
878	CMF-8100	KD1G			Allow access to Contractor DE/2018/04 for E&M installation and T&C works (from 1/F to Roof)	0 days	2024年4月18日星期四	2024年4月18日星期四	NA	NA	849,830	48FF+3.39 days	-381.2 days		0%
879	**CMF-9000**	**SW1**			**ABWF works + BS works**	**707.2 days**	**2022年10月24日,**	**2025年3月7日星**	**年10月24日星期一2022**	**NA**	**265,215**	**56FF+3.39 days**	**-197.4 days**		**2%**
897	**CSA-0000**	*			**SAS Pumping Station, B-6 (12)**	**934 days**	**2020年4月9日星**	**2023年6月6日星**	**年4月9日星期四2020**	**NA**	**11**		**327.8 days**		**98%**
924	CSA-8000	KD1H			Allow access to Contractor DE/2018/03 for E&M installation and T&C works	1 day	2022年3月11日星	2022年3月11日	年3月11日星期五2022	年3月11日星期五2022	923	49FF,925SS-1 day	0 days		100%
927	**CSA-9000**	**SW1**			**ABWF works + BS works**	**331 days**	**2022年4月25日星**	**2023年6月6日星**	**年4月25日星期一2022**	**NA**	**926**	**56FF+3.39 days**	**327.8 days**		**93%**
939	**CFS-1000**	*		301	**Fire Services Sprinkler Pumping Room & Emergency Generator House (9)+(10)****	**534 days**	**2021年5月4日星期二**	**2023年2月18日星期六**	**年5月4日星期二2021**	**年2月18日星期六2023**			**0 days**		**100%**
982	CFS-5000	KD1J			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	1 day	2022年8月29日星	2022年8月29日	年8月29日星期一2022	年8月29日星期一2022	957	51FF,983SS-1 day	0 days		100%
996	CFS-6100	SW1			Inspection and Handover	37 days	2022年12月6日星	2023年1月20日	年12月6日星期二2022	年1月20日星期五2023	994,995	56FF+3.39 days	0 days		100%
997	**CCS-1000**	*	295,297		**Chemical System No.1 (8)***	**539 days**	**2021年7月13日星**	**2023年5月8日星**	**年7月13日星期二2021**	**NA**			**351.8 days**		**99%**
1032	CCS-1900	KD1J			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2022年9月5日星期	2022年9月5日星	年9月5日星期一2022	年9月5日星期一2022	1034	51FF,1039,1038	0 days		100%
1044	CCS-2050	SW1			Inspection and Handover	1 day	2023年5月8日星期	2023年5月8日星	NA	NA	1043	56FF+3.39 days	351.8 days		0%
1045	**CDS-0000**	*			**Deodorization System No.3A (7)***	**387 days**	**2021年6月11日星**	**2022年9月28日,**	**年6月11日星期五2021**	**年9月28日星期三2022**			**0 days**		**100%**
1058	CDS-7000	KD1J			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	1 day	2022年9月28日星	2022年9月28日	年9月28日星期三2022	年9月28日星期三2022	1057	51FF,1062	0 days		100%
1059	**CTC-0000**	*			**Temporary Chemical Dosing System (5)**	**466 days**	**2021年6月3日星**	**2022年12月23日**	**年6月3日星期四2021**	**年12月23日星期五2022**			**0 days**		**100%**
1082	CTC-11000	KD1J			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2022年9月28日星	2022年9月28日	年9月28日星期三2022	年9月28日星期三2022	1080FS+1 day	51FF,1084	0 days		100%
1087	CTC-13000	SW1			Inspection and Handover	1 day	2022年11月22日星	2022年11月22日	年11月22日星期二2022	年11月22日星期二2022	1086	56FF+3.39 days	0 days		100%
1088	**CFB-0000**	*			**Fire Hydrant and Booster Pump Room (13)***	**650.8 days**	**2021年10月29日,**	**2024年1月8日星**	**年10月29日星期五2021**	**NA**			**150 days**		**9%**
1100	CFB-4000	KD1C			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	1 day	2023年10月31日星	2023年10月31日	NA	NA	1099FF	1101SF,44FF+3.19 d	-190.99 days		0%
1107	CFB-5100	SW1			Inspection and Handover	10 days	2023年12月27日星	2024年1月8日星	NA	NA	1103,1104,1105,1106	56FF+3.39 days	150 days		0%
1116	CDS1-4000	KD1C			Allow access to Contractor DE/2018/04 for E&M installation and T&C works	0 days	2023年6月27日星	2023年6月27日	NA	NA	1115	56FF+3.39 days,44F	-86.19 days		0%
1117	**CAA-0000**	*			**Additional and Alternation Works for Existing Facilities (B-7A, B-8, B-8A)**	**961 days**	**2020年10月19日,**	**2024年1月15日,**	**年10月19日星期一2020**	**NA**			**0 days**		**79%**
1118	**CAA-1000**	**KD2B**			**B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)**	**315 days**	**2020年10月19日星期一**	**2021年11月9日星期二**	**年10月19日星期一2020**	**年11月9日星期二2021**	**15,216,260**	**53FF**	**0 days**		**100%**
1123	CAA-1500	KD2B		064	Re-alignment of DN800 Temporary Air Main (CHTA) and Provision of FRP Staircases	168 days	2021年4月20日星期二	2021年11月9日星期二	年4月20日星期二2021	年11月9日星期二2021	1119,1120,1121	53FF	0 days		100%
1124	CAA-1600	KD2B	017	062	Elevated Section of DN800 Temporary Air Main (CHTA) across existing Bioreactor's Distribution Chamber No. 2	168 days	2021年4月20日星期二	2021年11月9日星期二	年4月20日星期二2021	年11月9日星期二2021	1119,1120,1121	53FF,1125	0 days		100%
1125	CAA-2000	KD1I			B7-A Alternation works for existing Power House	0 days	2022年1月3日星期	2022年1月3日星	年1月3日星期一2022	年1月3日星期一2022	13FS-1 day,196,234,23	50FF,1126FS+540 d	0 days		100%
1126	CAA-2100	SW3		224	Additional works for Power House	60 days	2023年10月30日	2024年1月11日	NA	NA	1125FS+540 days	58FF+2.33 days,54F	2.47 days		0%
1127	CAA-3000	SW3			Alternation works for existing Membrane Facilities Building No.1	359 days	2022年10月31日	2024年1月15日	年10月31日星期一2022	NA	14FS-1 day,249FS+160	58FF+2.33 days,54F	-0.53 days		41%
1128	**C2AUU-0000**	*			**External Underground Service, Utilities, Road/Drain (KD2A)**	**802 days**	**2019年11月18日,**	**2022年8月3日星**	**年11月18日星期一2019**	**NA**	**16**		**984.8 days**		**81%**
1129	C2AUU-1000	KD2A		33, 222, 255	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)	530 days	2020年10月19日星期一	2022年8月3日星期三	年10月19日星期一2020	NA	260,216	52FF	984.8 days		72%
1130	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	2019年11月18日星期一	2020年1月22日星期三	年11月18日星期一2019	年1月22日星期三2020			0 days		100%

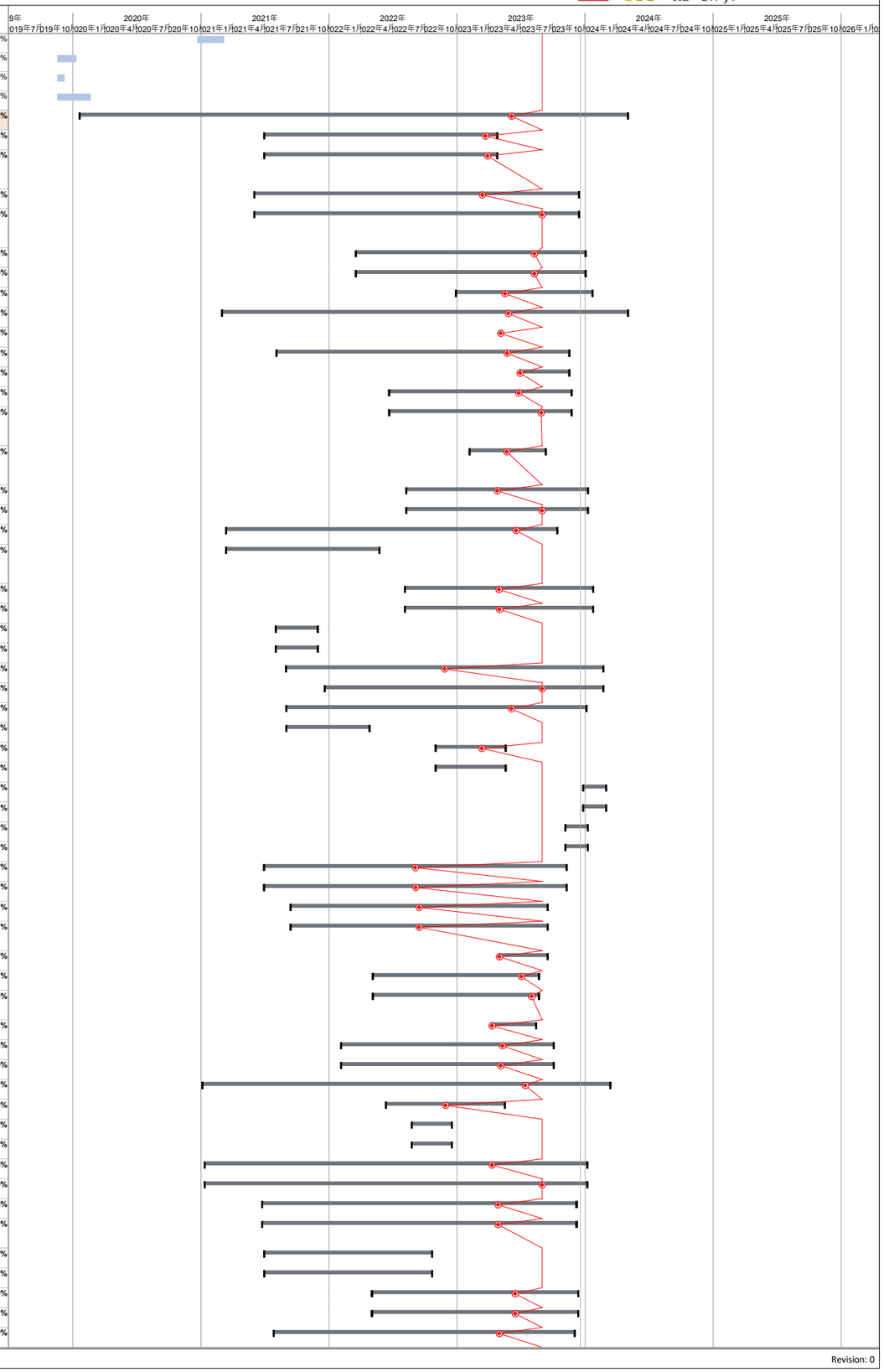


Contract No. DC/2018/07
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Civil Works for Sewage Treatment Facilities

Revised Master Programme (Status Date: 30/09/2023)

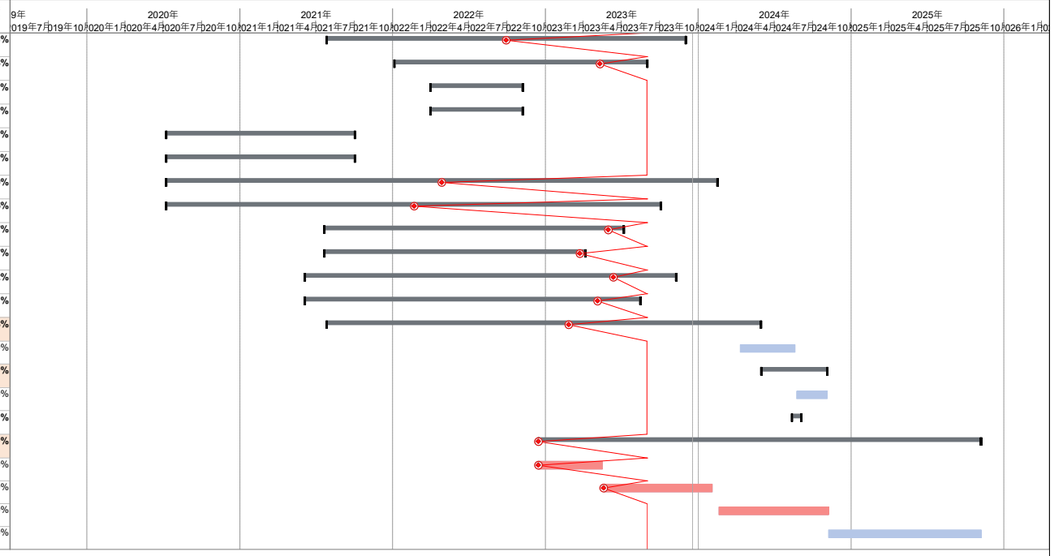
群利－俊和聯營體 KL-CW JV

識別碼	Activity ID	Key Date	NCE/(EW	PMI/(CE)	Task Name	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	總寬限時間	Risk Allowa	完成百分比
1131	C2AUU-1000b	KD2A		255	Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN900 D.I.)	60 days	2020年12月21日	2021年3月6日星	年12月21日星期一2020	年3月6日星期六2021		52FF	0 days		100%
1132	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	2019年11月18日 星期一	2020年1月9日 星期四	年11月18日星期一2019	年1月9日星期四2020			0 days		100%
1133	C2AUU-1002	KD2A		222	Grouting for Sheung Shui Slaughter House Boundary Walls along CHR & CHS Pipes Works Area	16.83 days	2019年11月18日 星期一	2019年12月6日 星期五	年11月18日星期一2019	年12月6日星期五2019			0 days		100%
1134	C2AUU-1004	KD2A		(076)	Delay Delivery of DI pipes due to COVID-19	75 days	2019年11月18日	2020年2月19日	年11月18日星期一2019	年2月19日星期三2020			0 days		100%
1135	**CS2-0000**	**SW2**			**External Underground Service, Utilities, Road/Drain (Section 2)**	**1268 days**	**2020年1月20日星**	**2024年5月3日星**	**年1月20日星期一2020**	**NA**		**57FF+2.33 days**	**-135 days**		**68%**
1163	**CS2-1000**	**SW2**			**Sewerage and utilities in Workfront A2**	**539 days**	**2021年6月30日星**	**2023年4月25日,**	**年6月30日星期三2021**	**NA**			**-20 days**		**94%**
1181	**CS2-1100**	**SW2**			**Workfront A2b : Construction of 2 nos. of DN250 DI sludge pipe (CHPS1,CHPS2 CH157-190), 2 nos. of DN350 DI sewage pipe (CHT CH62-91, CHY CH62-91) and 3 nos. of DN150 DI pipe (CHW, CHX, CHZ CH62-91)**	**539 days**	**2021年6月30日 星期三**	**2023年4月25日 星期二**	**年6月30日星期三2021**	**NA**		**1164**	**-20 days**		**85%**
1191	**CS2-2000**	**SW2**			**Sewerage and utilities in Workfront A3**	**756.8 days**	**2021年6月2日星**	**2023年12月15日**	**年6月2日星期三2021**	**NA**			**-211.8 days**		**61%**
1208	**CS2-2100**	**SW2**			**Workfront A3b: Construction of 2 nos. of DN250 DI sludge pipe (CHPS1, CHPS2 CH133-146), 2 nos. of DN350 DI sewage pipe (CHT CH100-114, CHY CH100-114) and 3 nos. of DN150 DI pipe (CHW CH100-114, CHX&CHZ CH100-114); Watermains**	**756.8 days**	**2021年6月2日星 期三**	**2023年12月 15日星期五**	**年6月2日星期三2021**	**NA**	**1967**		**-304.13 days**		**64%**
1219	**CS2-3000a**	**SW2**			**Sewerage and utilities in Workfront A5a**	**531 days**	**2022年3月18日星**	**2024年1月2日星**	**年3月18日星期五2022**	**NA**		**2025,2018**	**-80 days**		**64%**
1221	**CS2-3100a**	**SW2**			**Construction of DN825 concrete pipe (CHU CH9.81-67.72) and manhole MHS01-MHS03**	**531 days**	**2022年3月18日 星期五**	**2024年1月2日 星期二**	**年3月18日星期五2022**	**NA**			**-80 days**		**64%**
1250	**CS2-3000b**	**SW2**			**Sewerage and utilities in Workfront A5b**	**316 days**	**2022年12月29日,**	**2024年1月22日,**	**年12月29日星期四2022**	**NA**		**2025,2018**	**-103 days**		**17%**
1261	**CS2-3300**	**SW2**			**Sewerage and utilities in Workfront A6**	**940 days**	**2021年3月1日星**	**2024年5月3日星**	**年3月1日星期一2021**	**NA**			**-135 days**		**61%**
1263	**CS2-3310**	**SW2**			**Construction of CHPS1 CH274.233 - 355.037 ; CHPSW1 CH0-7**	**171 days**	**2022年10月6日星**	**2023年5月5日星**	**年10月6日星期四2022**	**NA**			**112 days**		**76%**
1312	**CS2-4000**	**SW2**			**Sewerage and utilities in Workfront B1**	**680 days**	**2021年8月4日星**	**2023年11月17日**	**年8月4日星期三2021**	**NA**			**-50 days**		**44%**
1325	**CS2-4100**	**SW2**			**Workfront B1b: DN600 concrete pipe (CHU CH0-9.81)**	**117 days**	**2023年6月30日星**	**2023年11月17日**	**年6月30日星期五2023**	**NA**			**-50 days**		**5%**
1342	**CS2-5000**	**SW2**			**Sewerage and utilities in Workfront C1**	**427 days**	**2022年6月21日星**	**2023年11月24日**	**年6月21日星期二2022**	**NA**		**2042**	**-65 days**		**57%**
1343	**CS2-5100**	**SW2**			**Workfront C1a: Construction of 2 nos. of DN250 DI sludge pipe (CHPS1,CHPS2 CH50-133), 2 nos. of DN350 DI sewage pipe (CHT&CHY CH114-189) and 3 nos. of DN150 DI pipe (CHW CH114-140, CHX&CHZ CH114-140), MHFB64B-MHFB64C**	**427 days**	**2022年6月21日 星期二**	**2023年11月 24日星期五**	**年6月21日星期二2022**	**NA**	**1508**		**-73 days**		**78%**
1370	**CS2-5100**	**SW2**			**Workfront C1b: Construction of 2 nos. of DN250 DI sludge pipe (CHPS1,CHPS2 CH50-133), 2 nos. of DN350 DI sewage pipe (CHT&CHY CH114-189) and 3 nos. of DN150 DI pipe (CHW CH114-140, CHX&CHZ CH114-140), MHFB64B-MHFB64C, CHPSW-5**	**179 days**	**2023年2月6日星 期一**	**2023年9月11日 星期一**	**年2月6日星期一2023**	**NA**		**1388**	**-4 days**		**32%**
1387	**CS2-6000**	**SW2**			**Sewerage and utilities in Workfront C2**	**423 days**	**2022年8月9日星**	**2024年1月10日,**	**年8月9日星期二2022**	**NA**		**2052,1482**	**-422 days**		**1%**
1388	**CS2-6100**	**SW2**			**Construction of 2 nos. of DN250 DI sludge pipe(CHPS1, CHPS2 CH25-50), CH PSW-7**	**423 days**	**2022年8月9日星 期二**	**2024年1月10日 星期三**	**年8月9日星期二2022**	**NA**	**1370**		**-422 days**		**1%**
1405	**CS2-7000**	**SW2**			**Sewerage and utilities in Workfront C3**	**768 days**	**2021年3月13日星**	**2023年10月14日**	**年3月13日星期六2021**	**NA**		**2060**	**-191 days**		**71%**
1406	**CS2-7100**	**SW2**			**Construction of DN1000 HDPE odour pipe (CHDO2), DN250 DI sludge pipe (CHPS1, CHPS2; CH0-25), DN250 DI pipe (CHPSW-6), DN300 DI pipe(CHTFT2), manhole MHD5A and its associated backdrop manhole**	**353 days**	**2021年3月13日 星期六**	**2022年5月24日 星期二**	**年3月13日星期六2021**	**年5月24日星期二2022**	**1502**		**0 days**		**100%**
1440	**CS2-8000**	**SW2**			**Sewerage and utilities in Workfront D1**	**438 days**	**2022年8月5日星**	**2024年1月24日,**	**年8月5日星期五2022**	**NA**			**-105 days**		**36%**
1441	**CS2-8100**	**SW2**			**Construction of DN250 DI pipe (CHTFT-2), DN800 MS pipe (CHTA) and watermains**	**438 days**	**2022年8月5日星 期五**	**2024年1月24日 星期三**	**年8月5日星期五2022**	**NA**	**1358,1379**		**-105 days**		**38%**
1469	**CS2-9000**	**SW2**			**Sewerage and utilities in Workfront D2**	**100 days**	**2021年8月2日星**	**2021年11月29日**	**年8月2日星期一2021**	**年11月29日星期一2021**			**0 days**		**100%**
1470	**CS2-9100**	**SW2**			**Construction of DN350 DI temporary flow diversion pipe (CHTE(A), CHTE(B))**	**100 days**	**2021年8月2日星 期一**	**2021年11月 29日星期一**	**年8月2日星期一2021**	**年11月29日星期一2021**			**0 days**		**100%**
1480	**CS2-10000**	**SW2**			**Sewerage and utilities in Workfront D3**	**734 days**	**2021年8月31日星**	**2024年2月22日,**	**年8月31日星期二2021**	**NA**			**-356.33 da...**		**84%**
1482	**CS2-10100**	**SW2**			**Construction of DN100 DI pretreatment screen pipe (CHPT2)**	**642 days**	**2021年12月20日,**	**2024年2月22日,**	**年12月20日星期一2021**	**NA**	**1387**		**-356.33 da...**		**66%**
1496	**CS2-11000**	**SW2**			**Sewerage and utilities in Portion D4**	**695 days**	**2021年9月1日星**	**2024年1月5日星**	**年9月1日星期三2021**	**NA**			**-70 days**		**81%**
1497	**CS2-11100**	**SW2**			**Construction of DN350 DI pipe (CHPSW-1)**	**191 days**	**2021年9月1日星**	**2022年4月26日,**	**年9月1日星期三2021**	**年4月26日星期二2022**			**0 days**		**100%**
1527	**CS2-12000**	**SW2**			**Sewerage and utilities in Portion E1**	**162 days**	**2022年11月1日星**	**2023年5月20日,**	**年11月1日星期二2022**	**NA**			**0 days**		**87%**
1528	**CS2-12100**	**SW2**			**Construction of watermains**	**162 days**	**2022年11月1日星**	**2023年5月20日,**	**年11月1日星期二2022**	**年5月20日星期六2023**			**0 days**		**100%**
1548	**CS2-13000**	**SW2**			**Sewerage and utilities in Portion E2**	**52 days**	**2023年12月27日,**	**2024年3月1日星**	**NA**	**NA**		**2098**	**-363.33 da...**		**0%**
1549	**CS2-13100**	**SW2**			**Construction of DN1600 DI sewage pipe (CHI CH75-95)**	**52 days**	**2023年12月27日,**	**2024年3月1日星**	**NA**	**NA**			**-363.33 da...**		**0%**
1564	**CS2-14000**	**SW2**			**Sewerage and utilities in Portion E3**	**52 days**	**2023年11月6日星**	**2024年1月9日星**	**NA**	**NA**		**2106**	**-321.33 da...**		**0%**
1565	**CS2-14100**	**SW2**			**Construction of DN1600 DI sewage pipe (CHI CH35-75), CHJ**	**52 days**	**2023年11月6日星**	**2024年1月9日星**	**NA**	**NA**	**1581FS-3 days**		**-321.33 da...**		**0%**
1581	**CS2-15000**	**SW2**			**Sewerage and utilities in Portion E4**	**703 days**	**2021年6月29日星**	**2023年11月9日,**	**年6月29日星期二2021**	**NA**		**1565FS-3 days**	**-321.33 da...**		**67%**
1584	**CS2-15100**	**SW2**			**Construction of DN1600 DI sewage pipe CHH, CHG**	**703 days**	**2021年6月29日星**	**2023年11月9日,**	**年6月29日星期二2021**	**NA**			**-321.33 da...**		**1%**
1600	**CS2-16000**	**SW2**			**Sewerage and utilities in Workfront E5**	**596 days**	**2021年9月13日星**	**2023年9月16日,**	**年9月13日星期一2021**	**NA**		**2120**	**-229.33 da...**		**4%**
1601	**CS2-16100a**	**SW2**			**Workfront E5a: Process Pipe CHG chainage 0-50, CHH chainage 0-80, CHJ chainage 0-40, CHPSW-4, CHPT1, CHPT2 diversion pipe, manhole MHSA4A, MHSA4R**	**596 days**	**2021年9月13日 星期一**	**2023年9月16日 星期六**	**年9月13日星期一2021**	**NA**	**1803**		**-229.33 days**		**7%**
1613	**CS2-16100b**	**SW2**			**Workfront E5b: Process Pipe CHI chainage 0-35**	**116 days**	**2023年5月2日星**	**2023年9月16日,**	**NA**	**NA**			**-229.33 da...**		**0%**
1641	**CS2-17000**	**SW2**			**Sewerage and utilities in Workfront F1**	**388 days**	**2022年5月5日星**	**2023年8月23日,**	**年5月5日星期四2022**	**NA**			**-16 days**		**71%**
1642	**CS2-17100a**	**SW2**			**Workfront F1a: Process Pipe CHPSW-1 CH100-108 , DN150 DI SAS pipe CHZB, Bioreactor Tank Drain CHTD1, watermains of CHPSW-1 and chemical trench**	**388 days**	**2022年5月5日星 期四**	**2023年8月23日 星期三**	**年5月5日星期四2022**	**NA**			**-16 days**		**93%**
1659	**CS2-17100b**	**SW2**			**Workfront F1b: Bioreactor Tank Drain CHTD1, cable ducts laying**	**104 days**	**2023年4月11日星**	**2023年8月14日,**	**年4月11日星期二2023**	**NA**			**-9 days**		**0%**
1669	**CS2-18000**	**SW2**			**Sewerage and utilities in Workfront F2**	**494 days**	**2022年2月4日星**	**2023年10月4日,**	**年2月4日星期五2022**	**NA**			**-13 days**		**84%**
1670	**CS2-18100**	**SW2**			**Workfront F2a: Construction of Process Pipe CHPSW-4**	**494 days**	**2022年2月4日星**	**2023年10月4日,**	**年2月4日星期五2022**	**NA**			**-13 days**		**76%**
1696	**CS2-19000**	**SW2**			**Sewerage and utilities in Workfront F3**	**945.8 days**	**2021年1月5日星**	**2024年3月13日,**	**年1月5日星期二2021**	**NA**			**-120 days**		**81%**
1715	**CS2-19300**	**SW2**			**Construction of DN350 DI process pipe CHPSW-1**	**276 days**	**2022年6月12日星**	**2023年5月17日,**	**年6月12日星期日2022**	**NA**			**-127.33 da...**		**63%**
1741	**CS2-20000**	**SW2**			**Sewerage and utilities in Workfront G1**	**96 days**	**2022年8月25日星**	**2022年12月17日**	**年8月25日星期四2022**	**年12月17日星期六2022**			**0 days**		**100%**
1742	**CS2-20100**	**SW2**			**Process Pipe DN900 DI RAS pipe (CHP) and 2 nos. of DN250 DI sludge pipe (CHSS1 CH140-183, CHSS2 CH140-182)**	**96 days**	**2022年8月25日 星期四**	**2022年12月 17日星期六**	**年8月25日星期四2022**	**年12月17日星期六2022**	**1899**		**0 days**		**100%**
1756	**CS2-21000**	**SW2**			**Sewerage and utilities in Workfront G2**	**887 days**	**2021年1月11日星**	**2024年1月8日星**	**年1月11日星期一2021**	**NA**			**-91 days**		**85%**
1758	**CS2-21100**	**SW2**			**Process Pipe DN1400 DI sewage pipe (CHK CH0-6), 2 nos. of DN250 DI sludge pipe (CHSS1, CHSS2 CH100-140)**	**887 days**	**2021年1月11日 星期一**	**2024年1月8日 星期一**	**年1月11日星期一2021**	**NA**			**-91 days**		**79%**
1786	**CS2-22000**	**SW2**			**Sewerage and utilities in Workfront G3**	**732 days**	**2021年6月24日星**	**2023年12月8日,**	**年6月24日星期四2021**	**NA**		**2162**	**-68 days**		**76%**
1789	**CS2-22100**	**SW2**			**Process Pipe DN1400 DI sewage pipe of CHK CH6-43.5, CHL CH0-31, DN300 CHN CH54-70, 2x DN250 CHSS1, CHSS2 (CH80-100), SAS gravity system and watermains**	**732 days**	**2021年6月24日 星期四**	**2023年12月8日 星期五**	**年6月24日星期四2021**	**NA**			**-68 days**		**70%**
1821	**CS2-23000**	**SW2**			**Sewerage and utilities in Workfront G4**	**390 days**	**2021年6月30日星**	**2022年10月21日**	**年6月30日星期三2021**	**年10月21日星期五2022**			**0 days**		**100%**
1822	**CS2-23100**	**SW2**			**DN700 CHER CH0-38**	**390 days**	**2021年6月30日星**	**2022年10月21日**	**年6月30日星期三2021**	**年10月21日星期五2022**			**0 days**		**100%**
1834	**CS2-24000**	**SW2**			**Sewerage and utilities in Workfront G5**	**483 days**	**2022年5月3日星**	**2023年12月13日**	**年5月3日星期二2022**	**NA**		**1889SS+21 days**	**-150 days**		**56%**
1835	**CS2-24100**	**SW2**	**310**	**489**	**Process Pipe CHM, CHN, CHO, CHP, CHQ, CHV**	**483 days**	**2022年5月3日星**	**2023年12月13日**	**年5月3日星期二2022**	**NA**			**-150 days**		**61%**
1860	**CS2-25000**	**SW2**			**Sewerage and utilities in Workfront G6**	**700 days**	**2021年7月27日星**	**2023年12月2日,**	**年7月27日星期二2021**	**NA**		**2170**	**-181 days**		**30%**

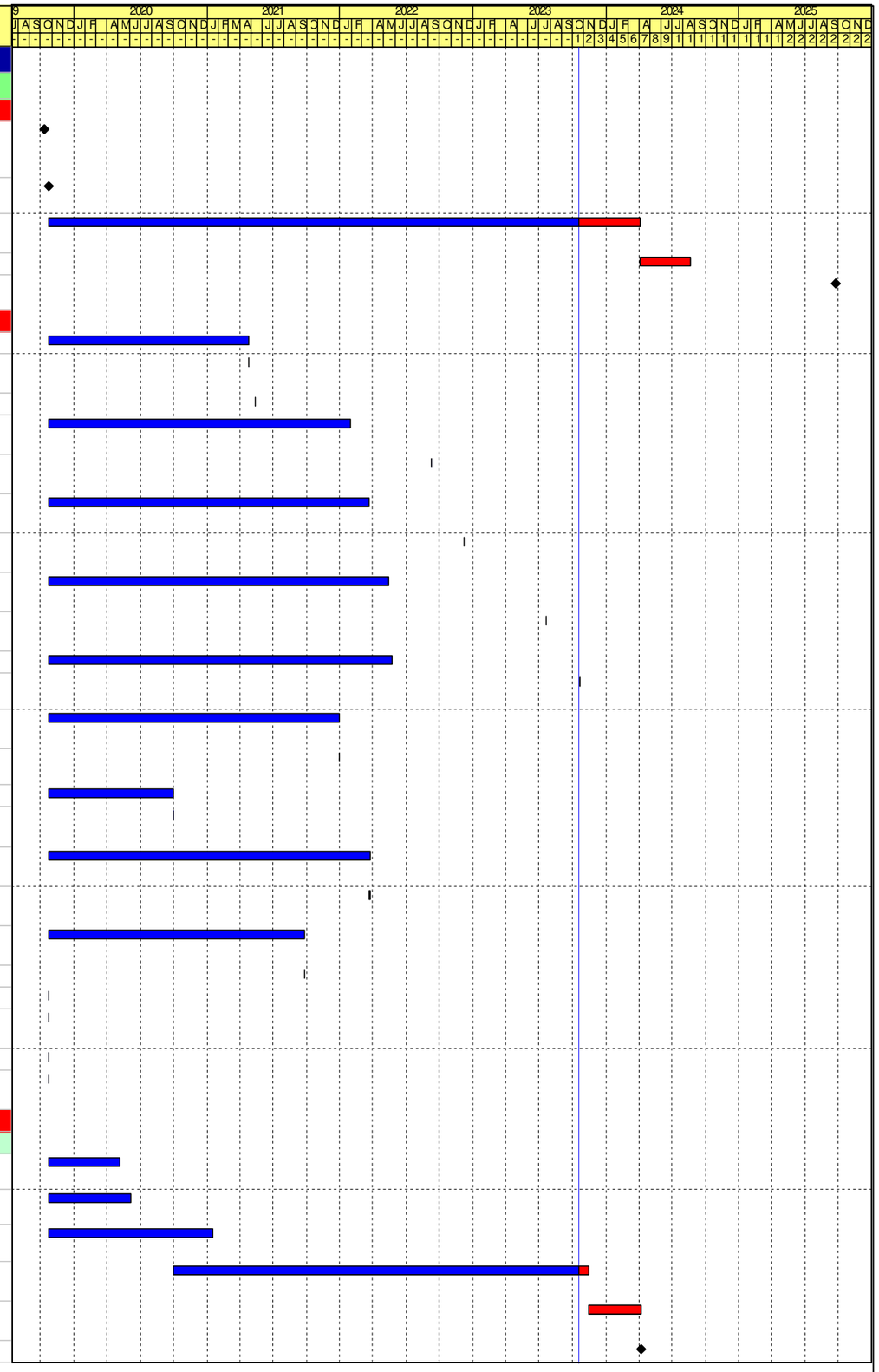


Revised Master Programme (Status Date: 30/09/2023)

識別碼	Activity ID	Key Date	NCE/(EW	PMI/(CE)	Task Name	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	總寬限時間	Risk Allowa	完成百分比
1862	**CS2-25100a**	**SW2**			**Workfront G6a: Process Pipe CHN, CHPSW-1, CHSS1, CHSS2**	**700 days**	**2021年7月27日星**	**2023年12月2日,**	**年7月27日星期二2021**	**NA**	**1884**	**1924**	**-351.33 da...**		**5%**
1873	**CS2-25100b**	**SW2**			**Workfront G6b: Process Pipe CHN, CHPSW-1, CHSS1, CHSS2**	**491 days**	**2022年1月5日星**	**2023年9月1日星**	**年1月5日星期三2022**	**NA**	**1768SS+36 days**		**-105 days**		**38%**
1888	**CS2-26000**	**SW2**			**Sewerage and utilities in Workfront H1**	**178 days**	**2022年4月1日星**	**2022年11月7日,**	**年4月1日星期五2022**	**年11月7日星期一2022**			**0 days**		**100%**
1889	**CS2-26100**	**SW2**			**Process Pipe CHSS1, CHSS2 CH181-254**	**178 days**	**2022年4月1日星**	**2022年11月7日,**	**年4月1日星期五2022**	**年11月7日星期一2022**	**1834SS+21 days**		**0 days**		**100%**
1900	**CS2-27000**	**SW2**			**Sewerage and utilities in Workfront I1**	**370 days**	**2020年7月8日星**	**2021年10月2日,**	**年7月8日星期三2020**	**年10月2日星期六2021**			**0 days**		**100%**
1901	**CS2-27100**	**SW2**			**Process Pipe CHS CH0-72 , CHR CH 57-132**	**370 days**	**2020年7月8日星**	**2021年10月2日,**	**年7月8日星期三2020**	**年10月2日星期六2021**			**0 days**		**100%**
1912	**CS2-28000**	**SW2**			**Sewerage and utilities in Workfront I2**	**1072 days**	**2020年7月8日星**	**2024年2月16日,**	**年7月8日星期三2020**	**NA**			**-351.33 da...**		**40%**
1913	**CS2-28100**	**SW2**			**Process Pipe CHR CH0-26**	**963 days**	**2020年7月8日星**	**2023年10月4日,**	**年7月8日星期三2020**	**NA**			**-242.33 da...**		**55%**
1929	**CS2-29000**	**SW2**			**Sewerage and utilities in Workfront I3**	**581 days**	**2021年7月21日星**	**2023年7月7日星**	**年7月21日星期三2021**	**NA**		**2198**	**0 days**		**97%**
1930	**CS2-29100**	**SW2**	**294,286,**		**Construction of manhole MHFB51A, MHFB51, MHFB52, PSW3**	**509 days**	**2021年7月21日星**	**2023年4月6日星**	**年7月21日星期三2021**	**NA**			**0 days**		**97%**
1967	**CS2-30000**	**SW2**			**Sewerage and utilities in Workfront I4**	**722.8 days**	**2021年6月5日星**	**2023年11月9日,**	**年6月5日星期六2021**	**NA**		**2187,1208,2209,221**	**0 days**		**72%**
1970	**CS2-30100**	**SW2**	**230,238,**		**Construction of Process Pipes CHPSW3; CHDO1, chemical trench**	**651 days**	**2021年6月5日星**	**2023年8月15日,**	**年6月5日星期六2021**	**NA**			**-3 days**		**61%**
2005	**CS3-0000**	*			**Remaining drainage and utilities (Section 3)**	**842.8 days**	**2021年7月27日星**	**2024年5月30日,**	**年7月27日星期二2021**	**NA**		**2222,58FF+2.33 day**	**2.67 days**		**28%**
2220	CS3CK-PMI-496g	SW3		496	ABWF works + BS works	90 days	2024年4月10日星	2024年8月19日	NA	NA	2219	58FF+2.33 days	55.37 days		0%
2221	**CRW-0000**	*			**Road Works (Section 3)**	**130 days**	**2024年5月31日星**	**2024年11月4日,**	**NA**	**NA**		**58FF+2.33 days**	**2.67 days**		**0%**
2232	CRW-2000	SW3			Footpath Road Pavement	60 days	2024年8月23日星	2024年11月4日	NA	NA	2231SS+5 days	58FF+2.33 days	2.67 days		0%
2233	CRW-2100	**SW3**			**Signages**	**20 days**	**2024年8月12日星**	**2024年9月3日星**	**NA**	**NA**	**2230SS**	**58FF+2.33 days**	**52.67 days**		**0%**
2236	**CLW-0000**	*			**Landscaping Works (Section 3)**	**872.47 days**	**2022年12月15日,**	**2025年11月7日,**	**年12月15日星期四2022**	**NA**	**16**		**1.33 days**		**0%**
2237	CLW-1000	SW3			Irrigation System	120 days	2022年12月15日	2023年5月16日	年12月15日星期四2022	NA		2238,58FF+2.33 days	0 days		0%
2238	CLW-2000	SW3			Hard Landscaping Works	214 days	2023年5月20日星	2024年2月3日星	NA	NA	2237	58FF+2.33 days,223	0 days	5	0%
2239	CLW-3000	SW3			Soft Landscaping Works	214 days	2024年2月19日星	2024年11月7日	NA	NA	2238FS+10 days	2240,58FF+2.33 day	0 days	5	0%
2240	CLW-4000	DLP			Establishment Works (365 days)	365 days	2024年11月7日星	2025年11月7日	NA	NA	2239,217	60FF	2.33 days	5	0%



Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M V		705	11-Oct-19 A	24-Sep-25	31-Oct-21	24-Sep-25	0			
Contract Data		705	11-Oct-19 A	24-Sep-25	24-May-22	24-Sep-25	0			
Starting Date & Completion Date		705	11-Oct-19 A	24-Sep-25	24-May-22	24-Sep-25	0			
CD1000	Contract Date (LOA)	0	11-Oct-19 A		24-May-22				CD1010, S1P1000, PL1460	
CD1010	Starting Date	0	23-Oct-19 A		24-May-22			CD1000	S1D1040, AD1050,	
CD1020	Whole Contract Period (1626 days from starting date)	167	23-Oct-19 A	04-Apr-24	21-Oct-23	04-Apr-24	0	CD1010	CD1040, CD1030	
CD1030	Extension of Time Granted (Total 139days)	139	05-Apr-24	21-Aug-24*	05-Apr-24	21-Aug-24	0	CD1020	CD1040	
CD1040	Completion Date for the whole of the Works	0		24-Sep-25		24-Sep-25	0	CD1020, CD1010,		
Access Date		1	23-Oct-19 A	21-Oct-23	24-May-22	24-Sep-25	704			
AD1000	Portion C-1A (within 480 to 550 days from starting date)	0	23-Oct-19 A	24-Apr-21 A	06-Jan-23	06-Jan-23		CD1010	AD1010	
AD1010	Planned Access Date for Portion C-1A (Partial Access)	0	24-Apr-21 A	24-Apr-21 A	06-Jan-23	06-Jan-23		CD1010, AD1000	PL1470, S4C1010	
AD1020	Planned Access Date for Portion C-1A (Access for Remaining Area)	0	12-May-21 A	12-May-21 A	06-Jan-23	06-Jan-23			S4C1010	
AD1030	Portion C-2A (within 705 to 795 days from starting date) (SS by NCE-NCE-288, within 705 to 831 days from starting date)	0	23-Oct-19 A	30-Jan-22 A	24-Sep-25	24-Sep-25		CD1010	AD1040	
AD1040	Planned Access Date for Portion C-2A	0	09-Sep-22 A	09-Sep-22 A	24-Sep-25	24-Sep-25		CD1010, AD1030		
AD1050	Portion C-2B (within 765 to 855 days from starting date) (SS by NCE-NCE-286, within 765 to 880 days from starting date)	0	23-Oct-19 A	20-Mar-22 A	11-Dec-22	11-Dec-22		CD1010	AD1060	
AD1060	Planned Access Date for Portion C-2B	0	07-Dec-22 A	07-Dec-22 A	11-Dec-22	11-Dec-22		CD1010, AD1050	S5CHPC1020	
AD1070	Portion C-2C (within 715 to 805 days from starting date) (SS by NCE-NCE-287, within 715 to 934 days from starting date)	0	23-Oct-19 A	13-May-22 A	23-Dec-22	23-Dec-22		CD1010	AD1080	
AD1080	Planned Access Date for Portion C2-C	0	20-Jul-23 A	20-Jul-23 A	23-Dec-22	23-Dec-22		CD1010, AD1070	S5DIGC1040, S5DIGC1210	
AD1090	Portion C-2D (within 825 to 945 days from starting date)	0	23-Oct-19 A	24-May-22 A	24-May-22	24-May-22		CD1010	AD1100	
AD1100	Planned Access Date for Portion C-2D	1	21-Oct-23	21-Oct-23*	24-May-22	24-May-22	-515	AD1090	S5BIOC1020, S5BIOC1030,	
AD1110	Portion C-3 (within 615 to 705 days from starting date) (SS by NCE-NCE-273, within 615 to 815 days from starting date)	0	23-Oct-19 A	31-Dec-21 A	21-Apr-23	21-Apr-23		CD1010	AD1120	
AD1120	Planned Access Date for Portion C-3 (SS by NCE-NCE-273)	0	31-Dec-21 A	31-Dec-21 A	21-Apr-23	21-Apr-23		AD1110, S2D1110	KD1060, S5WS2C1000,	
AD1130	Portion B-1 (within 285 to 345 days from starting date)	0	23-Oct-19 A	30-Sep-20 A	21-Oct-23	21-Oct-23		CD1010	AD1140	
AD1140	Planned Access Date for Portion B-1	0	30-Sep-20 A	30-Sep-20 A	21-Oct-23	21-Oct-23		AD1130	KD1030, S3C1020,	
AD1150	Portion B-2a (within 615 to 705 days from starting date) (SS by NCE-NCE-219, within 771 to 891 days from starting date)	0	23-Oct-19 A	23-Mar-22 A	26-Dec-22	26-Dec-22		CD1010	AD1160	
AD1160	Planned Access Date for Portion B-2a (SS by NCE-NCE-219)	0	23-Mar-22 A	23-Mar-22 A	26-Dec-22	26-Dec-22		AD1150	S5SASC1010, S5SASC1000	
AD1170	Portion B-2b (within 615 to 705 days from starting date) (SS by NCE-NCE-219)	0	23-Oct-19 A	24-Sep-21 A	24-Sep-25	24-Sep-25				
AD1180	Planned Access Date for Portion B-2b (SS by NCE-NCE-219)	0	24-Sep-21 A	24-Sep-21 A	24-Sep-25	24-Sep-25				
AD1190	Works Area WA1-B (starting date)	0	23-Oct-19 A	23-Oct-19 A	28-Dec-22	28-Dec-22		CD1010	AD1200	
AD1200	Planned Access Date for Works Area WA1-B	0	23-Oct-19 A	23-Oct-19 A	28-Dec-22	28-Dec-22		CD1010, AD1190	PL1000, PL1020	
AD1210	Works Area WA3 (starting date)	0	23-Oct-19 A	23-Oct-19 A	07-Jan-25	07-Jan-25		CD1010	AD1220	
AD1220	Planned Access Date for Works Area WA3	0	23-Oct-19 A	23-Oct-19 A	07-Jan-25	07-Jan-25		CD1010, AD1210	PL1000, PL1030	
Key Dates		418	23-Oct-19 A	11-Dec-24	05-Feb-23	24-Sep-25	287			
Contractual Completion (Include Implemented CE)		169	23-Oct-19 A	06-Apr-24	05-Feb-23	24-Sep-25	536			
KD1000	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	0	23-Oct-19 A	05-May-20 A	05-Feb-23	05-Feb-23		CD1010, S1D1040,	CD1040, S4P1040	
KD1010	KD2A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, Workshop No.2, etc.	0	23-Oct-19 A	04-Jun-20 A	24-Sep-25	24-Sep-25		CD1010, S2D1080,	KD1020	
KD1020	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	0	23-Oct-19 A	16-Jan-21 A	24-Sep-25	24-Sep-25		CD1010, S2D1120,	SC21110	
KD1030	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	25	30-Sep-20 A	14-Nov-23*	21-Oct-23	14-Nov-23	0	AD1140	KD1040	
KD1040	Extension of Time Granted for KD3A (Total 144days)	144	15-Nov-23	06-Apr-24	15-Nov-23	06-Apr-24	0	KD1030	KD1050, SC31120	
KD1050	Revised Completion Date for KD3A	0		06-Apr-24*		06-Apr-24	0	KD1040		



Remaining Work
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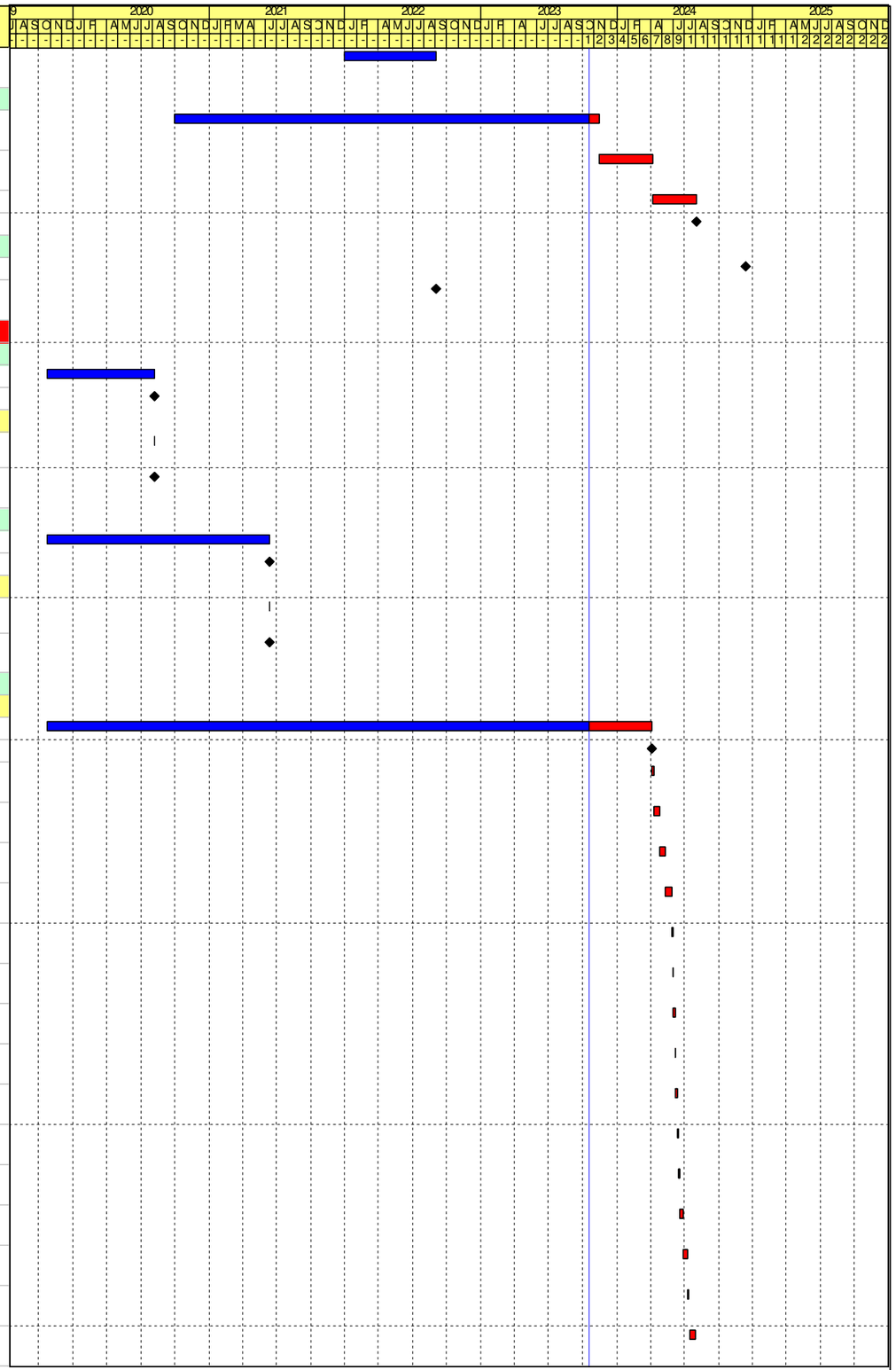
Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
KD1060	KD5A - Completion of BS Fitting at CLP Sub-Station at Workshop No.2 (245d after Portion C-3 Access)(Impacted by NCE-273)	0	31-Dec-21 A	02-Sep-22 A	24-Sep-25	24-Sep-25		AD1120, S5WS2C1010		
Expected Completion (Include Non-implemented CE)		287	30-Sep-20 A	02-Aug-24	21-Oct-23	02-Aug-24	0			
KD1030-1	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	25	30-Sep-20 A	14-Nov-23*	21-Oct-23	14-Nov-23	0	AD1140	KD1040-1	
KD1040-1	Extension of Time Granted for KD3A (Total 144 days)	144	15-Nov-23	06-Apr-24	15-Nov-23	06-Apr-24	0	KD1030-1	KD1045, SC31120	
KD1045	Extension of Time for KD3A - Non-implemented (Total 118days)	118	07-Apr-24	02-Aug-24	07-Apr-24	02-Aug-24	0	KD1040-1	KD1050-1	
KD1050-1	Expected Completion Date for KD3A	0		02-Aug-24*		02-Aug-24	0	KD1045		
Planned Completion		0	02-Sep-22 A	11-Dec-24	06-Apr-24	24-Sep-25	287			
KD1050-2	Planned Completion Date for KD3A	0		11-Dec-24*		06-Apr-24	-249	S3T1230	SC31120	
KD1060-1	Planned Completion Date for KD5A	0		02-Sep-22 A		24-Sep-25		AD1120, S5WS2C1010		
Completion Date		705	23-Oct-19 A	24-Sep-25	21-Oct-23	24-Sep-25	0			
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1		0	23-Oct-19 A	08-Aug-20 A	24-Sep-25	24-Sep-25				
SC11000	Contract Duration of Section 1	0	23-Oct-19 A	08-Aug-20 A	24-Sep-25	24-Sep-25		CD1010	SC11100	
SC11100	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		24-Sep-25		SC11000	SC11120	
Time Risk Allowance and Planned Completion		0	08-Aug-20 A	08-Aug-20 A	24-Sep-25	24-Sep-25				
SC11110	Time Risk Allowance for Section 1	0	08-Aug-20 A	08-Aug-20 A	24-Sep-25	24-Sep-25		S1P1000, S1P1040,	SC11120	
SC11120	Planned Completion for Section 1	0		08-Aug-20 A		24-Sep-25		SC11110, SC11100	CD1040	
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		0	23-Oct-19 A	11-Jun-21 A	24-Sep-25	24-Sep-25				
SC21000	Contract Duration of Section 2	0	23-Oct-19 A	11-Jun-21 A	24-Sep-25	24-Sep-25		CD1010	SC21100	
SC21100	Completion date - Section 2 (600 days after starting date)	0		11-Jun-21 A		24-Sep-25		SC21000	SC21120	
Time Risk Allowance and Planned Completion		0	11-Jun-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25				
SC21110	Time Risk Allowance for Section 2	0	11-Jun-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2P1000, S2P1010,	SC21120	
SC21120	Planned Completion for Section 2	0		11-Jun-21 A		24-Sep-25		SC21110, SC21100,	CD1040	
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		705	23-Oct-19 A	24-Sep-25	21-Oct-23	13-Jul-25	-73			
Contractual Completion (Include Implemented CE)		306	23-Oct-19 A	21-Aug-24	21-Oct-23	21-Aug-24	0			
SC31000	Contract Duration of Section 3	167	23-Oct-19 A	04-Apr-24	21-Oct-23	04-Apr-24	0		SC31001	
SC31001	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC31000	SC31002	
SC31002	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	SC31001	SC31003	
SC31003	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	SC31002	SC31005	
SC31005	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	24-Apr-24	09-May-24	24-Apr-24	09-May-24	0	SC31003	SC31006	
SC31006	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	09-May-24	28-May-24	09-May-24	28-May-24	0	SC31005	SC31007	
SC31007	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	28-May-24	31-May-24	28-May-24	31-May-24	0	SC31006	SC31010	
SC31010	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	01-Jun-24	01-Jun-24	01-Jun-24	01-Jun-24	0	SC31007	SC31011	
SC31011	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	01-Jun-24	05-Jun-24	01-Jun-24	05-Jun-24	0	SC31010	SC31012	
SC31012	NICE-CNE-0344 Inclement Weather (January 2022) - 0.5days (Implemented)	1	05-Jun-24	05-Jun-24	05-Jun-24	05-Jun-24	0	SC31011	SC31013	
SC31013	NICE-CNE-0345 Inclement Weather (February 2022) - 6.5days (Implemented)	7	06-Jun-24	12-Jun-24	06-Jun-24	12-Jun-24	0	SC31012	SC31014	
SC31014	NICE-CNE-0386 Inclement Weather (March 2022) - 3.5days (Implemented)	4	12-Jun-24	15-Jun-24	12-Jun-24	15-Jun-24	0	SC31013	SC31015	
SC31015	NICE-CNE-0387 Inclement Weather (April 2022) - 2.5days (Implemented)	3	16-Jun-24	18-Jun-24	16-Jun-24	18-Jun-24	0	SC31014	SC31016	
SC31016	NICE-CNE-0391 Inclement Weather (May 2022) - 8.5days (Implemented)	9	18-Jun-24	26-Jun-24	18-Jun-24	26-Jun-24	0	SC31015	SC31026	
SC31026	NICE-CNE-0397 Inclement Weather (June 2022) - 11.5days (Implemented)	12	27-Jun-24	08-Jul-24	27-Jun-24	08-Jul-24	0	SC31016	SC31027	
SC31027	NICE-CNE-0405 Inclement Weather (July 2022) - 5.5days (Implemented)	6	08-Jul-24	13-Jul-24	08-Jul-24	13-Jul-24	0	SC31026	SC31028	
SC31028	NICE-CNE-0409 Inclement Weather (August 2022) - 17.5days (Implemented)	18	14-Jul-24	31-Jul-24	14-Jul-24	31-Jul-24	0	SC31027	SC31029	



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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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30-Jun-23	Rev.35	IM/LT	KM
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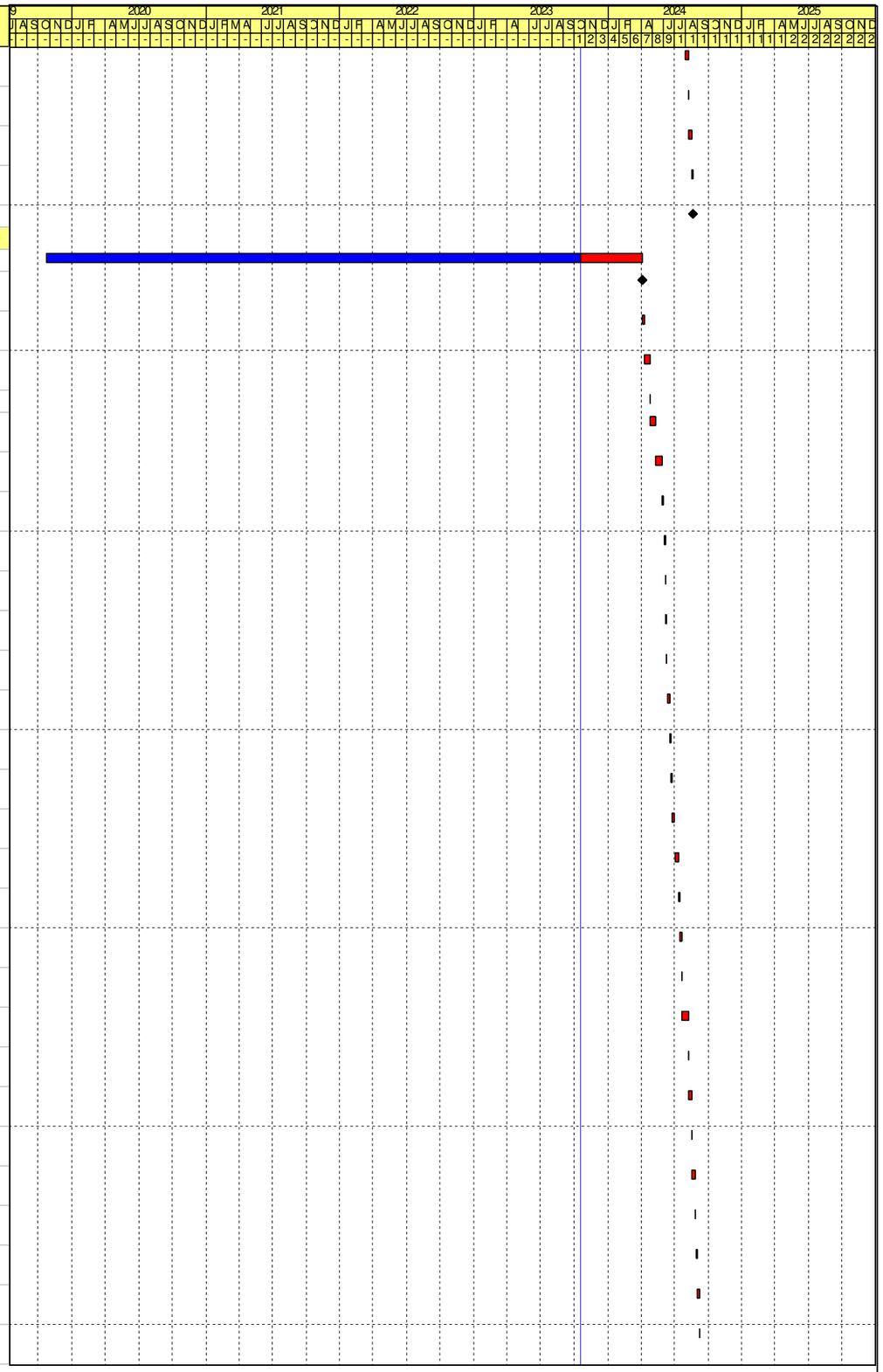
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SC31029	NICE-CNE-0427 Inclement Weather (September 2022) - 7days (Implemented)	7	31-Jul-24	07-Aug-24	31-Jul-24	07-Aug-24	0	SC31028	SC31030	
SC31030	NICE-CNE-0428 Inclement Weather (October 2022) - 2days (Implemented)	2	07-Aug-24	09-Aug-24	07-Aug-24	09-Aug-24	0	SC31029	SC31031	
SC31031	NICE-CNE-0433 Inclement Weather (November 2022) - 7.5days (Implemented)	8	09-Aug-24	16-Aug-24	09-Aug-24	16-Aug-24	0	SC31030	SC31032	
SC31032	NICE-CNE-0441 Inclement Weather (December 2022) - 5days (Implemented)	5	17-Aug-24	21-Aug-24	17-Aug-24	21-Aug-24	0	SC31031	SC31100	
SC31100	Revised Completion for Section 3	0		21-Aug-24*		21-Aug-24	0	SC31032		
Expected Completion (Include Non-implemented CE)		632	23-Oct-19 A	13-Jul-25	21-Oct-23	13-Jul-25	0			
SC31000-1	Contract Duration of Section 3	167	23-Oct-19 A	04-Apr-24	21-Oct-23	04-Apr-24	0	CD1010	SC31001-1	
SC31001-1	Completion date - Section 3 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC31000-1	SC31002-1, SC31120	
SC31002-1	NICE-CNE-0248 - Inclement Weather (May 2021) - 5days (Implemented)	5	05-Apr-24	09-Apr-24	05-Apr-24	09-Apr-24	0	SC31001-1	SC31003-1	
SC31003-1	NICE-CNE-0256 Inclement Weather (June 2021) - 14.5days (Implemented)	15	10-Apr-24	24-Apr-24	10-Apr-24	24-Apr-24	0	SC31002-1	SC31004-1	
SC31004-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	24-Apr-24	25-Apr-24	24-Apr-24	25-Apr-24	0	SC31003-1	SC31005-1	
SC31005-1	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	25-Apr-24	10-May-24	25-Apr-24	10-May-24	0	SC31004-1	SC31006-1	
SC31006-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	10-May-24	29-May-24	10-May-24	29-May-24	0	SC31005-1	SC31007-1	
SC31007-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	29-May-24	01-Jun-24	29-May-24	01-Jun-24	0	SC31006-1	SC31009-1	
SC31009-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	02-Jun-24	05-Jun-24	02-Jun-24	05-Jun-24	0	SC31007-1	SC31010-1	
SC31010-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	06-Jun-24	06-Jun-24	06-Jun-24	06-Jun-24	0	SC31009-1	SC31011-1	
SC31011-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	06-Jun-24	10-Jun-24	06-Jun-24	10-Jun-24	0	SC31010-1	SC31012-1	
SC31012-1	NICE-CNE-0344 Inclement Weather (January 2022) - 0.5days (Implemented)	1	10-Jun-24	10-Jun-24	10-Jun-24	10-Jun-24	0	SC31011-1	SC31013-1	
SC31013-1	NICE-CNE-0345 Inclement Weather (February 2022) - 6.5days (Implemented)	7	11-Jun-24	17-Jun-24	11-Jun-24	17-Jun-24	0	SC31012-1	SC31014-1	
SC31014-1	NICE-CNE-0386 Inclement Weather (March 2022) - 3.5days (Implemented)	4	17-Jun-24	20-Jun-24	17-Jun-24	20-Jun-24	0	SC31013-1	SC31015-1	
SC31015-1	NICE-CNE-0387 Inclement Weather (April 2022) - 2.5days (Implemented)	3	21-Jun-24	23-Jun-24	21-Jun-24	23-Jun-24	0	SC31014-1	SC31016-1	
SC31016-1	NICE-CNE-0391 Inclement Weather (May 2022) - 8.5days (Implemented)	9	23-Jun-24	01-Jul-24	23-Jun-24	01-Jul-24	0	SC31015-1	SC31017-1	
SC31017-1	NICE-CNE-0397 Inclement Weather (June 2022) - 11.5days (Implemented)	12	02-Jul-24	13-Jul-24	02-Jul-24	13-Jul-24	0	SC31016-1	SC31018-1	
SC31018-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 2days	2	13-Jul-24	15-Jul-24	13-Jul-24	15-Jul-24	0	SC31017-1	SC31019-1	
SC31019-1	NICE-CNE-0405 Inclement Weather (July 2022) - 5.5days (Implemented)	6	15-Jul-24	20-Jul-24	15-Jul-24	20-Jul-24	0	SC31018-1	SC31020-1	
SC31020-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	21-Jul-24	21-Jul-24	21-Jul-24	21-Jul-24	0	SC31019-1	SC31021-1	
SC31021-1	NICE-CNE-0409 Inclement Weather (August 2022) - 17.5days (Implemented)	18	22-Jul-24	08-Aug-24	22-Jul-24	08-Aug-24	0	SC31020-1	SC31022-1	
SC31022-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1	08-Aug-24	09-Aug-24	08-Aug-24	09-Aug-24	0	SC31021-1	SC31023-1	
SC31023-1	NICE-CNE-0427 Inclement Weather (September 2022) - 7days (Implemented)	7	09-Aug-24	16-Aug-24	09-Aug-24	16-Aug-24	0	SC31022-1	SC31024-1	
SC31024-1	NICE-CNE-0428 Inclement Weather (October 2022) - 2days (Implemented)	2	16-Aug-24	18-Aug-24	16-Aug-24	18-Aug-24	0	SC31023-1	SC31025-1	
SC31025-1	NICE-CNE-0433 Inclement Weather (November 2022) - 7.5days (Implemented)	8	18-Aug-24	25-Aug-24	18-Aug-24	25-Aug-24	0	SC31024-1	SC31026-1	
SC31026-1	CNE-062 Inclement Weather (November 2022) (Time and Cost Implication) - 2days	2	26-Aug-24	27-Aug-24	26-Aug-24	27-Aug-24	0	SC31025-1	SC31027-1	
SC31027-1	NICE-CNE-0441 Inclement Weather (December 2022) - 5days (Implemented)	5	28-Aug-24	01-Sep-24	28-Aug-24	01-Sep-24	0	SC31026-1	SC31028-1	
SC31028-1	CNE-068 Inclement Weather (January 2023) (Time Implication) - 5days	5	02-Sep-24	06-Sep-24	02-Sep-24	06-Sep-24	0	SC31027-1	SC31029-1	
SC31029-1	CNE-070 Inclement Weather (February 2023) (Time Implication) - 2days	2	07-Sep-24	08-Sep-24	07-Sep-24	08-Sep-24	0	SC31028-1	SC31030-1	



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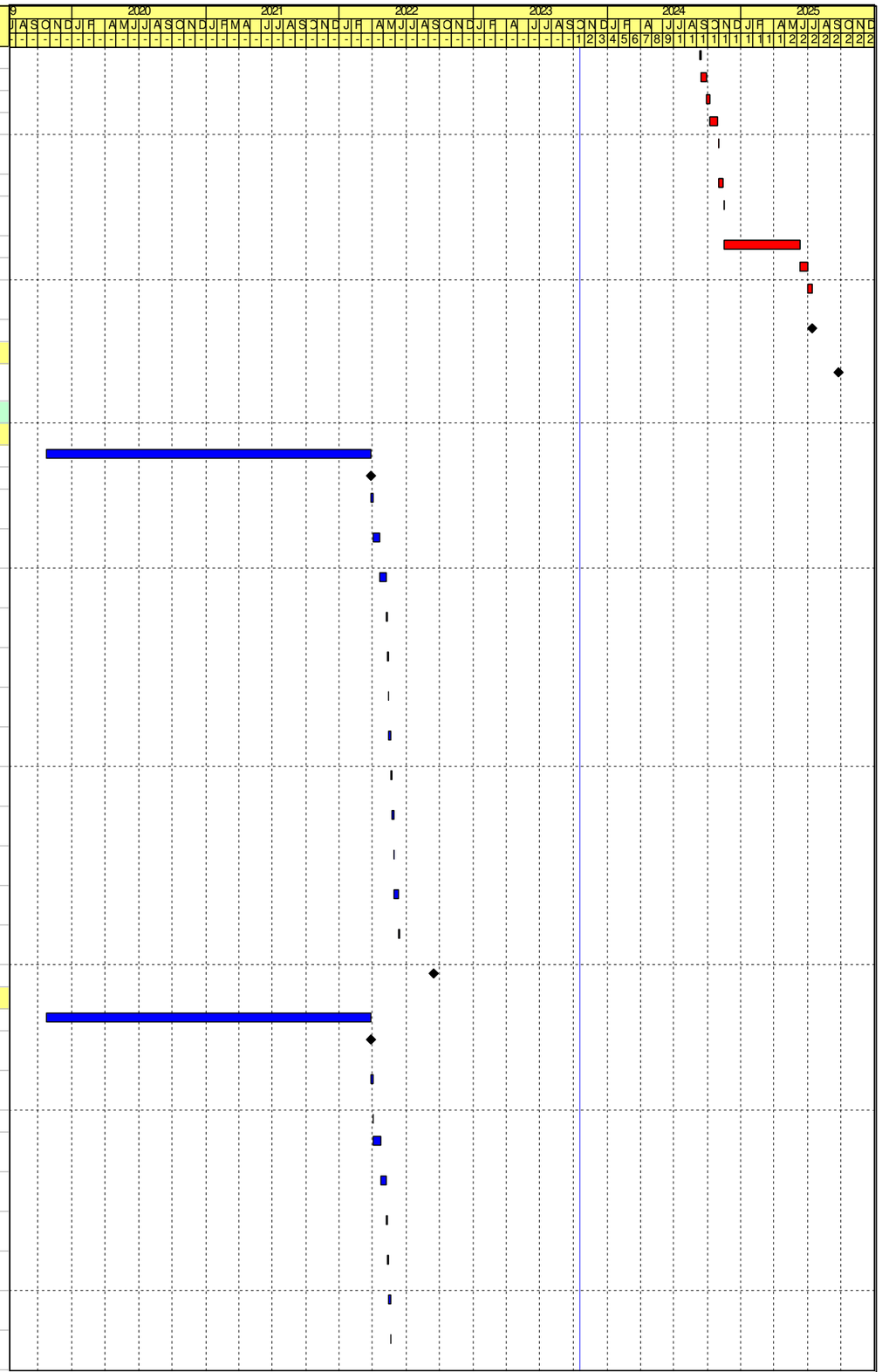
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SC31030-1	CNE-071 Inclement Weather (March 2023) (Time Implication) - 5days	5	09-Sep-24	13-Sep-24	09-Sep-24	13-Sep-24	0	SC31029-1	SC31031-1	
SC31031-1	CNE-072 Inclement Weather (April 2023) (Time Implication) - 14days	14	14-Sep-24	27-Sep-24	14-Sep-24	27-Sep-24	0	SC31030-1	SC31032-1	
SC31032-1	CNE-073 Inclement Weather (May 2023) (Time Implication) - 10days	10	28-Sep-24	07-Oct-24	28-Sep-24	07-Oct-24	0	SC31031-1	SC31033-1	
SC31033-1	CNE-076 Inclement Weather (June 2023) (Time Implication) - 22days	22	08-Oct-24	29-Oct-24	08-Oct-24	29-Oct-24	0	SC31032-1	SC31034-1	
SC31034-1	CNE-077 Inclement Weather (June 2023) (Time and Cost Implication) - 1day	1	30-Oct-24	30-Oct-24	30-Oct-24	30-Oct-24	0	SC31033-1	SC31035-1	
SC31035-1	CNE-078 Inclement Weather (July 2023) (Time Implication) - 14days	14	31-Oct-24	13-Nov-24	31-Oct-24	13-Nov-24	0	SC31034-1	SC31036-1	
SC31036-1	CNE-079 Inclement Weather (July 2023) (Time and Cost Implication) - 2days	2	14-Nov-24	15-Nov-24	14-Nov-24	15-Nov-24	0	SC31035-1	SC31099-1	
SC31099-1	EWN-0314 Extention of Time for change of access date	208	16-Nov-24	11-Jun-25	16-Nov-24	11-Jun-25	0	SC31036-1	SC31099-2	
SC31099-2	CNE-082 Inclement Weather (Aug 2023) (Time Implication) - 19 days	19	12-Jun-25	30-Jun-25	12-Jun-25	30-Jun-25	0	SC31099-1	SC31099-3	
SC31099-3	CNE-084 Inclement Weather (Sep 2023) (Time Implicatipon) - 13 days	13	01-Jul-25	13-Jul-25	01-Jul-25	13-Jul-25	0	SC31099-2	SC31100-1	
SC31100-1	Expected Completion for Section 3	0		13-Jul-25*		13-Jul-25	0	SC31099-3		
Time Risk Allowance and Planned Completion		0	24-Sep-25	24-Sep-25	21-Aug-24	21-Aug-24	-399			
SC31120	Planned Completion for Section 3	0		24-Sep-25*		21-Aug-24	-399	SC31001-1, S3C1160,	CD1040	
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		0	23-Oct-19 A	14-Sep-22 A	24-Sep-25	24-Sep-25				
Contractual Completion (Include Implemented CE)		0	23-Oct-19 A	14-Sep-22 A	24-Sep-25	24-Sep-25				
SC41000	Contract Duration of Section 4	0	23-Oct-19 A	26-Mar-22 A	24-Sep-25	24-Sep-25			SC41001	
SC41001	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		24-Sep-25		SC41000	SC41002	
SC41002	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	0	27-Mar-22 A	02-Apr-22 A	24-Sep-25	24-Sep-25		SC41001	SC41004	
SC41004	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	0	02-Apr-22 A	21-Apr-22 A	24-Sep-25	24-Sep-25		SC41002	SC41005	
SC41005	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	0	21-Apr-22 A	07-May-22 A	24-Sep-25	24-Sep-25		SC41004	SC41006	
SC41006	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	0	07-May-22 A	11-May-22 A	24-Sep-25	24-Sep-25		SC41005	SC41007	
SC41007	NICE-CNE-0309 Inclement Weather (October 2021) - 3days (Implemented)	0	12-May-22 A	14-May-22 A	24-Sep-25	24-Sep-25		SC41006	SC41009	
SC41009	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	0	15-May-22 A	15-May-22 A	24-Sep-25	24-Sep-25		SC41007	SC41010	
SC41010	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	0	15-May-22 A	19-May-22 A	24-Sep-25	24-Sep-25		SC41009	SC41012	
SC41012	NICE-CNE-0345 Inclement Weather (February 2022) - 4.5days (Implemented)	0	19-May-22 A	23-May-22 A	24-Sep-25	24-Sep-25		SC41010	SC41013	
SC41013	NICE-CNE-0386 Inclement Weather (March 2022) - 4.5days (Implemented)	0	24-May-22 A	28-May-22 A	24-Sep-25	24-Sep-25		SC41012	SC41014	
SC41014	NICE-CNE-0387 Inclement Weather (April 2022) - 1.5days (Implemented)	0	28-May-22 A	29-May-22 A	24-Sep-25	24-Sep-25		SC41013	SC41015	
SC41015	NICE-CNE-0391 Inclement Weather (May 2022) - 10.5days (Implemented)	0	30-May-22 A	09-Jun-22 A	24-Sep-25	24-Sep-25		SC41014	SC41016	
SC41016	NICE-CNE-0397 Inclement Weather (June 2022) - 4.5days (Implemented)	0	09-Jun-22 A	13-Jun-22 A	24-Sep-25	24-Sep-25		SC41015	SC41100	
SC41100	Revised Completion for Section 4	0		14-Sep-22 A		24-Sep-25		SC41016		
Expected Completion (Include Non-implemented CE)		0	23-Oct-19 A	14-Sep-22 A	24-Sep-25	24-Sep-25				
SC41000-1	Contract Duration of Section 4	0	23-Oct-19 A	26-Mar-22 A	24-Sep-25	24-Sep-25		CD1010	SC41001-1	
SC41001-1	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		24-Sep-25		SC41000-1	SC41110, SC41002-1	
SC41002-1	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	0	27-Mar-22 A	02-Apr-22 A	24-Sep-25	24-Sep-25		SC41001-1	SC41004-1, SC41003-1	
SC41003-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	0	02-Apr-22 A	03-Apr-22 A	24-Sep-25	24-Sep-25		SC41002-1	SC41004-1	
SC41004-1	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	0	03-Apr-22 A	22-Apr-22 A	24-Sep-25	24-Sep-25		SC41002-1, SC41003-1	SC41005-1	
SC41005-1	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	0	22-Apr-22 A	08-May-22 A	24-Sep-25	24-Sep-25		SC41004-1	SC41006-1	
SC41006-1	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	0	08-May-22 A	12-May-22 A	24-Sep-25	24-Sep-25		SC41005-1	SC41007-1	
SC41007-1	NICE-CNE-0309 Inclement Weather (October 2021) - 3days (Implemented)	0	13-May-22 A	15-May-22 A	24-Sep-25	24-Sep-25		SC41006-1	SC41008-1	
SC41008-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	0	16-May-22 A	19-May-22 A	24-Sep-25	24-Sep-25		SC41007-1	SC41009-1	
SC41009-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	0	20-May-22 A	20-May-22 A	24-Sep-25	24-Sep-25		SC41008-1	SC41010-1	



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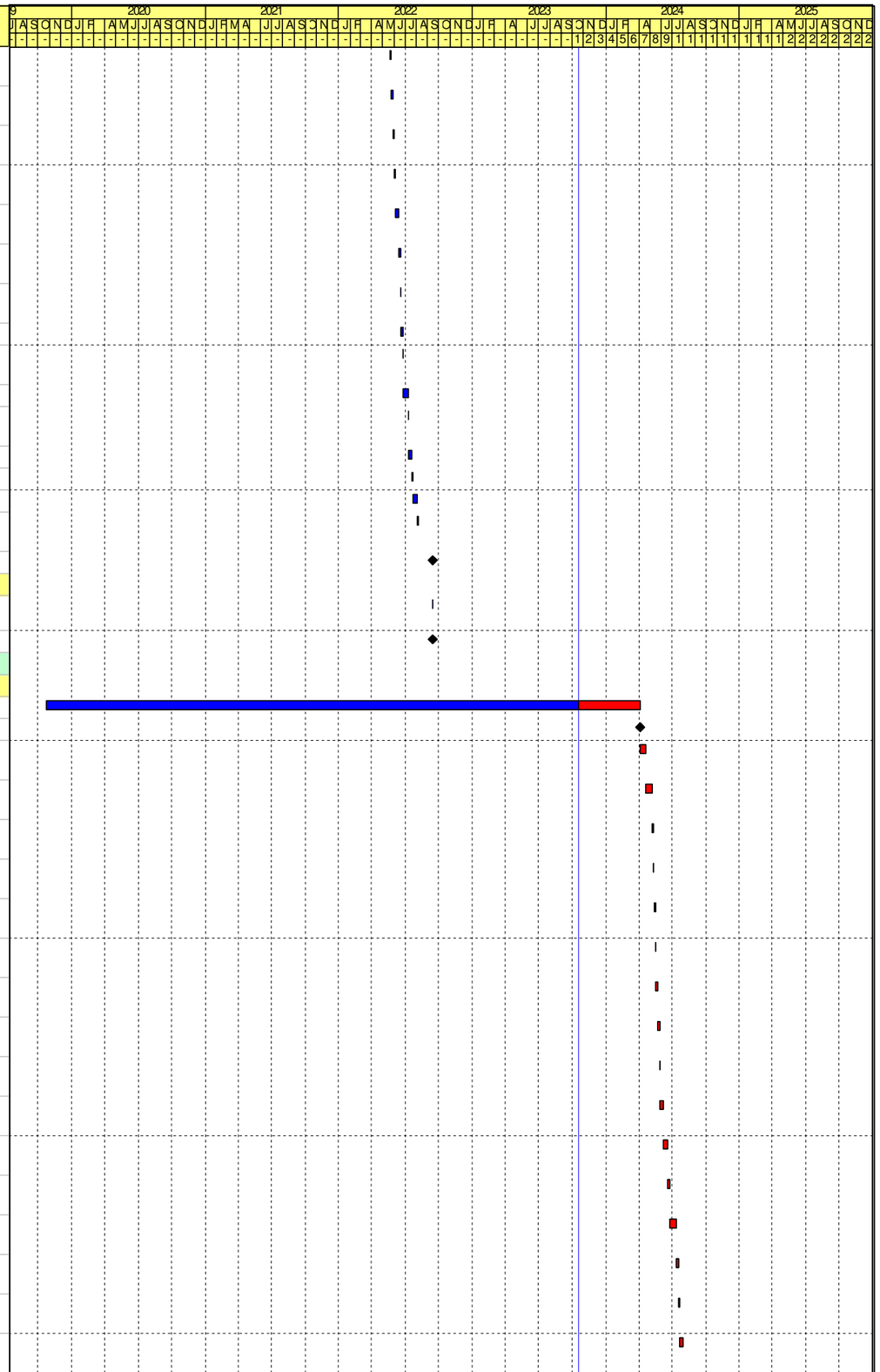
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SC41010-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	0	20-May-22 A	24-May-22 A	24-Sep-25	24-Sep-25		SC41009-1	SC41012-1	
SC41012-1	NICE-CNE-0345 Inclement Weather (February 2022) - 4.5days (Implemented)	0	24-May-22 A	28-May-22 A	24-Sep-25	24-Sep-25		SC41010-1	SC41013-1	
SC41013-1	NICE-CNE-0386 Inclement Weather (March 2022) - 4.5days (Implemented)	0	29-May-22 A	02-Jun-22 A	24-Sep-25	24-Sep-25		SC41012-1	SC41014-1	
SC41014-1	NICE-CNE-0387 Inclement Weather (April 2022) - 1.5days (Implemented)	0	02-Jun-22 A	03-Jun-22 A	24-Sep-25	24-Sep-25		SC41013-1	SC41015-1	
SC41015-1	NICE-CNE-0391 Inclement Weather (May 2022) - 10.5days (Implemented)	0	04-Jun-22 A	14-Jun-22 A	24-Sep-25	24-Sep-25		SC41014-1	SC41016-1	
SC41016-1	NICE-CNE-0397 Inclement Weather (June 2022) - 4.5days (Implemented)	0	14-Jun-22 A	18-Jun-22 A	24-Sep-25	24-Sep-25		SC41015-1	SC41017-1	
SC41017-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 2day	0	19-Jun-22 A	20-Jun-22 A	24-Sep-25	24-Sep-25		SC41016-1	SC41018-1	
SC41018-1	CNE-054 Inclement Weather (July 2022) - 4days	0	21-Jun-22 A	24-Jun-22 A	24-Sep-25	24-Sep-25		SC41017-1	SC41019-1	
SC41019-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	0	25-Jun-22 A	25-Jun-22 A	24-Sep-25	24-Sep-25		SC41018-1	SC41020-1	
SC41020-1	CNE-056 Inclement Weather (August 2022) - 13.5days	0	26-Jun-22 A	09-Jul-22 A	24-Sep-25	24-Sep-25		SC41019-1	SC41021-1	
SC41021-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	0	09-Jul-22 A	10-Jul-22 A	24-Sep-25	24-Sep-25		SC41020-1	SC41022-1	
SC41022-1	CNE-058 Inclement Weather (September 2022) - 8days	0	10-Jul-22 A	18-Jul-22 A	24-Sep-25	24-Sep-25		SC41021-1	SC41023-1	
SC41023-1	CNE-059 Inclement Weather (October 2022) - 4days	0	18-Jul-22 A	22-Jul-22 A	24-Sep-25	24-Sep-25		SC41022-1	SC41024-1	
SC41024-1	CNE-061 Inclement Weather (November 2022) - 13days	0	22-Jul-22 A	04-Aug-22 A	24-Sep-25	24-Sep-25		SC41023-1	SC41025-1	
SC41025-1	CNE-062 Inclement Weather (November 2022) (Time and Cost Implication) - 2days	0	04-Aug-22 A	06-Aug-22 A	24-Sep-25	24-Sep-25		SC41024-1	SC41100-1	
SC41100-1	Expected Completion for Section 4	0		14-Sep-22 A		24-Sep-25		SC41025-1		
Time Risk Allowance and Planned Completion		0	14-Sep-22 A	14-Sep-22 A	24-Sep-25	24-Sep-25				
SC41110	Time Risk Allowance for Section 4	0	14-Sep-22 A	14-Sep-22 A	24-Sep-25	24-Sep-25		SC41001-1, S4C1100,	SC41120	
SC41120	Planned Completion for Section 4	0		14-Sep-22 A		24-Sep-25		SC41110	CD1040	
Section 5 - Complete all remaining Works (incl. T&C)		705	23-Oct-19 A	24-Sep-25	21-Oct-23	13-Jul-25	-73			
Contractual Completion (Include Implemented CE)		287	23-Oct-19 A	02-Aug-24	21-Oct-23	02-Aug-24	0			
SC51000	Contract Duration of Section 5	167	23-Oct-19 A	04-Apr-24	21-Oct-23	04-Apr-24	0		SC51001	
SC51001	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000	SC51002	
SC51002	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001	SC51003	
SC51003	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002	SC51004	
SC51004	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003	SC51007	
SC51007	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	11-May-24	11-May-24	11-May-24	11-May-24	0	SC51004	SC51008	
SC51008	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	12-May-24	16-May-24	12-May-24	16-May-24	0	SC51007	SC51009	
SC51009	NICE-CNE-0344 Inclement Weather (January 2022) - 0.5days (Implemented)	1	17-May-24	17-May-24	17-May-24	17-May-24	0	SC51008	SC51010	
SC51010	NICE-CNE-0345 Inclement Weather (February 2022) - 5.5days (Implemented)	6	17-May-24	22-May-24	17-May-24	22-May-24	0	SC51009	SC51011	
SC51011	NICE-CNE-0386 Inclement Weather (March 2022) - 4.5days (Implemented)	5	23-May-24	27-May-24	23-May-24	27-May-24	0	SC51010	SC51012	
SC51012	NICE-CNE-0387 Inclement Weather (April 2022) - 1.5days (Implemented)	2	27-May-24	28-May-24	27-May-24	28-May-24	0	SC51011	SC51013	
SC51013	NICE-CNE-0391 Inclement Weather (May 2022) - 8.5days (Implemented)	9	29-May-24	06-Jun-24	29-May-24	06-Jun-24	0	SC51012	SC51014	
SC51014	NICE-CNE-0397 Inclement Weather (June 2022) - 11.5ays (Implemented)	12	06-Jun-24	17-Jun-24	06-Jun-24	17-Jun-24	0	SC51013	SC51015	
SC51015	NICE-CNE-0405 Inclement Weather (July 2022) - 6.5days (Implemented)	7	18-Jun-24	24-Jun-24	18-Jun-24	24-Jun-24	0	SC51014	SC51016	
SC51016	NICE-CNE-0409 Inclement Weather (August 2022) - 17.5days (Implemented)	18	24-Jun-24	11-Jul-24	24-Jun-24	11-Jul-24	0	SC51015	SC51017	
SC51017	NICE-CNE-0427 Inclement Weather (September 2022) - 7days (Implemented)	7	12-Jul-24	18-Jul-24	12-Jul-24	18-Jul-24	0	SC51016	SC51018	
SC51018	NICE-CNE-0428 Inclement Weather (October 2022) - 2days (Implemented)	2	19-Jul-24	20-Jul-24	19-Jul-24	20-Jul-24	0	SC51017	SC51019	
SC51019	NICE-CNE-0433 Inclement Weather (November 2022) - 8.5days (Implemented)	9	21-Jul-24	29-Jul-24	21-Jul-24	29-Jul-24	0	SC51018	SC51020	



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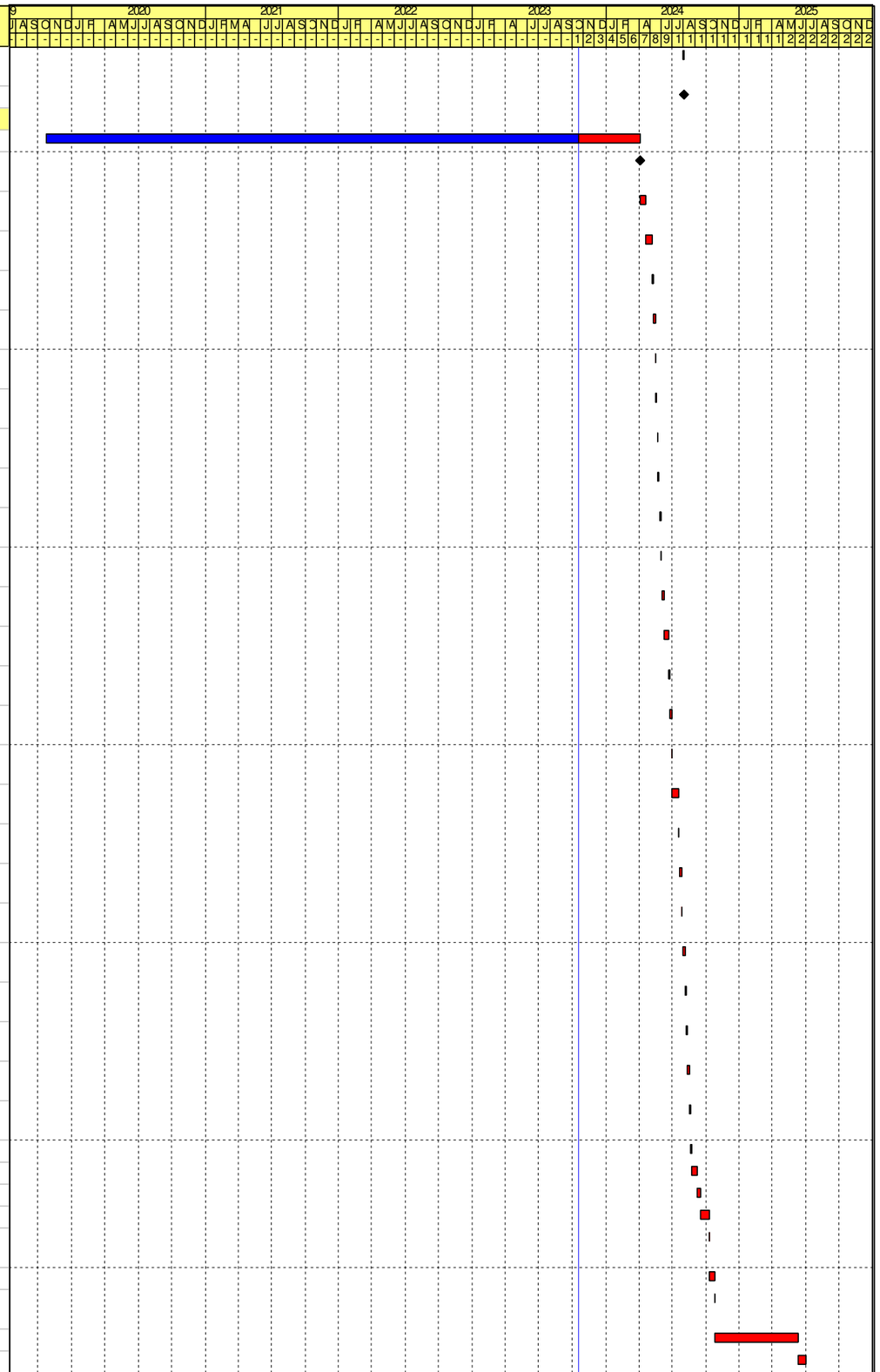
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SC51020	NICE-CNE-0441 Inclement Weather (December 2022) - 4days (Implemented)	4	29-Jul-24	02-Aug-24	29-Jul-24	02-Aug-24	0	SC51019	SC51100	
SC51100	Revised Completion for Section 5	0		02-Aug-24*		02-Aug-24	0	SC51020		
Expected Completion (Include Non-implemented CE)		632	23-Oct-19 A	13-Jul-25	21-Oct-23	13-Jul-25	0			
SC51000-1	Contract Duration of Section 5	167	23-Oct-19 A	04-Apr-24	21-Oct-23	04-Apr-24	0	CD1010	SC51001-1	
SC51001-1	Completion date - Section 5 (1625 days after starting date)	0		04-Apr-24*		04-Apr-24	0	SC51000-1	SC51002-1, SC51120	
SC51002-1	NICE-CNE-0264 Inclement Weather (July 2021) - 14days (Implemented)	14	05-Apr-24	18-Apr-24	05-Apr-24	18-Apr-24	0	SC51001-1	SC51003-1	
SC51003-1	NICE-CNE-0292 Inclement Weather (August 2021) - 19days (Implemented)	19	19-Apr-24	07-May-24	19-Apr-24	07-May-24	0	SC51002-1	SC51004-1	
SC51004-1	NICE-CNE-0293 Inclement Weather (September 2021) - 3.5days (Implemented)	4	08-May-24	11-May-24	08-May-24	11-May-24	0	SC51003-1	SC51006-1	
SC51006-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	11-May-24	15-May-24	11-May-24	15-May-24	0	SC51004-1	SC51007-1	
SC51007-1	ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	15-May-24	15-May-24	15-May-24	15-May-24	0	SC51006-1	SC51008-1	
SC51008-1	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	16-May-24	20-May-24	16-May-24	20-May-24	0	SC51007-1	SC51009-1	
SC51009-1	NICE-CNE-0344 Inclement Weather (January 2022) - 0.5days (Implemented)	1	21-May-24	21-May-24	21-May-24	21-May-24	0	SC51008-1	SC51010-1	
SC51010-1	NICE-CNE-0345 Inclement Weather (February 2022) - 5.5days (Implemented)	6	21-May-24	26-May-24	21-May-24	26-May-24	0	SC51009-1	SC51011-1	
SC51011-1	NICE-CNE-0386 Inclement Weather (March 2022) - 4.5days (Implemented)	5	27-May-24	31-May-24	27-May-24	31-May-24	0	SC51010-1	SC51012-1	
SC51012-1	NICE-CNE-0387 Inclement Weather (April 2022) - 1.5days (Implemented)	2	31-May-24	01-Jun-24	31-May-24	01-Jun-24	0	SC51011-1	SC51013-1	
SC51013-1	NICE-CNE-0391 Inclement Weather (May 2022) - 8.5days (Implemented)	9	02-Jun-24	10-Jun-24	02-Jun-24	10-Jun-24	0	SC51012-1	SC51014-1	
SC51014-1	NICE-CNE-0397 Inclement Weather (June 2022) - 11.5ays (Implemented)	12	10-Jun-24	21-Jun-24	10-Jun-24	21-Jun-24	0	SC51013-1	SC51015-1	
SC51015-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 2days	2	22-Jun-24	23-Jun-24	22-Jun-24	23-Jun-24	0	SC51014-1	SC51016-1	
SC51016-1	NICE-CNE-0405 Inclement Weather (July 2022) - 6.5days (Implemented)	7	24-Jun-24	30-Jun-24	24-Jun-24	30-Jun-24	0	SC51015-1	SC51017-1	
SC51017-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	30-Jun-24	01-Jul-24	30-Jun-24	01-Jul-24	0	SC51016-1	SC51018-1	
SC51018-1	NICE-CNE-0409 Inclement Weather (August 2022) - 17.5days (Implemented)	18	01-Jul-24	18-Jul-24	01-Jul-24	18-Jul-24	0	SC51017-1	SC51019-1	
SC51019-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1	19-Jul-24	19-Jul-24	19-Jul-24	19-Jul-24	0	SC51018-1	SC51020-1	
SC51020-1	NICE-CNE-0427 Inclement Weather (September 2022) - 7days (Implemented)	7	20-Jul-24	26-Jul-24	20-Jul-24	26-Jul-24	0	SC51019-1	SC51021-1	
SC51021-1	NICE-CNE-0428 Inclement Weather (October 2022) - 2days (Implemented)	2	27-Jul-24	28-Jul-24	27-Jul-24	28-Jul-24	0	SC51020-1	SC51022-1	
SC51022-1	NICE-CNE-0433 Inclement Weather (November 2022) - 8.5days (Implemented)	9	29-Jul-24	06-Aug-24	29-Jul-24	06-Aug-24	0	SC51021-1	SC51023-1	
SC51023-1	CNE-062 Inclement Weather (November 2022) (Time and Cost Implication) - 2days	2	06-Aug-24	08-Aug-24	06-Aug-24	08-Aug-24	0	SC51022-1	SC51024-1	
SC51024-1	NICE-CNE-0441 Inclement Weather (December 2022) - 4days (Implemented)	4	08-Aug-24	12-Aug-24	08-Aug-24	12-Aug-24	0	SC51023-1	SC51025-1	
SC51025-1	CNE-068 Inclement Weather (January 2023) (Time Implication) - 5days	5	12-Aug-24	17-Aug-24	12-Aug-24	17-Aug-24	0	SC51024-1	SC51026-1	
SC51026-1	CNE-070 Inclement Weather (February 2023) (Time Implication) - 2days	2	17-Aug-24	19-Aug-24	17-Aug-24	19-Aug-24	0	SC51025-1	SC51027-1	
SC51027-1	CNE-071 Inclement Weather (March 2023) (Time Implication) - 5days	5	19-Aug-24	24-Aug-24	19-Aug-24	24-Aug-24	0	SC51026-1	SC51028-1	
SC51028-1	CNE-072 Inclement Weather (April 2023) (Time Implication) - 14days	14	24-Aug-24	07-Sep-24	24-Aug-24	07-Sep-24	0	SC51027-1	SC51029-1	
SC51029-1	CNE-073 Inclement Weather (May 2023) (Time Implication) - 10days	10	07-Sep-24	17-Sep-24	07-Sep-24	17-Sep-24	0	SC51028-1	SC51030-1	
SC51030-1	CNE-076 Inclement Weather (June 2023) (TIme Implication) - 22days	22	17-Sep-24	09-Oct-24	17-Sep-24	09-Oct-24	0	SC51029-1	SC51031-1	
SC51031-1	CNE-077 Inclement Weather (June 2023) (Time and Cost Implication) - 1day	1	09-Oct-24	10-Oct-24	09-Oct-24	10-Oct-24	0	SC51030-1	SC51032-1	
SC51032-1	CNE-078 Inclement Weather (July 2023) (Time Implication) - 14days	14	10-Oct-24	24-Oct-24	10-Oct-24	24-Oct-24	0	SC51031-1	SC51033-1	
SC51033-1	CNE-079 Inclement Weather (July 2023) (Time and Cost Implication) - 2days	2	24-Oct-24	26-Oct-24	24-Oct-24	26-Oct-24	0	SC51032-1	SC51099-1	
SC51099-1	EWN-0314 Extention of Time for change of access date	229	26-Oct-24	11-Jun-25	26-Oct-24	11-Jun-25	0	SC51033-1	SC51099-2	
SC51099-2	CNE-082 Inclement Weather (Aug 2023) (Time Implication) - 19 days	19	12-Jun-25	30-Jun-25	12-Jun-25	30-Jun-25	0	SC51099-1	SC51099-3	

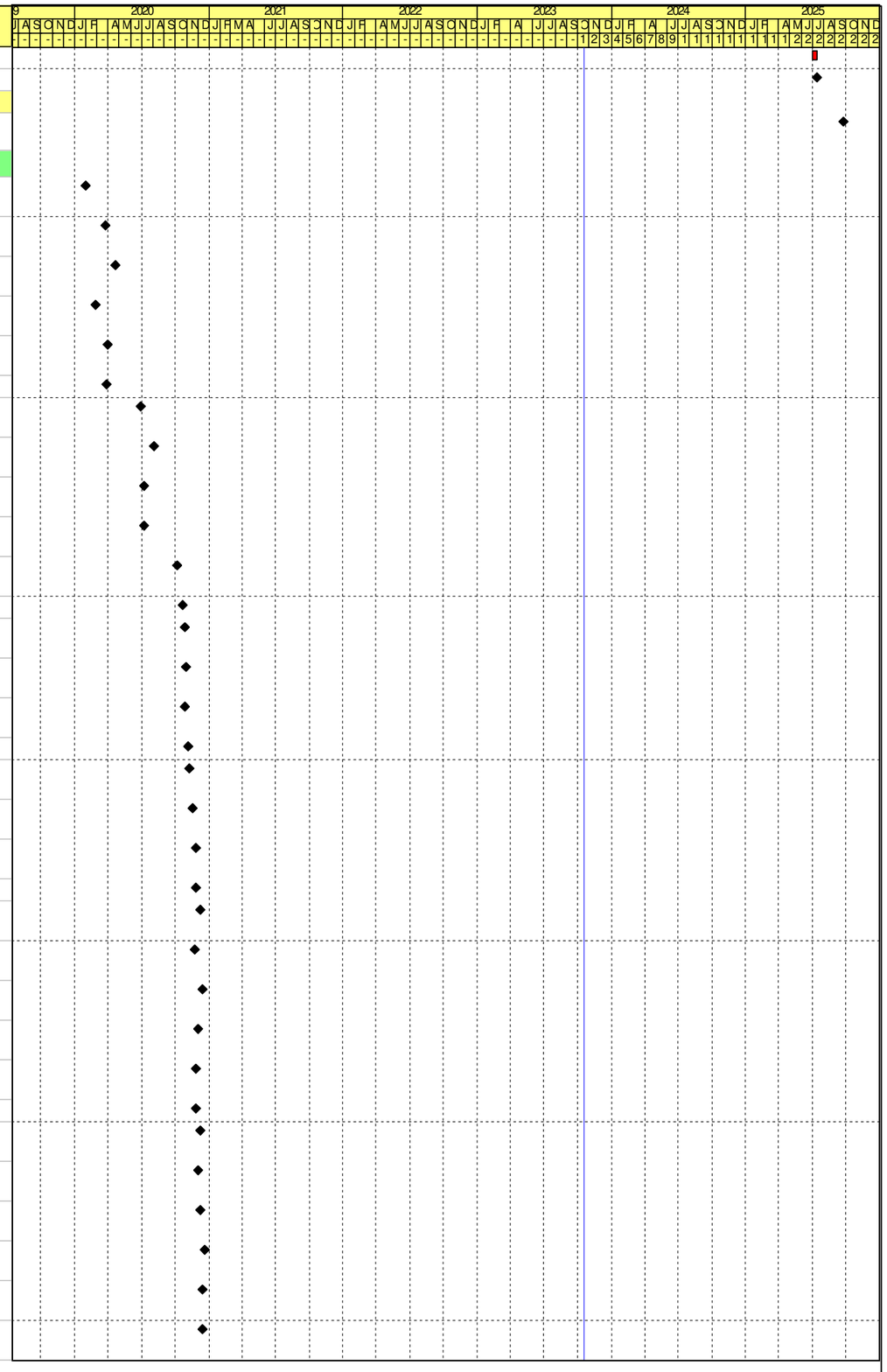


Remaining Work
Critical Activity
Milestone
Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
SC51099-3	CNE-084 Inclement Weather (Sep 2023) (Time Implication) - 13 days	13	01-Jul-25	13-Jul-25	01-Jul-25	13-Jul-25	0	SC51099-2	SC51100-1	
SC51100-1	Expected Completion for Section 5	0		13-Jul-25*		13-Jul-25	0	SC51099-3		
Time Risk Allowance and Planned Completion		0	24-Sep-25	24-Sep-25	02-Aug-24	02-Aug-24	-419			
SC51120	Planned Completion for Section 5	0		24-Sep-25*		02-Aug-24	-419	PL1520, PL1560,	CD1040	
Compensation Event		0	23-Oct-19 A	20-Oct-23 A	26-Dec-22	24-Sep-25				
CE0001	CE No.001 - Special Work Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	0		30-Jan-20 A		24-Sep-25				
CE0002	CE No.002 - The Contractor's Site Accomodation by Modular Integrated Construction (MIC) Method	0		23-Mar-20 A		24-Sep-25				
CE0003	CE No.003 - Flowmeter Relocation & Pipework Rearrangement at Effluent Transfer Pumping Station	0		20-Apr-20 A		24-Sep-25				
CE0004	CE No.004 - Designated Area for the Contractor's Site Accommodation in Works Area WA1	0		26-Feb-20 A		24-Sep-25				
CE0005	CE No.005 - Revised Size of Penstock at UV System No.1 & Effluent Pumping Station No.1 for Ex. Outfall	0		30-Mar-20 A		24-Sep-25				
CE0006	CE No.006 - Additional Duty Point for Effluent Transfer Pumps	0		27-Mar-20 A		24-Sep-25				
CE0007	CE No.007 - Additional Adjustable Weir at UV System No.1 & Effluent Pumping Station No.1	0		30-Jun-20 A		24-Sep-25				
CE0008	CE No.008 - Provision of Additional 2nd Temp. Power Supply for UV System No.1 & Effluent Pumping Station No.1	0		03-Aug-20 A		24-Sep-25				
CE0009	CE No.009 - Employment of Temporary Staff under Anti-Epidemic Fund	0		07-Jul-20 A		24-Sep-25				
CE0010	CE No.010 - Revised Setting Out Plan for Sidestream Treatment Facilities	0		07-Jul-20 A		24-Sep-25				
CE0012	CE No.012 - Provision of Touchscreen Display System for the Project Manager's Office	0		06-Oct-20 A		24-Sep-25				
CE0013	CE No.013 - Feasibility Study for Adopting emMiC & DfMA	0		22-Oct-20 A		24-Sep-25				
CE0014	CE No.014 - Revised FS Water Supply Arrangement for CHP, Guard House, Workshop No.2, SludgeDigester&DistributionChamber	0		28-Oct-20 A		24-Sep-25				
CE0015	CE No.015 - Revised Plumbing Arranagement for Workshop No.2, UV & Effluent No.1, CHP, SPS&FCDF, DOU No.11&12, H2S, SDDC	0		30-Oct-20 A		24-Sep-25				
CE0016	CE No.016 - Elect. Provisions for Addit. 800A ACB w/ CMPD as Standby Supply for MBBR for UV No.2 for Future Expansion	0		28-Oct-20 A		24-Sep-25				
CE0018	CE No.018 - MVAC Layout for Plant Service Water System	0		05-Nov-20 A		24-Sep-25				
CE0020	CE No.020 - Addit. set of 11kV power feeder panel at 11kV SB in CHP for future connection to Zone B in Stage 2	0		09-Nov-20 A		24-Sep-25				
CE0201	NCE-PMI-0201 - Provision of Access Platform for EOT cranes in UV System No.1 & Effluent Pumping Station No.1	0		16-Nov-20 A		24-Sep-25				
CE0202	NCE-PMI-0202 - Revised Plumbing Arrangement for Sludge Dewatering Building	0		26-Nov-20 A		24-Sep-25				
CE0203	NCE-PPMI-0203 - MVAC Layout for SAS Pumping Station	0		25-Nov-20 A		24-Sep-25				
CE0204	NCE-PMI-0204 - CHP - Provisional of Additional ATS for Power Supply for UPS	0		08-Dec-20 A		24-Sep-25				
CE0205	NCE-PPMI-0205 - Fibre Optics Network Connection for SCADA Systems between Zone B & Zone C	0		23-Nov-20 A		24-Sep-25				
CE0206	NCE-PMI-0206 - SDB - Provisional of Additional ATS for Power Supply for UPS	0		15-Dec-20 A		24-Sep-25				
CE0207	NCE-PMI-0207 - TX Rm & Switch Rm - Provision of ATS for Power Supply for UPS	0		01-Dec-20 A		24-Sep-25				
CE0208	NCE-PPMI-0208 - Provision of Drainage service Layout for SAS Pumping Station	0		26-Nov-20 A		24-Sep-25				
CE0209	NCE-PPMI-0209 - Drainage System for Plant Service Water System	0		26-Nov-20 A		24-Sep-25				
CE0210	NCE-PPMI-0210 - Electrical provisions for MVAC & Drainage Systems in SAS Pumping Station	0		08-Dec-20 A		24-Sep-25				
CE0211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		24-Sep-25				
CE0212	NCE-PMI-0212 - Provision of Louvre Panel for Outdoor AC Units at Contractor's Site Accomodation	0		07-Dec-20 A		24-Sep-25				
CE0213	NCE-PPMI-0213 - Electrical provisions for MVAC & Drainage System in UV System No.1 & Effluent Pumping Station No.1	0		21-Dec-20 A		24-Sep-25				
CE0214	NCE-PPMI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Pumping Station	0		14-Dec-20 A		24-Sep-25				
CE0215	NCE-PPMI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-20 A		24-Sep-25				

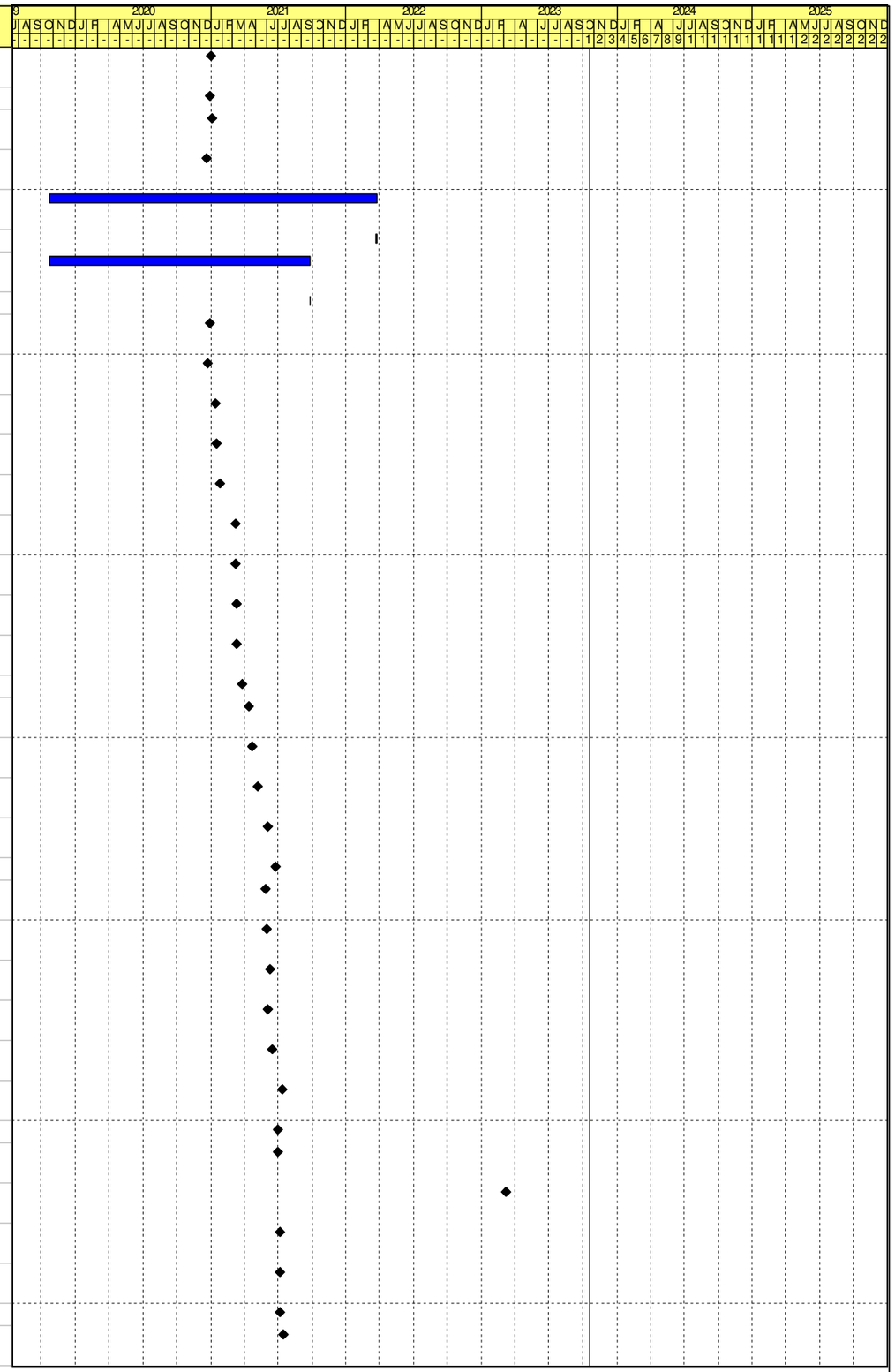


Remaining Work
Critical Activity
Milestone
Actual Progress

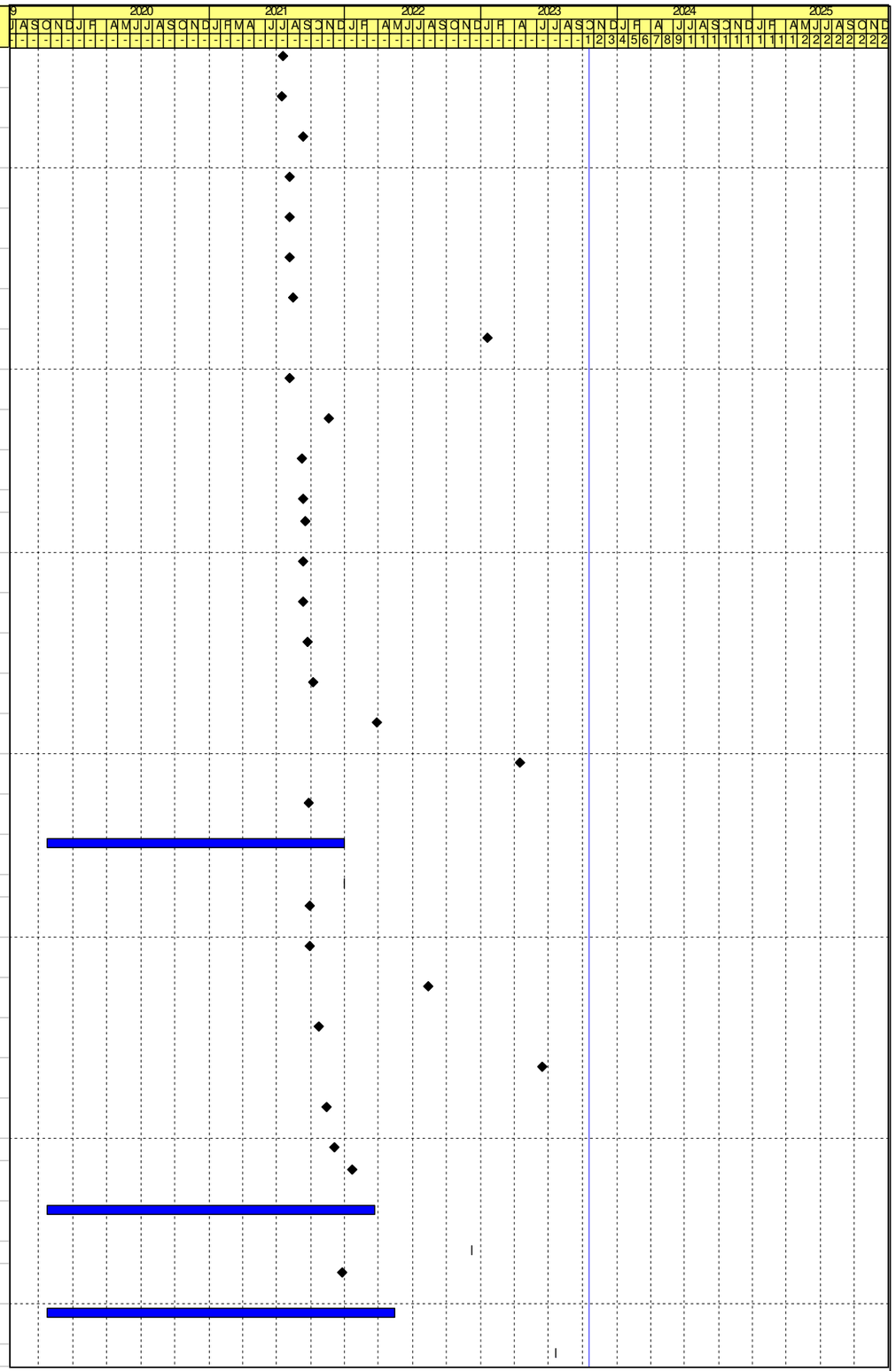
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
CE0216	NCE-PPMI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water System	0		31-Dec-20 A		24-Sep-25				
CE0217	NCE-PMI-0217 - Revised Duty Points for Effluent Transfer Pumps	0		29-Dec-20 A		24-Sep-25				
CE0218	NCE-PMI-0218 - Scoping Study for Application of Digital Twin & IoT in Zone B & Zone C of SWHEPP	0		04-Jan-21 A		24-Sep-25				
CE0219	NCE-NCE-0219 - Change of Site Access Date to SAS Pumping Station Forming Part of Portion B-2 of the Site	0		19-Dec-20 A		24-Sep-25				
CE0219a	NCE-NCE-0219 - Portion B-2a (within 771 to 891 days from starting date)	0	23-Oct-19 A	23-Mar-22 A	26-Dec-22	26-Dec-22		CD1010	CE0219b	
CE0219b	NCE-NCE-0219 - Revised Access Date for Portion B-2a	0	23-Mar-22 A	23-Mar-22 A	26-Dec-22	26-Dec-22		CE0219a	S5SASC1010	
CE0219c	NCE-NCE-0219 - Portion B-2b (within 615 to 705 days from starting date)	0	23-Oct-19 A	24-Sep-21 A	13-Mar-23	13-Mar-23			CE0219d	
CE0219d	NCE-NCE-0219 - Revised Access Date for Portion B-2b	0	24-Sep-21 A	24-Sep-21 A	13-Mar-23	13-Mar-23		CE0219c	S5ECHC1000	
CE0220	NCE-PMI-0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River	0		30-Dec-20 A		24-Sep-25				
CE0221	NCE-PPMI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room	0		24-Dec-20 A		24-Sep-25				
CE0222	NCE-PMI-0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering Building	0		12-Jan-21 A		24-Sep-25				
CE0223	NCE-PMI-0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0		15-Jan-21 A		24-Sep-25				
CE0224	NCE-PMI-0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for UV Disinfeciton System	0		25-Jan-21 A		24-Sep-25				
CE0225	NCE-PMI-0225 - Supply of Ductile Iron Puddle Pipes at the Basement of Sludge Dewatering Building	0		09-Mar-21 A		24-Sep-25				
CE0226	NCE-PMI-0226 - Provision of Solar Water Heating System at the Contractor's Site Accomodation	0		09-Mar-21 A		24-Sep-25				
CE0227	NCE-PMI-0227 - Dual Power Fedder for LV Switch Panel at Sewage Pumping Station	0		11-Mar-21 A		24-Sep-25				
CE0228	NCE-PMI-0228 - Provision of Effluent Pipes and Associated Valve and Supply of Supports for Effluent to Shek Sheung River	0		11-Mar-21 A		24-Sep-25				
CE0230	NCE-PMI-0230 - Provision of Project Jackets with Fleece Vests	0		26-Mar-21 A		24-Sep-25				
CE0231	NCE-PMI-0231 - Extension of Sampling Pipe From Low Level on Sludge Digesters	0		12-Apr-21 A		24-Sep-25				
CE0232	NCE-PMI-0232 - Dual Power Fedder for LV Switch Panel at 1/F LV Switch Room of Combined Heat and Power (CHP) Building	0		22-Apr-21 A		24-Sep-25				
CE0233	NCE-PMI-0233 - Sampling, Simulating and Testing of Existing Sludge for Obtaining the Viscosity of the Mixed Sludge	0		06-May-21 A		24-Sep-25				
CE0234	NCE-PMI-0234 - Provision of FRP Walkway, Access Platform & Handrailing for Sludge Digester No. 2	0		02-Jun-21 A		24-Sep-25				
CE0237	NCE-CNE-0237 - Provision of Inspectin Windows for Sludge Digester	0		25-Jun-21 A		24-Sep-25				
CE0238	NCE-PMI-0238 - Supply of Stainless Steel Puddle Pipes for Surplus Activated Sludge (SAS) Pumping Station	0		27-May-21 A		24-Sep-25				
CE0239	NCE-PMI-0239 - Revised the Arrangement for Process Water Supply and Plant Services Water System	0		01-Jun-21 A		24-Sep-25				
CE0240	NCE-PMI-0240 - Revised Coping and Invert Levels for Penstock and Stoplog of SAS Pumping Station	0		09-Jun-21 A		24-Sep-25				
CE0241	NCE-PMI-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building	0		04-Jun-21 A		24-Sep-25				
CE0242	NCE-PMI-0242 - Revised Fire Services Provision of UV System No. 1 and Effluent Pumping Station No. 1	0		15-Jun-21 A		24-Sep-25				
CE0243	NCE-PMI-0243 - Provision of Flow Signal Inputs for UV Disinfection System	0		12-Jul-21 A		24-Sep-25				
CE0244	RCNE-CNE-0244 - Access to and use of portion C-1A	0		29-Jun-21 A		24-Sep-25				
CE0245	NCE-PMI-0245 - Provision of Augmented Reality (AR) Mobile Application	0		30-Jun-21 A		24-Sep-25				
CE0245-1	NCE-PMI-0245-1 - Provision of Augmented Reality (AR) Mobile Application	0		08-Mar-23 A		24-Sep-25				
CE0246	NCE-PMI-0246 - Revised HV Remote Control Panels at CHP & Workshop No. 2	0		06-Jul-21 A		24-Sep-25				
CE0247	NCE-PMI-0247 - Temporary 4G System for SCADA System Monitoring	0		07-Jul-21 A		24-Sep-25				
CE0248	NCE-PMI-0248 - Inclement Weather - May 2021 (Time Implication)	0		05-Jul-21 A		24-Sep-25				
CE0250	NCE-PMI-0250 - Provision of Front Access LV Switch Panel in the LV Switch Room on G/F Workshop No. 2	0		14-Jul-21 A		24-Sep-25				



Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
CE0252	NCE-PMI-0252 - Provision of Neutral Earthing Resistor (NER) at Workshop No. 2	0		19-Jul-21 A		24-Sep-25				
CE0253	NCE-PMI-0253 - Provision of Building Services Systems in New LV Switch Room on the G/F Workshop No. 2	0		16-Jul-21 A		24-Sep-25				
CE0254	NCE-CNE-0254 - Removal of Obstructions at Trail Pit No. 3 at Sidestreamt Facilities	0		10-Sep-21 A		24-Sep-25				
CE0256	RCNE-CNE-0256 - Amber Rainstrom Warning and Inclement Weather - June 2021 (Time Implication)	0		05-Aug-21 A		24-Sep-25				
CE0257	RCNE-CNE-0257 - Black and Red Rainstrom Warning - June 2021 (Time & Cost Implication)	0		05-Aug-21 A		24-Sep-25				
CE0258	NCE-PMI-0258 - Provision of FRP Cover for Overflow Chambers of Sludge Digesters	0		04-Aug-21 A		24-Sep-25				
CE0259	NCE-PMI-0259 - Provision of Virtual Reality (VR) Safety Training Platform	0		13-Aug-21 A		24-Sep-25				
CE0259-1	NCE-PMI-0259-1 - Provision of Virtual Reality (VR) Safety Training Platform (Another 1 year subscription)	0		17-Jan-23 A		24-Sep-25				
CE0260	NCE-PMI-0260 - Provision of Chequer Plates at UV System No. 1 & Effluent Pumping Station No. 1	0		04-Aug-21 A		24-Sep-25				
CE0262	NCE-PMI-0262 - Emergency Access Door for Lift at Sludge Dewatering Building	0		18-Nov-21 A		24-Sep-25				
CE0263	NCE-PMI-0263 - Upgrade of the Supporting Frame of 1st and 2nd Stage Heat Exchangers for Future Expansion of THP System	0		07-Sep-21 A		24-Sep-25				
CE0264	RCNE-CNE-0264 - Inclement Weather - July 2021 (Time Implication)	0		10-Sep-21 A		24-Sep-25				
CE0265	NCE-PMI-0265 - Water Supply to Emergency Drench Shower and Eye Fountain at Deodorization System No. 11	0		16-Sep-21 A		24-Sep-25				
CE0269	NCE-PMI-0269 - Additional Cleansing Points at Sludge Skip Area of Sludge Dewatering Building	0		10-Sep-21 A		24-Sep-25				
CE0270	NCE-CNE-0270 - Extra sampling, simulating & testing of exiting sludge for obtaining the viscosity of the existing sludge	0		10-Sep-21 A		24-Sep-25				
CE0271	NCE-PMI-0271 - Provision of Access Platform for the EOT Crane (LA-01-02) in Sludge Dewatering Building	0		23-Sep-21 A		24-Sep-25				
CE0272	NCE-PMI-0272 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		08-Oct-21 A		24-Sep-25				
CE0272-1	NCE-PMI-0272-1 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		28-Mar-22 A		24-Sep-25				
CE0272-2	NCE-PMI-0272-2 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		14-Apr-23 A		24-Sep-25				
CE0273	NCE-NCE-0273 - Change of Site Access Date to Workshop No. 2 Forming Part of Portion C-3 of the Site	0		24-Sep-21 A		24-Sep-25				
CE0273a	NCE-NCE-0273 - Portion C-3 (within 615 to 815 days from starting date)	0	23-Oct-19 A	31-Dec-21 A	24-Sep-25	24-Sep-25			CE0273b	
CE0273b	NCE-NCE-0273 - Revised Access Date for Portion C-3	0	31-Dec-21 A	31-Dec-21 A	24-Sep-25	24-Sep-25		CE0273a		
CE0275	NCE-PMI-0275 - Additional Lighting Fittings for UV System No.1 & Effluent Pumping Station No.1	0		29-Sep-21 A		24-Sep-25				
CE0277	NCE-PMI-0277 - Provision of Access Platform for the EOT Crane (LA-01-03) in Sludge Dewatering Building	0		27-Sep-21 A		24-Sep-25				
CE0279	NCE-PPMI-0279 - Implementation of Digital Twin Pilot Project in Advance Works Area of Shek Wu Hui Sewage Treatment Works	0		11-Aug-22 A		24-Sep-25				
CE0280	NCE-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		21-Oct-21 A		24-Sep-25				
CE0280a	PMI-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		16-Jun-23 A		24-Sep-25				
CE0283	NCE-PMI-0283 - Provision of Metal Base Plate,Stopper&Guide Rail for Loading&Unloading of Sludge Skip at Skip Rm of SDB	0		11-Nov-21 A		24-Sep-25				
CE0284	NCE-PMI-0284 - Revised Road Lighting System for Zone C	0		03-Dec-21 A		24-Sep-25				
CE0286	NCE-NCE-0286 - Change of Site Access Date to Combined Heat and Power Building Forming Part of Portion C-2B of the Site	0		21-Jan-22 A		24-Sep-25				
CE0286a	NCE-NCE-0286 - Portion C-2B (within 765 to 880 days from starting date)	0	23-Oct-19 A	20-Mar-22 A	24-Sep-25	24-Sep-25			CE0286b	
CE0286b	NCE-NCE-0286 - Revised Access Date for Portion C2-B	0	07-Dec-22 A	07-Dec-22 A	24-Sep-25	24-Sep-25		CE0286a		
CE0287	NCE-NCE-0287 - Change of Site Access Date to Sludge Digester & Distribution Chamber Forming Part of Portion C- 2C	0		24-Dec-21 A		24-Sep-25				
CE0287a	NCE-NCE-0287 - Portion C-2C (within 715 to 934 days from starting date)	0	23-Oct-19 A	13-May-22 A	24-Sep-25	24-Sep-25			CE0287b	
CE0287b	NCE-NCE-0287 - Revised Access Date for Portion C2-C	0	20-Jul-23 A	20-Jul-23 A	24-Sep-25	24-Sep-25		CE0287a		



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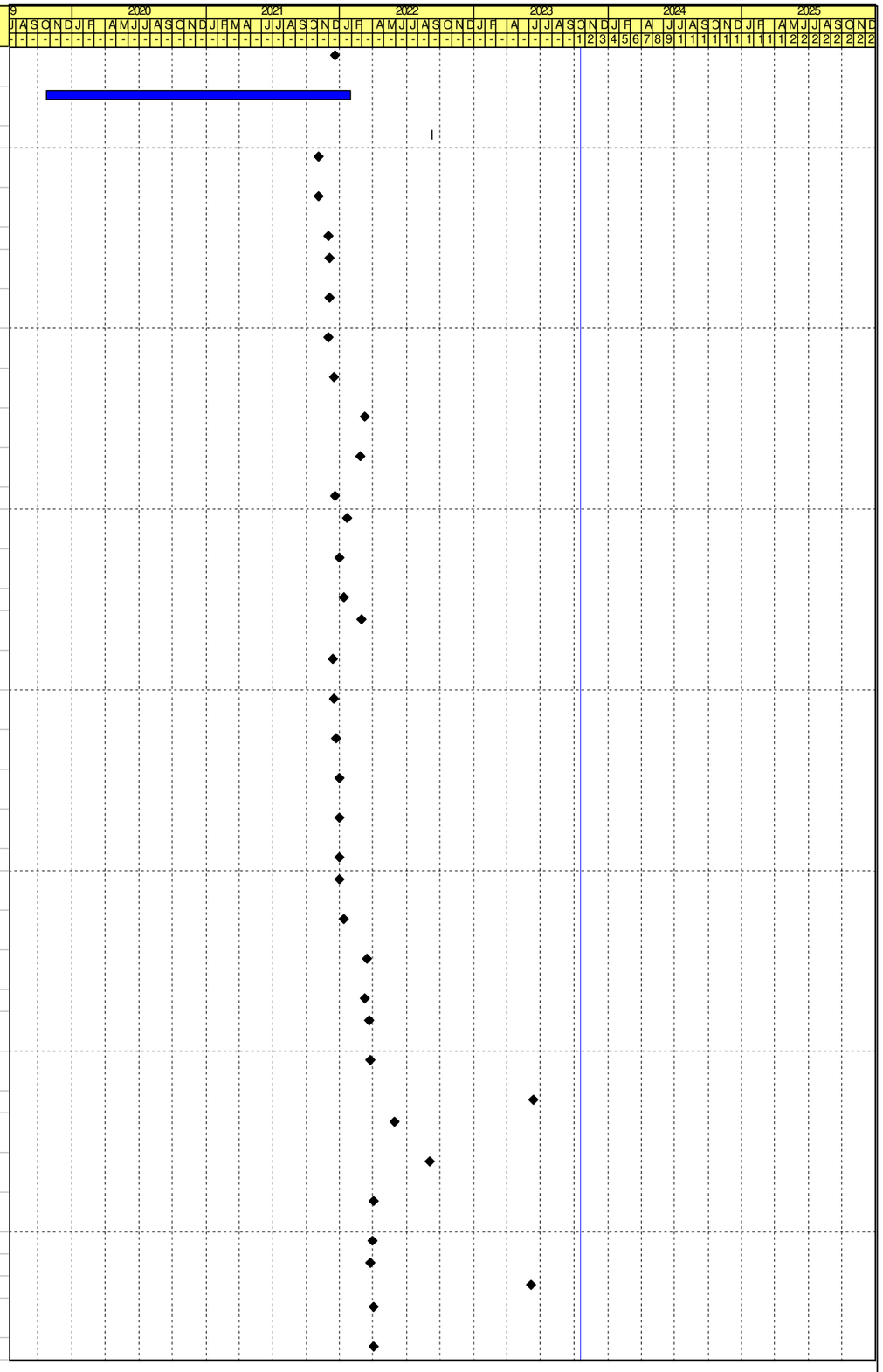
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
CE0288	NCE-NCE-0288 - Change of Site Access Date to Sludge Dewatering Building Forming Part of the Portion C- 2A of the site	0		18-Dec-21 A		24-Sep-25				
CE0288a	NCE-NCE-0288 - Portion C-2A (within 705 to 831 days from starting date)	0	23-Oct-19 A	30-Jan-22 A	24-Sep-25	24-Sep-25			CE0288b	
CE0288b	NCE-NCE-0288 - Revised Access Date for Portion C-2A	0	09-Sep-22 A	09-Sep-22 A	24-Sep-25	24-Sep-25		CE0288a		
CE0292	RCNE-CNE-0292 - Inclement Weather - August 2021 (Time Implication)	0		02-Nov-21 A		24-Sep-25				
CE0293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0		02-Nov-21 A		24-Sep-25				
CE0294	NCE-PMI-0294 - IIB for FAT for THP System	0		30-Nov-21 A		24-Sep-25				
CE0296	NCE-PMI-0296 - Provision of emMiC Adoption of FRP Walkway and Platform for Sludge Digesters	0		03-Dec-21 A		24-Sep-25				
CE0297	NCE-PMI-0297-Provision of Addit. Module BIM Collaboration Pro to existing CDE&Omission of Procurement Maintenance of CDE	0		03-Dec-21 A		24-Sep-25				
CE0298	NCE-PMI-0298 - Additional Light Fittings at Roof Floor of UV System No.1 & Effluent Pumping Station No.1	0		30-Nov-21 A		24-Sep-25				
CE0299	NCE-PMI-0299 - Revised Plumbing Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-21 A		24-Sep-25				
CE0300	NCE-PMI-0300 - Revised Plumbing Layout for CHP, DOU 12 and SD&DC	0		10-Mar-22 A		24-Sep-25				
CE0301	NCE-PMI-0301 - Revised Plumbing Layout for SDB & FeCl3 Dosing System	0		24-Feb-22 A		24-Sep-25				
CE0302	NCE-PMI-0302 - Revised Lighting Layout Plan for Workshop No.2	0		17-Dec-21 A		24-Sep-25				
CE0303	NCE-CNE-0303 - Revise Fire Services Provision for Server Room of Workshop No.2	0		19-Jan-22 A		24-Sep-25				
CE0304	NCE-PMI-0304 - Provision of Digital Displaying Screen and Softwarewithin Portion B Area	0		29-Dec-21 A		24-Sep-25				
CE0305	NCE-PMI-0305 - Process Review for Advance Works	0		12-Jan-22 A		24-Sep-25				
CE0306	NCE-CNE-0306 - Additional Trial Pits & the Associated Modification Works for Uncharted Utilities at STF	0		01-Mar-22 A		24-Sep-25				
CE0307	NCE-PMI-0307 - Revised Quantity for Stoplogs of Sewage Pumping Station	0		13-Dec-21 A		24-Sep-25				
CE0309	RCNE-CNE-0309 - Inclement Weather - October 2021 (Time Implication)	0		16-Dec-21 A		24-Sep-25				
CE0310	NCE-PMI-0310 - Temp. Leased Line for UV System No.1, Effluent PS No.1 & existing Control Room at Zone B	0		20-Dec-21 A		24-Sep-25				
CE0311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0		29-Dec-21 A		24-Sep-25				
CE0312	CNE-0312 - Weather Condition Affecting the Site in Oct due to Typhoon Signal No.8 or above, Red/Black Rainstorm Warning	0		29-Dec-21 A		24-Sep-25				
CE0313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0		29-Dec-21 A		24-Sep-25				
CE0315	NCE-PMI-0315 - Modification of Monorali LA-01-04 in Sludge Dewatering Building	0		30-Dec-21 A		24-Sep-25				
CE0317	NCE-PMI-0317 - Revised CCTV Layout Plan & Addition of CCTV Camera for UV System No.1 & Effluent Pumping Station	0		11-Jan-22 A		24-Sep-25				
CE0325	NCE-PMI-0325 - Provision of 2 Nos. of 3 Tons Mobile A-frame with Electrical Hoist in Sludge Dewatering Building	0		14-Mar-22 A		24-Sep-25				
CE0327	NCE-PMI-0327 - Change of Material for Electrical Wiring Accessories	0		08-Mar-22 A		24-Sep-25				
CE0328	NCE-PMI-0328 - Provision of Chequer Plates at SAS Pumping Station	0		22-Mar-22 A		24-Sep-25				
CE0329	NCE-PMI-0329 - Provision of IIB for FAT for Sludge Thickening and Dewatering Centrifuges	0		23-Mar-22 A		24-Sep-25				
CE0331	RCNE-CNE-0331 - Unavailability of Temporary Power Supply by CLP	0		13-Jun-23 A		24-Sep-25				
CE0333	NCE-PMI-0333 - Revised MVAC Layout and Control Schematic for Workshop No.2	0		30-May-22 A		24-Sep-25				
CE0334	NCE-PMI-0334 - Provision of 1 Set of SWL 1 Tons Davit with Electrical Chain Hoist on the Roof of Distribution Chamber	0		02-Sep-22 A		24-Sep-25				
CE0335	NCE-PMI-0335 - Revised Power & Control for MVAC Provision at Workshop No.2	0		01-Apr-22 A		24-Sep-25				
CE0336	NCE-PMI-0336 - Provision of Additional Temporary Storage Area	0		30-Mar-22 A		24-Sep-25				
CE0337	NCE-PMI-0337 - Revised Pipe Trenches in Zone C	0		24-Mar-22 A		24-Sep-25				
CE0337a	PMI-PMI-0337 - Revised Pipe Trenches in Zone C	0		07-Jun-23 A		24-Sep-25				
CE0338	NCE-PMI-0338 - Provision of Additional RFID Handheld Readers with 4G Data SIM Card Service	0		01-Apr-22 A		24-Sep-25				
CE0339	NCE-PMI-0339 - Revised Lighting Layout for SDB	0		01-Apr-22 A		24-Sep-25				



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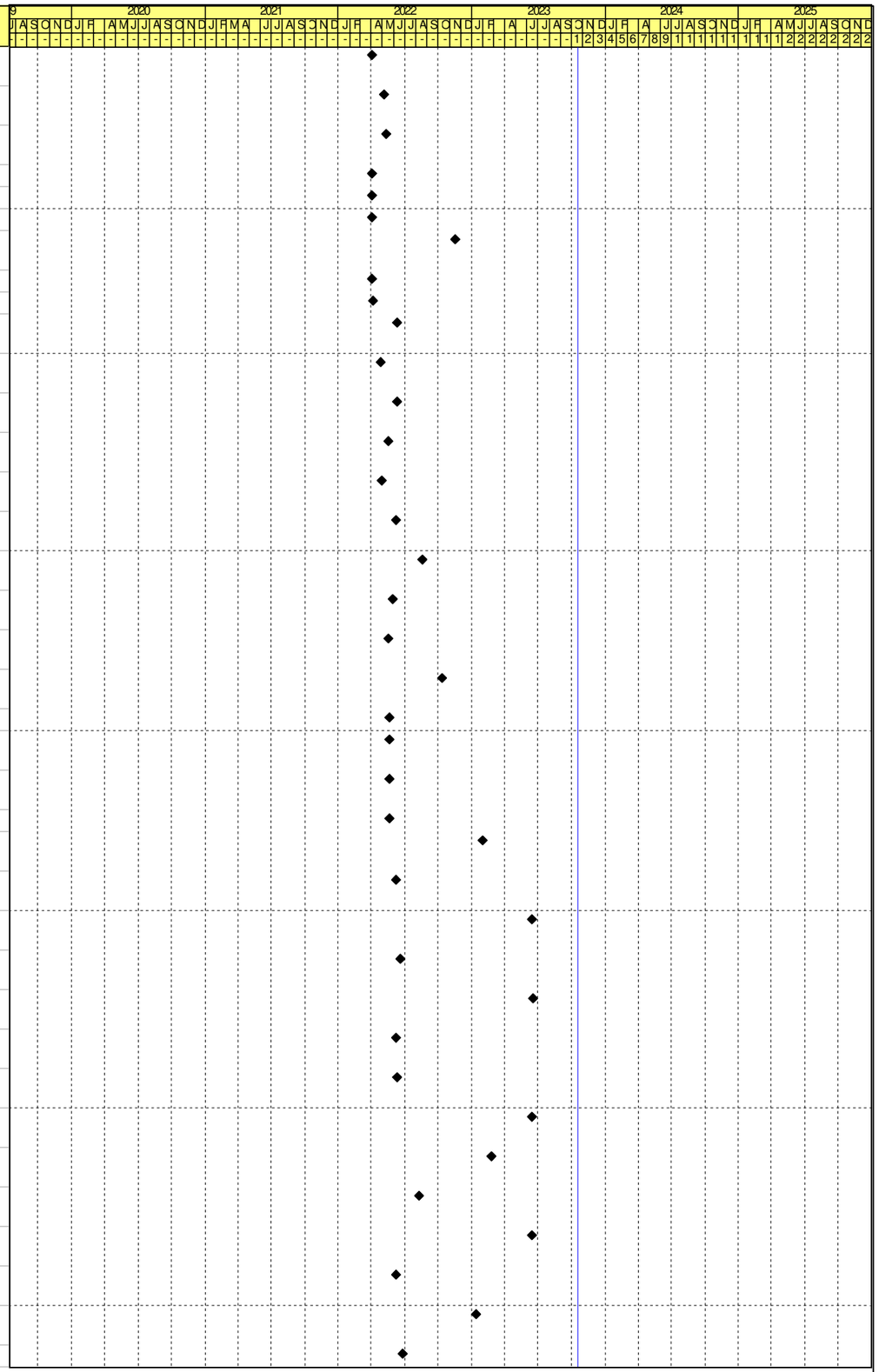
CE0340	NCE-PMI-0340 - Buillding Services & SCADA Interface Provisions for Workshop No.2	0		01-Apr-22 A		24-Sep-25				
CE0341	NCE-PMI-0341 - Revised MVAC Layout for Sludge Digesters and Distribution Chamber	0		05-May-22 A		24-Sep-25				
CE0342	NCE-PMI-0342 - Provision and Installation of Additional Pipes to Manhole MHSS1	0		12-May-22 A		24-Sep-25				
CE0343	CNE-0343 - Inclement Weather - December 2021 (Time Implication)	0		01-Apr-22 A		24-Sep-25				
CE0344	CNE-0344 - Inclement Weather - January 2022 (Time Implication)	0		01-Apr-22 A		24-Sep-25				
CE0345	CNE-0345 - Inclement Weather - February 2022 (Time Implication)	0		01-Apr-22 A		24-Sep-25				
CE0346	NCE-CNE-0346 - Left in Temporary Steel Casing for Pile No. SSHP5 at Sidesteam Treatment Facilities	0		16-Nov-22 A		24-Sep-25				
CE0347	NCE-PMI-0347 - IIB for FAT for 11kV Switchboards	0		01-Apr-22 A		24-Sep-25				
CE0348	NCE-PMI-0348 - Provision of (IIB) for FAT for CHP Generating Sets	0		04-Apr-22 A		24-Sep-25				
CE0352	NCE-PMI-0352 - Revised MVAC Layout and for Transformer and Switch Room	0		10-Jun-22 A		24-Sep-25				
CE0353	NCE-PMI-0353 - Additional Auto-sampler for sampling Location at UV system No.1 and Effluent Pumping Station No.1	0		27-Apr-22 A		24-Sep-25				
CE0354	NCE-EWP-0354 - Early Deployment of Tower Crane to Enhance Programme affected by Uncharted U/U at STF	0		10-Jun-22 A		24-Sep-25				
CE0359	NCE-PMI-0359 - Revised Lighting Layout for Sludge Digesters and Districbution Chamber (Basement 1 and Basement 2)	0		16-May-22 A		24-Sep-25				
CE0360	NCE-PMI-0360 - Provision of Video Wall with Additional Monitors in the Control Room of Workshop No.2	0		29-Apr-22 A		24-Sep-25				
CE0361	NCE-PMI-0361 - Revised Power Layout for Sludge Dewatering Building	0		08-Jun-22 A		24-Sep-25				
CE0362	NCE-CNE-0362 - Amendment of Dangers Goods Ordinance (Cap.295)	0		19-Aug-22 A		24-Sep-25				
CE0363	NCE-PMI-0363 - Revised MVAC Layout and Control Schematic for CHP Building	0		30-May-22 A		24-Sep-25				
CE0364	NCE-PMI-0364 - Provision of Security and Utility Services for Additional Temporary Storage Area	0		16-May-22 A		24-Sep-25				
CE0364-1	NCE-PMI-0364-1 - Provision of Security and Utility Services for Additional Temporary Storage Area	0		10-Oct-22 A		24-Sep-25				
CE0366	CNE-0366 - No Access to and Use of Portion C-2B for Area for CHP	0		20-May-22 A		24-Sep-25				
CE0367	NCE-PMI-0367 - Sealing Works for UV System & Effluent Pumping Station No. 1	0		20-May-22 A		24-Sep-25				
CE0369	CNE-0369 - No Access to and use of Portion C-2C for Area for SD & DC	0		20-May-22 A		24-Sep-25				
CE0370	CNE-0370 - No Access to and Use of Portion C-2A for Area for SDB	0		20-May-22 A		24-Sep-25				
CE0370-1	RCNE-CNE-0370-1 - No Access to and Use of Portion C-2A for Area for Sludge Dewatering Building	0		31-Jan-23 A		24-Sep-25				
CE0372	NCE-PMI-0372 - Building Services Control & Monitoring Provisions for SDB & Gas Detection System for Pipe Tranch No.1	0		08-Jun-22 A		24-Sep-25				
CE0372-1	PMI-PMI-0372-1 -Building Services Control & Monitoring Provisions for SDB & Gas Detection System for Pipe Tranch No.1	0		16-Jun-23 A		24-Sep-25				
CE0374	NCE-PMI-0374 - Revised Power Layout for SDDC & Control Provisions for Sump Pumps at Pipe Trench No.1 & No.2	0		20-Jun-22 A		24-Sep-25				
CE0374-1	PMI-PMI-0374-1 - Revised Power Layout for SDDC & Control Provisions for Sump Pumps at Pipe Trench No.1 & No.2	0		19-Jun-23 A		24-Sep-25				
CE0375	NCE-PMI-0375 - Gas Detection System for Pipe Trench No.3 in Zone C	0		06-Jun-22 A		24-Sep-25				
CE0376	NCE-PMI-0376 - BS Provisions for SDDC (G/F & Roof) & Pipe Trench No.2	0		10-Jun-22 A		24-Sep-25				
CE0376-1	PMI-PMI-0376-1 - BS Provisions for SDDC (G/F & Roof) & Pipe Trench No.2	0		16-Jun-23 A		24-Sep-25				
CE0380	CNE-0380 - No Access and Use of Portion C-2D for Area for THP, H2S removal, DOU, WGB system, BHT, THP CWTPS, Fecl3 etc.	0		24-Feb-23 A		24-Sep-25				
CE0381	NCE-PMI-0381 - Employment of Temporary Staff under Job Creation Scheme 3.0 (JCS 3.0) under Anti-Epidemic Fund (AEF)	0		08-Aug-22 A		24-Sep-25				
CE0381-1	PMI-PMI-0381-1 - Employment of Temporary Staff under Job Creation Scheme 3.0 (JCS 3.0) under Anti-Epidemic Fund (AEF)	0		16-Jun-23 A		24-Sep-25				
CE0384	NCE-PMI-0384 - Enhanced Protective Measures against Spread of Omicron COVID Variant	0		08-Jun-22 A		24-Sep-25				
CE0384-1	NCE-PMI-0384-1 - Enhanced Protective Measures against Spread of Omicron COVID Variant	0		11-Jan-23 A		24-Sep-25				
CE0386	CNE-0386 - Inclement Weather - March 2022 (Time Implication)	0		24-Jun-22 A		24-Sep-25				



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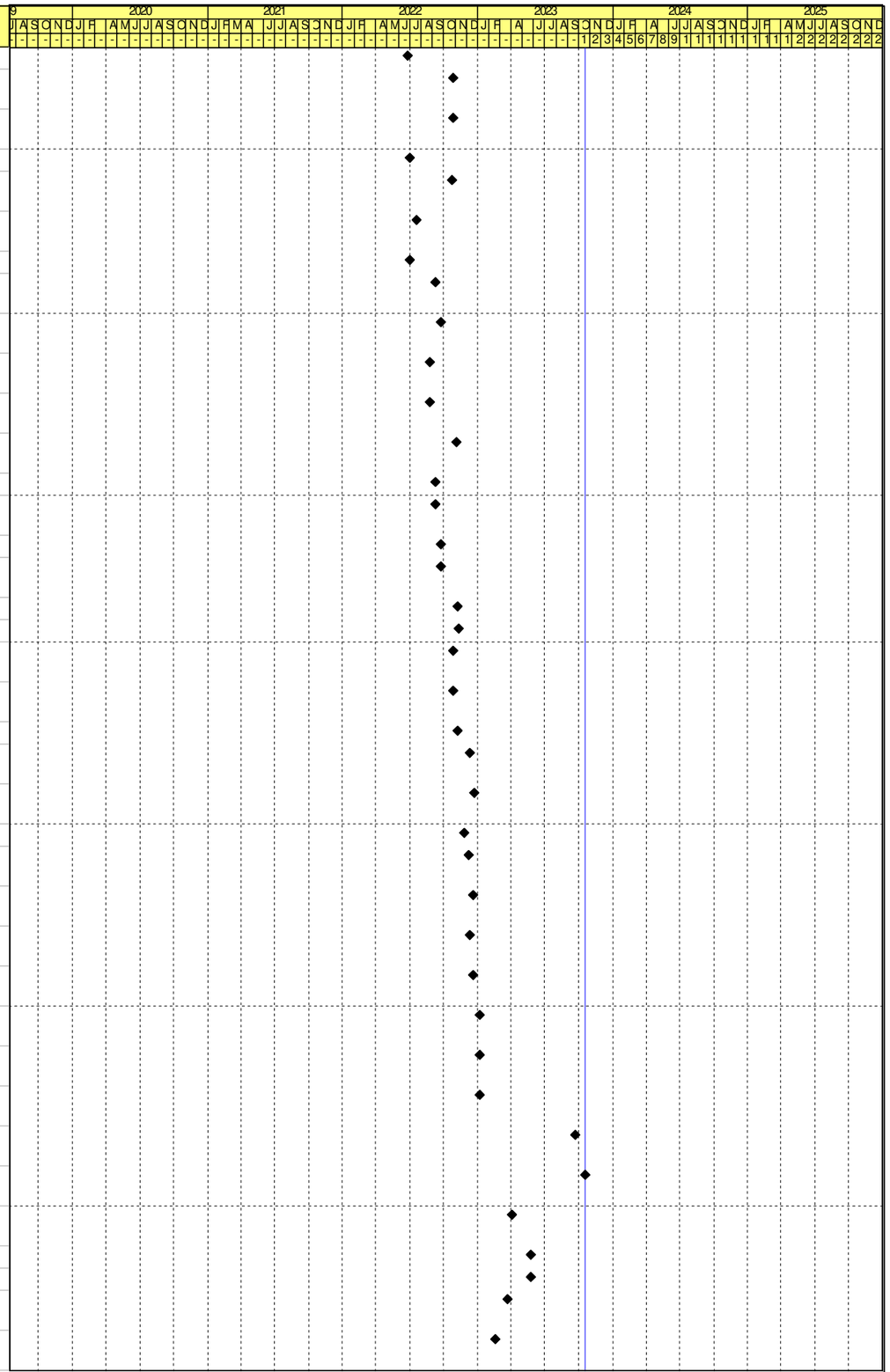
CE0387	CNE-0387 - Inclement Weather - April 2022 (Time Implication)	0		24-Jun-22 A		24-Sep-25				
CE0389	NCE-PMI-0389 - Enhancement of Ventilation for CHP Acoustic Enclosures at Combined Heat and Power Building	0		27-Oct-22 A		24-Sep-25				
CE0390	NCE-PMI-0390 - Electricity Supply for DSD Maintenance Works at Workshop No.2	0		26-Oct-22 A		24-Sep-25				
CE0391	CNE-0391 - Inclement Weather - May 2022 (Time Implication)	0		30-Jun-22 A		24-Sep-25				
CE0393	NCE-PMI-0393 - Automatic Changeover System for UV System No.1 in LV Switchboard at Transformer and Switchroom	0		22-Oct-22 A		24-Sep-25				
CE0395	NCE-PMI-0395 - Omission of the Set-up Work for Temporary Water and Electricity Supply for Works Area WA1-B	0		20-Jul-22 A		24-Sep-25				
CE0397	CNE-0397 - Inclement Weather - Jun 2022 (Time Implication)	0		30-Jun-22 A		24-Sep-25				
CE0398	CNE-0398 - Red Rainstorm Warning -June 2022 (Time and Cost Implication)	0		08-Sep-22 A		24-Sep-25				
CE0399	NCE-PMI-0399 - Revised MVAC Layout for Sludge Dewatering Building	0		22-Sep-22 A		24-Sep-25				
CE0400	NCE-PMI-0400 - Provision of High Tide Detection System for System No.1 and Effluent Pumping Station No. 1	0		23-Aug-22 A		24-Sep-25				
CE0402	NCE-PMI-0402 - Provision of Flow Control System for Effluent to Shek Sheung River	0		24-Aug-22 A		24-Sep-25				
CE0403	NCE-PMI-0403 - Revised MVAC Provisions for SDB, TX&Switchrrom, UV no.1 & EPS and FHBP Rm	0		03-Nov-22 A		24-Sep-25				
CE0405	CNE-0405 - Inclement Weather -July 2022 (Time Implication)	0		08-Sep-22 A		24-Sep-25				
CE0406	CNE-0406 - Tropical Cyclone Warning Signal No. 8 - July 2022 (Time and Cost Implication)	0		08-Sep-22 A		24-Sep-25				
CE0409	CNE-0409 - Inclement Weather -August 2022 (Time Implication)	0		22-Sep-22 A		24-Sep-25				
CE0410	CNE-0410 - Tropical Cyclone Warning Signal No. 8 - August 2022 (Time and Cost Implication)	0		22-Sep-22 A		24-Sep-25				
CE0411	NCE-PMI-0411 - Revised Lighting Design for CHP Building	0		07-Nov-22 A		24-Sep-25				
CE0412	NCE-PMI-0412 - Omission of the Works of CMMS & IDMS	0		09-Nov-22 A		24-Sep-25				
CE0413	NCE-PMI-0413 - MV for UV Plant Area (Level +4.9mPD) of UV System No.1 & Effluent Pumping Station No.1	0		25-Oct-22 A		24-Sep-25				
CE0414	NCE-PMI-0414 - Sample Collection and Analysis for Existing Sewage Treatment Facilities	0		27-Oct-22 A		24-Sep-25				
CE0415	NCE-PMI-0415 - Modification Works for Instrument of UV Channels	0		07-Nov-22 A		24-Sep-25				
CE0420	NCE-PMI-0420 - Pipework Modifcation for THP Feeding System (from SDB to THP)	0		09-Dec-22 A		24-Sep-25				
CE0421	NCE-PMI-0421 - Provision of BLI System for THP Feeding System at Sludge Dewatering Building	0		22-Dec-22 A		24-Sep-25				
CE0422	NCE-PMI-0422 - MVAC Provisions for Store at Workshop No. 2	0		25-Nov-22 A		24-Sep-25				
CE0423	NCE-PMI-0423 - Provision of Puddle Flanges for Draft Tube Mixer Installation at Sludge Digester No. 2	0		06-Dec-22 A		24-Sep-25				
CE0424	NCE-PMI-0424 - Provision of Addtional Ethernet Module for Dual Ring in SCADA and PMS System	0		20-Dec-22 A		24-Sep-25				
CE0425	NCE-PMI-0425 - Provision of PLC Gateway for the Interface Work with Reclaimed Water Facilities in Zone D	0		09-Dec-22 A		24-Sep-25				
CE0429	NCE-PMI-0429 - Provision of Additional Access Platform for the EOT in CHP Building	0		20-Dec-22 A		24-Sep-25				
CE0430	NCE-PMI-0430 - Provision of Additional Lifting Davits for Thermal Hydrolysis Process (THP) System	0		05-Jan-23 A		24-Sep-25				
CE0433	CNE-0433 - Weather Conditions Affecting the Site in Nov 22 due to Amber Rainstorm warning, or Inclement Weather	0		05-Jan-23 A		24-Sep-25				
CE0434	CNE-0434 - Weather Condition Affecting the Site in Nov due to Typhoon Signal No.8 or above, Red/Black Rainstorm Warning	0		05-Jan-23 A		24-Sep-25				
CE0434-1	CNE-0434-1 - Weather Condition Affecting the Site in Nov due to Typhoon Signal No.8 or above,Red/Black Rainstorm Warning	0		22-Sep-23 A		24-Sep-25				
CE0434-2	CNE-0434-2 - Weather Condition Affecting the Site in Nov due to Typhoon Signal No.8 or above,Red/Black Rainstorm Warning	0		20-Oct-23 A		24-Sep-25				
CE0435	NCE-PMI-0435 - Provision of Hydraulic Operated Sludge Skip of Sludge Dewatering Building	0		03-Apr-23 A		24-Sep-25				
CE0438	NICE-PMI-0438 - Revised Valve Type for Biogas Holding Tanks	0		25-May-23 A		24-Sep-25				
CE0438-1	PMI-PMI-04238 - Revised Valve Type for Biogas Holding Tanks	0		25-May-23 A		24-Sep-25				
CE0439	NCE-PMI-0439 - Building Services Provision for Unmanned Services Duct	0		21-Mar-23 A		24-Sep-25				
CE0441	CNE-0441 - Weather Conditions Affecting the Site in Dec 22 due to Amber Rainstorm warning, or Inclement Weather	0		16-Feb-23 A		24-Sep-25				



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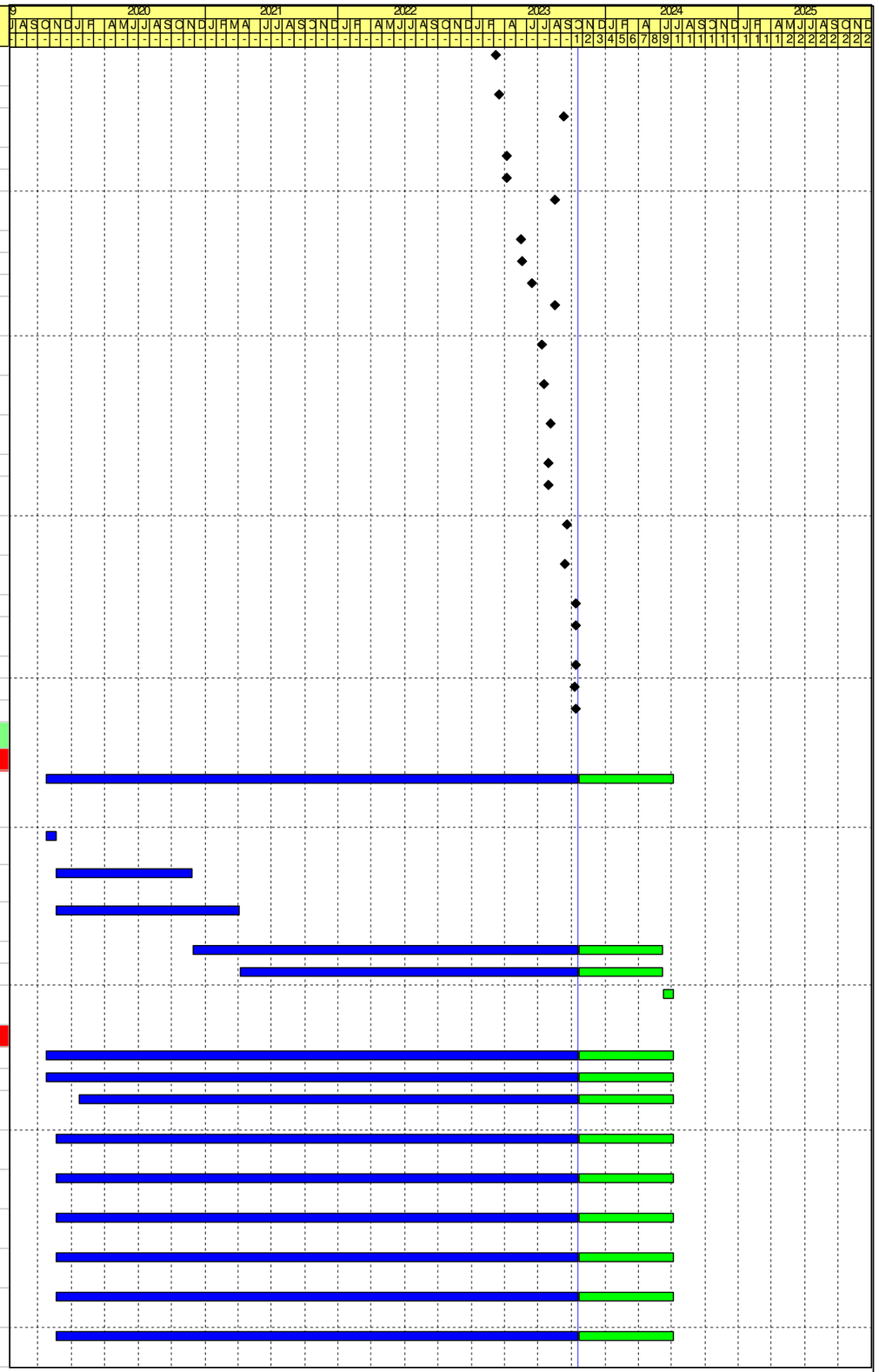
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
CE0444	NCE-PMI-0444 - Building Services Provision for Additional Shower Cubicles at Workshop No. 2	0		06-Mar-23 A		24-Sep-25				
CE0445	NCE-PMI-0445 - Additional Power Provisions for Workshop No. 2	0		17-Mar-23 A		24-Sep-25				
CE0448	NCE-PPMI-0448 - Omission of Greening on Roof of Sidestream Treatment Facilities	0		11-Sep-23 A		24-Sep-25				
CE0450	CNE-0450 - Inclement Weather - February 2023 (Time Implication)	0		06-Apr-23 A		24-Sep-25				
CE0451	CNE-0451 - Inclement Weather - January 2023 (Time Implication)	0		06-Apr-23 A		24-Sep-25				
CE0453	PMI-PMI-0453 - Revised Vertical Green System and Area at the External Walls of STF	0		17-Aug-23 A		24-Sep-25				
CE0456	CNE-0456 - Inclement Weather - March 2023 (Time Implication)	0		15-May-23 A		24-Sep-25				
CE0460	CNE-0460 - Inclement Weather - April 2023 (Time Implication)	0		19-May-23 A		24-Sep-25				
CE0461	CNE-0461 - Inclement Weather - May 2023 (Time Implication)	0		16-Jun-23 A		24-Sep-25				
CE0462	CNE-0462 - Provision of By-pass Pipe Routing and Associated Motorized Gate Valve for External Sludge Intake at SDB	0		18-Aug-23 A		24-Sep-25				
CE0463	PMI-PMI-0463 - Change of Test Cube Size of Grout for Piling Works at Sidestream Treatment Facilities	0		12-Jul-23 A		24-Sep-25				
CE0464	CNE-0464 - Updated Version of Guidance Notes on Prevention of Heat Stroke at Work	0		17-Jul-23 A		24-Sep-25				
CE0466	CNE-0466 - Red Rainstorm Warning -May 2023 (Time and Cost Implication)	0		04-Aug-23 A		24-Sep-25				
CE0468	CNE-0468 - Inclement Weather - June 2023 (Time Implication)	0		31-Jul-23 A		24-Sep-25				
CE0469	CNE-0469 - Weather Conditions Affecting the Site in June 23 due to Amber Rainstorm warning, or Inclement Weather	0		31-Jul-23 A		24-Sep-25				
CE0475	PMI-PMI-0475 - Provision of Centralised Management Platform for Smart Site Safety System in Zone C	0		18-Sep-23 A		24-Sep-25				
CE0478	PMI-PPMI-0478 - Omission of Underground Earthing Systems for HV System, LV System etc	0		14-Sep-23 A		24-Sep-25				
CE0480	CNE-0480 - Inclement Weather - July 2023 (Time Implication)	0		13-Oct-23 A		24-Sep-25				
CE0481	CNE-0481 - Tropical Cyclone Warning Signal No. 8 and Red Rainstorm Warning - July 2023 (Time and cost Implication)	0		13-Oct-23 A		24-Sep-25				
CE0482	CNE-0482 - Inclement Weather - August 2023 (Time Implication)	0		13-Oct-23 A		24-Sep-25				
CE0484	CNE-0484 - Serious Flooding at the Site WA3 Storage Area	0		11-Oct-23 A		24-Sep-25				
CE0486	PMI-PMI-0486 - Provision of Biogas Pipe in CHP Building	0		12-Oct-23 A		24-Sep-25				
Preliminaries		705	23-Oct-19 A	24-Sep-25	29-Aug-22	24-Sep-25	0			
Mobilisation		261	23-Oct-19 A	07-Jul-24	29-Aug-22	24-Sep-25	444			
PL1000	Provison of Equipment / Facilities for the PM's Office	261	23-Oct-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	AD1200, AD1220, CD1010	CD1040	
PL1010	Mobilisation	0	23-Oct-19 A	19-Nov-19 A	29-Aug-22	29-Aug-22		CD1010	PL1240, S2P1010,	
PL1020	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1-B)	0	20-Nov-19 A	27-Nov-20 A	28-Dec-22	28-Dec-22		AD1200, PL1010	PL1040, S2D1930,	
PL1030	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	0	20-Nov-19 A	05-Apr-21 A	07-Jan-25	07-Jan-25		AD1220, PL1010	PL1050	
PL1040	Maintain Contractor's Site Office	231	28-Nov-20 A	07-Jun-24	07-Jan-25	25-Aug-25	444	PL1020	PL1060	
PL1050	Maintain Contractor's Storage Area	231	06-Apr-21 A	07-Jun-24	07-Jan-25	25-Aug-25	444	PL1030	PL1060	
PL1060	Removal of Site Office, Storage & Relevant Facilities	30	08-Jun-24	07-Jul-24	26-Aug-25	24-Sep-25	444	PL1040, PL1050	CD1040	
Site Preliminaries		705	23-Oct-19 A	24-Sep-25	26-Dec-23	24-Sep-25	0			
PL1070	Provision of Insurance, Third Party Insurances & PII	261	23-Oct-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010	CD1040	
PL1080	Provision of 2 Contract Car for the Use of the PM & Supervisor	261	23-Oct-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010	CD1040	
PL1090	Provision of 1 Electric Car for the Use of the PM & Supervisor	261	22-Jan-20 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1100	Provision of Photographs	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1110	Provision of Environmental Mitigation Measures	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1120	Provision of Air Pollution Abatment	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1130	Provision of Noise Pollution Abatment	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1140	Provision of Wastewater Pollution Abatement	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1150	Provision of Wastement Management	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	



Remaining Work
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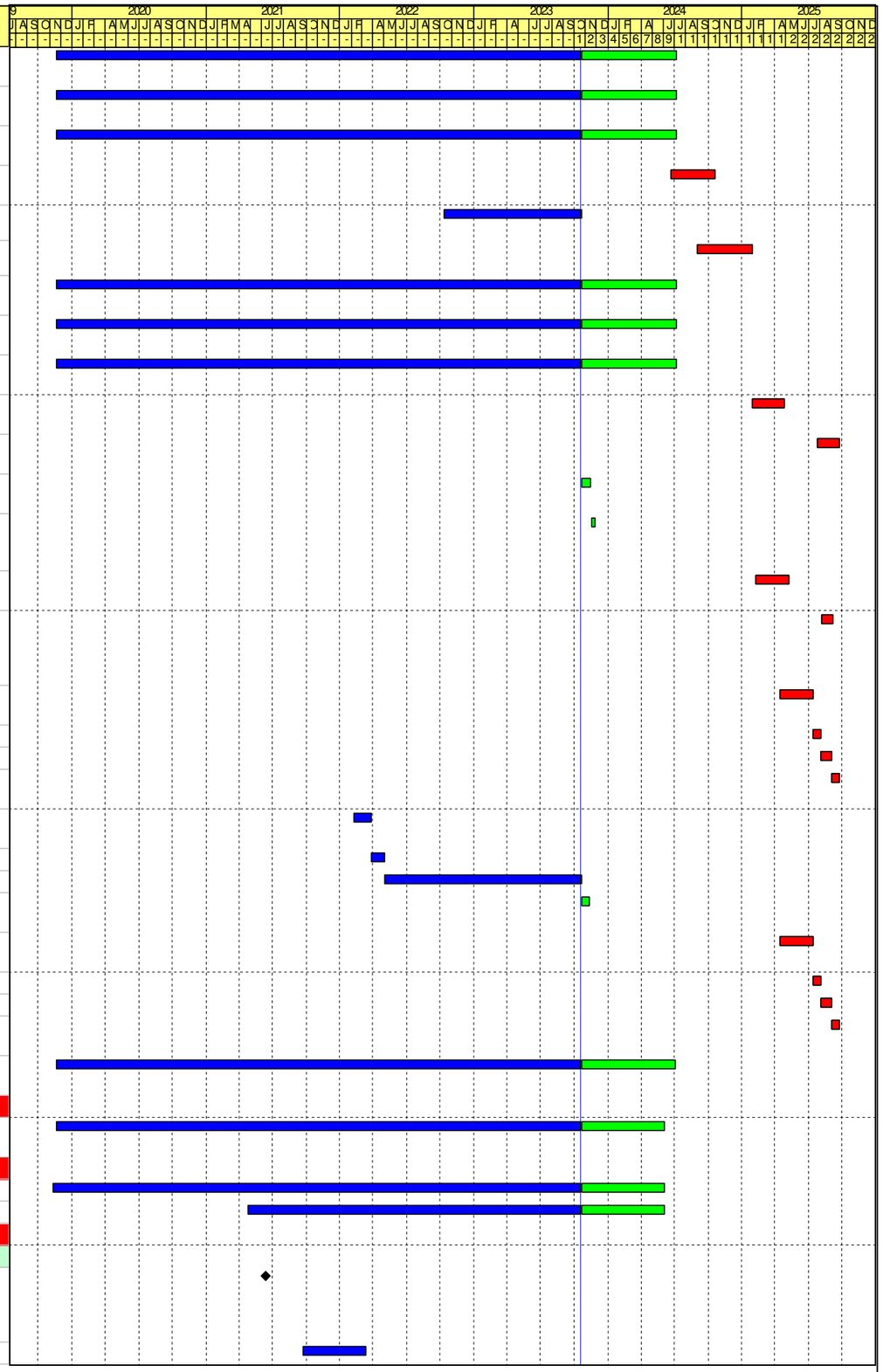
PL1160	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1170	Provision of Environmental Management	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1180	Provision of Site Management Plan for Trip Ticket System	261	20-Nov-19 A	07-Jul-24	07-Jan-25	24-Sep-25	444	CD1010, PL1010	CD1040	
PL1190	Provision of As-constructed Drawings for Section 3	121	22-Jun-24	20-Oct-24	23-Apr-24	21-Aug-24	-60	CD1010, S3C1150	CD1040, SC31120	
PL1200	Provision of As-constructed Drawings for Section 4	1	13-Oct-22 A	21-Oct-23	24-Sep-25	24-Sep-25	704	CD1010, S4C1160,	CD1040, SC41110	
PL1210	Provision of As-constructed Drawings for Section 5	151	01-Sep-24	29-Jan-25	04-Mar-24	02-Aug-24	-181	CD1010, S5DIGC1040,	CD1040, SC51120	
PL1220	Provision of Systematic Risk Management	260	20-Nov-19 A	06-Jul-24	08-Jan-25	24-Sep-25	445	CD1010, PL1010	CD1040	
PL1230	Provision of Site Liaison Group & Community Liaison Group	260	20-Nov-19 A	06-Jul-24	08-Jan-25	24-Sep-25	445	CD1010, PL1010	CD1040	
PL1240	Provision of 24-Hour Telephone Line	260	20-Nov-19 A	06-Jul-24	08-Jan-25	24-Sep-25	445	CD1010, PL1010	CD1040	
PL1260	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3	90	28-Jan-25	27-Apr-25	26-Dec-23	24-Mar-24	-399		PL1270	
PL1270	Provision of Training for Employer's Staff for Section 3	60	27-Jul-25	24-Sep-25	23-Jun-24	21-Aug-24	-399	CD1010, PL1260	CD1040, SC31120	
PL1280	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 4	27	21-Oct-23	16-Nov-23	17-Aug-25	12-Sep-25	666		PL1290	
PL1290	Provision of Training for Employer's Staff for Section 4	12	17-Nov-23	28-Nov-23	13-Sep-25	24-Sep-25	666	CD1010, S4T1020, PL1280	CD1040, SC41110	
PL1300	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 5	90	08-Feb-25	08-May-25	05-Jan-24	04-Apr-24	-400		PL1310	
PL1310	Provision of Training for Employer's Staff for Section 5	30	07-Aug-25	05-Sep-25	03-Jul-24	02-Aug-24	-400	CD1010, S5T1180, S5DIGC1040, PL1300	CD1040, SC51120	
PL1320	Prepare & Submit O&M Manual for Section 3	90	16-Apr-25	14-Jul-25	13-Mar-24	10-Jun-24	-399	CD1010	CD1040, PL1330	
PL1330	PM Reivew & Comment O&M Manual for Section 3	21	15-Jul-25	04-Aug-25	11-Jun-24	01-Jul-24	-399	PL1320	PL1340	
PL1340	Revise & Re-submit O&M Manual for Section 3	30	05-Aug-25	03-Sep-25	02-Jul-24	31-Jul-24	-399	PL1330	PL1350	
PL1350	PM Reivew & Approval of O&M Manual for Section 3	21	04-Sep-25	24-Sep-25	01-Aug-24	21-Aug-24	-399	PL1340	CD1040, SC31120	
PL1360	Prepare & Submit O&M Manual for Section 4	0	07-Feb-22 A	28-Mar-22 A	03-Sep-25	03-Sep-25		CD1010	CD1040, PL1370	
PL1370	PM Reivew & Comment O&M Manual for Section 4	0	29-Mar-22 A	03-May-22 A	03-Sep-25	03-Sep-25		PL1360	PL1380	
PL1380	Revise & Re-submit O&M Manual for Section 4	1	04-May-22 A	21-Oct-23	03-Sep-25	03-Sep-25	683	PL1370	PL1390	
PL1390	PM Reivew & Approval of O&M Manual for Section 4	21	22-Oct-23	11-Nov-23	04-Sep-25	24-Sep-25	683	PL1380	CD1040, SC41110	
PL1400	Prepare & Submit O&M Manual for Section 5	90	16-Apr-25	14-Jul-25	22-Feb-24	22-May-24	-419	CD1010	CD1040, PL1410	
PL1410	PM Reivew & Comment O&M Manual for Section 5	21	15-Jul-25	04-Aug-25	22-May-24	12-Jun-24	-419	PL1400	PL1420	
PL1420	Revise & Re-submit O&M Manual for Section 5	30	05-Aug-25	03-Sep-25	12-Jun-24	12-Jul-24	-419	PL1410	PL1430	
PL1430	PM Reivew & Approval of O&M Manual for Section 5	21	04-Sep-25	24-Sep-25	12-Jul-24	02-Aug-24	-419	PL1420	CD1040, SC51120	
PL1440	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	258	20-Nov-19 A	04-Jul-24	10-Jan-25	24-Sep-25	447	CD1010, PL1010	CD1040	
Site Upkeeping		228	20-Nov-19 A	04-Jun-24	09-Feb-25	24-Sep-25	477			
PL1450	General Site Upkeeping of the Site	228	20-Nov-19 A	04-Jun-24	09-Feb-25	24-Sep-25	477	CD1010, PL1010	CD1040	
Safety and Environmental Management		228	10-Nov-19 A	04-Jun-24	09-Feb-25	24-Sep-25	477			
PL1460	Construction Health and Safety Plan	228	10-Nov-19 A	04-Jun-24	09-Feb-25	24-Sep-25	477	CD1000	CD1040	
PL1470	Site Traffic Safety Management Plan	228	25-Apr-21 A	04-Jun-24	09-Feb-25	24-Sep-25	477	AD1010	CD1040	
Compliance with BEAM Requirements		586	11-Jun-21 A	28-May-25	24-Dec-23	02-Aug-24	-300			
Sludge Dewatering Building		389	11-Jun-21 A	12-Nov-24	02-Mar-24	02-Aug-24	-103			
PL1490	Material Submission & Design Calculation Approved	0		11-Jun-21 A		02-Mar-24		S2D1290, S2D1330, S2D1450, S2D1490	PL1500, SC21120	
PL1500	Issued approved submission & Calculation to Cinotech	0	21-Sep-21 A	11-Mar-22 A	02-Mar-24	02-Mar-24		PL1490	PL1510	



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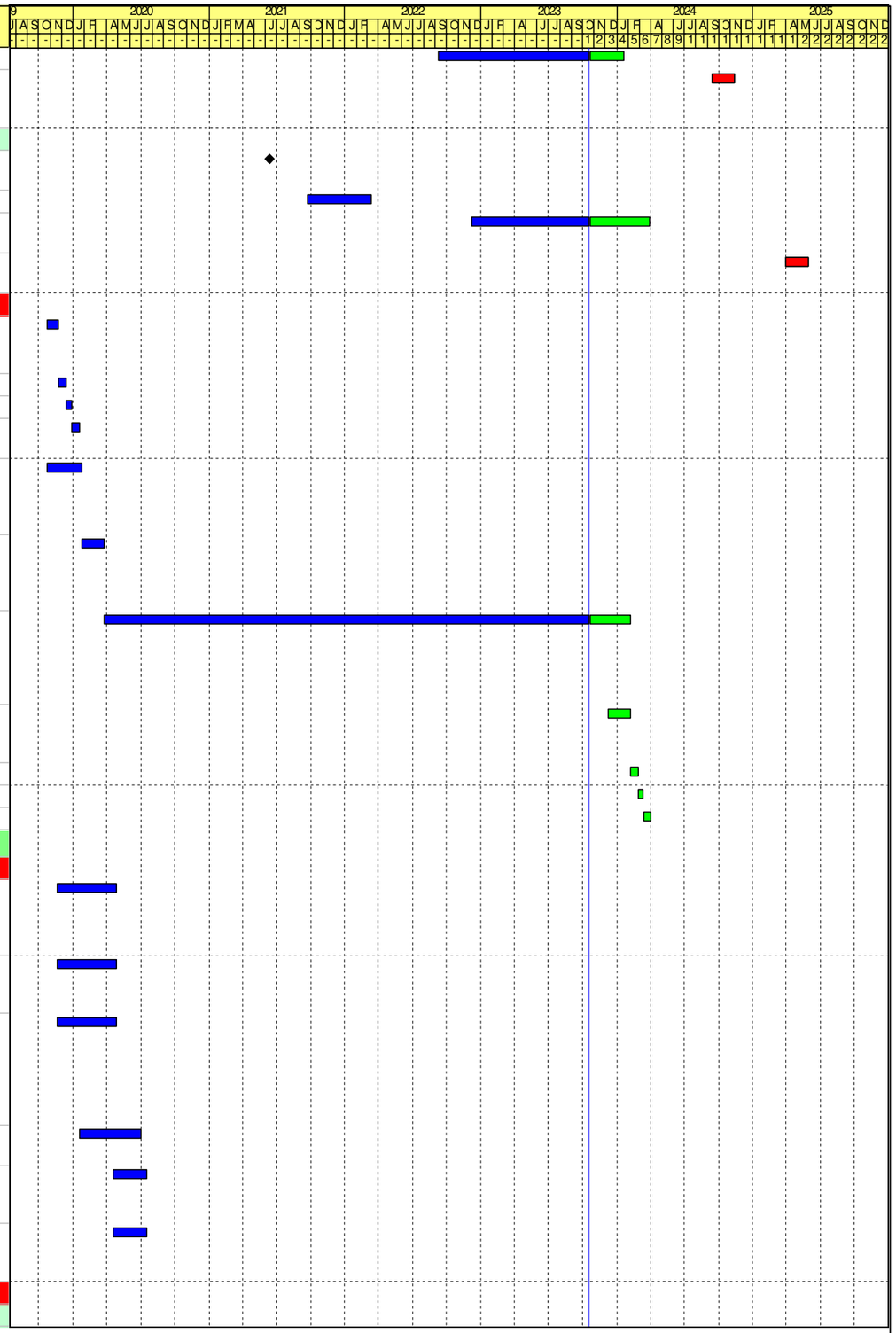
PL1510	Monthly Review & Submission	93	09-Sep-22 A	21-Jan-24	02-Mar-24	03-Jun-24	134	PL1500	PL1520	
PL1520	Submission & Approval of Test Record	60	14-Sep-24	12-Nov-24	03-Jun-24	02-Aug-24	-103	PL1510, S5T1060, S5T1055	SC51120	
CHP Building		586	11-Jun-21 A	28-May-25	24-Dec-23	02-Aug-24	-300			
PL1530	Material Submission & Design Calculation Approved	0		11-Jun-21 A		24-Dec-23		S2D1610	PL1540, SC21120	
PL1540	Issued approved submission & Calculation to Cinotech	0	21-Sep-21 A	11-Mar-22 A	24-Dec-23	24-Dec-23		PL1530	PL1550	
PL1550	Monthly Review & Submission	162	07-Dec-22 A	30-Mar-24	24-Dec-23	03-Jun-24	65	S5CHPC1020, PL1540	PL1560	
PL1560	Submission & Approval of Test Record	60	30-Mar-25	28-May-25	03-Jun-24	02-Aug-24	-300	PL1550, S5T1100	SC51120	
BIM		165	24-Oct-19 A	02-Apr-24	13-Apr-25	24-Sep-25	540			
PL1570	Prepare & Submit Construction Stage BIM Execution Plan	0	24-Oct-19 A	22-Nov-19 A	13-Apr-25	13-Apr-25		CD1010	PL1580, PL1630, PL1620	
PL1580	PM Reivew & Comment Construction Stage BIM Execution Plan	0	23-Nov-19 A	13-Dec-19 A	13-Apr-25	13-Apr-25		PL1570	PL1590	
PL1590	Revise & Re-submit Construction Stage BIM Execution Plan	0	14-Dec-19 A	27-Dec-19 A	13-Apr-25	13-Apr-25		PL1580	PL1600	
PL1600	PM Reivew & Approval of Construction Stage BIM Execution Plan	0	28-Dec-19 A	17-Jan-20 A	13-Apr-25	13-Apr-25		PL1590	PL1630, PL1620	
PL1610	Contractor Review & Study Design Stage BIM	0	24-Oct-19 A	23-Jan-20 A	13-Apr-25	13-Apr-25		CD1010	CD1040, PL1640, PL1630, PL1620	
PL1620	Contractor Develop 1st Construction Stage BIM	0	24-Jan-20 A	23-Mar-20 A	13-Apr-25	13-Apr-25		PL1600, PL1570, PL1610	CD1040, PL1640, PL1630, PL1630	
PL1630	Review & Update BIM Execution Plan & BIM Model	109	24-Mar-20 A	06-Feb-24	13-Apr-25	30-Jul-25	540	PL1570, PL1620, PL1600, PL1610, PL1620	CD1040, PL1640	
PL1640	Prepare & Submit the Fully Coordinated BIM	60	09-Dec-23	06-Feb-24	01-Jun-25	30-Jul-25	540	PL1620, PL1630, PL1610	PL1650	
PL1650	PM Reivew & Comment Fully Coordinated BIM	21	07-Feb-24	27-Feb-24	31-Jul-25	20-Aug-25	540	PL1640	PL1660	
PL1660	Revise & Re-submit Fully Coordinated BIM	14	28-Feb-24	12-Mar-24	21-Aug-25	03-Sep-25	540	PL1650	PL1670	
PL1670	PM Reivew & Approval of Fully Coordinated BIM	21	13-Mar-24	02-Apr-24	04-Sep-25	24-Sep-25	540	PL1660	CD1040	
Section 1 - Design for UV System No. 1 & Effluent Pumping Station		0	21-Nov-19 A	08-Aug-20 A	28-Oct-22	24-Sep-25				
Major Plant & Materials Procurement		0	21-Nov-19 A	17-Jul-20 A	28-Oct-22	05-Feb-23				
S1P1000	Procurement & PO for UV Disinfection System (S10)	0	21-Nov-19 A	28-Apr-20 A	28-Oct-22	28-Oct-22		CD1000, CD1010, PL1010	SC11110, S4P1040, S1D1000, S1P1030	
S1P1010	Procurement & PO for Lift-up Pumps (S11)	0	21-Nov-19 A	28-Apr-20 A	28-Oct-22	28-Oct-22		CD1010, PL1010	SC11110, S4P1070, S1D1000	
S1P1020	Procurement & PO for Transfer Pumps (S13)	0	21-Nov-19 A	28-Apr-20 A	28-Oct-22	28-Oct-22		CD1010, PL1010	SC11110, S4P1080, S1P1040, S1P1050, S1D1000, S4P1090	
S1P1030	Procurement & PO for EOT Cranes (2T & 5T) (S19)	0	19-Jan-20 A	03-Jul-20 A	06-Jan-23	06-Jan-23		S1P1000	SC11110, S4P1100	
S1P1040	Procurement & PO for Stoplogs (S21)	0	18-Apr-20 A	17-Jul-20 A	05-Feb-23	05-Feb-23		S1P1020, PL1010	SC11110, S4P1110, S2P1160	
S1P1050	Procurement & PO for Penstocks (S21)	0	18-Apr-20 A	17-Jul-20 A	05-Feb-23	05-Feb-23		S1P1020, PL1010	SC11110, S4P1120, S2P1170	
Design & Submission		0	27-Jan-20 A	08-Aug-20 A	28-Oct-22	24-Sep-25				
General Arrangement Drawings		0	27-Jan-20 A	08-Aug-20 A	28-Oct-22	24-Sep-25				



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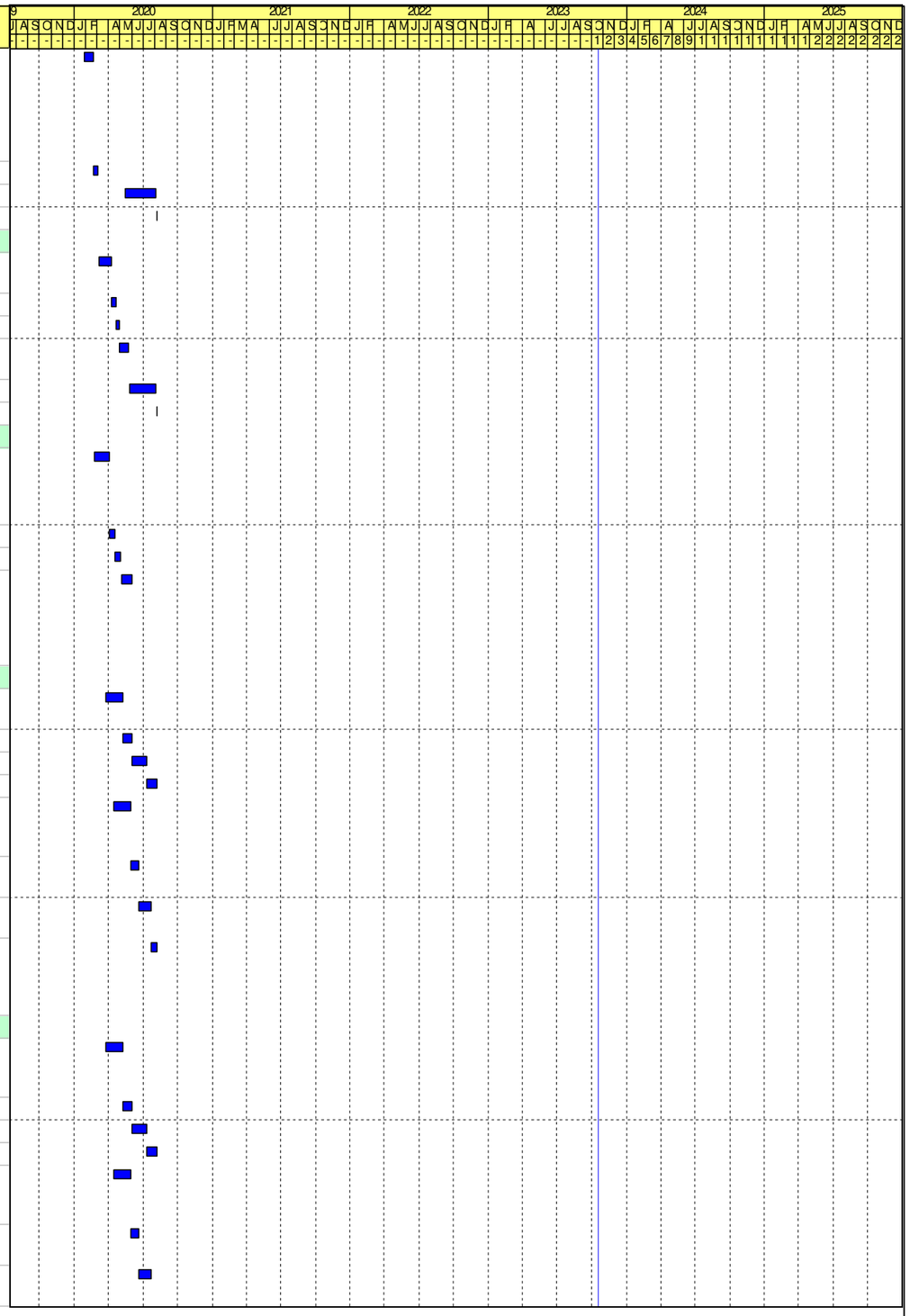
S1D1000	Prepare & Submit General Arrangement Drawings	0	27-Jan-20 A	19-Feb-20 A	28-Oct-22	28-Oct-22		S1P1000, S1P1010, S1P1020, PL1010	S1D1010, S1D1040, S1D1100, S1D1180, S1D1260, S4P1010	
S1D1010	Review & Comment on General Arrangement Drawings by PM	0	20-Feb-20 A	04-Mar-20 A	24-Sep-25	24-Sep-25		S1D1000	S1D1020	
S1D1020	Revise & Re-submit General Arrangement Drawings	0	16-May-20 A	05-Aug-20 A	24-Sep-25	24-Sep-25		S1D1010	S1D1030	
S1D1030	Review & Accept of General Arrangement Drawings by PM	0	06-Aug-20 A	08-Aug-20 A	24-Sep-25	24-Sep-25		S1D1020	SC11110	
Civil & Dimensional / Tolerance Requirement Drawings		0	07-Mar-20 A	08-Aug-20 A	05-Feb-23	24-Sep-25				
S1D1040	Prepare & Submit Civil Requirement Drawings	0	07-Mar-20 A	08-Apr-20 A	05-Feb-23	05-Feb-23		CD1010, S1D1000	S1D1050, KD1000	
S1D1050	Review & Comment on Civil Requirement Drawings by PM	0	09-Apr-20 A	20-Apr-20 A	24-Sep-25	24-Sep-25		S1D1040	S1D1060	
S1D1060	Revise & Re-submit Civil Requirement Drawings	0	21-Apr-20 A	29-Apr-20 A	24-Sep-25	24-Sep-25		S1D1050	S1D1070	
S1D1070	Review & Comment of Civil Requirement Drawings by PM	0	30-Apr-20 A	25-May-20 A	24-Sep-25	24-Sep-25		S1D1060	SC11110, S1D1080	
S1D1080	Revise & Re-submit Civil Requirement Drawings	0	26-May-20 A	05-Aug-20 A	24-Sep-25	24-Sep-25		S1D1070	S1D1090	
S1D1090	Review & Accept of Civil Requirement Drawings by PM	0	06-Aug-20 A	08-Aug-20 A	24-Sep-25	24-Sep-25		S1D1080	SC11110	
Electrical Schematic Drawings		0	25-Feb-20 A	03-Jun-20 A	28-Oct-22	06-Jan-23				
S1D1100	Prepare & Submit Elec. Schematic Drawings	0	25-Feb-20 A	03-Apr-20 A	28-Oct-22	28-Oct-22		CD1010, S1D1000	S1D1110, KD1000, S1D1140, S1D1220	
S1D1110	Review & Comment on Elec. Schematic Drawings by PM	0	04-Apr-20 A	16-Apr-20 A	06-Jan-23	06-Jan-23		S1D1100	S1D1120	
S1D1120	Revise & Re-submit Elec. Schematic Drawings	0	17-Apr-20 A	04-May-20 A	06-Jan-23	06-Jan-23		S1D1110	S1D1130	
S1D1130	Review & Accept of Elec. Schematic Drawings by PM	0	05-May-20 A	03-Jun-20 A	06-Jan-23	06-Jan-23		S1D1120	S5TXRP1000, S4C1000, S4C1010, S4P1020, SC11110	
UV System No. 1		0	24-Mar-20 A	08-Aug-20 A	27-Nov-22	24-Sep-25				
S1D1140	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	24-Mar-20 A	08-May-20 A	27-Nov-22	27-Nov-22		CD1010, S1D1100	S1D1150, S1D1180	
S1D1150	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	0	09-May-20 A	01-Jun-20 A	24-Sep-25	24-Sep-25		S1D1140	S1D1160	
S1D1160	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	0	02-Jun-20 A	10-Jul-20 A	24-Sep-25	24-Sep-25		S1D1150	S1D1170	
S1D1170	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	0	11-Jul-20 A	06-Aug-20 A	24-Sep-25	24-Sep-25		S1D1160	SC11110	
S1D1180	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	15-Apr-20 A	29-May-20 A	27-Nov-22	27-Nov-22		CD1010, S1D1140, S1D1000	S1D1190, S4C1020	
S1D1190	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	30-May-20 A	19-Jun-20 A	27-Nov-22	27-Nov-22		S1D1180	S1D1200	
S1D1200	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	0	20-Jun-20 A	23-Jul-20 A	27-Nov-22	27-Nov-22		S1D1190	S1D1210	
S1D1210	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	0	24-Jul-20 A	08-Aug-20 A	27-Nov-22	27-Nov-22		S1D1200	S4P1040, S5TXRP1000, S5TXRP1010, SC11110	
Effluent Pumping Station No. 1		0	24-Mar-20 A	08-Aug-20 A	28-Oct-22	24-Sep-25				
S1D1220	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	24-Mar-20 A	08-May-20 A	28-Oct-22	28-Oct-22		CD1010, S1D1100	S1D1230, S1D1260, S1D1300	
S1D1230	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	0	09-May-20 A	01-Jun-20 A	24-Sep-25	24-Sep-25		S1D1220	S1D1240	
S1D1240	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	0	02-Jun-20 A	10-Jul-20 A	24-Sep-25	24-Sep-25		S1D1230	S1D1250	
S1D1250	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	0	11-Jul-20 A	08-Aug-20 A	24-Sep-25	24-Sep-25		S1D1240	SC11110	
S1D1260	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	15-Apr-20 A	29-May-20 A	28-Oct-22	28-Oct-22		CD1010, S1D1220, S1D1000	S1D1270, S4C1020	
S1D1270	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	30-May-20 A	19-Jun-20 A	28-Oct-22	28-Oct-22		S1D1260	S1D1280	
S1D1280	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	0	20-Jun-20 A	23-Jul-20 A	28-Oct-22	28-Oct-22		S1D1270	S1D1290	



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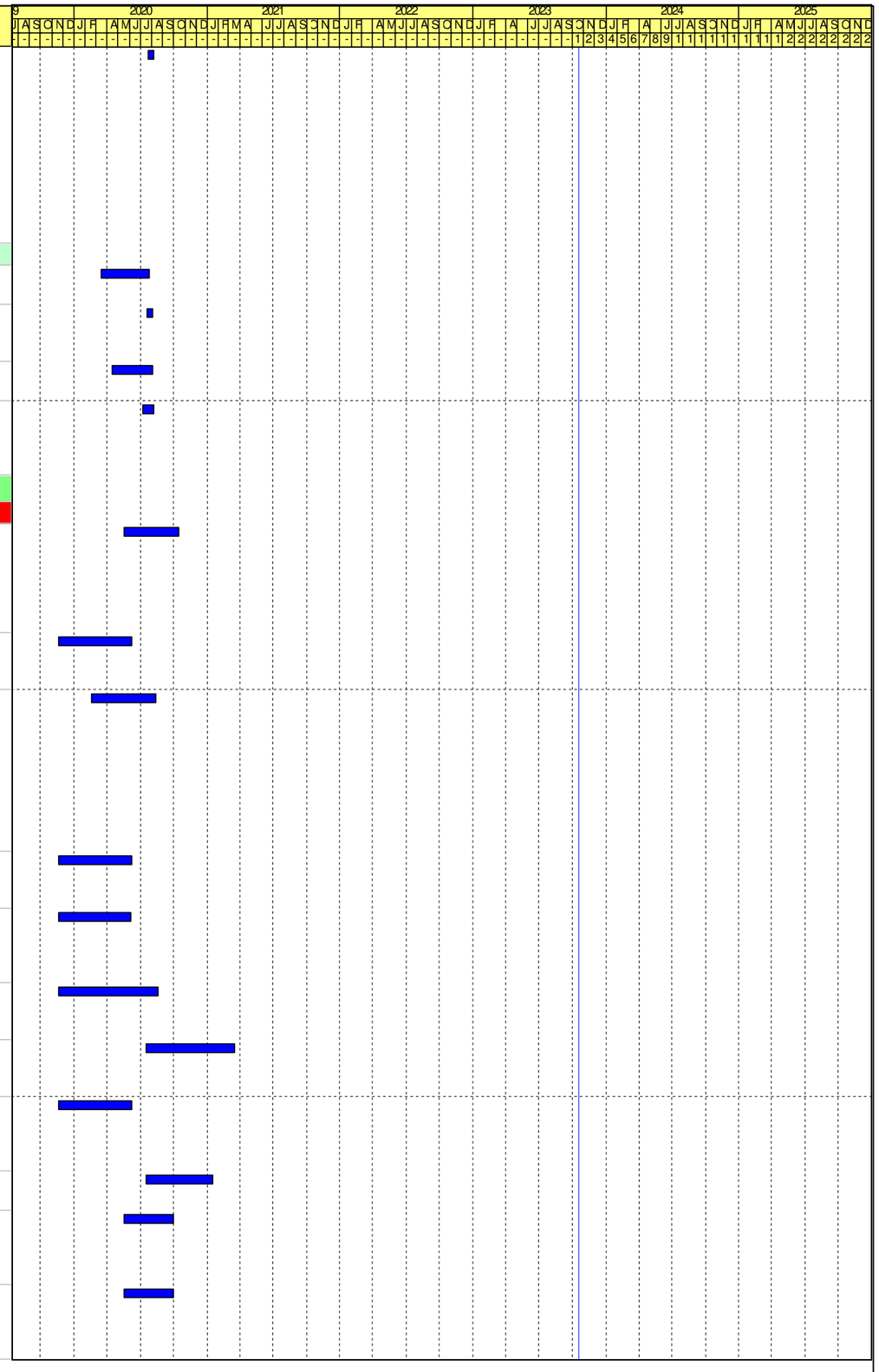
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S1D1290	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	0	24-Jul-20 A	08-Aug-20 A	28-Oct-22	28-Oct-22		S1D1280	S4P1110, S4P1120, S4P1070, S4P1080, S4P1090, S4P1100, S5TXRP1000, S5TXRP1010, S5TXRP1020, S4P1130, SC11110	
Building Services		0	15-Mar-20 A	06-Aug-20 A	07-Apr-23	24-Sep-25				
S1D1300	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	0	15-Mar-20 A	27-Jul-20 A	07-Apr-23	07-Apr-23		S1D1220	S1D1320, S1D1310	
S1D1310	Review & Accept of BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	0	21-Jul-20 A	05-Aug-20 A	07-Apr-23	07-Apr-23		S1D1300	SC11110, S5TXRC1030, S4C1110	
S1D1320	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	0	14-Apr-20 A	05-Aug-20 A	24-Sep-25	24-Sep-25		S1D1300	S1D1330	
S1D1330	Review & Accept of FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	0	09-Jul-20 A	06-Aug-20 A	24-Sep-25	24-Sep-25		S1D1320	SC11110, S4P1030, S4P1140, S4P1150	
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		1	20-Nov-19 A	21-Oct-23	31-Oct-21	24-Sep-25	704			
Major Plant & Materials Procurement		0	20-Nov-19 A	23-Apr-21 A	29-Aug-22	24-Sep-25				
S2P1000	Procurement & PO for Sludge Screening System (S2)	0	18-May-20 A	16-Oct-20 A	29-Sep-22	29-Sep-22		S2P1020	SC21110, S2D1260, S5P1000, S2P1060, S2P1150, S5P1030	
S2P1010	Procurement & PO for Sludge Thickening System (S3)	0	20-Nov-19 A	08-Jun-20 A	29-Sep-22	29-Sep-22		PL1010, CD1010	SC21110, S2D1300, S2P1030	
S2P1020	Procurement & PO for Sludge Digestion System (S5)	0	18-Feb-20 A	12-Aug-20 A	29-Sep-22	29-Sep-22		CD1010, S2P1040	SC21110, S5DIGP1000, S2D1420, S5DIGP1010, S2P1180, S2P1210, S5P1040, S2P1000, S5P1020	
S2P1030	Procurement & PO for Sludge Dewatering System (S6)	0	20-Nov-19 A	08-Jun-20 A	29-Sep-22	29-Sep-22		PL1010, CD1010, S2P1010	SC21110, S2D1460	
S2P1040	Procurement & PO for THP System (S4)	0	20-Nov-19 A	05-Jun-20 A	29-Sep-22	29-Sep-22		CD1010, PL1010	SC21110, S5THPP1000, S2D1340, S2P1020	
S2P1050	Procurement & PO for Biogas Holding Tanks(S7)	0	20-Nov-19 A	20-Aug-20 A	29-Aug-22	29-Aug-22		PL1010	SC21110, S5BIOP1010, S2D1500	
S2P1060	Procurement & PO for H2S Removal System (S7)	0	17-Jul-20 A	17-Mar-21 A	29-Sep-22	29-Sep-22		S2P1000	SC21110, S5H2SP1000, S2D1500	
S2P1070	Procurement & PO for CHP System (S8)	0	20-Nov-19 A	08-Jun-20 A	29-Sep-22	29-Sep-22		PL1010	SC21110, S5CHPP1010, S2D1540, S2P1110	
S2P1080	Procurement & PO for Waste Gas Burning System (S9)	0	17-Jul-20 A	15-Jan-21 A	14-Apr-23	14-Apr-23			SC21110, S5WGBP1000	
S2P1090	Procurement & PO for Plant Service Water System (S12)	0	18-May-20 A	30-Sep-20 A	29-Sep-22	29-Sep-22			SC21110, S5PSWP1000, S2D1660, S2P1190	
S2P1100	Procurement & PO for SAS Pumping System (S14)	0	18-May-20 A	30-Sep-20 A	13-Mar-23	13-Mar-23			SC21110, S5SASP1000, S2D1700, S2P1220	



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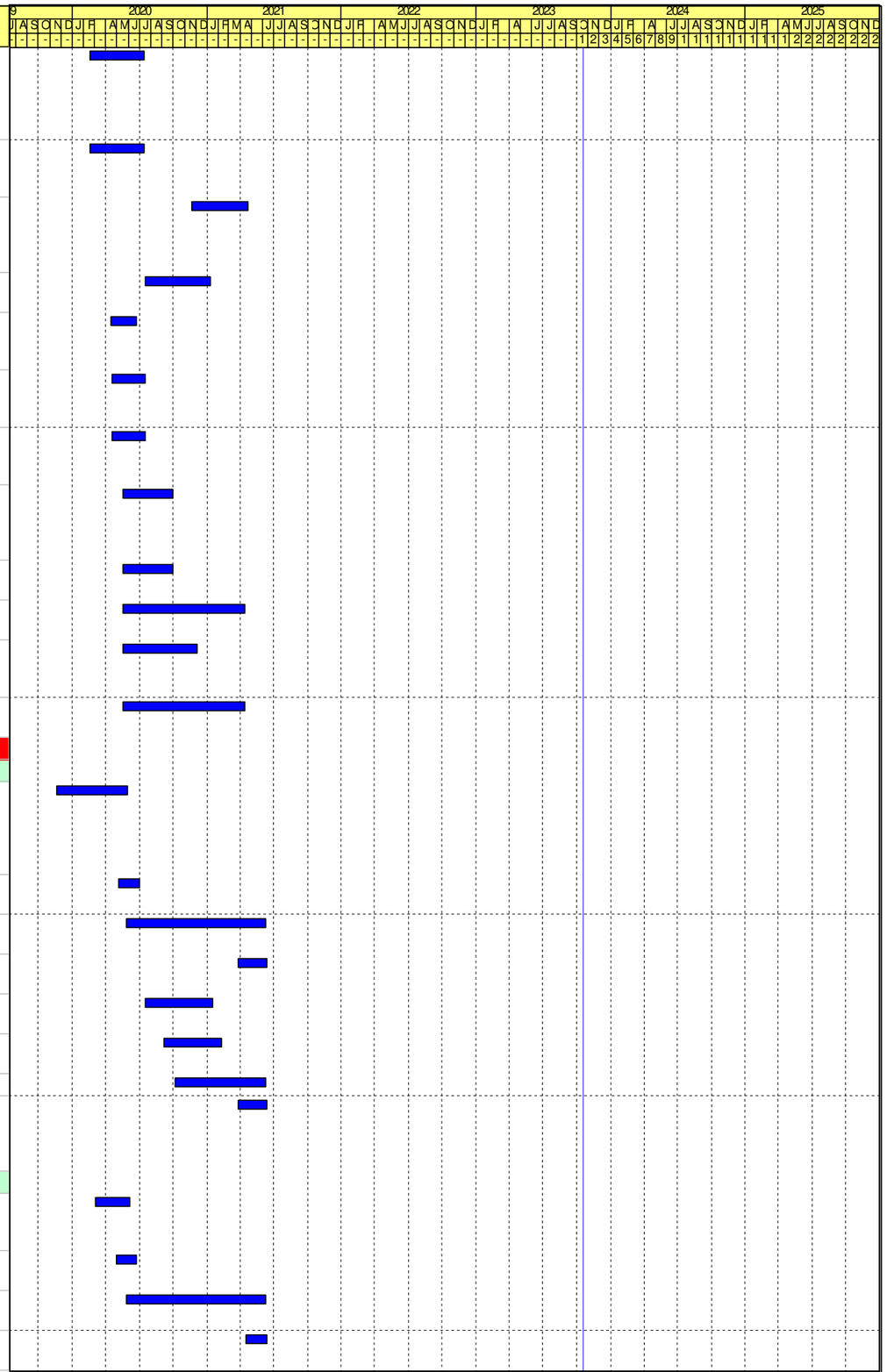
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S2P1110	Procurement & PO for Transfomers (S17)	0	18-Feb-20 A	13-Jul-20 A	29-Sep-22	29-Sep-22		S2P1070	SC21110, S5WS2P1000, S2P1120, S2P1140, S5TXRP1000	
S2P1120	Procurement & PO for 11 kV Switchboard (S17)	0	18-Feb-20 A	13-Jul-20 A	29-Sep-22	29-Sep-22		S2P1110	SC21110, S5WS2P1060, S2P1130	
S2P1130	Procurement & PO for 380V Switchboard (S17)	0	21-Nov-20 A	23-Apr-21 A	29-Sep-22	29-Sep-22		S2P1120, S2D1220	SC21110, S5WS2P1090, S5P1050, S5TXRP1010	
S2P1140	Procurement & PO for Control & Monitoring System (S18)	0	17-Jul-20 A	11-Jan-21 A	28-Oct-22	28-Oct-22		PL1010, S2P1110	SC21110, S5TXRP1020	
S2P1150	Procurement & PO for DO System (S21)	0	15-Apr-20 A	24-Jun-20 A	28-Dec-22	28-Dec-22		S2P1000	SC21110, S5DOUP1000, S2D1930	
S2P1160	Procurement & PO for Stoplog (S21)	0	18-Apr-20 A	17-Jul-20 A	08-Apr-23	08-Apr-23		PL1010, S1P1040	SC21110, S5SASP1010, S2P1170	
S2P1170	Procurement & PO for Penstock (S21)	0	18-Apr-20 A	17-Jul-20 A	08-Apr-23	08-Apr-23		PL1010, S2P1160, S1P1050	SC21110, S5SASP1020	
S2P1180	Procurement & PO for Sewage Pump (S21)	0	18-May-20 A	30-Sep-20 A	14-Apr-23	14-Apr-23		S2P1020	SC21110, S5SPSP1000, S2D1940, S2P1200	
S2P1190	Procurement & PO for Process Water Pump (S21)	0	18-May-20 A	30-Sep-20 A	24-Sep-25	24-Sep-25		S2P1090	SC21110, S2D1950	
S2P1200	Procurement & PO for External Sludge Transfer Pump (S21)	0	18-May-20 A	14-Apr-21 A	08-May-23	08-May-23		S2P1180	SC21110, S2D1960	
S2P1210	Procurement & PO for THP Cooling Pump (S21)	0	18-May-20 A	04-Dec-20 A	08-May-23	08-May-23		S2P1020	SC21110, S5TCWP1000, S2D1970	
S2P1220	Procurement & PO for Temporary Primary Sludge Pump (S21)	0	18-May-20 A	14-Apr-21 A	13-Mar-23	13-Mar-23		PL1010, S2P1100	SC21110, S5ECHP1000	
Design & Submission		0	20-Nov-19 A	11-Jun-21 A	29-Aug-22	24-Sep-25				
General Arrangement Drawings		0	20-Nov-19 A	11-Jun-21 A	29-Aug-22	24-Sep-25				
S2D1000	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	0	20-Nov-19 A	29-May-20 A	29-Aug-22	29-Aug-22		PL1010	S2D1010, S2D1080, S2D1160, S2D1040, S2D1340	
S2D1010	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	0	07-May-20 A	02-Jul-20 A	24-Sep-25	24-Sep-25		S2D1000	S2D1020	
S2D1020	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	0	26-May-20 A	10-Jun-21 A	24-Sep-25	24-Sep-25		S2D1010	S2D1030	
S2D1030	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	0	26-Mar-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1020	SC21110	
S2D1040	Prepare & Submit General Arrangement Drawings (remaining)	0	17-Jul-20 A	15-Jan-21 A	29-Aug-22	29-Aug-22		PL1010, S2D1000	S2D1050, S2D1120	
S2D1050	Review & Comment on General Arrangement Drawings by PM (remaining)	0	05-Sep-20 A	08-Feb-21 A	29-Aug-22	29-Aug-22		S2D1040	S2D1060	
S2D1060	Revise & Re-submit General Arrangement Drawings (remaining)	0	06-Oct-20 A	10-Jun-21 A	29-Aug-22	29-Aug-22		S2D1050	S2D1070	
S2D1070	Review & Accept of General Arrangement Drawings by PM (remaining)	0	26-Mar-21 A	11-Jun-21 A	29-Aug-22	29-Aug-22		S2D1060	SC21110, S5S1060, S5P1010, S5S1050	
Civil & Dimensional / Tolerance Requirement Drawings		0	04-Mar-20 A	11-Jun-21 A	29-Sep-22	24-Sep-25				
S2D1080	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	0	04-Mar-20 A	04-Jun-20 A	29-Sep-22	29-Sep-22		S2D1000	S2D1090, S2D1660, KD1010	
S2D1090	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	0	30-Apr-20 A	23-Jun-20 A	21-Apr-23	21-Apr-23		S2D1080	S2D1100	
S2D1100	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	0	26-May-20 A	10-Jun-21 A	21-Apr-23	21-Apr-23		S2D1090	S2D1110	
S2D1110	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	0	17-Apr-21 A	11-Jun-21 A	21-Apr-23	21-Apr-23		S2D1100	SC21110, AD1120	



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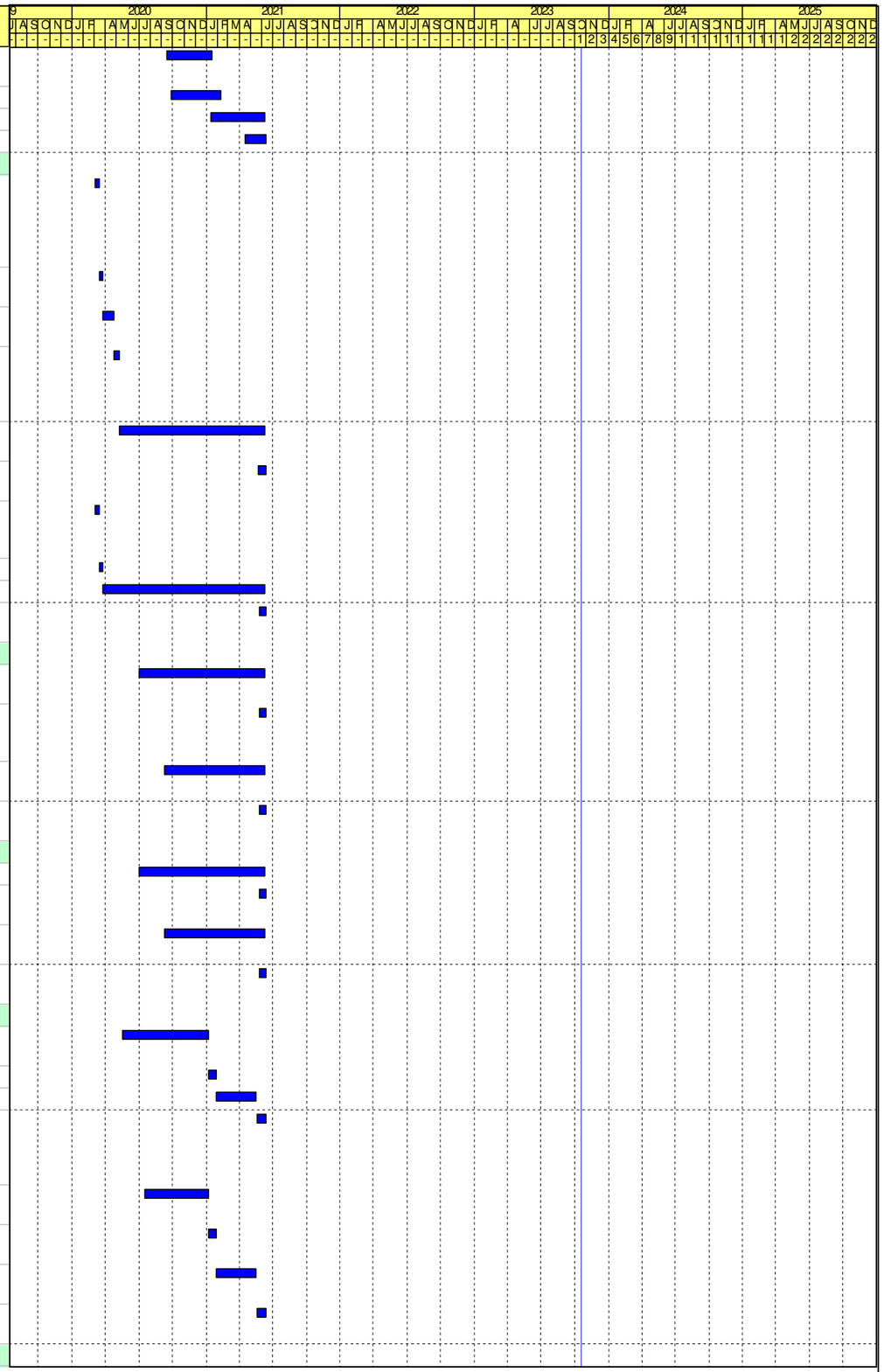
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S2D1120	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	0	15-Sep-20 A	15-Jan-21 A	24-Sep-25	24-Sep-25		S2D1040	S2D1130, KD1020	
S2D1130	Review & Comment on Civil Requirement Drawings by PM (remaining)	0	28-Sep-20 A	08-Feb-21 A	24-Sep-25	24-Sep-25		S2D1120	S2D1140	
S2D1140	Revise & Re-submit Civil Requirement Drawings (remaining)	0	12-Jan-21 A	10-Jun-21 A	24-Sep-25	24-Sep-25		S2D1130	S2D1150	
S2D1150	Review & Accept of Civil Requirement Drawings by PM (remaining)	0	17-Apr-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1140	SC21110	
Electrical Schematic Drawings		0	05-Mar-20 A	11-Jun-21 A	29-Sep-22	24-Sep-25				
S2D1160	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	0	05-Mar-20 A	16-Mar-20 A	29-Sep-22	29-Sep-22		S2D1000	S2D1170, S2D1260, S2D1660, KD1010, S2D1220	
S2D1170	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	0	17-Mar-20 A	24-Mar-20 A	29-Sep-22	29-Sep-22		S2D1160	S2D1180	
S2D1180	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	0	25-Mar-20 A	23-Apr-20 A	29-Sep-22	29-Sep-22		S2D1170	S2D1190, S2D1220	
S2D1190	Review & Comment of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	0	24-Apr-20 A	08-May-20 A	29-Sep-22	29-Sep-22		S2D1180	S2D1250, S5WS2P1090, S2D1220, S2D1200	
S2D1200	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	0	09-May-20 A	10-Jun-21 A	24-Sep-25	24-Sep-25		S2D1190	S2D1210	
S2D1210	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	0	21-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1200	SC21110	
S2D1220	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	0	05-Mar-20 A	16-Mar-20 A	29-Sep-22	29-Sep-22		S2D1160, S2D1180, S2D1190	S2D1230, KD1020, S2P1130	
S2D1230	Review & Comment on Elec. Schematic Drawings by PM (remaining)	0	17-Mar-20 A	24-Mar-20 A	17-Jan-24	17-Jan-24		S2D1220	S2D1240	
S2D1240	Revise & Re-submit Elec. Schematic Drawings (remaining)	0	25-Mar-20 A	10-Jun-21 A	17-Jan-24	17-Jan-24		S2D1230	S2D1250	
S2D1250	Review & Accept of Elec. Schematic Drawings by PM (remaining)	0	24-May-21 A	11-Jun-21 A	17-Jan-24	17-Jan-24		S2D1240, S2D1190	SC21110, S5WS2P1090	
Sludge Screening (SSc)		0	02-Jul-20 A	11-Jun-21 A	29-Sep-22	02-Mar-24				
S2D1260	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	02-Jul-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2D1160, S2P1000	S2D1270	
S2D1270	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1260	S5WS2P1090, S5P1050, SC21110	
S2D1280	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	10-Sep-20 A	10-Jun-21 A	02-Mar-24	02-Mar-24			S2D1290	
S2D1290	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	02-Mar-24	02-Mar-24		S2D1280	SC21110, PL1490	
Sludge Thickening (STh)		0	02-Jul-20 A	11-Jun-21 A	29-Sep-22	02-Mar-24				
S2D1300	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	02-Jul-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2P1010	S2D1310	
S2D1310	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1300	SC21110, S5P1050	
S2D1320	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	10-Sep-20 A	10-Jun-21 A	02-Mar-24	02-Mar-24			S2D1330	
S2D1330	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	02-Mar-24	02-Mar-24		S2D1320	SC21110, PL1490	
Thermal Hydrolysis Process (THP)		0	18-May-20 A	11-Jun-21 A	29-Sep-22	05-Jan-23				
S2D1340	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	18-May-20 A	07-Jan-21 A	29-Sep-22	29-Sep-22		S2P1040, S2D1000	S2D1350, S2D1970	
S2D1350	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	0	08-Jan-21 A	27-Jan-21 A	29-Sep-22	29-Sep-22		S2D1340	S2D1360	
S2D1360	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	0	28-Jan-21 A	17-May-21 A	29-Sep-22	29-Sep-22		S2D1350	S2D1370	
S2D1370	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	0	18-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1360	SC21110, S5THPP1000, S5TCWP1000, S5P1050	
S2D1380	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	17-Jul-20 A	07-Jan-21 A	05-Jan-23	05-Jan-23			S2D1390	
S2D1390	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	08-Jan-21 A	27-Jan-21 A	05-Jan-23	05-Jan-23		S2D1380	S2D1400	
S2D1400	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	0	28-Jan-21 A	17-May-21 A	05-Jan-23	05-Jan-23		S2D1390	S2D1410	
S2D1410	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	0	18-May-21 A	11-Jun-21 A	05-Jan-23	05-Jan-23		S2D1400	S5THPP1000, SC21110	
Sludge Digestion (SDi)		0	01-Aug-20 A	11-Jun-21 A	29-Sep-22	23-Dec-22				



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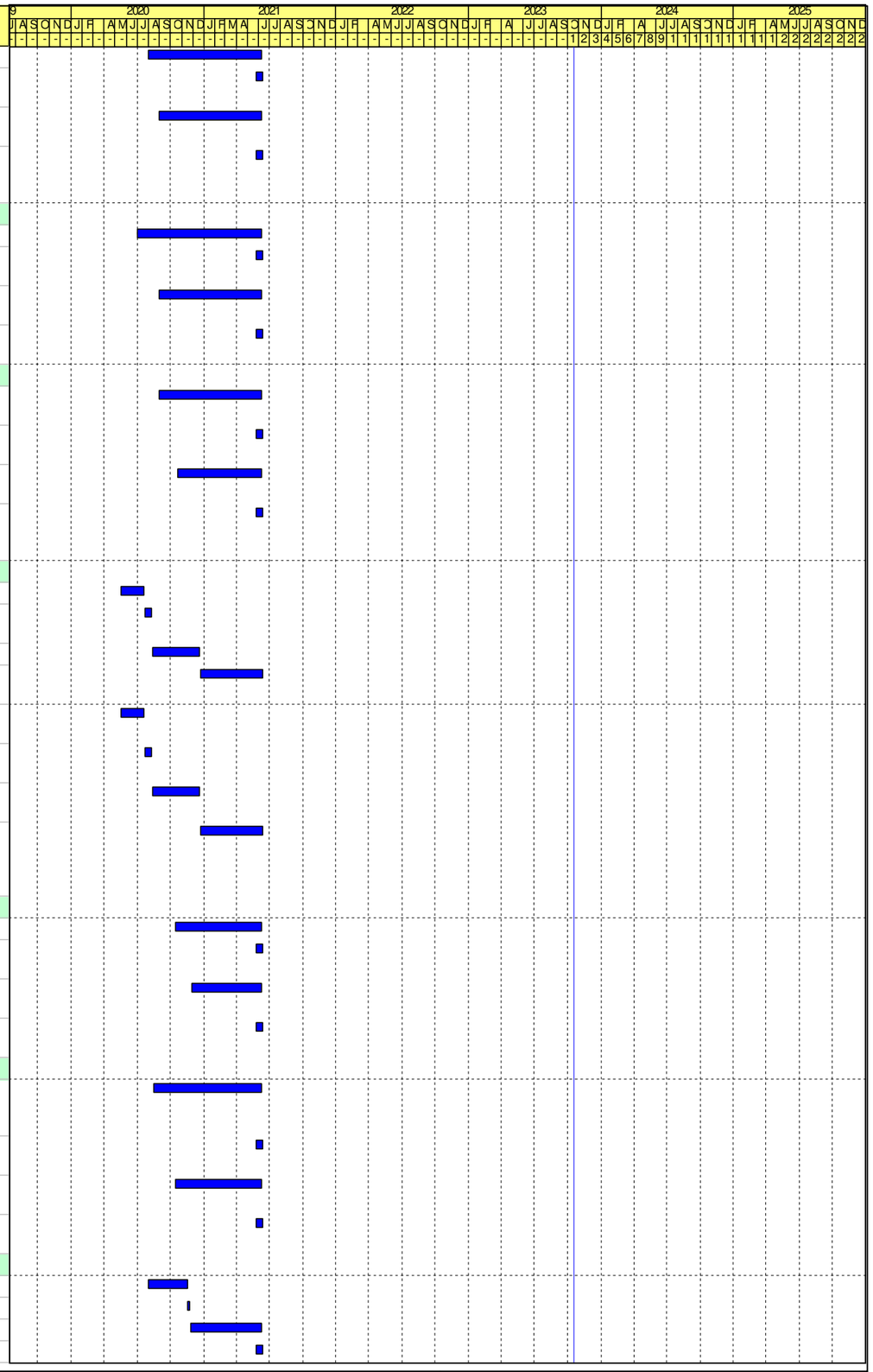
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S2D1420	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	01-Aug-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2P1020	S2D1430	
S2D1430	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1420	SC21110, S5P1050	
S2D1440	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	31-Aug-20 A	10-Jun-21 A	23-Dec-22	23-Dec-22			S2D1450	
S2D1450	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	23-Dec-22	23-Dec-22		S2D1440	S5DIGP1000, SC21110, PL1490	
Sludge Dewatering (SDe)		0	02-Jul-20 A	11-Jun-21 A	29-Sep-22	02-Mar-24				
S2D1460	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	02-Jul-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2P1030	S2D1470	
S2D1470	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1460	SC21110, S5P1050	
S2D1480	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	31-Aug-20 A	10-Jun-21 A	02-Mar-24	02-Mar-24			S2D1490	
S2D1490	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	02-Mar-24	02-Mar-24		S2D1480	SC21110, PL1490	
Biogas Storage & Pre-Treatment (BSPT)		0	31-Aug-20 A	11-Jun-21 A	29-Aug-22	29-Sep-22				
S2D1500	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	31-Aug-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2P1060, S2P1050	S2D1510	
S2D1510	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1500	SC21110, S5P1050	
S2D1520	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	22-Oct-20 A	10-Jun-21 A	29-Aug-22	29-Aug-22			S2D1530	
S2D1530	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	29-Aug-22	29-Aug-22		S2D1520	S5BIOP1010, S5H2SP1000, SC21110	
Combined Heat & Power Generation (CHP)		0	18-May-20 A	11-Jun-21 A	29-Sep-22	30-Nov-22				
S2D1540	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	18-May-20 A	21-Jul-20 A	29-Sep-22	29-Sep-22		S2P1070	S2D1550	
S2D1550	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	0	22-Jul-20 A	11-Aug-20 A	29-Sep-22	29-Sep-22		S2D1540	S2D1560, S2D1870	
S2D1560	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	0	12-Aug-20 A	21-Dec-20 A	29-Sep-22	29-Sep-22		S2D1550	S2D1570	
S2D1570	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	0	22-Dec-20 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1560	SC21110, S5P1050	
S2D1580	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	18-May-20 A	21-Jul-20 A	30-Nov-22	30-Nov-22			S2D1590	
S2D1590	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	22-Jul-20 A	11-Aug-20 A	30-Nov-22	30-Nov-22		S2D1580	S2D1600	
S2D1600	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	0	12-Aug-20 A	21-Dec-20 A	30-Nov-22	30-Nov-22		S2D1590	S2D1610	
S2D1610	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	0	22-Dec-20 A	11-Jun-21 A	30-Nov-22	30-Nov-22		S2D1600	S5CHPP1010, SC21110, S5S1020, PL1530	
Waste Gas Burning System (WGB)		0	15-Oct-20 A	11-Jun-21 A	29-Sep-22	14-Apr-23				
S2D1620	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	15-Oct-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22			S2D1630	
S2D1630	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1620	SC21110, S5P1050	
S2D1640	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	29-Nov-20 A	10-Jun-21 A	14-Apr-23	14-Apr-23			S2D1650	
S2D1650	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	14-Apr-23	14-Apr-23		S2D1640	S5WGBP1000, SC21110	
Plant Service Water System (PSW)		0	16-Aug-20 A	11-Jun-21 A	29-Sep-22	12-Feb-23				
S2D1660	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	16-Aug-20 A	10-Jun-21 A	29-Sep-22	29-Sep-22		S2D1080, S2D1160, S2P1090	S2D1670	
S2D1670	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	29-Sep-22	29-Sep-22		S2D1660	SC21110, S5P1050	
S2D1680	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	15-Oct-20 A	10-Jun-21 A	12-Feb-23	12-Feb-23			S2D1690	
S2D1690	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	12-Feb-23	12-Feb-23		S2D1680	S5PSWP1000, SC21110	
Surplus Activated Sludge Pumping Station (SAS)		0	01-Aug-20 A	11-Jun-21 A	08-Apr-23	24-Sep-25				
S2D1700	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	01-Aug-20 A	17-Nov-20 A	24-Sep-25	24-Sep-25		S2P1100	S2D1710	
S2D1710	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	0	18-Nov-20 A	24-Nov-20 A	24-Sep-25	24-Sep-25		S2D1700	S2D1720	
S2D1720	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	0	25-Nov-20 A	10-Jun-21 A	24-Sep-25	24-Sep-25		S2D1710	S2D1730	
S2D1730	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1720	SC21110	



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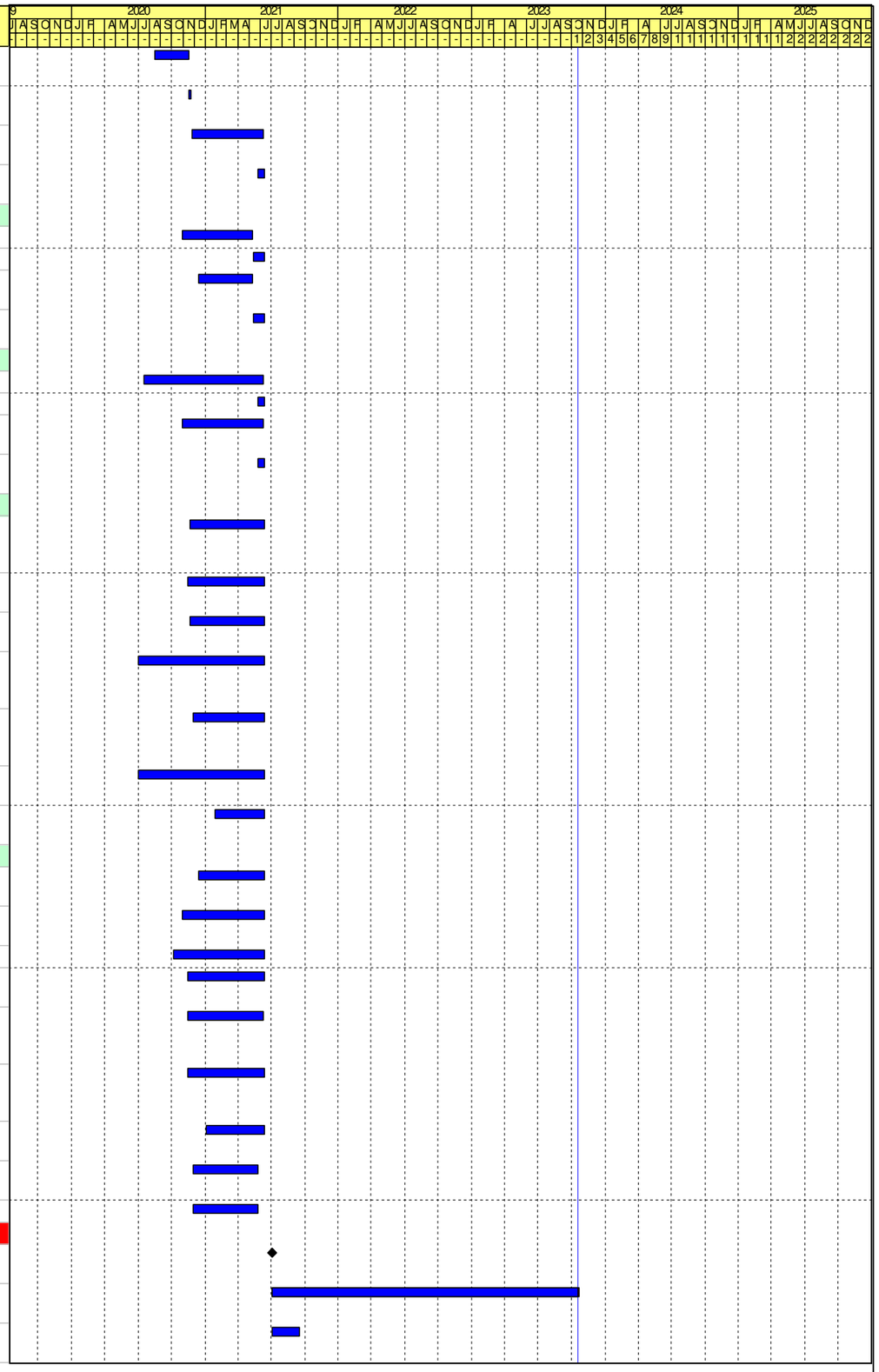
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S2D1740	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	16-Aug-20 A	17-Nov-20 A	08-Apr-23	08-Apr-23			S2D1750	
S2D1750	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	0	18-Nov-20 A	24-Nov-20 A	08-Apr-23	08-Apr-23		S2D1740	S2D1760	
S2D1760	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	0	25-Nov-20 A	10-Jun-21 A	08-Apr-23	08-Apr-23		S2D1750	S2D1770	
S2D1770	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	08-Apr-23	08-Apr-23		S2D1760	S5SASP1000, SC21110	
Control and Monitoring System		0	30-Oct-20 A	11-Jun-21 A	24-Sep-25	24-Sep-25				
S2D1780	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	30-Oct-20 A	11-May-21 A	24-Sep-25	24-Sep-25			S2D1790	
S2D1790	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	12-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1780	SC21110	
S2D1800	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	14-Dec-20 A	11-May-21 A	24-Sep-25	24-Sep-25			S2D1810	
S2D1810	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	0	12-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1800	SC21110	
Lifting Appliances		0	17-Jul-20 A	11-Jun-21 A	24-Sep-25	24-Sep-25				
S2D1820	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	0	17-Jul-20 A	10-Jun-21 A	24-Sep-25	24-Sep-25			S2D1830	
S2D1830	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	0	24-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1820	SC21110	
S2D1840	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	0	30-Oct-20 A	10-Jun-21 A	24-Sep-25	24-Sep-25			S2D1850	
S2D1850	Review & Acceptt on the Schedule, Design Cal. & Fixing Details of Equipment	0	24-May-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1840	SC21110	
Building Services		0	02-Jul-20 A	11-Jun-21 A	18-Oct-22	24-Sep-25				
S2D1860	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	0	21-Nov-20 A	11-Jun-21 A	18-Oct-22	18-Oct-22			SC21110, S5S1010, S5S1120	
S2D1870	Submit & Accept BS Works Design & Dwgs for CHP Building	0	14-Nov-20 A	11-Jun-21 A	11-Mar-23	11-Mar-23		S2D1550	SC21110, S5S1120	
S2D1880	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	0	21-Nov-20 A	11-Jun-21 A	11-Mar-23	11-Mar-23			SC21110, S5S1120	
S2D1890	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	0	02-Jul-20 A	11-Jun-21 A	11-Mar-23	11-Mar-23			SC21110, S5S1030, S5S1120	
S2D1900	Submit & Accept BS Works Design & Dwgs for Other Facilities	0	29-Nov-20 A	11-Jun-21 A	11-Mar-23	11-Mar-23			S2D1920, SC21110, S5S1120	
S2D1910	Submit & Accept BS Works Design & Dwgs for FS Installation	0	02-Jul-20 A	11-Jun-21 A	11-Mar-23	11-Mar-23			SC21110, S5S1120	
S2D1920	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	0	28-Jan-21 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2D1900	SC21110	
Miscellaneous		0	05-Oct-20 A	11-Jun-21 A	13-Oct-22	24-Sep-25				
S2D1930	Submit & Accept Design & Dwgs for DO System	0	14-Dec-20 A	11-Jun-21 A	28-Dec-22	28-Dec-22		S2P1150, PL1020	S5DOUP1000, SC21110	
S2D1940	Submit & Accept Design & Dwgs for Sewage Pumping Station	0	30-Oct-20 A	11-Jun-21 A	14-Apr-23	14-Apr-23		S2P1180	S5SPSP1000, SC21110	
S2D1950	Submit & Accept Design & Dwgs for Process Water Pumping System	0	05-Oct-20 A	11-Jun-21 A	24-Sep-25	24-Sep-25		S2P1190	SC21110	
S2D1960	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	0	14-Nov-20 A	11-Jun-21 A	08-May-23	08-May-23		S2P1200	S2D1970, SC21110	
S2D1970	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	0	14-Nov-20 A	10-Jun-21 A	08-May-23	08-May-23		S2D1340, S2D1960, S2P1210	S5TCWP1000, SC21110	
S2D1980	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	0	14-Nov-20 A	11-Jun-21 A	13-Oct-22	13-Oct-22			S5FCDP1000, S5FCDP1010, SC21110	
S2D1990	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	0	04-Jan-21 A	11-Jun-21 A	13-Mar-23	13-Mar-23		PL1020	S5ECHP1000, SC21110	
S2D2000	Submit & Accept Design & Dwgs for Gas Detection System	0	29-Nov-20 A	24-May-21 A	16-Jan-23	16-Jan-23			SC21110, S5CHPP1040	
S2D2010	Submit & Accept Design & Dwgs for CCTV System	0	29-Nov-20 A	26-May-21 A	24-Sep-25	24-Sep-25			SC21110	
Outstanding Works		1	02-Jul-21 A	21-Oct-23	31-Oct-21	24-Sep-25	704			
S2D2020	Certifiate of Completion - Section 2 of the works (Ref: RCYK:ccm:60427128/92-2021004626w)	0	02-Jul-21 A		24-Sep-25					
S2D2030	Provide ICE Certificate for all design, calculations, drawings, plans & relevant documents	1	02-Jul-21 A	21-Oct-23*	31-May-22	31-May-22	-508			
S2D2040	Submit finalized design calculations, drawings & material submissions for BS systems (Workshop No.2)	0	02-Jul-21 A	15-Sep-21 A	24-Sep-25	24-Sep-25				



Remaining Work
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Actual Progress

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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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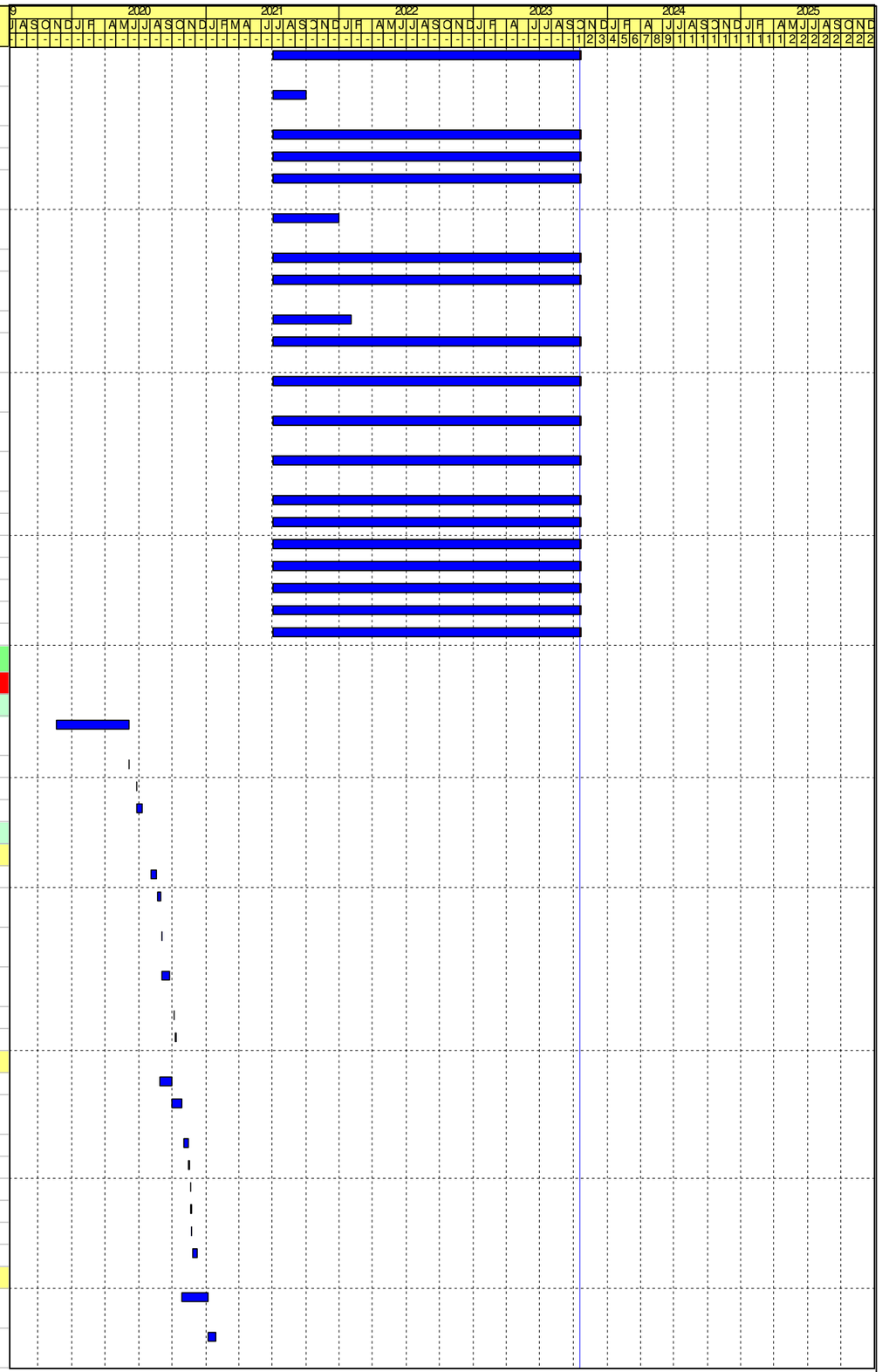
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S2D2050	Submit finalized design calculations, drawings & material submissions for BS systems (except Workshop No.2)	1	02-Jul-21 A	21-Oct-23*	30-Apr-22	30-Apr-22	-539			
S2D2060	Submit finalized sizing calculations for the actuators and stems for penstocks	0	02-Jul-21 A	30-Sep-21 A	24-Sep-25	24-Sep-25				
S2D2070	Submit finalized cable schedules & sizing calculation (LV System)	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2080	Submit finalized pumps and associated motor and VSD calculations	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2090	Submit finalized electrical loads to verify the rating of the switchgears, transformers and protective devices	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2100	Submit finalized material submissions of the cables, cable tray, ladder and accessories	0	02-Jul-21 A	31-Dec-21 A	24-Sep-25	24-Sep-25				
S2D2110	Submit finalized cable route drawings	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2120	Submit finalized layout and control wiring diagrams for switchboard, MCC, control panel, etc	1	02-Jul-21 A	21-Oct-23*	31-Jan-22	31-Jan-22	-628			
S2D2130	Submit finalized design submissions of the CHP system	0	02-Jul-21 A	31-Jan-22 A	24-Sep-25	24-Sep-25				
S2D2140	Submit finalized interlock devices for electrical equipment and system	1	02-Jul-21 A	21-Oct-23*	30-Apr-22	30-Apr-22	-539			
S2D2150	Submit finalized calculations for total harmonic distortion, electrical faults and touch voltage	1	02-Jul-21 A	21-Oct-23*	30-Apr-22	30-Apr-22	-539			
S2D2160	Submit finalized design calculations, drawings & material submissions for ELV systems	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2170	Submit finalized design submissions of SCADA, PMS, CMMS, IDMS, UPS for FCS	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2180	Submit finalized configuration of SCADA / PLC system, CMMS & PMS	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2190	Submit finalized PLC and MCC panel design	1	02-Jul-21 A	21-Oct-23*	28-Feb-22	28-Feb-22	-600			
S2D2200	Submit finalized design & philosophy of the process instrument	1	02-Jul-21 A	21-Oct-23*	31-Dec-21	31-Dec-21	-659			
S2D2210	Submit finalized Process Design Submission	1	02-Jul-21 A	21-Oct-23*	30-Nov-21	30-Nov-21	-690			
S2D2220	Submit finalized acoustic and noise calculations for all equipment	1	02-Jul-21 A	21-Oct-23*	30-Apr-22	30-Apr-22	-539			
S2D2230	Submit finalized design of THP feeding system	1	02-Jul-21 A	21-Oct-23*	31-Oct-21	31-Oct-21	-720			
S2D2240	Submit finalized design of the centrifuge discharge system	1	02-Jul-21 A	21-Oct-23*	30-Nov-21	30-Nov-21	-690			
Section 3 - Complete Design, Construction & T&C for Sidestream F		705	20-Nov-19 A	24-Sep-25	17-Sep-22	24-Sep-25	0			
Major Subcontractor / Supplier Procurement		0	20-Nov-19 A	06-Sep-21 A	11-Nov-22	24-Sep-25				
Design		0	20-Nov-19 A	12-Jul-20 A	11-Nov-22	24-Sep-25				
S3P1000	Procurement & PO for Deammonification Sidestream Treatment Facilities	0	20-Nov-19 A	05-Jun-20 A	11-Nov-22	11-Nov-22		CD1010, PL1010	S3D1000, S3D1440	
S3P1010	E&M (Process) Designer Award	0	05-Jun-20 A	05-Jun-20 A	24-Sep-25	24-Sep-25				
S3P1020	Civil & BS Designer Award	0	26-Jun-20 A	26-Jun-20 A	24-Sep-25	24-Sep-25			S3P1030	
S3P1030	Mobilisation	0	27-Jun-20 A	12-Jul-20 A	24-Sep-25	24-Sep-25		S3P1020		
Civil & Building Contractor		0	05-Aug-20 A	06-Sep-21 A	26-Oct-23	26-Oct-23				
For Site Clearance & Survey		0	05-Aug-20 A	12-Oct-20 A	26-Oct-23	26-Oct-23				
S3P1040	Submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	0	05-Aug-20 A	20-Aug-20 A	26-Oct-23	26-Oct-23			S3P1050	
S3P1050	Review & Comment the Tender proprosal of Civil Contractor (Site Clearance & Survey)	0	21-Aug-20 A	01-Sep-20 A	26-Oct-23	26-Oct-23		S3P1040	S3P1060	
S3P1060	Re-submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	0	02-Sep-20 A	02-Sep-20 A	26-Oct-23	26-Oct-23		S3P1050	S3P1070	
S3P1070	Review & Accept Tender proprosal of Civil Contractor (Site Clearance & Survey)	0	03-Sep-20 A	23-Sep-20 A	26-Oct-23	26-Oct-23		S3P1060	S3P1080	
S3P1080	Civil Contractor (Site Clearance & Survey) Award	0	07-Oct-20 A	07-Oct-20 A	26-Oct-23	26-Oct-23		S3P1070	S3P1090	
S3P1090	Mobilisation	0	08-Oct-20 A	12-Oct-20 A	26-Oct-23	26-Oct-23		S3P1080	S3C1010	
For Ground Investigation		0	29-Aug-20 A	08-Dec-20 A	26-Oct-23	26-Oct-23				
S3P1100	Submit Tender proprosal of Civil Contractor (Ground Investigation)	0	29-Aug-20 A	29-Sep-20 A	26-Oct-23	26-Oct-23			S3P1110	
S3P1110	Review & Accept the Tender proprosal of Civil Contractor (Ground Investigation)	0	30-Sep-20 A	27-Oct-20 A	26-Oct-23	26-Oct-23		S3P1100	S3P1120	
S3P1120	Tender Invitation of Civil Contractor (Ground Investigation)	0	02-Nov-20 A	13-Nov-20 A	26-Oct-23	26-Oct-23		S3P1110	S3P1130	
S3P1130	Submission of Tender Report	0	14-Nov-20 A	18-Nov-20 A	26-Oct-23	26-Oct-23		S3P1120	S3P1140	
S3P1140	Review & Accept the Tender Report by PM	0	19-Nov-20 A	19-Nov-20 A	26-Oct-23	26-Oct-23		S3P1130	S3P1150	
S3P1150	Contract Preparation	0	20-Nov-20 A	23-Nov-20 A	26-Oct-23	26-Oct-23		S3P1140	S3P1160	
S3P1160	Civil Contractor (Ground Investigation) Award	0	24-Nov-20 A	24-Nov-20 A	26-Oct-23	26-Oct-23		S3P1150	S3P1170	
S3P1170	Mobilisation	0	25-Nov-20 A	08-Dec-20 A	26-Oct-23	26-Oct-23		S3P1160	S3C1020	
For Pre-drilling & Post-drilling		0	26-Oct-20 A	21-Feb-21 A	26-Oct-23	26-Oct-23				
S3P1180	Submit Tender proprosal of Civil Contractor (Pre-drilling & Post-drilling)	0	26-Oct-20 A	06-Jan-21 A	26-Oct-23	26-Oct-23		S3D1300, S3D1240	S3P1190	
S3P1190	Review & Accept the Tender proprosal of Civil Contractor (Predrill & Proof drill)	0	07-Jan-21 A	27-Jan-21 A	26-Oct-23	26-Oct-23		S3P1180	S3P1200	



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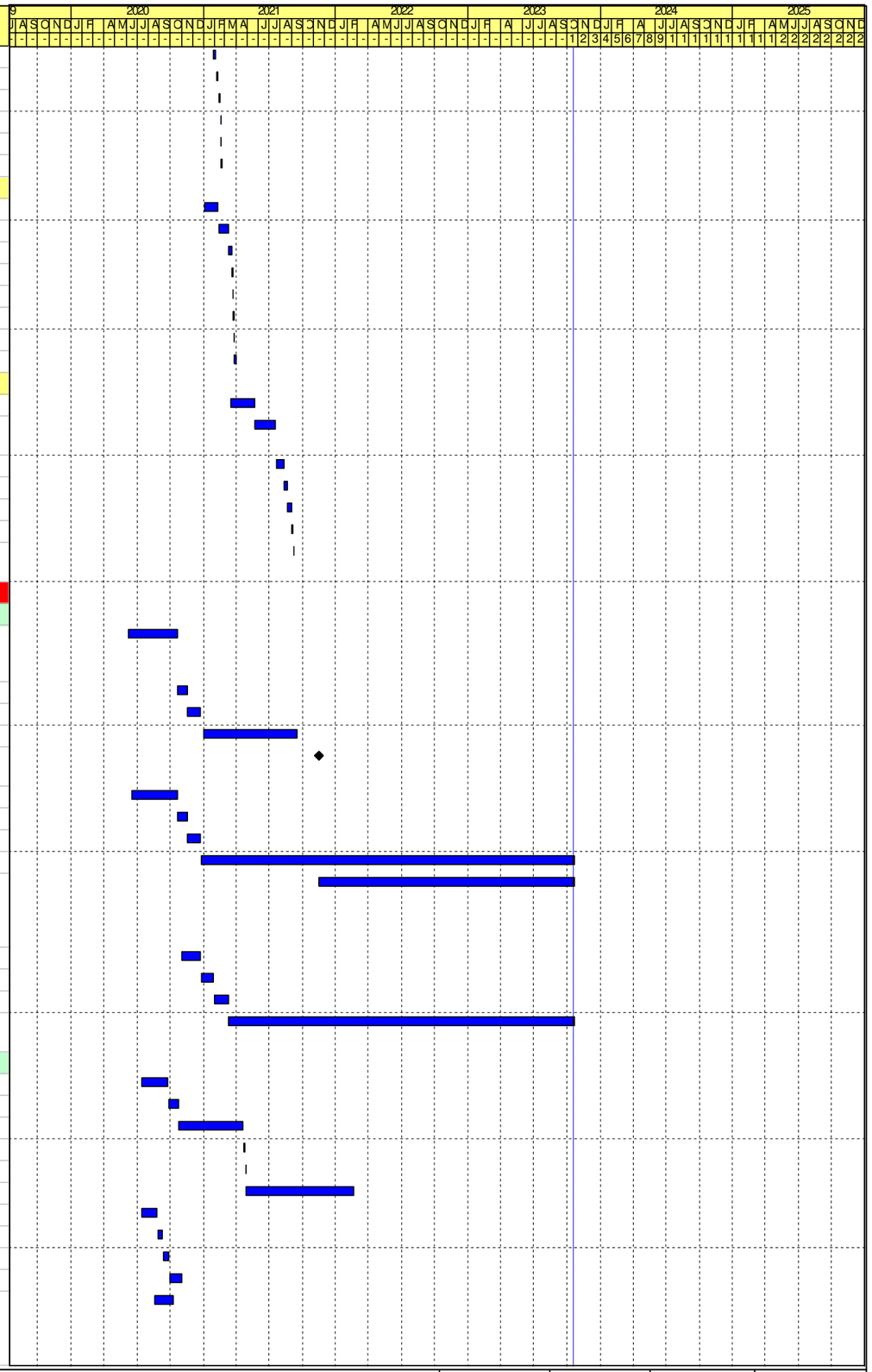
Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3P1200	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	0	28-Jan-21 A	04-Feb-21 A	26-Oct-23	26-Oct-23		S3P1190	S3P1210	
S3P1210	Submission of Tender Report	0	05-Feb-21 A	10-Feb-21 A	26-Oct-23	26-Oct-23		S3P1200	S3P1220	
S3P1220	Review & Accept the Tender Report by PM	0	11-Feb-21 A	16-Feb-21 A	26-Oct-23	26-Oct-23		S3P1210	S3P1230	
S3P1230	Contract Preparation	0	17-Feb-21 A	17-Feb-21 A	26-Oct-23	26-Oct-23		S3P1220	S3P1240	
S3P1240	Civil Contractor (Pre-drilling & Post-drilling) Award	0	18-Feb-21 A	18-Feb-21 A	26-Oct-23	26-Oct-23		S3P1230	S3P1250	
S3P1250	Mobilisation	0	19-Feb-21 A	21-Feb-21 A	26-Oct-23	26-Oct-23		S3P1240	S3C1030	
For Piling		0	04-Jan-21 A	01-Apr-21 A	26-Oct-23	26-Oct-23				
S3P1260	Submit Tender proprosal of Civil Contractor (Piling)	0	04-Jan-21 A	10-Feb-21 A	26-Oct-23	26-Oct-23			S3P1270	
S3P1270	Review & Accept the Tender proprosal of Civil Contractor (Piling)	0	11-Feb-21 A	12-Mar-21 A	26-Oct-23	26-Oct-23		S3P1260	S3P1280	
S3P1280	Tender Invitation of Civil Contractor (Piling)	0	12-Mar-21 A	19-Mar-21 A	26-Oct-23	26-Oct-23		S3P1270	S3P1290	
S3P1290	Submission of Tender Report	0	20-Mar-21 A	22-Mar-21 A	26-Oct-23	26-Oct-23		S3P1280	S3P1300	
S3P1300	Review & Accept the Tender Report by PM	0	23-Mar-21 A	23-Mar-21 A	26-Oct-23	26-Oct-23		S3P1290	S3P1310	
S3P1310	Contract Preparation	0	24-Mar-21 A	25-Mar-21 A	26-Oct-23	26-Oct-23		S3P1300	S3P1320	
S3P1320	Civil Contractor (Piling) Award	0	26-Mar-21 A	26-Mar-21 A	26-Oct-23	26-Oct-23		S3P1310	S3P1330	
S3P1330	Mobilisation	0	26-Mar-21 A	01-Apr-21 A	26-Oct-23	26-Oct-23		S3P1320	S3C1030	
For Main Civil Works		0	17-Mar-21 A	06-Sep-21 A	26-Oct-23	26-Oct-23				
S3P1340	Submit Tender proprosal of Civil Contractor (Main Civil Works)	0	17-Mar-21 A	21-May-21 A	26-Oct-23	26-Oct-23			S3P1350	
S3P1350	Review & Accept the Tender proprosal of Civil Contractor (Main Civil Works)	0	22-May-21 A	19-Jul-21 A	26-Oct-23	26-Oct-23		S3P1340	S3P1360	
S3P1360	Tender Invitation of Civil Contractor (Main Civil Works)	0	21-Jul-21 A	11-Aug-21 A	26-Oct-23	26-Oct-23		S3P1350	S3P1370	
S3P1370	Submission of Tender Report	0	12-Aug-21 A	19-Aug-21 A	26-Oct-23	26-Oct-23		S3P1360	S3P1380	
S3P1380	Review & Accept the Tender Report by PM	0	20-Aug-21 A	31-Aug-21 A	26-Oct-23	26-Oct-23		S3P1370	S3P1390	
S3P1390	Contract Preparation	0	01-Sep-21 A	05-Sep-21 A	26-Oct-23	26-Oct-23		S3P1380	S3P1400	
S3P1400	Civil Contractor (Main Civil Works) Award	0	06-Sep-21 A	06-Sep-21 A	26-Oct-23	26-Oct-23		S3P1390	S3D1360, S3C1070	
Design & Submission		1	07-Jun-20 A	21-Oct-23	17-Sep-22	24-Sep-25	704			
Architectural		1	07-Jun-20 A	21-Oct-23	25-Oct-23	25-Oct-23	4			
S3D1000	Prepare & Submit Building Layout Plan	0	07-Jun-20 A	21-Oct-20 A	25-Oct-23	25-Oct-23		CD1010, S3P1000	S3D1010, S3D1050, S3D1100	
S3D1010	Review & Comment on Buildingl Layout Plan by PM	0	22-Oct-20 A	17-Nov-20 A	25-Oct-23	25-Oct-23		S3D1000	S3D1020	
S3D1020	Revise & Re-submit Building Layout Plan	0	18-Nov-20 A	24-Dec-20 A	25-Oct-23	25-Oct-23		S3D1010	S3D1030	
S3D1030	Review & Accept of Building Layout Plan by PM	0	01-Jan-21 A	16-Sep-21 A	25-Oct-23	25-Oct-23		S3D1020	S3D1090	
S3D1040	Coordination Meeting with DSD (Employer) for the Architectural Drawing	0		15-Nov-21 A		25-Oct-23			S3D1090	
S3D1050	Prepare & Submit Architectural Design / Drawings	0	17-Jun-20 A	21-Oct-20 A	25-Oct-23	25-Oct-23		S3D1000	S3D1060	
S3D1060	Review & Comment on Architectural Design / Drawings by PM	0	22-Oct-20 A	17-Nov-20 A	25-Oct-23	25-Oct-23		S3D1050	S3D1070	
S3D1070	Revise & Re-submit Architectural Design / Drawings	0	18-Nov-20 A	24-Dec-20 A	25-Oct-23	25-Oct-23		S3D1060	S3D1080	
S3D1080	Review & Accept of Architectural Design / Drawings by PM	1	25-Dec-20 A	21-Oct-23	25-Oct-23	25-Oct-23	4	S3D1070	S3D1090	
S3D1090	Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD	1	15-Nov-21 A	21-Oct-23	25-Oct-23	25-Oct-23	4	S3D1080, S3D1130, S3D1030, S3D1040	S3C1140, S3P2150	
S3D1100	Prepare & Submit ABWF Works Drawings	0	03-Nov-20 A	24-Dec-20 A	25-Oct-23	25-Oct-23		S3D1000	S3D1110	
S3D1110	Review & Comment on ABWF Works Drawings by PM	0	25-Dec-20 A	29-Jan-21 A	25-Oct-23	25-Oct-23		S3D1100	S3D1120	
S3D1120	Revise & Re-submit ABWF Works Drawings	0	30-Jan-21 A	11-Mar-21 A	25-Oct-23	25-Oct-23		S3D1110	S3D1130	
S3D1130	Review & Accept of ABWF Works Drawings by PM	1	12-Mar-21 A	21-Oct-23	25-Oct-23	25-Oct-23	4	S3D1120	S3C1140, S3D1090	
Civil / Structural		0	13-Jul-20 A	18-Feb-22 A	17-Sep-22	24-Sep-25				
S3D1140	Prepare & Submit Loading Plan to ICE	0	13-Jul-20 A	25-Sep-20 A	26-Oct-23	26-Oct-23			S3D1150	
S3D1150	Review & Comment on Loading Plan by ICE	0	26-Sep-20 A	23-Oct-20 A	26-Oct-23	26-Oct-23		S3D1140	S3D1160	
S3D1160	Revise & Re-submit Loading Plan to ICE	0	24-Oct-20 A	20-Apr-21 A	26-Oct-23	26-Oct-23		S3D1150	S3D1170	
S3D1170	Review & Accept of Loading Plan by ICE	0	21-Apr-21 A	26-Apr-21 A	26-Oct-23	26-Oct-23		S3D1160	S3D1180	
S3D1180	Prepare & Submit Loading Plan to PM	0	27-Apr-21 A	27-Apr-21 A	26-Oct-23	26-Oct-23		S3D1170	S3D1190	
S3D1190	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	0	28-Apr-21 A	18-Feb-22 A	26-Oct-23	26-Oct-23		S3D1180	S3C1090	
S3D1200	Prepare & Submit GI Plan	0	13-Jul-20 A	26-Aug-20 A	26-Oct-23	26-Oct-23			S3D1210	
S3D1210	Review & Comment on GI Plan by PM	0	27-Aug-20 A	10-Sep-20 A	26-Oct-23	26-Oct-23		S3D1200	S3D1220	
S3D1220	Revise & Re-submit GI Plan	0	11-Sep-20 A	28-Sep-20 A	26-Oct-23	26-Oct-23		S3D1210	S3D1230	
S3D1230	Review & Accept of GI Plan by PM	0	29-Sep-20 A	02-Nov-20 A	26-Oct-23	26-Oct-23		S3D1220	S3C1020	
S3D1240	Prepare & Submit Foundation Design / Drawings to ICE & PM	0	20-Aug-20 A	09-Oct-20 A	17-Sep-22	17-Sep-22			S3D1250, S3C1010, S3D1300, S3P1180	

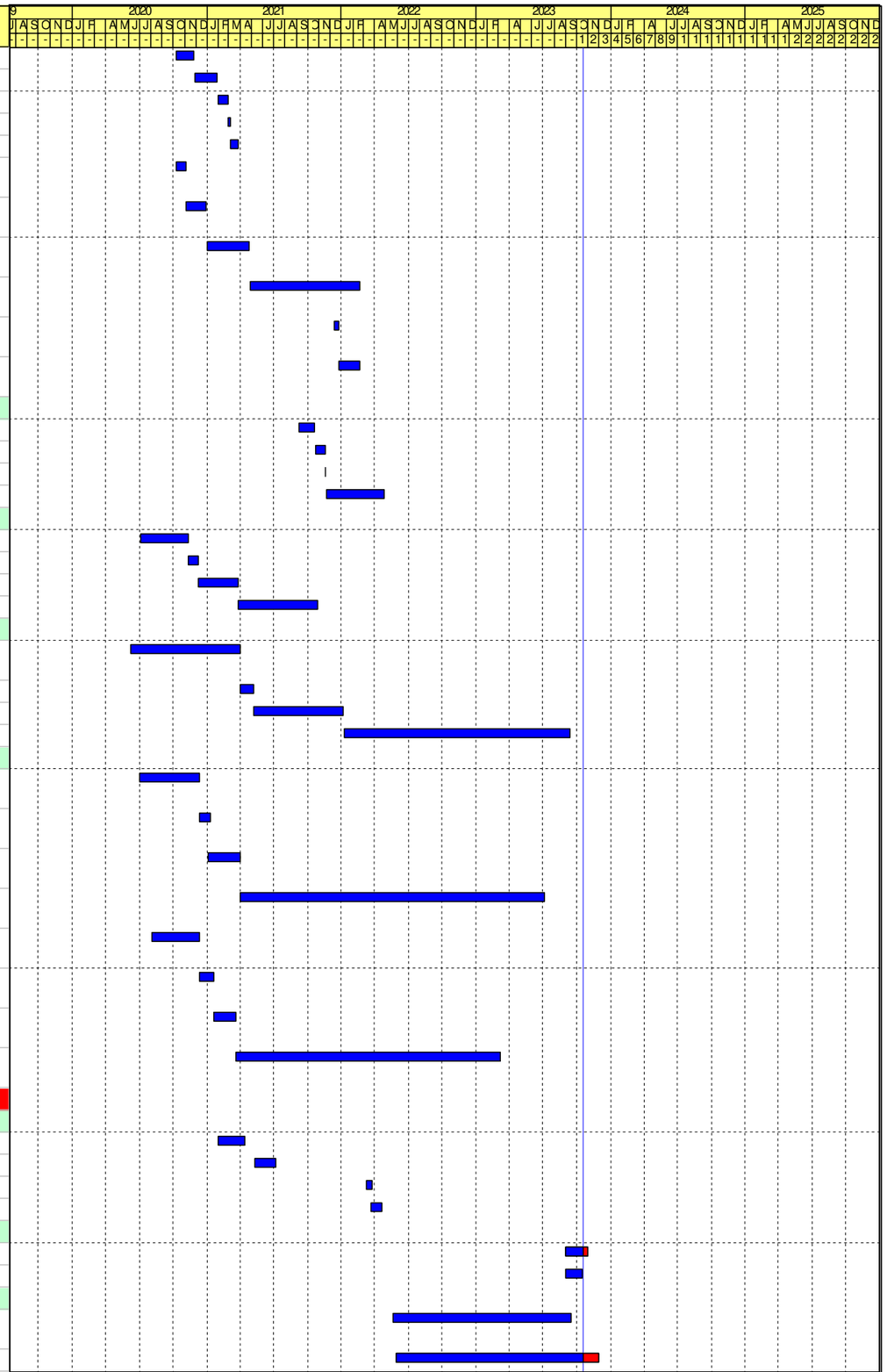


Remaining Work
Critical Activity
Milestone
Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3D1250	Review & Comment on Foundation Design / Drawings by ICE & PM	0	10-Oct-20 A	27-Nov-20 A	24-Sep-25	24-Sep-25		S3D1240	S3D1260	
S3D1260	Revise & Re-submit Foundation Design / Drawings to ICE & PM	0	28-Nov-20 A	29-Jan-21 A	24-Sep-25	24-Sep-25		S3D1250	S3D1270	
S3D1270	Review & Accept of Foundation Design / Drawings by ICE & PM	0	30-Jan-21 A	26-Feb-21 A	24-Sep-25	24-Sep-25		S3D1260	S3D1280	
S3D1280	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	0	27-Feb-21 A	05-Mar-21 A	24-Sep-25	24-Sep-25		S3D1270	S3D1290	
S3D1290	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	0	06-Mar-21 A	26-Mar-21 A	24-Sep-25	24-Sep-25		S3D1280		
S3D1300	Prepare & Submit Substructure / Superstructure Design / Drawings to ICE & PM	0	10-Oct-20 A	05-Nov-20 A	17-Sep-22	17-Sep-22		S3D1240	S3D1310, S3P1180	
S3D1310	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	0	06-Nov-20 A	30-Dec-20 A	17-Sep-22	17-Sep-22		S3D1300	S3D1320	
S3D1320	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	0	31-Dec-20 A	26-Apr-21 A	17-Sep-22	17-Sep-22		S3D1310	S3D1330	
S3D1330	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	0	27-Apr-21 A	18-Feb-22 A	17-Sep-22	17-Sep-22		S3D1320	S3D1340	
S3D1340	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	0	13-Dec-21 A	23-Dec-21 A	17-Sep-22	17-Sep-22		S3D1330	S3D1350	
S3D1350	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	0	24-Dec-21 A	18-Feb-22 A	17-Sep-22	17-Sep-22		S3D1340	S3C1100	
ELS		0	07-Sep-21 A	26-Apr-22 A	26-Oct-23	26-Oct-23				
S3D1360	Prepare & Submit ELS Plan to ICE	0	07-Sep-21 A	20-Oct-21 A	26-Oct-23	26-Oct-23		S3P1400	S3D1370	
S3D1370	Review & Accept of ELS Plan by ICE	0	21-Oct-21 A	18-Nov-21 A	26-Oct-23	26-Oct-23		S3D1360	S3D1380	
S3D1380	Prepare & Submit ELS Plan to PM	0	19-Nov-21 A	19-Nov-21 A	26-Oct-23	26-Oct-23		S3D1370	S3D1390	
S3D1390	Review & Accept of ELS Plan by PM	0	20-Nov-21 A	26-Apr-22 A	26-Oct-23	26-Oct-23		S3D1380	S3C1080	
Process Design		0	06-Jul-20 A	29-Oct-21 A	24-Sep-25	24-Sep-25				
S3D1400	Prepare & Submit E&M Works (Process) Design Drawings	0	06-Jul-20 A	10-Nov-20 A	24-Sep-25	24-Sep-25			S3D1410	
S3D1410	Review & Comment on E&M Works (Process) Design Drawings by PM	0	11-Nov-20 A	08-Dec-20 A	24-Sep-25	24-Sep-25		S3D1400	S3D1420	
S3D1420	Revise & Re-submit E&M Works (Process) Design Drawings	0	09-Dec-20 A	26-Mar-21 A	24-Sep-25	24-Sep-25		S3D1410	S3D1430	
S3D1430	Review & Accept of E&M Works (Process) Design Drawings by PM	0	27-Mar-21 A	29-Oct-21 A	24-Sep-25	24-Sep-25		S3D1420		
E&M Design		0	07-Jun-20 A	14-Sep-23 A	11-Nov-22	11-Nov-22				
S3D1440	Prepare & Submit General Arrangement Drawings	0	07-Jun-20 A	31-Mar-21 A	11-Nov-22	11-Nov-22		S3P1000	S3D1450, S3C1080	
S3D1450	Review & Comment on General Arrangement Drawings by PM	0	01-Apr-21 A	07-May-21 A	11-Nov-22	11-Nov-22		S3D1440	S3D1460	
S3D1460	Revise & Re-submit General Arrangement Drawings	0	08-May-21 A	06-Jan-22 A	11-Nov-22	11-Nov-22		S3D1450	S3D1470	
S3D1470	Review & Accept of General Arrangement Drawings by PM	0	07-Jan-22 A	14-Sep-23 A	11-Nov-22	11-Nov-22		S3D1460	S3C1995	
BS		0	03-Jul-20 A	07-Jul-23 A	11-Nov-22	11-Nov-22				
S3D1480	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	0	03-Jul-20 A	10-Dec-20 A	11-Nov-22	11-Nov-22			S3D1490	
S3D1490	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	0	11-Dec-20 A	11-Jan-21 A	11-Nov-22	11-Nov-22		S3D1480	S3D1500	
S3D1500	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	0	05-Jan-21 A	31-Mar-21 A	11-Nov-22	11-Nov-22		S3D1490	S3D1510	
S3D1510	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	0	01-Apr-21 A	07-Jul-23 A	11-Nov-22	11-Nov-22		S3D1500	S3S1020	
S3D1520	Submission & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	0	03-Aug-20 A	10-Dec-20 A	11-Nov-22	11-Nov-22			S3D1530	
S3D1530	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	0	11-Dec-20 A	19-Jan-21 A	11-Nov-22	11-Nov-22		S3D1520	S3D1540	
S3D1540	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	0	20-Jan-21 A	19-Mar-21 A	11-Nov-22	11-Nov-22		S3D1530	S3D1550	
S3D1550	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	0	20-Mar-21 A	06-Mar-23 A	11-Nov-22	11-Nov-22		S3D1540	S3S1020	
Major Plant & Materials Procurement		193	18-Feb-20 A	30-Apr-24	17-Sep-22	23-Jan-24	-98			
Civil & Structure		0	01-Feb-21 A	19-Apr-22 A	26-Oct-23	26-Oct-23				
S3P1410	Procurement, Manufacture & Delivery of Piling	0	01-Feb-21 A	14-Apr-21 A	26-Oct-23	26-Oct-23			S3C1040	
S3P1420	Procurement, Manufacture & Delivery of Metal Works Material	0	09-May-21 A	07-Jul-21 A	26-Oct-23	26-Oct-23			S3C1080	
S3P1430	Procurement, Manufacture & Delivery of Steel Reinforcement	0	11-Mar-22 A	25-Mar-22 A	26-Oct-23	26-Oct-23			S3C1090	
S3P1440	Procurement, Manufacture & Delivery of Concrete Mix	0	21-Mar-22 A	19-Apr-22 A	26-Oct-23	26-Oct-23			S3C1090	
ABWF		11	01-Sep-23 A	31-Oct-23	15-Oct-23	26-Oct-23	-6			
S3P1450	Procurement, Manufacture & Delivery of ABWF Works Material	11	01-Sep-23 A	31-Oct-23	15-Oct-23	25-Oct-23	-6		S3C1140	
S3P1460	Procurement, Manufacture & Delivery of Water Proofing Material	0	01-Sep-23 A	16-Oct-23 A	26-Oct-23	26-Oct-23			S3C1130	
E&M Process		193	20-May-22 A	30-Apr-24	17-Sep-22	28-Apr-23	-368			
S3P1470	Manufacture & Delivery of Primary and Secondary Clarifiers for Phospaq	0	20-May-22 A	16-Sep-23 A	31-Mar-23	31-Mar-23			S3C2280, S3C2090	
S3P1480	Manufacture & Delivery of Drum sludge thickener	42	31-May-22 A	01-Dec-23	21-Feb-23	03-Apr-23	-242		S3C2240	

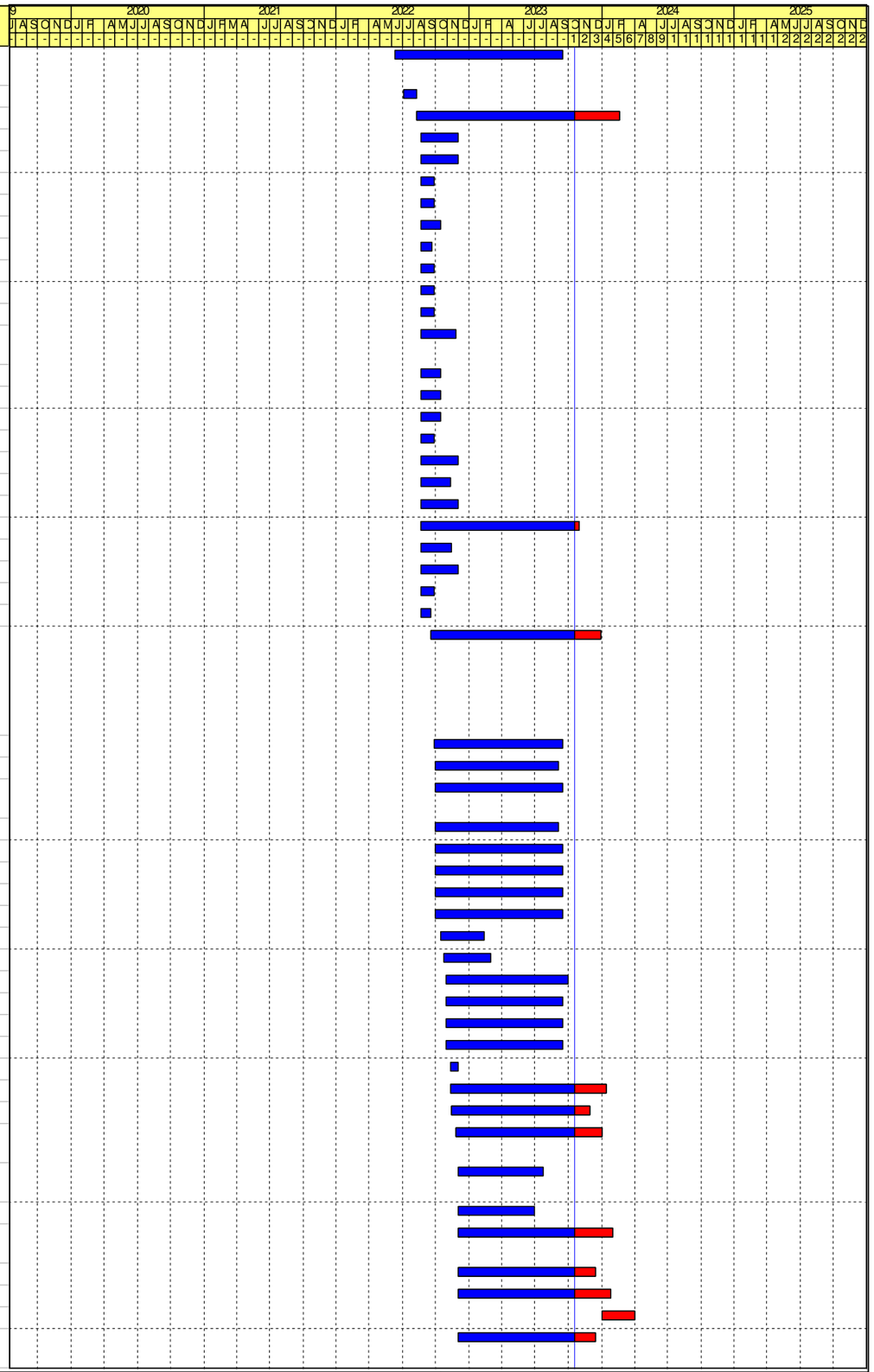


Remaining Work
Critical Activity
Milestone
Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3P1490	Manufacture & Delivery of Tilted Plates for Phospaq and Anammox internals	0	11-Jun-22 A	16-Sep-23 A	14-Mar-23	14-Mar-23			S3C2100, S3C2110	
S3P1500	Procurement of Air Blower System	0	04-Jul-22 A	08-Aug-22 A	17-Oct-22	17-Oct-22			S3P1510	
S3P1510	Manufacture & Delivery of Air Blower System	121	09-Aug-22 A	18-Feb-24	17-Oct-22	14-Feb-23	-369	S3P1500	S3C2310	
S3P1520	Procurement of Diffusers for Phospaq and Anammox Internals	0	21-Aug-22 A	02-Dec-22 A	21-Dec-22	21-Dec-22			S3P1950	
S3P1530	Procurement of Ancillary Air Blower	0	21-Aug-22 A	02-Dec-22 A	09-Nov-22	09-Nov-22			S3P1970	
S3P1540	Procurement of Buffer tank Lifting Pump	0	21-Aug-22 A	27-Sep-22 A	01-Jan-23	01-Jan-23			S3P1760	
S3P1550	Procurement of Anammox feed pump and Sludge Discharge pump	0	21-Aug-22 A	27-Sep-22 A	01-Jan-23	01-Jan-23			S3P1770	
S3P1560	Procurement of Metering Pump	0	21-Aug-22 A	14-Oct-22 A	01-Jan-23	01-Jan-23			S3P1850	
S3P1570	Procurement of 2nd Sludge Pump	0	21-Aug-22 A	19-Sep-22 A	01-Jan-23	01-Jan-23			S3P1780	
S3P1580	Procurement of Struvite Pump	0	21-Aug-22 A	27-Sep-22 A	01-Jan-23	01-Jan-23			S3P1790	
S3P1590	Procurement of Primary Sludge Pump	0	21-Aug-22 A	27-Sep-22 A	01-Jan-23	01-Jan-23			S3P1800	
S3P1600	Procurement of Drum Thickener Feed Pump	0	21-Aug-22 A	27-Sep-22 A	01-Jan-23	01-Jan-23			S3P1810	
S3P1610	Procurement of FRP Tanks (NaOH, Micro-Nutrient, Anti-foamer and Polymer)	0	21-Aug-22 A	25-Nov-22 A	28-Oct-22	28-Oct-22			S3P1930	
S3P1620	Procurement of NaOH Dosing Pump	0	21-Aug-22 A	14-Oct-22 A	02-Jan-23	02-Jan-23			S3P1860	
S3P1630	Procurement of Micro-Nutrient Dosing Pump	0	21-Aug-22 A	14-Oct-22 A	02-Jan-23	02-Jan-23			S3P1870	
S3P1640	Procurement of Anti-foamer Dosing Pump	0	21-Aug-22 A	14-Oct-22 A	02-Jan-23	02-Jan-23			S3P1880	
S3P1650	Procurement of Polymer Dosing Pump	0	21-Aug-22 A	27-Sep-22 A	02-Jan-23	02-Jan-23			S3P1750	
S3P1660	Procurement of DOU no.4	0	21-Aug-22 A	02-Dec-22 A	05-Dec-22	05-Dec-22			S3P1980	
S3P1670	Procurement of SCADA System	0	21-Aug-22 A	10-Nov-22 A	14-Nov-22	14-Nov-22			S3P1910	
S3P1680	Procurement of Local control panel parts for Drum Sludge Thickener	0	21-Aug-22 A	02-Dec-22 A	08-Jan-23	08-Jan-23			S3P1990	
S3P1690	Procurement of uPVC pipe and GRP Pipe	12	21-Aug-22 A	01-Nov-23	17-Sep-22	28-Sep-22	-399		S3P2020	
S3P1700	Procurement of EM Flowmeter	0	21-Aug-22 A	14-Nov-22 A	02-Feb-23	02-Feb-23			S3P1920	
S3P1710	Procurement of Instrument	0	21-Aug-22 A	02-Dec-22 A	18-Jan-23	18-Jan-23			S3P2000	
S3P1720	Procurement of PAM dosing pump	0	21-Aug-22 A	27-Sep-22 A	02-Jan-23	02-Jan-23			S3P1820	
S3P1730	Procurement of Lifting Applicance	0	23-Aug-22 A	16-Sep-22 A	17-Oct-22	17-Oct-22			S3P1740	
S3P1740	Manufacture & Delivery of Lifting Applicance	72	17-Sep-22 A	31-Dec-23	17-Oct-22	27-Dec-22	-369	S3P1730	S3C2170, S3C2180, S3C2190, S3C2260, S3C2270, S3C2290	
S3P1750	Manufacture & Delivery of Polymer Dosing Pump	0	28-Sep-22 A	15-Sep-23 A	02-Jan-23	02-Jan-23		S3P1650	S3C2200	
S3P1760	Manufacture & Delivery of Buffer tank Lifting Pump	0	29-Sep-22 A	04-Sep-23 A	01-Jan-23	01-Jan-23		S3P1540	S3C2000	
S3P1770	Manufacture & Delivery of Anammox feed pump and Anammox Sludge pump	0	29-Sep-22 A	15-Sep-23 A	01-Jan-23	01-Jan-23		S3P1550	S3C2020, S3C2040	
S3P1780	Manufacture & Delivery of 2nd Sludge Pump	0	29-Sep-22 A	04-Sep-23 A	01-Jan-23	01-Jan-23		S3P1570	S3C2010	
S3P1790	Manufacture & Delivery of Struvite Pump	0	29-Sep-22 A	15-Sep-23 A	01-Jan-23	01-Jan-23		S3P1580	S3C2050	
S3P1800	Manufacture & Delivery of Primary Sludge Pump	0	29-Sep-22 A	15-Sep-23 A	01-Jan-23	01-Jan-23		S3P1590	S3C2070	
S3P1810	Manufacture & Delivery of Drum Thickener Feed Pump	0	29-Sep-22 A	15-Sep-23 A	01-Jan-23	01-Jan-23		S3P1600	S3C2060	
S3P1820	Manufacture & Delivery of PAM dosing pump	0	29-Sep-22 A	15-Sep-23 A	02-Jan-23	02-Jan-23		S3P1720	S3C2200	
S3P1830	Procurement of PE pipework	0	15-Oct-22 A	11-Feb-23 A	01-Jan-23	01-Jan-23			S3P2060	
S3P1840	Procurement of Flushing pump	0	24-Oct-22 A	28-Feb-23 A	20-Oct-22	20-Oct-22			S3P2050	
S3P1850	Manufacture & Delivery of Metering Pump	0	31-Oct-22 A	30-Sep-23 A	01-Jan-23	01-Jan-23		S3P1560	S3C2030	
S3P1860	Manufacture & Delivery of NaOH Dosing pump	0	31-Oct-22 A	15-Sep-23 A	02-Jan-23	02-Jan-23		S3P1620	S3C2200	
S3P1870	Manufacture & Delivery of Micro-Nutrient Dosing Pump	0	31-Oct-22 A	15-Sep-23 A	02-Jan-23	02-Jan-23		S3P1630	S3C2200	
S3P1880	Manufacture & Delivery of Anti-foamer Dosing Pump	0	31-Oct-22 A	15-Sep-23 A	02-Jan-23	02-Jan-23		S3P1640	S3C2200	
S3P1900	Procurement of Mixer	0	11-Nov-22 A	02-Dec-22 A	23-Feb-23	23-Feb-23			S3P1960	
S3P1910	Manufacture & Delivery of SCADA System	87	11-Nov-22 A	15-Jan-24	14-Nov-22	08-Feb-23	-341	S3P1670	S3C2400	
S3P1920	Manufacture & Delivery of EM Flowmeter	41	15-Nov-22 A	30-Nov-23	02-Feb-23	14-Mar-23	-261	S3P1700	S3C2430	
S3P1930	Manufacture & Delivery of FRP Tanks (NaOH, Micro-Nutrient, Anti-foamer and Polymer)	73	26-Nov-22 A	01-Jan-24	28-Oct-22	08-Jan-23	-358	S3P1610	S3C2210	
S3P1940	Procurement of SS pipe and Fittings	0	01-Dec-22 A	25-Jul-23 A	29-Oct-22	29-Oct-22			S3P2070, S3P1945	
S3P1945	Procurement of Ductile Iron Pipes and Fittings	0	01-Dec-22 A	30-Jun-23 A	06-Nov-22	06-Nov-22		S3P1940	S3P2160	
S3P1950	Manufacture & Delivery of Diffusers for Phospaq and Anammox Internals	104	03-Dec-22 A	01-Feb-24	21-Dec-22	03-Apr-23	-304	S3P1520	S3C2130, S3C2140	
S3P1960	Manufacture & Delivery of Mixer	56	03-Dec-22 A	15-Dec-23	23-Feb-23	19-Apr-23	-240	S3P1900	S3C2120	
S3P1970	Manufacture & Delivery of Ancillary air blower	98	03-Dec-22 A	26-Jan-24	09-Nov-22	14-Feb-23	-346	S3P1530	S3C2340	
S3P1980	Manufacture & Delivery of DOU no.4	90	02-Jan-24*	31-Mar-24	05-Dec-22	04-Mar-23	-393	S3P1660	S3C2300	
S3P1990	Manufacture & Delivery of Local control panel parts for Drum Sludge Thickener	56	03-Dec-22 A	15-Dec-23	08-Jan-23	04-Mar-23	-286	S3P1680	S3C2430	



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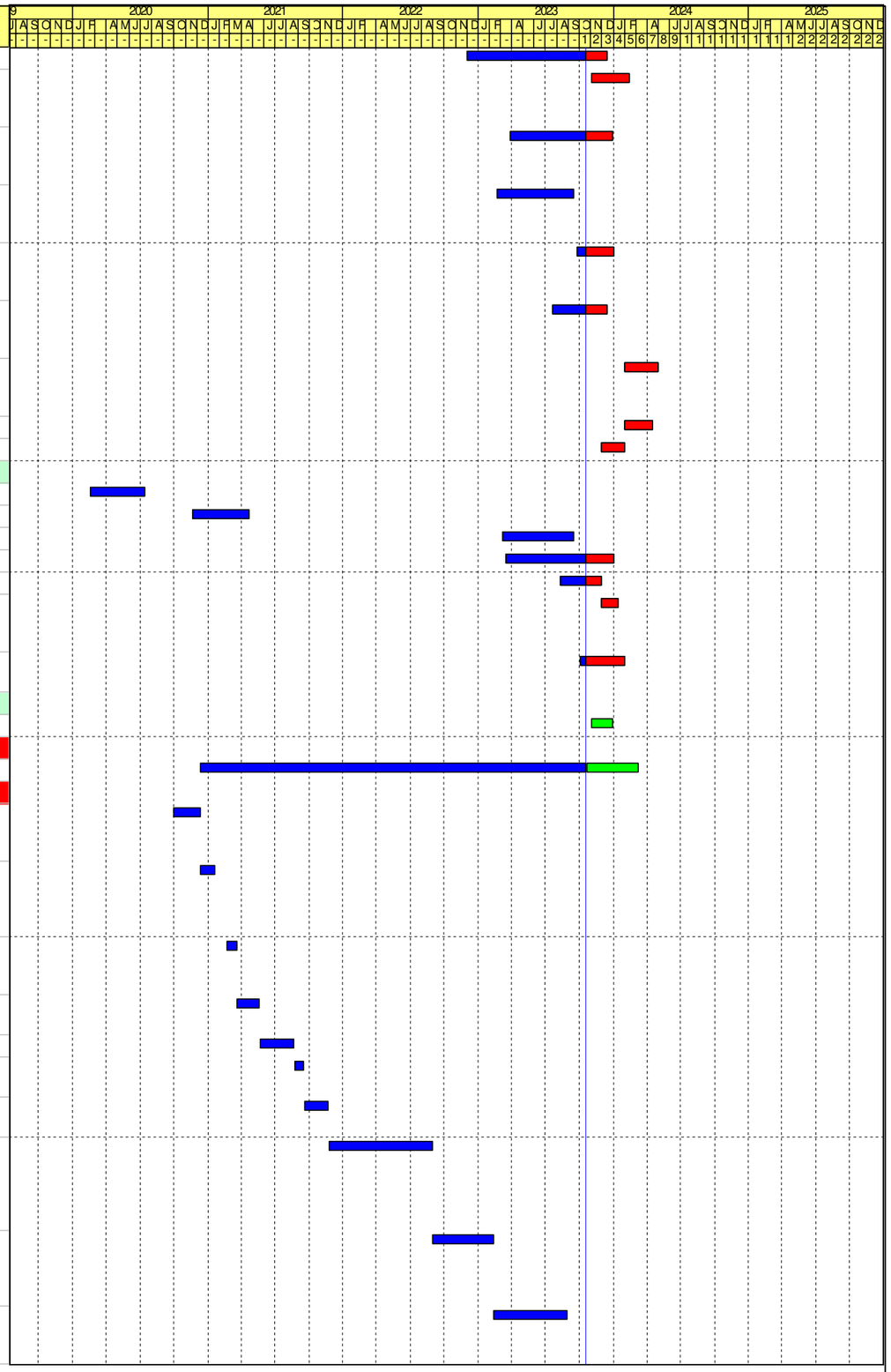
S3P2000	Manufacture & Delivery of Instrument	56	03-Dec-22 A	15-Dec-23	18-Jan-23	14-Mar-23	-276	S3P1710	S3C2430	
S3P2020	Manufacture & Delivery of uPVC pipe and FRP Pipe	105	02-Nov-23	14-Feb-24	29-Sep-22	11-Jan-23	-399	S3P1690	S3C2250, S3C2350, S3C2150	
S3P2050	Manufacture & Delivery of Flushing pump	72	30-Mar-23 A	31-Dec-23	20-Oct-22	30-Dec-22	-366	S3P1840	S3C2350, S3T1030, S3C2080	
S3P2060	Manufacture & Delivery of PE pipework	0	21-Feb-23 A	16-Sep-23 A	01-Jan-23	01-Jan-23		S3P1830	S3C2250, S3C2150, S3C2350	
S3P2070	Manufacture & Delivery of SS pipe and Fittings	75	26-Sep-23 A	03-Jan-24	29-Oct-22	11-Jan-23	-357	S3P1940	S3C2150, S3C2250, S3C2350	
S3P2160	Manufacture & Delivery of Ductile Iron Pipes and Fittings	56	21-Jul-23 A	15-Dec-23	06-Nov-22	31-Dec-22	-349	S3P1945	S3C2150, S3C2350, S3C2250	
S3P2170	Manufacture & Delivery of Actuators	90	01-Feb-24*	30-Apr-24	29-Jan-23	28-Apr-23	-368		S3C2230, S3C2550, S3C2570	
S3P2180	Manufacture & Delivery of Polymer System	75	01-Feb-24*	15-Apr-24	19-Jan-23	03-Apr-23	-378		S3C2320	
S3P2190	Manufacture & Delivery of NaOH Tank	62	01-Dec-23*	31-Jan-24	08-Dec-22	08-Feb-23	-358		S3C2160	
BS		104	18-Feb-20 A	01-Feb-24	05-Nov-22	03-May-23	-274			
S3P2080	Procurement of Transformer	0	18-Feb-20 A	13-Jul-20 A	18-Nov-22	18-Nov-22			S3P2120	
S3P2090	Procurement of Low Voltage Switchboard and Accessories	0	21-Nov-20 A	23-Apr-21 A	05-Nov-22	05-Nov-22			S3P2110	
S3P2100	Procurement of MVAC System	0	08-Mar-23 A	15-Sep-23 A	19-Dec-22	19-Dec-22			S3P2130	
S3P2110	Manufacture & Delivery of Low Voltage Switchboard and Accessories	74	18-Mar-23 A	02-Jan-24	05-Nov-22	17-Jan-23	-350	S3P2090	S3C2380	
S3P2120	Manufacture & Delivery of Transformer	41	10-Aug-23 A	30-Nov-23	18-Nov-22	28-Dec-22	-337	S3P2080	S3C2360	
S3P2130	Manufacture & Delivery of MVAC System	45	01-Dec-23*	14-Jan-24	19-Dec-22	01-Feb-23	-347	S3P2100	S3C2490, S3C2500, S3C2530	
S3P2140	Procurement, Manufacture & Delivery of BS Works Material	104	05-Oct-23 A	01-Feb-24	20-Jan-23	03-May-23	-274		S3C2420, S3T1270	
Fitting-out		60	02-Nov-23	31-Dec-23	25-Nov-23	23-Jan-24	23			
S3P2150	Procurement, Manufacture & Delivery of Fit-out Works Material	60	02-Nov-23*	31-Dec-23	25-Nov-23	23-Jan-24	23	S3D1090	S3C1140	
Ground Settlement, Tilting & Utility Monitoring		141	12-Dec-20 A	09-Mar-24	03-Apr-24	21-Aug-24	165			
S3C1000	Ground Settlement, Tilting & Utility Monitoring	141	12-Dec-20 A	09-Mar-24	03-Apr-24	21-Aug-24	165	S3C1010	SC31120	
Civil Works Construction		705	30-Sep-20 A	24-Sep-25	17-Sep-22	21-Aug-24	-399			
S3C1010	Site Clearance & Survey	0	30-Sep-20 A	12-Dec-20 A	26-Oct-23	26-Oct-23		S3D1240, AD1140, S3P1090	S3C1020, S3C1000	
S3C1020	Ground Investigation	0	12-Dec-20 A	18-Jan-21 A	26-Oct-23	26-Oct-23		AD1140, S3C1010, S3P1170, S3D1230	S3C1030	
S3C1030	Pre-drilling Works	0	22-Feb-21 A	19-Mar-21 A	26-Oct-23	26-Oct-23		S3C1020, S3P1250, S3P1330	S3C1040	
S3C1040	Minor Civil Works & Preperation Works for Piling	0	20-Mar-21 A	20-May-21 A	26-Oct-23	26-Oct-23		S3C1030, S3P1410	S3C1050	
S3C1050	Piling Works (Impacted by Inclement Weather)	0	21-May-21 A	21-Aug-21 A	26-Oct-23	26-Oct-23		S3C1040	S3C1060	
S3C1060	Post-drilling, Proof test & remaining works (Impacted by Inclement Weather)	0	22-Aug-21 A	17-Sep-21 A	26-Oct-23	26-Oct-23		S3C1050	S3C1080, S3C1070	
S3C1070	Site Set-up / Mobilisation (Impacted by Inclement Weather)	0	18-Sep-21 A	20-Nov-21 A	26-Oct-23	26-Oct-23		S3C1060, S3P1400	S3C1080	
S3C1080	Excavation / ELS (Impacted by Inclement Weather)	0	24-Nov-21 A	31-Aug-22 A	26-Oct-23	26-Oct-23		S3D1440, S3P1420, S3D1390, S3C1060, S3C1070	S3C1090	
S3C1090	Pile Caps installation & Basement Slab	0	01-Sep-22 A	11-Feb-23 A	26-Oct-23	26-Oct-23		S3C1080, S3P1440, S3P1430, S3D1190	S3C1130	
S3C1100	Construction of Basement up to G/F Slab	0	12-Feb-23 A	29-Aug-23 A	17-Sep-22	17-Sep-22		S3D1350, S3S1010	S3C1110, S3C1130, S3C1995	



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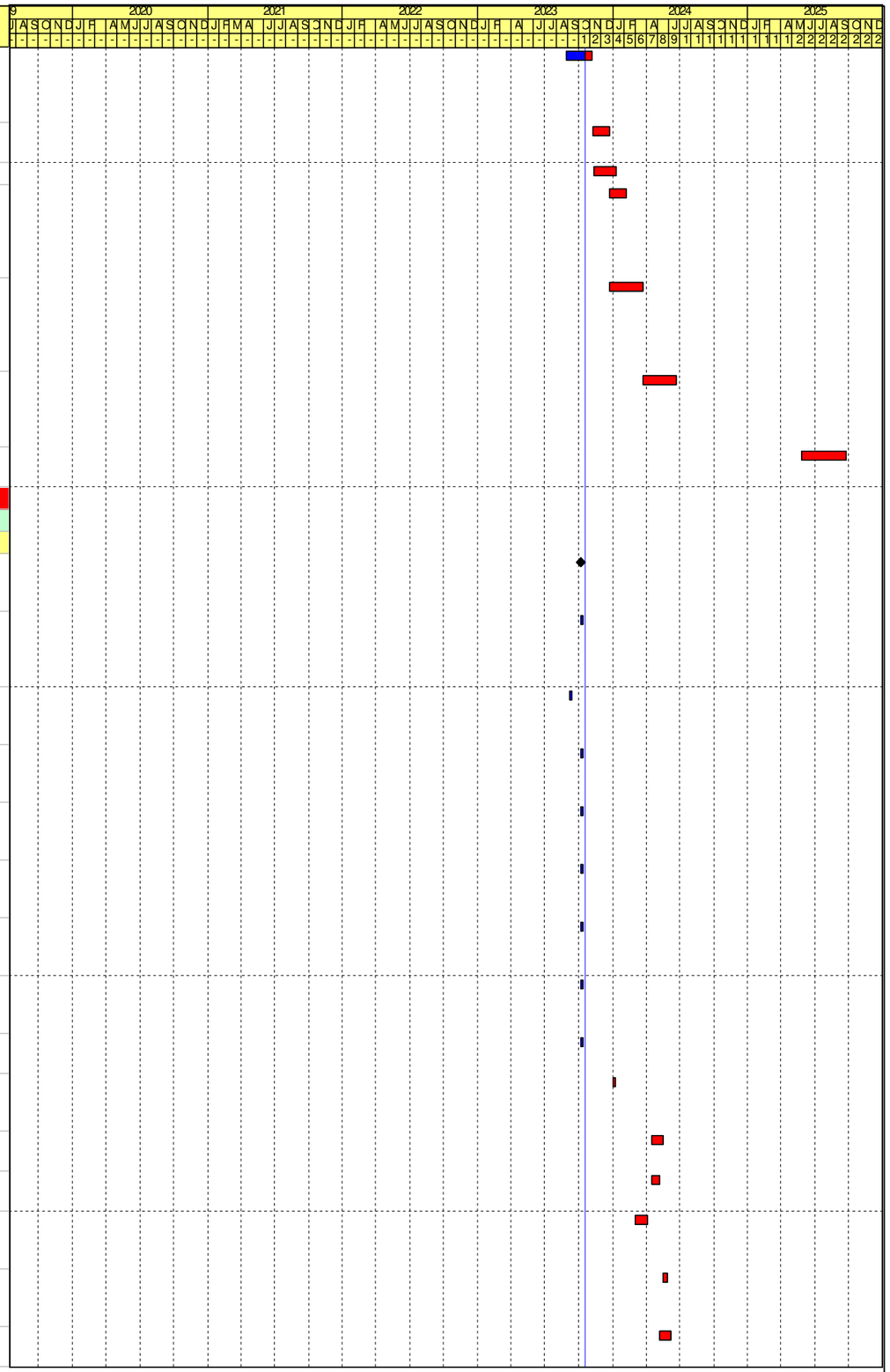
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3C1110	Construction of G/F up to 1/F Slab	18	30-Aug-23 A	07-Nov-23	17-Sep-22	04-Oct-22	-399	S3C1100	S3C1120, S3C1130, S3C2155, S3C1125	
S3C1120	Construction of 1/F up to Roof	47	08-Nov-23	24-Dec-23	30-Dec-22	14-Feb-23	-313	S3C1110	S3C1130, S3C2285	
S3C1125	Water tightness Test for all concrete tank	60	13-Nov-23*	11-Jan-24	19-Feb-23	19-Apr-23	-267	S3C1110	S3C2120	
S3C1130	Waterproofing	45	25-Dec-23	07-Feb-24	26-Oct-23	09-Dec-23	-60	S3P1460, S3C1120, S3C1090, S3C1100, S3C1110	S3C1140	
S3C1140	External & Internal Finishes - 1st Fix (Blockwork, Plastering, Wet Trade)	90	25-Dec-23	23-Mar-24	26-Oct-23	23-Jan-24	-60	S3C1130, S3P1450, S3D1090, S3D1130, S3P2150	S3C1150, S3C1160	
S3C1150	External & Internal Finishes - 2nd Fix (Ceiling / Wall / Floor Finishing, Door)	90	24-Mar-24	21-Jun-24	24-Jan-24	22-Apr-24	-60	S3C1140	S3S1170, S3C1160, PL1190, SC31120	
S3C1160	Landscaping Works	120	28-May-25	24-Sep-25	24-Apr-24	21-Aug-24	-399	S3C1140, S3C1150	SC31120	
E&M Installation		174	08-Sep-23 A	05-Jun-24	11-Nov-22	22-Jul-24	47			
Mechanical Installations		156	08-Sep-23 A	05-Jun-24	11-Nov-22	22-Jul-24	47			
Basement		156	08-Sep-23 A	05-Jun-24	11-Nov-22	19-May-23	-383			
S3C1995	Access to Sidestream Treatment Facilities (B/F)	0	08-Oct-23 A		11-Nov-22			S3C1100, S3D1470	S3C2000, S3C2450, S3C2460	
S3C2000	Installation of Buffer Tank Lifting pumps (3 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3P1760, S3C1995	S3C2020, S3C2150, S3T1030, S3C2010	
S3C2010	Installation of Secondary Clarifier Sludge discharge pumps (3 nos.)	0	08-Sep-23 A	14-Sep-23 A	01-Jan-23	01-Jan-23		S3P1780, S3C2000	S3C2030, S3C2150, S3T1030	
S3C2020	Installation of Anammox Feed pumps (3 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2000, S3P1770	S3C2040, S3C2150, S3T1030	
S3C2030	Installation of Metering Pumps (2 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2010, S3P1850	S3C2050, S3C2150, S3T1030	
S3C2040	Installation of Anammox Sludge discharge pumps (2 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2020, S3P1770	S3C2060, S3C2150, S3T1030	
S3C2050	Installation of Struvite Pumps (3 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2030, S3P1790	S3C2070, S3C2150, S3T1030	
S3C2060	Installation of Thickener feed pumps (2 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2040, S3P1810	S3C2080, S3C2150, S3T1030	
S3C2070	Installation of Primary Clarifier sludge discharge pump (3 nos.)	0	08-Oct-23 A	14-Oct-23 A	01-Jan-23	01-Jan-23		S3C2050, S3P1800	S3C2150, S3T1030	
S3C2080	Installation of Flushing Pump (2 nos.)	7	02-Jan-24	08-Jan-24	01-Jan-23	07-Jan-23	-366	S3C2060, S3P2050	S3C2150, S3C2240, S3T1030	
S3C2090	Installation of Secondary Clarifiers No.1 and 2	30	16-Apr-24	15-May-24	31-Mar-23	29-Apr-23	-382	S3P1470, S3C2180	S3T1110	
S3C2100	Installation of Separator for Phospaq No.1 and 2	21	16-Apr-24	06-May-24	14-Mar-23	03-Apr-23	-399	S3P1490, S3C2180	S3C2130, S3T1140	
S3C2110	Installation of Separator for Anammox No. 1 and 2	34	02-Mar-24	04-Apr-24	31-Mar-23	03-May-23	-337	S3P1490, S3C2260, S3C2270	S3T1150	
S3C2120	Installation of Mixer for Thickened Sludge Tank, Sludge Mlxing Tank, Anammox Effluent Chamber and Filtrate Buffer Tank	14	16-May-24	29-May-24	20-Apr-23	03-May-23	-392	S3P1960, S3C2190, S3C1125	S3T1090	
S3C2130	Installation of Diffusers and pipework for Phospaq	30	07-May-24	05-Jun-24	04-Apr-23	03-May-23	-399	S3P1950, S3C2100	S3T1140, S3C2140	



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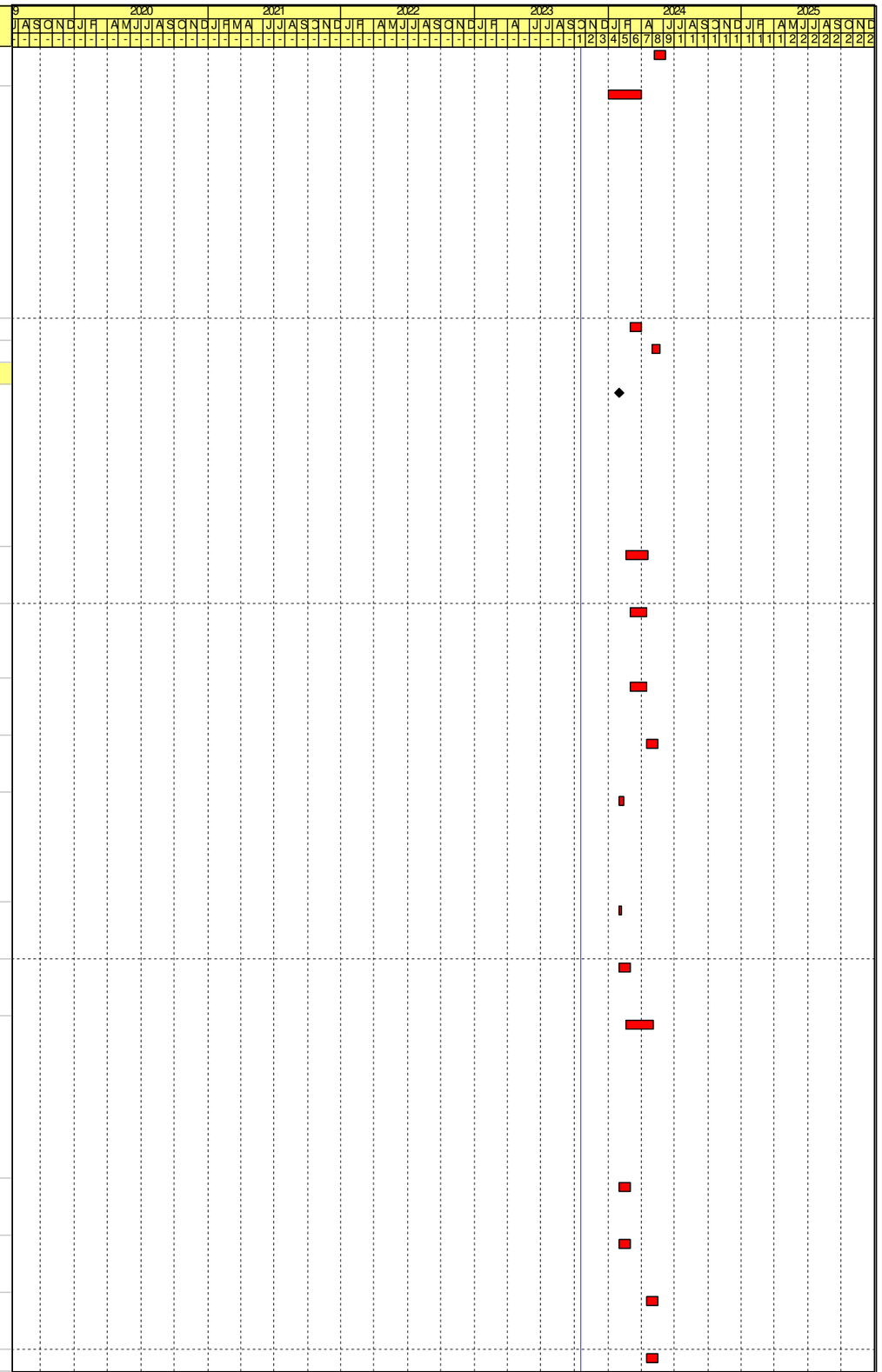
S3C2140	Installation of Diffusers and pipework for Anammox	30	07-May-24	05-Jun-24	04-Apr-23	03-May-23	-399	S3P1950, S3C2130	S3T1150	
S3C2150	Installation of Pipeworks, Associate Valves and Fittings	90	02-Jan-24	31-Mar-24	01-Jan-23	31-Mar-23	-366	S3C2000, S3C2010, S3C2020, S3C2030, S3C2040, S3C2050, S3C2060, S3C2070, S3C2080, S3P2060, S3P2070, S3P2020, S3P2160	S3T1000, S3T1070, S3T1140, S3T1150, S3C2220, S3C2430	
S3C2220	Installation of Instruments	30	02-Mar-24	31-Mar-24	04-Apr-23	03-May-23	-333	S3C2150	S3T1154	
S3C2230	Installation of Actuator	21	01-May-24	21-May-24	29-Apr-23	19-May-23	-368	S3P2170	S3T1164	
G/F		111	01-Feb-24	21-May-24	29-Dec-22	19-May-23	-368			
S3C2155	Access to Sidestream Treatment Facilities (G/F)	0	01-Feb-24*		29-Dec-22		-399	S3C1110	S3C2200, S3C2170, S3C2210, S3C2240, S3C2250, S3C2160, S3C2280, S3C2360, S3C2260	
S3C2160	E&M installation of DG Plant Room (NaOH tank and FRP platform)	60	19-Feb-24*	18-Apr-24	08-Feb-23	09-Apr-23	-376	S3C2155, S3S1100, S3P2190	S3S1110	
S3C2170	Installation of EOT crane (LA-01)	45	02-Mar-24	15-Apr-24	28-Jan-23	13-Mar-23	-399	S3P1740, S3C2155, S3C2270	S3C2180, S3C2190, S3T1285, S3C2280	
S3C2180	Installation of EOT crane (LA-02)	45	02-Mar-24	15-Apr-24	28-Jan-23	13-Mar-23	-399	S3C2170, S3P1740	S3T1285, S3C2090, S3C2100	
S3C2190	Installation of Monorail (LA-03)	30	16-Apr-24	15-May-24	21-Mar-23	19-Apr-23	-392	S3P1740, S3C2170	S3C2120, S3T1285, S3C2290	
S3C2200	Installation of NaOH Dosing Pumps, Micro-Nutrient Dosing Pumps, Defoamer Dosing Pumps and PAM Dosing Pumps (12 nos.)	14	01-Feb-24	14-Feb-24	02-Jan-23	15-Jan-23	-395	S3P1860, S3P1870, S3P1880, S3P1820, S3C2155, S3P1750	S3C2250, S3T1030, S3T1020, S3C2210, S3C2250	
S3C2210	Installation of Deformer dissolving Tank, Micro-nutrient tank and mixer	7	01-Feb-24	07-Feb-24	09-Jan-23	15-Jan-23	-388	S3P1930, S3C2155, S3C2200	S3C2250, S3T1020, S3C2250	
S3C2240	Installation of Drum Sludge Thickener System (Including mixing valves, flocculation reactors)	30	01-Feb-24	01-Mar-24	04-Apr-23	03-May-23	-303	S3P1480, S3C2080, S3C2155	S3T1040	
S3C2250	Installation of Pipeworks, Associate Valves and Fittings	75	19-Feb-24	03-May-24	16-Jan-23	31-Mar-23	-399	S3C2200, S3C2210, S3P2060, S3P2070, S3P2020, S3C2155, S3P2160, S3C2200, S3C2210	S3T1000, S3C2430, S3T1070, S3C2540	
S3C2260	Installation of Monorail (LA-04)	30	01-Feb-24	01-Mar-24	29-Dec-22	27-Jan-23	-399	S3P1740, S3C2155	S3C2270, S3T1285, S3C2110	
S3C2270	Installation of Monorail (LA-05)	30	01-Feb-24	01-Mar-24	29-Dec-22	27-Jan-23	-399	S3P1740, S3C2260	S3T1285, S3C2170, S3C2110	
S3C2280	Installation of Primary Clarifiers No.1 and 2	30	16-Apr-24	15-May-24	04-Apr-23	03-May-23	-378	S3P1470, S3C2155, S3C2170	S3T1100	
S3C2320	Installation of Polymer System	30	16-Apr-24	15-May-24	04-Apr-23	03-May-23	-378	S3P2180	S3T1020	



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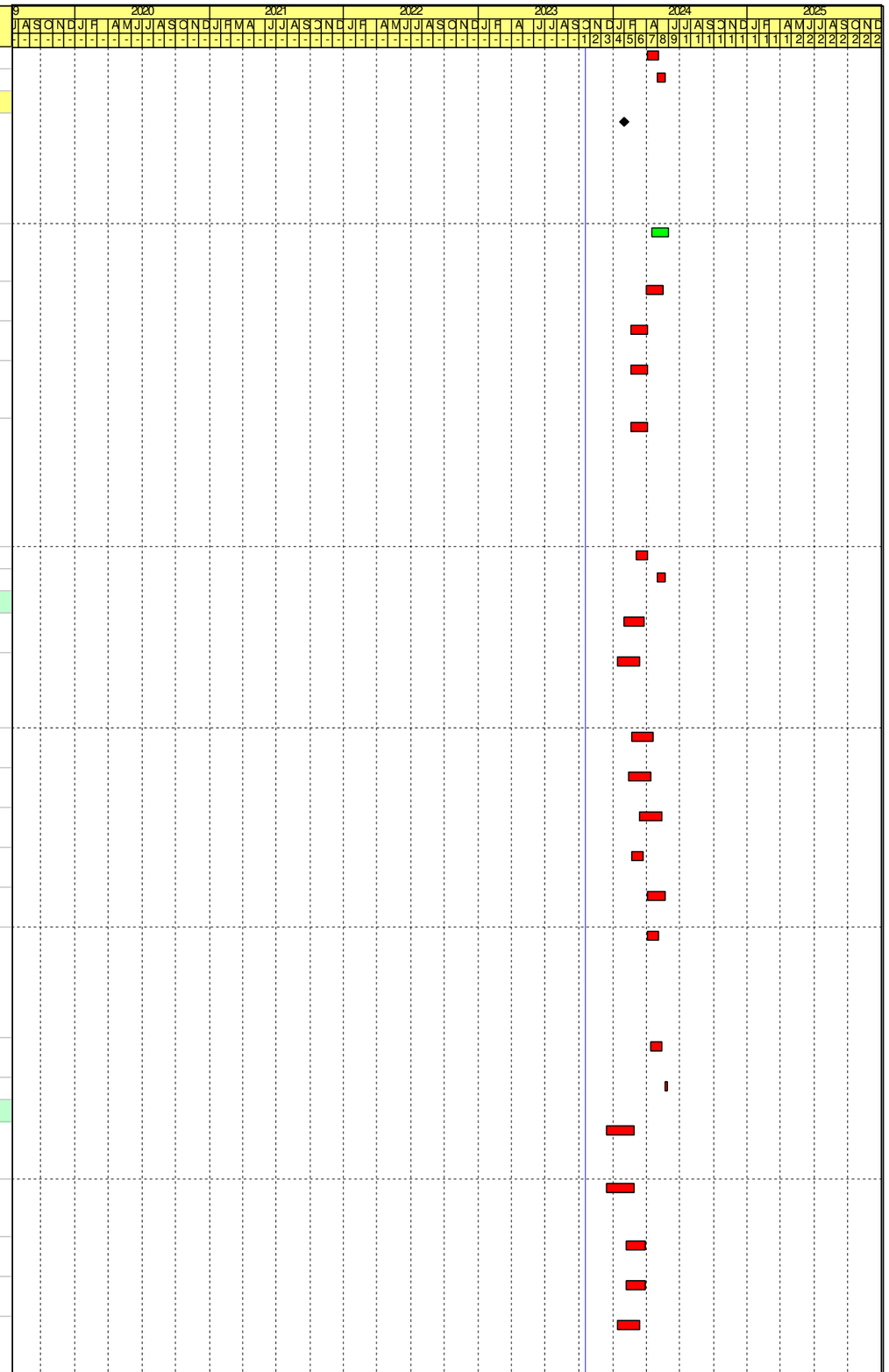
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3C2540	Installation of Instruments	30	04-Apr-24	03-May-24	04-Apr-23	03-May-23	-366	S3C2250	S3T1154	
S3C2550	Installation of Actuator	21	01-May-24	21-May-24	29-Apr-23	19-May-23	-368	S3P2170	S3T1164	
1/F		120	01-Feb-24	30-May-24	15-Feb-23	22-Jul-24	53			
S3C2285	Access to Sidestream Treatment Facilities (1/F)	0	01-Feb-24*		15-Feb-23		-351	S3C1120	S3C2290, S3C2300, S3C2310, S3C2340, S3C2350, S3T1030	
S3C2290	Installation of EOT crane (LA-06)	45	16-Apr-24	30-May-24	08-Jun-24	22-Jul-24	53	S3P1740, S3C2285, S3C2190	S3T1285	
S3C2300	Installation of Deodorisation System (DOU) No.4	45	01-Apr-24	15-May-24	05-Mar-23	18-Apr-23	-393	S3P1980, S3C2285	S3T1080	
S3C2310	Installation of Air Blower System	45	19-Feb-24	03-Apr-24	15-Feb-23	31-Mar-23	-369	S3P1510, S3C2285	S3C2340, S3T1060	
S3C2340	Installation of Ancillary Air Blower	45	19-Feb-24	03-Apr-24	15-Feb-23	31-Mar-23	-369	S3P1970, S3C2310, S3C2285	S3T1060, S3C2350	
S3C2350	Installation of Pipeworks, Associate Valves and Fittings	45	19-Feb-24	03-Apr-24	15-Feb-23	31-Mar-23	-369	S3P2060, S3P2070, S3P2020, S3C2285, S3P2160, S3P2050, S3C2340	S3T1000, S3T1070, S3C2560, S3C2430	
S3C2560	Installation of Instruments	30	05-Mar-24	03-Apr-24	04-Apr-23	03-May-23	-336	S3C2350	S3T1154	
S3C2570	Installation of Actuator	21	01-May-24	21-May-24	29-Apr-23	19-May-23	-368	S3P2170	S3T1164	
Electrical Installations		135	14-Jan-24	27-May-24	11-Dec-22	25-Apr-24	-32			
S3C2360	Installation of Transformer	55	01-Feb-24	26-Mar-24	29-Dec-22	21-Feb-23	-399	S3P2120, S3C2155	S3C2380, S3T1125	
S3C2370	Installation of Electrical system - Cable Containment	60	14-Jan-24	13-Mar-24	11-Dec-22	08-Feb-23	-399	S3C2490	S3C2390, S3T1280, S3C2410, S3C2400	
S3C2380	Installation of LV Switchroom	60	21-Feb-24	20-Apr-24	18-Jan-23	18-Mar-23	-399	S3P2110, S3C2360	S3C2410, S3T1120	
S3C2390	Installation of Electrical system - Wall Mount Equipment, Conduit & Wiring	60	13-Feb-24	12-Apr-24	27-Jan-24	26-Mar-24	-17	S3C2370	S3C2440, S3T1280	
S3C2400	Installation of SCADA system	60	14-Mar-24	12-May-24	09-Feb-23	09-Apr-23	-399	S3C2370, S3P1910	S3T1050	
S3C2410	Power Cable laying and Termination	30	22-Feb-24	22-Mar-24	03-May-23	01-Jun-23	-295	S3C2380, S3C2370	S3T1160	
S3C2420	Installation of Gas Detection System	50	04-Apr-24	23-May-24	15-Mar-23	03-May-23	-386	S3P2140, S3C2430	S3T1152	
S3C2430	Installation of Online Monitoring instrument / Level Control Equipment	30	04-Apr-24	03-May-24	15-Mar-23	13-Apr-23	-386	S3P2000, S3P1920, S3P1990, S3C2250, S3C2350, S3C2150	S3C2420, S3T1154	
S3C2440	Installation of Electrical system - Lighting and Small Power Accessories	30	13-Apr-24	12-May-24	27-Mar-24	25-Apr-24	-17	S3C2390	S3T1280	
S3C2580	Installation of UPS	7	21-May-24	27-May-24	20-May-23	26-May-23	-367	S5P1090	S3T1174	
BS Equipment Installation		150	15-Dec-23	12-May-24	11-Nov-22	25-Apr-24	-17			
S3C2450	Installation of P&D System - Main Pipework	75	15-Dec-23	27-Feb-24	11-Nov-22	24-Jan-23	-399	S3C2460, S3S1020, S3C1995	S3C2470, S3C2490, S3T1250	
S3C2460	Installation of FS system - Main Pipework	75	15-Dec-23*	27-Feb-24	11-Nov-22	24-Jan-23	-399	S3S1020, S3C1995	S3C2480, S3C2450, S3T1240	
S3C2470	Installation of P&D System - Branch Pipework	50	08-Feb-24	28-Mar-24	28-Dec-23	15-Feb-24	-42	S3C2450	S3C2510, S3T1250	
S3C2480	Installation of FS system - Branch Pipework, Conduit & Wiring	50	08-Feb-24	28-Mar-24	28-Dec-23	15-Feb-24	-42	S3C2460	S3C2520, S3T1240	
S3C2490	Installation of MVAC system - Ceiling Mount Equipment, Main Ductwork & Pipework	60	14-Jan-24	13-Mar-24	11-Dec-22	08-Feb-23	-399	S3C2450, S3P2130	S3C2500, S3T1260, S3C2370	



Remaining Work
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Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

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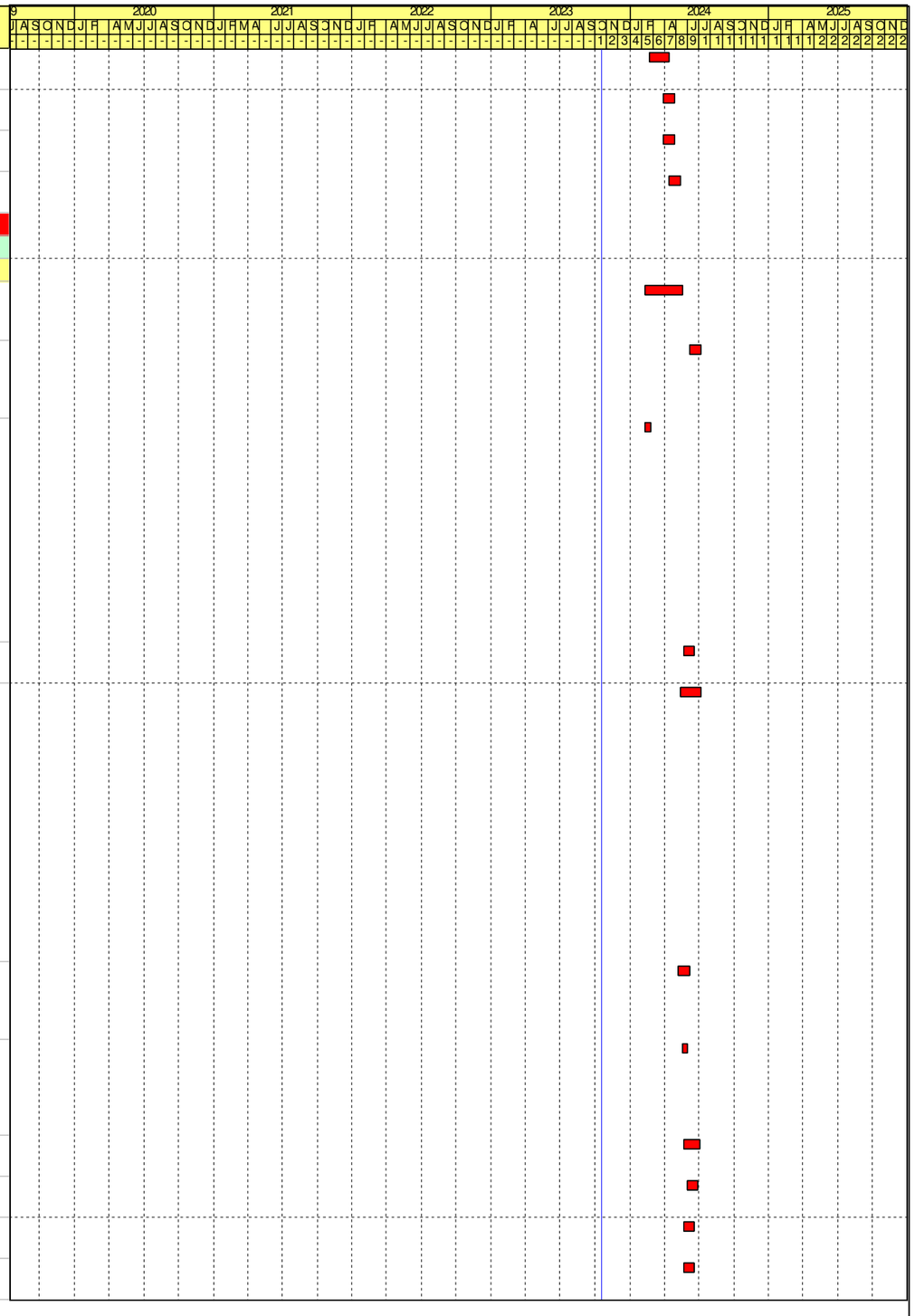
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3C2500	Installation of MVAC system - Wall Mount Equipment, Branch Duct & pipework	50	23-Feb-24	12-Apr-24	06-Feb-24	26-Mar-24	-17	S3C2490, S3P2130	S3C2530, S3T1260	
S3C2510	Installation of P&D System - Sanitary Fitting	30	29-Mar-24	27-Apr-24	16-Feb-24	16-Mar-24	-42	S3C2470	S3T1250, S3S1030	
S3C2520	Installation of FS system - Dropper, Sprinkler Head, Detector & Devices	30	29-Mar-24	27-Apr-24	16-Feb-24	16-Mar-24	-42	S3C2480	S3T1240, S3S1030	
S3C2530	Installation of MVAC system - Air Grills & Diffuser	30	13-Apr-24	12-May-24	27-Mar-24	25-Apr-24	-17	S3C2500, S3P2130	S3T1260	
Testing & Commissioning		601	02-Feb-24	24-Sep-25	06-Jan-23	24-Sep-25	0			
For KD3A - Completion of Phase 1 Commissioning - 15 Jan 2024		328	09-Feb-24	01-Jan-25	06-Jan-23	24-Sep-25	266			
SAT of Sidestream Facilities		148	09-Feb-24	05-Jul-24	06-Jan-23	02-Jun-23	-399			
S3T1000	Pipe Pressure Test	100	09-Feb-24	18-May-24	06-Jan-23	15-Apr-23	-399	S3C2150, S3C2250, S3C2350	S3T1170, S3T1070	
S3T1020	SAT for Chemical Dosing system (i.e.NaOH, Micro-Nutrient and Defoamer)	30	06-Jun-24	05-Jul-24	04-May-23	02-Jun-23	-399	S3C2210, S3C2200, S3T1130, S3C2320	S3T1170	
S3T1030	Dry Test for Pumps	14	11-Feb-24	24-Feb-24	02-Apr-23	15-Apr-23	-315	S3C2000, S3C2010, S3C2020, S3C2030, S3C2040, S3C2050, S3C2060, S3C2070, S3C2080, S3C2200, S3P2050, S3C2285	S3T1070, S3T1050	
S3T1040	SAT for Drum Sludge Thickener System	30	21-May-24	19-Jun-24	04-May-23	02-Jun-23	-383	S3C2240, S3T1120	S3T1170, S3T1050	
S3T1050	SAT for SCADA System (STF)	54	13-May-24	05-Jul-24	10-Apr-23	02-Jun-23	-399	S3C2400, S3T1030, S3T1040, S3T1060, S3T1080, S3T1090, S3T1100, S3T1110, S3T1120, S3T1130, S3T1140, S3T1150, S3T1152, S3T1154, S3T1174	S3T1170	
S3T1060	SAT for Air blowers and Ancillary Air Blower	30	07-May-24	05-Jun-24	04-Apr-23	03-May-23	-399	S3C2310, S3C2340, S3T1120	S3T1170, S3T1050, S3T1140, S3T1150	
S3T1070	Wet Test for Pumps	14	19-May-24	01-Jun-24	16-Apr-23	29-Apr-23	-399	S3T1030, S3C2350, S3C2250, S3C2150, S3T1000	S3T1130	
S3T1080	SAT for DOU no.4	45	21-May-24	04-Jul-24	19-Apr-23	02-Jun-23	-398	S3C2300, S3T1120	S3T1170, S3T1050	
S3T1090	SAT for mixer	30	30-May-24	28-Jun-24	04-May-23	02-Jun-23	-392	S3C2120	S3T1170, S3T1050	
S3T1100	SAT for Primary clarifier	30	21-May-24	19-Jun-24	04-May-23	02-Jun-23	-383	S3C2280, S3T1120	S3T1170, S3T1050	
S3T1110	SAT for Secondary clarifier	30	21-May-24	19-Jun-24	04-May-23	02-Jun-23	-383	S3C2090, S3T1120	S3T1170, S3T1050	



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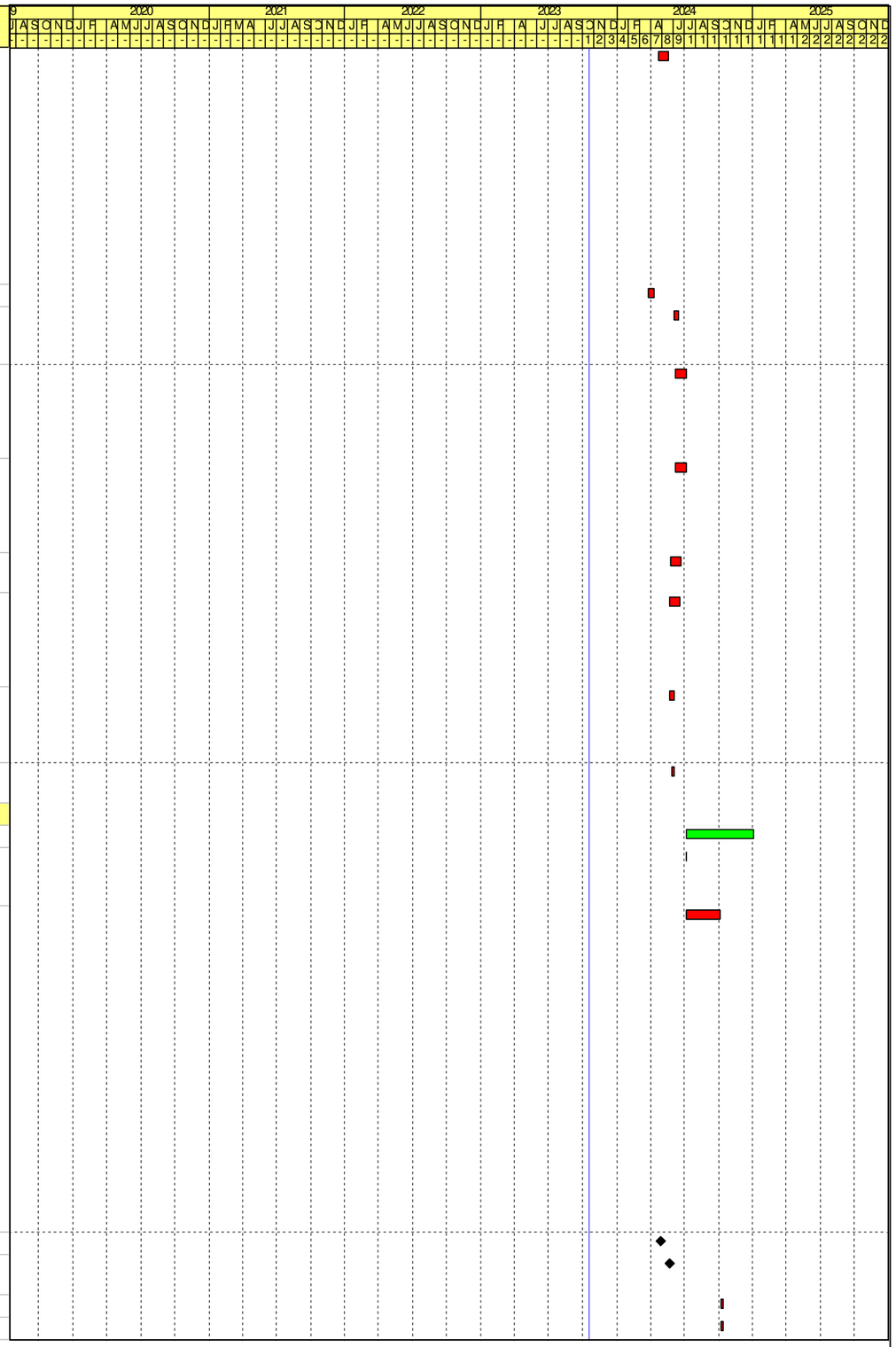
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3T1120	SAT for LV Switchboard	30	21-Apr-24	20-May-24	19-Mar-23	17-Apr-23	-399	S3C2380	S3T1160, S3T1140, S3T1150, S3T1050, S3T1080, S3T1100, S3T1110, S3T1152, S3T1154, S3T1164, S3T1174, S3T1060, S3T1040	
S3T1125	SAT for Transformer	14	27-Mar-24	09-Apr-24	19-May-23	01-Jun-23	-313	S3C2360	S3T1160	
S3T1130	Functional Test for Pumps	14	02-Jun-24	15-Jun-24	30-Apr-23	13-May-23	-399	S3T1070	S3T1170, S3T1050, S3T1020	
S3T1140	SAT for Phospaq Reactor	30	06-Jun-24	05-Jul-24	04-May-23	02-Jun-23	-399	S3C2130, S3C2100, S3C2150, S3T1120, S3T1060	S3T1170, S3T1050	
S3T1150	SAT for Anammox Reactor	30	06-Jun-24	05-Jul-24	04-May-23	02-Jun-23	-399	S3C2140, S3C2110, S3C2150, S3T1120, S3T1060	S3T1170, S3T1050	
S3T1152	SAT for Gas Detection System	30	24-May-24	22-Jun-24	04-May-23	02-Jun-23	-386	S3C2420, S3T1120	S3T1170, S3T1050	
S3T1154	SAT for Instrumentation	30	21-May-24	19-Jun-24	04-May-23	02-Jun-23	-383	S3C2430, S3C2560, S3C2220, S3C2540, S3T1120	S3T1170, S3T1050	
S3T1164	SAT for Actuators	14	22-May-24	04-Jun-24	20-May-23	02-Jun-23	-368	S3C2570, S3C2550, S3C2230, S3T1120	S3T1170	
S3T1174	SAT for UPS	7	28-May-24	03-Jun-24	27-May-23	02-Jun-23	-367	S3C2580, S3T1120	S3T1050	
Process Start Up & Phase 1 Commissioning Test		249	27-Apr-24	01-Jan-25	18-Apr-23	24-Sep-25	266			
S3T1158	Temporary Power Supply for STF	180	06-Jul-24	01-Jan-25	29-Mar-25	24-Sep-25	266	S3T1170		
S3T1160	Power Energization (Power Provision from DE/2018/04 Contract)	0	05-Jul-24	05-Jul-24	01-Jun-23	01-Jun-23	-399	S3T1120, S3C2410, S3T1125	S3T1170	
S3T1170	Process Start Up	92	06-Jul-24	05-Oct-24	03-Jun-23	02-Sep-23	-399	S3T1190, S3T1180, S3T1100, S3T1110, S3T1060, S3T1040, S3T1090, S3T1020, S3T1080, S3T1150, S3T1140, S3T1000, S3T1050, S3T1130, S3T1152, S3T1154, S3T1164, S3T1160	S3T1200, S3T1158	
S3T1180	Existing sludge dewatering facilities Ready (by DE/2018/04 Contract)	0		27-Apr-24*		02-Jun-23	-330		S3T1170	
S3T1190	Plant service water from zone B/C Ready (Zone B by DE/2018/04 Contract)	0		21-May-24		18-Apr-23	-399		S3T1170	
S3T1200	Submission & Acceptance of Process Start Up Report	7	06-Oct-24	12-Oct-24	03-Sep-23	09-Sep-23	-399	S3T1170	S3T1210	
S3T1210	Notice for Commencement of Phase 1 Commissioning Tests	7	06-Oct-24	12-Oct-24	03-Sep-23	09-Sep-23	-399	S3T1200	S3T1220	



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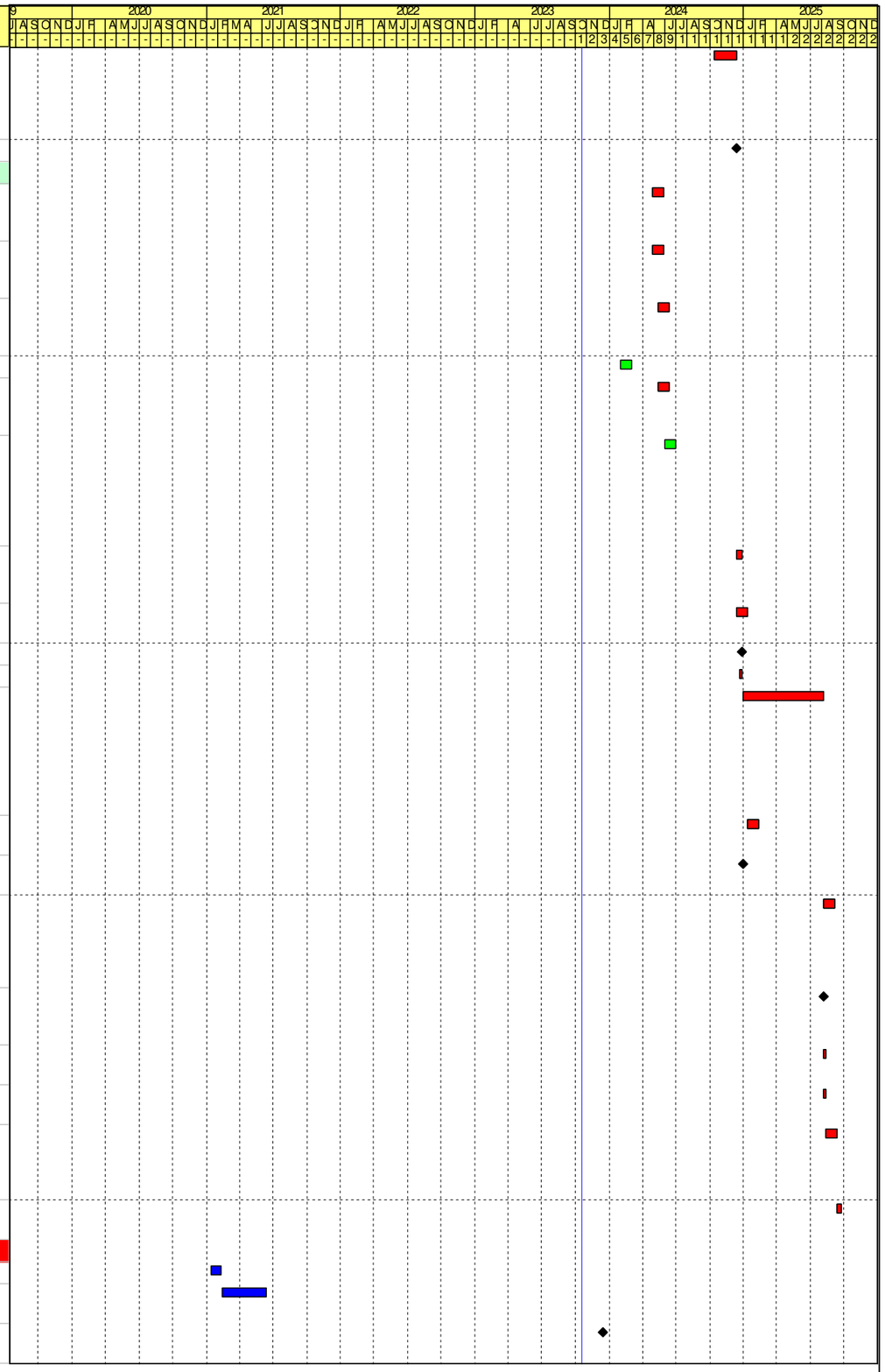
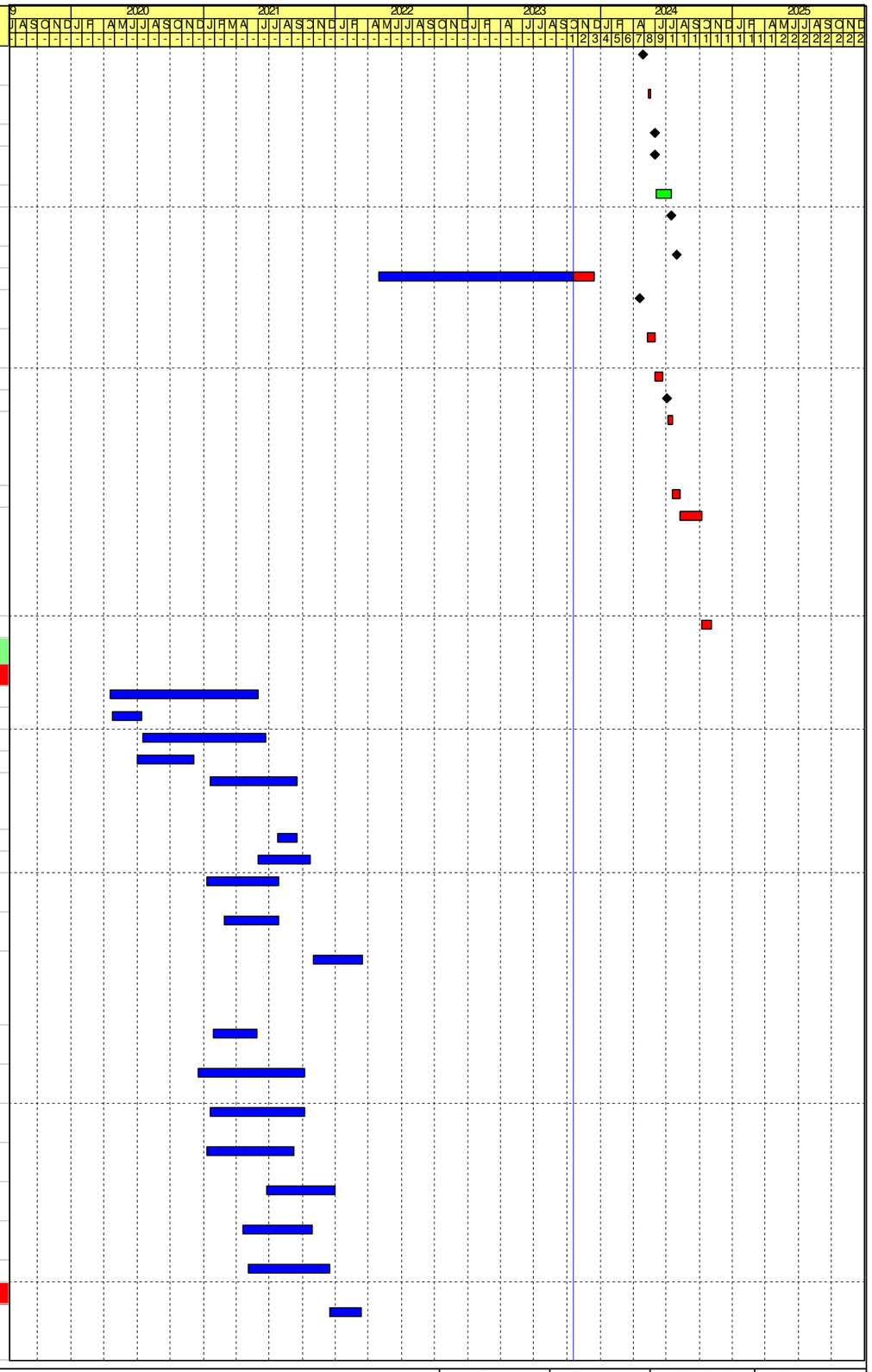
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3T1220	Phase 1 Commissioning Tests with daily result to PM	60	13-Oct-24	11-Dec-24	10-Sep-23	08-Nov-23	-399	S3T1210	S3T1300, S3T1230, S3T1320, S3T1350, S3T1290	
S3T1230	Completion of KD3A	0		11-Dec-24		06-Apr-24	-249	S3T1220	KD1050-2	
For Section 3 Completion - Remaining Commissioning Works - 05 Jun 2024		601	02-Feb-24	24-Sep-25	09-Nov-23	21-Aug-24	-399			
S3T1240	SAT for FS system	30	28-Apr-24	27-May-24	26-Apr-24	25-May-24	-2	S3C2520, S3C2460, S3C2480	S3S1170	
S3T1250	SAT for P&D system	30	28-Apr-24	27-May-24	26-Apr-24	25-May-24	-2	S3C2450, S3C2470, S3C2510	S3S1170	
S3T1260	SAT for MVAC System	30	13-May-24	11-Jun-24	26-Apr-24	25-May-24	-17	S3C2530, S3C2490, S3C2500	S3S1170	
S3T1270	Essential T&C for FSD Inspection	30	02-Feb-24	02-Mar-24	22-Mar-24	20-Apr-24	49	S3P2140	S3S1150	
S3T1280	SAT for Electrical System (BS)	30	13-May-24	11-Jun-24	26-Apr-24	25-May-24	-17	S3C2370, S3C2390, S3C2440	S3S1170	
S3T1285	SAT for Lifting Appliance	30	31-May-24	29-Jun-24	23-Jul-24	21-Aug-24	53	S3C2170, S3C2180, S3C2190, S3C2290, S3C2260, S3C2270	SC31120	
S3T1290	Phase 1 Post Commissioning with daily result to PM	17	12-Dec-24	28-Dec-24	09-Nov-23	25-Nov-23	-399	S3T1220	S3T1320, S3T1330, S3T1315	
S3T1300	Submission & Acceptance of Phase 1 Commissioning Tests Report	30	12-Dec-24	10-Jan-25	12-May-24	10-Jun-24	-214	S3T1220	S3T1350, S3T1330	
S3T1310	THP digested sludge centrate from Zone C Ready	0		28-Dec-24		25-Nov-23	-399		S3T1320	
S3T1315	Notice for Commencement of Phase 2 Commissioning Tests	7	22-Dec-24	28-Dec-24	19-Nov-23	25-Nov-23	-399	S3T1290	S3T1320	
S3T1320	Phase 2 Commissioning Tests with daily result to PM	221	29-Dec-24	06-Aug-25	26-Nov-23	03-Jul-24	-399	S3T1340, S3T1220, S5T1120, S5T1180, S3T1310, S3T1290, S3T1315	S3T1350, S3T1370, S3T1365, S3T1362	
S3T1330	Submission & Acceptance of Phase 1 Post Commissioning Report	30	11-Jan-25	09-Feb-25	11-Jun-24	10-Jul-24	-214	S3T1300, S3T1290	S3T1350	
S3T1340	Ready to Process start up of the first Anaerobic Digester in Zone C	0	29-Dec-24		26-Nov-23		-399	S5T1120	S3T1320, S3T1350	
S3T1350	Submission & Acceptance of Phase 2 Commissioning Tests Report	30	07-Aug-25	05-Sep-25	11-Jul-24	09-Aug-24	-392	S3T1320, S3T1340, S3T1300, S3T1220, S3T1330	S3T1380	
S3T1360	Commissioning of new Anaerobic Digesters (2 nos.) in Zone C Finished	0		06-Aug-25		03-Jul-24	-399	S5T1180	S3T1370, S3T1365, S3T1362	
S3T1362	Demonstration	7	07-Aug-25	13-Aug-25	04-Jul-24	10-Jul-24	-399	S3T1360, S3T1320	S3T1370	
S3T1365	Notice for Commencement of Phase 3 Commissioning Tests	7	07-Aug-25	13-Aug-25	04-Jul-24	10-Jul-24	-399	S3T1360, S3T1320	S3T1370	
S3T1370	Phase 3 Commissioning Tests with daily result to PM	30	14-Aug-25	12-Sep-25	11-Jul-24	09-Aug-24	-399	S3T1360, S3T1320, S3T1365, S3T1362	S3T1380	
S3T1380	Submission & Acceptance of Phase 3 Commissioning Tests Report	12	13-Sep-25	24-Sep-25	10-Aug-24	21-Aug-24	-399	S3T1370, S3T1350	SC31120	
Statutory Submission / Inspection (FSD)		381	12-Jan-21 A	04-Nov-24	17-Sep-22	21-Aug-24	-75			
S3S1000	Prepare & Submit GBP for FSD approval	0	12-Jan-21 A	10-Feb-21 A	17-Sep-22	17-Sep-22			S3S1010	
S3S1010	FSD Review & Approval of GBP	0	11-Feb-21 A	11-Jun-21 A	17-Sep-22	17-Sep-22		S3S1000	S3S1150, S3C1100	
S3S1020	Submit WWO46 Part I/II to WSD (FS / PD)	0	15-Dec-23		11-Nov-22		-399	S3D1550, S3D1510	S3C2460, S3C2450	



Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S3S1030	Submit WWO46 Part IV to WSD (FS / PD)	0	28-Apr-24		17-Mar-24		-42	S3C2510, S3C2520	S3S1040	
S3S1040	WSD Inspection	7	12-May-24	18-May-24	31-Mar-24	06-Apr-24	-42	S3S1030	S3S1060, S3S1050	
S3S1050	Issuance of FS Water Certificate	0		01-Jun-24		20-Apr-24	-42	S3S1040	S3S1150	
S3S1060	Issuance of Form WWO46 Part Va	0		01-Jun-24		23-Jun-24	22	S3S1040	S3S1080, S3S1070	
S3S1070	System Flushing / Sampling	45	02-Jun-24	16-Jul-24	24-Jun-24	07-Aug-24	22	S3S1060	S3S1080	
S3S1080	Issuance of Form WWO46 Part Vb	0		16-Jul-24		07-Aug-24	22	S3S1060, S3S1070	S3S1090	
S3S1090	Issuance of Water Certificate	0		30-Jul-24		21-Aug-24	22	S3S1080	SC31120	
S3S1100	Submission & Approval of DG Application to FSD	56	29-Apr-22 A	15-Dec-23	14-Dec-22	08-Feb-23	-311		S3C2160	
S3S1110	Submit Application to FSD for DG Licence	0	19-Apr-24		09-Apr-23		-376	S3C2160	S3S1120, S5S1270	
S3S1120	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	10-May-24	30-May-24	25-Feb-24	16-Mar-24	-75	S3S1110	S3S1130	
S3S1130	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	31-May-24	20-Jun-24	17-Mar-24	06-Apr-24	-75	S3S1120	S3S1140	
S3S1140	DG Licence issued	0		04-Jul-24		20-Apr-24	-75	S3S1130	S3S1150	
S3S1150	Prepare & Submit FS/314, FS/501 & FS/501a	14	05-Jul-24	18-Jul-24	21-Apr-24	04-May-24	-75	S3S1010, S3S1140, S3S1050, S3T1270	S3S1160	
S3S1160	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	19-Jul-24	08-Aug-24	05-May-24	25-May-24	-75	S3S1150	S3S1170	
S3S1170	F.S. Inspection, Defects Rectification & Re-inspection	60	09-Aug-24	07-Oct-24	26-May-24	24-Jul-24	-75	S3S1160, S3C1150, S3T1240, S3T1250, S3T1260, S3T1280	S3S1180	
S3S1180	Issuance of Acceptance Letter	28	08-Oct-24	04-Nov-24	25-Jul-24	21-Aug-24	-75	S3S1170	SC31120	
Section 4 - Complete Construction & T&C for UV System No.1 & EP		0	18-Apr-20 A	14-Sep-22 A	06-Jan-23	24-Sep-25				
Major Plant & Materials Fabrication & Delivery		0	18-Apr-20 A	16-Mar-22 A	06-Jan-23	24-Sep-25				
S4P1000	Procurement & PO for FRP Cover	0	18-Apr-20 A	31-May-21 A	15-Apr-23	15-Apr-23		PL1010	S4P1090	
S4P1010	Procurement & PO for Pipeworks & Associated Valves	0	25-Apr-20 A	15-Jul-20 A	06-Jan-23	06-Jan-23		S1D1000	S4P1130	
S4P1020	Procurement & PO for Elec. Materials	0	18-Jul-20 A	22-Jun-21 A	24-Sep-25	24-Sep-25		S1D1130	S4P1140	
S4P1030	Procurement & PO for FS System	0	02-Jul-20 A	04-Dec-20 A	24-Sep-25	24-Sep-25		S1D1330	S4P1150	
S4P1040	Fabrication of UV Disinfection System	0	18-Jan-21 A	17-Sep-21 A	05-Feb-23	05-Feb-23		S1P1000, KD1000, S1D1210	S4C1080, S4P1050	
S4P1050	FAT for UV Disinfection System	0	23-Jul-21 A	17-Sep-21 A	05-Feb-23	05-Feb-23		S4P1040	S4P1060	
S4P1060	Delivery of UV Disinfection System	0	01-Jun-21 A	22-Oct-21 A	05-Feb-23	05-Feb-23		S4P1050	S4C1080	
S4P1070	Fabrication & Delivery of Lift-up Pumps	0	11-Jan-21 A	26-Jul-21 A	06-Jan-23	06-Jan-23		S1P1010, S1D1290	S4C1040	
S4P1080	Fabrication & Delivery of Transfer Pumps	0	26-Feb-21 A	26-Jul-21 A	15-Apr-23	15-Apr-23		S1P1020, S1D1290	S5UVPC1000	
S4P1090	Fabrication & Delivery of FRP Cover	0	01-Nov-21 A	16-Mar-22 A	15-Apr-23	15-Apr-23		S1D1290, S4P1000, S1P1020, PL1010	S4T1010	
S4P1100	Fabrication & Delivery of EOT Cranes (2T & 5T)	0	28-Jan-21 A	27-May-21 A	06-Jan-23	06-Jan-23		S1P1030, S1D1290	S4C1020	
S4P1110	Fabrication & Delivery of Stoplogs	0	16-Dec-20 A	07-Oct-21 A	05-Feb-23	05-Feb-23		S1P1040, S1D1290	S4C1070	
S4P1120	Fabrication & Delivery of Penstocks	0	18-Jan-21 A	07-Oct-21 A	05-Feb-23	05-Feb-23		S1P1050, S1D1290	S4C1070	
S4P1130	Fabrication & Delivery of Pipeworks & Associated Valves	0	11-Jan-21 A	08-Sep-21 A	06-Jan-23	06-Jan-23		S4P1010, S1D1290	S4C1040	
S4P1140	Fabrication & Delivery of Elec. Materials	0	24-Jun-21 A	31-Dec-21 A	24-Sep-25	24-Sep-25		S4P1020, S1D1330	S4C1120	
S4P1150	Fabrication & Delivery of FS System	0	18-Apr-21 A	28-Oct-21 A	24-Sep-25	24-Sep-25		S4P1030, S1D1330	S4C1100	
S4P1160	Fabrication & Delivery of Temp. Switchboard	0	05-May-21 A	15-Dec-21 A	15-Apr-23	15-Apr-23			S4C1000	
E&M Installation		0	25-Apr-21 A	23-Jun-22 A	06-Jan-23	24-Sep-25				
S4C1000	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	0	15-Dec-21 A	11-Mar-22 A	15-Apr-23	15-Apr-23		S4C1010, S1D1130, S4P1160	S4T1010, S4C1140	



Remaining Work
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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
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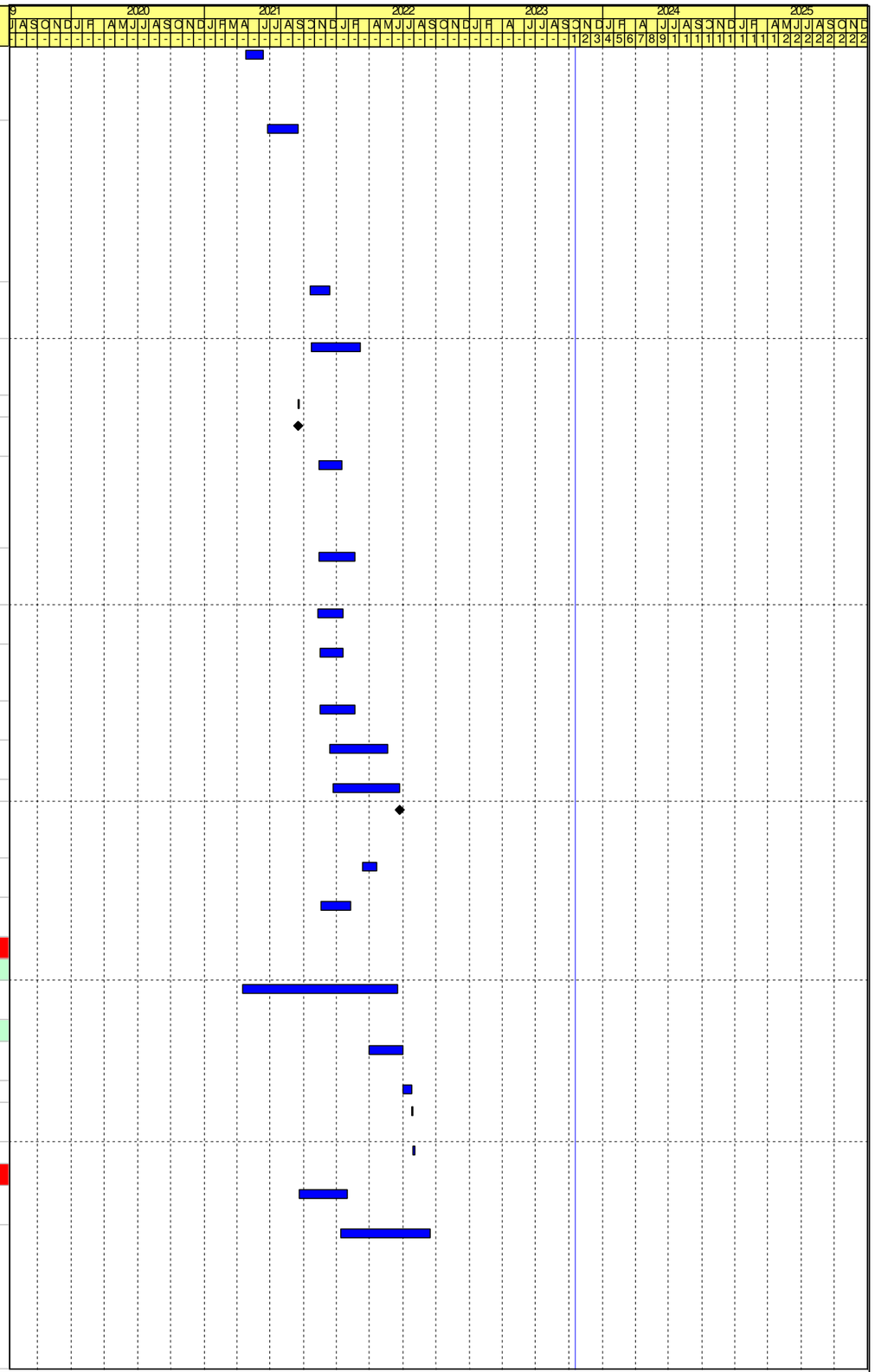
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S4C1010	Mobilisation (Partial Access on 24 Apr 2021, Remaining Access on 12 May 2021)	0	25-Apr-21 A	12-Jun-21 A	06-Jan-23	06-Jan-23		AD1010, S1D1130, AD1020	S4C1020, S5TXRC1030, S4C1090, S4C1000	
S4C1020	E&M Installation of EOT Cranes (2T)	0	25-Jun-21 A	17-Sep-21 A	06-Jan-23	06-Jan-23		S1D1180, S1D1260, S4C1010, S4P1100	S4T1010, S4C1030, S4C1040, S4C1110, S4C1090, S4T1000, S4C1080, S4C1070, PL1200	
S4C1030	E&M Installation of EOT Cranes (5T)	0	20-Oct-21 A	11-Dec-21 A	15-Apr-23	15-Apr-23		S4C1020	S5UVPC1000, S4T1000, PL1200	
S4C1040	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	0	21-Oct-21 A	05-Mar-22 A	06-Jan-23	06-Jan-23		S4C1020, S4P1070, S4P1130	S5TXRC1050, S4T1010, PL1200	
S4C1050	Preperation Works for E&M Installation of Penstocks & Stoplogs	0	17-Sep-21 A	19-Sep-21 A	05-Feb-23	05-Feb-23			S4C1070	
S4C1060	CNE-014 Access to and use to Portion C-1A for Installation of EOT, UV Equipment and Effluent Transfer Pump	0	16-Sep-21 A		05-Feb-23				S4C1070	
S4C1070	E&M Installation of Penstocks & Stoplogs (Impacted by CNE-014)	0	11-Nov-21 A	15-Jan-22 A	05-Feb-23	05-Feb-23		S4P1110, S4P1120, S4C1020, S4C1050, S4C1060	S4T1010, S5TXRC1050, PL1200	
S4C1080	E&M Installation of UV System	0	11-Nov-21 A	19-Feb-22 A	05-Feb-23	05-Feb-23		S4P1040, S4P1060, S4C1020	S4T1010, S5TXRC1050, PL1200	
S4C1090	FS Installation - Conduits, Trunking, & Pipeworks	0	08-Nov-21 A	18-Jan-22 A	24-Sep-25	24-Sep-25		S4C1010, S4C1020	S4C1100, PL1200	
S4C1100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	0	15-Nov-21 A	18-Jan-22 A	24-Sep-25	24-Sep-25		S4P1150, S4C1090	SC41110, S4S1010, PL1200	
S4C1110	BS Fitting Installation - Conduits, Trunking, & Ductworks	0	15-Nov-21 A	19-Feb-22 A	24-Sep-25	24-Sep-25		S4C1020, S1D1310	S4C1120, PL1200	
S4C1120	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	0	13-Dec-21 A	21-May-22 A	24-Sep-25	24-Sep-25		S4C1110, S4P1140	S4C1150, PL1200	
S4C1130	Excavation Works & Cable Laying - by CLP (Impacted by CNE-035)	0	22-Dec-21 A	23-Jun-22 A	15-Apr-23	15-Apr-23			S4C1140	
S4C1140	Ready for Power Energization	0		23-Jun-22 A		15-Apr-23		S4C1000, S4C1130, S4S1000	S4S1030, S4T1010	
S4C1150	Installation of CCTV System	0	14-Mar-22 A	19-Apr-22 A	24-Sep-25	24-Sep-25		S4C1120	SC41110, PL1200	
S4C1160	Installation of FS Link	0	17-Nov-21 A	08-Feb-22 A	24-Sep-25	24-Sep-25			S4S1010, PL1200	
Statutory Submission / Inspection		0	17-Apr-21 A	02-Aug-22 A	15-Apr-23	24-Sep-25				
CLP Submission		0	17-Apr-21 A	15-Jun-22 A	15-Apr-23	15-Apr-23				
S4S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP (Temp. Power)	0	17-Apr-21 A	15-Jun-22 A	15-Apr-23	15-Apr-23			S4C1140	
FSD Submission & Inspection		0	01-Apr-22 A	02-Aug-22 A	24-Sep-25	24-Sep-25				
S4S1010	Prepare & Submit FS/314, FS/501 & FS/501a	0	01-Apr-22 A	30-Jun-22 A	24-Sep-25	24-Sep-25		S4C1100, S4C1160	S4S1020	
S4S1020	FSD Review & Approval of FS/314, FS/501 & FS/501a	0	01-Jul-22 A	25-Jul-22 A	24-Sep-25	24-Sep-25		S4S1010	S4S1030	
S4S1030	F.S. Inspection, Defects Rectification & Re-inspection	0	26-Jul-22 A	29-Jul-22 A	24-Sep-25	24-Sep-25		S4S1020, S4C1140	S4S1040	
S4S1040	Issuance of Acceptance Letter	0	30-Jul-22 A	02-Aug-22 A	24-Sep-25	24-Sep-25		S4S1030	SC41110	
Testing & Commissioning		0	18-Sep-21 A	14-Sep-22 A	15-Apr-23	15-Apr-23				
S4T1000	T&C and R.P.E inspection for EOT Cranes	0	18-Sep-21 A	28-Jan-22 A	15-Apr-23	15-Apr-23		S4C1020, S4C1030	S4T1010	
S4T1010	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1 (Impacted by CNE-035)	0	10-Jan-22 A	14-Sep-22 A	15-Apr-23	15-Apr-23		S4C1020, S4C1070, S4C1080, S4C1000, S4T1000, S4C1040, S4P1090, S4C1140	S4T1020	



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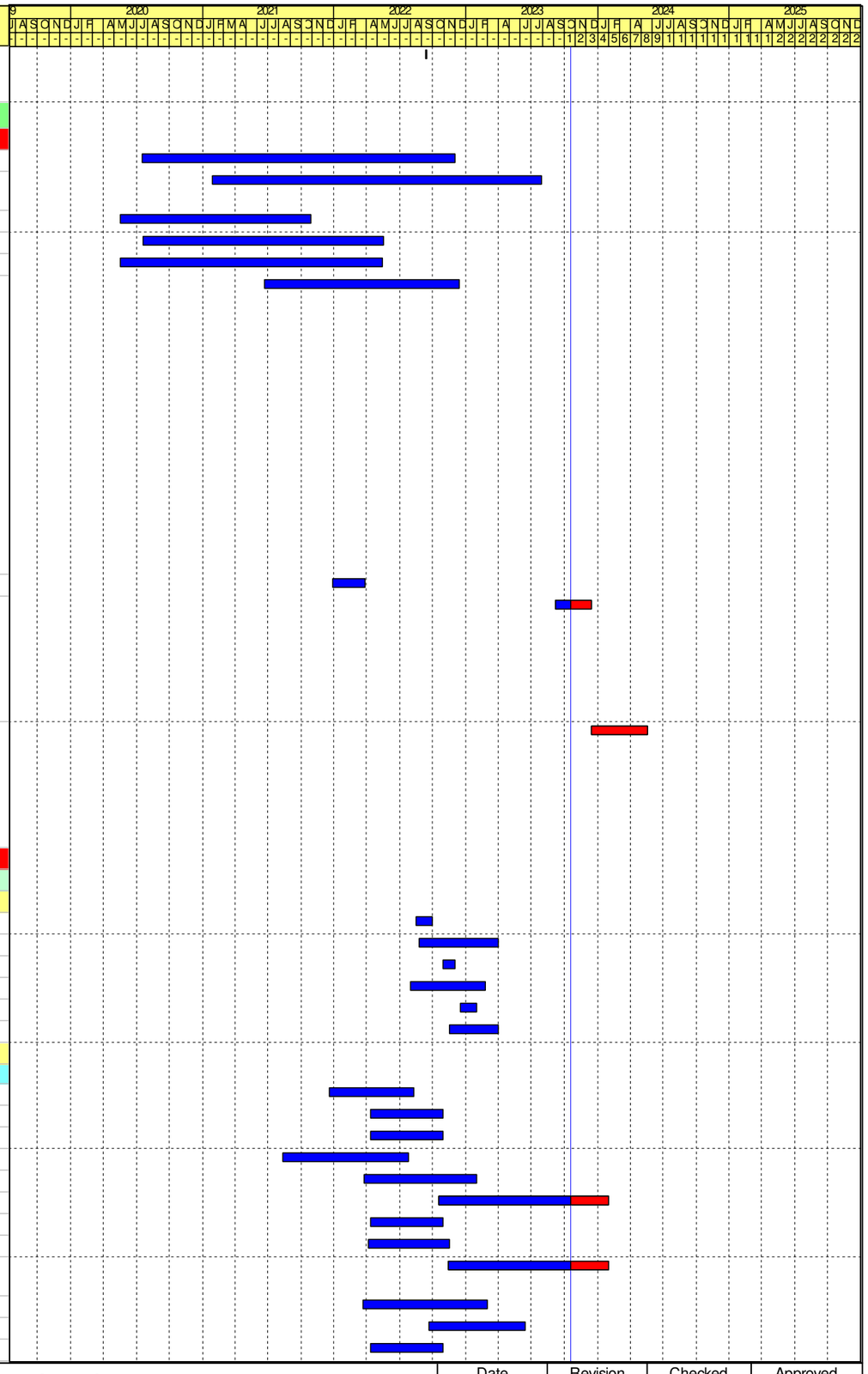
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S4T1020	System Commissioning Tests	0	11-Sep-22 A	14-Sep-22 A	15-Apr-23	15-Apr-23		S4T1010	SC41110, PL1290, S5UVPC1000	
Section 5 - Complete all remaining Works (incl. T&C)		705	18-May-20 A	24-Sep-25	29-Aug-22	24-Sep-25	0			
Fabrication, FAT & Delivery of Major Plant & Materials		213	18-May-20 A	20-May-24	29-Sep-22	24-Sep-25	492			
S5P1000	Procurement & PO for Biogas Booster and Transfer Pumps	0	17-Jul-20 A	30-Nov-22 A	09-May-23	09-May-23		S2P1000	S5BIOP1000	
S5P1010	Procurement & PO for Pipeworks & Associated Valves	0	29-Jan-21 A	30-Jul-23 A	11-Dec-22	11-Dec-22		S2D1070	S5CHPP1070, S5DIGP1020	
S5P1020	Procurement & PO for Lifting Appliances	0	18-May-20 A	29-Oct-21 A	24-Sep-25	24-Sep-25		S2P1020		
S5P1030	Procurement & PO for Ferric Chloride Storage Tank	0	20-Jul-20 A	18-May-22 A	13-Oct-22	13-Oct-22		S2P1000	S5FCDP1000	
S5P1040	Procurement & PO for Ferric Chloride Dosing Pump	0	18-May-20 A	13-May-22 A	23-Feb-23	23-Feb-23		S2P1020	S5FCDP1010	
S5P1050	Procurement & PO for Electrical Sub-contractor	0	21-Jun-21 A	14-Dec-22 A	29-Sep-22	29-Sep-22		PL1010, S2P1130, S2D1370, S2D1570, S2D1270, S2D1310, S2D1430, S2D1470, S2D1510, S2D1630, S2D1670	S5SDBC1170, S5SDBC1310, S5SDBC1540, S5CHPC1100, S5CHPC1230, S5CHPC1290, S5TXRC1030, S5TXRC1040, S5DIGC1120, S5DIGC1160, S5DIGC1200, S5DIGC1260, S5EXAC1030, S5EXAC1080, S5EXAC1100, S5EXAC1110, S5EXAC1070	
S5P1070	Procurement & PO for mechanical ventilation system	0	28-Dec-21 A	28-Mar-22 A	24-Sep-25	24-Sep-25				
S5P1080	Fabrication and Delivery of Ventilation Fan	56	07-Sep-23 A	15-Dec-23	02-Nov-22	28-Dec-22	-353		S5SDBC1620, S5SDBC1720, S5SDBC1820, S5CHPC1090, S5CHPC1220, S5DIGC1290, S5WS2C1150	
S5P1090	Fabrication and Delivery of UPS	158	15-Dec-23*	20-May-24	13-Dec-22	19-May-23	-367		S5SDBC1900, S5SDBC1910, S5SASC1040, S3C2580, S5CHPC1430, S5CHPC1440, S5WS2C1200	
Sludge Dewatering Building		289	11-Aug-21 A	04-Aug-24	29-Sep-22	24-Sep-25	416			
Procurement, Fabrication, FAT & Delivery of Major Plant & Materials		132	11-Aug-21 A	29-Feb-24	29-Sep-22	27-Jul-23	-218			
Procurement		0	31-Jul-22 A	31-Mar-23 A	16-Nov-22	28-Apr-23				
S5SDBP1000	Procurement & PO for DI pipework (B/F)	0	17-Aug-22 A	30-Sep-22 A	22-Apr-23	22-Apr-23			S5SDBP1630	
S5SDBP1010	Procurement & PO for DI pipework (G/F and 1/F)	0	24-Aug-22 A	31-Mar-23 A	16-Nov-22	16-Nov-22			S5SDBP1640	
S5SDBP1020	Procurement & PO for FRP ductworks	0	31-Oct-22 A	30-Nov-22 A	14-Feb-23	14-Feb-23			S5SDBP1650	
S5SDBP1030	Procurement & PO for Genset	0	31-Jul-22 A	22-Feb-23 A	07-Jan-23	07-Jan-23			S5SDBP1670	
S5SDBP1040	Procurement & PO for Process Water Pumps	0	17-Dec-22 A	30-Jan-23 A	23-Jan-23	23-Jan-23			S5SDBP1210	
S5SDBP1050	Procurement & PO for Sludge Skip (PS Screen & Dewatering Screen)	0	18-Nov-22 A	31-Mar-23 A	28-Apr-23	28-Apr-23			S5SDBP1230	
Mechanical		132	11-Aug-21 A	29-Feb-24	29-Sep-22	27-Jul-23	-218			
Fabrication and FAT		103	11-Aug-21 A	31-Jan-24	29-Sep-22	27-Jun-23	-219			
S5SDBP1060	Fabrication & Delivery of Lift	0	18-Dec-21 A	10-Aug-22 A	30-Apr-23	30-Apr-23			S5SDBC1780	
S5SDBP1070	Fabrication & FAT of External Sludge Transfer Pump	0	11-Apr-22 A	28-Oct-22 A	22-Apr-23	22-Apr-23			S5SDBP1400	
S5SDBP1080	Fabrication & FAT of PS Screen Feed Pump	0	11-Apr-22 A	28-Oct-22 A	12-May-23	12-May-23			S5SDBP1490	
S5SDBP1090	Fabrication & FAT of Sludge Screen	0	11-Aug-21 A	26-Jul-22 A	27-Mar-23	27-Mar-23			S5SDBP1520	
S5SDBP1100	Fabrication and FAT of Centrate Transfer Pumps	0	25-Mar-22 A	31-Jan-23 A	22-Feb-23	22-Feb-23			S5SDBP1360	
S5SDBP1110	Fabrication and FAT of Conveyor	103	17-Oct-22 A	31-Jan-24	25-Oct-22	05-Feb-23	-361		S5SDBP1370	
S5SDBP1120	Fabrication and FAT of Dewatering Centrifuge Feed Pumps	0	11-Apr-22 A	28-Oct-22 A	22-Apr-23	22-Apr-23			S5SDBP1380	
S5SDBP1130	Fabrication and FAT of Dewatering Polymer Powder Unit	0	06-Apr-22 A	17-Nov-22 A	29-Sep-22	29-Sep-22		S5SDBP1290	S5SDBP1390	
S5SDBP1140	Fabrication and FAT of FRP Tank (Thickening & Dewatering Polymer Dosing System)	103	14-Nov-22 A	31-Jan-24	11-Nov-22	22-Feb-23	-344		S5SDBP1410	
S5SDBP1150	Fabrication and FAT of Hoist	0	21-Mar-22 A	28-Feb-23 A	27-Mar-23	27-Mar-23			S5SDBP1420	
S5SDBP1160	Fabrication and FAT of Mixers (Digested Sludge Holding Tank)	0	22-Sep-22 A	14-Jun-23 A	17-Feb-23	17-Feb-23			S5SDBP1430	
S5SDBP1170	Fabrication and FAT of Polymer Dosing Pumps	0	11-Apr-22 A	28-Oct-22 A	27-Mar-23	27-Mar-23			S5SDBP1440	



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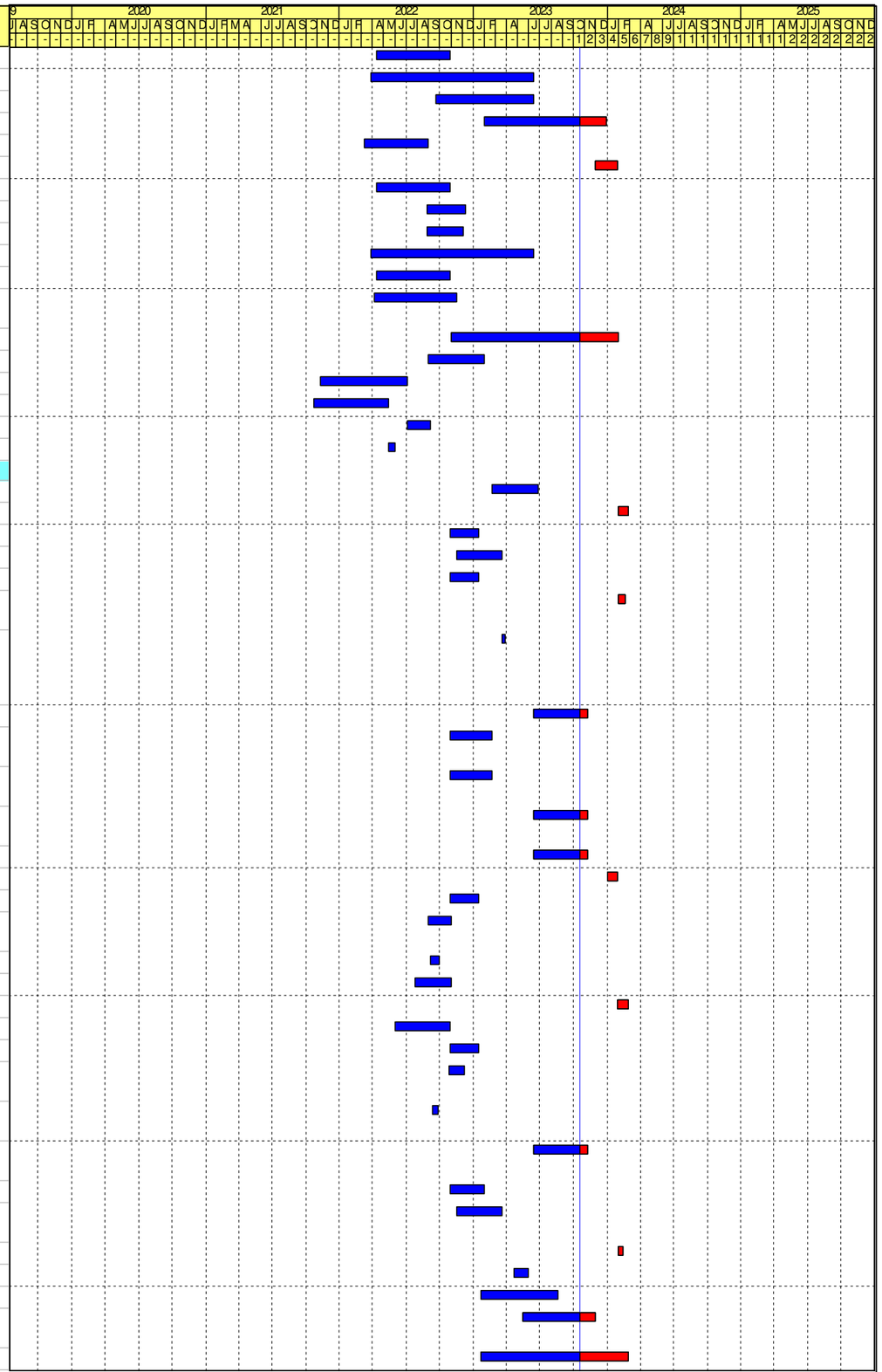
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5SDBP1180	Fabrication and FAT of Polymer Transfer Pumps	0	11-Apr-22 A	28-Oct-22 A	22-Apr-23	22-Apr-23			S5SDBP1450	
S5SDBP1190	Fabrication and FAT of Preparation Tank Mixers	0	28-Mar-22 A	14-Jun-23 A	23-May-23	23-May-23			S5SDBP1460	
S5SDBP1200	Fabrication and FAT of Primary Sludge Holding Tank Mixer	0	22-Sep-22 A	14-Jun-23 A	10-Mar-23	10-Mar-23			S5SDBP1470	
S5SDBP1210	Fabrication and FAT of Process Water Pumps	72	31-Jan-23 A	31-Dec-23	23-Jan-23	05-Apr-23	-271	S5SDBP1040	S5SDBP1480	
S5SDBP1220	Fabrication and FAT of Recirculation Pumps	0	10-Mar-22 A	31-Aug-22 A	22-Feb-23	22-Feb-23			S5SDBP1500	
S5SDBP1230	Fabrication and FAT of Sludge Skip (PS Screen & Dewatering Screen)	60	30-Nov-23*	28-Jan-24	28-Apr-23	27-Jun-23	-216	S5SDBP1050	S5SDBP1530	
S5SDBP1240	Fabrication and FAT of Sludge Transfer Pumps (THP By Pass)	0	11-Apr-22 A	28-Oct-22 A	22-Apr-23	22-Apr-23			S5SDBP1550	
S5SDBP1250	Fabrication and FAT of Steel Work (EOT)	0	29-Aug-22 A	09-Dec-22 A	27-Mar-23	27-Mar-23			S5SDBP1560	
S5SDBP1260	Fabrication and FAT of Steel Work (Monorails)	0	29-Aug-22 A	03-Dec-22 A	12-May-23	12-May-23			S5SDBP1570	
S5SDBP1270	Fabrication and FAT of Storage Tank Mixers	0	28-Mar-22 A	14-Jun-23 A	23-May-23	23-May-23			S5SDBP1580	
S5SDBP1280	Fabrication and FAT of Thickening Centrifuge Feed Pump	0	11-Apr-22 A	28-Oct-22 A	22-Apr-23	22-Apr-23			S5SDBP1590	
S5SDBP1290	Fabrication and FAT of Thickening Polymer Powder Unit	0	06-Apr-22 A	17-Nov-22 A	29-Sep-22	29-Sep-22			S5SDBP1600, S5SDBP1130	
S5SDBP1300	Fabrication and FAT of Thickening Sludge Silo	103	01-Nov-22 A	31-Jan-24	09-Nov-22	20-Feb-23	-346		S5SDBP1610	
S5SDBP1310	Fabrication and FAT of THP Feed Pump	0	31-Aug-22 A	31-Jan-23 A	05-May-23	05-May-23			S5SDBP1620	
S5SDBP1320	Fabrication of Sludge Dewatering Centrifuges	0	10-Nov-21 A	05-Jul-22 A	27-Mar-23	27-Mar-23			S5SDBP1340	
S5SDBP1330	Fabrication of Sludge Thickening Centrifuges	0	22-Oct-21 A	15-May-22 A	27-Mar-23	27-Mar-23			S5SDBP1350	
S5SDBP1340	FAT of Sludge Dewatering Centrifuges	0	06-Jul-22 A	05-Sep-22 A	27-Mar-23	27-Mar-23		S5SDBP1320	S5SDBP1510	
S5SDBP1350	FAT of Sludge Thickening Centrifuges	0	16-May-22 A	31-May-22 A	27-Mar-23	27-Mar-23		S5SDBP1330	S5SDBP1540	
Delivery		132	01-Jun-22 A	29-Feb-24	29-Sep-22	27-Jul-23	-218			
S5SDBP1360	Delivery of Centrate Transfer Pumps	0	21-Feb-23 A	26-Jun-23 A	22-Feb-23	22-Feb-23		S5SDBP1100	S5SDBC1030	
S5SDBP1370	Delivery of Conveyor	29	01-Feb-24	29-Feb-24	05-Feb-23	06-Mar-23	-361	S5SDBP1110	S5SDBC1260	
S5SDBP1380	Delivery of Dewatering Centrifuges Feed Pumps	0	29-Oct-22 A	14-Jan-23 A	22-Apr-23	22-Apr-23		S5SDBP1120	S5SDBC1040	
S5SDBP1390	Delivery of Dewatering Polymer Powder Unit	0	18-Nov-22 A	20-Mar-23 A	29-Sep-22	29-Sep-22		S5SDBP1130	S5SDBC1050	
S5SDBP1400	Delivery of External Sludge Transfer Pump	0	29-Oct-22 A	14-Jan-23 A	22-Apr-23	22-Apr-23		S5SDBP1070	S5SDBC1070	
S5SDBP1410	Delivery of FRP Tank (Thickening & Dewatering Polymer Dosing System)	18	01-Feb-24	18-Feb-24	22-Feb-23	12-Mar-23	-344	S5SDBP1140	S5SDBC1480, S5SDBC1060	
S5SDBP1420	Delivery of Hoist	0	21-Mar-23 A	28-Mar-23 A	27-Mar-23	27-Mar-23		S5SDBP1150	S5SDBC1230, S5SDBC1450, S5SDBC1400, S5SDBC1390	
S5SDBP1430	Delivery of Mixers (Digested Sludge Holding Tank)	19	15-Jun-23 A	08-Nov-23	17-Feb-23	08-Mar-23	-246	S5SDBP1160	S5SDBC1420	
S5SDBP1440	Delivery of Polymer Dosing Pumps	0	29-Oct-22 A	20-Feb-23 A	27-Mar-23	27-Mar-23		S5SDBP1170	S5SDBC1500, S5SDBC1520	
S5SDBP1450	Delivery of Polymer Transfer Pumps	0	29-Oct-22 A	20-Feb-23 A	22-Apr-23	22-Apr-23		S5SDBP1180	S5SDBC1130, S5SDBC1280	
S5SDBP1460	Delivery of Preparation Tank Mixers	19	15-Jun-23 A	08-Nov-23	23-May-23	11-Jun-23	-151	S5SDBP1190	S5SDBC1430, S5SDBC1090	
S5SDBP1470	Delivery of Primay Sludge Holding Tank Mixer	19	15-Jun-23 A	08-Nov-23	10-Mar-23	29-Mar-23	-225	S5SDBP1200	S5SDBC1440	
S5SDBP1480	Delivery of Process Water Pumps	30	01-Jan-24	30-Jan-24	05-Apr-23	05-May-23	-271	S5SDBP1210	S5SDBC1110	
S5SDBP1490	Delivery of PS Screen Feed Pump	0	29-Oct-22 A	14-Jan-23 A	12-May-23	12-May-23		S5SDBP1080	S5SDBC1250	
S5SDBP1500	Delivery of Recirculation Pumps	0	01-Sep-22 A	31-Oct-22 A	22-Feb-23	22-Feb-23		S5SDBP1220	S5SDBC1120, S5SDBC1150	
S5SDBP1510	Delivery of Sludge Dewatering Centrifuges	0	07-Sep-22 A	30-Sep-22 A	27-Mar-23	27-Mar-23		S5SDBP1340	S5SDBC1490	
S5SDBP1520	Delivery of Sludge Screen Press	0	27-Jul-22 A	31-Oct-22 A	27-Mar-23	27-Mar-23		S5SDBP1090	S5SDBC1470	
S5SDBP1530	Delivery of Sludge Skip (PS Screen & Dewatering Screen)	30	29-Jan-24	27-Feb-24	27-Jun-23	27-Jul-23	-216	S5SDBP1230	S5SDBC1300	
S5SDBP1540	Delivery of Sludge Thickening Centrifuges	0	01-Jun-22 A	28-Oct-22 A	27-Mar-23	27-Mar-23		S5SDBP1350	S5SDBC1510	
S5SDBP1550	Delivery of Sludge Transfer Pumps (THP By Pass)	0	29-Oct-22 A	14-Jan-23 A	22-Apr-23	22-Apr-23		S5SDBP1240	S5SDBC1150	
S5SDBP1560	Delivery of Steel Work (EOT)	0	28-Oct-22 A	06-Dec-22 A	27-Mar-23	27-Mar-23		S5SDBP1250	S5SDBC1400, S5SDBC1390	
S5SDBP1570	Delivery of Steel Work (Monorails)	0	12-Sep-22 A	25-Sep-22 A	12-May-23	12-May-23		S5SDBP1260	S5SDBC1230, S5SDBC1450	
S5SDBP1580	Delivery of Storage Tank Mixers	19	15-Jun-23 A	08-Nov-23	23-May-23	11-Jun-23	-151	S5SDBP1270	S5SDBC1430, S5SDBC1090	
S5SDBP1590	Delivery of Thickening Centrifuges Feed Pump	0	29-Oct-22 A	31-Jan-23 A	22-Apr-23	22-Apr-23		S5SDBP1280	S5SDBC1140	
S5SDBP1600	Delivery of Thickening Polymer Powder Unit	0	18-Nov-22 A	20-Mar-23 A	29-Sep-22	29-Sep-22		S5SDBP1290	S5SDBC1270, S5SDBC1050	
S5SDBP1610	Delivery of Thickening Sludge Silo	14	01-Feb-24	14-Feb-24	20-Feb-23	06-Mar-23	-346	S5SDBP1300	S5SDBC1260	
S5SDBP1620	Delivery of THP Feed Pump	0	21-Apr-23 A	30-May-23 A	05-May-23	05-May-23		S5SDBP1310	S5SDBC1290	
S5SDBP1630	Fabrication and delivery of DI pipework (B/F)	0	21-Jan-23 A	21-Aug-23 A	22-Apr-23	22-Apr-23		S5SDBP1000	S5SDBC1100	
S5SDBP1640	Fabrication and delivery of DI pipework (G/F and 1/F)	41	15-May-23 A	30-Nov-23	16-Nov-22	27-Dec-22	-339	S5SDBP1010	S5SDBC1240, S5SDBC1460	
S5SDBP1650	Fabrication and delivery of FRP ductworks	132	21-Jan-23 A	29-Feb-24	14-Feb-23	26-Jun-23	-249	S5SDBP1020	S5SDBC1210	



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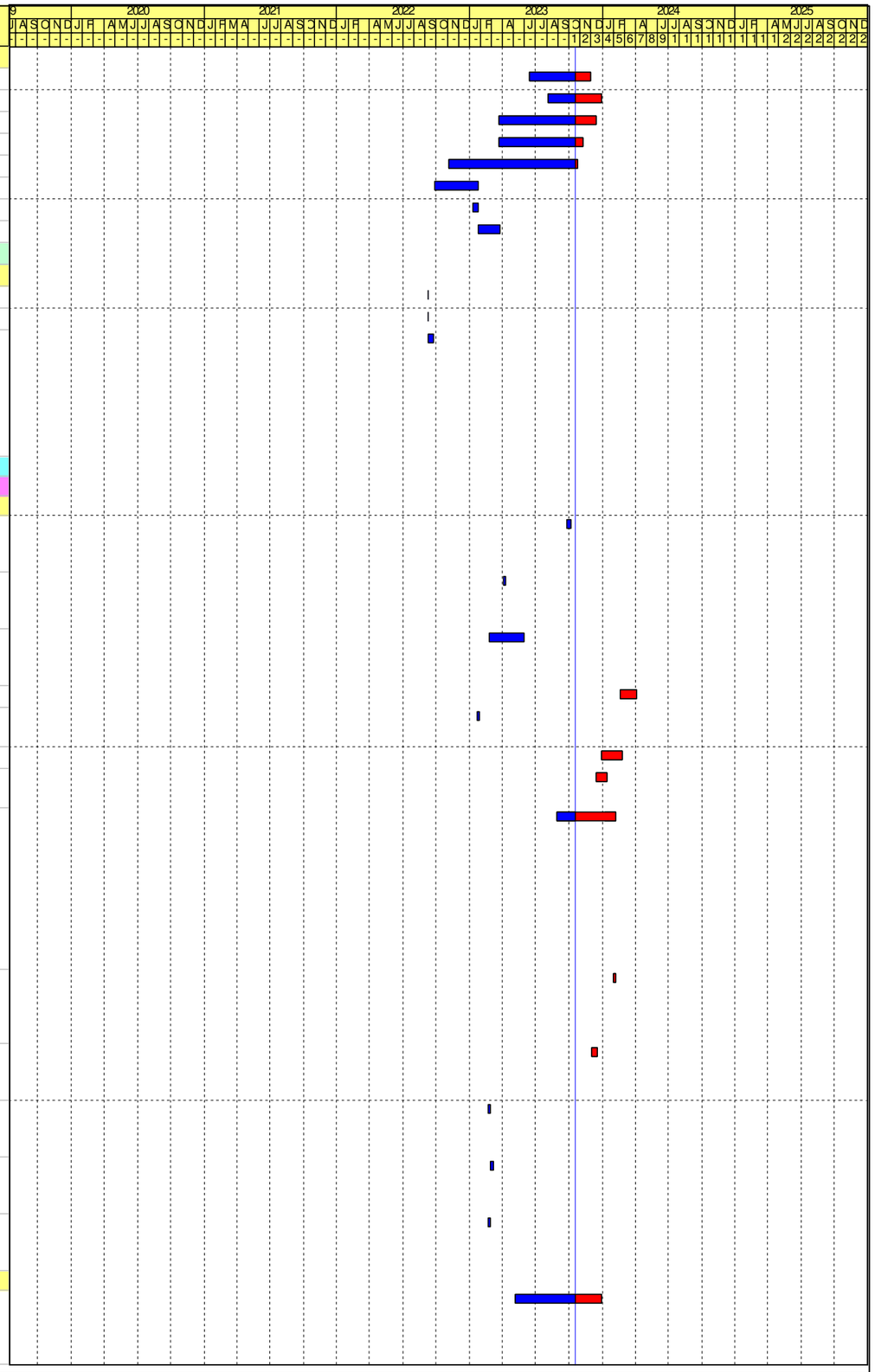
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
Electrical and Control		72	26-Sep-22 A	31-Dec-23	10-Nov-22	28-Apr-23	-248			
S5SDBP1660	Fabrication & Delivery of Cable	41	15-Jun-23 A	30-Nov-23	18-Mar-23	28-Apr-23	-217		S5SDBC1350	
S5SDBP1670	Fabrication & Delivery of Genset	72	04-Aug-23 A	31-Dec-23	07-Jan-23	20-Mar-23	-287	S5SDBP1030	S5SDBC1770	
S5SDBP1680	Fabrication & Delivery of LV Switchboard for G/F	56	22-Mar-23 A	15-Dec-23	23-Feb-23	20-Apr-23	-240		S5SDBC1370	
S5SDBP1690	Fabrication & Delivery of LV Switchboard for 1/F	21	22-Mar-23 A	10-Nov-23	05-Apr-23	26-Apr-23	-199		S5SDBC1580	
S5SDBP1710	Fabrication & Delivery of SCADA System for 1/F	5	04-Nov-22 A	25-Oct-23	10-Nov-22	15-Nov-22	-345		S5SDBC1570	
S5SDBP1720	Fabrication of 380V Transfomers	0	26-Sep-22 A	23-Jan-23 A	17-Mar-23	17-Mar-23			S5SDBP1730	
S5SDBP1730	FAT for 380V Transfomers	0	10-Jan-23 A	23-Jan-23 A	17-Mar-23	17-Mar-23		S5SDBP1720	S5SDBP1740	
S5SDBP1740	Delivery of 380V Transfomers	0	24-Jan-23 A	26-Mar-23 A	17-Mar-23	17-Mar-23		S5SDBP1730	S5SDBC1380	
Installation		241	06-Jun-22 A	17-Jun-24	29-Sep-22	24-Sep-25	464			
NCE-PMI-0325 - Provision of 2 nos of 3 Tons Mobile A-frame with Electrical Hoist in SDE		241	06-Jun-22 A	17-Jun-24	29-Sep-22	24-Sep-25	464			
S5SDBC1000	Access to Sludge Dewatering Building (Impacted by EWN-0314)	0	09-Sep-22 A	09-Sep-22 A	29-Sep-22	29-Sep-22			S5SDBC1020	
S5SDBC1010	Access to Sludge Dewatering Building (Impacted by EWN-0314-1)	0	09-Sep-22 A	09-Sep-22 A	29-Sep-22	29-Sep-22			S5SDBC1020	
S5SDBC1020	Mobilisation	0	09-Sep-22 A	23-Sep-22 A	29-Sep-22	29-Sep-22		S5SDBC1000, S5SDBC1010	S5SDBC1200, S5SDBC1680, S5SDBC1370, S5SDBC1590, S5SDBC1770, S5SDBC1120, S5SDBC1050	
E&M Installation		220	06-Jun-22 A	27-May-24	29-Sep-22	24-Sep-25	485			
Basement		166	21-Jan-23 A	03-Apr-24	29-Sep-22	11-Jul-23	-268			
Mechanical		122	21-Jan-23 A	03-Apr-24	29-Sep-22	11-Jul-23	-268			
S5SDBC1030	Installation of Centrate Transfer Pumps (3 nos.)	0	25-Sep-23 A	08-Oct-23 A	22-Feb-23	22-Feb-23		S5SDBP1360	S5SDBC1100, S5SDBT1000, S5SDBC1120	
S5SDBC1040	Installation of Dewatering Centrifuges Feed Pumps (3 nos.)	0	03-Apr-23 A	08-Apr-23 A	22-Apr-23	22-Apr-23		S5SDBP1380, S5SDBC1140	S5SDBT1000, S5SDBC1100, S5SDBC1110	
S5SDBC1050	Installation of Dewatering Polymer Powder Feed Units	0	24-Feb-23 A	31-May-23 A	29-Sep-22	29-Sep-22		S5SDBP1390, S5SDBP1600, S5SDBC1020	S5SDBC1170, S5SDBT1080, S5SDBC1420	
S5SDBC1060	Installation of Dewatering Polymer Preparation Tanks	45	19-Feb-24	03-Apr-24	12-Mar-23	26-Apr-23	-344	S5SDBP1410	S5SDBC1480	4
S5SDBC1070	Installation of External Sludge Transfer Pumps (2 nos.)	0	21-Jan-23 A	27-Jan-23 A	22-Apr-23	22-Apr-23		S5SDBP1400	S5SDBT1000, S5SDBC1100	
S5SDBC1080	Installation of Instruments	60	29-Dec-23	26-Feb-24	12-Apr-23	11-Jun-23	-261	S5SDBC1100	S5SDBT1160	6
S5SDBC1090	Installation of Polymer Mixer	30	15-Dec-23*	13-Jan-24	11-Jun-23	11-Jul-23	-187	S5SDBP1580, S5SDBP1460	S5SDBT1170	3
S5SDBC1100	Installation of Process Pipe	30	28-Aug-23 A	06-Feb-24	22-Apr-23	22-May-23	-261	S5SDBC1120, S5SDBC1030, S5SDBC1070, S5SDBC1130, S5SDBC1150, S5SDBC1140, S5SDBC1040, S5SDBC1110, S5SDBP1630	S5SDBT1040, S5SDBC1080	6
S5SDBC1110	Installation of Process Water Pumps (3 nos.)	7	31-Jan-24	06-Feb-24	05-May-23	12-May-23	-271	S5SDBP1480, S5SDBC1040	S5SDBT1000, S5SDBC1100, S5SDBT1190, S5S1160	
S5SDBC1120	Installation of Recirculation Pumps for Centrate Tank, Sludge Blend Tanks & THP by-pass Sludge Holding Tank (6 nos,)	14	04-Dec-23*	17-Dec-23	22-Feb-23	08-Mar-23	-285	S5SDBP1500, S5SDBC1020, S5SDBC1030	S5SDBT1000, S5SDBC1100, S5SDBT1210	
S5SDBC1130	Installation of Sludge Dewatering Polymer Transfer Pumps (2 nos.)	0	21-Feb-23 A	27-Feb-23 A	22-Apr-23	22-Apr-23		S5SDBP1450	S5SDBT1000, S5SDBC1100, S5SDBC1150	
S5SDBC1140	Installation of Thickening Centrifuges Feed Pumps (4 nos.)	0	28-Feb-23 A	06-Mar-23 A	22-Apr-23	22-Apr-23		S5SDBP1590, S5SDBC1150	S5SDBT1000, S5SDBC1100, S5SDBC1040	
S5SDBC1150	Installation of THP by-pass Sludge Holding Tank Transfer Pumps (4 nos.)	0	21-Feb-23 A	27-Feb-23 A	22-Apr-23	22-Apr-23		S5SDBP1550, S5SDBP1500, S5SDBC1130	S5SDBT1000, S5SDBC1100, S5SDBC1140	
Electrical		102	08-May-23 A	30-Jan-24	29-Sep-22	10-Jul-23	-205			
S5SDBC1170	Installation of Electrical System - Cable Containment	72	08-May-23 A	31-Dec-23	29-Sep-22	10-Dec-22	-387	S5SDBC1050, S5SDBC1590, S5P1050	S5SDBC1180, S5SDBC1185, S5SDBC1310, S5T1060	3



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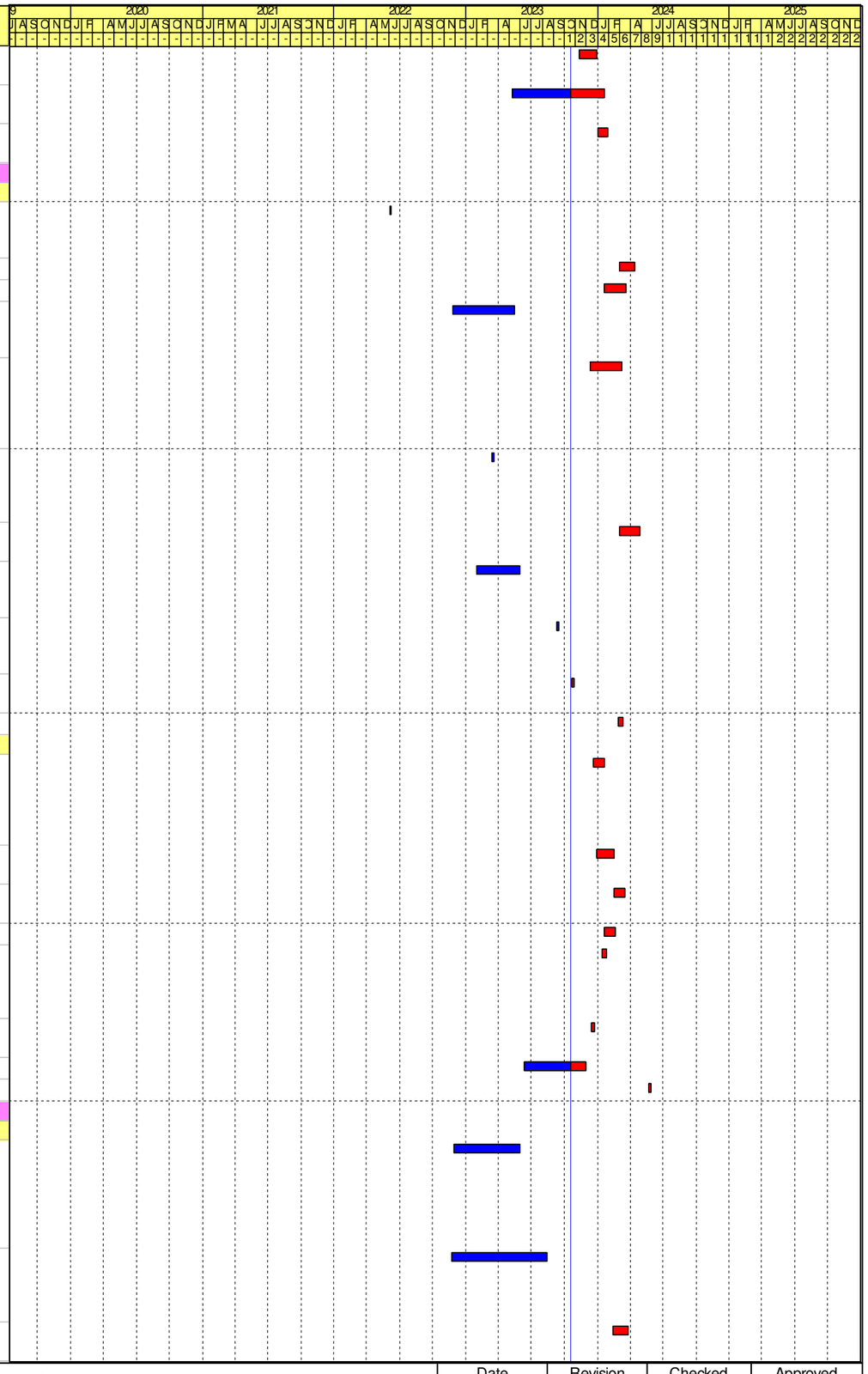
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5SDBC1180	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50	12-Nov-23	31-Dec-23	21-Apr-23	10-Jun-23	-205	S5SDBC1170	S5SDBC1190	5
S5SDBC1185	Installation of Control Cable Laying	19	09-May-23 A	19-Jan-24	11-Dec-22	30-Dec-22	-386	S5SDBC1170	S5SDBC1530, S5T1060	2
S5SDBC1190	Installation of Electrical System - Lighting and Small Power Accessories	30	01-Jan-24	30-Jan-24	10-Jun-23	10-Jul-23	-205	S5SDBC1180	S5SDBT1130	3
Ground Floor		220	06-Jun-22 A	27-May-24	30-Nov-22	17-Aug-23	-285			
Mechanical		190	06-Jun-22 A	29-Apr-24	25-Feb-23	10-Aug-23	-264			
S5SDBC1200	Installation of A-Frame (Effected by NCE-PMI-0325)	0	06-Jun-22 A	06-Jun-22 A	12-Mar-23	12-Mar-23		S5SDBC1020	S5SDBC1480, S5SDBC1470, S5SDBC1400	
S5SDBC1210	Installation of DOU Ductworks	45	01-Mar-24	14-Apr-24	26-Jun-23	10-Aug-23	-249	S5SDBP1650	S5T1060	4
S5SDBC1220	Installation of Instruments	60	20-Jan-24	19-Mar-24	12-Apr-23	11-Jun-23	-283	S5SDBC1240	S5SDBT1160	6
S5SDBC1230	Installation of Monorail LA-01-01	0	25-Nov-22 A	16-May-23 A	12-May-23	12-May-23		S5SDBC1450, S5SDBP1570, S5SDBP1420	S5SDBC1280	
S5SDBC1240	Installation of Process Pipe	90	11-Dec-23*	09-Mar-24	25-Feb-23	26-May-23	-289	S5SDBP1640, S5SDBC1290, S5SDBC1280, S5SDBC1250, S5SDBC1270	S5SDBT1040, S5SDBC1220	9
S5SDBC1250	Installation of PS Screen Feed Pumps (3 nos.)	0	13-Mar-23 A	19-Mar-23 A	12-May-23	12-May-23		S5SDBP1490	S5SDBT1000, S5SDBC1280, S5SDBC1240, S5SDBT1210	
S5SDBC1260	Installation of Silo & Conveyor	60	01-Mar-24	29-Apr-24	06-Mar-23	05-May-23	-361	S5SDBP1610, S5SDBP1370	S5SDBT1060	6
S5SDBC1270	Installation of Sludge Thickening Polymer Preparation Tanks	0	31-Jan-23 A	31-May-23 A	08-Mar-23	08-Mar-23		S5SDBP1600	S5SDBT1080, S5SDBC1420, S5SDBC1240	
S5SDBC1280	Installation of Sludge Thickening Polymer Transfer Pumps (2 nos.)	0	11-Sep-23 A	16-Sep-23 A	12-May-23	12-May-23		S5SDBP1450, S5SDBC1250, S5SDBC1230	S5SDBT1000, S5SDBC1240	
S5SDBC1290	Installation of THP Feed Pumps (4 nos.)	7	23-Oct-23*	29-Oct-23	05-May-23	12-May-23	-171	S5SDBP1620	S5SDBT1000, S5SDBC1240	
S5SDBC1300	Position of Sludge Skips and Installation of Hydraulic System	14	28-Feb-24	12-Mar-24	27-Jul-23	10-Aug-23	-216	S5SDBP1530	S5T1060	1
Electrical		220	12-Jun-23 A	27-May-24	30-Nov-22	17-Aug-23	-285			
S5SDBC1310	Installation of Electrical System - Cable Containment	30	22-Dec-23	20-Jan-24	30-Nov-22	30-Dec-22	-387	S5SDBC1680, S5P1050, S5SDBC1170	S5SDBC1320, S5SDBC1540, S5SDBC1340, S5SDBC1350, S5T1060	3
S5SDBC1320	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50	29-Dec-23	16-Feb-24	21-Apr-23	10-Jun-23	-252	S5SDBC1310	S5SDBC1330	5
S5SDBC1330	Installation of Electrical System - Lighting and Small Power Accessories	30	17-Feb-24	17-Mar-24	10-Jun-23	10-Jul-23	-252	S5SDBC1320	S5SDBT1130	3
S5SDBC1340	Installation of Control Cable Laying	30	21-Jan-24	19-Feb-24	11-Jul-23	10-Aug-23	-194	S5SDBC1310	S5T1060	3
S5SDBC1350	Installation of Power Cable Laying and Termination	13	15-Jan-24*	27-Jan-24	28-Apr-23	11-May-23	-262	S5SDBC1370, S5SDBP1660, S5SDBC1310, S5SDBC1580	S5SDBT1050	
S5SDBC1370	LV Switchboard Installation	8	16-Dec-23	23-Dec-23	20-Apr-23	28-Apr-23	-240	S5SDBC1020, S5SDBP1680	S5SDBT1110, S5SDBC1350	3
S5SDBC1380	Installation of Transformer	41	12-Jun-23 A	30-Nov-23	17-Mar-23	27-Apr-23	-218	S5SDBP1740	S5SDBT1120	6
S5SDBC1900	Installation of UPS	7	21-May-24	27-May-24	10-Aug-23	17-Aug-23	-285	S5P1090	S5SDBT1245	
First Floor		199	17-Nov-22 A	27-May-24	15-Nov-22	24-Sep-25	485			
Mechanical		101	17-Nov-22 A	27-Mar-24	27-Dec-22	24-Sep-25	546			
S5SDBC1390	Installation of EOT Crane LA-01-02	0	28-Nov-22 A	31-May-23 A	27-Mar-23	27-Mar-23		S5SDBP1560, S5SDBP1420	S5SDBC1490, S5SDBC1400, S5SDBC1470, S5SDBC1500, S5SDBC1520, S5SDBC1510	
S5SDBC1400	Installation of EOT Crane LA-01-03	0	22-Nov-22 A	15-Aug-23 A	24-Sep-25	24-Sep-25		S5SDBC1200, S5SDBP1560, S5SDBP1420, S5SDBC1390		
S5SDBC1410	Installation of Instruments	45	12-Feb-24	27-Mar-24	27-Apr-23	11-Jun-23	-291	S5SDBC1460	S5SDBT1160, S5T1270	4



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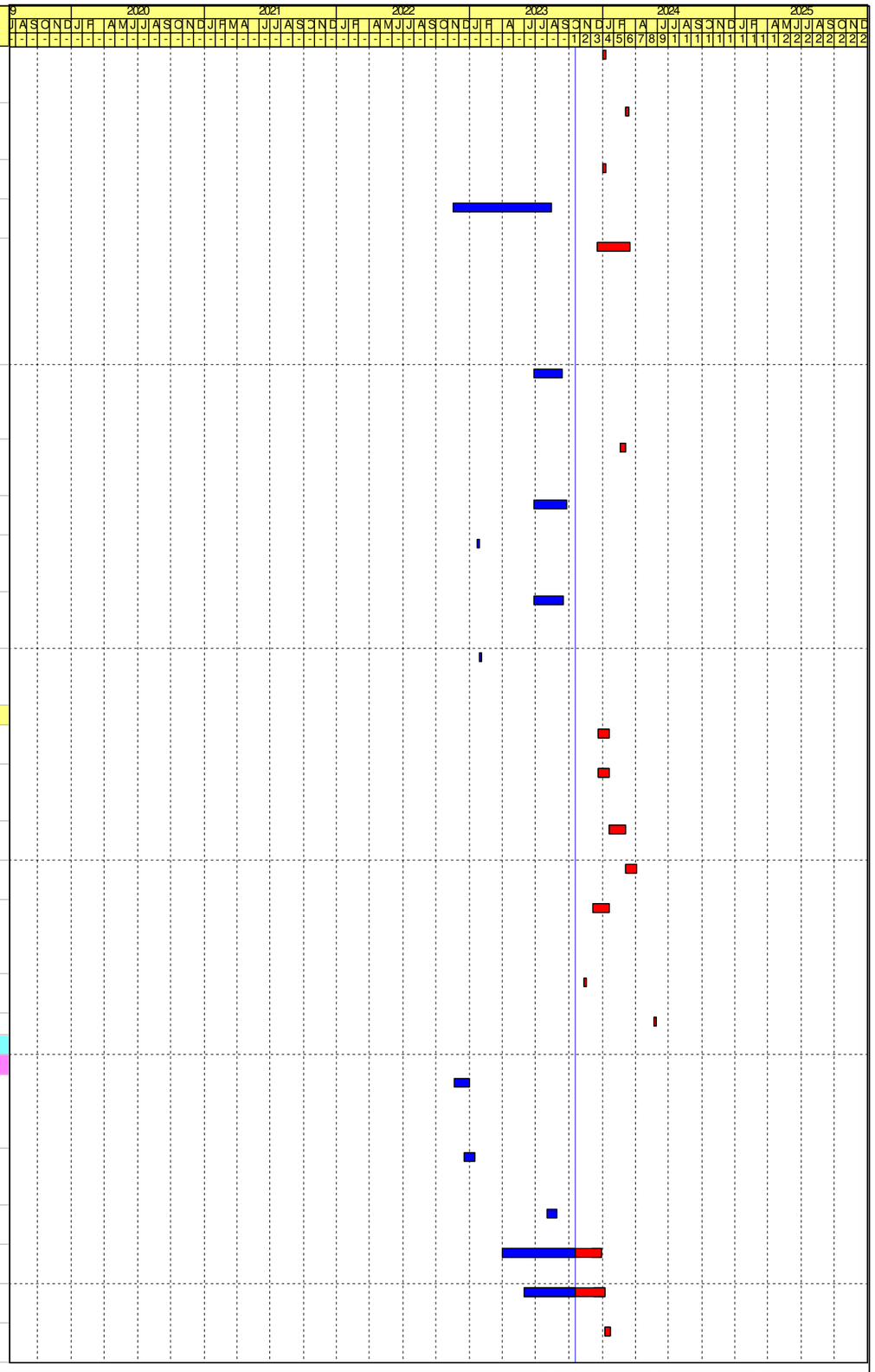
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5SDBC1420	Installation of Mixer for Digested Sludge Holding Tank	10	02-Jan-24*	11-Jan-24	08-Mar-23	18-Mar-23	-300	S5SDBP1430, S5SDBC1050, S5SDBC1270	S5SDBT1170, S5SDBT1178	1
S5SDBC1430	Installation of Mixer for Polymer Tank	10	04-Mar-24	13-Mar-24	01-Jul-23	11-Jul-23	-247	S5SDBP1580, S5SDBP1460, S5SDBC1480	S5SDBT1170	1
S5SDBC1440	Installation of Mixer for PS holding tank	10	02-Jan-24*	11-Jan-24	29-Mar-23	08-Apr-23	-279	S5SDBP1470, S5SDBC1470	S5SDBT1175	1
S5SDBC1450	Installation of Monorail LA-01-04	0	17-Nov-22 A	15-Aug-23 A	12-May-23	12-May-23		S5SDBP1570, S5SDBP1420	S5SDBC1230	
S5SDBC1460	Installation of Process Pipe	90	18-Dec-23*	16-Mar-24	27-Dec-22	27-Mar-23	-356	S5SDBP1640, S5SDBC1480, S5SDBC1510, S5SDBC1490, S5SDBC1470, S5SDBC1500, S5SDBC1520	S5SDBT1040, S5SDBC1410	9
S5SDBC1470	Installation of Screen Press	0	26-Jun-23 A	12-Sep-23 A	27-Mar-23	27-Mar-23		S5SDBC1200, S5SDBP1520, S5SDBC1390	S5SDBT1210, S5SDBC1440, S5SDBC1460, S5T1270	
S5SDBC1480	Installation of Sludge Dewatering / Thickening Polymer Dilution Tanks	15	19-Feb-24	04-Mar-24	12-Mar-23	27-Mar-23	-344	S5SDBC1200, S5SDBP1410, S5SDBC1060	S5SDBT1080, S5SDBC1430, S5SDBC1460	1
S5SDBC1490	Installation of Sludge Dewatering Centrifuges (3 nos)	0	26-Jun-23 A	25-Sep-23 A	27-Mar-23	27-Mar-23		S5SDBC1390, S5SDBP1510	S5SDBT1090, S5SDBC1460	
S5SDBC1500	Installation of Sludge Dewatering Polymer Dosing Pumps (4 nos.)	0	21-Jan-23 A	27-Jan-23 A	27-Mar-23	27-Mar-23		S5SDBP1440, S5SDBC1390	S5SDBT1000, S5SDBC1520, S5SDBC1460	
S5SDBC1510	Installation of Sludge Thickening Centrifuges (4 nos.)	0	26-Jun-23 A	15-Sep-23 A	27-Mar-23	27-Mar-23		S5SDBP1540, S5SDBC1390	S5SDBT1100, S5SDBC1460, S5T1270	
S5SDBC1520	Installation of Sludge Thickening Polymer Dosing Pumps (5 nos.)	0	28-Jan-23 A	03-Feb-23 A	27-Mar-23	27-Mar-23		S5SDBP1440, S5SDBC1500, S5SDBC1390	S5SDBT1000, S5SDBC1460, S5T1270	
Electrical		199	11-Nov-23	27-May-24	15-Nov-22	17-Aug-23	-285			
S5SDBC1530	Installation of Control Cable Laying	30	22-Dec-23	20-Jan-24	30-Nov-22	30-Dec-22	-387	S5SDBC1540, S5SDBC1185	S5SDBC1570	3
S5SDBC1540	Installation of Electrical System - Cable Containment	30	22-Dec-23	20-Jan-24	30-Nov-22	30-Dec-22	-387	S5SDBC1310, S5SDBC1790, S5P1050	S5SDBT1050, S5SDBC1550, S5SDBC1530	3
S5SDBC1550	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	45	21-Jan-24	05-Mar-24	26-Apr-23	10-Jun-23	-270	S5SDBC1540	S5SDBC1560	4
S5SDBC1560	Installation of Electrical System - Lighting and Small Power Accessories	30	06-Mar-24	04-Apr-24	10-Jun-23	10-Jul-23	-270	S5SDBC1550	S5SDBT1130	3
S5SDBC1570	Installation of SCADA System / Control Monitoring System (SPS, Process Water)	45	07-Dec-23	20-Jan-24	15-Nov-22	30-Dec-22	-387	S5SDBC1530, S5SDBP1710	S5T1002, S5T1060, S5T1270, S5T1280	4
S5SDBC1580	LV Switchboard Installation	9	11-Nov-23	19-Nov-23	26-Apr-23	05-May-23	-199	S5SDBP1690	S5SDBC1350, S5SDBT1110	
S5SDBC1910	Installation of UPS	7	21-May-24	27-May-24	10-Aug-23	17-Aug-23	-285	S5P1090	S5SDBT1245	
BS Installation		241	21-Nov-22 A	17-Jun-24	29-Sep-22	24-Sep-25	464			
Basement		241	21-Nov-22 A	17-Jun-24	29-Sep-22	24-Sep-25	464			
S5SDBC1590	Installation of FS System - Main Pipework	0	21-Nov-22 A	30-Dec-22 A	29-Sep-22	29-Sep-22		S5SDBC1020	S5SDBC1620, S5SDBC1170, S5SDBC1790, S5SDBC1680	
S5SDBC1600	Installation of FS System - Branch Pipework, Conduit & Wiring	0	16-Dec-22 A	14-Jan-23 A	07-Jul-23	07-Jul-23			S5SDBC1610, S5S1130, S5SDBC1690	
S5SDBC1610	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	0	01-Aug-23 A	30-Aug-23 A	25-Jul-23	25-Jul-23		S5SDBC1600	S5SDBT1150	
S5SDBC1620	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	26	31-Mar-23 A	29-Dec-23	20-May-23	15-Jun-23	-198	S5SDBC1590, S5P1080	S5SDBC1630	4
S5SDBC1630	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	30	01-Jun-23 A	08-Jan-24	26-May-23	25-Jun-23	-198	S5SDBC1620	S5SDBC1640	3
S5SDBC1640	Installation of MVAC System - Air Grills & Diffuser	15	09-Jan-24	23-Jan-24	25-Jun-23	10-Jul-23	-198	S5SDBC1630, S5SDBC1840	S5SDBT1180, S5SDBC1730	1



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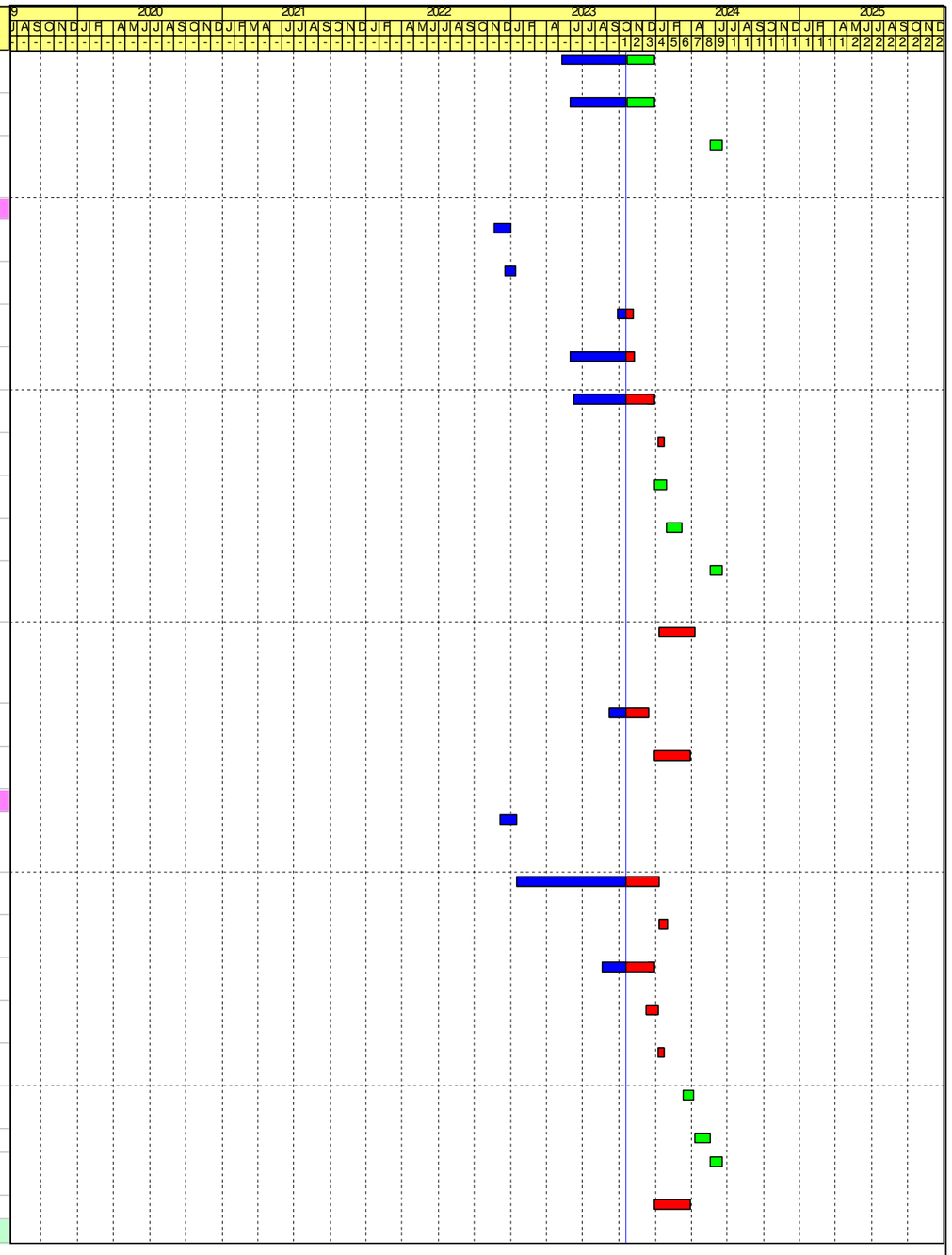
S5SDBC1650	Installation of Plumbing System - Main Pipework	71	10-May-23 A	30-Dec-23	27-Jan-25	07-Apr-25	464		S5SDBC1670, S5SDBC1660	7
S5SDBC1660	Installation of Plumbing System - Branch Pipework	70	30-May-23 A	30-Dec-23	28-Jan-25	07-Apr-25	464	S5SDBC1650	S5SDBC1670, S5SDBC1740	7
S5SDBC1670	Installation of Plumbing System - Sanitary Fitting	30	19-May-24	17-Jun-24	26-Aug-25	24-Sep-25	464	S5SDBC1650, S5SDBC1660, S5SDBC1870		3
Ground Floor		241	21-Nov-22 A	17-Jun-24	30-Nov-22	24-Sep-25	464			
S5SDBC1680	Installation of FS System - Main Pipework	0	21-Nov-22 A	30-Dec-22 A	30-Nov-22	30-Nov-22		S5SDBC1020, S5SDBC1590	S5SDBC1710, S5SDBC1310	
S5SDBC1690	Installation of FS System - Branch pipework, Conduit & Wiring	0	16-Dec-22 A	14-Jan-23 A	07-Jul-23	07-Jul-23		S5SDBC1600	S5SDBC1700, S5S1130	
S5SDBC1700	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	18	29-Sep-23 A	07-Nov-23	07-Jul-23	25-Jul-23	-106	S5SDBC1690	S5SDBT1150	1
S5SDBC1710	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	20	31-May-23 A	09-Nov-23	25-Jun-23	15-Jul-23	-118	S5SDBC1680	S5SDBC1720	2
S5SDBC1720	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	19	10-Jun-23 A	29-Dec-23	06-Jun-23	25-Jun-23	-188	S5SDBC1710, S5P1080	S5SDBC1730	3
S5SDBC1730	Installation of MVAC System - Air Grills & Diffuser	15	09-Jan-24	23-Jan-24	25-Jun-23	10-Jul-23	-198	S5SDBC1720, S5SDBC1640	S5SDBT1180	
S5SDBC1740	Installation of Plumbing System - Main Pipework	30	31-Dec-23	29-Jan-24	08-Apr-25	07-May-25	464	S5SDBC1660	S5SDBC1760, S5SDBC1750	3
S5SDBC1750	Installation of Plumbing System - Branch Pipework	40	30-Jan-24	09-Mar-24	08-May-25	16-Jun-25	464	S5SDBC1740	S5SDBC1760, S5SDBC1850	4
S5SDBC1760	Installation of Plumbing System - Sanitary Fitting	30	19-May-24	17-Jun-24	26-Aug-25	24-Sep-25	464	S5SDBC1740, S5SDBC1750, S5SDBC1870		3
S5SDBC1770	Generator & Fuel Room Installation	90	12-Jan-24*	10-Apr-24	09-Jan-23	09-Apr-23	-368	S5SDBP1670, S5SDBC1020, S5S1010, S5S1260	S5SDBT1140, S5S1270	9
S5SDBC1780	Installation of Lift	56	06-Sep-23 A	15-Dec-23	30-Apr-23	25-Jun-23	-174	S5SDBP1060, S5WS2C1190	S5SDBT1070	5
S5SDBC1880	Installation of Gas Detection System	90	30-Dec-23	28-Mar-24	26-Apr-23	25-Jul-23	-248	S5CHPP1040	S5SDBC1890, S5SDBT1240	9
First Floor		241	06-Dec-22 A	17-Jun-24	30-Nov-22	24-Sep-25	464			
S5SDBC1790	Installation of FS System - Main Pipework	0	06-Dec-22 A	15-Jan-23 A	30-Nov-22	30-Nov-22		S5SDBC1590	S5SDBC1800, S5SDBC1540, S5SDBC1820	
S5SDBC1800	Installation of FS System - Branch pipework, Conduit & Wiring	83	16-Jan-23 A	11-Jan-24	13-Apr-23	05-Jul-23	-191	S5SDBC1790	S5SDBC1810, S5S1130	8
S5SDBC1810	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	20	12-Jan-24	31-Jan-24	05-Jul-23	25-Jul-23	-191	S5SDBC1800	S5SDBT1150	2
S5SDBC1820	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	14	21-Aug-23 A	29-Dec-23	01-Jun-23	15-Jun-23	-198	S5SDBC1790, S5P1080	S5SDBC1830	1
S5SDBC1830	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	30	10-Dec-23	08-Jan-24	26-May-23	25-Jun-23	-198	S5SDBC1820	S5SDBC1840	3
S5SDBC1840	Installation of MVAC System - Air Grills & Diffuser	15	09-Jan-24	23-Jan-24	25-Jun-23	10-Jul-23	-198	S5SDBC1830	S5SDBT1180, S5SDBC1640	1
S5SDBC1850	Installation of Plumbing System - Main Pipework	30	10-Mar-24	08-Apr-24	17-Jun-25	16-Jul-25	464	S5SDBC1750	S5SDBC1870, S5SDBC1860	3
S5SDBC1860	Installation of Plumbing System - Branch Pipework	40	09-Apr-24	18-May-24	17-Jul-25	25-Aug-25	464	S5SDBC1850	S5SDBC1870	4
S5SDBC1870	Installation of Plumbing System - Sanitary Fitting	30	19-May-24	17-Jun-24	26-Aug-25	24-Sep-25	464	S5SDBC1850, S5SDBC1860	S5SDBC1760, S5SDBC1670	3
S5SDBC1890	Installation of Gas Detection System	90	30-Dec-23	28-Mar-24	26-Apr-23	25-Jul-23	-248	S5SDBC1880	S5SDBT1240	9
Testing and Commissioning		248	01-Dec-23	04-Aug-24	26-Jan-23	24-Aug-23	-347			



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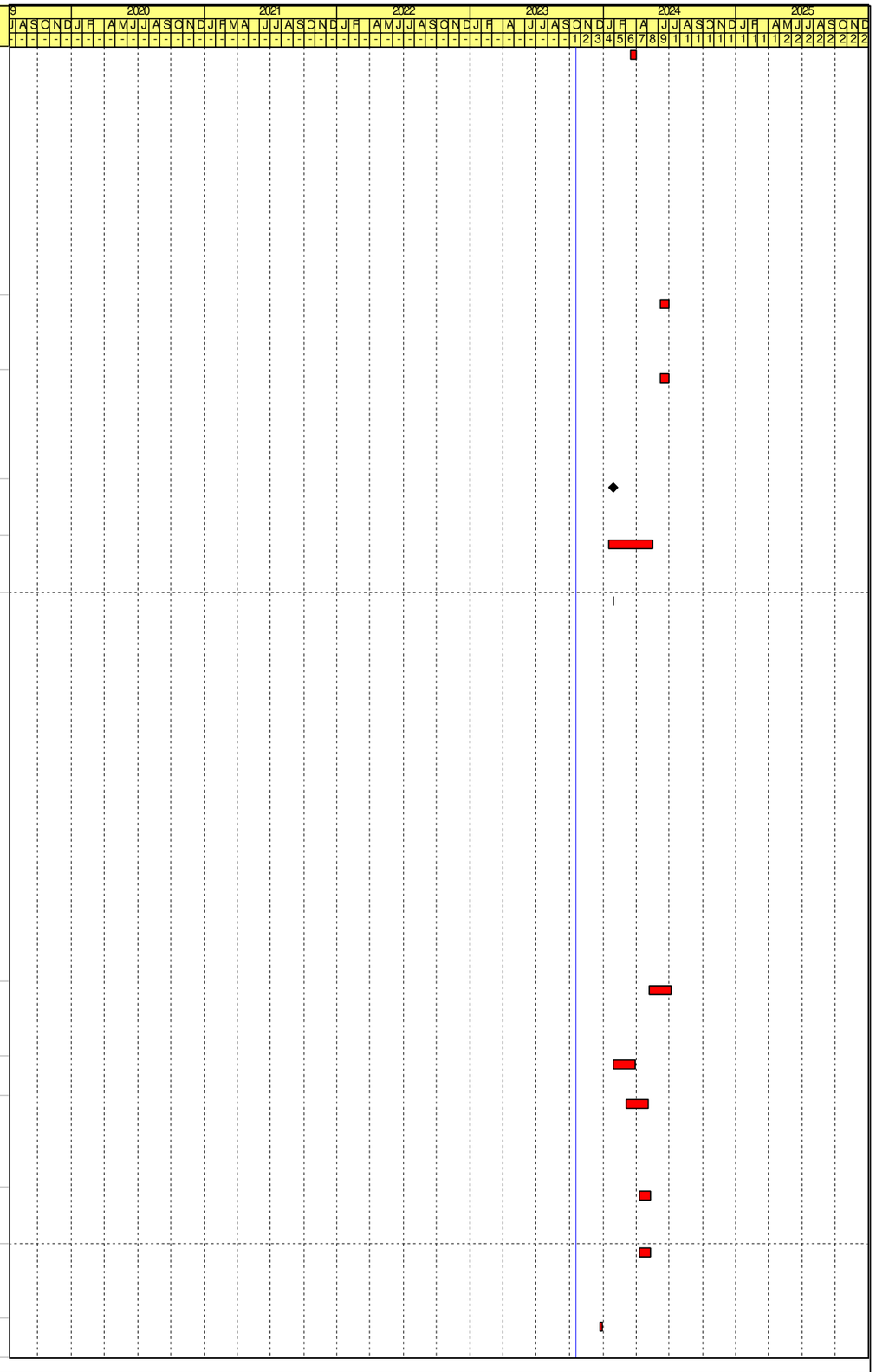
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5SDBT1000	Dry Test for Pumps	14	18-Mar-24*	31-Mar-24	12-May-23	26-May-23	-311	S5SDBC1250, S5SDBC1120, S5SDBC1110, S5SDBC1070, S5SDBC1130, S5SDBC1150, S5SDBC1140, S5SDBC1040, S5SDBC1290, S5SDBC1280, S5SDBC1500, S5SDBC1520, S5SDBC1030, S5SDBT1050	S5SDBT1220, S5SDBT1230	1
S5SDBT1010	Functional Check for Pumps (excluded FS Water Pumps and Process Water Pumps)	26	05-Jun-24	30-Jun-24	15-Jun-23	11-Jul-23	-356	S5SDBT1220, S5SDBT1050	S5T1060, S5SDBT1250, S5SDBT1260, S5T1280	2
S5SDBT1020	Functional Check for Pumps (FS Water Pumps and Process Water Pumps)	26	05-Jun-24	30-Jun-24	15-Jun-23	11-Jul-23	-356	S5SDBT1050, S5SDBT1230	S5S1220, S5T1055, S5T1050, S5SDBT1260, S5T1280, S5T1270	2
S5SDBT1030	Permanent Power ready for T&C	0	29-Jan-24		26-May-23		-248	S5SDBT1050	S5SDBT1100, S5SDBT1230, S5SDBT1090	
S5SDBT1040	Pipe Pressure Test	120	17-Jan-24	15-May-24	26-Jan-23	26-May-23	-356	S5SDBC1460, S5SDBC1240, S5SDBC1100	S5T1060, S5SDBT1220, S5SDBT1230	12
S5SDBT1050	Ready for Power Energisation - LV	1	28-Jan-24	28-Jan-24	11-May-23	12-May-23	-262	S5SDBC1540, S5SDBC1350, S5SDBT1120, S5WS2C1120, S5SDBT1110	S5SDBT1090, S5SDBT1070, S5SDBT1100, S5SDBT1020, S5SDBT1230, S5SDBT1080, S5SDBT1060, S5SDBT1130, S5SDBT1150, S5SDBT1180, S5SDBT1190, S5SDBT1170, S5SDBT1210, S5SDBT1160, S5SDBT1220, S5SDBT1010, S5SDBT1000, S5SDBT1030, S5SPST1000, S5FCDT1000, S5SDBT1178, S5T1060	
S5SDBT1060	SAT for Sludge Conveying and Discharge System	60	07-May-24	05-Jul-24	12-May-23	11-Jul-23	-361	S5SDBC1260, S5SDBT1050	S5T1060, S5T1002, S5SDBT1260, S5T1280	6
S5SDBT1070	SAT for Lift	60	29-Jan-24	28-Mar-24	25-Jun-23	24-Aug-23	-218	S5SDBC1780, S5SDBT1050	S5S1090, S5T1002	6
S5SDBT1080	SAT for Polymer Preparation, Storage and Dosing system for Thickening and Dewatering Sludge	60	05-Mar-24	03-May-24	12-May-23	11-Jul-23	-298	S5SDBC1480, S5SDBC1270, S5SDBC1050, S5SDBT1050	S5T1060, S5T1002, S5T1055, S5SDBT1260, S5T1280	6
S5SDBT1090	SAT for Sludge Dewatering Centrifuges	30	10-Apr-24*	09-May-24	11-Jul-23	10-Aug-23	-274	S5SDBT1050, S5SDBC1490, S5SDBT1030	S5T1060, S5T1002	3
S5SDBT1100	SAT for Sludge Thickening Cnetrifuge	30	10-Apr-24*	09-May-24	11-Jun-23	11-Jul-23	-304	S5SDBT1050, S5SDBC1510, S5SDBT1030	S5T1060, S5T1055, S5T1002, S5SDBT1250	3
S5SDBT1110	SAT for Switchboard	6	24-Dec-23	29-Dec-23	05-May-23	11-May-23	-233	S5SDBC1370, S5SDBC1580	S5T1055, S5SDBT1050	



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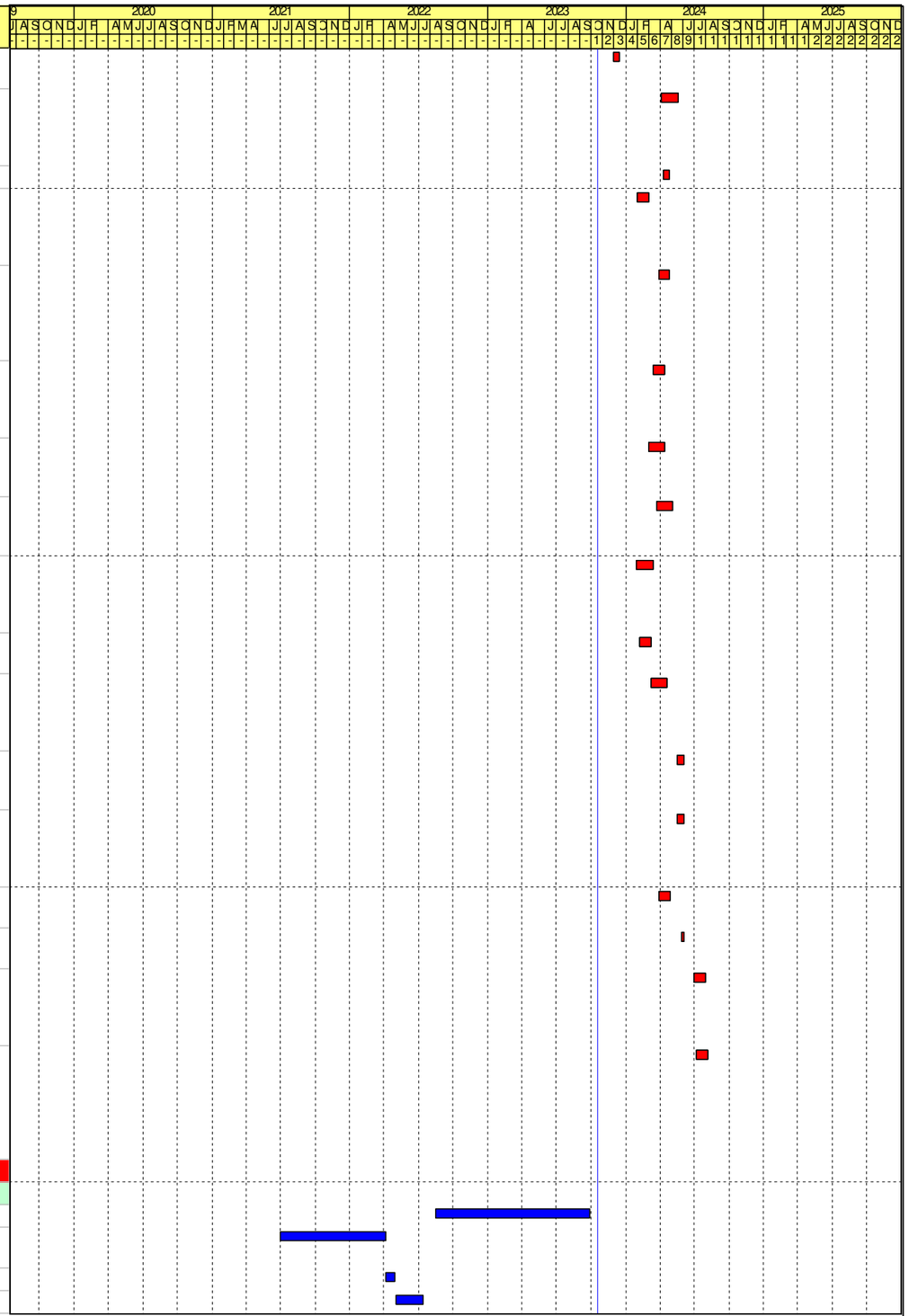
S5SDBT1120	SAT for Tranformer	14	01-Dec-23	14-Dec-23	27-Apr-23	11-May-23	-218	S5SDBC1380, S5WS2T1000	S5SDBT1050	2
S5SDBT1130	SAT of Electrical System (BS)	45	05-Apr-24	19-May-24	10-Jul-23	24-Aug-23	-270	S5SDBC1330, S5SDBC1190, S5SDBC1560, S5SDBT1050	S5S1220, S5T1002	4
S5SDBT1140	SAT of Emergency Generator System	15	11-Apr-24	25-Apr-24	09-Aug-23	24-Aug-23	-246	S5SDBC1770	S5T1002	2
S5SDBT1150	SAT of FS System	30	01-Feb-24	01-Mar-24	25-Jul-23	24-Aug-23	-191	S5SDBC1810, S5SDBC1700, S5SDBC1610, S5SDBT1050	S5S1220, S5T1002	3
S5SDBT1160	SAT of Instrumentation	30	28-Mar-24	26-Apr-24	11-Jun-23	11-Jul-23	-291	S5SDBC1410, S5SDBC1220, S5SDBC1080, S5SDBT1050	S5T1060, S5T1002, S5T1055, S5SDBT1260, S5T1280	3
S5SDBT1170	SAT of Mixer (Excluded Mixer for PS holding tank)	30	14-Mar-24	12-Apr-24	11-Jul-23	10-Aug-23	-247	S5SDBC1430, S5SDBC1420, S5SDBC1090, S5SDBT1050	S5T1060, S5T1002	3
S5SDBT1175	SAT of Primary Sludge Holding Tanks and Mixer	45	01-Mar-24	14-Apr-24	27-May-23	11-Jul-23	-279	S5SDBC1440	S5T1055, S5SDBT1250, S5T1270	4
S5SDBT1178	SAT of Digested Sludge Holding Tanks and Mixer	45	22-Mar-24	05-May-24	27-May-23	11-Jul-23	-300	S5SDBC1420, S5SDBT1050	S5T1055, S5SDBT1260, S5T1280	6
S5SDBT1180	SAT of MVAC System	45	29-Jan-24	13-Mar-24	10-Jul-23	24-Aug-23	-203	S5SDBC1840, S5SDBC1730, S5SDBC1640, S5SDBT1050	S5S1220, S5T1002	4
S5SDBT1190	SAT of Plumbing System	30	07-Feb-24	07-Mar-24	25-Jul-23	24-Aug-23	-197	S5SDBT1050, S5SDBC1110	S5T1002	3
S5SDBT1210	SAT of Sludge Blending System (included PS Screen Feed Pumps, Sludge Screen Presses and Sludge Recirculation Pumps)	45	07-Mar-24	20-Apr-24	27-May-23	11-Jul-23	-285	S5SDBC1470, S5SDBT1050, S5SDBC1120, S5SDBC1250	S5T1060, S5T1002, S5T1055, S5SDBT1250	4
S5SDBT1220	Wet Test for Pumps (excluded FS Water Pumps and Process Water Pumps)	20	16-May-24	04-Jun-24	26-May-23	15-Jun-23	-356	S5SDBT1000, S5SDBT1050, S5SDBT1040	S5SDBT1010	2
S5SDBT1230	Wet Test for Pumps (FS Water Pumps and Process Water Pumps)	20	16-May-24	04-Jun-24	26-May-23	15-Jun-23	-356	S5SDBT1000, S5SDBT1050, S5SDBT1030, S5SDBT1040	S5SDBT1020	2
S5SDBT1240	SAT of Gas Detection System	30	29-Mar-24	27-Apr-24	25-Jul-23	24-Aug-23	-248	S5SDBC1890, S5SDBC1880	S5T1110, S5T1002	3
S5SDBT1245	SAT of UPS	7	28-May-24	03-Jun-24	17-Aug-23	24-Aug-23	-285	S5SDBC1910, S5SDBC1900	S5T1002	
S5SDBT1250	Self Test for Sludge Thickening System	30	01-Jul-24	30-Jul-24	11-Jul-23	10-Aug-23	-356	S5SDBT1010, S5SDBT1100, S5SDBT1175, S5SDBT1210	S5T1055, S5T1050, S5T1270	
S5SDBT1260	Self Test for Sludge Dewatering System	30	06-Jul-24	04-Aug-24	11-Jul-23	10-Aug-23	-361	S5SDBT1020, S5SDBT1010, S5SDBT1080, S5SDBT1178, S5SDBT1060, S5SDBT1160	S5T1060	
Combined Heat & Power Building		466	29-Jun-21 A	28-Jan-25	30-Nov-22	24-Sep-25	239			
Fabrication, FAT & Delivery of Major Plant & Materials		165	29-Jun-21 A	02-Apr-24	30-Nov-22	20-Jul-23	-258			
S5CHPP1000	Fabrication & Delivery of Pre-Treatment	0	15-Aug-22 A	27-Sep-23 A	12-Mar-23	12-Mar-23			S5CHPC1170	
S5CHPP1010	Fabrication of CHP System	0	29-Jun-21 A	06-Apr-22 A	30-Nov-22	30-Nov-22		S2P1070, S2D1610	S5CHPP1020	
S5CHPP1020	FAT for CHP Generators	0	07-Apr-22 A	30-Apr-22 A	30-Nov-22	30-Nov-22		S5CHPP1010	S5CHPP1030	
S5CHPP1030	Delivery of CHP Generators	0	02-May-22 A	14-Jul-22 A	30-Nov-22	30-Nov-22		S5CHPP1020	S5CHPC1050	



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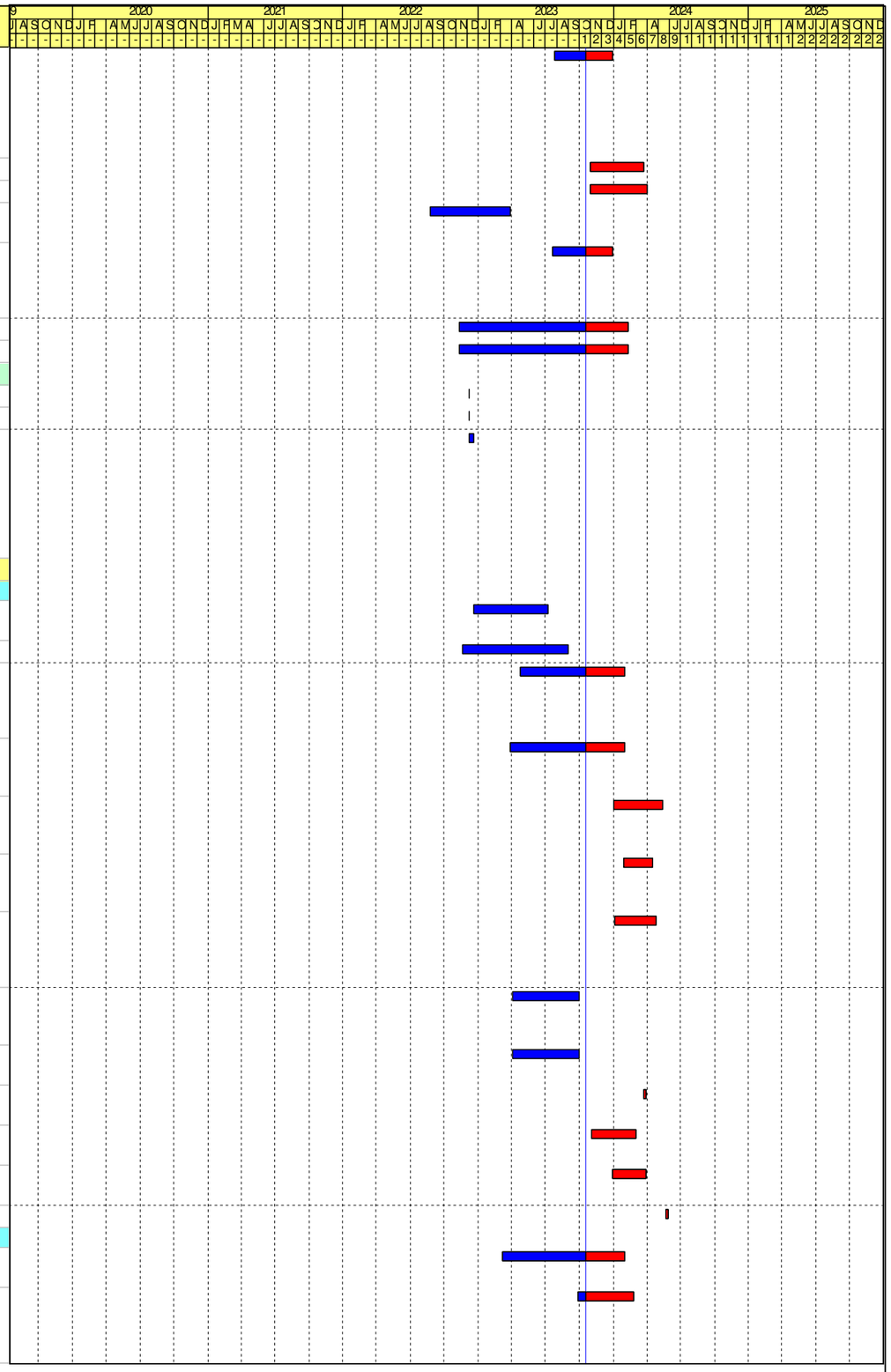
S5CHPP1040	Fabrication & Delivery of Gas Detection System	70	28-Jul-23 A	29-Dec-23	16-Jan-23	27-Mar-23	-278	S2D2000, PL1020	S5CHPC1170, S5CHPC1280, S5SDBC1880, S5CHPC1410, S5DIGC1270, S5BIOC1070	30
S5CHPP1050	Fabrication & Delivery of LV Switchboard for G/F	144	31-Oct-23*	22-Mar-24	14-Jan-23	07-Jun-23	-290		S5CHPC1145	30
S5CHPP1055	Fabrication & Delivery of LV Switchboard for 1/F	155	31-Oct-23*	02-Apr-24	03-Jan-23	07-Jun-23	-301		S5CHPC1260	30
S5CHPP1060	Fabrication & Delivery of Lifting Appliances	0	24-Aug-22 A	28-Mar-23 A	13-Mar-23	13-Mar-23			S5CHPC1030, S5CHPC1160	
S5CHPP1070	Fabrication & Delivery of Pipeworks & Associated Valves	72	20-Jul-23 A	31-Dec-23	01-Jan-23	14-Mar-23	-293	S5P1010	S5CHPC1070, S5CHPC1200, S5CHPC1270, S5CHPC1280	15
S5CHPP1080	Fabrication & Delivery of SCADA System for G/F	113	11-Nov-22 A	10-Feb-24	07-Mar-23	28-Jun-23	-228		S5CHPC1120	30
S5CHPP1090	Fabrication & Delivery of SCADA System for 1/F	113	11-Nov-22 A	10-Feb-24	29-Mar-23	20-Jul-23	-206		S5CHPC1250	30
Installation		220	19-Nov-22 A	27-May-24	30-Nov-22	24-Sep-25	485			
S5CHPC1000	Access to CHP Building (Impacted by EWN-0314)	0	07-Dec-22 A	07-Dec-22 A	11-Dec-22	11-Dec-22			S5CHPC1020	
S5CHPC1010	Access to CHP Building (Impacted by EWN-0314-1)	0	07-Dec-22 A	07-Dec-22 A	11-Dec-22	11-Dec-22			S5CHPC1020	
S5CHPC1020	Mobilisation	0	08-Dec-22 A	19-Dec-22 A	11-Dec-22	11-Dec-22		AD1060, S5S1020, S5CHPC1000, S5CHPC1010	PL1550, S5CHPC1030, S5CHPC1040, S5CHPC1080, S5CHPC1130, S5CHPC1140, S5CHPC1210	
E&M Installation		220	19-Nov-22 A	27-May-24	30-Nov-22	24-Sep-25	485			
Ground Floor		220	19-Nov-22 A	27-May-24	30-Nov-22	24-Sep-25	485			
S5CHPC1030	Installation of EOT Crane LA-04-01	0	19-Dec-22 A	10-Jul-23 A	13-Mar-23	13-Mar-23		S5CHPC1020, S5CHPP1060	S5CHPC1050, S5CHPC1160	
S5CHPC1040	Installation of Monorail LA-04-02 (total 3nos.)	0	19-Nov-22 A	31-Aug-23 A	24-Sep-25	24-Sep-25		S5CHPC1020		
S5CHPC1050	Installation of CHP System - Mechanical Work	103	26-Apr-23 A	31-Jan-24	30-Nov-22	13-Mar-23	-325	S5CHPC1030, S5CHPP1030	S5CHPC1100, S5CHPT1030, S5CHPC1270, S5CHPT1060	10
S5CHPC1060	Installation of Steam Boiler System - Mechanical Work	103	29-Mar-23 A	31-Jan-24	12-Mar-23	23-Jun-23	-223		S5CHPC1070, S5CHPC1170, S5CHPT1050	15
S5CHPC1070	Installation of pipework	133	02-Jan-24*	13-May-24	14-Mar-23	25-Jul-23	-294	S5CHPC1060, S5CHPP1070	S5CHPT1000, S5CHPT1022, S5CHPT1026	13
S5CHPC1100	Installation of Electrical System	79	28-Jan-24	15-Apr-24	09-Mar-23	27-May-23	-325	S5CHPC1090, S5CHPC1050, S5P1050	S5CHPC1120, S5CHPT1050, S5CHPT1030	8
S5CHPC1120	Installation of SCADA System	111	05-Jan-24	24-Apr-24	22-May-23	10-Sep-23	-228	S5CHPC1100, S5CHPP1080	S5T1100, S5CHPC1250, S5T1003, S5CHPT1030	11
S5CHPC1130	Transfomers Room Installation	0	04-Apr-23 A	30-Sep-23 A	03-Jun-23	03-Jun-23		S5WS2P1020, S5CHPC1020	S5CHPT1020, S5CHPC1260, S5CHPT1010	
S5CHPC1140	HV Switchroom Installation	0	03-Apr-23 A	30-Sep-23 A	13-Jun-23	13-Jun-23		S5CHPC1020, S5WS2P1080	S5CHPT1020, S5CHPT1010	
S5CHPC1145	LV Switchboard Installation	6	23-Mar-24	28-Mar-24	07-Jun-23	13-Jun-23	-290	S5CHPP1050	S5CHPT1010, S5CHPC1420	
S5CHPC1150	Diesel Storage & Pump Room Installation	120	04-Nov-23*	02-Mar-24	10-Dec-22	09-Apr-23	-329		S5S1280, S5S1270	12
S5CHPC1410	Installation of Gas Detection System	90	30-Dec-23	28-Mar-24	27-Mar-23	25-Jun-23	-278	S5CHPP1040	S5CHPC1400, S5CHPT1070	
S5CHPC1430	Installation of UPS	7	21-May-24	27-May-24	21-Jan-24	28-Jan-24	-121	S5P1090	S5CHPT1080	
First Floor		220	07-Mar-23 A	27-May-24	12-Mar-23	28-Jan-24	-121			
S5CHPC1160	Installation of Monorail / Davit LA-04-03 to LA-04-10 (total 8nos.)	103	07-Mar-23 A	31-Jan-24	05-Apr-23	17-Jul-23	-199	S5CHPP1060, S5CHPC1030	S5CHPC1170	8
S5CHPC1170	Installation of Biogas Pre-treatment System - Mechanical Work	127	28-Sep-23 A	24-Feb-24	12-Mar-23	17-Jul-23	-223	S5CHPC1060, S5CHPC1160, S5CHPP1000, S5CHPP1040	S5CHPC1200, S5CHPC1230, S5CHPT1040	12

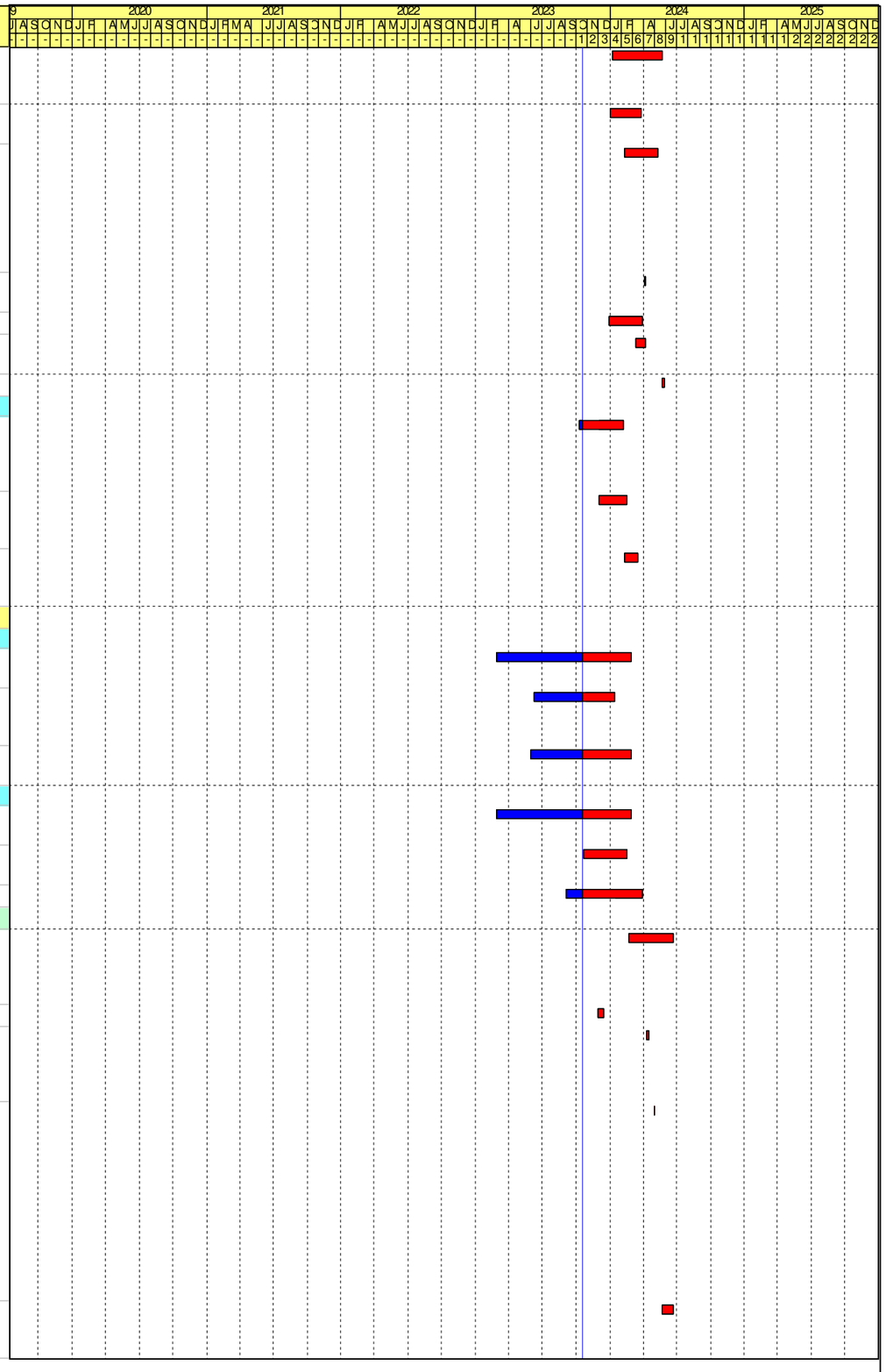


Remaining Work
Critical Activity
Milestone
Actual Progress

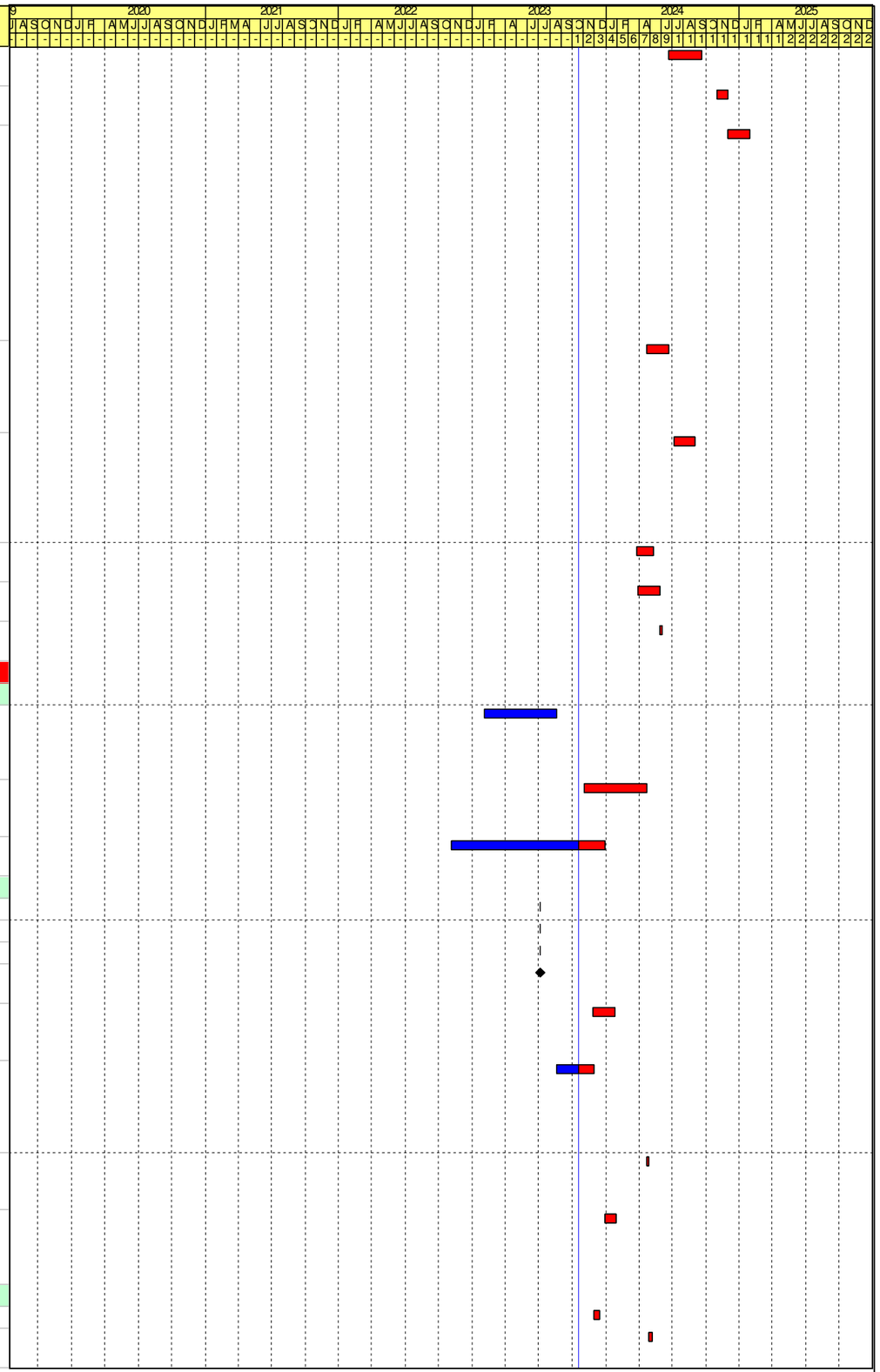
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5CHPC1200	Installation of pipework	135	08-Jan-24*	21-May-24	12-Mar-23	25-Jul-23	-302	S5CHPC1170, S5CHPP1070	S5CHPT1000, S5CHPT1022, S5CHPT1026	13
S5CHPC1230	Installation of Electrical System	85	01-Jan-24	25-Mar-24	11-Jul-23	04-Oct-23	-174	S5CHPC1170, S5P1050	S5CHPT1040, S5CHPC1250	8
S5CHPC1250	Installation of SCADA System (THP, Digester,H2S removal System, Dou12, Biogas Holding Tank)	90	11-Feb-24	10-May-24	20-Jul-23	18-Oct-23	-206	S5CHPC1120, S5CHPP1090, S5CHPC1230	S5T1100, S5CHPT1030, S5T1250, S5T1260, S5T1220, S5T1230, S5T1240	9
S5CHPC1260	LV Switchboard Installation	6	03-Apr-24	08-Apr-24	07-Jun-23	13-Jun-23	-301	S5CHPC1130, S5CHPP1055	S5CHPT1010, S5CHPC1420	
S5CHPC1400	Installation of Gas Detection System	90	30-Dec-23	28-Mar-24	27-Mar-23	25-Jun-23	-278	S5CHPC1410	S5CHPT1070	
S5CHPC1420	Cable Laying and termination	30	10-Mar-24*	08-Apr-24	22-May-23	21-Jun-23	-293	S5CHPC1260, S5CHPC1145	S5CHPT1020	
S5CHPC1440	Installation of UPS	7	21-May-24	27-May-24	21-Jan-24	28-Jan-24	-121	S5P1090	S5CHPT1080	
Roof		107	09-Oct-23 A	17-Mar-24	21-Mar-23	06-Jul-23	-256			
S5CHPC1270	Installation of CHP System - Mechanical Work	69	09-Oct-23 A	08-Feb-24	21-Mar-23	29-May-23	-256	S5CHPC1050, S5CHPP1070	S5CHPT1030, S5CHPC1280, S5CHPC1290, S5CHPT1060	12
S5CHPC1280	Installation of Steam Boiler System - Mechanical Work	77	02-Dec-23	16-Feb-24	21-Mar-23	06-Jun-23	-256	S5CHPC1270, S5CHPP1070, S5CHPP1040	S5CHPT1050, S5CHPC1290	7
S5CHPC1290	Installation of Electrical System	38	09-Feb-24	17-Mar-24	29-May-23	06-Jul-23	-256	S5CHPC1270, S5CHPC1280, S5P1050	S5CHPT1040, S5CHPT1020	4
BS Installation		162	27-Feb-23 A	30-Mar-24	11-Dec-22	16-Feb-24	-44			
Ground Floor		132	27-Feb-23 A	29-Feb-24	11-Dec-22	28-May-23	-278			
S5CHPC1080	Installation of FS System	132	27-Feb-23 A	29-Feb-24	11-Dec-22	22-Apr-23	-314	S5CHPC1020, S5CHPC1210	S5CHPC1110, S5S1220	7
S5CHPC1090	Installation of MVAC System	80	10-Jun-23 A	14-Jan-24	09-Mar-23	28-May-23	-232	S5P1080	S5CHPC1100, S5S1220, S5CHPC1220	6
S5CHPC1110	Installation of Plumbing System	132	01-Jun-23 A	29-Feb-24	11-Dec-22	22-Apr-23	-314	S5CHPC1080	S5S1160, S5CHPC1240	5
First Floor		162	27-Feb-23 A	30-Mar-24	11-Dec-22	16-Feb-24	-44			
S5CHPC1210	Installation of FS System	132	27-Feb-23 A	29-Feb-24	11-Dec-22	22-Apr-23	-314	S5CHPC1020	S5S1220, S5CHPC1080	7
S5CHPC1220	Installation of MVAC System	120	21-Oct-23	17-Feb-24	19-Oct-23	16-Feb-24	-2	S5CHPC1090, S5P1080	S5S1220	12
S5CHPC1240	Installation of Plumbing System	73	04-Sep-23 A	30-Mar-24	10-Mar-23	22-May-23	-314	S5CHPC1110	S5S1160	5
Testing and Commissioning		425	01-Dec-23	28-Jan-25	26-Apr-23	04-Apr-24	-300			
S5CHPT1000	Pipe Pressure Test	120	22-Feb-24	20-Jun-24	26-Apr-23	24-Aug-23	-302	S5CHPC1200, S5CHPC1070	S5T1100, S5CHPT1030, S5CHPT1040, S5CHPT1050	12
S5CHPT1005	SAT for Transformer	14	01-Dec-23	14-Dec-23	21-Jun-23	05-Jul-23	-163	S5WS2T1000	S5CHPT1020	
S5CHPT1010	SAT for Switchboard	8	09-Apr-24	16-Apr-24	13-Jun-23	21-Jun-23	-301	S5CHPC1260, S5CHPC1140, S5CHPC1130, S5CHPC1145	S5CHPT1020	
S5CHPT1020	Ready for Power Energisation	1	01-May-24	01-May-24	05-Jul-23	06-Jul-23	-301	S5CHPC1130, S5CHPC1140, S5CHPT1010, S5CHPC1290, S5WS2C1110, S5CHPC1420, S5CHPT1005	S5CHPT1030, S5THPT1010, S5CHPT1040, S5CHPT1050, S5DIGT1010, S5BIOT1000, S5THPT1000, S5H2ST1000, S5WGBT1000, S5DOUT1010, S5TCWT1000	
S5CHPT1022	SAT of Instrumentation (Excluded Biogas Circuit)	30	22-May-24	20-Jun-24	07-Oct-23	06-Nov-23	-228	S5CHPC1200, S5CHPC1070	S5CHPT1030, S5T1003, S5CHPT1024	3



Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5CHPT1024	SAT for CHP System (Test without Biogas)	90	21-Jun-24	18-Sep-24	06-Nov-23	04-Feb-24	-228	S5CHPT1022, S5T1003	S5CHPT1030	
S5CHPT1026	SAT of Instrumentation (Biogas Circuit)	30	31-Oct-24	29-Nov-24	05-Jan-24	04-Feb-24	-300	S5CHPC1200, S5CHPC1070	S5CHPT1030	
S5CHPT1030	SAT for CHP System (Test with Biogas)	60	30-Nov-24	28-Jan-25	04-Feb-24	04-Apr-24	-300	S5CHPT1020, S5CHPC1050, S5CHPC1100, S5CHPC1270, S5CHPT1000, S5CHPC1250, S5CHPC1120, S5CHPT1022, S5T1110, S5CHPT1026, S5CHPT1040, S5CHPT1024	S5T1100, S5T1210	6
S5CHPT1040	SAT for Biogas Pre-treatment System	60	22-Apr-24	20-Jun-24	06-Dec-23	04-Feb-24	-138	S5CHPC1170, S5CHPT1020, S5CHPC1230, S5CHPC1290, S5CHPT1000	S5T1003, S5CHPT1030	6
S5CHPT1050	SAT for Steam Boiler System	60	05-Jul-24	02-Sep-24	25-Jun-23	24-Aug-23	-376	S5CHPC1060, S5CHPC1100, S5CHPT1020, S5CHPC1280, S5CHPT1000, S5S1310	S5T1003, S5T1110, S5T1050	6
S5CHPT1060	SAT for Ventailation System (CHP System)	45	27-Mar-24	10-May-24	21-Dec-23	04-Feb-24	-97	S5CHPC1270, S5CHPC1050	S5T1200, S5T1003	4
S5CHPT1070	SAT for Gas Detection System	60	29-Mar-24	27-May-24	25-Jun-23	24-Aug-23	-278	S5CHPC1400, S5CHPC1410	S5T1110, S5T1003	6
S5CHPT1080	SAT for UPS	7	28-May-24	03-Jun-24	28-Jan-24	04-Feb-24	-121	S5CHPC1440, S5CHPC1430	S5T1003	
Tx Rm & LV Switchroom (for UV)		214	04-Nov-22 A	21-May-24	28-Oct-22	24-Jun-23	-333			
Fabrication, FAT & Delivery of Major Plant & Materials		185	04-Nov-22 A	22-Apr-24	28-Oct-22	18-May-23	-341			
S5TXRP1000	Fabrication & Delivery of Transfomers -UV (Tx 07 & 08)	0	03-Feb-23 A	20-Aug-23 A	07-Apr-23	07-Apr-23		S1D1130, S1D1290, S1D1210, S2P1110	S5TXRC1030	
S5TXRP1010	Fabrication & Delivery of LVSB -UV	172	03-Nov-23*	22-Apr-24	27-Nov-22	18-May-23	-341	S1D1210, S1D1290, S2P1130	S5TXRC1040	30
S5TXRP1020	Fabrication & Delivery of SCADA System	70	04-Nov-22 A	29-Dec-23	28-Oct-22	06-Jan-23	-358	S1D1290, S2P1140	S5TXRC1050	60
Installation		191	06-Jul-23 A	28-Apr-24	06-Jan-23	23-Jun-23	-311			
S5TXRC1000	Access to TX Rm & LV Switchroom (Impacted by EWN-0314)	0	06-Jul-23 A	06-Jul-23 A	24-Apr-23	24-Apr-23			S5TXRC1020	
S5TXRC1010	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-1)	0	06-Jul-23 A	06-Jul-23 A	24-Apr-23	24-Apr-23			S5TXRC1020	
S5TXRC1012	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-2)	0	06-Jul-23 A	06-Jul-23 A	07-Apr-23	07-Apr-23			S5TXRC1015	
S5TXRC1015	Actual access Date	0	06-Jul-23 A		07-Apr-23			S5TXRC1012	S5TXRC1020, S5TXRC1030	
S5TXRC1020	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	27-Nov-23*	25-Jan-24	24-Apr-23	23-Jun-23	-217	S5TXRC1000, S5TXRC1010, S5TXRC1015	S5TXRT1010	6
S5TXRC1030	E&M Installation of Transfomers in Tx Rm	41	20-Aug-23 A	30-Nov-23	07-Apr-23	18-May-23	-197	S4C1010, S5TXRP1000, S1D1310, S5P1050, S5TXRC1015	S5TXRC1040, S5TXRT1000	
S5TXRC1040	E&M Installation of LVSB	6	23-Apr-24	28-Apr-24	18-May-23	24-May-23	-341	S5TXRC1030, S5TXRP1010, S5P1050	S5TXRT1000, S5EXAC1080	
S5TXRC1050	Installation of SCADA System (UV, DOU11, PSW)	30	30-Dec-23	28-Jan-24	06-Jan-23	05-Feb-23	-358	S4C1040, S5TXRP1020, S4C1070, S4C1080	S5T1200, S5T1120, PL1210, S5T1006	3
Testing and Commissioning		173	01-Dec-23	21-May-24	01-Jun-23	24-Jun-23	-333			
S5TXRT0001	SAT for Transformer	14	01-Dec-23	14-Dec-23	09-Jun-23	23-Jun-23	-175	S5WS2T1000	S5TXRT1010	
S5TXRT1000	SAT for Switchboard	8	29-Apr-24	06-May-24	01-Jun-23	09-Jun-23	-333	S5TXRC1040, S5TXRC1030	S5TXRT1010	



Remaining Work
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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

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30-Jun-23	Rev.35	IM/LT	KM
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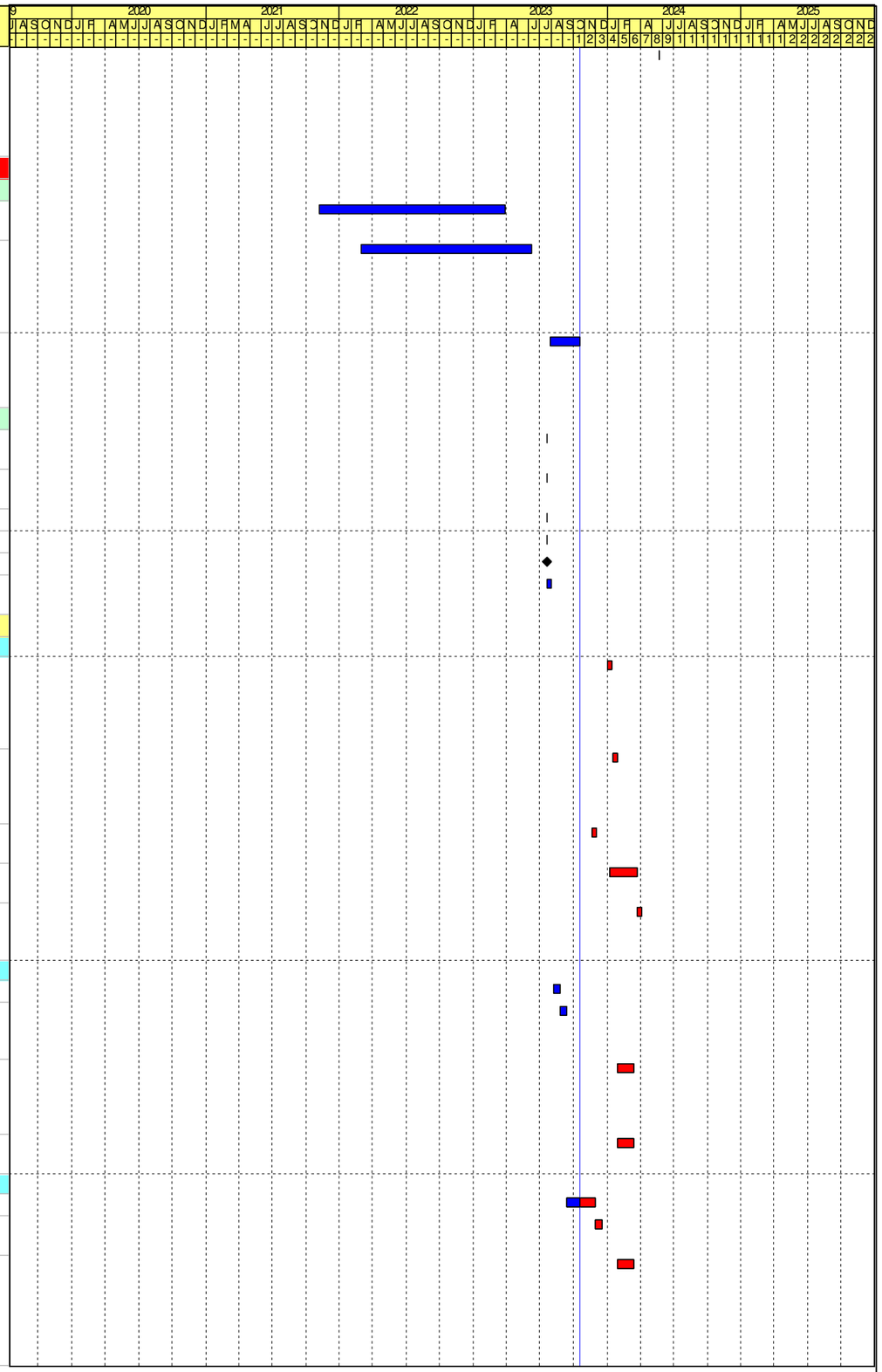
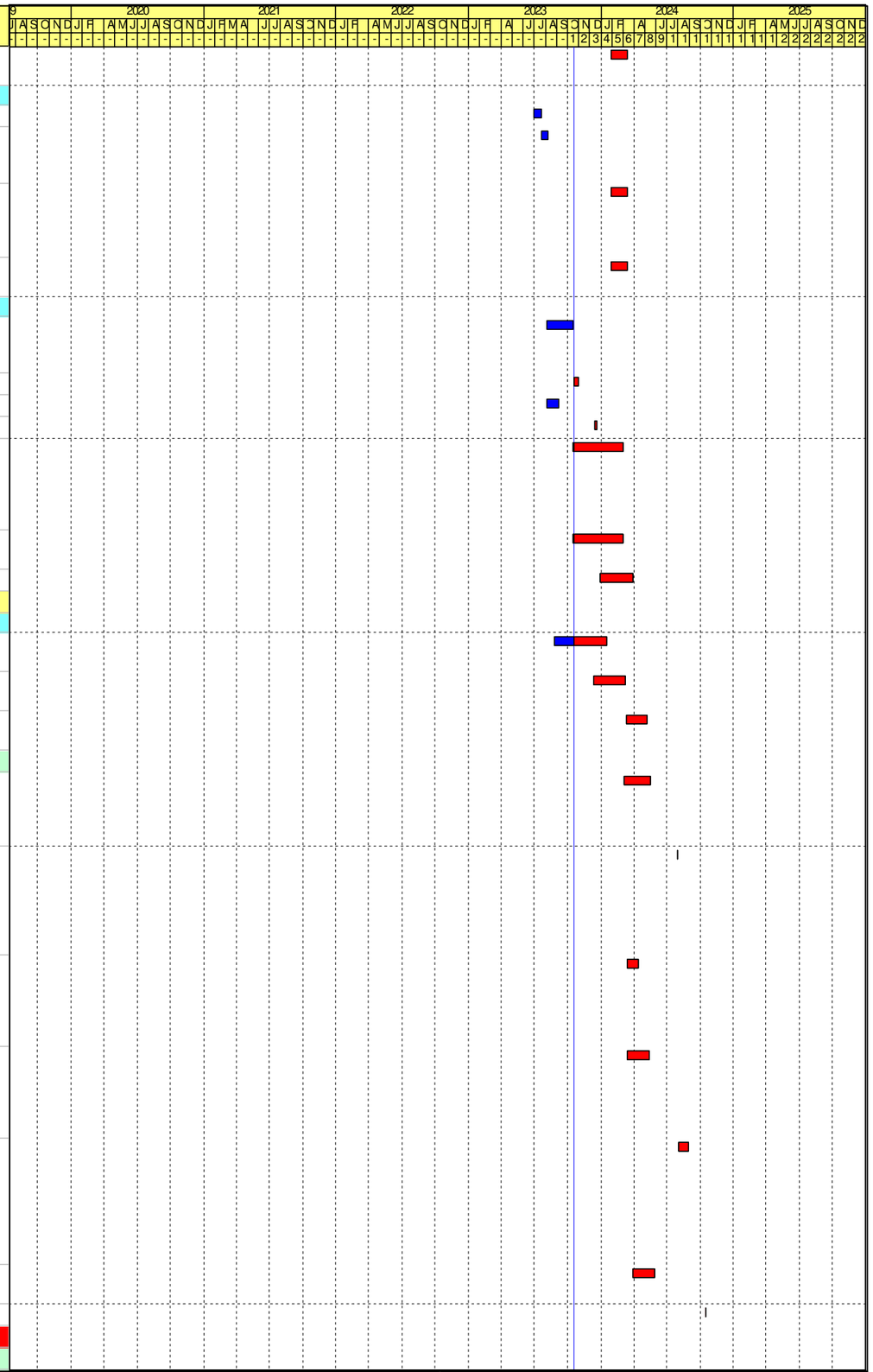
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5TXRT1010	Ready for Power Energisation	1	21-May-24	21-May-24	23-Jun-23	24-Jun-23	-333	S5TXRC1020, S5WS2C1060, S5WS2C1040, S5WS2C1130, S5TXRT1000, S5TXRT0001	S5SHPT1000, S5DOUT1000, S5PSWT1000, SC51120	
Sludge Digesters & Distribution Chamber		361	06-Nov-21 A	15-Oct-24	11-Dec-22	24-Sep-25	344			
Fabrication, FAT & Delivery of Major Plant & Materials		0	06-Nov-21 A	20-Oct-23 A	11-Dec-22	11-Apr-23				
S5DIGP1000	Fabrication & Delivery of Sludge Digestion System	0	06-Nov-21 A	29-Mar-23 A	23-Dec-22	23-Dec-22		S2P1020, S2D1450	S5DIGC1210	
S5DIGP1010	Fabrication & Delivery of FRP Walkway / Cover	0	01-Mar-22 A	10-Jun-23 A	11-Apr-23	11-Apr-23		S2P1020	S5DIGC1040, S5DIGC1050, S5DIGC1060, S5DIGC1070, S5DIGC1080	
S5DIGP1020	Fabrication & Delivery of Pipeworks & Associated Valves	0	31-Jul-23 A	20-Oct-23 A	11-Dec-22	11-Dec-22		S5P1010	S5DIGC1110, S5DIGC1150, S5DIGC1190, S5DIGC1250	
Installation		201	29-Jun-23 A	08-May-24	11-Dec-22	24-Sep-25	504			
S5DIGC1000	Access to Sludge Digesters & Distribution Chamber (Impacted by EWN-0314)	0	20-Jul-23 A	20-Jul-23 A	24-Sep-25	24-Sep-25				
S5DIGC1010	Access to Sludge Digester No.1 & Distribution Chamber (Impacted by EWN-0314-1)	0	20-Jul-23 A	20-Jul-23 A	24-Sep-25	24-Sep-25				
S5DIGC1020	Access to Sludge Digesters - Remaining (Impacted by EWN-0314-1)	0	20-Jul-23 A	20-Jul-23 A	11-Jun-23	11-Jun-23			S5DIGC1050	
S5DIGC1022	Access to Sludge Digesters - Remaining (Impacted by EWN-0314-2)	0	20-Jul-23 A	20-Jul-23 A	23-Dec-22	23-Dec-22			S5DIGC1025	
S5DIGC1025	Actual Access Date	0	20-Jul-23 A		23-Dec-22			S5DIGC1022	S5DIGC1030	
S5DIGC1030	Mobilisation	0	20-Jul-23 A	03-Aug-23 A	23-Dec-22	23-Dec-22		S5DIGC1025	S5DIGC1210, S5DIGC1040	
E&M Installation		168	29-Jun-23 A	05-Apr-24	11-Dec-22	09-Jul-23	-272			
FRP Walkway / Cover Installation		138	20-Nov-23	05-Apr-24	11-Apr-23	09-Jul-23	-272			
S5DIGC1040	Installation of Working Platform for Digester 1 (Roof)	14	02-Jan-24*	15-Jan-24	28-May-23	11-Jun-23	-219	AD1080, S5DIGP1010, S5DIGC1030, S5DIGC1100, S5DIGC1060	PL1210, PL1310, S5DIGC1050, SC51120	
S5DIGC1050	Installation of Working Platform for Digester 3 (Roof)	14	16-Jan-24	29-Jan-24	11-Jun-23	25-Jun-23	-219	S5DIGC1020, S5DIGC1140, S5DIGP1010, S5DIGC1040	S5DIGC1080	
S5DIGC1060	Installation of Working Platform for Digester 4 (Roof)	14	20-Nov-23*	03-Dec-23	14-May-23	28-May-23	-190	S5DIGC1180, S5DIGP1010	S5DIGC1040	
S5DIGC1070	Installation of Working Platform for Distribution Chamber & Overflow Chamber	75	08-Jan-24*	22-Mar-24	11-Apr-23	25-Jun-23	-272	S5DIGP1010	S5DIGC1080	7
S5DIGC1080	Installation of Working Platform for Digester 2 (Roof)	14	23-Mar-24	05-Apr-24	25-Jun-23	09-Jul-23	-272	S5DIGC1070, S5DIGP1010, S5DIGC1050	S5DIGT1020	
Sludge Digester 1		45	08-Aug-23 A	13-Mar-24	26-Jan-23	06-Jul-23	-252			
S5DIGC1090	Installation of Sludge Mixer (4 nos.)	0	08-Aug-23 A	26-Aug-23 A	26-Jan-23	26-Jan-23		S5DIGC1180	S5DIGC1100	
S5DIGC1100	Installation of Motor with Belt adjustment	0	27-Aug-23 A	13-Sep-23 A	26-Jan-23	26-Jan-23		S5DIGC1090	S5DIGC1110, S5DIGC1130, S5DIGC1040	
S5DIGC1110	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	29-Jan-24*	13-Mar-24	26-Mar-23	10-May-23	-309	S5DIGC1100, S5DIGP1020, S5DIGC1150	S5DIGC1120, S5DIGT1015, S5DIGT1018, S5DIGT1000	4
S5DIGC1120	Installation of Electrical System	45	29-Jan-24	13-Mar-24	22-May-23	06-Jul-23	-252	S5DIGC1110, S5P1050	S5DIGT1010	4
Sludge Digester 3		145	14-Sep-23 A	13-Mar-24	26-Jan-23	06-Jul-23	-252			
S5DIGC1130	Installation of Sludge Mixer (4 nos.)	41	14-Sep-23 A	30-Nov-23	26-Jan-23	08-Mar-23	-268	S5DIGC1100	S5DIGC1140	
S5DIGC1140	Installation of Motor with Belt adjustment	18	01-Dec-23	18-Dec-23	08-Mar-23	26-Mar-23	-268	S5DIGC1130	S5DIGC1150, S5DIGC1050	
S5DIGC1150	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	29-Jan-24*	13-Mar-24	26-Mar-23	10-May-23	-309	S5DIGC1140, S5DIGP1020	S5DIGC1160, S5DIGC1110, S5DIGC1190, S5DIGT1015, S5DIGT1018, S5DIGT1000	4



Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5DIGC1160	Installation of Electrical System	45	29-Jan-24	13-Mar-24	22-May-23	06-Jul-23	-252	S5DIGC1150, S5P1050	S5DIGT1010	4
Sludge Digester 4		45	29-Jun-23 A	13-Mar-24	26-Jan-23	06-Jul-23	-252			
S5DIGC1170	Installation of Sludge Mixer (4 nos.)	0	29-Jun-23 A	20-Jul-23 A	26-Jan-23	26-Jan-23			S5DIGC1180	
S5DIGC1180	Installation of Motor with Belt adjustment	0	21-Jul-23 A	07-Aug-23 A	26-Jan-23	26-Jan-23		S5DIGC1170	S5DIGC1190, S5DIGC1090, S5DIGC1060	
S5DIGC1190	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	29-Jan-24	13-Mar-24	26-Mar-23	10-May-23	-309	S5DIGC1180, S5DIGP1020, S5DIGC1150	S5DIGC1200, S5DIGT1015, S5DIGT1018, S5DIGT1000	4
S5DIGC1200	Installation of Electrical System	45	29-Jan-24	13-Mar-24	22-May-23	06-Jul-23	-252	S5DIGC1190, S5P1050	S5DIGT1010	4
Distribution Chamber		160	04-Aug-23 A	28-Mar-24	11-Dec-22	06-Jul-23	-267			
S5DIGC1210	Installation of Sludge Recirculation Pumps (5 nos.)	0	04-Aug-23 A	17-Oct-23 A	23-Dec-22	23-Dec-22		AD1080, S5DIGP1000, S5DIGC1030	S5DIGC1220, S5DIGC1280, S5DIGT1018	
S5DIGC1220	Installation of Heat Exchanger (3 nos.)	11	18-Oct-23 A	31-Oct-23	07-Mar-23	18-Mar-23	-228	S5DIGC1210	S5DIGC1230	
S5DIGC1230	Installation of Sludge Transfer Pump (2 nos.)	0	04-Aug-23 A	07-Sep-23 A	18-Mar-23	18-Mar-23		S5DIGC1220	S5DIGC1240	
S5DIGC1240	Installation of Vertical Mixer at Sludge Buffer Tank (2 nos.)	8	15-Dec-23*	22-Dec-23	18-Mar-23	26-Mar-23	-272	S5DIGC1230	S5DIGC1250	
S5DIGC1250	Installation of Pipework, Valve & Instruments	135	16-Oct-23 A	03-Mar-24	11-Dec-22	25-Apr-23	-314	S5DIGC1240, S5DIGP1020	S5DIGC1260, S5DIGT1000, S5H2SC1020, S5DIGT1015, S5DIGT1018	13
S5DIGC1260	Installation of Electrical System	135	16-Oct-23 A	03-Mar-24	21-Feb-23	06-Jul-23	-242	S5DIGC1250, S5P1050	S5DIGT1010	13
S5DIGC1270	Installation of Gas Detection System	90	30-Dec-23	28-Mar-24	27-Mar-23	25-Jun-23	-278	S5CHPP1040	S5DIGT1030	9
BS Installation		201	25-Aug-23 A	08-May-24	23-Dec-22	22-May-23	-353			
Distribution Chamber		201	25-Aug-23 A	08-May-24	23-Dec-22	22-May-23	-353			
S5DIGC1280	Installation of FS System	90	25-Aug-23 A	18-Jan-24	23-Dec-22	23-Mar-23	-302	S5DIGC1210	S5DIGC1290, S5S1220	9
S5DIGC1290	Installation of MVAC System	90	11-Dec-23	09-Mar-24	23-Dec-22	23-Mar-23	-353	S5DIGC1280, S5P1080	S5DIGC1300, S5S1220	9
S5DIGC1300	Installation of Plumbing System	60	10-Mar-24	08-May-24	23-Mar-23	22-May-23	-353	S5S1120, S5DIGC1290	S5S1160	6
Testing and Commissioning		226	04-Mar-24	15-Oct-24	25-Apr-23	24-Aug-23	-419			
S5DIGT1000	Pipe Pressure Test	75	04-Mar-24	17-May-24	25-Apr-23	09-Jul-23	-314	S5DIGC1250, S5DIGC1190, S5DIGC1150, S5DIGC1110	S5DIGT1020	8
S5DIGT1010	Ready for Power Energisation	3	29-Jul-24	31-Jul-24	06-Jul-23	09-Jul-23	-389	S5DIGC1260, S5DIGC1200, S5DIGC1160, S5DIGC1120, S5EXAC1030, S5CHPT1020	S5DIGT1020	
S5DIGT1015	SAT of Instrumentation	30	14-Mar-24	12-Apr-24	09-Jun-23	09-Jul-23	-279	S5DIGC1250, S5DIGC1190, S5DIGC1150, S5DIGC1110	S5DIGT1020, S5T1120, S5T1110, S5T1060, S5T1220	3
S5DIGT1018	SAT for Digested Sludge Recirculation Pumps	60	14-Mar-24	12-May-24	10-May-23	09-Jul-23	-309	S5DIGC1210, S5DIGC1250, S5DIGC1190, S5DIGC1150, S5DIGC1110	S5DIGT1020, S5T1220	6
S5DIGT1020	Self Test for Sludge Anaerobic Digestion System	30	01-Aug-24	30-Aug-24	09-Jul-23	08-Aug-23	-389	S5DIGC1080, S5DIGT1010, S5DIGT1000, S5DIGT1015, S5DIGT1018	S5T1120, S5T1110, S5T1060, S5T1220, S5T1050, S5T1280, S5DIGT1040	3
S5DIGT1030	SAT for Gas detection System	60	29-Mar-24	27-May-24	25-Jun-23	24-Aug-23	-278	S5DIGC1270	S5T1110, S5T1220	6
S5DIGT1040	Purging for Digester Tank	1	15-Oct-24	15-Oct-24	23-Aug-23	24-Aug-23	-419	S5DIGT1020	S5T1110	
Workshop No. 2		343	29-Nov-21 A	27-Sep-24	11-Mar-23	08-May-24	-143			
Fabrication, FAT & Delivery of Major Plant & Materials		132	29-Nov-21 A	29-Feb-24	17-Mar-23	17-Jan-24	-44			



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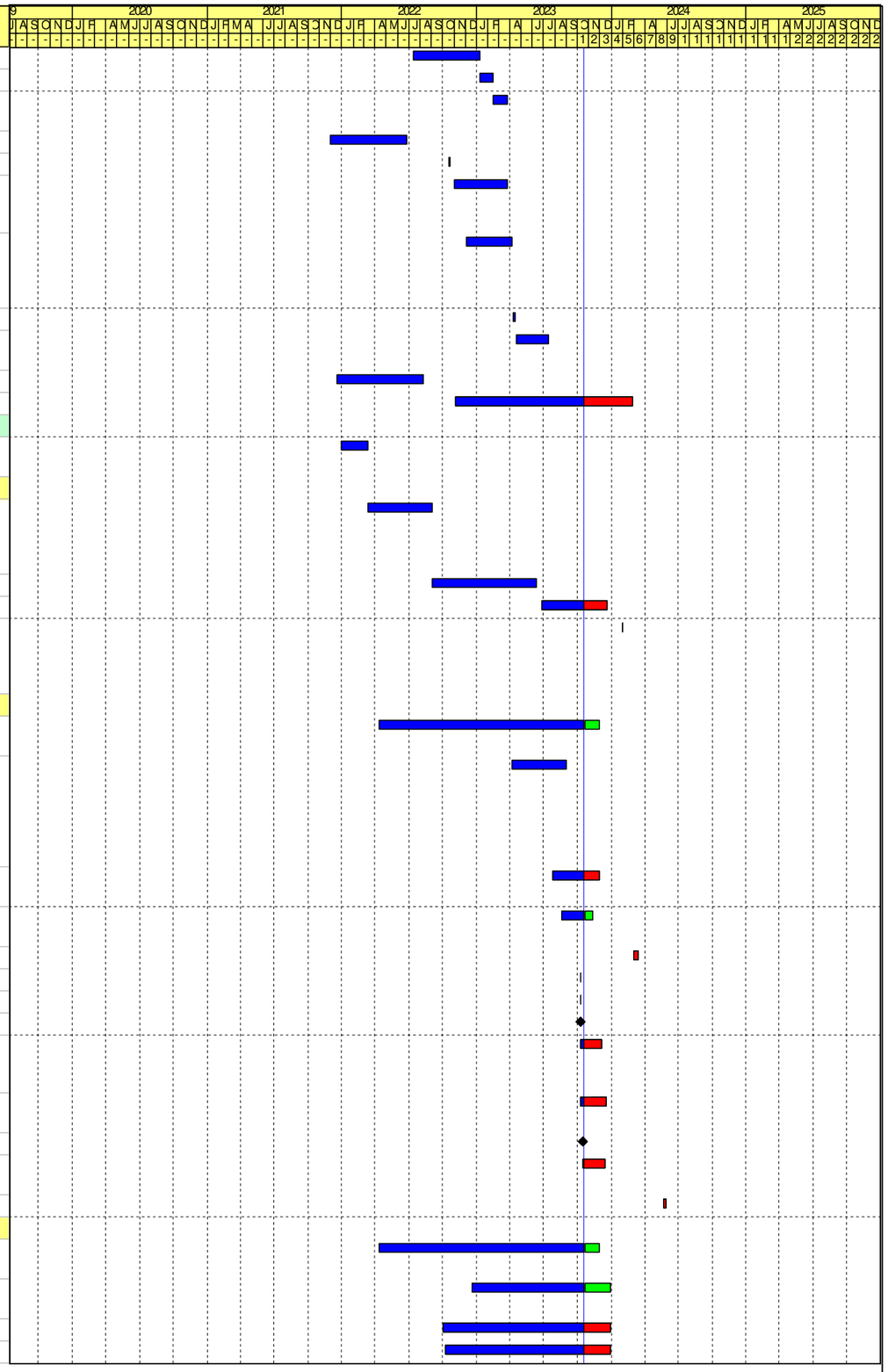
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5WS2P1000	Fabrication of 11kV to 380V Transfomers	0	14-Jul-22 A	09-Jan-23 A	17-Mar-23	17-Mar-23		S2P1110	S5WS2P1010	
S5WS2P1010	FAT for 11kV to 380V Transfomers	0	10-Jan-23 A	15-Feb-23 A	17-Mar-23	17-Mar-23		S5WS2P1000	S5WS2P1020	
S5WS2P1020	Delivery of 11kV to 380V Transfomers	0	16-Feb-23 A	25-Mar-23 A	17-Mar-23	17-Mar-23		S5WS2P1010	S5CHPC1130, S5WS2C1070	
S5WS2P1060	Fabrication of 11 kV Switchboard	0	29-Nov-21 A	26-Jun-22 A	17-Mar-23	17-Mar-23		S2P1120	S5WS2P1070	
S5WS2P1070	FAT for 11 kV Switchboard	0	18-Oct-22 A	21-Oct-22 A	17-Mar-23	17-Mar-23		S5WS2P1060	S5WS2P1080	
S5WS2P1080	Delivery of 11kV Switchboard	0	01-Nov-22 A	25-Mar-23 A	17-Mar-23	17-Mar-23		S5WS2P1070	S5WS2C1060, S5CHPC1140, S5WS2T1000	
S5WS2P1090	Fabrication of LV Switchboard	0	04-Dec-22 A	07-Apr-23 A	17-Jan-24	17-Jan-24		S2P1130, S2D1250, S2D1190, S2D1270	S5WS2P1100	
S5WS2P1100	FAT for LV Switchboard	0	10-Apr-23 A	14-Apr-23 A	17-Jan-24	17-Jan-24		S5WS2P1090	S5WS2P1110	
S5WS2P1110	Delivery of LV Switchboard	0	20-Apr-23 A	14-Jul-23 A	17-Jan-24	17-Jan-24		S5WS2P1100	S5WS2C1080, S5WS2T1005	
S5WS2P1120	Fabrication & Delivery of Lift	0	18-Dec-21 A	10-Aug-22 A	30-Apr-23	30-Apr-23			S5WS2C1190	
S5WS2P1130	Fabrication, FAT & Delivery of SCADA System	132	04-Nov-22 A	29-Feb-24	18-Jul-23	27-Nov-23	-95		S5WS2C1180	60
Installation		220	31-Dec-21 A	27-May-24	11-Mar-23	01-May-24	-27			
S5WS2C1000	Mobilisation	0	31-Dec-21 A	12-Mar-22 A	21-Apr-23	21-Apr-23		AD1120, S5S1030	S5WS2C1010, S5WS2C1050	
CLP Substation		103	14-Mar-22 A	31-Jan-24	21-Apr-23	24-Jun-23	-222			
S5WS2C1010	BS Fitting Installation (at CLP Sub-station in Workshop No.2)	0	14-Mar-22 A	02-Sep-22 A	21-Apr-23	21-Apr-23		S5WS2C1000, AD1120	KD1060, S5WS2C1020, S5WS2C1050, KD1060-1	
S5WS2C1020	Inspections, Rectification & H/O to CLP	0	03-Sep-22 A	13-Jun-23 A	21-Apr-23	21-Apr-23		S5WS2C1010	S5WS2C1030	
S5WS2C1030	E&M Installation of HV Transformer (By CLP)	63	26-Jun-23 A	22-Dec-23	21-Apr-23	23-Jun-23	-183	S5WS2C1020	S5WS2C1040	
S5WS2C1040	Energisation (By CLP)	1	31-Jan-24*	31-Jan-24	23-Jun-23	24-Jun-23	-222	S5WS2C1030, S5WS2C1060, S5S1000, S5WS2T1000	S5TXRT1010	
HV Switchroom / Transformer Room / LV Switchroom		220	11-Apr-22 A	27-May-24	12-Mar-23	01-May-24	-27			
S5WS2C1050	BS Fitting Intallation	41	11-Apr-22 A	30-Nov-23	27-Jan-24	08-Mar-24	99	S5WS2C1000, S5WS2C1010	S5WS2T1010	
S5WS2C1060	HV Switchroom Installation	0	06-Apr-23 A	31-Aug-23 A	17-Mar-23	17-Mar-23		S5WS2P1080	S5WS2C1130, S5TXRT1010, S5WS2C1040, S5WS2C1070, S5WS2T1010, S5WS2T1000	
S5WS2C1070	Installation of Transformer	41	28-Jul-23 A	30-Nov-23	17-Mar-23	27-Apr-23	-218	S5WS2C1060, S5WS2P1020	S5WS2T1010, S5WS2T1000	
S5WS2C1080	LV Switchroom Installation	23	20-Aug-23 A	12-Nov-23	17-Jan-24	09-Feb-24	89	S5WS2P1110	S5WS2T1005, S5WS2C1085	
S5WS2C1085	Cable Laying and Termination	12	02-Mar-24*	13-Mar-24	10-Feb-24	22-Feb-24	-21	S5WS2C1080	S5WS2T1010	
S5WS2C1090	Access to Other Peripheral Systems (Impacted by EWN-0314)	0	09-Oct-23 A	09-Oct-23 A	12-Mar-23	12-Mar-23			S5WS2C1110	
S5WS2C1100	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	0	09-Oct-23 A	09-Oct-23 A	12-Mar-23	12-Mar-23			S5WS2C1110	
S5WS2C1105	Access to Stage 1 External Area	0	09-Oct-23 A		12-Mar-23				S5WS2C1110	
S5WS2C1110	HV Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg and Termination	48	09-Oct-23 A	07-Dec-23	12-Mar-23	29-Apr-23	-223	S5WS2C1090, S5WS2C1105, S5WS2C1100	S5WS2C1120, PL1210, S5CHPT1020	
S5WS2C1120	HV Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg and Termination	42	11-Oct-23 A	19-Dec-23	30-Mar-23	11-May-23	-223	S5WS2C1110	PL1210, S5SDBT1050	
S5WS2C1125	Access to Stage 3 External Area	0	16-Oct-23 A		29-Apr-23				S5WS2C1130	
S5WS2C1130	HV Cables Laying between Workshop No.2 & Tx Rm for UV System No.1 and Termination	55	16-Oct-23 A	14-Dec-23	29-Apr-23	23-Jun-23	-175	S5WS2C1060, S5WS2C1125	S5TXRT1010, PL1210	
S5WS2C1200	Installation of UPS	7	21-May-24	27-May-24	24-Apr-24	01-May-24	-27	S5P1090	S5WS2T1030	
Building Services		201	11-Apr-22 A	08-May-24	11-Mar-23	16-Feb-24	-83			
S5WS2C1140	Installation of FS System	41	11-Apr-22 A	30-Nov-23	28-Oct-23	08-Dec-23	8	S5S1120	S5WS2C1150, S5S1130	
S5WS2C1150	Installation of MVAC System	72	19-Dec-22 A	31-Dec-23	06-Dec-23	16-Feb-24	47	S5WS2C1140, S5P1080	S5S1220	
S5WS2C1160	Installation of Electrical System	72	03-Oct-22 A	31-Dec-23	16-Sep-23	27-Nov-23	-35		S5WS2C1180	
S5WS2C1170	Installation of Plumbing System	72	10-Oct-22 A	31-Dec-23	11-Mar-23	22-May-23	-224	S5S1120	S5S1160	



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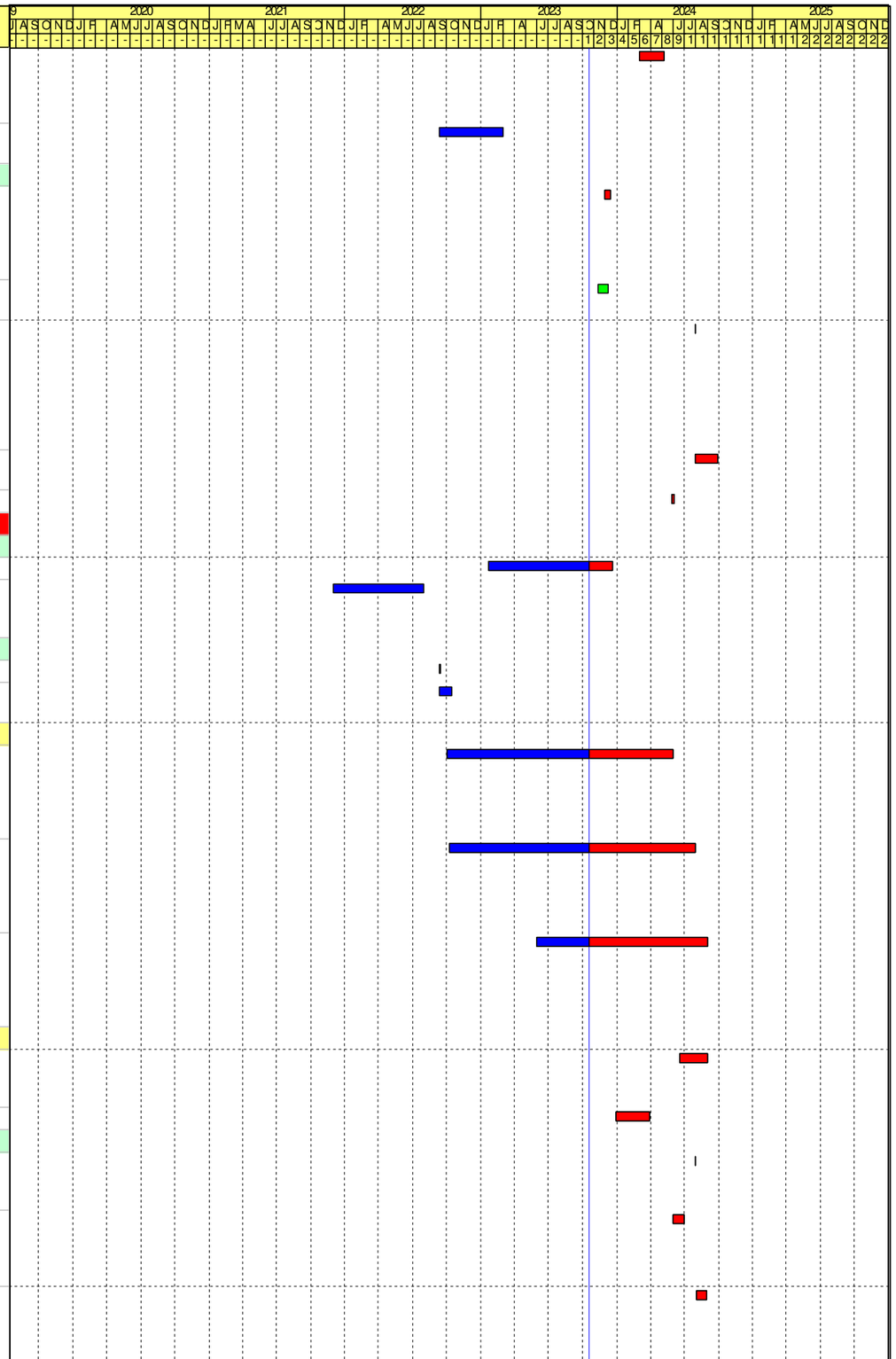
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5WS2C1180	Installation of SCADA System	69	01-Mar-24	08-May-24	27-Nov-23	04-Feb-24	-95	S5WS2C1160, S5WS2P1130	S5T1200, S5S0990, PL1210, S5T1004	7
S5WS2C1190	Installation of Lift	0	13-Sep-22 A	28-Feb-23 A	30-Apr-23	30-Apr-23		S5WS2P1120	S5WS2T1020, S5SDBC1780	
Testing and Commissioning		320	13-Nov-23	27-Sep-24	27-Apr-23	08-May-24	-143			
S5WS2T1000	SAT for Transformer	14	01-Dec-23	14-Dec-23	27-Apr-23	11-May-23	-218	S5WS2P1080, S5WS2C1060, S5WS2C1070	S5WS2T1010, S5WS2C1040, S5CHPT1005, S5TXRT0001, S5SDBT1120	
S5WS2T1005	SAT for LV Switchboard	28	13-Nov-23	10-Dec-23	09-Feb-24	08-Mar-24	89	S5WS2P1110, S5WS2C1080	S5WS2T1010	
S5WS2T1010	Ready for Power Energisation	1	29-Jul-24	29-Jul-24	08-Mar-24	09-Mar-24	-143	S5EXAC1030, S5WS2C1060, S5WS2C1070, S5WS2T1000, S5WS2T1005, S5WS2C1050, S5WS2C1085	S5WS2T1020	
S5WS2T1020	SAT for Lift	60	30-Jul-24	27-Sep-24	09-Mar-24	08-May-24	-143	S5WS2C1190, S5WS2T1010	S5S1090, S5T1004	6
S5WS2T1030	SAT for UPS	7	28-May-24	03-Jun-24	01-May-24	08-May-24	-27	S5WS2C1200	S5T1004	
Biogas Storage		346	29-Nov-21 A	30-Sep-24	29-Aug-22	08-May-24	-146			
Fabrication, FAT & Delivery of Major Plant & Materials		62	29-Nov-21 A	21-Dec-23	29-Aug-22	10-Jul-23	-165			
S5BIOP1000	Fabrication & Delivery of Biogas Booster and Transfer Pumps	62	22-Jan-23 A	21-Dec-23	09-May-23	10-Jul-23	-165	S5P1000	S5BIOC1040	30
S5BIOP1010	Fabrication & Delivery of Biogas Storage	0	29-Nov-21 A	30-Jul-22 A	29-Aug-22	29-Aug-22		S2P1050, S2D1530	S5BIOC1020, S5BIOC1030, S5BIOC1040	
E&M Installation		315	13-Sep-22 A	31-Aug-24	29-Aug-22	12-Aug-23	-386			
S5BIOC1000	Access to Biogas Holding Tanks (Impacted by EWN-0314-1)	0	13-Sep-22 A	13-Sep-22 A	29-Aug-22	29-Aug-22			S5BIOC1010	
S5BIOC1010	Mobilisation	0	13-Sep-22 A	14-Oct-22 A	29-Aug-22	29-Aug-22		AD1100, S5BIOC1000	S5BIOC1020	
Mechanical Installation		315	03-Oct-22 A	31-Aug-24	29-Aug-22	10-Jul-23	-419			
S5BIOC1020	Mechanical Installation of Biogas Storage Tank 3	223	03-Oct-22 A	31-May-24	29-Aug-22	09-Apr-23	-419	AD1100, S5BIOP1010, S5S1060, S5BIOC1010	S5BIOC1030, S5BIOC1060, S5BIOT1010, S5S1070, S5BIOT1050	15
S5BIOC1030	Mechanical Installation of Biogas Storage Tank 2	284	10-Oct-22 A	31-Jul-24	29-Aug-22	09-Jun-23	-419	AD1100, S5BIOC1020, S5BIOP1010	S5BIOC1040, S5BIOT1020, S5BIOC1060, S5S1070, S5BIOT1050	15
S5BIOC1040	Mechanical Installation of Biogas Storage Tank 1	315	01-Jun-23 A	31-Aug-24	29-Aug-22	10-Jul-23	-419	AD1100, S5BIOC1030, S5BIOP1010, S5BIOP1000	PL1210, S5BIOT1030, S5BIOC1060, S5S1070, S5BIOT1050	15
Electrical Installation		246	30-Dec-23	31-Aug-24	27-Mar-23	12-Aug-23	-386			
S5BIOC1060	Electrical Installation for Biogas Holding Tanks	76	17-Jun-24	31-Aug-24	28-May-23	12-Aug-23	-386	S5BIOC1020, S5BIOC1040, S5BIOC1030	S5BIOT1000	14
S5BIOC1070	Installation for Gas Detection System	90	30-Dec-23	28-Mar-24	27-Mar-23	25-Jun-23	-278	S5CHPP1040	S5BIOT1040	9
Testing and Commissioning		186	29-Mar-24	30-Sep-24	25-Jun-23	08-May-24	-146			
S5BIOT1000	Ready for Power Energisation	1	29-Jul-24	29-Jul-24	09-Jul-23	10-Jul-23	-386	S5EXAC1050, S5CHPT1020, S5BIOC1060	S5BIOT1030, S5BIOT1050	
S5BIOT1010	SAT for Biogas Storage Tank 3	30	01-Jun-24	30-Jun-24	25-Jul-23	24-Aug-23	-312	S5BIOC1020	S5T1120, S5T1110, S5T1260, S5S1070	3
S5BIOT1020	SAT for Biogas Storage Tank 2	30	01-Aug-24	30-Aug-24	25-Jul-23	24-Aug-23	-373	S5BIOC1030	S5T1120, S5T1110, S5T1260, S5S1070	3



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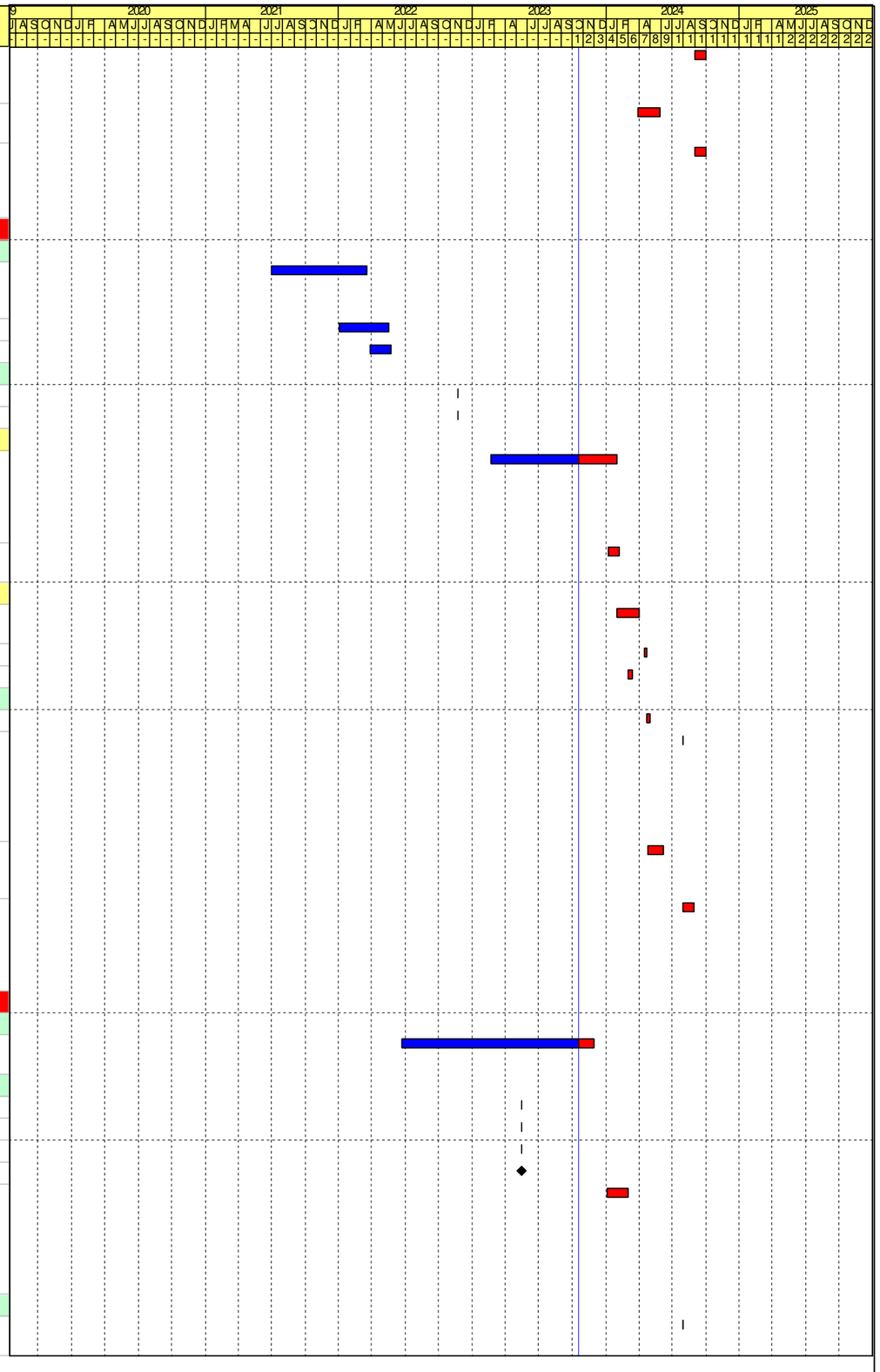
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5BIOT1030	SAT for Biogas Storage Tank 1 (Include Purging of Tanks and associate pipelines)	30	01-Sep-24	30-Sep-24	10-Jul-23	09-Aug-23	-419	S5BIOC1040, S5BIOT1000	S5T1110, S5T1260, S5S1070	3
S5BIOT1040	SAT for Gas Detection System	60	29-Mar-24	27-May-24	25-Jun-23	24-Aug-23	-278	S5BIOC1070	S5T1110, S5T1260	6
S5BIOT1050	SAT for Biogas Tansfer and Booster Pumps	30	01-Sep-24	30-Sep-24	08-Apr-24	08-May-24	-146	S5BIOC1020, S5BIOC1030, S5BIOC1040, S5BIOT1000	S5T1260	
THP Area		312	29-Jun-21 A	28-Aug-24	05-Jan-23	22-Sep-23	-342			
Fabrication, FAT & Delivery of Major Plant & Materials		0	29-Jun-21 A	23-May-22 A	05-Jan-23	05-Jan-23				
S5THPP1000	Fabrication of THP System	0	29-Jun-21 A	18-Mar-22 A	05-Jan-23	05-Jan-23		S2P1040, S2D1410, S2D1370	S5THPP1010	
S5THPP1010	FAT for THP System	0	03-Jan-22 A	17-May-22 A	05-Jan-23	05-Jan-23		S5THPP1000	S5THPP1020	
S5THPP1020	Delivery of THP System	0	29-Mar-22 A	23-May-22 A	05-Jan-23	05-Jan-23		S5THPP1010	S5THPC1020	
E&M Installation		184	22-Nov-22 A	22-Apr-24	05-Jan-23	23-Aug-23	-244			
S5THPC1000	Access to THP Area (Impacted by EWN-0314)	0	22-Nov-22 A	22-Nov-22 A	05-Jan-23	05-Jan-23			S5THPC1020	
S5THPC1010	Access to THP Area (Impacted by EWN-0314-1)	0	22-Nov-22 A	22-Nov-22 A	05-Jan-23	05-Jan-23			S5THPC1020	
Mechanical Installation		108	20-Feb-23 A	06-Feb-24	05-Jan-23	23-Aug-23	-168			
S5THPC1020	Mechanical Installation of THP System	102	20-Feb-23 A	31-Jan-24	05-Jan-23	17-Apr-23	-290	AD1100, S5THPP1020, S5S1020, S5THPC1000, S5THPC1010	S5THPC1030, S5THPT1010, S5THPC1050, S5WGBC1020, S5THPT1000	10
S5THPC1030	Mechanical Installation of Thickened Sludge Feed Pipe to THP System	30	08-Jan-24*	06-Feb-24	24-Jul-23	23-Aug-23	-168	S5THPC1020	S5THPT1010, PL1210	3
Electrical Installation		82	01-Feb-24	22-Apr-24	17-Apr-23	22-Aug-23	-245			
S5THPC1050	Electrical Installation for THP Facilities	60	01-Feb-24	31-Mar-24	17-Apr-23	16-Jun-23	-290	S5THPC1020	S5THPT1000, S5THPT1005	6
S5THPC1060	Installation of Control panel for THP	6	17-Apr-24*	22-Apr-24	25-Jul-23	31-Jul-23	-267		S5THPT0005	
S5THPC1070	Cable Laying and Termination	12	02-Mar-24*	13-Mar-24	10-Aug-23	22-Aug-23	-205		S5THPT1000	
Testing and Commissioning		128	23-Apr-24	28-Aug-24	09-Jul-23	22-Sep-23	-342			
S5THPT0005	SAT of LV switchboard	8	23-Apr-24	30-Apr-24	31-Jul-23	08-Aug-23	-267	S5THPC1060	S5THPT1000	
S5THPT1000	Ready for Power Energisation	1	29-Jul-24	29-Jul-24	22-Aug-23	23-Aug-23	-342	S5THPC1020, S5EXAC1050, S5THPC1050, S5CHPT1020, S5THPC1070, S5THPT0005	S5THPT1010	
S5THPT1005	SAT of Instrumentation	45	24-Apr-24	07-Jun-24	09-Jul-23	23-Aug-23	-290	S5THPC1050	S5THPT1010, S5T1230, S5T1050	4
S5THPT1010	Self Test for THP system	30	30-Jul-24	28-Aug-24	23-Aug-23	22-Sep-23	-342	S5THPC1020, S5THPC1030, S5CHPT1020, S5THPT1000, S5THPT1005	S5T1050, S5T1230	3
H2S Removal Area		299	23-Jun-22 A	14-Aug-24	18-Mar-23	24-Sep-25	406			
Fabrication, FAT & Delivery of Major Plant & Materials		41	23-Jun-22 A	30-Nov-23	18-Mar-23	28-Apr-23	-217			
S5H2SP1000	Fabrication & Delivery of H2S Removal System	41	23-Jun-22 A	30-Nov-23	18-Mar-23	28-Apr-23	-217	S2P1060, S2D1530	S5H2SC1020	30
Installation		60	15-May-23 A	03-Mar-24	12-May-23	24-Sep-25	570			
S5H2SC1000	Access to H2S Removal Area (Impacted by EWN-0314)	0	15-May-23 A	15-May-23 A	12-May-23	12-May-23			S5H2SC1020	
S5H2SC1010	Access to H2S Removal Area (Impacted by EWN-0314-1)	0	15-May-23 A	15-May-23 A	12-May-23	12-May-23			S5H2SC1020	
S5H2SC1012	Access to H2S Removal Area (Impacted by EWN-0314-2)	0	15-May-23 A	15-May-23 A	24-Sep-25	24-Sep-25				
S5H2SC1015	Actual Access Date	0	15-May-23 A		12-May-23				S5H2SC1020	
S5H2SC1020	E&M Installation of H2S Removal System	60	04-Jan-24	03-Mar-24	12-May-23	11-Jul-23	-237	AD1100, S5H2SP1000, S5H2SC1000, S5H2SC1010, S5H2SC1015, S5DIGC1250	PL1210, S5H2ST1010	6
Testing and Commissioning		30	16-Jul-24	14-Aug-24	11-Jul-23	10-Aug-23	-371			
S5H2ST1000	Ready for Power Energisation	3	29-Jul-24	31-Jul-24	24-Jul-23	27-Jul-23	-371	S5EXAC1050, S5CHPT1020	S5H2ST1010	



Remaining Work
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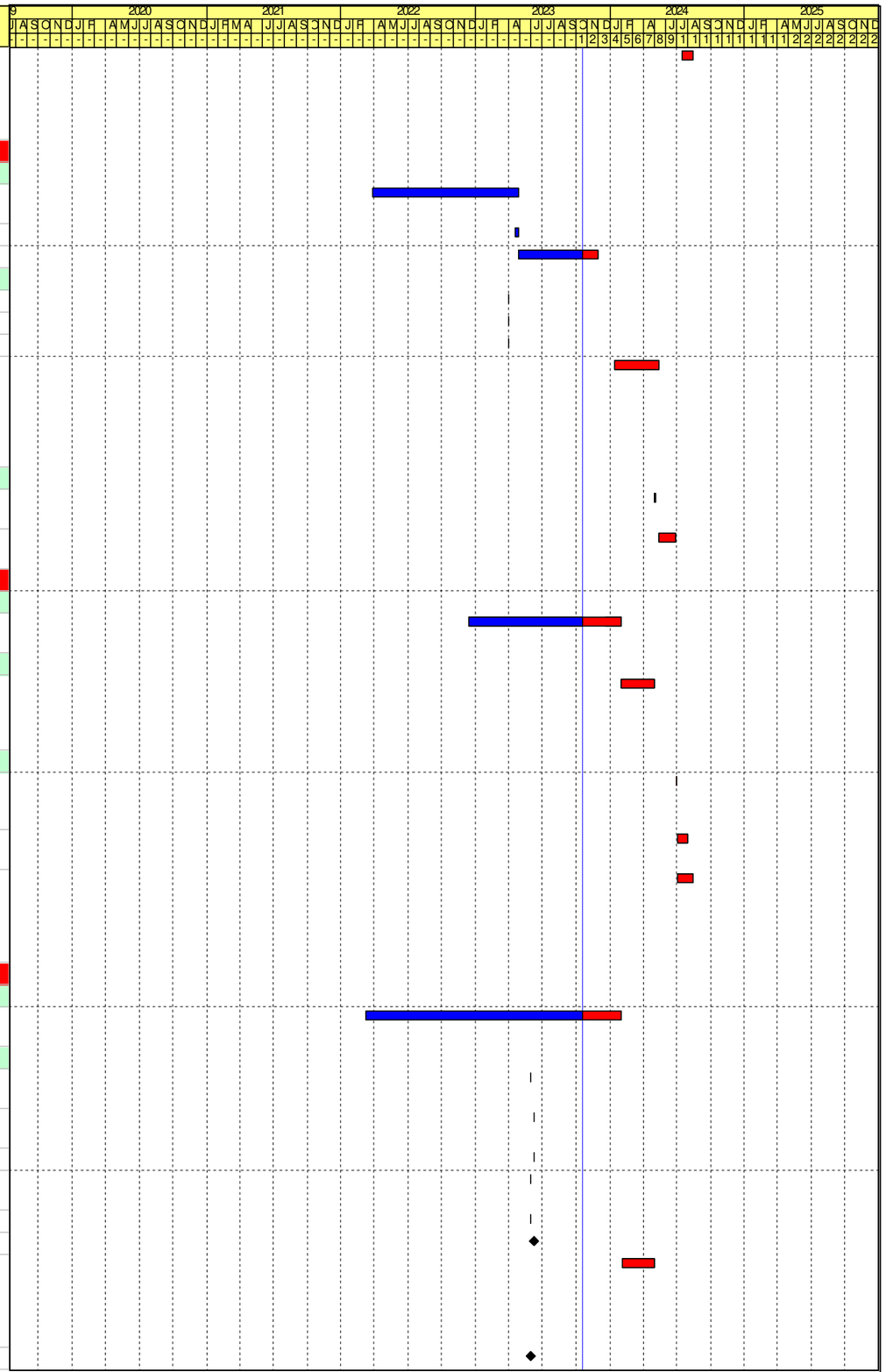
Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5H2ST1010	SAT of H2S Removal System	30	16-Jul-24	14-Aug-24	11-Jul-23	10-Aug-23	-371	S5H2ST1000, S5H2SC1020	S5T1110, S5T1120, S5T1110, S5T1060, S5T1250	3
Waste Gas Burning Area		251	29-Mar-22 A	27-Jun-24	14-Apr-23	06-Nov-23	-235			
Fabrication, FAT & Delivery of Major Plant & Materials		41	29-Mar-22 A	30-Nov-23	14-Apr-23	25-May-23	-190			
S5WGBP1000	Fabrication of Waste Gas Burning System	0	29-Mar-22 A	26-Apr-23 A	14-Apr-23	14-Apr-23		S2P1080, S2D1650	S5WGBP1010	
S5WGBP1010	FAT for Waste Gas Burning System	0	20-Apr-23 A	26-Apr-23 A	14-Apr-23	14-Apr-23		S5WGBP100	S5WGBP102	
S5WGBP1020	Delivery of Waste Gas Burning System	41	27-Apr-23 A	30-Nov-23	14-Apr-23	25-May-23	-190	S5WGBP101	S5WGBC102	15
Installation		120	31-Mar-23 A	13-May-24	25-May-23	22-Sep-23	-235			
S5WGBC1000	Access to Waste Gas Burning Area (Impacted by EWN-0314)	0	31-Mar-23 A	31-Mar-23 A	25-May-23	25-May-23			S5WGBC102	
S5WGBC1010	Access to Waste Gas Burning Area (Impacted by EWN-0314-1)	0	31-Mar-23 A	31-Mar-23 A	25-May-23	25-May-23			S5WGBC102	
S5WGBC1015	Actual Access Date	0	31-Mar-23 A	31-Mar-23 A	25-May-23	25-May-23			S5WGBC102	
S5WGBC1020	E&M Installation of Waste Gas Burning System	120	15-Jan-24*	13-May-24	25-May-23	22-Sep-23	-235	AD1100, S5WGBP1020, S5THPC1020, S5WGBC1000, S5WGBC1010, S5WGBC1015	S5WGBT1010, PL1210	12
Testing and Commissioning		57	02-May-24	27-Jun-24	19-Sep-23	06-Nov-23	-235			
S5WGBT1000	Ready for Power Energisation	3	02-May-24	04-May-24	19-Sep-23	22-Sep-23	-226	S5EXAC1090, S5CHPT1020	S5WGBT1010	
S5WGBT1010	SAT for Flare (Waste Gas Burning System)	45	14-May-24	27-Jun-24	22-Sep-23	06-Nov-23	-235	S5WGBC1020, S5WGBT1000	S5T1120, S5T1110	4
Plant Service Water Area		238	15-Dec-22 A	15-Aug-24	12-Feb-23	10-Aug-23	-372			
Fabrication, FAT & Delivery of Major Plant & Materials		41	15-Dec-22 A	31-Jan-24	12-Feb-23	25-Mar-23	-313			
S5PSWP1000	Fabrication & Delivery of Plant Service Water System	41	15-Dec-22 A	31-Jan-24	12-Feb-23	25-Mar-23	-313	S2P1090, S2D1690	S5PSWC1000	30
Installation		90	01-Feb-24	30-Apr-24	25-Mar-23	23-Jun-23	-313			
S5PSWC1000	E&M Installation of Plant Service Water System	90	01-Feb-24*	30-Apr-24	25-Mar-23	23-Jun-23	-313	AD1100, S5PSWP1000	S5PSWT1000, PL1210, S5PSWT1010, S5PSWT1005	9
Testing and Commissioning		48	29-Jun-24	15-Aug-24	23-Jun-23	10-Aug-23	-372			
S5PSWT1000	Ready for Power Energisation	3	29-Jun-24	01-Jul-24	23-Jun-23	26-Jun-23	-372	S5PSWC1000, S5EXAC1080, S5TXRT1010	S5PSWT1010, S5PSWT1005	
S5PSWT1005	SAT of Instrumentation	30	02-Jul-24	31-Jul-24	11-Jul-23	10-Aug-23	-357	S5PSWC1000, S5PSWT1000	S5PSWT1010	
S5PSWT1010	SAT & System Commissioning Tests for Plant Services Water System	45	02-Jul-24	15-Aug-24	26-Jun-23	10-Aug-23	-372	S5PSWT1000, S5UVPC1000, S5PSWC1000, S5PSWT1005	S5T1060, S5T1006, S5T1055, S5T1050, S5T1280	5
DO Area		315	10-Mar-22 A	30-Aug-24	28-Dec-22	24-Aug-23	-373			
Fabrication, FAT & Delivery of Major Plant & Materials		105	10-Mar-22 A	02-Feb-24	28-Dec-22	12-Apr-23	-297			
S5DOUP1000	Fabrication & Delivery of DO System	105	10-Mar-22 A	02-Feb-24	28-Dec-22	12-Apr-23	-297	S2P1150, S2D1930	S5DOUC1030, S5DOUC1040	
Installation		90	01-Jun-23 A	02-May-24	12-Apr-23	25-Jul-23	-283			
S5DOUC1000	Access to DO Area (Impacted by EWN-0314)	0	01-Jun-23 A	01-Jun-23 A	12-Apr-23	12-Apr-23			S5DOUC1030, S5DOUC1040	
S5DOUC1010	Access to DO Area No.11 (Impacted by EWN-0314-1)	0	08-Jun-23 A	08-Jun-23 A	12-Apr-23	12-Apr-23			S5DOUC1030, S5DOUC1012	
S5DOUC1012	Access to DO Area No.11 (Impacted by EWN-0314-2)	0	08-Jun-23 A	08-Jun-23 A	12-Apr-23	12-Apr-23		S5DOUC1010	S5DOUC1025	
S5DOUC1020	Access to DO Area No.12 (Impacted by EWN-0314-1)	0	01-Jun-23 A	01-Jun-23 A	26-Apr-23	26-Apr-23			S5DOUC1040, S5DOUC1022	
S5DOUC1022	Access to DO Area No.12 (Impacted by EWN-0314-2)	0	01-Jun-23 A	01-Jun-23 A	26-Apr-23	26-Apr-23		S5DOUC1020	S5DOUC1035	
S5DOUC1025	Actual Access Date (DO Area No.11)	0	08-Jun-23 A		12-Apr-23			S5DOUC1012	S5DOUC1030	
S5DOUC1030	E&M Installation of DO System No.11	90	03-Feb-24	02-May-24	12-Apr-23	11-Jul-23	-297	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1010, S5DOUC1025	S5DOUT1020	9
S5DOUC1035	Actual Access Date (DO Area No.12)	0	01-Jun-23 A		26-Apr-23			S5DOUC1022	S5DOUC1040	



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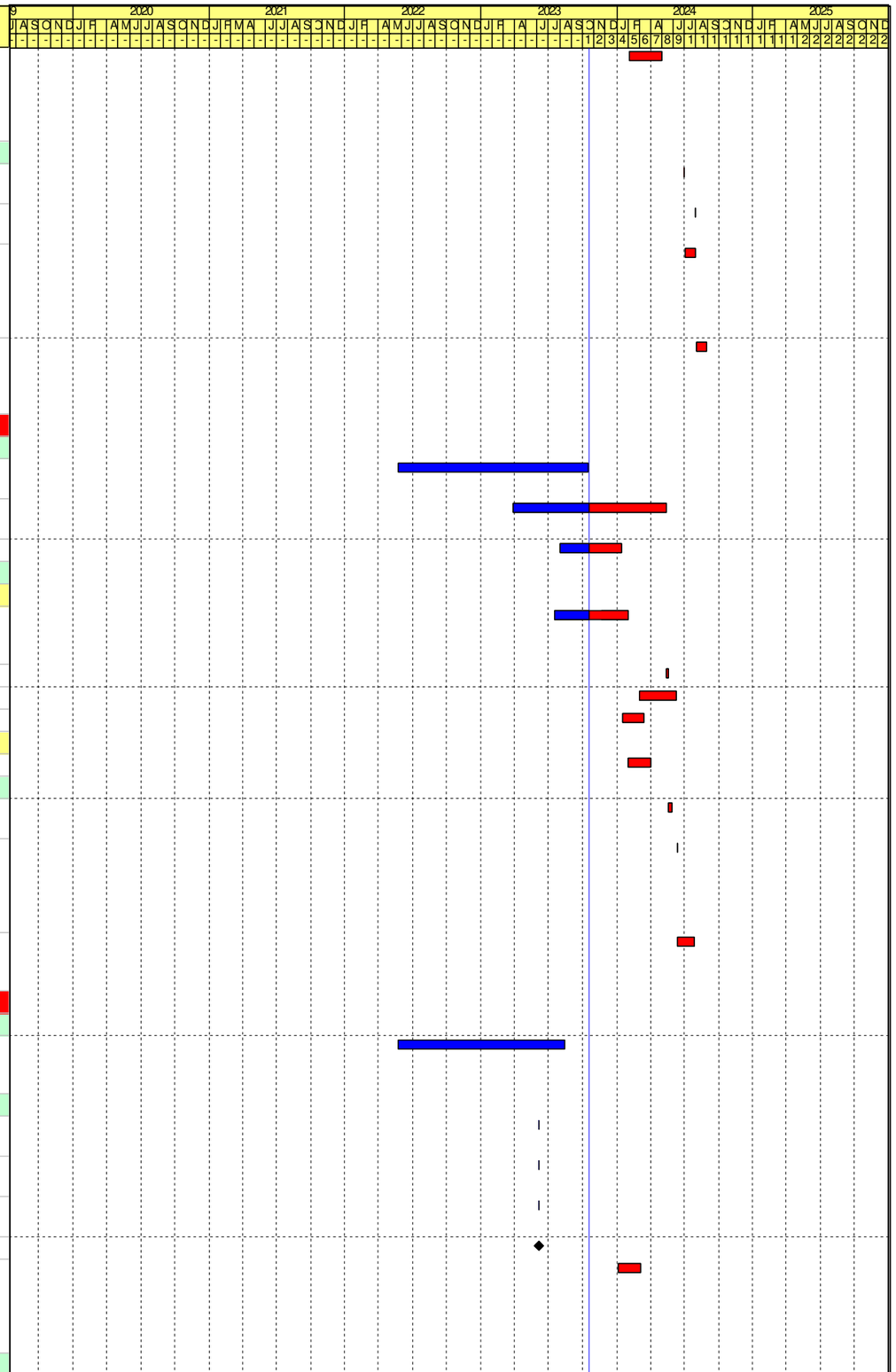
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5DOUC1040	E&M Installation of DO System No.12	90	03-Feb-24	02-May-24	26-Apr-23	25-Jul-23	-283	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1020, S5DOUC1035	PL1210, S5DOUT1030	9
Testing and Commissioning		63	29-Jun-24	30-Aug-24	08-Jul-23	24-Aug-23	-373			
S5DOUT1000	Ready for Power Energisation of DO No.11	3	29-Jun-24	01-Jul-24	08-Jul-23	11-Jul-23	-357	S5EXAC1080, S5TXRT1010	S5DOUT1020	
S5DOUT1010	Ready for Power Energisation of DO No.12	3	29-Jul-24	31-Jul-24	22-Jul-23	25-Jul-23	-373	S5EXAC1050, S5CHPT1020	S5DOUT1030	
S5DOUT1020	SAT & System Commissioning Tests for DO System No.11	30	02-Jul-24	31-Jul-24	11-Jul-23	10-Aug-23	-357	S5DOUT1000, S5DOUC1030	S5T1110, S5T1006, S5T1055, S5T1280, S5T1270	6
S5DOUT1030	SAT & System Commissioning Tests for DO System No.12	30	01-Aug-24	30-Aug-24	25-Jul-23	24-Aug-23	-373	S5DOUT1010, S5DOUC1040	S5T1110, S5T1240, S5T1050, S5T1280	6
Sewage Pump Station		280	23-May-22 A	26-Jul-24	03-Nov-22	16-Feb-24	-162			
Fabrication, FAT & Delivery of Major Plant & Materials		206	23-May-22 A	13-May-24	03-Nov-22	28-May-23	-352			
S5SPSP1000	Fabrication & Delivery of Sewage Pump	0	23-May-22 A	17-Oct-23 A	14-Apr-23	14-Apr-23		S2P1180, S2D1940	S5SPSC1000	
S5SPSP1010	Fabrication & Delivery of LV Switchboard	206	28-Mar-23 A	13-May-24	03-Nov-22	28-May-23	-352		S5SPSC1001, S5SPST0990	30
S5SPSP1020	Fabrication & Delivery of SCADA System	87	01-Aug-23 A	15-Jan-24	17-Nov-22	12-Feb-23	-338		S5SPSC1012	
Installation		203	17-Jul-23 A	10-Jun-24	12-Feb-23	16-Feb-24	-116			
E&M Installation		203	17-Jul-23 A	10-Jun-24	12-Feb-23	25-Jun-23	-352			
S5SPSC1000	E&M Installation of Sewage Pump	72	17-Jul-23 A	31-Jan-24	14-Apr-23	25-Jun-23	-221	AD1100, S5SPSP1000	S5SPSC1020, S5SPST1000, PL1210	
S5SPSC1001	LV Switchboard Installation	6	14-May-24	19-May-24	28-May-23	03-Jun-23	-352	S5SPSP1010	S5SPST0990	
S5SPSC1002	Cable Laying and Termination	101	02-Mar-24*	10-Jun-24	16-Mar-23	25-Jun-23	-352		S5SPST1000	10
S5SPSC1012	SCADA System Installation	60	16-Jan-24	15-Mar-24	12-Feb-23	13-Apr-23	-338	S5SPSP1020	S5T1000	6
BS Installation		60	01-Feb-24	31-Mar-24	18-Dec-23	16-Feb-24	-45			
S5SPSC1020	BS Installation for Sewage Pumping Station	60	01-Feb-24	31-Mar-24	18-Dec-23	16-Feb-24	-45	S5SPSC1000	S5S1220	6
Testing and Commissioning		68	20-May-24	26-Jul-24	03-Jun-23	10-Aug-23	-352			
S5SPST0990	SAT of Switchboard	8	20-May-24	27-May-24	03-Jun-23	11-Jun-23	-352	S5SPSP1010, S5SPSC1001	S5SPST1000	
S5SPST1000	Ready for Power Energisation	1	11-Jun-24	11-Jun-24	25-Jun-23	26-Jun-23	-352	S5SPSC1000, S5SPST0990, S5EXAC1070, S5SDBT1050, S5SPSC1002	S5SPST1010	
S5SPST1010	SAT & System Commissioning Tests for Sewage Pumping Station	45	12-Jun-24	26-Jul-24	26-Jun-23	10-Aug-23	-352	S5SPST1000	S5T1060, S5T1000, S5T1055	
THP Cooling Water Transfer Pumping Station		254	23-May-22 A	14-Sep-24	08-May-23	24-Aug-23	-388			
Fabrication, FAT & Delivery of Major Plant & Materials		0	23-May-22 A	15-Aug-23 A	08-May-23	08-May-23				
S5TCWP1000	Fabrication & Delivery of THP Cooling Pump	0	23-May-22 A	15-Aug-23 A	08-May-23	08-May-23		S2P1210, S2D1970, S2D1370	S5TCWC1020	
Installation		60	07-Jun-23 A	04-Mar-24	08-May-23	07-Jul-23	-242			
S5TCWC1000	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314)	0	07-Jun-23 A	07-Jun-23 A	08-May-23	08-May-23			S5TCWC1020	
S5TCWC1010	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-1)	0	07-Jun-23 A	07-Jun-23 A	08-May-23	08-May-23			S5TCWC1020, S5TCWC1012	
S5TCWC1012	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-2)	0	07-Jun-23 A	07-Jun-23 A	08-May-23	08-May-23		S5TCWC1010	S5TCWC1015	
S5TCWC1015	Actual Access Date	0	07-Jun-23 A		08-May-23			S5TCWC101	S5TCWC102	
S5TCWC1020	E&M Installation of THP Cooling Pump	60	05-Jan-24*	04-Mar-24	08-May-23	07-Jul-23	-242	AD1100, S5TCWP1000, S5TCWC1000, S5TCWC1010, S5TCWC1015	S5TCWT1000, PL1210, S5TCWT1010	6
Testing and Commissioning		48	29-Jul-24	14-Sep-24	07-Jul-23	24-Aug-23	-388			



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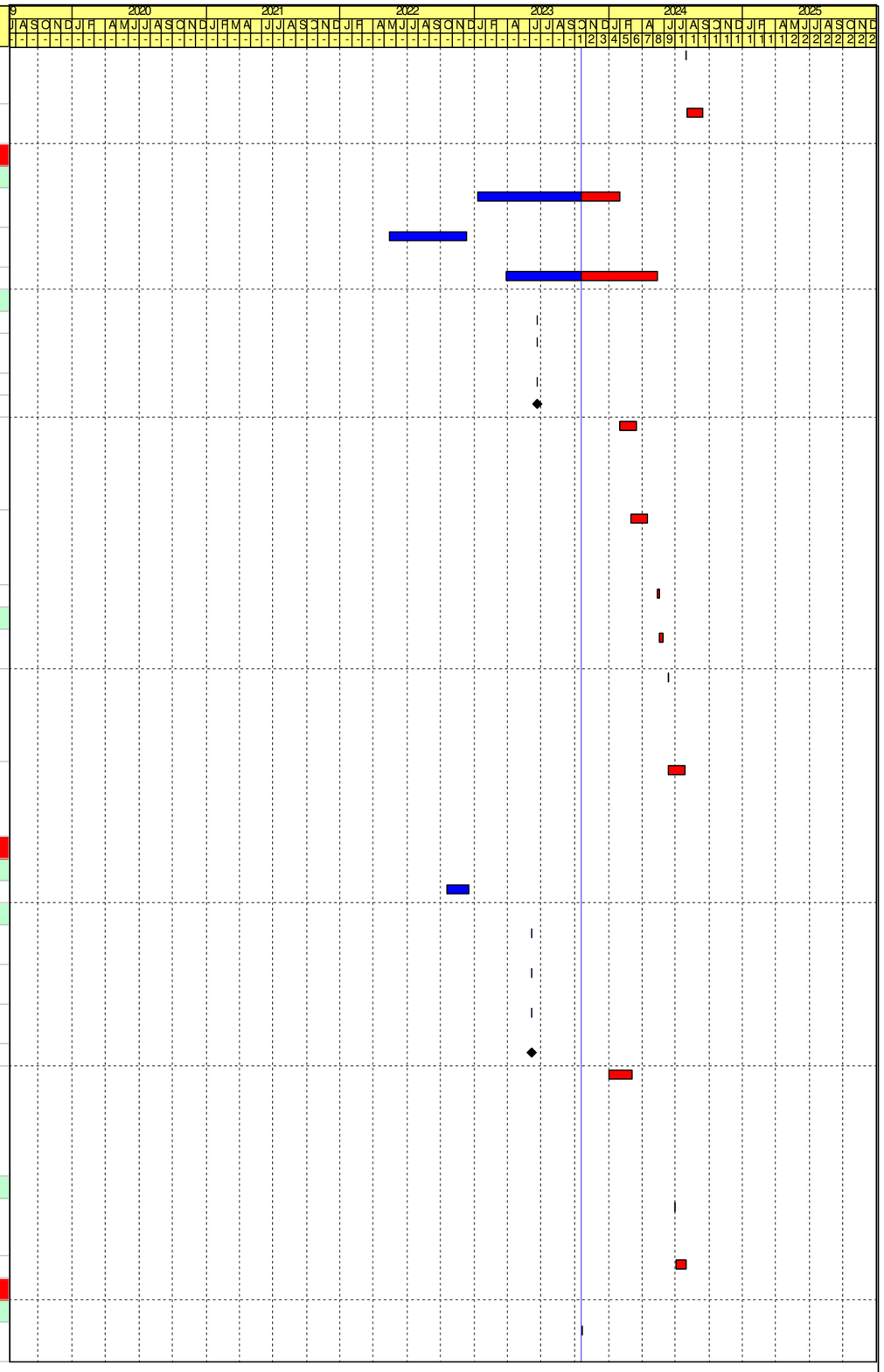
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5TCWT1000	Ready for Power Energisation	3	29-Jul-24	31-Jul-24	07-Jul-23	10-Jul-23	-388	S5TCWC1020, S5EXAC1030, S5CHPT1020	S5TCWT1010	
S5TCWT1010	SAT for THP Cooling Water Pumping System	45	01-Aug-24	14-Sep-24	10-Jul-23	24-Aug-23	-388	S5TCWT1000, S5TCWC1020	S5T1110	5
Ferric Chloride Dosing Facility		280	14-May-22 A	26-Jul-24	13-Oct-22	10-Aug-23	-352			
Fabrication, FAT & Delivery of Major Plant & Materials		206	14-May-22 A	13-May-24	13-Oct-22	28-May-23	-352			
S5FCDP1000	Fabrication & Delivery of Ferric Chloride Storage Tank	103	09-Jan-23 A	31-Jan-24	13-Oct-22	24-Jan-23	-373	S5P1030, S2D1980	S5FCDC1020	15
S5FCDP1010	Fabrication & Delivery of Ferric Chloride Dosing Pump	0	14-May-22 A	09-Dec-22 A	23-Feb-23	23-Feb-23		S5P1040, S2D1980	S5FCDC1030	
S5FCDP1020	Fabrication & Delivery of LV Switchboard	206	28-Mar-23 A	13-May-24	03-Nov-22	28-May-23	-352		S5FCDC1035	30
Installation		109	20-Jun-23 A	19-May-24	24-Jan-23	03-Jun-23	-352			
S5FCDC1000	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	0	20-Jun-23 A	20-Jun-23 A	24-Jan-23	24-Jan-23			S5FCDC1020	
S5FCDC1010	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-1)	0	20-Jun-23 A	20-Jun-23 A	24-Jan-23	24-Jan-23			S5FCDC1020, S5FCDC1012	
S5FCDC1012	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-2)	0	20-Jun-23 A	20-Jun-23 A	24-Jan-23	24-Jan-23		S5FCDC1010	S5FCDC1015	
S5FCDC1015	Actual Access Date	0	20-Jun-23 A		24-Jan-23			S5FCDC1012	S5FCDC1020	
S5FCDC1020	E&M Installation of Ferric Chloride Storage Tank	45	01-Feb-24	16-Mar-24	24-Jan-23	10-Mar-23	-373	AD1100, S5FCDP1000, S5FCDC1000, S5FCDC1010, S5FCDC1015	S5FCDC1030, S5S1280, S5S1270	5
S5FCDC1030	E&M Installation of Ferric Chloride Dosing Pump	45	02-Mar-24	15-Apr-24	23-Feb-23	09-Apr-23	-373	AD1100, S5FCDC1020, S5FCDP1010	S5FCDT1000, S5FCDT0990, PL1210, S5S1270	5
S5FCDC1035	LV Switchboard Installation	6	14-May-24	19-May-24	28-May-23	03-Jun-23	-352	S5FCDP1020	S5FCDT0990	
Testing and Commissioning		68	20-May-24	26-Jul-24	03-Jun-23	10-Aug-23	-352			
S5FCDT0990	SAT of Switchboard	8	20-May-24	27-May-24	03-Jun-23	11-Jun-23	-352	S5FCDC1030, S5FCDC1035	S5FCDT1000, S5FCDT1000	
S5FCDT1000	Ready for Power Energisation	1	11-Jun-24	11-Jun-24	25-Jun-23	26-Jun-23	-352	S5FCDC1030, S5FCDT0990, S5EXAC1070, S5SDBT1050, S5FCDT0990	S5FCDT1010	
S5FCDT1010	SAT & System Commissioning Tests for FeCl3 Dosing Facility	45	12-Jun-24	26-Jul-24	26-Jun-23	10-Aug-23	-352	S5FCDT1000	S5T1000, S5T1120, S5T1110, S5T1060	5
Fire Hydrant and Booster Pump Room		212	18-Oct-22 A	31-Jul-24	06-Oct-23	16-Feb-24	-167			
Fabrication, FAT & Delivery of Major Plant & Materials		0	18-Oct-22 A	16-Dec-22 A	06-Oct-23	06-Oct-23				
S5SHPP1000	Fabrication & Delivery of Fire Hydrant and Booster Pump	0	18-Oct-22 A	16-Dec-22 A	06-Oct-23	06-Oct-23			S5SHPC1020	
Installation		63	07-Jun-23 A	04-Mar-24	06-Oct-23	08-Dec-23	-88			
S5SHPC1000	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314)	0	07-Jun-23 A	07-Jun-23 A	06-Oct-23	06-Oct-23			S5SHPC1020	
S5SHPC1010	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314-1)	0	07-Jun-23 A	07-Jun-23 A	06-Oct-23	06-Oct-23			S5SHPC1020, S5SHPC1012	
S5SHPC1012	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314-2)	0	07-Jun-23 A	07-Jun-23 A	06-Oct-23	06-Oct-23		S5SHPC1010	S5SHPC1015	
S5SHPC1015	Actual Access Date	0	07-Jun-23 A		06-Oct-23			S5SHPC1012	S5SHPC1020	
S5SHPC1020	Fire Hydrant and Booster Pump Room Installation	63	02-Jan-24*	04-Mar-24	06-Oct-23	08-Dec-23	-88	S5S1120, AD1100, S5SHPC1000, S5SHPC1010, S5SHPP1000, S5SHPC1015	S5S1130, S5SHPT1000, PL1210	6
Testing and Commissioning		33	29-Jun-24	31-Jul-24	14-Jan-24	16-Feb-24	-167			
S5SHPT1000	Ready for Power Energisation	3	29-Jun-24	01-Jul-24	14-Jan-24	17-Jan-24	-167	S5SHPC1020, S5EXAC1080, S5TXRT1010	S5SHPT1010	
S5SHPT1010	SAT for Fire Hydrant and Booster Pump	30	02-Jul-24	31-Jul-24	17-Jan-24	16-Feb-24	-167	S5SHPT1000	S5S1220	3
External Area		312	21-Oct-23	27-Aug-24	06-Feb-23	16-Feb-24	-194			
Installation		312	21-Oct-23	27-Aug-24	06-Feb-23	16-Feb-24	-194			
S5EXAC1000	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	21-Oct-23*	21-Oct-23	19-Aug-23	20-Aug-23	-63		S5EXAC1100, S5EXAC1110	



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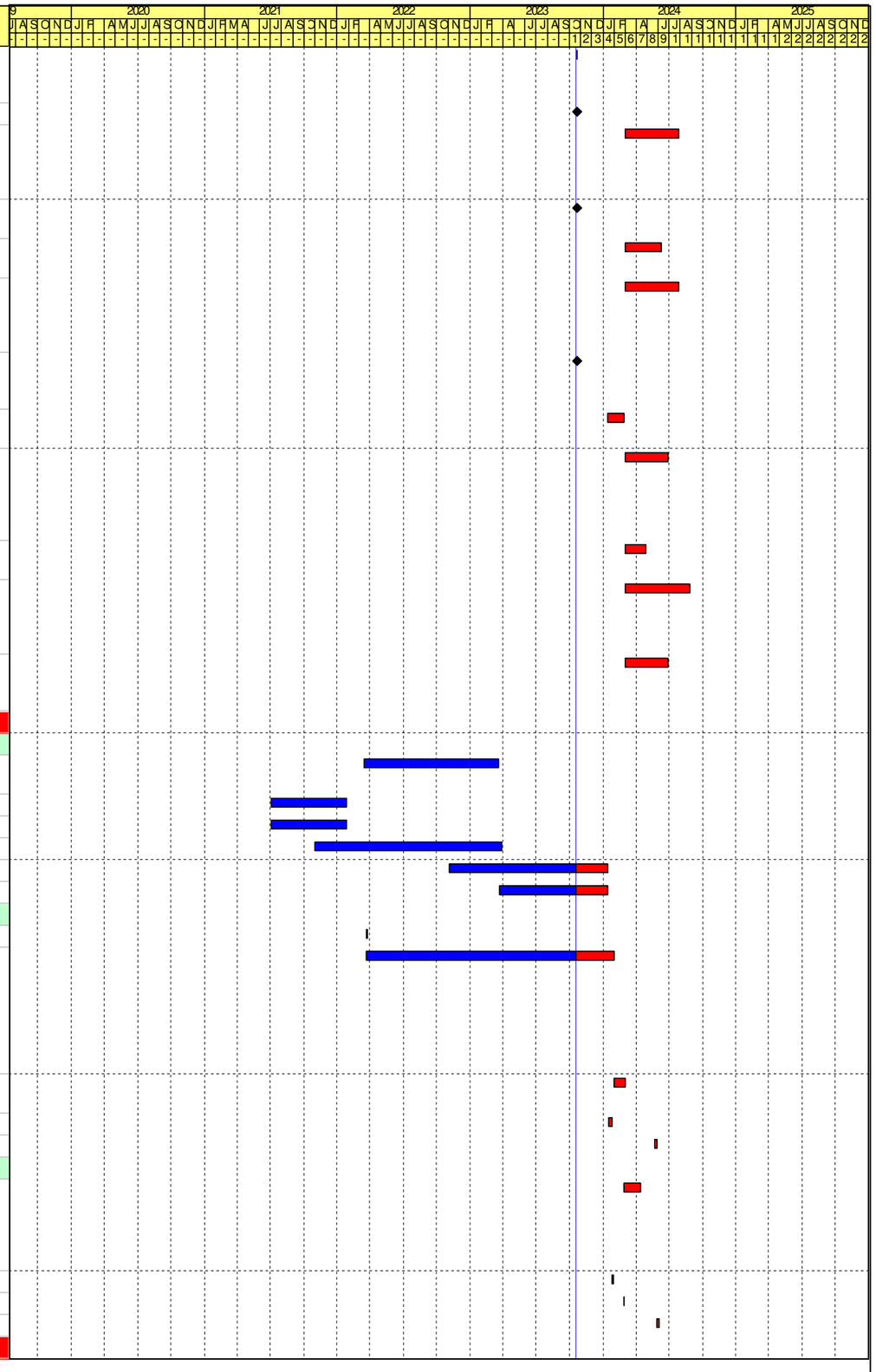
S5EXAC1010	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	21-Oct-23*	21-Oct-23	24-May-23	25-May-23	-150		S5EXAC1100, S5EXAC1110, S5EXAC1030	
S5EXAC1020	Access to Stage 1 External Area	0	21-Oct-23*		06-Feb-23		-257		S5EXAC1030	
S5EXAC1030	LV Cable Laying from CHP to Sludge Digestor, Workshop no.2 and THP CW transfer PS (100 days) & Termination (50 days)	150	01-Mar-24*	28-Jul-24	06-Feb-23	06-Jul-23	-389	S5EXAC1010, S5P1050, S5EXAC1020	S5TCWT1000, S5WS2T1010, S5DIGT1010, PL1210	15
S5EXAC1040	Access to Stage 2 External Area	0	21-Oct-23*		09-Feb-23		-254		S5EXAC1050, S5EXAC1045	
S5EXAC1045	E&M Installation of Pipe Trench No.1, No.2 (Duration assumed no interface work)	100	01-Mar-24*	08-Jun-24	14-Jun-23	22-Sep-23	-261	AD1100, S5EXAC1040	S5T1050, PL1210	10
S5EXAC1050	LV Cable Laying from CHP to BHT, THP, DOU No.12, H2S removal & Guard Hse (90 days) & Termination (60 days)	150	01-Mar-24*	28-Jul-24	09-Feb-23	09-Jul-23	-386	S5EXAC1040	S5BIOT1000, S5THPT1000, S5DOUT1010, S5H2ST1000	15
S5EXAC1060	Access to Stage 3 External Area	0	21-Oct-23*		23-Feb-23		-240		S5EXAC1090, S5EXAC1080, S5EXAC1070	
S5EXAC1070	LV Cable Laying from SDB to SPS (20 days) & Termination (25 days)	45	15-Jan-24*	28-Feb-24	11-May-23	25-Jun-23	-249	S5EXAC1060, S5P1050	S5SPST1000, S5FCDT1000	4
S5EXAC1080	LV Cable Laying from TX & SW Room to DOU no. 11, Street Hydrant Pump room and PSWS (75 days) & Termination (45 days)	120	01-Mar-24*	28-Jun-24	23-Feb-23	23-Jun-23	-372	S5P1050, S5EXAC1060, S5TXRC1040	S5SHPT1000, S5DOUT1000, S5PSWT1000, PL1210, S5EXAC1090	12
S5EXAC1090	LV Cable Laying from CHP to FeCl3 Dosing Facility and Waste Gas Burning System (30 days) & Termination (30 days)	60	01-Mar-24	29-Apr-24	21-Jul-23	19-Sep-23	-224	S5EXAC1060, S5EXAC1080	S5WGBT1000	6
S5EXAC1100	Road Lighting Installation	180	01-Mar-24*	27-Aug-24	20-Aug-23	16-Feb-24	-194	AD1100, S5EXAC1000, S5EXAC1010, S5P1050	S5S1220, PL1210	18
S5EXAC1110	Landscape Lighting Installation	120	01-Mar-24*	28-Jun-24	19-Oct-23	16-Feb-24	-134	S5EXAC1000, S5EXAC1010, S5P1050	S5S1220, PL1210	12
SAS Pumping Station		227	04-Jul-21 A	03-Jun-24	26-Dec-22	10-Aug-23	-299			
Fabrication, FAT & Delivery of Major Plant & Materials		87	04-Jul-21 A	15-Jan-24	11-Jan-23	13-May-23	-248			
S5SASP1000	Fabrication & Delivery of SAS Pumping System	0	16-Mar-22 A	20-Mar-23 A	08-Apr-23	08-Apr-23		S2P1100, S2D1770	S5SASC1010	
S5SASP1010	Fabrication & Delivery of Stoplog	0	04-Jul-21 A	27-Jan-22 A	08-Apr-23	08-Apr-23		S2P1160	S5SASC1010	
S5SASP1020	Fabrication & Delivery of Penstock	0	04-Jul-21 A	27-Jan-22 A	08-Apr-23	08-Apr-23		S2P1170	S5SASC1010	
S5SASP1030	Fabrication & Delivery of Lifting Appliances	0	30-Oct-21 A	28-Mar-23 A	08-Apr-23	08-Apr-23			S5SASC1010	
S5SASP1040	Delivery of Control & Monitoring System / SCADA System	87	04-Nov-22 A	15-Jan-24	11-Jan-23	08-Apr-23	-283		S5SASC1020	
S5SASP1050	Fabrication & Delivery of LV Switchboard	87	22-Mar-23 A	15-Jan-24	15-Feb-23	13-May-23	-248		S5SASC1030	
Installation		220	23-Mar-22 A	27-May-24	26-Dec-22	03-Aug-23	-299			
S5SASC1000	Access to SAS Pumping Station (Impacted by NCE-NCE-219)	0	23-Mar-22 A	23-Mar-22 A	26-Dec-22	26-Dec-22		AD1160	S5SASC1010	
S5SASC1010	E&M Installation of SAS Pumping System	103	23-Mar-22 A	31-Jan-24	26-Dec-22	08-Apr-23	-299	AD1160, S5SASP1000, CE0219b, S5SASP1010, S5SASP1020, S5SASC1000, S5SASP1030	S5SAST1000, PL1210, S5SASC1020	10
S5SASC1020	Installation of SCADA System / Control Monitoring System	30	01-Feb-24	01-Mar-24	08-Apr-23	08-May-23	-299	S5SASP1040, S5SASC1010	S5T1001	
S5SASC1030	LV Switchboard Installation	10	16-Jan-24	25-Jan-24	13-May-23	23-May-23	-248	S5SASP1050	S5SAST1010	
S5SASC1040	Installation of UPS	7	21-May-24	27-May-24	27-Jul-23	03-Aug-23	-299	S5P1090	S5SAST1030	
Testing and Commissioning		130	26-Jan-24	03-Jun-24	23-May-23	10-Aug-23	-299			
S5SAST1000	SAT & System Commissioning Tests for SAS Pumping Station	45	29-Feb-24	13-Apr-24	26-Jun-23	10-Aug-23	-248	S5SASC1010, S5SAST1020	S5T1110, S5T1120, S5T1060, S5T1001, S5T1055	5
S5SAST1010	SAT of Switchboard	4	26-Jan-24	29-Jan-24	23-May-23	27-May-23	-248	S5SASC1030	S5SAST1020	
S5SAST1020	Ready for Power Energisation	1	28-Feb-24	28-Feb-24	25-Jun-23	26-Jun-23	-248	S5SAST1010	S5SAST1000	
S5SAST1030	SAT for UPS	7	28-May-24	03-Jun-24	03-Aug-23	10-Aug-23	-299	S5SASC1040	S5T1001	
Existing Consolidation House		150	21-Feb-22 A	28-Jun-24	13-Mar-23	10-Aug-23	-324			



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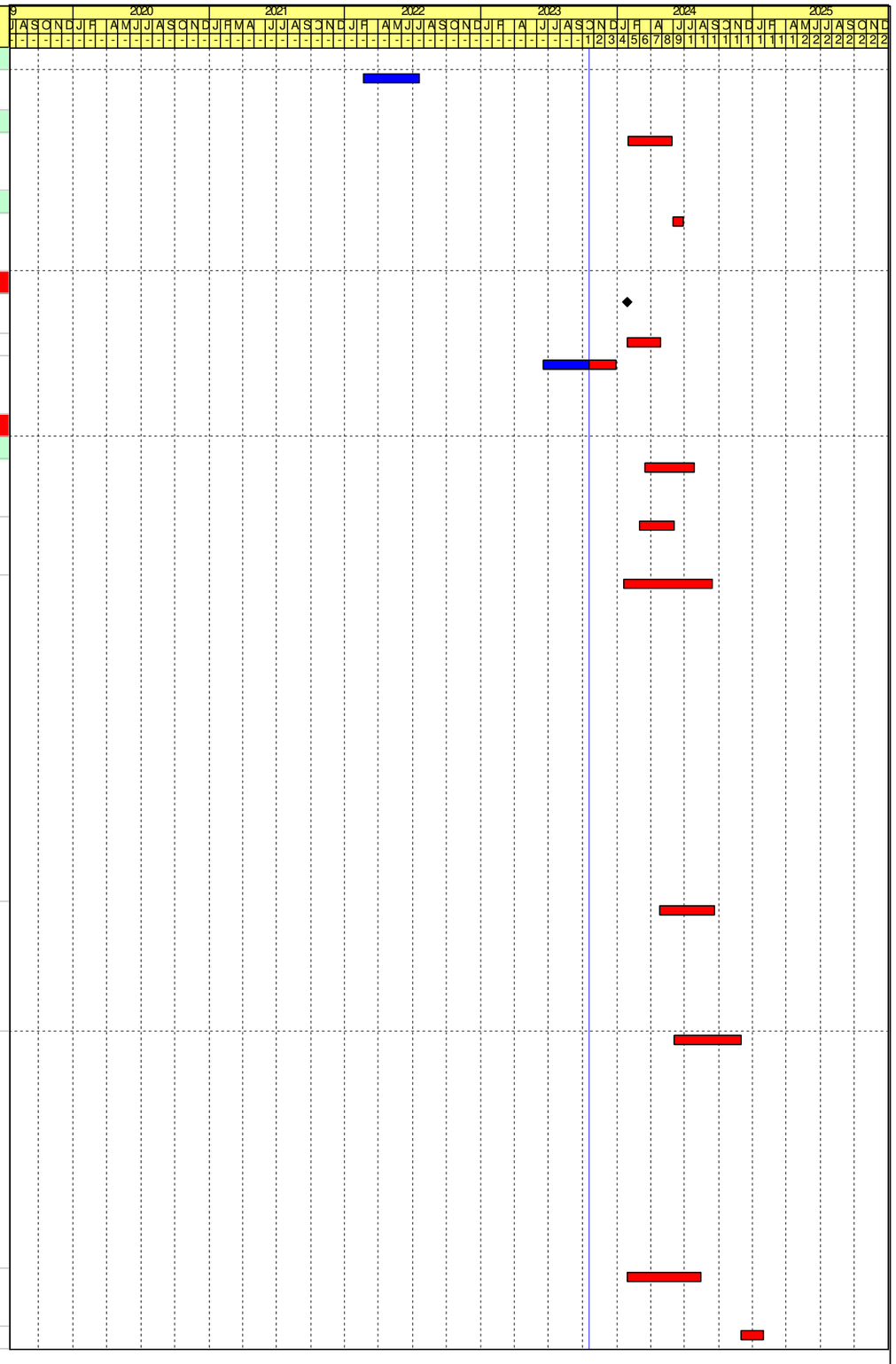
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
Fabrication, FAT & Delivery of Major Plant & Materials		0	21-Feb-22 A	20-Jul-22 A	13-Mar-23	13-Mar-23				
S5ECHP1000	Fabrication & Delivery of Temporary Primary Sludge Pump	0	21-Feb-22 A	20-Jul-22 A	13-Mar-23	13-Mar-23		S2P1220, S2D1990	S5ECHC1000	
Installation		120	31-Jan-24	29-May-24	13-Mar-23	11-Jul-23	-324			
S5ECHC1000	E&M Installation of Existing Consolidation House	120	31-Jan-24*	29-May-24	13-Mar-23	11-Jul-23	-324	CE0219d, S5ECHP1000	S5T1060, S5ECHT1000, PL1210	12
Testing and Commissioning		30	30-May-24	28-Jun-24	11-Jul-23	10-Aug-23	-324			
S5ECHT1000	SAT for Temporary Primary Sludge Pump	30	30-May-24	28-Jun-24	11-Jul-23	10-Aug-23	-324	S5ECHC1000	S5T1060, S5T1055, S5T1270	3
Miscellaneous		190	19-Jun-23 A	27-Apr-24	15-Apr-23	16-Feb-24	-72			
S5MISC1000	Access to Other Peripheral Systems - Guard House Only (Impacted by EWN-0314-4)	0	29-Jan-24*		18-Nov-23		-72		S5MISC1010	
S5MISC1010	E&M Installation - Guard House	90	29-Jan-24*	27-Apr-24	18-Nov-23	16-Feb-24	-72	S5MISC1000	S5S1220	9
S5UVPC1000	E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	72	19-Jun-23 A	31-Dec-23	15-Apr-23	26-Jun-23	-189	S4C1030, S4P1080, S4T1020	S5PSWT1010, PL1210	7
Testing & Commissioning		613	21-Jan-24	24-Sep-25	30-Dec-22	02-Aug-24	-419			
T&C of Control Monitoring System		374	21-Jan-24	28-Jan-25	30-Dec-22	08-May-24	-266			
S5T1000	SAT of SCADA System (SPS and FeCl3)	133	16-Mar-24	26-Jul-24	13-Apr-23	24-Aug-23	-338	S5SPSC1012, S5SPST1010, S5FCDT1010	S5T1110, S5T1004	
S5T1001	SAT of SCADA System (SAS PS)	94	02-Mar-24	03-Jun-24	08-May-23	10-Aug-23	-299	S5SASC1020, S5SAST1000, S5SAST1030	S5T1055, S5T1004	
S5T1002	SAT of SCADA (SDB)	237	21-Jan-24	13-Sep-24	30-Dec-22	24-Aug-23	-387	S5SDBC1570, S5SDBT1060, S5SDBT1070, S5SDBT1080, S5SDBT1090, S5SDBT1100, S5SDBT1130, S5SDBT1140, S5SDBT1150, S5SDBT1160, S5SDBT1170, S5SDBT1180, S5SDBT1190, S5SDBT1210, S5SDBT1240, S5T1055, S5T1060, S5SDBT1245	S5T1110, S5T1004	
S5T1003	SAT of SCADA (CHP System at CHP building) (Excluded Biogas Circuit)	147	25-Apr-24	18-Sep-24	10-Sep-23	04-Feb-24	-228	S5CHPC1120, S5CHPT1022, S5CHPT1040, S5CHPT1050, S5CHPT1070, S5CHPT1060, S5CHPT1080	S5T1004, S5CHPT1024	
S5T1004	SAT of SCADA (WS2)	179	04-Jun-24	29-Nov-24	11-Nov-23	08-May-24	-206	S5WS2C1180, S5WS2T1020, S5T1000, S5T1001, S5T1002, S5T1003, S5T1006, S5T1220, S5T1230, S5T1240, S5T1250, S5T1260, S5WS2T1030	S5T1140	
S5T1006	SAT of SCADA (Transformer and Switchroom)	200	29-Jan-24	15-Aug-24	05-Feb-23	24-Aug-23	-358	S5TXRC1050, S5DOUT1020, S5PSWT1010	S5T1110, S5T1004	
S5T1210	SAT of SCADA (CHP System at CHP building) (Biogas Circuit)	60	30-Nov-24	28-Jan-25	04-Feb-24	04-Apr-24	-300	S5CHPT1030	S5T1100	



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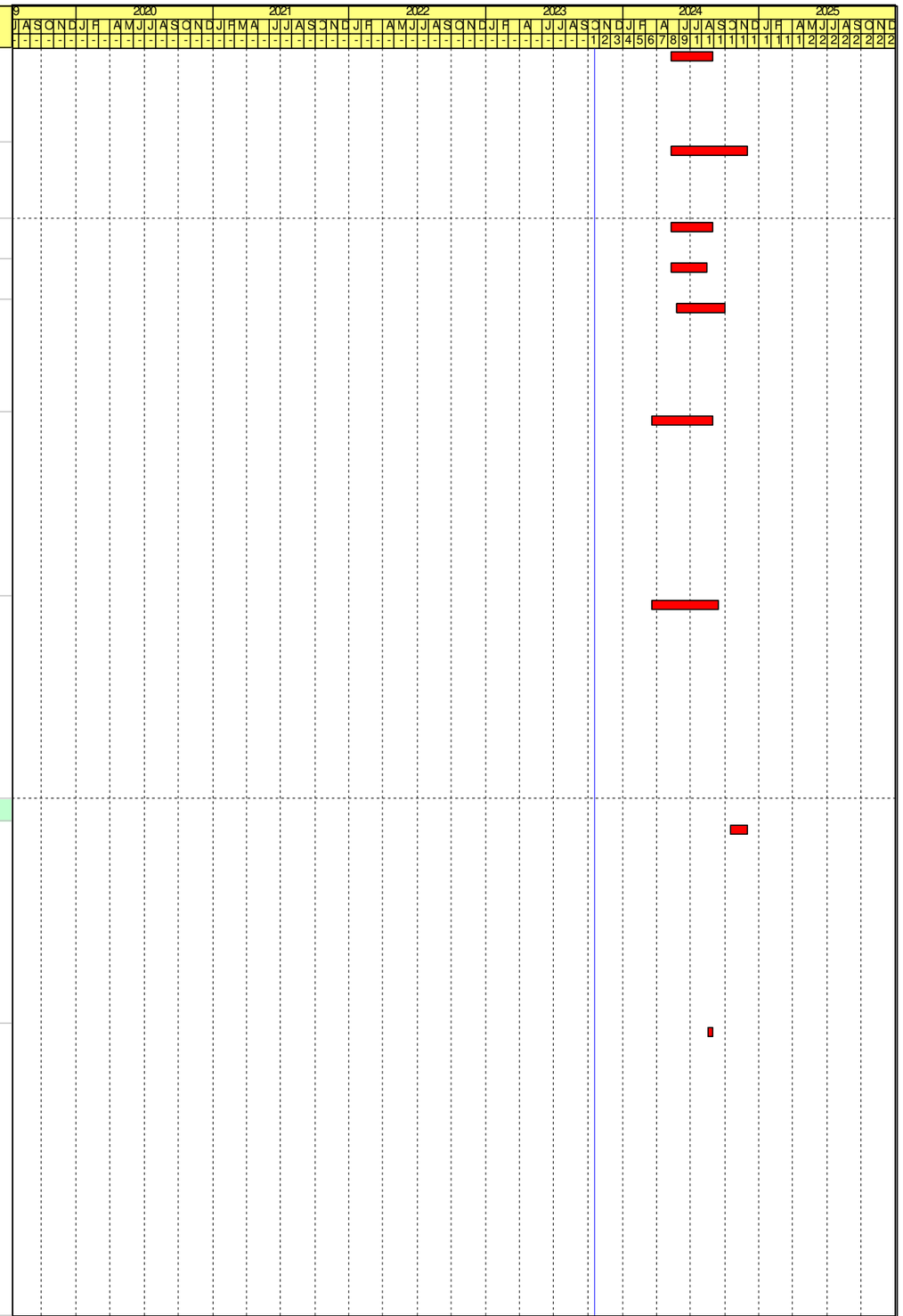
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5T1220	SAT of SCADA (Sludge Anaerobic Digestion System at CHP Building)	112	11-May-24	30-Aug-24	17-Jan-24	08-May-24	-115	S5DIGT1015, S5DIGT1018, S5DIGT1020, S5DIGT1030, S5CHPC1250	S5T1140, S5T1004	
S5T1230	SAT of SCADA (THP system at CHP Building)	203	11-May-24	29-Nov-24	18-Oct-23	08-May-24	-206	S5THPT1005, S5THPT1010, S5T1050, S5CHPC1250	S5T1140, S5T1004	
S5T1240	SAT of SCADA (DO System at CHP building)	112	11-May-24	30-Aug-24	17-Jan-24	08-May-24	-115	S5DOUT1030, S5CHPC1250	S5T1140, S5T1004	
S5T1250	SAT of SCADA (H2S Removal System at CHP building)	96	11-May-24	14-Aug-24	02-Feb-24	08-May-24	-99	S5CHPC1250, S5H2ST1010	S5T1140, S5T1004	
S5T1260	SAT of SCADA (Biogas Holding Tank at CHP building)	130	24-May-24	30-Sep-24	30-Dec-23	08-May-24	-146	S5CHPC1250, S5BIOT1010, S5BIOT1020, S5BIOT1030, S5BIOT1040, S5BIOT1050	S5T1140, S5T1004	
S5T1270	SAT of SCADA (for Sludge Thickening System at SDB Building)	162	21-Mar-24	29-Aug-24	15-Mar-23	24-Aug-23	-372	S5SDBC1570, S5SDBC1510, S5SDBC1520, S5SDBC1470, S5SDBC1410, S5DOUT1020, S5SDBT1020, S5ECHT1000, S5SDBT1175, S5SDBT1250	S5T1055	
S5T1280	SAT of SCADA (for Sludge Dewatering System at SDB Building)	177	21-Mar-24	13-Sep-24	28-Feb-23	24-Aug-23	-387	S5PSWT1010, S5SDBT1020, S5SDBT1010, S5SDBT1080, S5SDBT1178, S5SDBT1060, S5DOUT1020, S5DOUT1030, S5DIGT1020, S5SDBT1160, S5SDBC1570	S5T1060	
T&C of E&M Process		405	16-Aug-24	24-Sep-25	10-Aug-23	02-Aug-24	-419			
S5T1050	SAT of THP System & Auxiliary Equipment (including THP Cooling Water	45	16-Oct-24	29-Nov-24	22-Sep-23	06-Nov-23	-390	S5THPT1010, S5EXAC1045, S5T1055, S5T1110, S5PSWT1010, S5CHPT1050, S5SDBT1020, S5DOUT1030, S5SDBT1250, S5DIGT1020, S5THPT1005	S5T1120, S5T1230	
S5T1055	SAT of Sludge Thickening System including Sludge Thickening Centrifuge	14	16-Aug-24	29-Aug-24	10-Aug-23	24-Aug-23	-372	S5SDBT1100, S5SDBT1110, S5SDBT1175, S5SDBT1178, S5T1001, S5SDBT1210, S5PSWT1010, S5SAST1000, S5SPST1010, S5SDBT1080, S5ECHT1000, S5SDBT1020, S5DOUT1020, S5SDBT1160, S5SDBT1250, S5T1270	S5T1050, S5T1002, PL1520	



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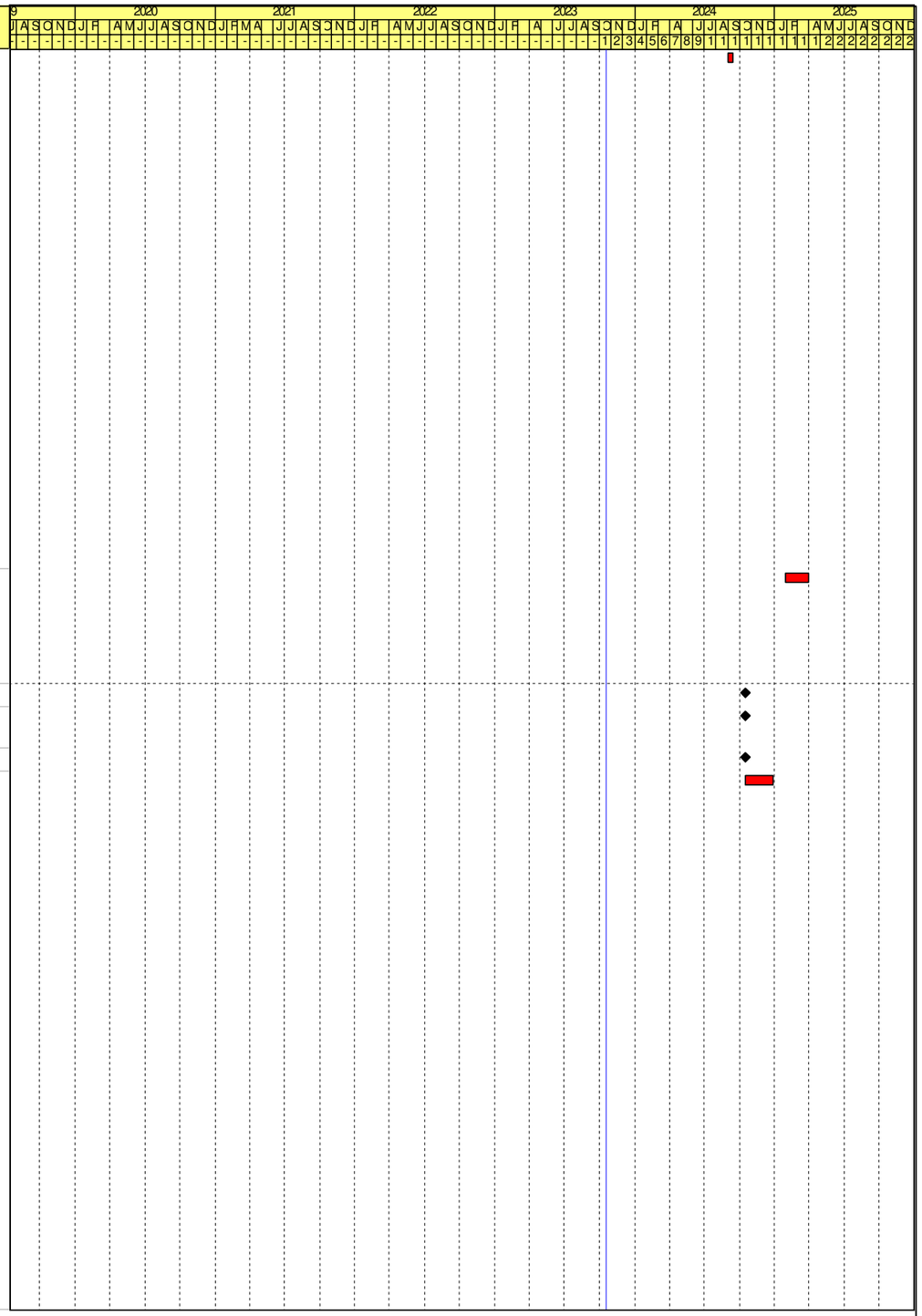
S5T1060	SAT of Sludge Dewatering System including Sludge Dewatering Centrifuge	14	31-Aug-24	13-Sep-24	10-Aug-23	24-Aug-23	-387	S5ECHC1000, S5SPST1010, S5SAST1000, S5ECHT1000, S5SDBT1100, S5SDBT1090, S5SDBT1160, S5SDBT1170, S5SDBT1080, S5SDBT1010, S5SDBT1210, S5SDBT1060, S5SDBT1040, S5SDBC1300, S5SDBC1210, S5PSWT1010, S5SDBC1570, S5SDBT1050, S5SDBC1170, S5SDBC1185, S5SDBC1340, S5SDBC1310, S5DIGT1020, S5H2ST1010, S5FCDT1010, S5DIGT1015, S5SDBT1260, S5T1280	S5T1120, S5T1002, PL1520	
S5T1100	CHP on-grid	60	29-Jan-25	29-Mar-25	04-Apr-24	03-Jun-24	-300	S5CHPT1030, S5S1310, S5CHPC1120, S5CHPT1000, S5CHPC1250, S5T1210	PL1560, S5T1200	6
S5T1102	Sewage Pumping Station to inlet work pipework ready (by other)	0		15-Oct-24		24-Aug-23	-419		S5T1110	
S5T1104	Sludge pipe from existing consolidation house to sludge transfer to SDB ready	0		15-Oct-24		24-Aug-23	-419		S5T1110	
S5T1106	Sludge ready from Zone B	0		15-Oct-24		24-Aug-23	-419		S5T1110	
S5T1110	Seeding Digester Tank no.4	74	16-Oct-24	28-Dec-24	24-Aug-23	06-Nov-23	-419	S5SAST1000, S5DOUT1020, S5DOUT1030, S5H2ST1010, S5T1102, S5T1104, S5T1106, S5T1122, S5T1124, S5BIOT1010, S5WGBT1010, S5TCWT1010, S5SDBT1240, S5CHPT1070, S5DIGT1030, S5BIOT1040, S5T1000, S5T1002, S5DIGT1020, S5H2ST1010, S5FCDT1010, S5DIGT1015, S5BIOT1020, S5T1006, S5S1210, S5S1070, S5BIOT1030, S5CHPT1050, S5DIGT1040	S5T1120, S5T1050, S5CHPT1030	



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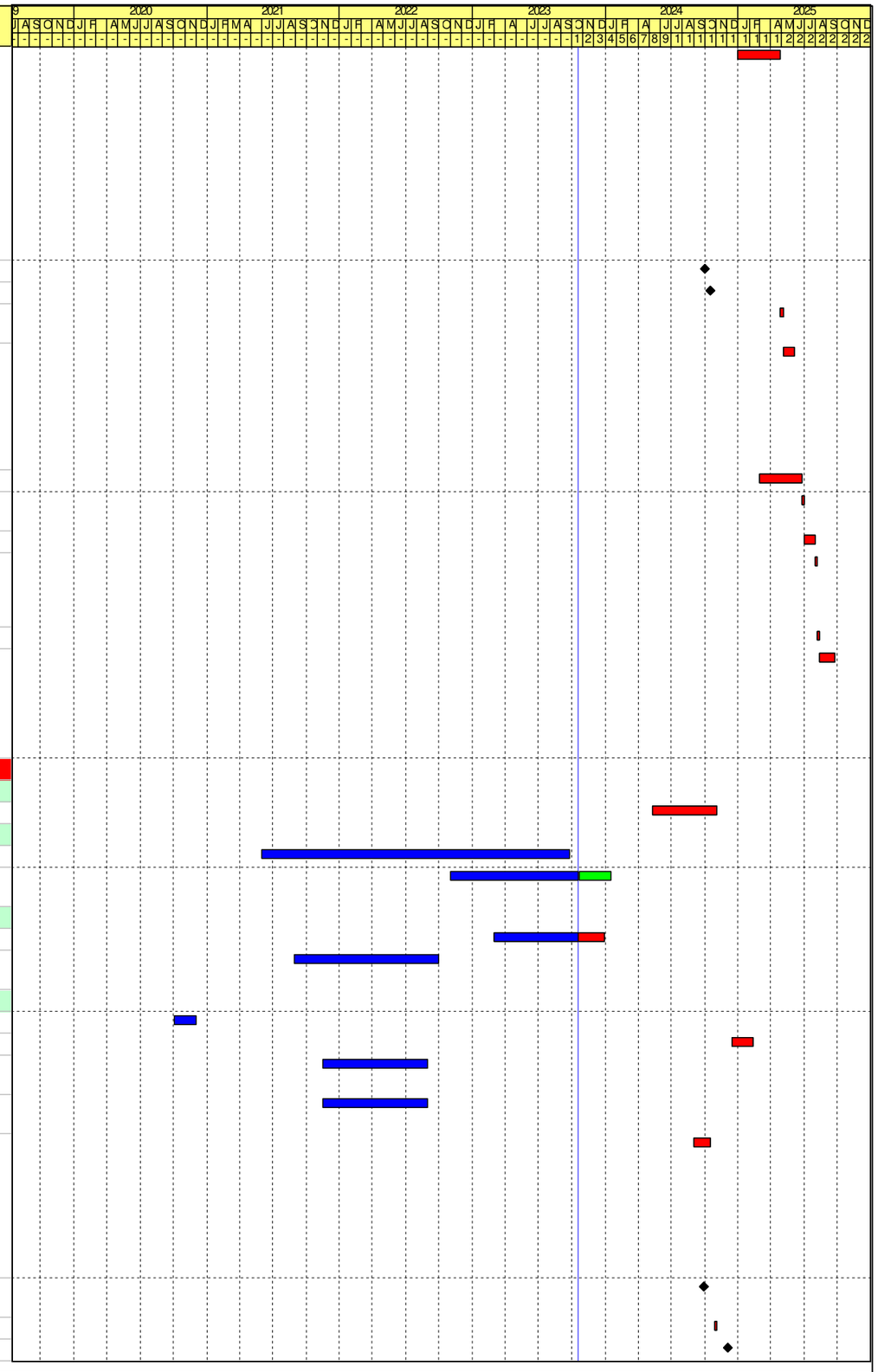
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
30-Jun-23	Rev.35	IM/LT	KM
31-Jul-23	Rev.36	IM/LT	KM
31-Aug-23	Rev.37	IM/LT	KM
30-Sep-23	Rev.38	IM/LT	KM
31-Oct-23	Rev.39	IM/LT	KM

Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
S5T1120	Digester Tank no.4 feed THP sludge (Process start up)	120	29-Dec-24	27-Apr-25	06-Nov-23	05-Mar-24	-419	S5T1060, S5T1050, S5T1110, S5TXRC1050, S5SAST1000, S5BIOT1010, S5WGBT1010, S5DIGT1020, S5H2ST1010, S5FCDT1010, S5DIGT1015, S5BIOT1020	S5T1150, S5T1130, S3T1340, S3T1320	60
S5T1122	Underground biogas pipe from SD to holding tank ready (by other)	0		01-Oct-24		10-Aug-23	-419		S5T1110	
S5T1124	Sludge pipe from distribution chamber back to SDB (by other)	0		15-Oct-24		24-Aug-23	-419		S5T1110	
S5T1130	Notice to Commence Phase 1 System Commissioning - Digester Tank no.4	7	28-Apr-25	04-May-25	01-May-24	08-May-24	-362	S5T1120	S5T1140	
S5T1140	Phase 1 System Commissioning - Digester Tank no.4	30	05-May-25	03-Jun-25	08-May-24	07-Jun-24	-362	S5T1130, S5T1220, S5T1230, S5T1240, S5T1250, S5T1260, S5T1004	S5T1180	
S5T1150	Digester Tank no.3 set-up (Process start up)	120	27-Feb-25	26-Jun-25	05-Jan-24	04-May-24	-419	S5T1120	S5T1160	30
S5T1160	Notice to Commence Phase 1 System Commissioning - Digester Tank no.3	4	27-Jun-25	30-Jun-25	04-May-24	08-May-24	-419	S5T1150	S5T1170	
S5T1170	Phase 1 System Commissioning - Digester Tank no.3	30	01-Jul-25	30-Jul-25	08-May-24	07-Jun-24	-419	S5T1160	S5T1180	
S5T1180	Phase 2 System Commissioning - Digester Tank no.3 and no.4	7	31-Jul-25	06-Aug-25	07-Jun-24	14-Jun-24	-419	S5T1170, S5T1140	S5T1190, PL1310, S3T1360, S3T1320	
S5T1190	Notice to Commence Plant Commissioning	7	07-Aug-25	13-Aug-25	14-Jun-24	21-Jun-24	-419	S5T1180	S5T1200	
S5T1200	Plant Commissioning Tests	42	14-Aug-25	24-Sep-25	21-Jun-24	02-Aug-24	-419	S5T1190, S5TXRC1050, S5WS2C1180, S5S1150, S5T1100, S5CHPT1060	SC51120	12
Statutory Submission / Inspection		480	03-Oct-20 A	11-Feb-25	29-Aug-22	24-Sep-25	225			
HKT Submission		180	09-May-24	04-Nov-24	04-Feb-24	02-Aug-24	-95			
S5S0990	Application of Telemetry Lines for Workshop No. 2.	180	09-May-24	04-Nov-24	04-Feb-24	02-Aug-24	-95	S5WS2C1180	SC51120	18
CLP Submission		89	30-May-21 A	17-Jan-24	23-Jun-23	24-Sep-25	616			
S5S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP	0	30-May-21 A	26-Sep-23 A	23-Jun-23	23-Jun-23			S5WS2C1040	
S5S1080	Submission and approval of Renewable Energization Application to/from CLP	89	03-Nov-22 A	17-Jan-24	28-Jun-25	24-Sep-25	616		CD1040	
EPD Submission / Inspection		72	28-Aug-21 A	31-Dec-23	18-Oct-22	29-Dec-22	-368			
S5S1010	EPD Submission & Approval for Air Pollution Control - Genset	72	01-Mar-23 A	31-Dec-23	18-Oct-22	29-Dec-22	-368	S2D1860	S5SDBC1770	9
S5S1020	EPD Submission & Approval for Air Pollution Control - CHP & Burner	0	28-Aug-21 A	29-Sep-22 A	11-Dec-22	11-Dec-22		S2D1610	S5THPC1020, S5CHPC1020	
EMSD Submission / Inspection		164	03-Oct-20 A	11-Feb-25	29-Aug-22	02-Aug-24	-194			
S5S1030	BEEO Stage one: Submit EE1 & EE-SU to EMSD	0	03-Oct-20 A	02-Dec-20 A	21-Apr-23	21-Apr-23		S2D1890	S5WS2C1000	
S5S1040	BEEO Stage two: Submit EE2 & EE-SU to EMSD	60	14-Dec-24	11-Feb-25	03-Jun-24	02-Aug-24	-194	S5S1250	SC51120	
S5S1050	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	0	15-Nov-21 A	30-Aug-22 A	29-Aug-22	29-Aug-22		S2D1070	S5S1070, S5S1060	
S5S1060	Application for Construction Approval of Notifiable Gas Installation (Form 104)	0	15-Nov-21 A	30-Aug-22 A	29-Aug-22	29-Aug-22		S2D1070, S5S1050	S5S1070, S5BIOC1020	
S5S1070	Application for Approval of Use of Notifiable Gas Installation (Form 105) & EMSD inspection	45	01-Sep-24	15-Oct-24	10-Jul-23	24-Aug-23	-419	S5S1060, S5S1050, S5BIOC1020, S5BIOC1030, S5BIOC1040, S5BIOT1010, S5BIOT1020, S5BIOT1030	S5T1110	15
S5S1090	Form 5 Submission to EMSD - Lift Installation	0	28-Sep-24		27-May-24		-124	S5WS2T1020, S5SDBT1070	S5S1100	
S5S1100	EMSD Inspection - Lift Installation	7	28-Oct-24	03-Nov-24	26-Jun-24	03-Jul-24	-124	S5S1090	S5S1110	
S5S1110	Issuance of Form 6 - Lift Installation	0		03-Dec-24		02-Aug-24	-124	S5S1100	SC51120	



Remaining Work
Critical Activity
Milestone
Actual Progress

Contract No. DE/2018/03
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
Revised Programme - as at 20 October 2023

Date	Revision	Checked	Approved
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31-Jul-23	Rev.36	IM/LT	KM
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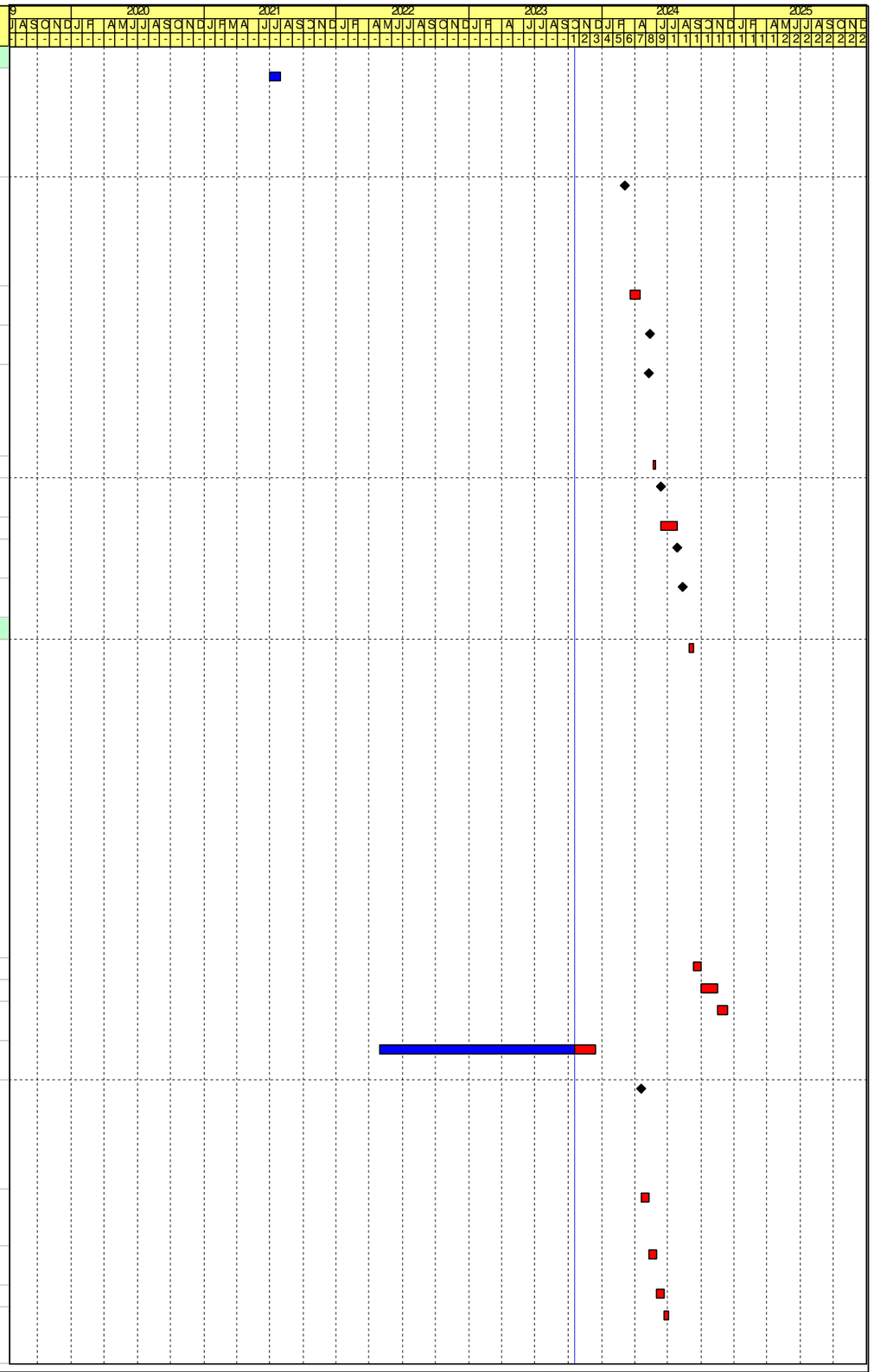
Activity ID	Activity Name	Remaining Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors	Time Risk Allowance
WSD Submission / Inspection		159	01-Jul-21 A	10-Aug-24	11-Mar-23	16-Feb-24	-177			
S5S1120	Submit WWO46 Part I / II to WSD (FS/PD)	0	01-Jul-21 A	30-Jul-21 A	11-Mar-23	11-Mar-23		S2D1910, S2D1860, S2D1870, S2D1880, S2D1890, S2D1900	S5S1130, S5WS2C1140, S5SHPC1020, S5DIGC1300, S5WS2C1170	
S5S1130	Submit WWO46 Part IV to WSD (FS)	0	05-Mar-24		08-Dec-23		-88	S5S1120, S5WS2C1140, S5SHPC1020, S5SDBC1800, S5SDBC1690, S5SDBC1600	S5S1140, S5S1150	
S5S1140	WSD Inspection (FS)	28	19-Mar-24	15-Apr-24	22-Dec-23	19-Jan-24	-88	S5S1130	S5S1250, S5S1150	
S5S1150	Issuance of FS Water Certificate	0		13-May-24		16-Feb-24	-88	S5S1130, S5S1140	S5T1200, S5S1220	
S5S1160	Submit WWO46 Part IV to WSD (PD)	0	09-May-24		22-May-23		-353	S5CHPC1240, S5CHPC1110, S5DIGC1300, S5WS2C1170, S5SDBC1110	S5S1170	
S5S1170	WSD Inspection	7	23-May-24	29-May-24	05-Jun-23	12-Jun-23	-353	S5S1160	S5S1180	
S5S1180	Issuance of Form WWO46 Part Va	0		12-Jun-24		26-Jun-23	-353	S5S1170	S5S1200, S5S1190	
S5S1190	System Flushing / Sampling	45	13-Jun-24	27-Jul-24	26-Jun-23	10-Aug-23	-353	S5S1180	S5S1200	
S5S1200	Issuance of Form WWO46 Part Vb	0		27-Jul-24		10-Aug-23	-353	S5S1180, S5S1190	S5S1210	
S5S1210	Issuance of Water Certificate	0		10-Aug-24		24-Aug-23	-353	S5S1200	SC51120, S5T1110	9
FSD Submission / Inspection		420	29-Apr-22 A	13-Dec-24	14-Nov-22	03-Jun-24	-194			
S5S1220	Prepare & Submit FSI/314 & FSI/501	14	28-Aug-24	10-Sep-24	16-Feb-24	01-Mar-24	-194	S5WS2C1150, S5S1310, S5S1150, S5EXAC1100, S5EXAC1110, S5CHPC1080, S5CHPC1090, S5CHPC1210, S5CHPC1220, S5DIGC1280, S5DIGC1290, S5SHPT1010, S5SDBT1020, S5SDBT1150, S5SDBT1180, S5SDBT1130, S5MISC1010, S5SPSC1020	S5S1230	
S5S1230	FSD Review & Approval of FSI/314 & FSI/501	21	11-Sep-24	01-Oct-24	01-Mar-24	22-Mar-24	-194	S5S1220	S5S1240	
S5S1240	F.S. Inspection, Defects Rectification & Re-inspection	45	02-Oct-24	15-Nov-24	22-Mar-24	06-May-24	-194	S5S1230	S5S1250	
S5S1250	Issuance of Acceptance Letter	28	16-Nov-24	13-Dec-24	06-May-24	03-Jun-24	-194	S5S1240, S5S1140	S5S1040, SC51120	
S5S1260	Submission & Approval of DG Application to FSD	56	29-Apr-22 A	15-Dec-23	14-Nov-22	09-Jan-23	-341		S5S1270, S5SDBC1770	
S5S1270	Application of D.G. Licence	0	19-Apr-24		09-Apr-23		-376	S5S1260, S5CHPC1150, S5SDBC1770, S5FCDC1020, S5FCDC1030, S3S1110	S5S1280	
S5S1280	Apply for D.G. Inspection	21	19-Apr-24	09-May-24	09-Apr-23	30-Apr-23	-376	S5CHPC1150, S5FCDC1020, S5S1270	S5S1310, S5S1290	
S5S1290	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	10-May-24	30-May-24	30-Apr-23	21-May-23	-376	S5S1280	S5S1310, S5S1300	
S5S1300	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	31-May-24	20-Jun-24	21-May-23	11-Jun-23	-376	S5S1290	S5S1310	
S5S1310	Issue D.G. Licence	14	21-Jun-24	04-Jul-24	11-Jun-23	25-Jun-23	-376	S5S1290, S5S1300, S5S1280	S5S1220, S5T1100, S5CHPT1050	30



Remaining Work
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Contract No. DE/2018/03
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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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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 01/12/2023 to 01/02/2024)

Updated on: **20-Dec-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 %		
Drawing Submisssion for Key Dates												
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 dimenssional 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 Comissioning	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											
	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: 6B.2.15 Operation Restoration of Existing Primary Sedimentation Tank (PST) No. 4 and 6	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: Acceptancce 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						
	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%		

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Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1
- E&M Works for Sewage Treatment Facilities
3 Month Rolling Programme (From 01/12/2023 to 01/02/2024)

Updated on: **20-Dec-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 %		
	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). Manufaturing 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 thie 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 Comisssioning 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.

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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 %		
	KD3B: Testing and Comisssioning 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											
Section 1 of Works (outstanding works list)												
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%		
	Acceptancce 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 issused 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 reveiced 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 reveiced 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 reveiced on 17 Aug 2020. - Bestwise submitted Rev.0 on 12 Jan 2020.

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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 %		
	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 reveiced 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-	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 reveiced on 17 Aug 2020. Subletting package would was 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 reveiced 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 Comissioning	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				-		

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6B Overall plant process equipment sizing review	Submission of Contractor's Design Calculation for	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
	Acceptance of submission for further detail design	14/6/2020	3/7/2020	30/6/2020	17/7/2020	Task Completed				-		
6B.2.1 Inlet Works	Submission of Contractor's Design for Inlet Works No. 1	6/9/2020	16/11/2020	14/5/2021	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	99%						P&M0058 - Lamella Plate Settler (status: B) P&M0097 - Scum Skimmer and Scum Collection Pipe (status: B) 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.

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	Submission of GA Drawing	6/9/2020	3/2/2021	14/5/2021	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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

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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 %		
	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	7/9/2020	16/9/2020	5/11/2020	5/11/2020	Task Completed						
	KD1A: 6 November 2020											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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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 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	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
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	31/12/2023	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	31/12/2023	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	31/12/2023	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)

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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 %		
	Submission of Electrical Drawing	15/4/2021	15/1/2021	14/5/2021	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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.

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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 %		
	Submission of GA Drawing of DOU No. 3A	6/9/2020	8/7/2020	14/5/2021	31/12/2023	99%				-	Bestwise	Bestwise submitted (rev.1) on 28 Oct 2020. AECOM commeneted 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	31/12/2023	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	31/12/2023	99%						
	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	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. 3B (CDS0019 & CDS0049)	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	31/12/2023	99%						Bestwise submitted DWG0081 (rev.0) on 5 Feb 2021. AECOM commeneted on 12 Mar 2021. Bestwise to resubmit. Finalized drawings shall be submitted by 30 June 2022 and BIM GA revew 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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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	31/12/2023	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.

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	Submission for Fire Services System	N/A	15/3/2021	N/A	31/12/2023	99%						Subletting Package to be resubmitted by 31 Mar 2021. AECOM accepted on 9 Apr 2021. Drawings: Inlet Works: submitted on 8 June 2021. PST 1-4: submitted on 23 Jun 2021 BR2A &2B: submitted on 8 Jun 2021 MFB 2: submitted on 8 Jun 2021 Finalized design shall be submitted by 20 Jan 2023.
	Submission for Plumbing and Drainage System	N/A	15/3/2021	N/A	31/12/2023	99%						Subletting Package resubmitted by 10 Mar 2021. AECOM accepted on 12 Mar 2021. Tender invitation was conducted on 15 Mar 2021 and closed on 26 Mar 2021. Finalized design shall be submitted by 20 Jan 2023.
	Submission for Electrical Services System	N/A	10/12/2020	N/A	31/12/2023	99%						GA for lighting was submitted on 18 Dec 2020. AECOM commented on 6 Jan 2021. Bestwise to resubmit. GA for small power system was submitted in 8 Feb 2021. AECOM commented on 3 Mar 2021. Bestwise to resubmit. Finalized design shall be submitted by 20 Jan 2023.
	Submission of ELV system	N/A	8/1/2021	N/A	31/12/2023	99%						GA for CCTV was resubmitted on 16 Mar 2021. AECOM commented on 30 Mar 2021. Bestwise resubmitted on 25 Jun 2021. Finalized design shall be submitted by 20 Jan 2023.
	Submission for PV system	N/A	15/3/2021	N/A	31/12/2023	99%						Tender package was submitted to AECOM. Finalized design shall be submitted by 20 Jan 2023.
SCADA System & PMS	Submission for SCADA system	N/A	11/2/2021	N/A	31/12/2023	99%						Revised SCADA structure was provided via email on 9 Apr 2021 and tender package is under preparation. Finalized design shall be submitted by 20 Jan 2023.
	Submission for PMS system	N/A	8/3/2021	N/A	31/12/2023	99%						Tender package to be resubmitted on 29 June 2021. Finalized design shall be submitted by 20 Jan 2023.
	Submission for CMMS & IDMS system	N/A	1/6/2021	N/A	31/12/2023	99%						Finalized design shall be submitted by 20 Jan 2023.
Section 2 of Works												
Street Fire Hydrant Pump Room	KD1A: Submission of civil requirement drawing for	15/7/2020	15/7/2020	15/8/2020	17/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for	28/8/2020	18/9/2020	2/11/2020	5/11/2020	Task Completed	no.	1	1	100%		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						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
FS & Sprinkler Pump Room	KD1A: Submission of civil requirement drawing for FS	15/7/2020	15/7/2020	15/8/2020	17/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 17 September 2020
	KD1A: Submission of civil requirement drawing for FS	28/8/2020	18/9/2020	2/11/2020	5/11/2020	Task Completed	no.	1	1	100%		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						
	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
	Fire Services Installation Work	1/3/2023	16/3/2023	16/7/2023	31/7/2023							
Emergency Generator House	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (First	15/7/2020	15/7/2020	15/8/2020	18/9/2020	Task Completed	no.	1	1	100%		1st draft of drawing submitted on 18 September 2020
	KD1A: Submission of civil requirement drawing for Emergency Generator House up to +8.0 mPD (Final)	28/8/2020	19/9/2020	2/11/2020	5/11/2020	Task Completed	no.	1	1	100%		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							
	KD1A: Submission of electrical schematic drawings for Street Fire Hydrant Pump Room (Final)	7/9/2020	1/10/2020	5/11/2020	5/11/2020							
	KD1A: 6 November 2020											Notice of completion works was submitted on 17 Nov 2020
DOU3A	Material Delivery	7/3/2023	7/3/2023	7/5/2023								
	Mechanical Installation for DOU3A	8/3/2023		6/7/2023						35%		
	Testing & Commissioning											

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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 %		
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	Task Completed						
	Material Delivery	15/12/2022	1/10/2022	31/3/2022	31/10/2022	Task Completed						
	Installation Work	15/3/2022	1/11/2022	30/10/2022	14/12/2022	Task Completed						
	Testing & Commissioning	1/11/2022	15/12/2022	15/11/2022	31/12/2022							
MFB No.2	Rail Beam Installation at Basement 2	12/5/2023	22/5/2023	11/7/2023								
	MVAC Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023								
	Fire Services Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023								
	Plumbing Services Installation at Basement 2	8/5/2023	8/5/2023	7/7/2023								
	Fire Services Installation at Basement 1	18/11/2023										
	Rail Beam Installation at G/F	18/11/2023	22/11/2023	18/12/2023								
	Rail Beam Installation at 1/F	8/1/2024		7/2/2024								
Section 3 of Works												
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%		
	Acceptancce 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											
Subcontracting												
	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.

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	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 Clearence 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 clearence 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%		
	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 -> 30/7/2020*	15/8/2020	15/06/2020- > 15/8/2020*	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-> 15/8/2020*	9/9/2020	22/06/2020- > 22/8/2020*	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-> 22/8/2020*	17/9/2020	29/06/2020- > 29/8/2020*	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 -> 15/7/2020*	9/12/2020	15/05/2020 - > 30/11/2020*	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 -> 30/7/2020*	29/1/2021	15/06/2020- > 15/8/2020*	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.

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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 (C9) (Elect)	15/06/2020-> 15/8/2020*	1/2/2021	22/06/2020-> 22/8/2020*	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-> 22/8/2020*	11/2/2021	29/06/2020-> 29/8/2020*	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%		
	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
	Tender award (C11)	15/05/2020-> 29/07/2020*	30/5/2020	15/07/2020->	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 on14 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 finallized 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.

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	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						
	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 Comissioning	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%		

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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 %		
	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		-						
	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		-						
Plant and Materials (Marking Scheme)												
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
	Tender award	5/6/2020	13/12/2020	5/10/2020	3/3/2021	Task Completed				100%		Technical Submission Evaluation Report was submitted on 12 Jan 2021. AECOM noted on 22 Jan 2021. 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

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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 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
	Acceptance of marking scheme by the PM	28/5/2020	3/9/2020	28/9/2020	5/9/2020	Task Completed				100%		AECOM accepted on 5 Sep 2020 subject to conditions.
	Tender invitation	11/6/2020	14/9/2020	12/10/2020	5/10/2020	Task Completed				100%		Tender invitation was conducted on 14 Sept 2020 and returned on 5 Oct 2020.
PS Clause no. 6B.2.4 Membrane Modules, Cassettes / Racks	Tender award	18/6/2020	6/10/2020	19/10/2020	2/11/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 14 Oct 2020, Tender report was submitted on 2 Nov 2020. AECOM noted on 4 Nov 2020.
	Acceptance of tender award	2/7/2020	3/11/2020	2/11/2020	24/11/2020	Task Completed				-		
	Submission of marking scheme for PM's acceptance (second draft)	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
	Acceptance of marking scheme by the PM	28/5/2020	20/8/2020	28/9/2020	1/9/2020	Task Completed				100%		AECOM accepeted on 1 Sep 2020
	Tender invitation	11/6/2020	25/9/2020	12/10/2020	29/10/2020	Task Completed				100%		Tender invitation was conducted on 25 Sept 2020 and returned on 29 Oct 2020.
PS Clause no. 6B.2.4 RAS Pump	Tender award	18/6/2020	30/10/2020	19/10/2020	2/12/2020	Task Completed				100%		Technical Submission Evaluation Report was submitted on 6 Nov 2020. Tender report was submitted on 24 Nov 2020, AECOM noted on 2 Dec 2020.
	Acceptance of tender award	2/7/2020	21/11/2020	2/11/2020	12/12/2020	Task Completed				-		
Usage of WA2-A		-		21/2/2020	21/2/2020	Task Completed				-		Site works including fencing and site clearnace works to be completed by DC/2018/06 by 30/4/2020 WA2C handovered to Bestwise on 21 February 2020