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

OCTOBER 2022

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Contract No. SPW 12/2021

Shek Wu Hui Effluent Polishing Plant – Main Work

Monthly Environmental Monitoring & Audit Report

October 2022

(November 2022)

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EXECUTIVE SUMMARY

i. This is the Environmental Monitoring and Audit (EM&A) Monthly Report – October 2022 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 14th 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 October 2022 to 31 October 2022. 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
- Sewage, utility and pipe works
- Backfilling
- ABWF works

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

- ELS works
- Sheet piling
- RC works

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

- ELS works (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation at SAS PS
- Electrical Installation at Workshop No.2
- Lift and Plumbing Installation at Workshop No.2
- MFA, AFA and SPR System Installation at SDB
- T&C UV System and T&C for Electrical Installation at UV No.1
- Bio-Gas Holding tank Installation at Bio-Gas Tank

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

- Improvement Works for Temporary Primary Sludge Thickener and its accessories

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. Power failure was encountered at AM1a* during the period from 11 Oct 2022 to 15 Oct 2022, so the 24hr AQM for AM1a* was temporarily suspended.

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

Noise Monitoring

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

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

Ecological Monitoring

viii. Ecological monitoring conducted on a weekly basis at both high and low tides (it is considered high tide when tidal levels are above 1.5m and low tide when tidal level are below 1.5m at Tsim Bei Tsui Station). The magnitude of how much above or below 1.5m was subject to tidal conditions of that week as it varied throughout different times of the year. Nonetheless, the high and low tide relative to that week's tidal condition were taken into consideration.

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

Site Inspections and Audit

x. The Environmental Team (ET) conducted weekly site inspections on 7, 10 (DC/2018/06 and DC/2018/07), 11 (DE/2018/03 and DE/2018/04), 18 and 25 October 2022 and biweekly landscape inspection on 10 and 25 October 2022. IEC attended the joint site inspection on 25 October 2022. No non-compliance was found during the site inspection while reminders on environmental measures were recommended.

Complaints, Notifications of Summons and Successful Prosecutions

xi. No environmental complaint, 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
- Backfilling
- Sewage, utility and pipe works
- ABWF works

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

- ELS works
- Sheet piling
- RC works
- Excavation

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

- ELS works at Sidestream Treatment Facilities
- Installation of Earth Mat at Sidestream Treatment Facilities
- Lift, Plumbing, MVAC and Electrical Installation at Workshop No.2
- Monorail, Penstock and Stoplog Installation at SAS PS
- SPR, MFA and AFA Installation at SDB
- T&C for Electrical Installation at UV No.1
- Bio-Gas Holding tank Installation at Bio-Gas Tank
- Monorail Installation at CHP
- Steam Boiler Transportation at CHP

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

- Improvement Works for Temporary Primary Sludge Thickener and its accessories
- E&M Installation 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 installation works at Portion B-2, Inert Works

1 Introduction

1.1 Scope of the Report

1.1.1. Lam Environmental Services Limited (LES) has been appointed to work as the Environmental Team (ET) under Environmental Permit (EP) No. FEP-02/474/2013 to implement the Environmental Monitoring and Audit (EM&A) programme as stipulated in the EM&A Manual of the approved Environmental Impact Assessment (EIA) Report for North East New Territories New Development Areas (Register No.: AEIAR-175/2013).

1.1.2. In accordance with Clause 3.4 stated in FEP-02/474/2013, 3 hard copies and 2 electronic copies of Monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month throughout the entire construction period.

1.1.3. According to Section 9.4.1.1 of the Project EM&A Manual, the Monthly EM&A Report should be submitted within 10 working days at the end of each reporting month, with the first report due in the month after construction commences.

1.2 Structure of the Report

Section 1 ***Introduction*** – details the scope and structure of the report.

Section 2 ***Project Background*** – summarizes background and scope of the project, site description, project organization and contact details of key personnel during the reporting period.

Section 3 ***Status of Regulatory Compliance*** – summarizes the status of valid Environmental Permits / Licenses during the reporting period.

Section 4 ***Monitoring Requirements*** – summarizes all monitoring parameters, monitoring methodology and equipment, monitoring locations, monitoring frequency, criteria and respective event and action plan and monitoring programmes.

Section 5 ***Monitoring Results*** – summarizes the monitoring results obtained in the reporting period.

Section 6 ***Compliance Audit*** – summarizes the auditing of monitoring results, all exceedances environmental parameters.

Section 7 **Environmental Site Audit** – summarizes the findings of weekly site inspections undertaken within the reporting period, with a review of any relevant follow-up actions within the reporting period.

Section 8 ***Complaints, Notification of summons and Prosecution*** – summarizes the cumulative statistics on complaints, notification of summons and prosecution

Section 9 ***Conclusion***

2 Project Background

2.1 Background

2.1.1. The existing Shek Wu Hui Sewage Treatment Works (SWHSTW) has been operating and maintaining for 30 years by the Drainage Services Department (DSD). It provides secondary level treatment to sewage collected from Sheung Shui, Fanling and adjacent areas. SWHSTW was completed in two stages and expanded progressively in the past years. In 1984, Stage I of SWHSTW was commissioned with design capacity of 60,000 cubic meters per day (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	CPC	Mr. Hanes Hui	2594 7459
AECOM	Supervisor Representative	Resident Engineer	Mr. Alex Leung	3907 6145
Kwan Lee - Chun Wo Joint Venture	Contractor (DC/2018/06)	Environmental Engineer	Ms. Ruby Hui	6218 6408
		Assistant Environmental Engineer	Mr. Marco Chan	6235 6017
	Contractor (DC/2018/07)	Environmental Engineer	Ms. Tiffany Choi	9789 1027
JEC	Contractor (DE/2018/03)	Environmental Officer	Ms. Juliet Ting	6826 7319
Bestwise	Contractor (DE/2018/04)	Environmental Officer	Mr. Albus Cheung	9731 0831
Meinhardt Infrastructure and Environment Ltd.	Independent Environmental Checker (IEC)	Independent Environmental Checker (IEC)	Ms. Claudine Lee	9612 9229
Lam Environmental Services Limited	Environmental Team (ET)	Environmental Team Leader (ETL)	Mr. Raymond Dai	2882 3939

2.3 Construction Activities

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

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

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

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

- ELS works
- Sheet piling
- RC works

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

- ELS works (Sidestream Treatment Facilities)
- Penstock and Stoplog Installation at SAS PS
- Electrical Installation at Workshop No.2
- Lift and Plumbing Installation at Workshop No.2
- MFA, AFA and SPR System Installation at SDB
- T&C UV System and T&C for Electrical Installation at UV No.1
- Bio-Gas Holding tank Installation at Bio-Gas Tank

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

- Improvement Works for Temporary Primary Sludge Thickener and its accessories

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	5	Section 4, SDB
	Tower Crane	2	Near Workshop No.2 and Gate 2
	Mobile generator	1	Near Workshop No.2
	Scissor lift platform	4	SDB and CHP
DC/2018/07	Excavator	22	BR2, Inlet, PST, Area C, Area D, MFB and SAS
	Generator	7	BR2, MFB, PST and Inlet
	Air compressor	1	Inlet
	Mobile Crane	4	PST, Inlet and BR2
	Road Work Machine	1	Inlet
DE/2018/03	Generator	7	UV No.1, Sidestream and Workshop No.2
	Tower Crane	1	Sidestream
DE/2018/04	-	-	-

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

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

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

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

- ELS works

- Sheet piling
- RC works
- Excavation

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

- ELS works at Sidestream Treatment Facilities
- Installation of Earth Mat at Sidestream Treatment Facilities
- Lift, Plumbing, MVAC and Electrical Installation at Workshop No.2
- Monorail, Penstock and Stoplog Installation at SAS PS
- SPR, MFA and AFA Installation at SDB
- T&C for Electrical Installation at UV No.1
- Bio-Gas Holding tank Installation at Bio-Gas Tank
- Monorail Installation at CHP
- Steam Boiler Transportation at CHP

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

- Improvement Works for Temporary Primary Sludge Thickener and its accessories
- E&M Installation 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 installation works at Portion B-2, Inert Works

3 Status of Regulatory Compliance

3.1 Status of Environmental Licensing and Permitting under the Project

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

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

Permits and/or Licences	Permit. No. / Account No.	Valid From	Expiry Date	Status
Environmental Permit	FEP-02/474/2013	15 Feb 2018	N/A	Valid
Notification pursuant to Air Pollution Control (Construction Dust) Regulation	449210 (Portion A & C)	23 Sep 2019	N/A	Valid
	449211 (WM1)	23 Sep 2019	N/A	Valid
Water Pollution Ordinance Licence	WT00035431-2019 (Portion C)	27 Jul 2020	31 Jan 2025	Valid
	WT00035718-2020 (Portion A)	02 Apr 2020	30 Apr 2025	Valid
Billing Account for Disposal of Construction Waste	7035390	11 Oct 2019	N/A	Valid
Registration as a Chemical Waste Producer	5213-624-K3371-01	14 Nov 2019	N/A	Valid
Construction Noise Permit	GW-RN0791-22	29 Aug 2022	28 Nov 2022	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-RN0791-22	29 Aug 2022	28 Nov 2022	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-RN0794-22	31 Aug 2022	30 Nov 2022	Valid

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

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

3.1.2. Implementation status of the recommended mitigation measures during this report month is presented in ***Appendix 3.1***.

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

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

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

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

4 Monitoring Requirements

4.1 Noise Monitoring

NOISE MONITORING STATIONS

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

Table 4.1 Noise Monitoring Station

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

NOISE MONITORING PARAMETERS, FREQUENCY AND DURATION

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

Table 4.2 Noise Monitoring Parameters, Frequency and Duration

Monitoring Period	Duration	Sampling Parameter	Sampling Period(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
Integrated Sound Level Meter	NTi XL2	A2A-15269-EO
Acoustic Calibrator	LD CAL200	13098

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

Remarks

(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
Portable direct reading dust meter	Met One BT- 645 / Met One AEROCET831	R14332 W15448
High Volume Sampler	Tisch Total Suspended Particulate Mass Flow Controlled High Volume Air Sampler (Model no. G3101)	HVS001 (Serial number: 0401-1105) HVS003 (Serial number: 1096-2305)
Wind Anemometer	YGY-FSXY1	YG 21071630T0924

4.2.9. The calibration certificates of the air quality monitoring equipment are attached in ***Appendix 4.2***.

WIND DATA

4.2.10. Hong 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)	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 5.6***.

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 – 4.3*** 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 ***Appendix 5.2***.

5.1.2 No action or limit level exceedance was recorded in this reporting month.

5.2 Air 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 ***Appendix 5.3***.

5.2.2 Power failure was encountered at AM1a* during the period from 11 Oct 2022 to 15 Oct 2022, so the 24hr AQM for AM1a* was temporarily suspended.

5.2.3 No action or limit level exceedance was recorded in this reporting month.

5.3 Ecology Monitoring Results

5.3.1 Details of ecological Monitoring results in the reporting month are provided in ***Appendix 5.4*** and ***Appendix 5.5***.

5.3.2 No Action Level or Limit Level was triggered for ecological monitoring in the reporting month.

5.3.3 Site observation in the reporting month shows that construction activities are similar to previous months. The photos are provided in ***Appendix 5.6.***

5.3.4 In recent months, it is found that there are different construction sites and human activities such as fishing around the project site. The photos are provided in ***Appendix 5.6***. These construction and human activities may affect activities of the waterbird. Although, there is no significant impact reduction in number of waterbird, but it is recommended that construction site should continue keeping the good site practice to minimize disturbance caused to waterbirds.

5.3.5 The monitoring work will continue next month to evaluate any construction impact on waterbirds.

5.4 Waste Management

5.4.1 The quantities of waste for disposal in the Reporting Period are summarized in ***Table 5.1*** to ***5.4***. The Monthly Summary Waste Flow Table is shown in ***Appendix 5.7.*** Whenever possible, materials were reused on-site as far as practicable.

Table 5.1 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 (2022)
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)	1.032	0.789	9.298
Metals (in '000kg)	0.004	0.003	2.379
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.010
Plastics (in '000kg)	0.010	0.008	0.023
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m^3)	0.229	0.133	1.264

Table 5.2 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 (2022)
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 (2022)
Reused in this Contract (Inert) (in '000m^3)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000m^3)	0.000	1.937	3.608
Disposal as Public Fill (Inert) (in '000m^3)	2.735	7.842	33.335
Metals (in '000kg)	0.000	0.000	23.300
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.010
Plastics (in '000kg)	0.007	0.006	0.026
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000m^3)	0.042	0.029	0.220

Table 5.3 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 (2022)
Hard Rock and Large Broken Concrete (Inert) (in '000kg)	0.000	0.000	0.000
Reused in this Contract (Inert) (in '000kg)	0.000	0.000	0.000
Reused in other Projects (Inert) (in '000kg)	0.000	0.000	0.000
Disposal as Public Fill (Inert) (in '000kg)	43.170	57.600	15479.440
Metals (in '000kg)	0.000	0.000	0.000

Waste Type	Quantity (Previous month)	Quantity (Reporting month)	Annual Cumulative Quantity (2022)
Paper / Cardboard Packing (in '000kg)	0.000	0.000	0.439
Plastics (in '000kg)	0.000	0.000	0.023
Chemical Wastes (in '000kg)	0.000	0.000	0.000
General Refuses (in '000kg)	3.610	0.000	13.910

Table 5.4 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 (2022)
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	0.000
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 '000kg)	0.000	6.840	6.840

6 Compliance Audit

6.1.1 The Event Action Plan for construction noise, air quality and ecological monitoring are presented in ***Appendix 6.1.***

6.1.2 The summary of exceedance is presented in ***Appendix 6.2.***

6.2 Noise Monitoring

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

6.3 Air Quality Monitoring

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

6.4 Ecological Monitoring

6.4.1 No Action Level or Limit Level was triggered for ecological monitoring in the reporting month.

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

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

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

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

7 Environmental Site Audit

7.0.1. Within this reporting month, weekly environmental site audits were conducted on 7, 10 (DC/2018/06 and DC/2018/07), 11 (DE/2018/03 and DE/2018/04), 18 and 25 October 2022 and biweekly landscape inspection on 10 and 25 October 2022. IEC attended the joint site inspection on 25 October 2022.

7.0.2. 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
20221018_1	18 Oct 2022	To cover up the exposed stockpiles with tarpaulin near SDB.	The stockpiles were either covered up or sprayed with water for dust suppression.	Rectified on 25 Oct 2022.

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

Item	Date	Reminder(s)/ Observation(s)	Action taken by Contractor	Outcome
20220927_2	27 Sep 2022	Faded colour NRMM label of the generator near MFB should be replaced.	New NRMM label was provided and displayed.	Rectified on 10 Oct 2022.
20221010_2	10 Oct 2022	To clear the clogged drip tray near PST.	The drip tray was properly maintained.	Rectified on 18 Oct 2022.

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
-	-	-	-	-

8. Complaints, Notification of Summons and Prosecution

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

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

8.0.3. Cumulative statistics on complaints and successful prosecutions are summarized in ***Table 8.1*** and ***Table 8.2*** respectively.

Table 8.1 Cumulative Statistics on Complaints in the Reporting Month

Reporting Period	No. of Complaints
Commencement works (Feb 2018) to last reporting month	4
October 2022	0
Total	**4**

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

9.0.1. 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.

9.0.2. 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.

9.0.3. 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

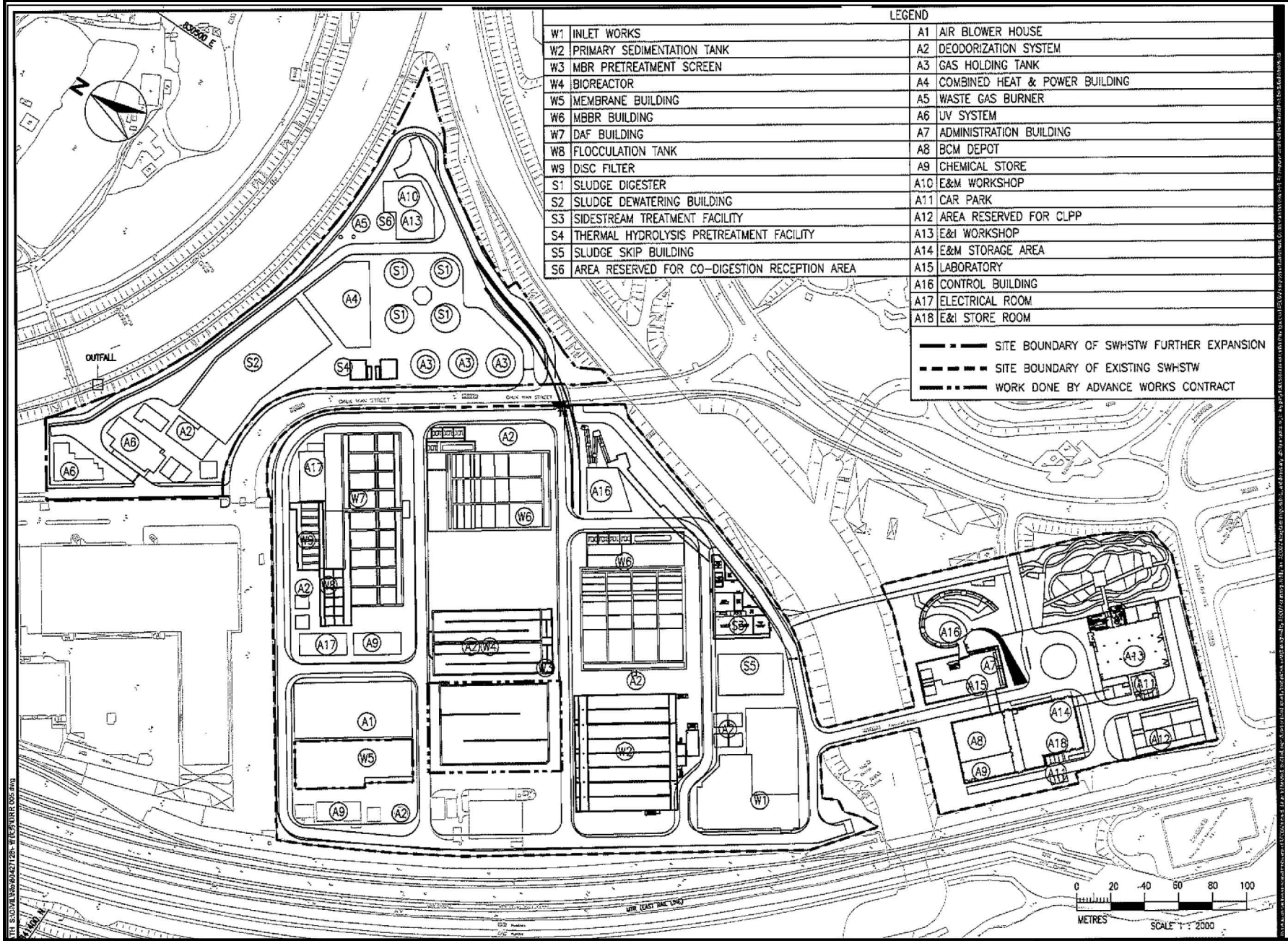
Contract No.	Key Construction Works	Recommended Mitigation Measures
DC/2018/06	• RC works • Sewage, utility and pipe works • Backfilling • ABWF works	• Implement proper dust mitigation measures on dusty surface and stockpiles • Implement proper measures to prevent excavated material, silt or debris being 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	• ELS works	• Implement proper dust mitigation measures on

Contract No.	Key Construction Works	Recommended Mitigation Measures
	• Sheet piling • RC works • Excavation	dusty surface and stockpiles • 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	• ELS works • Installation of Earth Mat • Lift, Plumbing, MVAC Installation • Penstock and Stoplog Installation • SPR, MFA and AFA Installation • Electrical Installation • Bio-Gas Holding tank Installation • Monorail Installation • Steam Boiler Transportation	• Implement proper dust mitigation measures on dusty surface and stockpiles • 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

Contract No.	Key Construction Works	Recommended Mitigation Measures
		displayed valid NRMM labels and the application of ULSD as fuel for diesel-powered machinery.
DE/2018/04	• Improvement Works for Temporary Primary Sludge Thickener and its accessories • E&M Installation 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 installation works at Portion B-2, Inert Works	• 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.

Figure 2.1

Project Layout



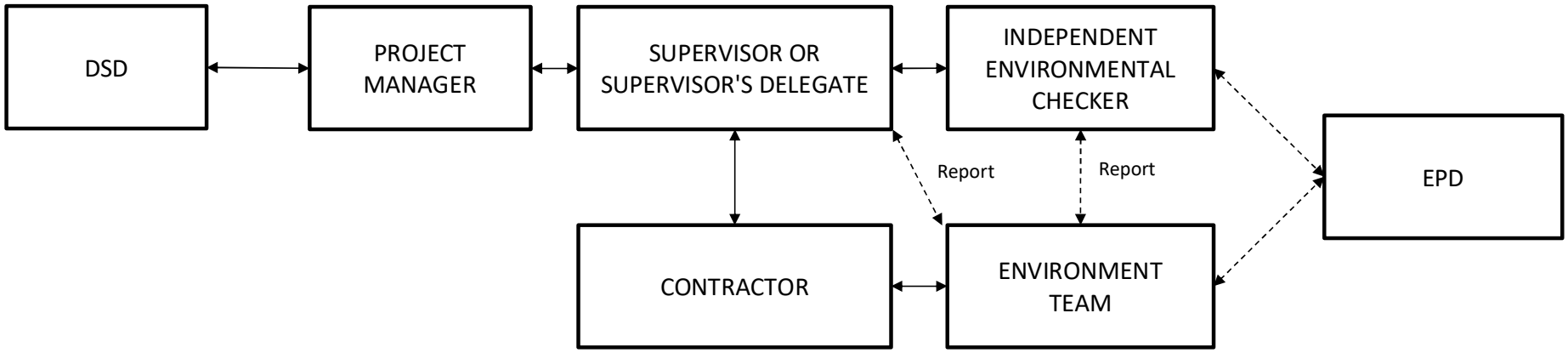
Shek Wu Hui E□luent Polishing Plant

General Site Layout O□SWHEPP

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

Figure 2.2

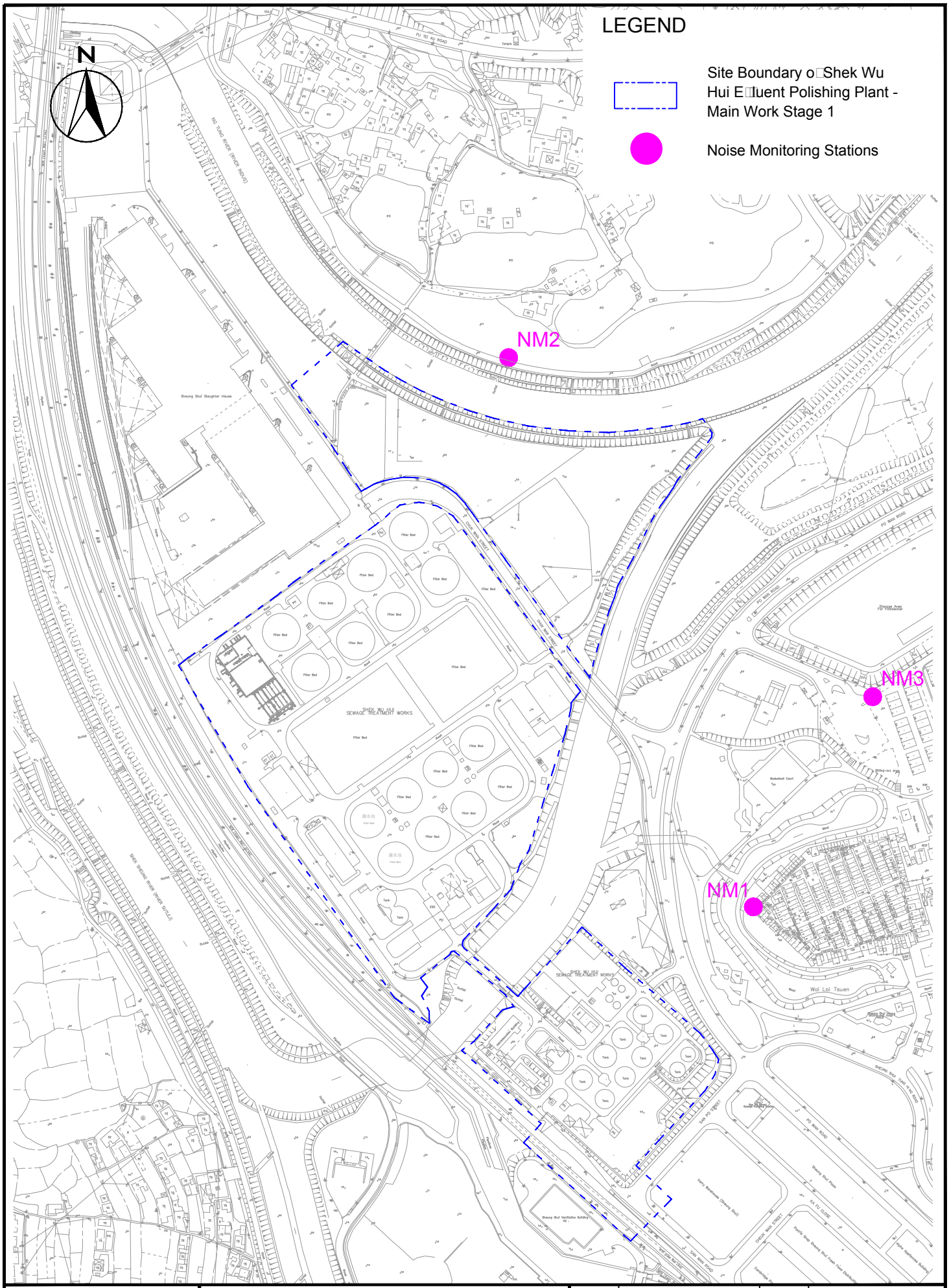
Project Organization Chart



	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

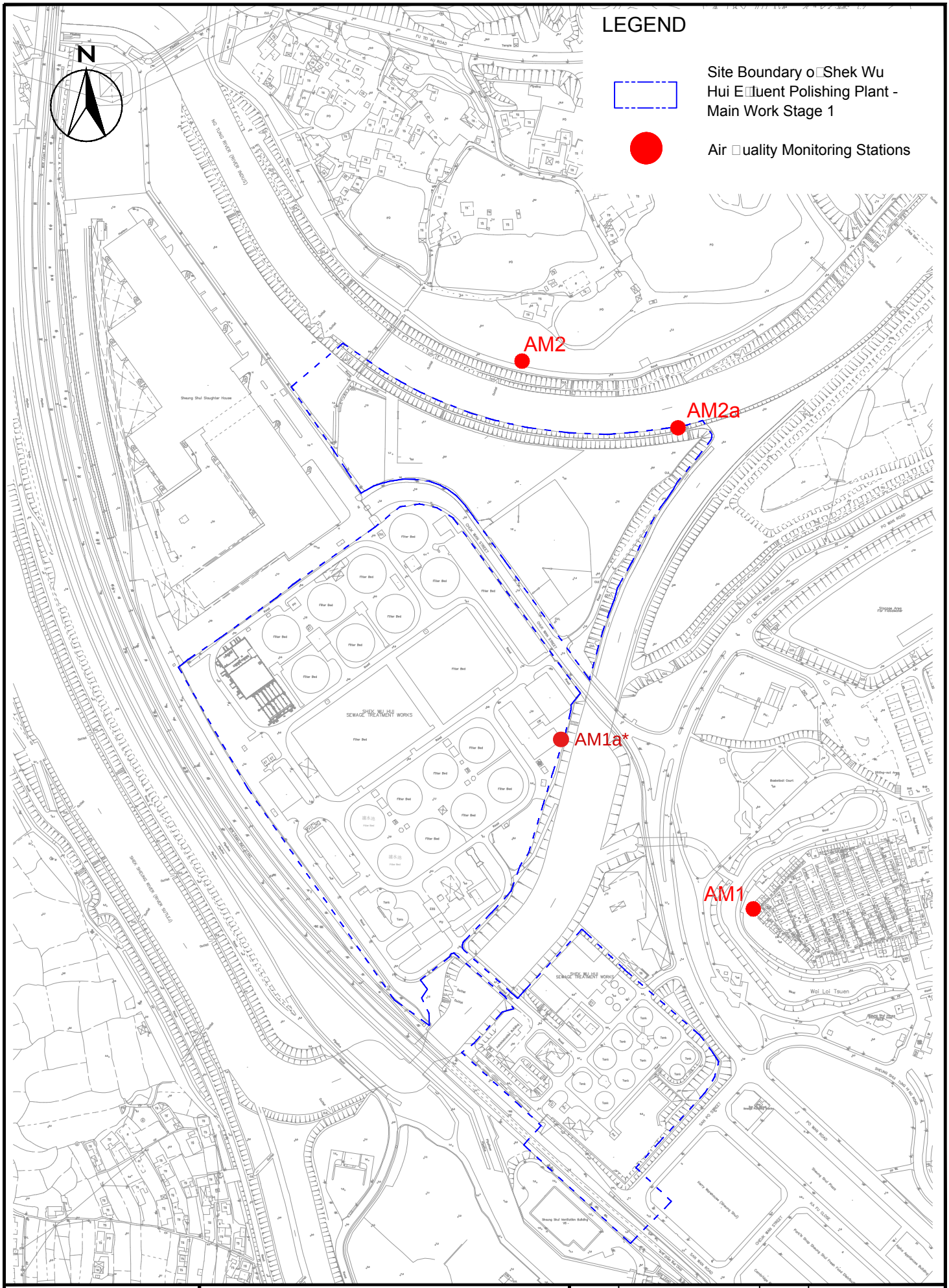
Locations of Noise Monitoring Stations



	Shek Wu Hui E luent Polishing Plant	SCALE	1:4000 A4	DATE SEP 2019
		CHECK	JM	DRAWN SY
	Location o Noise Monitoring Stations	JOB No.	MA19019	FIGURE NO. 3 RE -

Figure 4.2

Locations of Air Quality Monitoring Stations

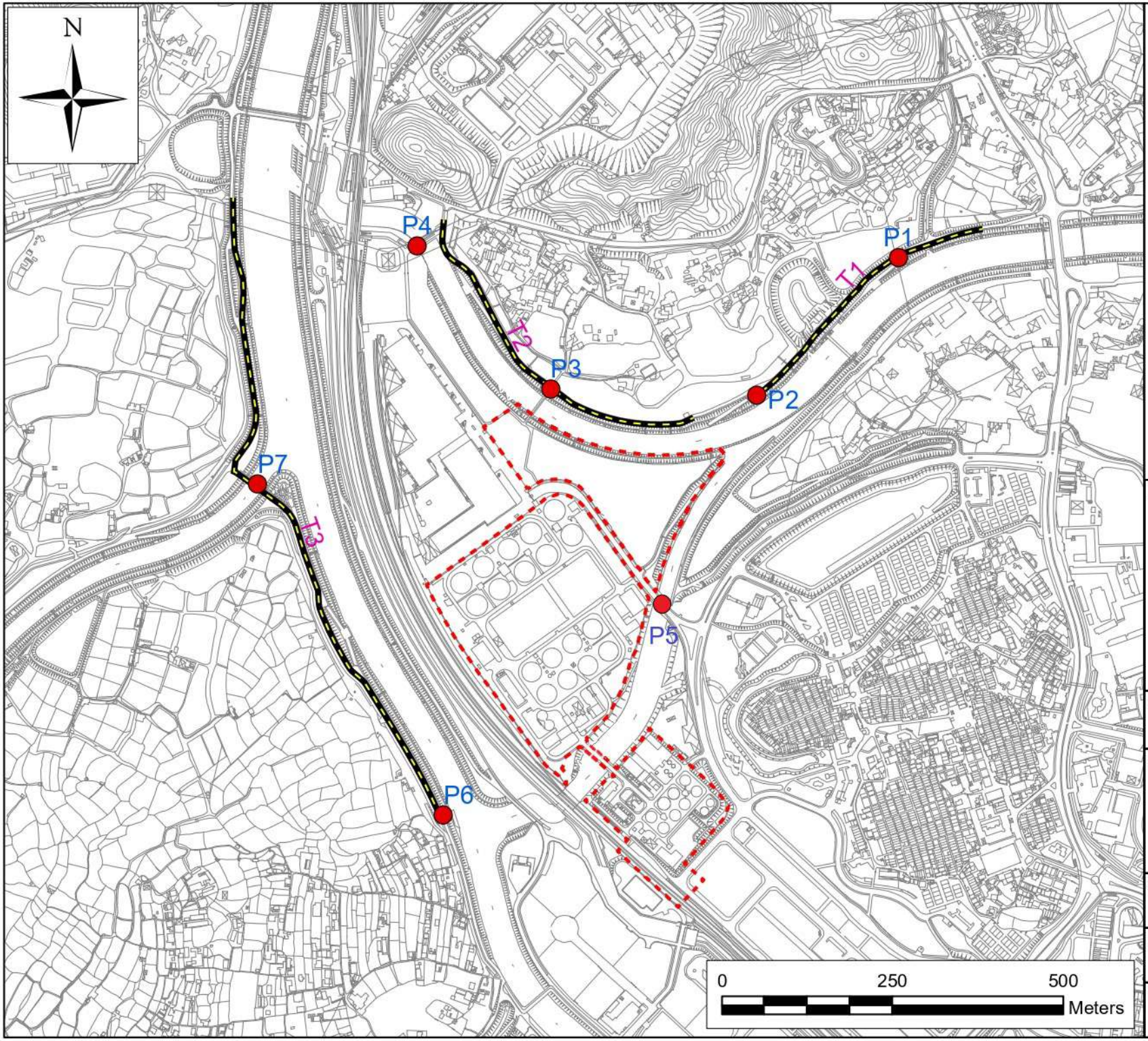


	Shek Wu Hui E□luent Polishing Plant - Location o□Air □uality Monitoring Stations	SCALE	1:400□ A4	DATE	SEP 2019
		CHECK	JM	DRAWN	SY
		JOB No.		FIGURE NO. 2	RE□ -

F:/Project_drawings

Figure 4.3

Locations of Ecological Monitoring Stations



Legend

- Project Site Boundary
- Walk Transects
- Point Count Locations

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CONTRACT NO.

SPW 12/2021

PROJECT TITLE

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

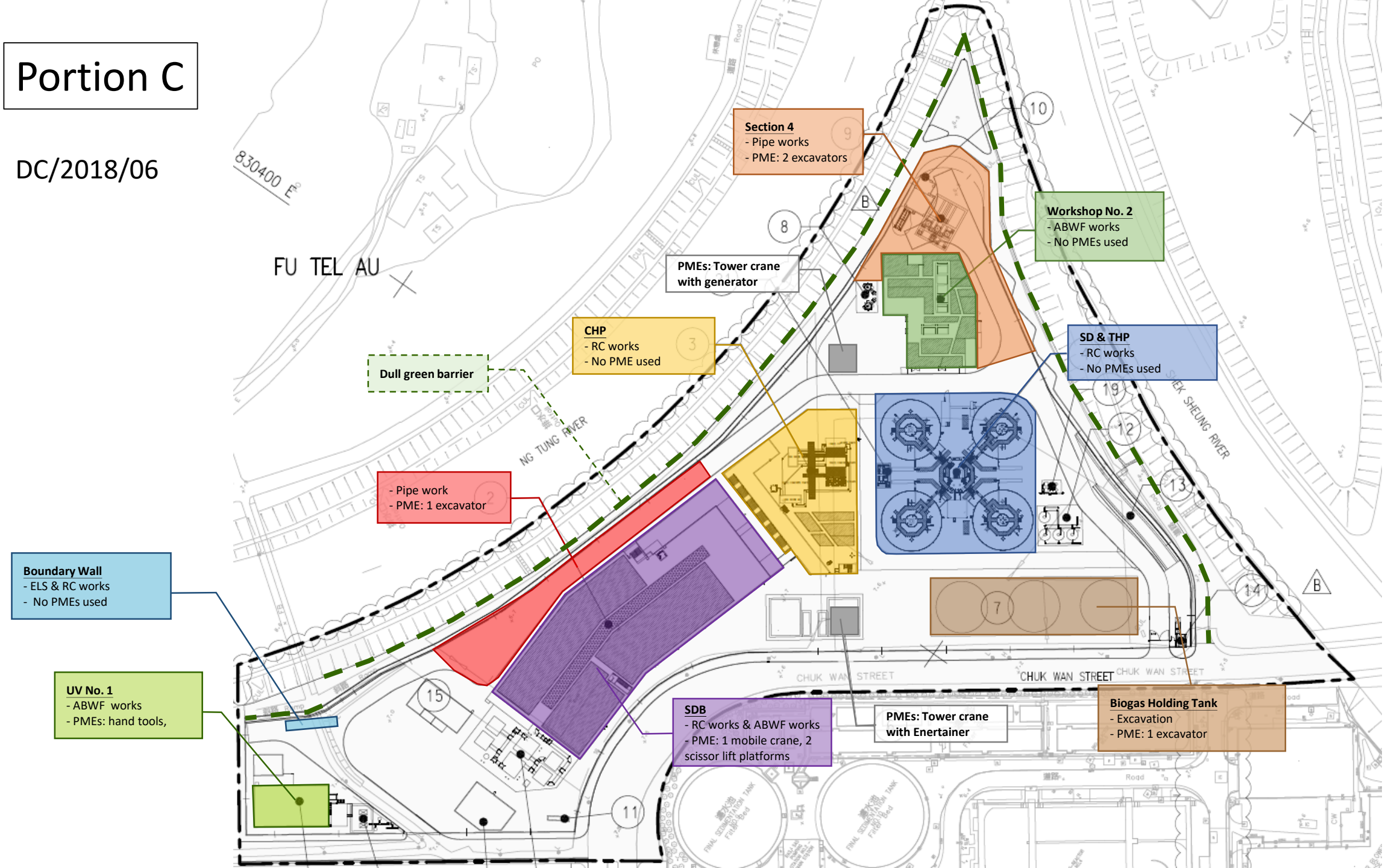
SCALE	DATE
1:7500@A4	***Sept 2021***
DRAWN BY ***AL***	CHECK BY ***MC***
FIGURE NO. ***1***	REVISION NO. ***-***

Appendix 2.1

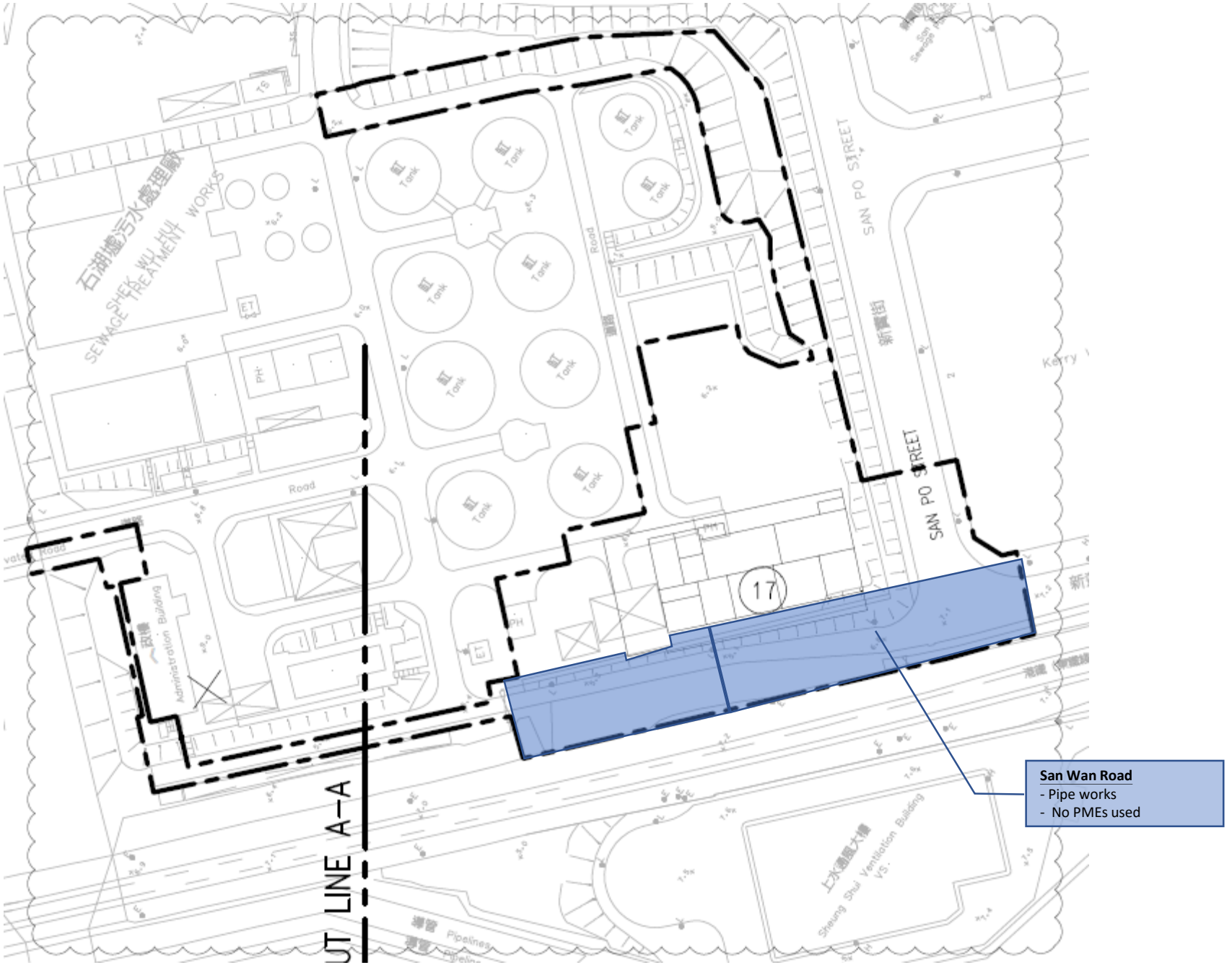
Layout Plan of Construction Activities and Site Record Photos

Portion C

DC/2018/06



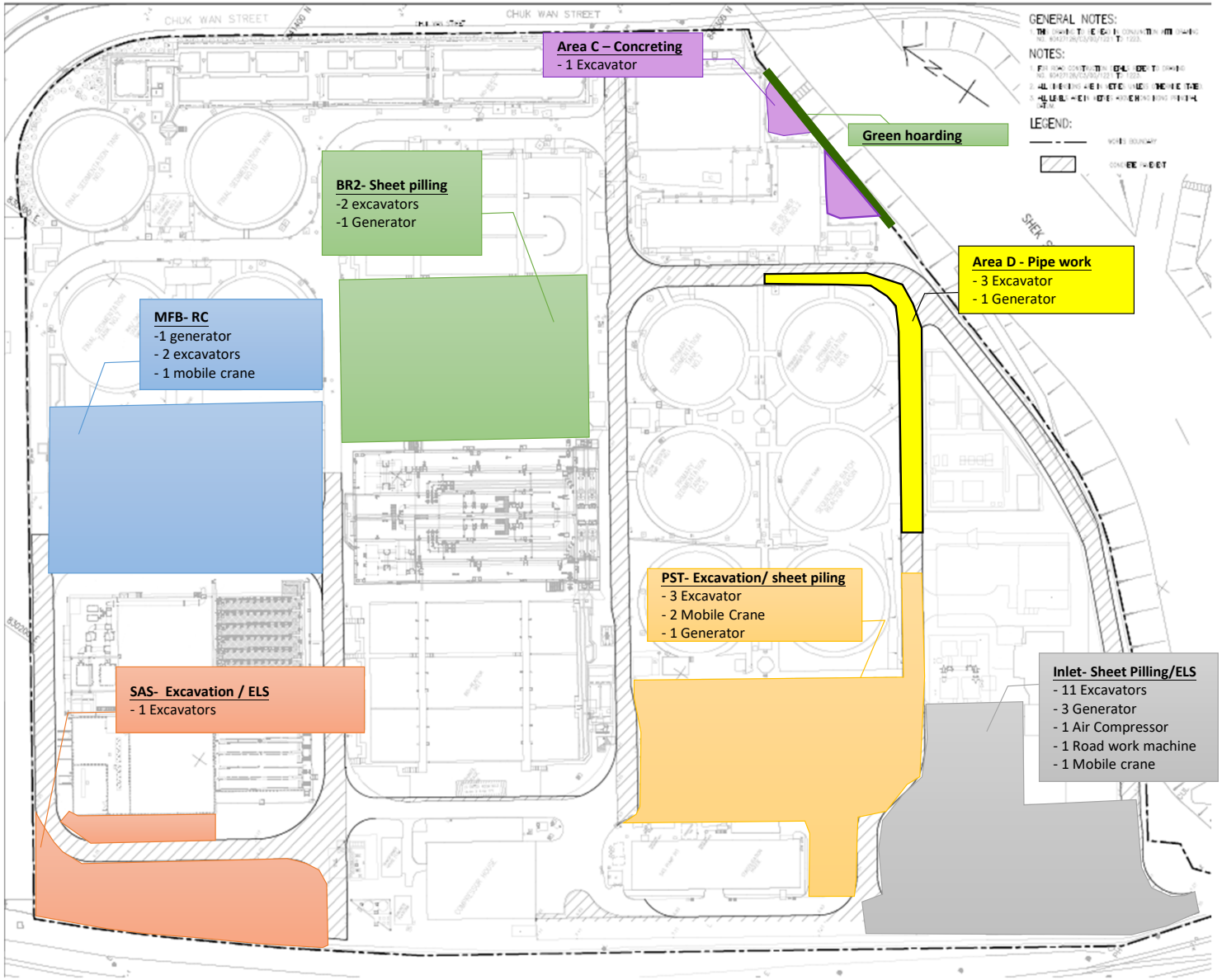
Portion A



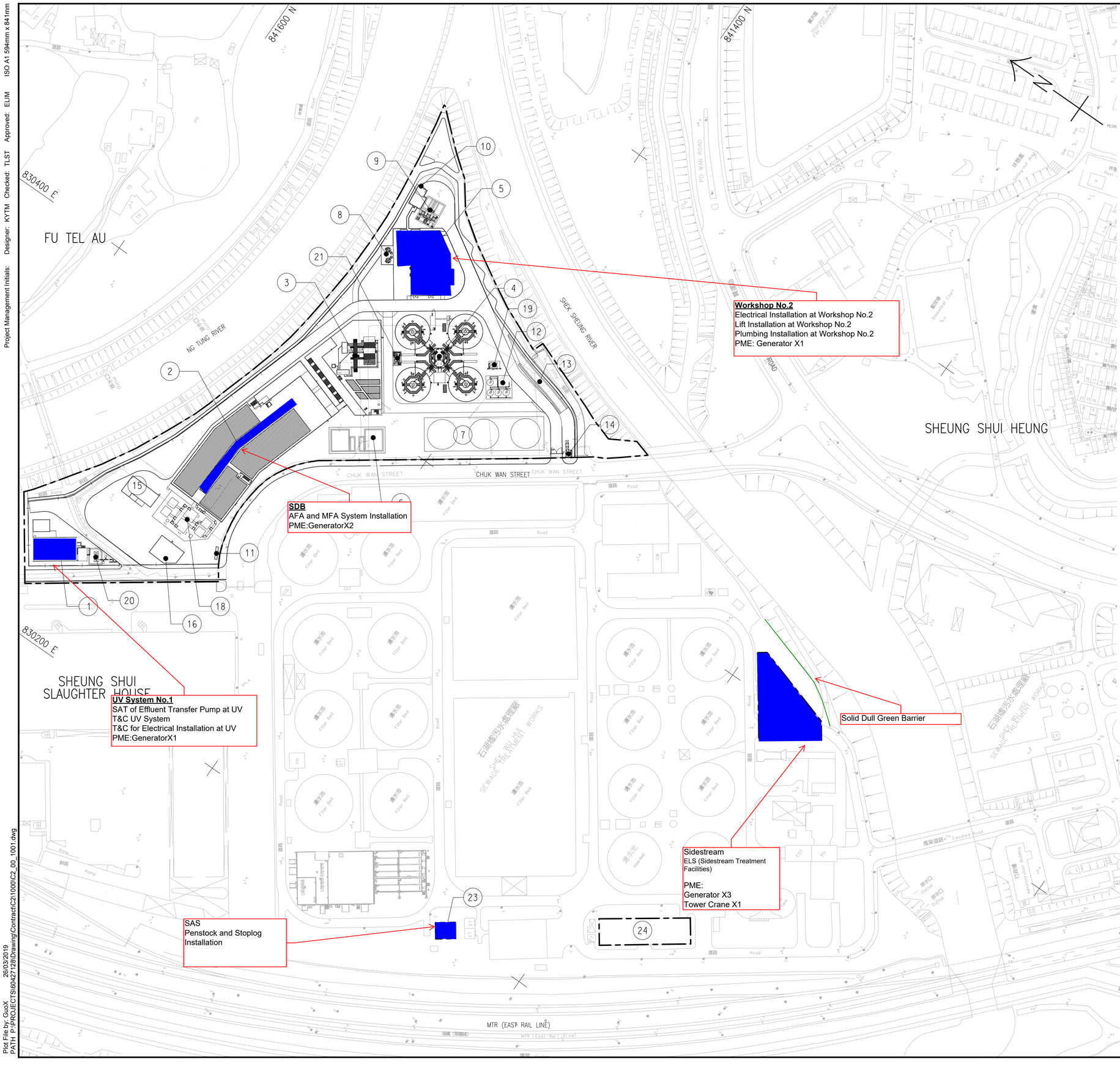
SAN PO STREET
SAN PO STREET
17
UT LINE A–A
San Wan Road
- Pipe works
- No PMEs used

Portion B

DC/2018/07



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



NOTES:

1. DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF 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.
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5. ALL DETAILS SHOWING THE EXISTING CONDITIONS OF THE SITE INCLUDING ALL GROUND, STRUCTURES, ROAD, SERVICES, ETC. ARE INDICATIVE ONLY.
6. THE LOCATION, ORIENTATIONS, ALIGNMENT, SIZES, LEVELS AND DETAILS OF THE SEWAGE AND DRAINAGE WORKS, INCLUDING THE PIPES CONNECTION, MANHOLES, EXISTING PIPES TO BE CONNECTED, EXISTING MANHOLES TO BE MODIFIED, THE CONSTRUCTION METHOD SHOWN ON THIS SET OF DRAWINGS ARE INDICATIVE AND FOR TENDER PURPOSE ONLY.
7. EXACT TIE-IN WITH EXISTING FEATURES SHALL BE AGREED WITH THE SUPERVISOR.

LEGEND:

	SITE BOUNDARY
1	UV SYSTEM NO. 1 & EFFLUENT PUMPING STATION NO. 1
2	SLUDGE DEWATERING BUILDING
3	COMBINED HEAT & POWER BUILDING
4	SLUDGE DIGESTER
5	WORKSHOP NO. 2
6	THERMAL HYDROLYSIS PRETREATMENT FACILITIES
7	BIOGAS HOLDING TANKS
8	WASTE GAS BURNER
9	SEWAGE PUMPING STATION
10	FERRIC CHLORIDE DOSING FACILITIES
11	WATER METER CABINET
12	H2S REMOVAL SYSTEM
13	UNDERPASS (PART)
14	GUARD HOUSE
15	TRANSFORMER AND SWITCHROOM
16	FIRE HYDRANT AND BOOSTER PUMP ROOM
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.
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
-	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

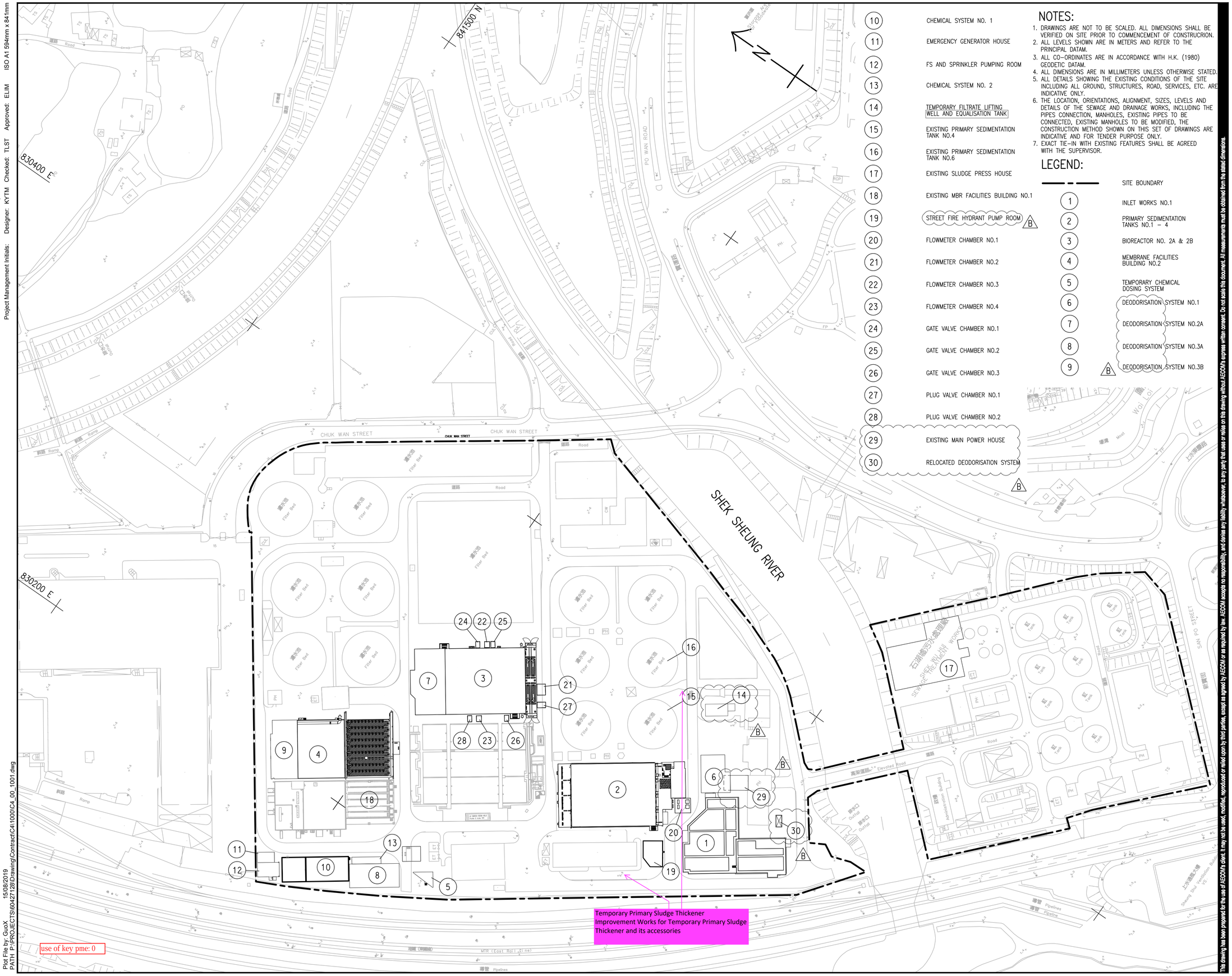
CONTRACT NO. 合約編號
DE/2018/03

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
PATH P:\PROJECTS\60427128\Drawing\Contract\C2\1000\C2_00_1001.dwg

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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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

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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

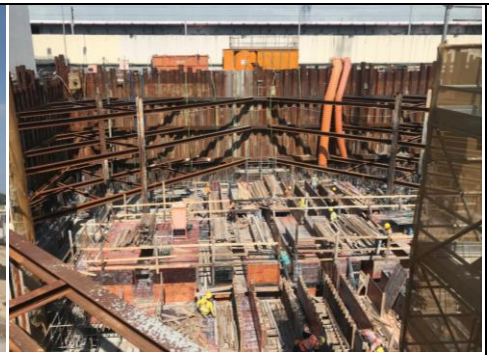
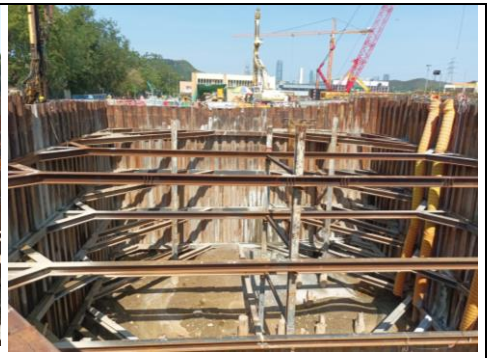
use of key pme: 0

Site Record Photos

DC/2018/06

SD&THP	Section 4	SDB	Biogas Holding Tank

DC/2018/07

			
BR2	MFB	PST	Inlet

DE/2018/03

Sidestream

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		N/A
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/m³		24-hour TSP Level in μg/m³	
	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:
June 28, 2023

Certificate of Calibration

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

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4500	3.2	2.00
2	3	4	1	1.0240	6.4	4.00
3	5	6	1	0.9130	7.9	5.00
4	7	8	1	0.8690	8.8	5.50
5	9	10	1	0.7180	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9961	0.6870	1.4144	0.9958	0.6867	0.8854
0.9918	0.9686	2.0003	0.9915	0.9683	1.2522
0.9899	1.0842	2.2364	0.9895	1.0838	1.4000
0.9887	1.1377	2.3456	0.9883	1.1373	1.4683
0.9834	1.3696	2.8289	0.9830	1.3691	1.7708
QSTD	**m=**	**2.07013**	**QA**	**m=**	**1.29628**
	b=	**-0.00727**		**b=**	**-0.00455**
	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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
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**	:	1-Sep-22
Equipment no.	:	HVS001 (0401-1105)	**Calbration Due Date**	:	1-Nov-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1008	mmHg

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

Calibration of TSP						
Calibration Point	**Manometer Reading H (inches of water)**			**Q_{std}** (m^3 / min.) **X-axis**	**Continuous Flow Recorder, W** (CFM)	**IC** $(W(P_a/1013.3 \times 298/T_a)^{1/2}/35.31)$ **Y-axis**
	(up)	(down)	(difference)			
1	1.4	1.4	2.8	0.8044	21	20.8058
2	2.3	2.3	4.6	1.0300	32	31.7041
3	3.5	3.5	7.0	1.2698	44	43.5932
4	4.3	4.3	8.6	1.4070	51	50.5285
5	5.6	5.6	11.2	1.6052	60	59.4452

By Linear Regression of Y on X

Slope, m	=	48.9134	Intercept, b	=	-17.5531
Correlation Coefficient*	=	0.9998			
Calibration Accepted	=	Yes/~~No~~**			

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

** Delete as appropriate.

Remarks : Serial No.:0401-1105

Calibrated by	:	Alan Ng	**Checked by**	:	Kelly Cheung
Date	:	1-Sep-22	**Date**	:	1-Sep-22

Lam Environmental Services Limited

Calibration Data for High Volume Sampler (TSP Sampler)

Location	:	AM2a	**Calbration Date**	:	1-Sep-22
Equipment no.	:	HVS003 (1096-2305)	**Calbration Due Date**	:	1-Nov-22

CALIBRATION OF CONTINUOUS FLOW RECORDER

Ambient Condition					
Temperature, T_a	302	Kelvin	**Pressure, P_a**	1008	mmHg

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

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	2.3	2.3	4.6	1.0300	23	22.7873
2	3.5	3.5	7.0	1.2698	33	32.6949
3	4.6	4.6	9.2	1.4552	44	43.5932
4	5.2	5.2	10.4	1.5469	48	47.5562
5	6.1	6.1	12.2	1.6752	55	54.4915

By Linear Regression of Y on X

Slope, m = 47.3405 Intercept, b = -26.2467

Correlation Coefficient* = 0.9980

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

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

** Delete as appropriate.

Remarks : Serial No.: 1096-2305

Calibrated by	:	Alan Ng	**Checked by**	:	Kelly Cheung
Date	:	1-Sep-22	**Date**	:	1-Sep-22

Met One Instruments
1600 Washington Blvd
Grants Pass, OR 97526
(541) 471-7111
(541) 471-7116 (Fax)
Service@metone.com

Calibration Certificate

The calibration results on this report certify that this instrument complies with the product specifications at the time of calibration. Calibration was performed according to accepted industry methods using equipment, procedures, and standards that are traceable to NIST and ISO.

Recommended calibration interval is 12 months from the first day of use.

Instrument Model# *Aerocet 831* **Instrument Serial#** *R14332*

Date of Calibration *4/29/2022* **Sensor #** *12228*

JGoddard AT8
Calibration Technician

AT5
Quality Check

Temperature *22* °C **Relative Humidity** *32* %

Test Procedure: *Aerocet 831-6100*

PSL Size (µm)	Test Results	Test Spec.	Lot# NIST	Expiration
0.3	Pass	± 10%	240943	05/31/2024
0.5	Pass	± 10%	219480	11/30/2022
1.0	Pass	± 10%	229294	8/31/2023
2.5	Pass	± 10%	REF	NA
4.0	Pass	± 10%	REF	NA
7.0	Pass	± 10%	REF	NA
10.0	Pass	± 10%	REF	NA

Standards	Model	SN	Cal Due
FLOW	SWIFT 6.0	B20457	11/24/2022
DMM	289	27720071	8/24/2022
RH/TEMP SENSOR	083E-1-6	R20313	9/13/2022
Particle Counter	GT-526S	X17421	5/29/2022

This calibration certificate shall not be reproduced except in full, without the written approval of Met One Instruments Inc.

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

Type	:	Particulare Monitor
Manufacturer	:	MET ONE INSTRUMENTS
Model Number	:	AEROCET831
Serial Number	:	R14332
Performance Check Date	:	17-May-22

Standard Equipment

Type	:	High Volume Sampler
Manufacturer	:	TISCH
Model Number	:	TE-5170
Equipment Number	:	HVS018 (S/N:2656)
Last Calibration Date	:	29-Apr-22

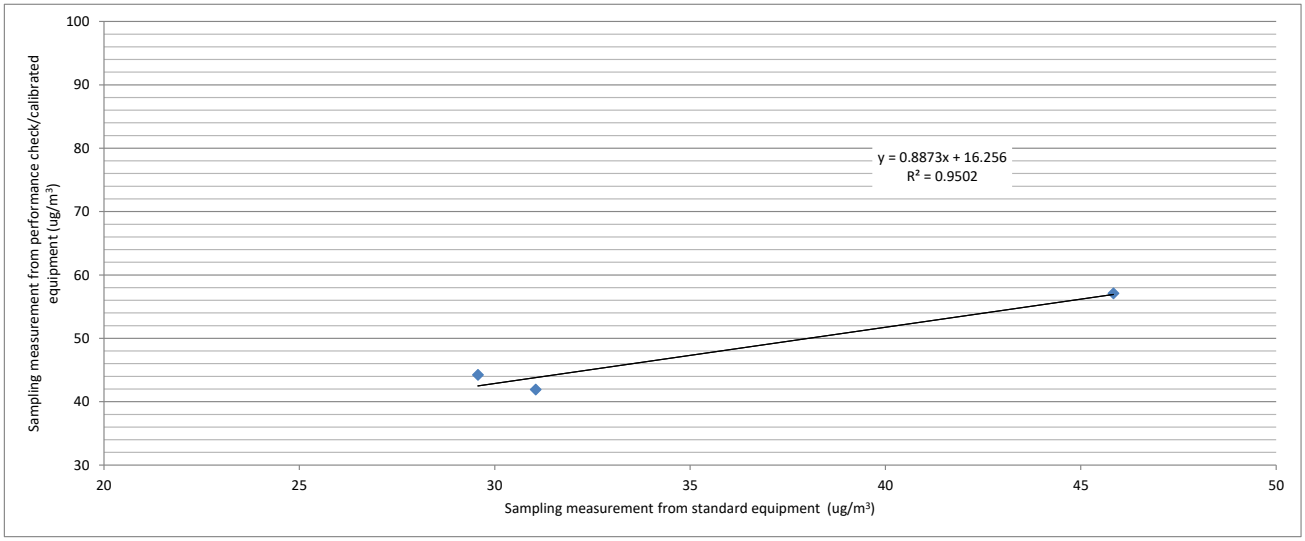
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard equipment) (Y - Axis)	Concentration in ug/m^3 (Performance Check / Calibrated equipment) (X - Axis)
1	17/5/22 09:30	33	1020	46	57
2	17/5/22 10:32	33	1020	30	44
3	17/5/22 13:00	33	1020	31	42

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor)	:	1.1000
Correlation Coefficient	:	0.9748
Validity of Performance Check / Calibration Record	:	17/5/2023



Operator:	Alan Ng	Date:	1/6/2022
Checked by:	Derek Lo	Date:	1/6/2022

Met One Instruments
1600 Washington Blvd
Grants Pass, OR 97526
(541) 471-7111
(541) 471-7116 (Fax)
Service@metone.com

Calibration Certificate

The calibration results on this report certify that this instrument complies with the product specifications at the time of calibration. Calibration was performed according to accepted industry methods using equipment, procedures, and standards that are traceable to NIST and ISO.

Recommended calibration interval is 12 months from the first day of use.

Instrument Model# *Aerocet 831* **Instrument Serial#** *W15448*

Date of Calibration *4/28/2022* **Sensor #** *16438*

JGoddard AT8
Calibration Technician

AT5
Quality Check

Temperature *22* °C **Relative Humidity** *32* %

Test Procedure: *Aerocet 831-6100*

PSL Size (µm)	Test Results	Test Spec.	Lot# NIST	Expiration
0.3	Pass	± 10%	240943	05/31/2024
0.5	Pass	± 10%	219480	11/30/2022
1.0	Pass	± 10%	229294	8/31/2023
2.5	Pass	± 10%	REF	NA
4.0	Pass	± 10%	REF	NA
7.0	Pass	± 10%	REF	NA
10.0	Pass	± 10%	REF	NA

Standards	Model	SN	Cal Due
Particle Counter	GT-526S	X17421	5/29/2022
FLOW	SWIFT 6.0	B20457	11/24/2022
RH/TEMP SENSOR	083E-1-6	R20313	9/13/2022
DMM	289	27720071	8/24/2022

This calibration certificate shall not be reproduced except in full, without the written approval of Met One Instruments Inc.

Lam Environmental Services Limited

Portable Dust Meter Performance Check Record

Portable Dust Meter

Type	:	Particulare Monitor
Manufacturer	:	MET ONE INSTRUMENTS
Model Number	:	AEROCET831
Serial Number	:	W15448
Performance Check Date	:	17-May-22

Standard Equipment

Type	:	High Volume Sampler
Manufacturer	:	TISCH
Model Number	:	TE-5170
Equipment Number	:	HVS018 (S/N:2656)
Last Calibration Date	:	29-Apr-22

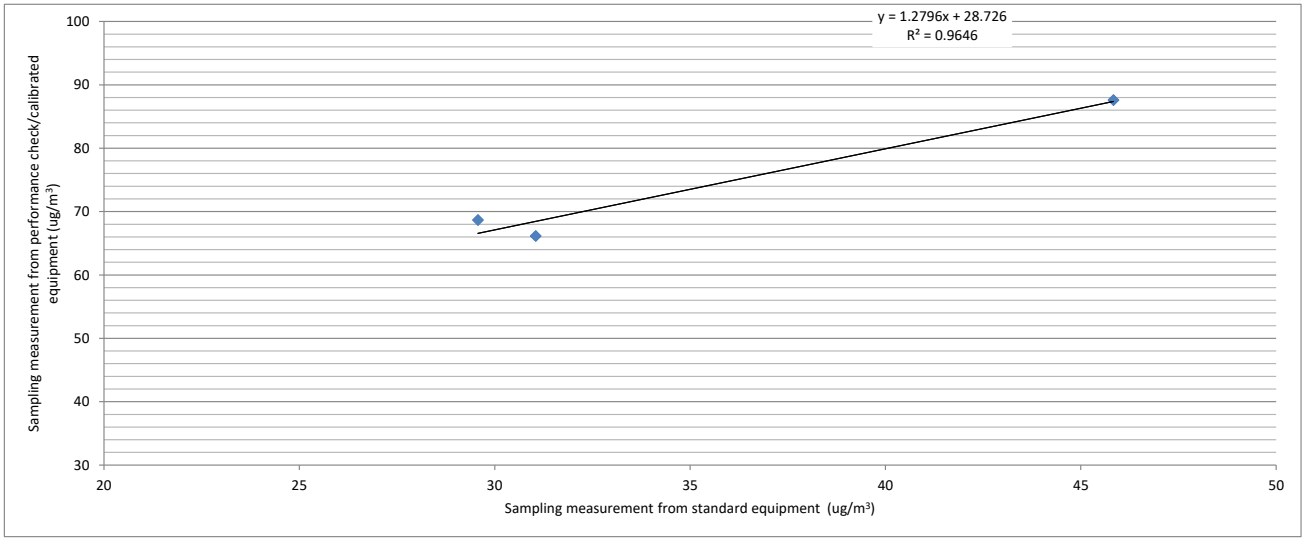
Portable Dust Meter Performance Check Results

Trial no. in 1-hr period	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard equipment) (Y - Axis)	Concentration in ug/m^3 (Performance Check / Calibrated equipment) (X - Axis)
1	17/5/22 09:30	33	1020	46	88
2	17/5/22 10:32	33	1020	30	69
3	17/5/22 13:00	33	1020	31	66

* Filter paper weighting was conducted by HOKLAS accredited laboratory.

Linear Regression of Y on X

Slope (K- factor)	:	0.8000
Correlation Coefficient	:	0.9821
Validity of Performance Check / Calibration Record	:	17/5/2023



Operator:	Alan Ng	Date:	1/6/2022
Checked by:	Derek Lo	Date:	1/6/2022

綜合試驗有限公司
SOILS & MATERIALS ENGINEERING CO., LTD.
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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

Certificate No.: 22CA0224 04-02 **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:	24-Feb-2022

Date of test: 01-Mar-2022

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Multi function sound calibrator	B&K 4226	2288444	23-Aug-2022	CIGISMEC
Signal generator	DS 360	33873	27-May-2022	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:** 02-Mar-2022 **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.

© Soils & Materials Engineering Co., Ltd.

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.: 22CA0224 04-02 **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:** 01-Mar-2022

Checked by: Chan Yuk Yiu **Date:** 02-Mar-2022

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

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SMECLab

Sound level meter type:	XL2	Serial No.	A2A-15269-EO	Date	01-Mar-2022
Microphone type:	MC230A	Serial No.	A16673		
				Report:	22CA0224 04-02

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	11.0	dB
Noise level in C weighting	14.5	dB
Noise level in Lin	20.9	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	49.1	49.1	0.7	0.1	0.1
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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Sound level meter type: XL2 Serial No. A2A-15269-EO Date 01-Mar-2022
Microphone type: MC230A Serial No. A16673
Report: 22CA0224 04-02

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	95.1	1.0	1.0	-0.1
3981.0	94.0	95.0	94.9	1.0	1.0	-0.1
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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SMECLab

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 01-Mar-2022

Microphone type: MC230A Serial No. A16673

Report: 22CA0224 04-02

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	93.1	1.0	1.0	-0.1
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	93.9	1.0	1.0	-0.1
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 01-Mar-2022
Microphone type: MC230A Serial No. A16673
Report: 22CA0224 04-02

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	119.3	2.0	0.3

Negative polarities:

Ref. level	Response to 10 ms	Response to 100 us	Tolerance	Deviation
dB	dB	dB	+/- dB	dB
119.0	119.0	119.3	2.0	0.3

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

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Microphone type: MC230A Serial No. A16673
Report: 22CA0224 04-02

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
121.6	120.6	117.6	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
127.7	126.7	86.7	86.7	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

Sound level meter type: XL2 Serial No. A2A-15269-EO Date 01-Mar-2022

Microphone type: MC230A Serial No. A16673

Report: 22CA0224 04-02

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	93.3	1.5	3.0	0.4

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

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CERTIFICATE OF CALIBRATION

Certificate No.: 21CA1222 02-01 **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 Ltd.
Address of Customer:	-
Request No.:	-
Date of receipt:	22-Dec-2021

Date of test: 29-Dec-2021

Reference equipment used in the calibration

Description:	Model:	Serial No.	Expiry Date:	Traceable to:
Lab standard microphone	B&K 4180	2341427	04-May-2022	SCL
Preamplifier	B&K 2673	2239857	31-May-2022	CEPREI
Measuring amplifier	B&K 2610	2346941	01-Jun-2022	CEPREI
Signal generator	DS 360	33873	27-May-2022	CEPREI
Digital multi-meter	34401A	US36087050	27-May-2022	CEPREI
Audio analyzer	8903B	GB41300350	28-May-2022	CEPREI
Universal counter	53132A	MY40003662	02-Jun-2022	CEPREI

Ambient conditions

Temperature:	22 ± 1 °C
Relative humidity:	55 ± 10 %
Air pressure:	1005 ± 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:** 03-Jan-2022 **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 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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HOKLAS 028 CAL

CERTIFICATE OF CALIBRATION

(Continuation Page)

Certificate No.: 21CA1222 02-01 **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	93.76	0.10

2, Sound Pressure Level Stability - Short Term Fluctuations

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

At 1000 Hz **STF = 0.018 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 = 0.6%**

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: Tung Chi Yip **Date:** 29-Dec-2021

Checked by: Chan Yuk Yiu **Date:** 03-Jan-2022

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

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Lam Environmental Services Limite

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 : 30-Sep-2022

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	2.0	2.1	-0.1
3 - 4	3.4	3.2	0.2
5 - 6	5.7	5.6	0.1
7 - 8	7.9	8.2	-0.3

Wind Direction (^{o})	Reading Value (W1, ^{o})	Compass Value (W2, ^{o})	Difference (W1 - W2, ^{o})
0	-1	0	-1
90	90	90	0
180	178	180	-2
270	272	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: William Cheung Checked by: Raymond Dai

Appendix 4.3

Wind Data

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
1-Oct-22	00:00	0.9	307(NW)
	01:00	1.3	239(WSW)
	02:00	0.0	195(SSW)
	03:00	0.0	355(N)
	04:00	0.0	143(SE)
	05:00	0.0	260(W)
	06:00	0.0	119(ESE)
	07:00	0.0	255(WSW)
	08:00	0.7	175(S)
	09:00	1.7	84(E)
	10:00	0.0	286(WNW)
	11:00	2.5	288(WNW)
	12:00	0.0	104(ESE)
	13:00	0.0	153(SSE)
	14:00	0.9	297(WNW)
	15:00	0.9	61(ENE)
	16:00	1.5	168(SSE)
	17:00	0.0	328(NNW)
	18:00	0.0	117(ESE)
	19:00	0.9	212(SSW)
	20:00	1.1	218(SW)
	21:00	0.0	228(SW)
	22:00	0.7	128(SE)
	23:00	1.3	146(SE)
2-Oct-22	00:00	0.5	313(NW)
	01:00	1.9	201(SSW)
	02:00	0.9	222(SW)
	03:00	1.1	127(SE)
	04:00	0.5	228(SW)
	05:00	0.0	276(W)
	06:00	1.7	108(ESE)
	07:00	1.1	297(WNW)
	08:00	0.7	209(SSW)
	09:00	0.0	339(NNW)
	10:00	0.0	217(SW)
	11:00	0.0	176(S)
	12:00	0.0	33(NNE)
	13:00	0.0	119(ESE)
	14:00	0.0	133(SE)
	15:00	0.0	233(SW)
	16:00	0.0	207(SSW)
	17:00	0.7	159(SSE)
	18:00	0.0	109(ESE)
	19:00	0.7	121(ESE)
	20:00	0.7	203(SSW)
	21:00	0.0	102(ESE)
	22:00	0.9	139(SE)
	23:00	0.9	275(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
3-Oct-22	00:00	0.0	85(E)
	01:00	0.0	127(SE)
	02:00	0.5	175(S)
	03:00	0.0	79(E)
	04:00	0.0	242(WSW)
	05:00	0.9	263(W)
	06:00	0.0	147(SSE)
	07:00	0.0	163(SSE)
	08:00	0.0	177(S)
	09:00	0.0	211(SSW)
	10:00	0.0	36(NE)
	11:00	0.0	165(SSE)
	12:00	0.7	219(SW)
	13:00	0.7	19(NNE)
	14:00	1.9	150(SSE)
	15:00	1.9	247(WSW)
	16:00	3.1	29(NNE)
	17:00	2.9	241(WSW)
	18:00	0.9	292(WNW)
	19:00	1.1	243(WSW)
	20:00	1.3	226(SW)
	21:00	0.7	263(W)
	22:00	0.0	260(W)
	23:00	0.0	337(NNW)
4-Oct-22	00:00	0.0	314(NW)
	01:00	0.0	291(WNW)
	02:00	1.5	276(W)
	03:00	0.9	226(SW)
	04:00	1.1	259(W)
	05:00	0.0	345(NNW)
	06:00	1.3	268(W)
	07:00	0.0	287(WNW)
	08:00	1.5	306(NW)
	09:00	1.7	305(NW)
	10:00	0.7	198(SSW)
	11:00	0.9	286(WNW)
	12:00	0.5	230(SW)
	13:00	2.1	8(N)
	14:00	1.5	230(SW)
	15:00	1.3	107(ESE)
	16:00	1.1	114(ESE)
	17:00	0.5	29(NNE)
	18:00	0.9	343(NNW)
	19:00	0.0	334(NNW)
	20:00	1.1	256(WSW)
	21:00	0.7	236(SW)
	22:00	0.0	244(WSW)
	23:00	0.7	230(SW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
5-Oct-22	00:00	0.0	278(WNW)
	01:00	1.1	259(W)
	02:00	1.1	270(W)
	03:00	0.9	266(W)
	04:00	0.9	239(WSW)
	05:00	1.1	204(SSW)
	06:00	0.9	246(WSW)
	07:00	0.0	249(WSW)
	08:00	0.5	322(NW)
	09:00	1.5	262(W)
	10:00	1.1	246(WSW)
	11:00	1.9	232(SW)
	12:00	2.3	93(E)
	13:00	3.1	228(SW)
	14:00	3.3	343(NNW)
	15:00	4.5	338(NNW)
	16:00	3.5	339(NNW)
	17:00	2.5	28(NNE)
	18:00	1.9	259(W)
	19:00	1.5	269(W)
	20:00	0.7	64(ENE)
	21:00	4.3	254(WSW)
	22:00	1.7	278(W)
	23:00	4.1	265(W)
6-Oct-22	00:00	4.9	299(WNW)
	01:00	2.9	225(SW)
	02:00	2.5	271(W)
	03:00	2.3	274(W)
	04:00	2.3	273(W)
	05:00	1.7	300(WNW)
	06:00	1.3	221(SW)
	07:00	2.5	284(WNW)
	08:00	2.5	270(W)
	09:00	1.5	266(W)
	10:00	5.1	268(W)
	11:00	2.3	292(WNW)
	12:00	2.3	264(W)
	13:00	2.7	302(WNW)
	14:00	1.3	336(NNW)
	15:00	0.9	98(E)
	16:00	1.9	254(WSW)
	17:00	1.3	334(NNW)
	18:00	1.9	327(NNW)
	19:00	2.5	306(NW)
	20:00	1.7	97(E)
	21:00	1.7	297(WNW)
	22:00	1.3	290(WNW)
	23:00	1.7	268(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
7-Oct-22	00:00	1.3	262(W)
	01:00	2.1	288(WNW)
	02:00	1.5	256(WSW)
	03:00	1.9	285(WNW)
	04:00	1.5	289(WNW)
	05:00	1.3	266(W)
	06:00	1.1	239(WSW)
	07:00	1.3	261(W)
	08:00	1.7	276(W)
	09:00	1.9	219(SW)
	10:00	2.5	278(W)
	11:00	1.7	54(NE)
	12:00	1.7	331(NNW)
	13:00	2.9	298(WNW)
	14:00	2.3	81(E)
	15:00	1.7	332(NNW)
	16:00	1.3	259(W)
	17:00	1.9	276(W)
	18:00	0.9	266(W)
	19:00	0.9	222(SW)
	20:00	1.1	263(W)
	21:00	1.5	182(S)
	22:00	2.5	270(W)
	23:00	1.5	239(WSW)
8-Oct-22	00:00	3.3	242(WSW)
	01:00	1.5	281(W)
	02:00	1.3	270(W)
	03:00	2.3	224(SW)
	04:00	1.1	230(SW)
	05:00	1.1	219(SW)
	06:00	1.3	203(SSW)
	07:00	1.3	218(SW)
	08:00	2.7	259(W)
	09:00	1.5	9(N)
	10:00	4.1	218(SW)
	11:00	2.5	230(SW)
	12:00	3.9	270(W)
	13:00	3.9	283(WNW)
	14:00	1.9	340(NNW)
	15:00	1.7	206(SSW)
	16:00	1.1	160(SSE)
	17:00	1.5	289(WNW)
	18:00	1.5	269(W)
	19:00	1.9	259(W)
	20:00	0.5	354(N)
	21:00	1.3	238(WSW)
	22:00	1.1	328(NNW)
	23:00	1.5	243(WSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
9-Oct-22	00:00	1.1	279 (WNW)
	01:00	1.7	267(W)
	02:00	1.5	276(W)
	03:00	1.9	269(W)
	04:00	2.3	255(WSW)
	05:00	1.1	266(W)
	06:00	1.7	290(WNW)
	07:00	0.9	232(SW)
	08:00	0.9	265(W)
	09:00	3.3	326(NW)
	10:00	1.3	252(WSW)
	11:00	1.3	214(SW)
	12:00	3.5	261(W)
	13:00	4.1	248(WSW)
	14:00	3.7	252(WSW)
	15:00	1.1	273(W)
	16:00	1.5	298(WNW)
	17:00	1.7	232(SW)
	18:00	1.7	210(SSW)
	19:00	2.5	264(W)
	20:00	2.5	264(W)
	21:00	3.7	217(SW)
	22:00	2.5	255(WSW)
	23:00	2.9	177(S)
10-Oct-22	00:00	0.9	244(WSW)
	01:00	-	-
	02:00	2.1	187(S)
	03:00	2.9	217(SW)
	04:00	1.7	281(W)
	05:00	3.5	263(W)
	06:00	-	-
	07:00	-	-
	08:00	-	-
	09:00	2.5	229(SW)
	10:00	3.7	265(W)
	11:00	2.5	249(WSW)
	12:00	2.1	278(W)
	13:00	1.3	280(W)
	14:00	0.0	256(WSW)
	15:00	3.5	253(WSW)
	16:00	1.9	249(WSW)
	17:00	1.1	301(WNW)
	18:00	2.7	258(WSW)
	19:00	2.9	276(W)
	20:00	1.3	257(WSW)
	21:00	2.1	248(WSW)
	22:00	1.3	285(WNW)
	23:00	3.3	285(WNW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
11-Oct-22	00:00	2.7	219(SW)
	01:00	3.1	219(SW)
	02:00	2.9	271(W)
	03:00	1.7	261(W)
	04:00	1.7	243(WSW)
	05:00	3.9	237(WSW)
	06:00	1.7	296(WNW)
	07:00	1.7	245(WSW)
	08:00	-	-
	09:00	3.1	248(WSW)
	10:00	-	-
	11:00	-	-
	12:00	-	-
	13:00	-	-
	14:00	0.9	239(WSW)
	15:00	2.5	278(W)
	16:00	3.1	253(WSW)
	17:00	1.5	261(W)
	18:00	1.7	273(W)
	19:00	1.1	289(WNW)
	20:00	0.9	282(WNW)
	21:00	-	-
	22:00	-	-
	23:00	-	-
12-Oct-22	00:00	-	-
	01:00	-	-
	02:00	-	-
	03:00	-	-
	04:00	-	-
	05:00	-	-
	06:00	-	-
	07:00	-	-
	08:00	-	-
	09:00	-	-
	10:00	-	-
	11:00	-	-
	12:00	-	-
	13:00	-	-
	14:00	0.9	239(WSW)
	15:00	2.5	278(W)
	16:00	3.1	253(WSW)
	17:00	1.5	261(W)
	18:00	1.7	273(W)
	19:00	1.1	289(WNW)
	20:00	0.9	282(WNW)
	21:00	-	-
	22:00	-	-
	23:00	-	-

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
13-Oct-22	00:00	-	-
	01:00	2.5	261(W)
	02:00	2.1	303(WNW)
	03:00	1.7	228(SW)
	04:00	1.3	273(W)
	05:00	1.7	285(WNW)
	06:00	1.3	266(W)
	07:00	2.1	276(W)
	08:00	2.3	277(W)
	09:00	2.7	269(W)
	10:00	1.3	210(SSW)
	11:00	1.1	264(W)
	12:00	-	-
	13:00	-	-
	14:00	-	-
	15:00	-	-
	16:00	-	-
	17:00	-	-
	18:00	-	-
	19:00	-	-
	20:00	-	-
	21:00	-	-
	22:00	-	-
	23:00	-	-
14-Oct-22	00:00	1.1	249(WSW)
	01:00	1.3	255(WSW)
	02:00	1.5	240(WSW)
	03:00	1.3	251(WSW)
	04:00	0.9	280(W)
	05:00	1.5	230(SW)
	06:00	1.1	279(W)
	07:00	1.5	243(WSW)
	08:00	1.9	262(W)
	09:00	1.5	248(WSW)
	10:00	0.7	25(NNE)
	11:00	1.5	215(SW)
	12:00	1.3	127(SE)
	13:00	3.9	205(SSW)
	14:00	2.3	206(SSW)
	15:00	2.3	289(WNW)
	16:00	2.7	249(WSW)
	17:00	2.1	278(W)
	18:00	0.9	256(WSW)
	19:00	0.7	286(WNW)
	20:00	2.1	312(NW)
	21:00	1.7	231(SW)
	22:00	1.1	257(WSW)
	23:00	0.9	206(SSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
15-Oct-22	00:00	1.3	229(SW)
	01:00	0.9	257(WSW)
	02:00	1.1	82(E)
	03:00	0.0	34(NE)
	04:00	0.9	243(WSW)
	05:00	3.3	255(WSW)
	06:00	1.5	75(ENE)
	07:00	2.3	223(SW)
	08:00	4.3	249(WSW)
	09:00	2.9	300(WNW)
	10:00	5.3	270(W)
	11:00	3.1	268(W)
	12:00	2.3	152(SSE)
	13:00	1.7	259(W)
	14:00	1.9	272(W)
	15:00	2.9	266(W)
	16:00	1.7	214(SW)
	17:00	2.7	181(S)
	18:00	2.1	175(S)
	19:00	0.7	108(ESE)
	20:00	0.7	70(ENE)
	21:00	0.0	20(NNE)
	22:00	0.9	72(ENE)
	23:00	0.7	303(WNW)
16-Oct-22	00:00	1.5	302(WNW)
	01:00	0.7	41(NE)
	02:00	2.7	291(WNW)
	03:00	1.3	24(NNE)
	04:00	1.9	296(WNW)
	05:00	1.3	330(NNW)
	06:00	0.9	311(NW)
	07:00	0.7	334(NNW)
	08:00	1.1	192(SSW)
	09:00	1.9	258(WSW)
	10:00	1.9	209(SSW)
	11:00	3.7	200(SSW)
	12:00	1.9	106(ESE)
	13:00	2.9	187(S)
	14:00	1.1	129(SE)
	15:00	0.7	76(ENE)
	16:00	2.1	188(S)
	17:00	1.1	212(SSW)
	18:00	2.5	195(SSW)
	19:00	1.1	280(W)
	20:00	0.0	330(NNW)
	21:00	3.1	281(W)
	22:00	3.3	205(SSW)
	23:00	2.3	257(WSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
17-Oct-22	00:00	0.9	234(SW)
	01:00	3.1	192(SSW)
	02:00	1.5	283(WNW)
	03:00	1.9	268(W)
	04:00	1.1	270(W)
	05:00	1.5	290(WNW)
	06:00	1.7	111(ESE)
	07:00	1.5	269(W)
	08:00	3.1	267(W)
	09:00	1.5	111(ESE)
	10:00	2.9	175(S)
	11:00	1.3	268(W)
	12:00	2.7	253(WSW)
	13:00	2.3	247(WSW)
	14:00	3.5	198(SSW)
	15:00	2.3	206(SSW)
	16:00	1.7	278(W)
	17:00	4.7	277(W)
	18:00	2.9	245(WSW)
	19:00	4.7	261(W)
	20:00	2.5	257(WSW)
	21:00	3.1	272(W)
	22:00	4.7	259(W)
	23:00	9.7	268(W)
18-Oct-22	00:00	4.7	240(WSW)
	01:00	6.9	256(WSW)
	02:00	6.1	268(W)
	03:00	7.1	252(WSW)
	04:00	9.3	276(W)
	05:00	1.7	165(SSE)
	06:00	1.1	304(NW)
	07:00	7.9	254(WSW)
	08:00	5.1	264(W)
	09:00	4.3	251(WSW)
	10:00	2.5	264(W)
	11:00	4.5	274(W)
	12:00	4.1	261(W)
	13:00	4.5	250(WSW)
	14:00	8.7	265(W)
	15:00	2.9	260(W)
	16:00	1.1	238(WSW)
	17:00	2.7	247(WSW)
	18:00	5.1	270(W)
	19:00	2.5	272(W)
	20:00	6.1	225(SW)
	21:00	1.9	178(S)
	22:00	0.0	112(ESE)
	23:00	1.7	268(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
19-Oct-22	00:00	0.9	289(WNW)
	01:00	1.7	288(WNW)
	02:00	0.0	307(NW)
	03:00	0.0	267(W)
	04:00	0.0	304(NW)
	05:00	0.0	320(NW)
	06:00	2.7	280(W)
	07:00	4.1	308(NW)
	08:00	2.3	256(WSW)
	09:00	3.7	275(W)
	10:00	2.1	263(W)
	11:00	1.1	212(SSW)
	12:00	3.1	220(SW)
	13:00	1.1	226(SW)
	14:00	1.9	302(WNW)
	15:00	1.5	240(WSW)
	16:00	1.3	262(W)
	17:00	1.9	244(WSW)
	18:00	1.3	253(WSW)
	19:00	1.1	237(WSW)
	20:00	0.9	249(WSW)
	21:00	1.1	281(W)
	22:00	0.5	294(WNW)
	23:00	0.9	278(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
20-Oct-22	00:00	1.3	269(W)
	01:00	1.7	278(W)
	02:00	1.5	318(NW)
	03:00	3.3	256(WSW)
	04:00	3.3	251(WSW)
	05:00	2.1	254(WSW)
	06:00	1.9	309(NW)
	07:00	2.3	246(WSW)
	08:00	3.5	263(W)
	09:00	3.5	275(W)
	10:00	5.7	257(WSW)
	11:00	1.5	252(WSW)
	12:00	4.5	283(WNW)
	13:00	1.1	308(NW)
	14:00	2.5	275(W)
	15:00	1.7	264(W)
	16:00	0.5	75(ENE)
	17:00	1.3	295(WNW)
	18:00	0.0	41(NE)
	19:00	1.5	240(WSW)
	20:00	2.7	270(W)
	21:00	0.0	261(W)
	22:00	0.0	290(WNW)
	23:00	1.3	259(W)
21-Oct-22	00:00	0.0	234(SW)
	01:00	0.0	257(WSW)
	02:00	0.0	277(W)
	03:00	0.0	270(W)
	04:00	1.9	253(WSW)
	05:00	1.7	287(WNW)
	06:00	0.0	254(WSW)
	07:00	0.0	267(W)
	08:00	0.9	284(WNW)
	09:00	2.7	251(WSW)
	10:00	2.7	280(W)
	11:00	1.9	339(NNW)
	12:00	0.0	87(E)
	13:00	0.9	163(SSE)
	14:00	1.3	175(S)
	15:00	3.1	320(NW)
	16:00	2.3	244(WSW)
	17:00	1.9	145(SE)
	18:00	0.9	242(WSW)
	19:00	0.5	325(NW)
	20:00	1.7	218(SW)
	21:00	2.3	264(W)
	22:00	1.3	282(WNW)
	23:00	1.7	256(WSW)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
22-Oct-22	00:00	1.7	261(W)
	01:00	1.1	272(W)
	02:00	1.9	221(SW)
	03:00	1.3	271(W)
	04:00	1.3	266(W)
	05:00	0.7	97(E)
	06:00	0.0	270(W)
	07:00	0.0	351(N)
	08:00	0.7	49(NE)
	09:00	0.0	278(W)
	10:00	0.7	213(SSW)
	11:00	0.9	295(WNW)
	12:00	0.9	230(SW)
	13:00	1.5	195(SSW)
	14:00	0.5	44(NE)
	15:00	1.7	336(NNW)
	16:00	2.5	238(WSW)
	17:00	1.7	245(WSW)
	18:00	0.9	259(W)
	19:00	1.5	262(W)
	20:00	0.7	298(WNW)
	21:00	1.5	314(NW)
	22:00	1.3	266(W)
	23:00	1.9	307(NW)
23-Oct-22	00:00	0.9	227(SW)
	01:00	0.7	275(W)
	02:00	1.7	245(WSW)
	03:00	1.7	237(WSW)
	04:00	0.9	257(WSW)
	05:00	0.9	266(W)
	06:00	0.7	247(WSW)
	07:00	0.7	9(N)
	08:00	0.7	96(E)
	09:00	1.5	250(WSW)
	10:00	1.7	270(W)
	11:00	2.7	190(S)
	12:00	0.0	262(W)
	13:00	0.0	213(SSW)
	14:00	1.3	269(W)
	15:00	1.3	292(WNW)
	16:00	2.5	308(NW)
	17:00	0.9	289(WNW)
	18:00	1.7	319(NW)
	19:00	2.9	317(NW)
	20:00	1.7	66(ENE)
	21:00	2.5	303(WNW)
	22:00	2.1	239(WSW)
	23:00	1.9	260(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
24-Oct-22	00:00	1.7	281(W)
	01:00	1.5	270(W)
	02:00	1.7	269(W)
	03:00	1.1	240(WSW)
	04:00	1.1	253(WSW)
	05:00	1.5	244(WSW)
	06:00	0.7	275(W)
	07:00	0.9	229(SW)
	08:00	1.3	309(NW)
	09:00	1.3	141(SE)
	10:00	3.1	254(WSW)
	11:00	2.5	228(SW)
	12:00	1.3	252(WSW)
	13:00	2.3	217(SW)
	14:00	1.9	259(W)
	15:00	3.7	19(NNE)
	16:00	6.7	285(WNW)
	17:00	3.1	19(NNE)
	18:00	2.3	48(NE)
	19:00	2.1	272(W)
	20:00	2.9	234(SW)
	21:00	2.7	283(WNW)
	22:00	3.1	124(SE)
	23:00	5.1	254(WSW)
25-Oct-22	00:00	2.1	296(WNW)
	01:00	4.5	295(WNW)
	02:00	1.7	295(WNW)
	03:00	1.1	248(WSW)
	04:00	1.7	286(WNW)
	05:00	1.1	274(W)
	06:00	2.3	285(WNW)
	07:00	1.5	264(W)
	08:00	1.9	254(WSW)
	09:00	3.1	312(NW)
	10:00	2.3	342(NNW)
	11:00	2.1	252(WSW)
	12:00	3.9	275(W)
	13:00	5.9	286(WNW)
	14:00	1.3	217(SW)
	15:00	1.1	270(W)
	16:00	1.9	284(WNW)
	17:00	0.9	8(N)
	18:00	1.1	272(W)
	19:00	3.1	294(WNW)
	20:00	2.1	292(WNW)
	21:00	2.5	261(W)
	22:00	4.1	259(W)
	23:00	3.9	261(W)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
26-Oct-22	00:00	1.5	249(WSW)
	01:00	1.1	304(NW)
	02:00	1.5	285(WNW)
	03:00	3.7	258(WSW)
	04:00	2.3	259(W)
	05:00	1.3	230(SW)
	06:00	1.7	236(SW)
	07:00	2.3	239(WSW)
	08:00	3.7	264(W)
	09:00	3.9	247(WSW)
	10:00	1.5	297(WNW)
	11:00	4.7	262(W)
	12:00	2.5	249(WSW)
	13:00	1.1	177(S)
	14:00	2.9	260(W)
	15:00	0.9	248(WSW)
	16:00	2.1	310(NW)
	17:00	1.3	44(NE)
	18:00	1.7	290(WNW)
	19:00	0.7	203(SSW)
	20:00	0.0	330(NNW)
	21:00	1.3	24(NNE)
	22:00	1.1	246(WSW)
	23:00	1.9	311(NW)
27-Oct-22	00:00	1.9	293(WNW)
	01:00	2.3	278(W)
	02:00	0.7	311(NW)
	03:00	1.9	284(WNW)
	04:00	1.7	279(W)
	05:00	1.1	281(W)
	06:00	0.7	264(W)
	07:00	1.3	274(W)
	08:00	1.1	295(WNW)
	09:00	1.7	66(ENE)
	10:00	2.7	255(WSW)
	11:00	2.7	239(WSW)
	12:00	1.1	283(WNW)
	13:00	0.9	287(WNW)
	14:00	0.0	138(SE)
	15:00	2.3	115(ESE)
	16:00	3.1	108(ESE)
	17:00	2.1	108(ESE)
	18:00	1.7	30(NNE)
	19:00	0.7	256(WSW)
	20:00	1.3	271(W)
	21:00	0.5	282(WNW)
	22:00	1.1	124(SE)
	23:00	0.0	154(SSE)

Wind Speed and Wind Direction

Date	Time	Wind Speed (m/s)	Wind Direction (degree)
28-Oct-22	00:00	0.9	319(NW)
	01:00	1.7	244(WSW)
	02:00	0.9	283(WNW)
	03:00	1.1	228(SW)
	04:00	1.3	223(SW)
	05:00	0.7	262(W)
	06:00	0.9	312(NW)
	07:00	0.5	296(WNW)
	08:00	1.5	218(SW)
	09:00	1.7	221(SW)
	10:00	3.1	183(S)
	11:00	2.3	262(W)
	12:00	3.1	189(S)
	13:00	1.3	265(W)
	14:00	1.9	248(WSW)
	15:00	1.5	255(WSW)
	16:00	1.9	254(WSW)
	17:00	3.1	300(WNW)
	18:00	2.5	235(SW)
	19:00	1.9	26(NNE)
	20:00	1.3	225(SW)
	21:00	0.7	22(NNE)
	22:00	0.7	106(ESE)
	23:00	0.7	264(W)
29-Oct-22	00:00	1.1	274(W)
	01:00	1.1	249(WSW)
	02:00	0.7	281(W)
	03:00	0.7	346(NNW)
	04:00	1.3	274(W)
	05:00	1.5	262(W)
	06:00	2.1	254(WSW)
	07:00	1.9	237(WSW)
	08:00	2.1	290(WNW)
	09:00	1.9	280(W)
	10:00	1.7	247(WSW)
	11:00	2.7	231(SW)
	12:00	2.7	280(W)
	13:00	1.5	233(SW)
	14:00	1.5	213(SSW)
	15:00	4.7	248(WSW)
	16:00	2.5	270(W)
	17:00	1.3	259(W)
	18:00	1.7	250(WSW)
	19:00	1.7	308(NW)
	20:00	3.7	253(WSW)
	21:00	2.3	295(WNW)
	22:00	2.5	240(WSW)
	23:00	0.7	204(SSW)

Wind Speed and Wind Direction

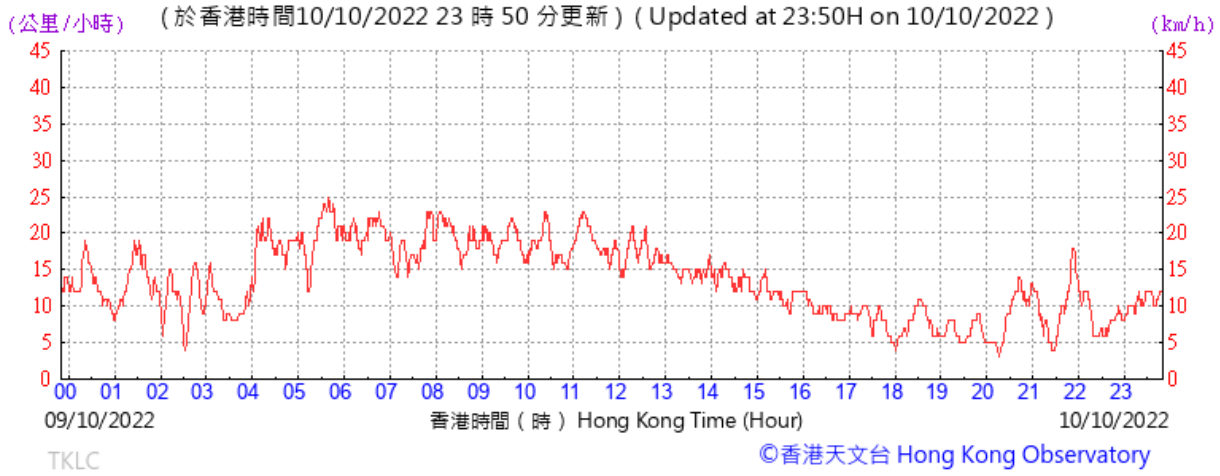
Date	Time	Wind Speed (m/s)	Wind Direction (degree)
30-Oct-22	00:00	2.3	279(W)
	01:00	2.7	254(WSW)
	02:00	2.3	262(W)
	03:00	0.9	264(W)
	04:00	3.7	228(SW)
	05:00	3.3	263(W)
	06:00	1.9	266(W)
	07:00	2.5	258(WSW)
	08:00	3.5	228(SW)
	09:00	2.5	280(W)
	10:00	4.1	235(SW)
	11:00	3.9	262(W)
	12:00	3.7	264(W)
	13:00	3.5	264(W)
	14:00	2.7	275(W)
	15:00	2.3	296(WNW)
	16:00	2.7	262(W)
	17:00	2.3	279(W)
	18:00	1.5	160(SSE)
	19:00	1.3	253(WSW)
	20:00	3.3	273(W)
	21:00	2.9	282(WNW)
	22:00	1.9	268(W)
	23:00	4.9	261(W)
31-Oct-22	00:00	7.9	276(W)
	01:00	2.5	260(W)
	02:00	2.5	238(WSW)
	03:00	2.3	265(W)
	04:00	2.3	212(SSW)
	05:00	2.1	228(SW)
	06:00	3.1	274(W)
	07:00	1.9	262(W)
	08:00	2.1	246(WSW)
	09:00	3.1	226(SW)
	10:00	3.7	273(W)
	11:00	6.1	285(WNW)
	12:00	1.5	182(S)
	13:00	5.7	286(WNW)
	14:00	4.7	207(SSW)
	15:00	2.9	270(W)
	16:00	2.7	230(SW)
	17:00	4.1	278(W)
	18:00	2.5	277(W)
	19:00	5.5	228(SW)
	20:00	0.7	328(NNW)
	21:00	6.1	261(W)
	22:00	2.7	239(WSW)
	23:00	1.9	268(W)

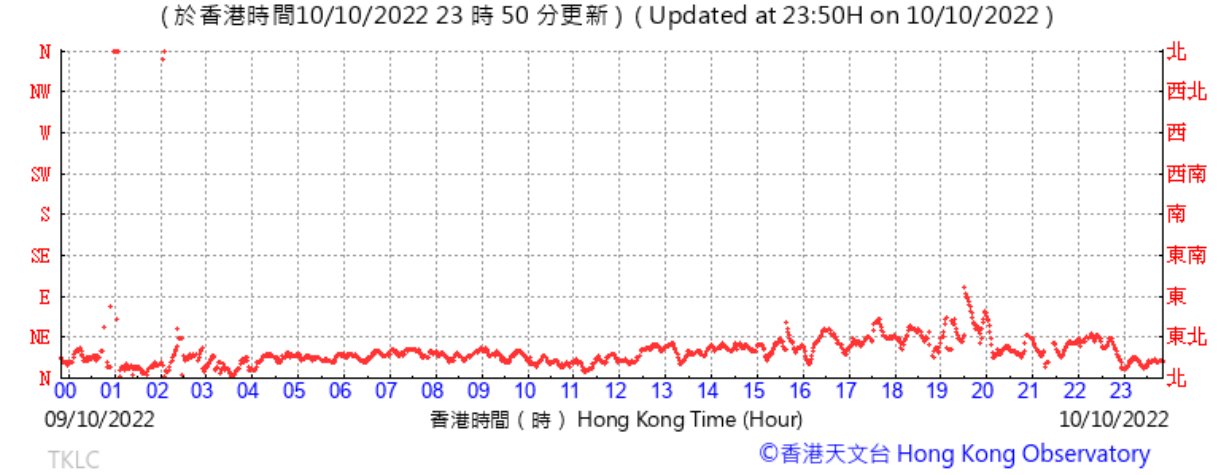
Remarks

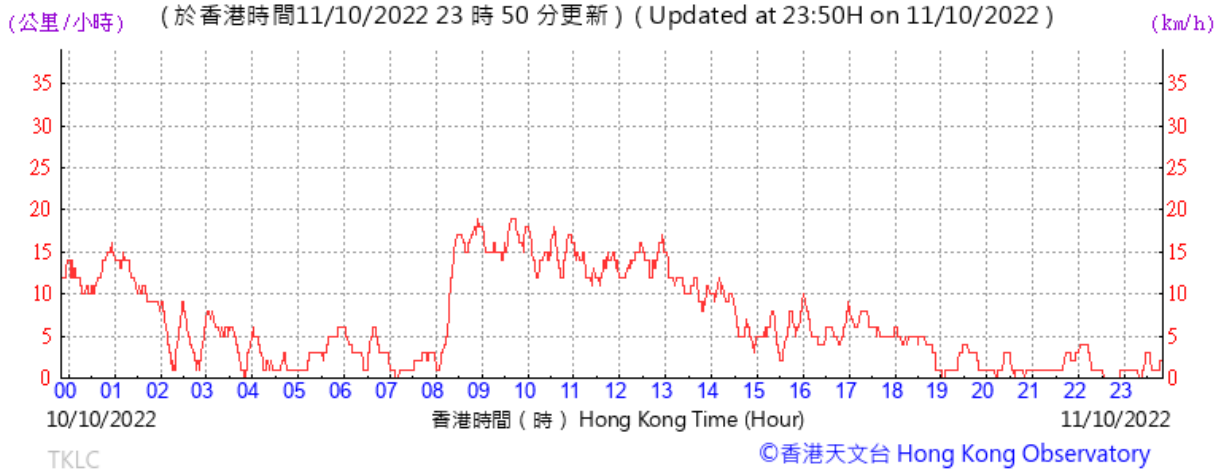
1. Part of the wind data for 10 to 13 October 2022 was unavailable since the power failure of the anemometer (Serial no. YG 21071630T0924) occurred in the mentioned period.
2. The wind data during this period in this reporting month was reference to the wind data obtained from Hong Kong Observatory, i.e. Ta Kwu Ling weather station

Wind data extraction from the Hong Kong Observatory (HKO)

1. Wind Speed and wind direction extracted from the HKO, Ta Kwu Ling Weather Station







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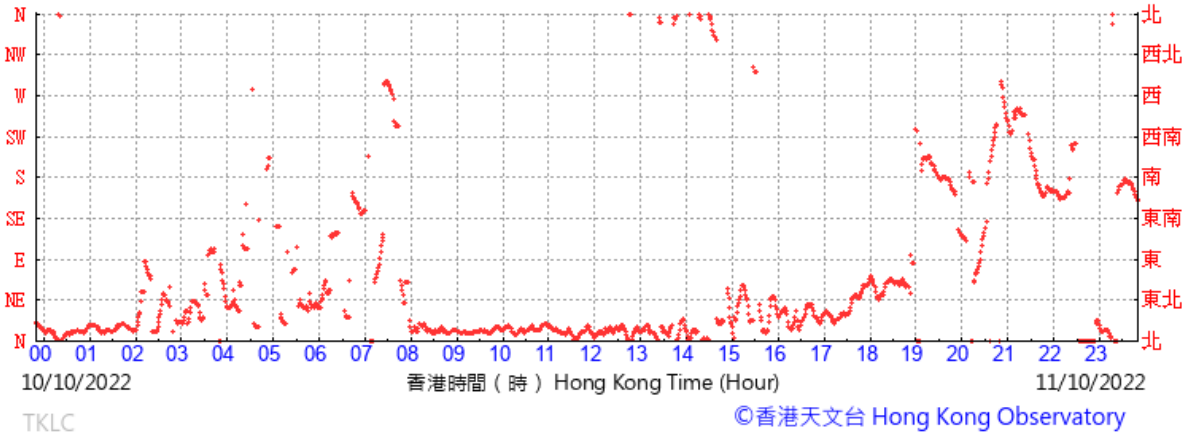

TKLC

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（公里/小時）（於香港時間12/10/2022 23 時 50 分更新）（Updated at 23:50H on 12/10/2022）（km/h）

TKLC

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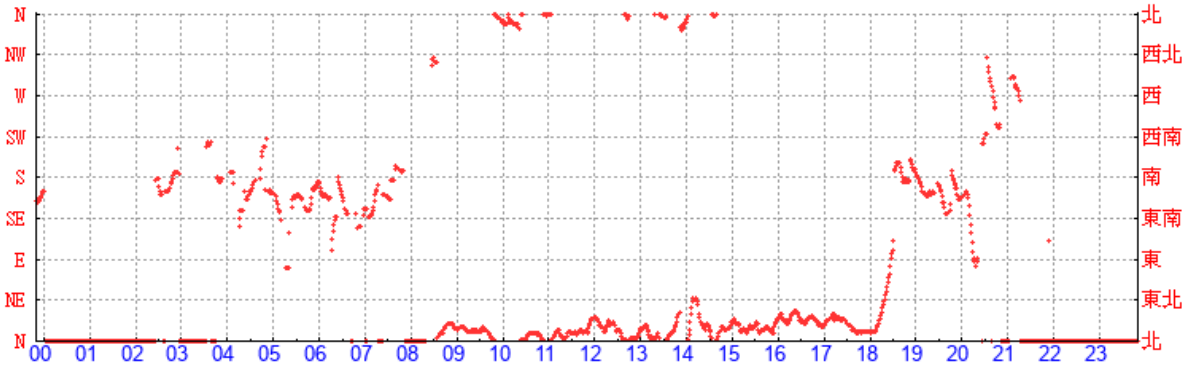
（於香港時間12/10/2022 23 時 50 分更新）（Updated at 23:50H on 12/10/2022）



TKLC

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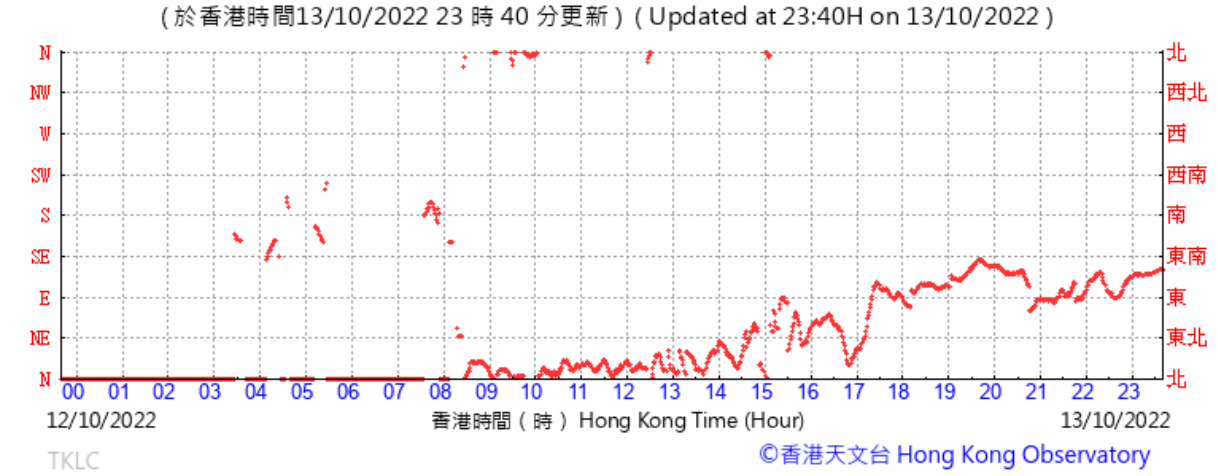


Remarks

1. Part of the wind data for 10 to 13 October 2022 was unavailable since the power failure of the anemometer (Serial no. YG 21071630T0924) occurred in the mentioned period.
2. The wind data during this period in this reporting month was reference to the wind data obtained from Hong Kong Observatory, i.e. Ta Kwu Ling weather station

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
Oct 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						01 Oct
02 Oct	03 Oct	04 Oct	05 Oct AQM - 24hr TSP	06 Oct AQM - 1hr TSP NM	07 Oct Ecological Monitoring	08 Oct
09 Oct	10 Oct	11 Oct AQM - 24hr TSP (AM2a)[1]	12 Oct AQM - 1hr TSP NM	13 Oct	14 Oct Ecological Monitoring	15 Oct
16 Oct	17 Oct AQM - 24hr TSP	18 Oct AQM - 1hr TSP NM	19 Oct	20 Oct	21 Oct Ecological Monitoring	22 Oct AQM - 24hr TSP
23 Oct	24 Oct AQM - 1hr TSP NM	25 Oct Ecological Monitoring	26 Oct	27 Oct	28 Oct AQM - 24hr TSP	29 Oct AQM - 1hr TSP
30 Oct	31 Oct					

Remarks

1. Power failure was encountered at AM1a* during the period from 11 Oct 2022 to 15 Oct 2022, so the 24hr AQM for AM1a* was temporarily suspended.

- 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
Nov 2022

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

Remarks

1. Power failure was encountered at AM1a* during the period from 11 Oct 2022 to 15 Oct 2022, so the 24hr AQM for AM1a* was temporarily suspended.

- 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.
- Water Quality Monitoring tenatively scheduled, which actual commencement date will be subject to commencement of cofferdam construction works.

Contract No. SPW 12/2021
Environmental Team (2021-2024)
for Shek Wui Effluent Polishing Plant - Main Works
Tentative Impact Monitoring Schedule
Dec 2022

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

Remarks

1. Power failure was encountered at AM1a* during the period from 11 Oct 2022 to 15 Oct 2022, so the 24hr AQM for AM1a* was temporarily suspended.

- 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.
- Water Quality Monitoring tenatively scheduled, which actual commencement date will be subject to commencement of cofferdam construction works.

Appendix 5.2

Noise Monitoring Results and Graphical Presentations

Noise Monitoring Result

Location: NM1 - G/F, Wai Loi Tsuen

Date	Time	Weather	Wind Speed	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
			(m/s)	Unit: dB(A), (30min)					
06/10/2022	13:20	Sunny	0.0	58.0	56.5	51.4	63.4	58	75
12/10/2022	10:00	Sunny	0.0	59.8	58.5	54.6	63.4	60	75
18/10/2022	8:18	Cloudy	0.0	60.0	58.7	54.7	63.4	60	75
24/10/2022	8:24	Sunny	0.0	59.2	57.7	53.6	63.4	59	75

Location: NM2 - G/F, Fu Tei Au

Date	Time	Weather	Wind Speed	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
			(m/s)	Unit: dB(A), (30-min)					
06/10/2022	14:45	Sunny	0.0	67.2	65.7	58.3	58.0	67	75
12/10/2022	9:00	Sunny	0.0	63.6	62.7	56.2	58.0	62	75
18/10/2022	14:03	Drizzle	0.0	69.1	68.2	57.9	58.0	69	75
24/10/2022	9:02	Sunny	0.0	59.5	58.7	52.4	58.0	54	75

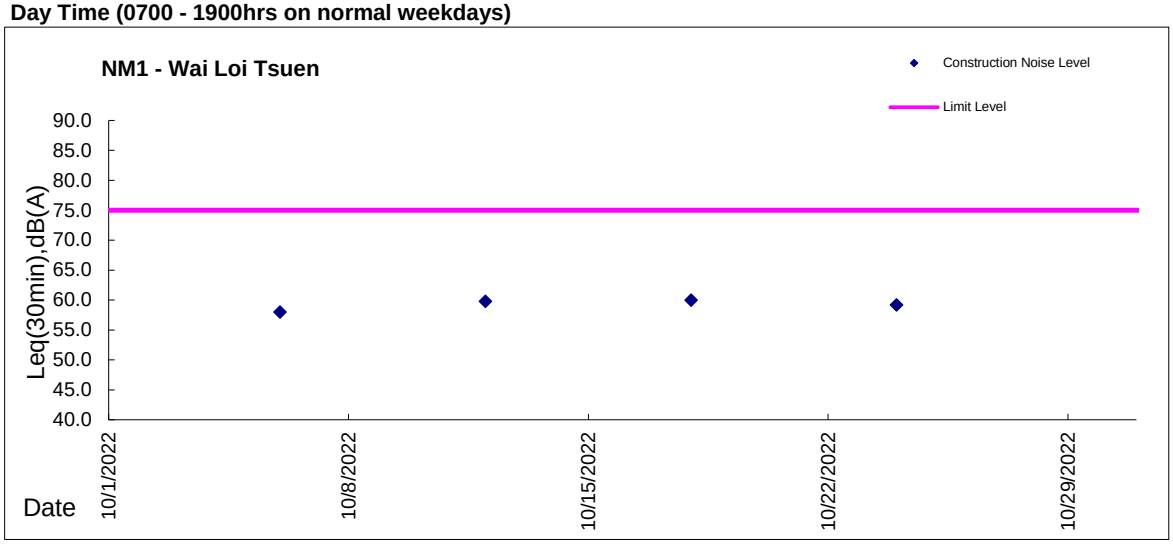
Location: NM3 - G/F, Man kok Village

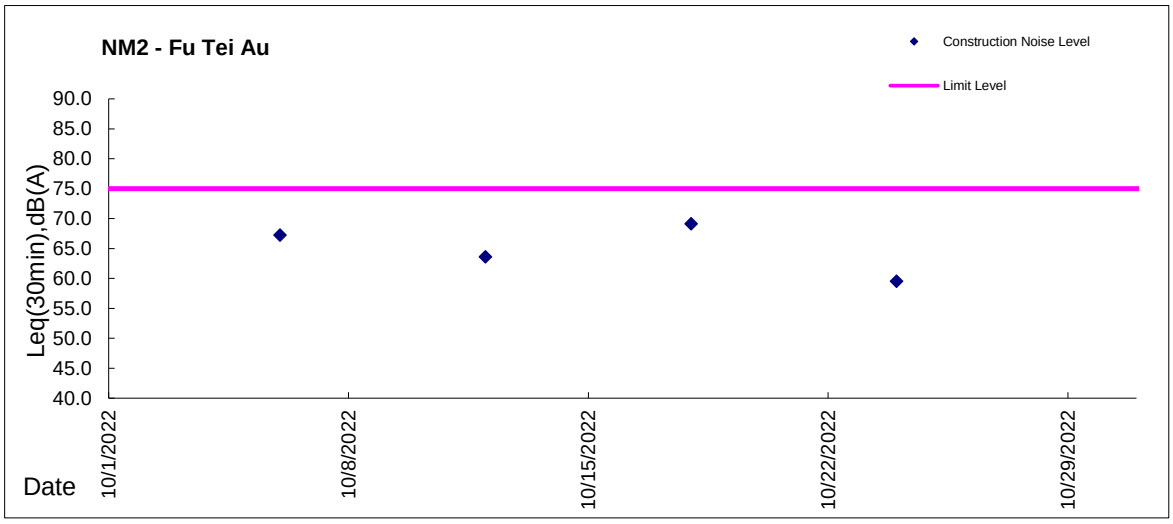
Date	Time	Weather	Wind Speed	Measurement Noise Level			Baseline Level	Construction Noise Level	Limit Level
				Leq	L10	L90	Leq	Leq	Leq
			(m/s)	Unit: dB(A), (30min)					
06/10/2022	14:00	Sunny	0.0	62.0	59.8	53.2	63.4	62	75
12/10/2022	10:45	Sunny	0.0	58.4	56.3	51.3	63.4	58	75
18/10/2022	14:56	Drizzle	0.0	60.2	56.0	48.3	63.4	60	75
24/10/2022	10:25	Sunny	0.0	58.0	56.8	47.1	63.4	58	75

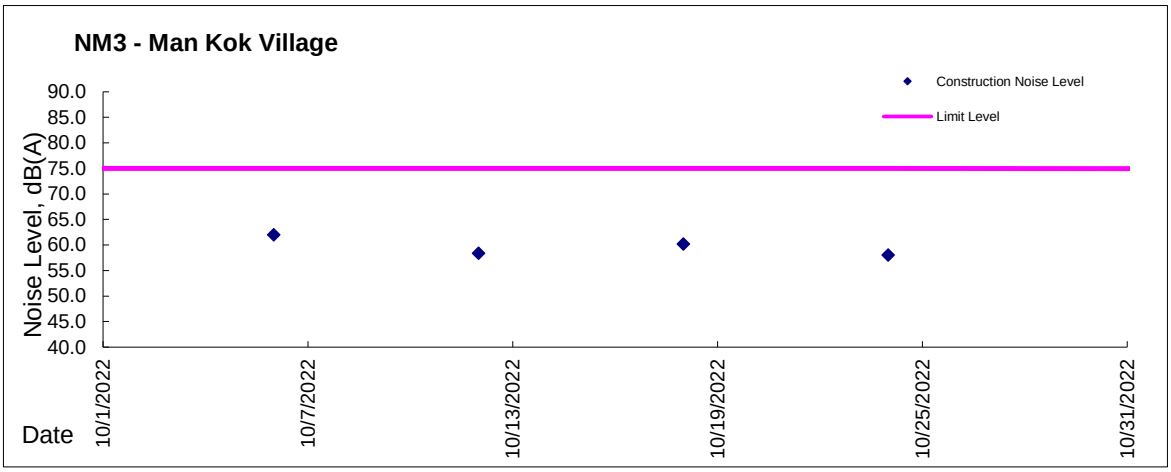
* Free field correction (Additional 3dB(A)) was made on NM1, NM2, and NM3 measurement result

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.
6-Oct-22	Sunny	8:24	16	AEROCET 831	R14332
6-Oct-22	Sunny	9:24	14		
6-Oct-22	Sunny	10:24	13		
12-Oct-22	Sunny	8:34	37		
12-Oct-22	Sunny	9:34	42		
12-Oct-22	Sunny	10:34	41		
18-Oct-22	Cloudy	8:11	40		
18-Oct-22	Cloudy	9:11	45		
18-Oct-22	Cloudy	10:11	37		
24-Oct-22	Sunny	8:21	36		
24-Oct-22	Sunny	9:21	31		
24-Oct-22	Sunny	10:21	29		
29-Oct-22	Fine	8:25	35		
29-Oct-22	Fine	9:25	38		
29-Oct-22	Fine	10:25	35		

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.
6-Oct-22	Sunny	8:29	35	AEROCET 831	W15448
6-Oct-22	Sunny	9:29	27		
6-Oct-22	Sunny	10:29	28		
12-Oct-22	Sunny	8:51	213		
12-Oct-22	Sunny	9:51	232		
12-Oct-22	Sunny	10:51	225		
18-Oct-22	Cloudy	8:48	74		
18-Oct-22	Cloudy	9:48	64		
18-Oct-22	Cloudy	10:48	53		
24-Oct-22	Sunny	8:51	32		
24-Oct-22	Sunny	9:51	28		
24-Oct-22	Sunny	10:51	25		
29-Oct-22	Fine	8:41	38		
29-Oct-22	Fine	9:41	65		
29-Oct-22	Fine	10:41	50		

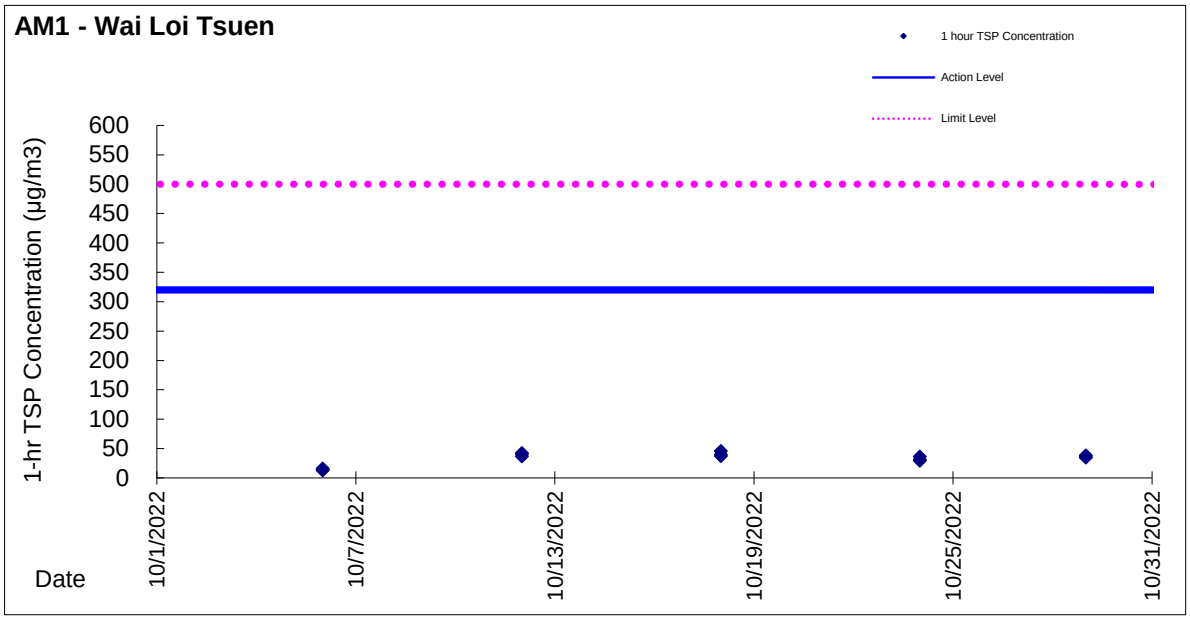
Location: AM1a* - Site boundary of the Shek Wu Hui STW (East), Roof floor of the control room of SWHSTW
Impact Monitoring Result on 24-hour TSP monitoring

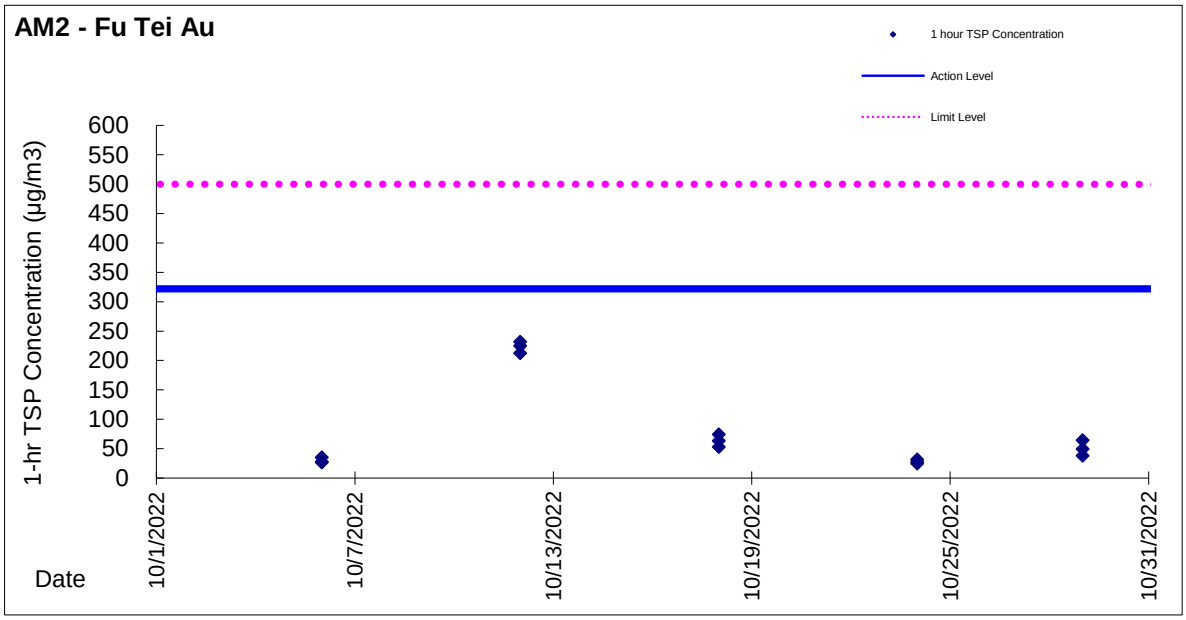
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
05-Oct-22	8:00	Sunny	1014.4	1015.0	29.1	28.9	AM1a_24hr_010532	2.7908	2.8385	27728.35	27752.35	24.00	1.19	1.19	1.19	1710	28	G3101	0401-1105
17-Oct-22	8:00	Cloudy	1008.9	1013.3	27.2	20.9	AM1a_24hr_011104	2.7953	2.9114	27776.35	27800.35	24.00	1.23	1.26	1.25	1797	65		
22-Oct-22	8:00	Sunny	1014.3	1013.1	17.3	19.4	AM1a_24hr_011105	2.785	2.8667	27800.35	27824.35	24.00	1.20	1.22	1.21	1745	47		
28-Oct-22	8:00	Sunny	1015.4	1014.2	25.5	25.7	AM1a_24hr_011107	2.8052	2.9563	27824.35	27848.35	24.00	1.24	1.24	1.24	1780	85		

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

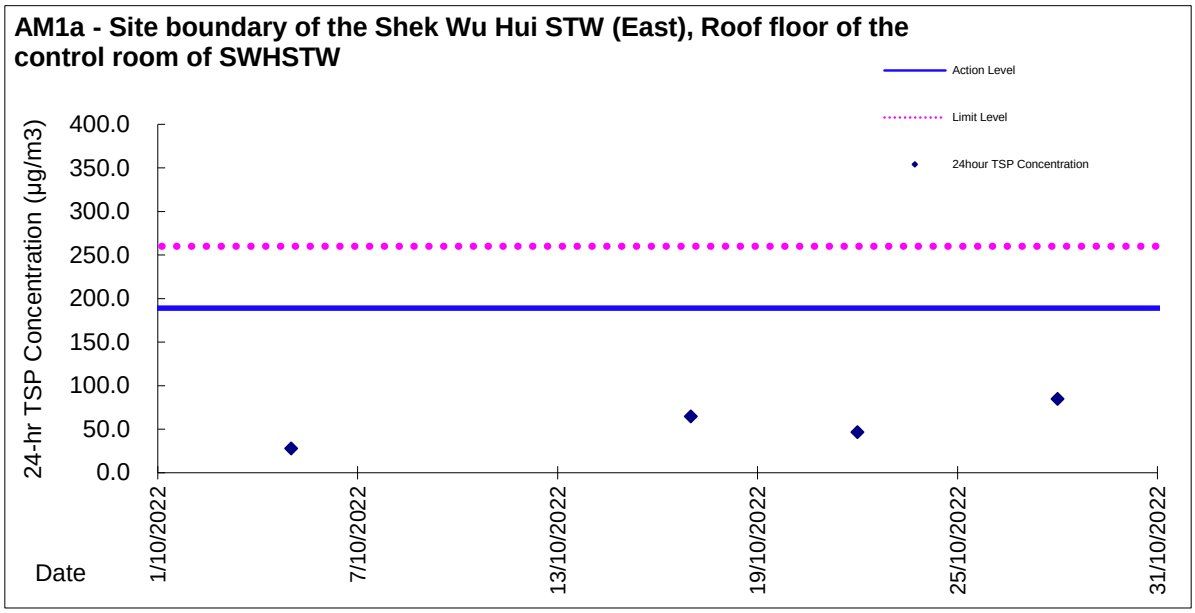
Date	Sampling Time	Weather Condition	Pressure, hPa		Temp. , °C		Filter paper no.	Filter Weight, g		Elapse Time, hr		Sampling Time, hr	Flow Rate, m^3/min			Total Volume, m^3	TSP Level, ug/m^3	Model No.	Serial No.
			Initial	Final	Initial	Final		Initial	Final	Initial	Final		Initial, Qsi	Final, Qsf	Average				
05-Oct-22	8:00	Sunny	1014.4	1015	29.1	28.9	AM2a_24hr_010534	2.8171	2.9044	18757.93	18781.93	24.00	1.25	1.23	1.24	1789	49	G3101	1096-2305
11-Oct-22	8:00	Sunny	1016.8	1015.4	24.1	25.2	AM2a_24hr_010530	2.7863	2.9808	18781.93	18805.93	24.00	1.53	1.53	1.53	2208	88		
17-Oct-22	8:00	Cloudy	1008.9	1013.3	27.2	20.9	AM2a_24hr_011102	2.7773	3.0578	18805.93	18829.93	24.00	1.48	1.49	1.49	2140	131		
22-Oct-22	8:00	Sunny	1014.3	1013.1	17.3	19.4	AM2a_24hr_011106	2.7865	2.9479	18829.93	18853.93	24.00	1.50	1.49	1.50	2154	75		
28-Oct-22	8:00	Sunny	1015.4	1014.2	25.5	25.7	AM2a_24hr_011108	2.7911	2.9726	18853.93	18877.93	24.00	1.44	1.44	1.44	2074	88		

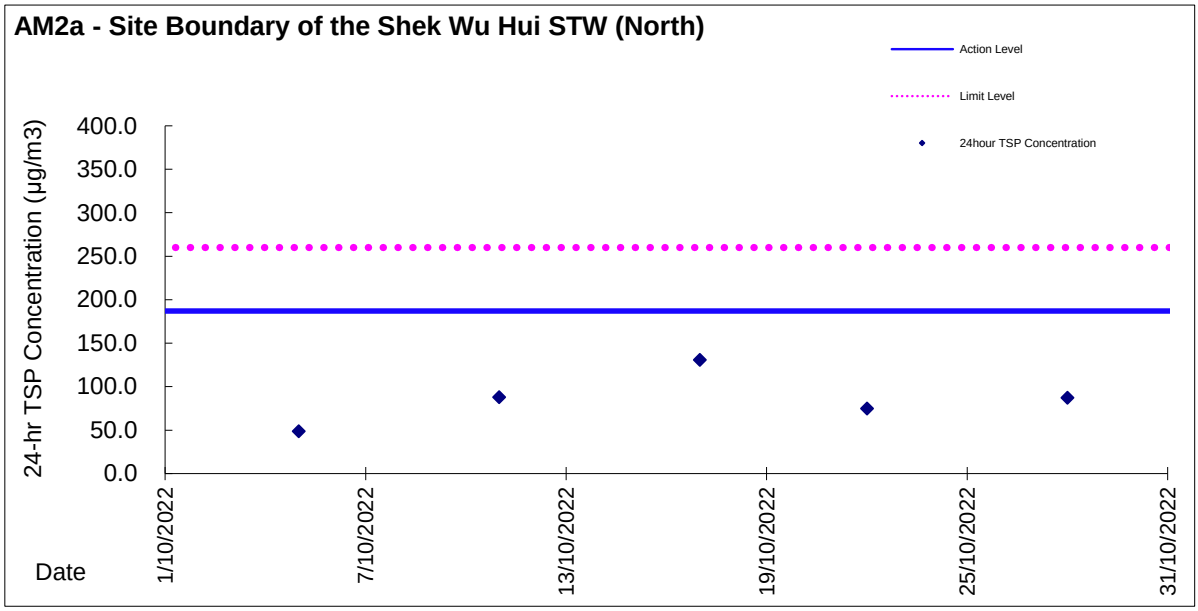
Graphic Presentation of TSP Result





Graphic Presentation of TSP Result





Appendix 5.4

Details of Ecological Monitoring Results in the Reporting Month

5.4. ECOLOGICAL MONITORING RESULTS

5.4.1. For this reporting month, the numbers of species and individuals recorded were provided in **Table 1** and the abundance of representative species were shown in **Table 2.**

Table 1 Total Bird Species and Abundance in the Reporting Month

	Number of Species	Abundance
All Avifauna	44	1246
Waterbirds	18	225

Table 2 Abundance of Representative Waterbirds in the Reporting Month

Species Name	Common Name	Chinese Name	Abundance
Egretta garzetta	Little Egret	小白鷺	38
Ardea cinerea	Grey Heron	蒼鷺	21
Ardeola bacchus	Chinese Pond Heron	池鷺	32
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	4
Ardea alba	Great Egret	大白鷺	16
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	6
		Total	**117**

Analysis

5.4.2. The result of student t-tests for all waterbirds and representative waterbirds are compiled in **Table 3 and 4** respectively. Further details are provided in **Appendix 5.4b.**

Table 3 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	-0.053	✓	✓
	Seasonal	-0.785	✓	✓

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 4 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	0.078	✔	✔	0.078	✔	✔	✔
Grey Heron	-1.024	✔	✔	-2.205	✔	✔	✔
Chinese Pond Heron	-0.726	✔	✔	0.264	✔	✔	✔
Great Cormorant	1.216	✔	✔	-3.996	X	✔	✔
Great Egret	-1.298	✔	✔	0.000	✔	✔	✔
Eastern Cattle Egret	1.841	✔	✔	-1.227	✔	✔	✔

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.

5.4.3. No Action Level and Limit Level was triggered for ecological monitoring in the reporting month.

5.4.4. Site observation in the reporting month shows that construction activities are similar to previous months. The photos are provided in **Appendix 5.6**.

5.4.5. In recent months, it is found that there are different construction sites and human activities such as fishing around the project site. These construction and human activities may affect activities of the waterbirds. Although, there is no significant impact reduction in number of waterbirds, it is recommended that construction site should continue keeping the good site practice to minimize disturbance caused to waterbirds.

5.4.6. The monitoring work will continue next month to evaluate any construction impact on waterbirds.

Observations

5.4.7. Waterbird behaviour observed during ecological monitoring are listed below:

- Flying
- Foraging
- Soaring
- Resting

5.4.8. The anthropogenic activities observed during ecological monitoring are listed in **Table 5.**

5.4.9.

Table 5 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 Fishing Construction activities such as Excavation and breaking works
T2 (PC3, PC4)	Construction activities such as generator & wielding works, Scaffolding, sedimentation tank, Excavation and crane	Human Activities such as Fishing and Landscape Planting Construction activities such as Sheet-piling, generator & wielding 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 Fishing Construction activities such as Excavation Sheet-piling, generator & wielding works, Scaffolding

Appendix 5.5

Ecological Monitoring Results and Analysis

Summary data of the Ecological Monitoring

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Nycticorax nycticorax	Black-crowned Night Heron	夜鷺	X	1	+
Ardeola bacchus	Chinese Pond Heron	池鷺	X	49	+++++
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	X	12	++
Ardea cinerea	Grey Heron	蒼鷺	X	37	+++++
Ardea alba	Great Egret	大白鷺	X	25	++++
Egretta garzetta	Little Egret	小白鷺	X	77	+++++
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	X	12	++
Milvus migrans	Black Kite	黑鳶	X	2	+
Amaurornis phoenicurus	White-breasted Waterhen	白胸苦惡鳥	X	3	+
Himantopus himantopus	Black-winged Stilt	黑翅長腳鷸	X	2	+
Tringa stagnatilis	Marsh Sandpiper	澤鷸	X	1	+
Tringa nebularia	Common Greenshank	青腳鷸	X	1	+
Tringa ochropus	Green Sandpiper	白腰草鷸	X	1	+
Actitis hypoleucos	Common Sandpiper	磯鷸	X	20	+++
Spilopelia chinensis	Spotted Dove	珠頸斑鳩		49	+++++
Centropus sinensis	Greater Coucal	褐翅鴉鵑		2	+
Halcyon smyrnensis	White-throated Kingfisher	白胸翡翠	X	3	+
Alcedo atthis	Common Kingfisher	普通翠鳥	X	1	+
Ceryle rudis	Pied Kingfisher	斑魚狗	X	0	+

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Lanius schach	Long-tailed Shrike	棕背伯勞		1	+
Urocissa erythroryncha	Red-billed Blue Magpie	紅嘴藍鵲		3	+
Pica pica	Eurasian Magpie	喜鵲		2	+
Corvus torquatus	Collared Crow	白頸鴉	X	4	+
Parus cinereus	Cinereous Tit	蒼背山雀		9	++
Pycnonotus jocosus	Red-whiskered Bulbul	紅耳鵯		91	+++++
Pycnonotus sinensis	Chinese Bulbul	白頭鵯		26	++++
Hirundo rustica	Barn Swallow	家燕		4	+
Phylloscopus fuscatus	Dusky Warbler	褐柳鶯		1	+
Phylloscopus proregulus	Pallas's Leaf Warbler	黃腰柳鶯		0	+
Phylloscopus inornatus	Yellow-browed Warbler	黃眉柳鶯		9	+
Prinia flaviventris	Yellow-bellied Prinia	黃腹鷦鶯		7	+
Prinia inornata	Plain Prinia	純色鷦鶯		6	+
Orthotomus sutorius	Common Tailorbird	長尾縫葉鶯		34	+++++
Garrulax perspicillatus	Masked Laughingthrush	黑臉噪鶥		54	+++++
Zosterops japonicus	Japanese White-eye	暗綠繡眼鳥		38	+++++
Acridotheres cristatellus	Crested Myna	八哥		463	+++++
Gracupica nigricollis	Black-collared Starling	黑領椋鳥		84	+++++
Copsychus saularis	Oriental Magpie Robin	鵲鴝		11	++

Scientific Names	Common Names	Chinese Names	Waterbird	Point Count Abundance	Transect Count Abundance
Myophonus caeruleus	Blue Whistling Thrush	紫嘯鶇		1	+
Phoenicurus auroreus	Daurian Redstart	北紅尾鴝		3	+
Passer montanus	Eurasian Tree Sparrow	樹麻雀		51	+++++
Lonchura punctulata	Scaly-breasted Munia	斑文鳥		19	++
Motacilla tschutschensis	Eastern Yellow Wagtail	東黃鶺鴒		1	+
Motacilla alba	White Wagtail	白鶺鴒		26	++++

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	7/10/2022	10:30	H	126	230	26
		12:30	L	104		21
2	14/10/2022	14:00	H	133	344	28
		16:15	L	211		28
3	21/10/2022	9:00	H	99	244	24
		11:00	L	145		26
4	26/10/2022	13:00	H	123	428	26
		15:30	L	305		28

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	7/10/2022	10:30	H	33	57
		12:30	L	24	
2	14/10/2022	14:00	H	25	66
		16:15	L	41	
3	21/10/2022	9:00	H	26	48
		11:00	L	22	
4	26/10/2022	13:00	H	28	80
		15:30	L	52	

Remarks: H: High Tide; L: Low Tide

T-Test Analysis for All Waterbirds

Baseline Data

Monthly Average Abundance (October)	51.00
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	-0.053	✓	✓
	Seasonal	-0.785	✓	✓

Remarks:

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

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

Abundance of Representative Waterbirds from Point Count										
Representative Species			**Recorded Abundance**						**Baseline Data**	
			Week 1	**Week2**	**Week 3**	**Week 4**	**Total**	**Avg.**	**Avg (Oct)**	**Avg (Winter)**
Species Name	**Common Name**	**Chinese Name**	**7/10/2022**	**14/10/2022**	**21/10/2022**	**26/10/2022**				
Egretta garzetta	Little Egret	小白鷺	20	15	14	28	77	19	15	15
Ardea cinerea	Grey Heron	蒼鷺	8	12	5	12	37	9	10	13
Ardeola bacchus	Chinese Pond Heron	池鷺	15	13	8	13	49	12	12	9
Phalacrocorax carbo	Great Cormorant	普通鸕鷀	0	4	3	5	12	3	1	7
Ardea alba	Great Egret	大白鷺	5	5	8	7	25	6	7	5
Bubulcus coromandus	Eastern Cattle Egret	牛背鷺	2	6	0	4	12	3	0	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%	99%	Seasonal	95%	99%	
Little Egret	0.078	✓	✓	0.078	✓	✓	✓
Grey Heron	-1.024	✓	✓	-2.205	✓	✓	✓
Chinese Pond Heron	-0.726	✓	✓	0.264	✓	✓	✓
Great Cormorant	1.216	✓	✓	-3.996	X	✓	✓
Great Egret	-1.298	✓	✓	0.000	✓	✓	✓
Eastern Cattle Egret	1.841	✓	✓	-1.227	✓	✓	✓

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 5.6

Photo Record of Ecological Monitoring

Conditions of Rivers

Sheung Yue River – Survey Point 7 (Taken on 14 Oct 2022)	**Shek Sheung River – Survey Point 6 (Taken on 14 Oct 2022)**
Shek Sheung River - Survey Point 5 (Taken on 26 Oct 2022)	**Ng Tung River - Survey Point 4 (Taken on 21 Oct 2022)**

Human Activities & Site Conditions

Construction Activities (Ng Tung River) **(Project-related, taken on 7 Oct 2022)**	**Construction Activities (Shek Sheung River)** **(Project-related, taken on 14 Oct 2022)**
Construction Activities (Sheung Yue River) **(Non-project-related, taken on 14 Oct 2022)**	**Construction Activities (Ng Tung River)** **(Non-Project-related, taken on 21 Oct 2022)**

Human Activities (Sheung Yue River) **(Non-project-related, taken on 21 Oct 2022)**	**Human Activities (Shek Sheung River)** **(Non- project-related, taken on 7 Oct 2022)**	**Human Activities (Shek Sheung River)(Non-project-related, taken on 14 Oct 2022)**
Construction Activities (Ng Tung River) **(Non-Project-related, taken on 26 Oct 2022)**	**Construction Activities (Sheung Yue River)** **(Non-project-related, taken on 21 Oct 2022)**	**Construction Activities (Ng Tung River)** **(Non-Project-related, taken on 14 Oct 2022)**

Waterbird Species

Eastern Cattle Egret	**Great Egret**	**Collared Crow**

Appendix 5.7

Monthly Summary Waste Flow Table

Name of Department: DSD

Contract No. DC/2018/06

Monthly Summary Waste Flow Table for 2022

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	1.104	0.000	0.000	0.000	1.104	0.094	0.000	0.000	0.000	0.000	0.202
Feb	0.549	0.000	0.000	0.000	0.549	0.134	2.370	0.000	0.000	0.000	0.068
Mar	0.398	0.000	0.000	0.000	0.398	0.756	0.000	0.000	0.000	0.000	0.094
Apr	1.624	0.000	0.000	0.000	1.624	0.133	0.000	0.000	0.000	0.000	0.088
May	0.362	0.000	0.000	0.000	0.362	0.046	0.000	0.000	0.000	0.000	0.090
Jun	0.397	0.000	0.000	0.000	0.397	0.069	0.000	0.010	0.000	0.000	0.077
Sub-total	4.433	0.000	0.000	0.000	4.433	1.233	2.370	0.010	0.000	0.000	0.620
Jul	1.635	0.000	0.000	0.000	1.635	0.104	0.003	0.000	0.001	0.000	0.122
Aug	1.409	0.000	0.000	0.000	1.409	0.487	0.000	0.000	0.005	0.000	0.160
Sep	1.032	0.000	0.000	0.000	1.032	0.429	0.004	0.000	0.010	0.000	0.229
Oct	0.789	0.000	0.000	0.000	0.789	0.320	0.003	0.000	0.008	0.000	0.133
Nov											
Dec											
Total	9.298	0.000	0.000	0.000	9.298	2.574	2.379	0.010	0.023	0.000	1.264

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 slurry and bentonite are disposed at Tseung Kwun O 137.
7. The non-inert C&D wastes are disposed at NENT.

Name of Department: DSD

Contract No. DC/2018/07

Monthly Summary Waste Flow Table for 2022

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	4.980	0.000	0.000	0.813	4.167	0.000	15.45	0.000	0.004	0.000	0.012
Feb	3.400	0.000	0.000	0.639	2.761	0.038	5.71	0.000	0.000	0.000	0.010
Mar	3.050	0.000	0.000	0.073	2.977	0.000	0.00	0.000	0.000	0.000	0.019
Apr	2.037	0.000	0.000	0.112	1.925	0.108	0.00	0.000	0.000	0.000	0.016
May	1.076	0.000	0.000	0.000	1.076	0.062	2.14	0.000	0.000	0.000	0.016
Jun	2.515	0.000	0.000	0.034	2.481	0.036	0.00	0.010	0.001	0.000	0.020
Sub-total	17.057	0.000	0.000	1.671	15.386	0.244	23.30	0.010	0.005	0.000	0.093
Jul	3.222	0.000	0.000	0.000	3.222	0.000	0.00	0.000	0.005	0.000	0.031
Aug	4.151	0.000	0.000	0.000	4.151	0.115	0.00	0.000	0.003	0.000	0.026
Sep	2.735	0.000	0.000	0.000	2.735	0.000	0.00	0.000	0.007	0.000	0.042
Oct	9.779	0.000	0.000	1.937	7.842	0.000	0.00	0.000	0.006	0.000	0.029
Nov											
Dec											
Total	36.943	0.000	0.000	3.608	33.335	0.359	23.30	0.010	0.026	0.000	0.220

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 2022 (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	176.71 T	0	0	0	176.71 T	0	0	0.177	0.008	0	2.7T
Feb	83.58T	0	0	0	83.58T	0	0	0.132	0.003	0	0
Mar	0	0	0	0	0	0	0	0	0	0	3.06T
Apr	0	0	0	0	0	0	0	0.13	0.012	0	0
May	4029.56T	0	0	0	4029.56T	0	0	0	0	0	1.64T
June	5565.13T	0	0	0	5565.13T	0	0	0	0	0	1.19T
Sub-total	9854.98 T	0	0	0	9854.98 T	0	0	0.439	0.023	0	8.59
July	5374.59T	0	0	0	5374.59T	0	0	0	0	0	1.71T
Aug	149.1T	0	0	0	149.1T	0	0	0	0	0	0
Sept	43.17T	0	0	0	43.17T	0	0	0	0	0	3.61
Oct	57.6T	0	0	0	57.6T	0	0	0	0	0	0
Nov											
Dec											
Total	15479.44T	0	0	0	15479.44T	0	0	0.439	0.023	0	13.91T

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

Monthly Summary Waste Flow Table for 2022 (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	0	0	0	0	0	0	0	0	0	0	0
Feb	0	0	0	0	0	0	0	0	0	0	0
Mar	0	0	0	0	0	0	0	0	0	0	0
Apr	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
Sub-total	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0	0	0
Oct	0	0	0	0	0	0	0	0	0	0	6.84
Nov											
Dec											
Total	0	0	0	0	0	0	0	0	0	0	6.84

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: October 2022

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 on 22 April 2022 as confirmed with EPD.

Appendix 9.1

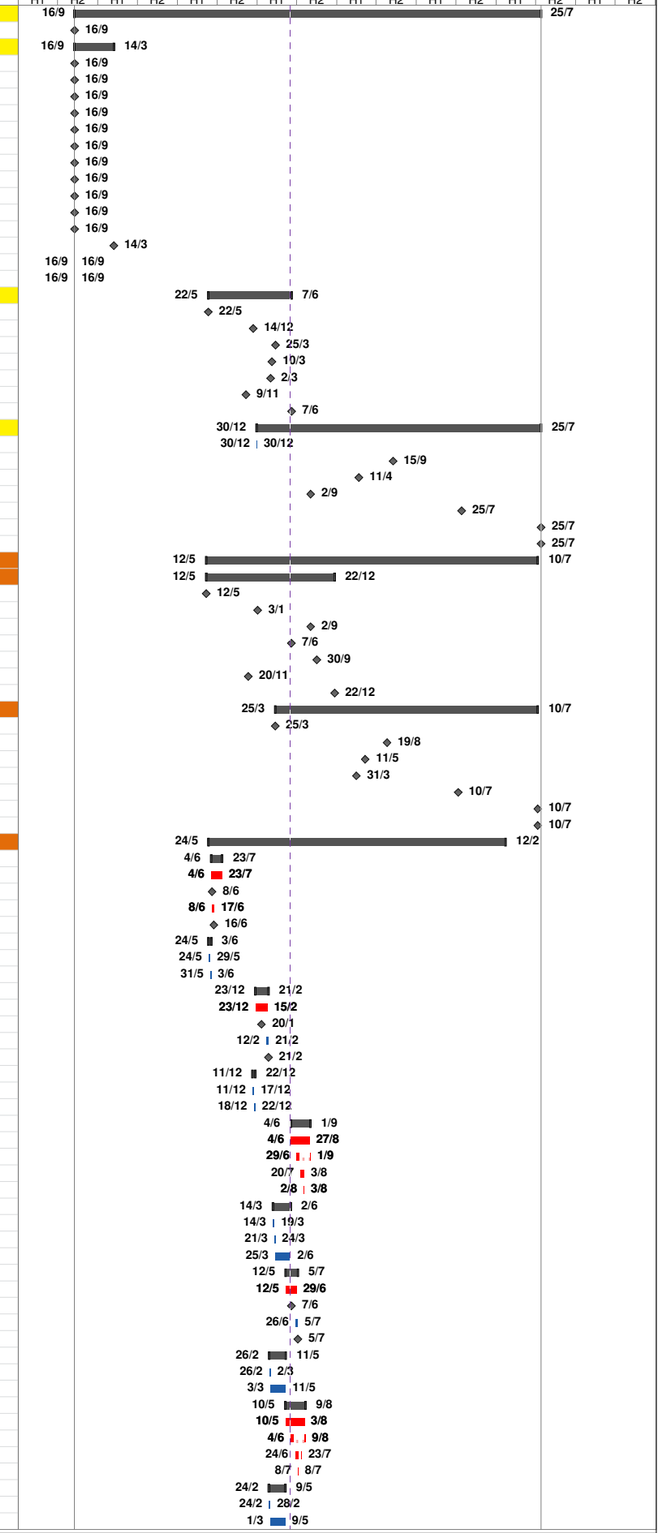
Construction Programme of Individual Contracts

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: 30/09/2022)

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 Allowan
1	**CD-00000**		**Contract Dates**			**2140 days**	**Mon 16/9/19**	**Fri 25/7/25**	**Mon 16/9/19**	**NA**			**0%**	
2	CD-01000		Starting Date			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19		4,5FS+181 days,6,7,8,9,11,12,1	100%	
3	**CAD-00000**		**Access Date (cal. day)**			**180 days**	**Mon 16/9/19**	**Sat 14/3/20**	**Mon 16/9/19**	**Sat 14/3/20**			**100%**	
4	CAD-01000		Portion A-1			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
5	CAD-02000		Portion A-2			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2FS+181 days		100%	
6	CAD-03000		Portion C-1A			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
7	CAD-04000		Portion C-1B			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
8	CAD-05000		Portion C-2A			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
9	CAD-06000		Portion C-2B			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
10	CAD-07000		Portion C-2C			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
11	CAD-08000		Portion C-2D			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
12	CAD-09000		Portion C-3			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
13	CAD-10000		Portion C-4			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
14	CAD-11000		Portion C-5			0 days	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
15	CAD-12000		Portion C-6			0 days	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	Sat 14/3/20	2FS+181 days	523	100%	
16	CAD-13000		Works Area WA1			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
17	CAD-14000		Works Area WA2-A			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2		100%	
18	**CKD-00000**		**Key Date (cal. day)**			**382 days**	**Sat 22/5/21**	**Tue 7/6/22**	**Sat 22/5/21**	**NA**			**0%**	
19	CKD-01000		KD1A (613.5days after starting date)			0 days	Sat 22/5/21	Sat 22/5/21	Sat 22/5/21	Sat 22/5/21	2FS+614.5 days,36FF	58	100%	
20	CKD-02000		KD2A (820 days after starting date)			0 days	Tue 14/12/21	Tue 14/12/21	Tue 14/12/21	Tue 14/12/21	2FS+821 days,37FF	66	100%	
21	CKD-03000		KD3A (921 days after starting date)			0 days	Fri 25/3/22	Fri 25/3/22	NA	NA	2FS+922 days,38FF	74	0%	
22	CKD-04000		KD3B (906 days after starting date)			0 days	Thu 10/3/22	Thu 10/3/22	Thu 10/3/22	Thu 10/3/22	2FS+907 days,39FF	83	100%	
23	CKD-05000		KD3C (898 days after starting date)			0 days	Wed 2/3/22	Wed 2/3/22	NA	NA	2FS+899 days,40FF	91	0%	
24	CKD-06000		KD3D (785 days after starting date)			0 days	Tue 9/11/21	Tue 9/11/21	Tue 9/11/21	Tue 9/11/21	2FS+786 days,41FF	99	100%	
25	CKD-07000		KD3E (994.5 days after starting date)			0 days	Tue 7/6/22	Tue 7/6/22	NA	NA	2FS+995.5 days,42FF	106	0%	
26	**CCD-00000**		**Completion Date (cal. day)**			**1304 days**	**Thu 30/12/21**	**Fri 25/7/25**	**Thu 30/12/21**	**NA**			**0%**	
27	CCD-01000		Section 1 of Works (836 days after starting date)			1 day	Thu 30/12/21	Thu 30/12/21	Thu 30/12/21	Thu 30/12/21	2FS+837 days,44FF	114	100%	
28	CCD-02000		Section 2 of Works (1,460 days after starting date)			0 days	Fri 15/9/23	Fri 15/9/23	NA	NA	2FS+1461 days,45FF	123	0%	
29	CCD-03000		Section 3 of Works (1,302.5 days after starting date)			0 days	Tue 11/4/23	Tue 11/4/23	NA	NA	2FS+1303.5 days,46FF	132	0%	
30	CCD-04000		Section 4 of Works (1,081.5 days after starting date)			0 days	Fri 2/9/22	Fri 2/9/22	NA	NA	2FS+1082.5 days,47FF	141	0%	
31	CCD-05000		Section 5 of Works (1,773.5 days after starting date)			0 days	Thu 25/7/24	Thu 25/7/24	NA	NA	2FS+1764.5 days,48FF	32,33,150	0%	
32	CCD-06000		Defect Liability Period			365 days	Fri 26/7/24	Fri 25/7/25	NA	NA	31		0%	
33	CCD-07000		Soft Landscape Establishment Works			365 days	Fri 26/7/24	Fri 25/7/25	NA	NA	31		0%	
34	**PD-00000**	*	**Planned Completion - Key Date (cal. day)**			**1521 days**	**Wed 12/5/21**	**Thu 10/7/25**	**Wed 12/5/21**	**NA**			**26%**	
35	**PKD-00000**	*	**Planned Completion - Key Dates**			**589 days**	**Wed 12/5/21**	**Thu 22/12/22**	**Wed 12/5/21**	**NA**			**0%**	
36	PKD-01000	KD1A	KD1A			0 days	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	Wed 12/5/21	284FF	19FF	100%	
37	PKD-02000	KD2A	KD2A			0 days	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	Mon 3/1/22	622FF	20FF	100%	
38	PKD-03000	KD3A	KD3A			0 days	Fri 2/9/22	Fri 2/9/22	NA	NA	314FF	21FF	0%	
39	PKD-04000	KD3B	KD3B			0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	345FF	22FF	100%	
40	PKD-05000	KD3C	KD3C			0 days	Fri 30/9/22	Fri 30/9/22	NA	NA	367FF	23FF	0%	
41	PKD-06000	KD3D	KD3D			0 days	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21	Sat 20/11/21	399FF	24FF	100%	
42	PKD-07000	KD3E	KD3E			0 days	Thu 22/12/22	Thu 22/12/22	NA	NA	414FF,422FF,430FF,438FF,473FF,4	25FF	0%	
43	**PCD-00000**	*	**Planned Completion - Section of the Works (cal. day)**			**1204 days**	**Fri 25/3/22**	**Thu 10/7/25**	**Fri 25/3/22**	**NA**			**0%**	
44	PCD-01000	SW1	Section 1 of Works			0 days	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	Fri 25/3/22	520FF,551FF,552FF,553FF,554FF,5	27FF	100%	
45	PCD-02000	SW2	Section 2 of Works			0 days	Sat 19/8/23	Sat 19/8/23	NA	NA	643FF,655FF	28FF	0%	
46	PCD-03000	SW3	Section 3 of Works			0 days	Thu 11/5/23	Thu 11/5/23	NA	NA	205FF,369FF,383FF,401FF,423FF,4	588,29FF	0%	
47	PCD-04000	SW4	Section 4 of Works			0 days	Fri 31/3/23	Fri 31/3/23	NA	NA	521FF,324FF,350FF,370FF,384FF,4	30FF	0%	
48	PCD-05000	SW5	Section 5 of Works			0 days	Wed 10/7/24	Wed 10/7/24	NA	NA	291FF,325FF,351FF,371FF,385FF,4	49,50,31FF	0%	
49	PCD-06000	DLP	Defect Liability Period			365 days	Thu 11/7/24	Thu 10/7/25	NA	NA	48,589FF		0%	
50	PCD-07000		Soft Landscape Establishment Works			365 days	Thu 11/7/24	Thu 10/7/25	NA	NA	48,581,582,583		0%	
51	**DE-00000**		**Delaying Events Other than Change of Works Information to be considered**			**1102.8 days**	**Mon 24/5/21**	**Wed 12/2/25**	**Mon 24/5/21**	**NA**			**37%**	
52	**IWKD1A-01000**		**Inclement Weather to KD1A**			**41 days**	**Fri 4/6/21**	**Fri 23/7/21**	**Fri 4/6/21**	**NA**			**59%**	
53	IWKD1A-01010		Delay and Disruption of Works before September 2022	(437),		41 days	Fri 4/6/21	Fri 23/7/21	Fri 4/6/21	NA	59	54	51%	
54	IWKD1A-01020		Delay and Disruption of Works for the month of September 2022			0 days	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	Tue 8/6/21	53	55	100%	
55	IWKD1A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			10 days	Tue 8/6/21	Thu 17/6/21	Tue 8/6/21	NA	54	56	90%	
56	IWKD1A-01040	KD1A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			0 days	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21	Wed 16/6/21	55		100%	
57	**OEKD1A-01000**		**Other Events affected to KD1A**			**10 days**	**Mon 24/5/21**	**Thu 3/6/21**	**Mon 24/5/21**	**Thu 3/6/21**			**100%**	
58	OEKD1A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Mon 24/5/21	Sat 29/5/21	Mon 24/5/21	Sat 29/5/21	19	59	100%	
59	OEKD1A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Mon 31/5/21	Thu 3/6/21	Mon 31/5/21	Thu 3/6/21	58	53	100%	
60	**IWKD2A-01000**		**Inclement Weather to KD2A**			**46 days**	**Thu 23/12/21**	**Mon 21/2/22**	**Thu 23/12/21**	**NA**			**61%**	
61	IWKD2A-01010		Delay and Disruption of Works before September 2022	(437),		41 days	Thu 23/12/21	Tue 15/2/22	Thu 23/12/21	NA	67	62	51%	
62	IWKD2A-01020		Delay and Disruption of Works for the month of September 2022			0 days	Thu 20/1/22	Thu 20/1/22	Thu 20/1/22	Thu 20/1/22	61	63	100%	
63	IWKD2A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			10 days	Sat 12/2/22	Mon 21/2/22	Sat 12/2/22	Mon 21/2/22	62	64	100%	
64	IWKD2A-01040	KD2A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			0 days	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	Mon 21/2/22	63		100%	
65	**OEKD2A-01000**		**Other Events affected to KD2A**			**10 days**	**Sat 11/12/21**	**Wed 22/12/21**	**Sat 11/12/21**	**Wed 22/12/21**			**100%**	
66	OEKD2A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 11/12/21	Fri 17/12/21	Sat 11/12/21	Fri 17/12/21	20	67	100%	
67	OEKD2A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 18/12/21	Wed 22/12/21	Sat 18/12/21	Wed 22/12/21	66	61	100%	
68	**IWKD3A-01000**		**Inclement Weather to KD3A**			**76 days**	**Sat 4/6/22**	**Thu 1/9/22**	**Sat 4/6/22**	**NA**			**32%**	
69	IWKD3A-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Sat 4/6/22	Sat 27/8/22	Sat 4/6/22	NA	76	70	29%	
70	IWKD3A-01020		Delay and Disruption of Works for the month of September 2022			15 days	Wed 29/6/22	Thu 1/9/22	Wed 29/6/22	NA	69	71	73%	
71	IWKD3A-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Wed 20/7/22	Wed 3/8/22	Wed 20/7/22	NA	70	72	7%	
72	IWKD3A-01040	KD3A	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Tue 2/8/22	Wed 3/8/22	Tue 2/8/22	NA	71		0%	
73	**OEKD3A-01000**		**Other Events affected to KD3A**			**64 days**	**Mon 14/3/22**	**Thu 2/6/22**	**Mon 14/3/22**	**Thu 2/6/22**			**100%**	
74	OEKD3A-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Mon 14/3/22	Sat 19/3/22	Mon 14/3/22	Sat 19/3/22	21	75	100%	
75	OEKD3A-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Mon 21/3/22	Thu 24/3/22	Mon 21/3/22	Thu 24/3/22	74	76	100%	
76	OEKD3A-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Fri 25/3/22	Thu 2/6/22	Fri 25/3/22	Thu 2/6/22	75	69	100%	
77	**IWKD3B-01000**		**Inclement Weather to KD3B**			**45 days**	**Thu 12/5/22**	**Tue 5/7/22**	**Thu 12/5/22**	**NA**			**61%**	
78	IWKD3B-01010		Delay and Disruption of Works before September 2022	(437),		41 days	Thu 12/5/22	Wed 29/6/22	Thu 12/5/22	NA	84	79	51%	
79	IWKD3B-01020		Delay and Disruption of Works for the month of September 2022			0 days	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	Tue 7/6/22	78	80	100%	
80	IWKD3B-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			10 days	Sun 26/6/22	Tue 5/7/22	Sun 26/6/22	Tue 5/7/22	79	81	100%	
81	IWKD3B-01040	KD3B	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			0 days	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22	Tue 5/7/22	80		100%	
82	**OEKD3B-01000**		**Other Events affected to KD3B**			**58 days**	**Sat 26/2/22**	**Wed 11/5/22**	**Sat 26/2/22**	**Wed 11/5/22**			**100%**	
83	OEKD3B-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 26/2/22	Wed 2/3/22	Sat 26/2/22	Wed 2/3/22	22	84	100%	
84	OEKD3B-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 3/3/22	Wed 11/5/22	Thu 3/3/22	Wed 11/5/22	83	78	100%	
85	**IWKD3C-01000**		**Inclement Weather to KD3C**			**77 days**	**Tue 10/5/22**	**Tue 9/8/22**	**Tue 10/5/22**	**NA**			**44%**	
86	IWKD3C-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Tue 10/5/22	Wed 3/8/22	Tue 10/5/22	NA	92	87	29%	
87	IWKD3C-01020		Delay and Disruption of Works for the month of September 2022			15 days	Sat 4/6/22	Tue 9/8/22	Sat 4/6/22	NA	86	88	67%	
88	IWKD3C-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Fri 24/6/22	Sat 23/7/22	Fri 24/6/22	NA	87	89	93%	
89	IWKD3C-01040	KD3C	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Fri 8/7/22	Fri 8/7/22	Fri 8/7/22	NA	88		0%	
90	**OEKD3C-01000**		**Other Events affected to KD3C**			**58 days**	**Thu 24/2/22**	**Mon 9/5/22**	**Thu 24/2/22**	**Mon 9/5/22**			**100%**	
91	OEKD3C-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Thu 24/2/22	Mon 28/2/22	Thu 24/2/22	Mon 28/2/22	23	92	100%	
92	OEKD3C-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Tue 1/3/22	Mon 9/5/22	Tue 1/3/22	Mon 9/5/22	91	86	100%	



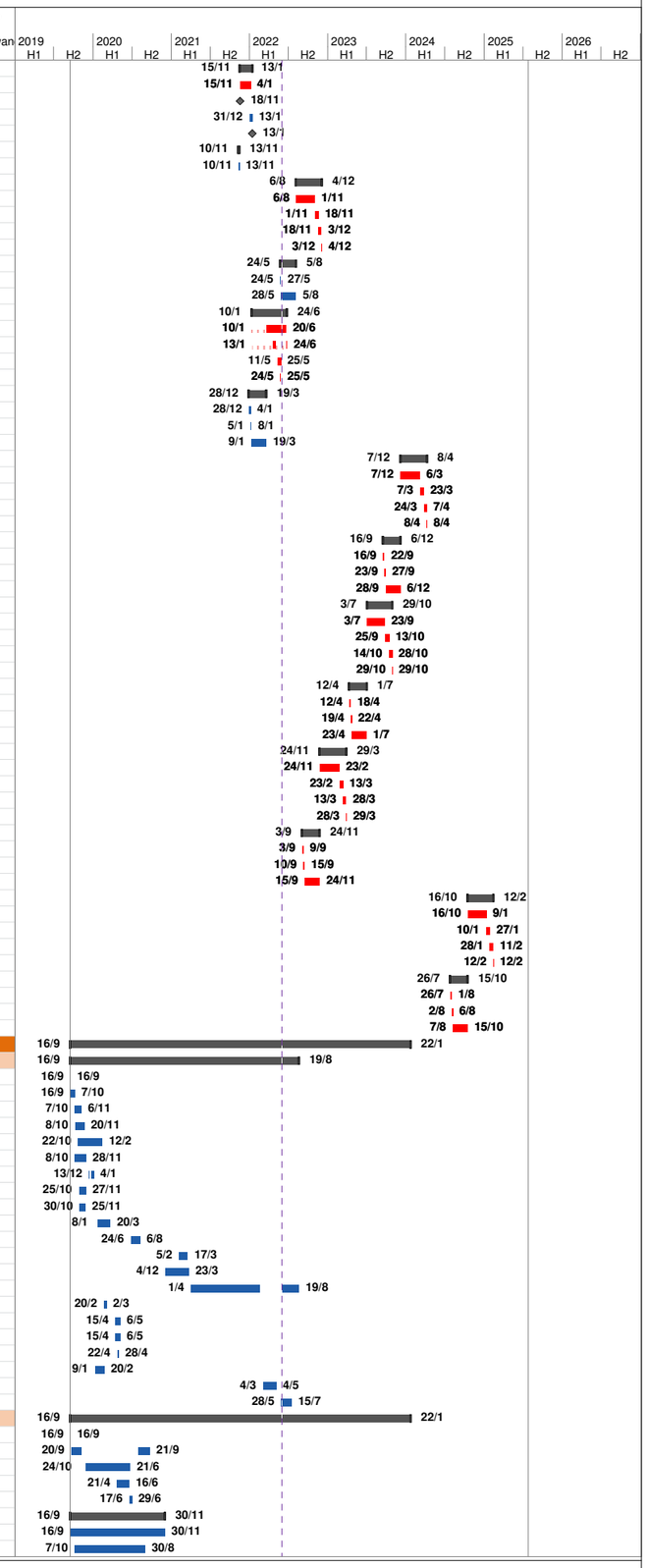
Critical Split | Task | Milestone | Summary | Critical

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: 30/09/2022)

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 Allowan
93	**IWKD3D-01000**		**Inclement Weather to KD3D**			**49 days**	**Mon 15/11/21**	**Thu 13/1/22**	**Mon 15/11/21**	**NA**			**64%**	
94	IWKD3D-01010		Delay and Disruption of Works before September 2022	(437),		41 days	Mon 15/11/21	Tue 4/1/22	Mon 15/11/21	NA		95	51%	
95	IWKD3D-01020		Delay and Disruption of Works for the month of September 2022			0 days	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	Thu 18/11/21	94	96	100%	
96	IWKD3D-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			14 days	Fri 31/12/21	Thu 13/1/22	Fri 31/12/21	Thu 13/1/22	95	97	100%	
97	IWKD3D-01040	KD3D	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			0 days	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	Thu 13/1/22	96		100%	
98	**OEKD3D-01000**		**Other Events affected to KD3D**			**4 days**	**Wed 10/11/21**	**Sat 13/11/21**	**Wed 10/11/21**	**Sat 13/11/21**			**100%**	
99	OEKD3D-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Wed 10/11/21	Sat 13/11/21	Wed 10/11/21	Sat 13/11/21	24		100%	
100	**IWKD3E-01000**		**Inclement Weather to KD3E**			**100.8 days**	**Sat 6/8/22**	**Sun 4/12/22**	**NA**	**NA**			**0%**	
101	IWKD3E-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Sat 6/8/22	Tue 1/11/22	NA	NA	107	102	0%	
102	IWKD3E-01020		Delay and Disruption of Works for the month of September 2022			15 days	Tue 1/11/22	Fri 18/11/22	NA	NA	101	103	0%	
103	IWKD3E-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Fri 18/11/22	Sat 3/12/22	NA	NA	102	104	0%	
104	IWKD3E-01040	KD3E	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Sat 3/12/22	Sun 4/12/22	NA	NA	103		0%	
105	**OEKD3E-01000**		**Other Events affected to KD3E**			**62 days**	**Tue 24/5/22**	**Fri 5/8/22**	**Tue 24/5/22**	**Fri 5/8/22**			**100%**	
106	OEKD3E-01010		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Tue 24/5/22	Fri 27/5/22	Tue 24/5/22	Fri 27/5/22	25	107	100%	
107	OEKD3E-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Sat 28/5/22	Fri 5/8/22	Sat 28/5/22	Fri 5/8/22	106	101	100%	
108	**IWSW1-01000**		**Inclement Weather to Section 1 of the Works**			**133 days**	**Mon 10/1/22**	**Fri 24/6/22**	**Mon 10/1/22**	**NA**			**45%**	
109	IWSW1-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Mon 10/1/22	Mon 20/6/22	Mon 10/1/22	NA	116	110	29%	
110	IWSW1-01020		Delay and Disruption of Works for the month of September 2022			15 days	Thu 13/1/22	Fri 24/6/22	Thu 13/1/22	NA	109	111	73%	
111	IWSW1-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Wed 11/5/22	Wed 25/5/22	Wed 11/5/22	NA	110	112	93%	
112	IWSW1-01040	SW1	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Tue 24/5/22	Wed 25/5/22	Tue 24/5/22	NA	111		0%	
113	**OESW1-01000**		**Other Events affected to Section 1 of the Works**			**67 days**	**Tue 28/12/21**	**Sat 19/3/22**	**Tue 28/12/21**	**Sat 19/3/22**			**100%**	
114	OESW1-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Tue 28/12/21	Tue 4/1/22	Tue 28/12/21	Tue 4/1/22	27	115	100%	
115	OESW1-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Wed 5/1/22	Sat 8/1/22	Wed 5/1/22	Sat 8/1/22	114	116	100%	
116	OESW1-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Sun 9/1/22	Sat 19/3/22	Sun 9/1/22	Sat 19/3/22	115	109	100%	
117	**IWSW2-01000**		**Inclement Weather to Section 2 of the Works**			**93 days**	**Thu 7/12/23**	**Mon 8/4/24**	**NA**	**NA**			**0%**	
118	IWSW2-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Thu 7/12/23	Wed 6/3/24	NA	NA	125	119	0%	
119	IWSW2-01020		Delay and Disruption of Works for the month of September 2022			15 days	Thu 7/3/24	Sat 23/3/24	NA	NA	118	120	0%	
120	IWSW1-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Sun 24/3/24	Sun 7/4/24	NA	NA	119	121	0%	
121	IWSW1-01040	SW2	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Mon 8/4/24	Mon 8/4/24	NA	NA	120		0%	
122	**OESW2-01000**		**Other Events affected to Section 2 of the Works**			**67 days**	**Sat 16/9/23**	**Wed 6/12/23**	**NA**	**NA**			**0%**	
123	OESW2-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 16/9/23	Fri 22/9/23	NA	NA	28	124	0%	
124	OESW2-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 23/9/23	Wed 27/9/23	NA	NA	123	125	0%	
125	OESW2-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 28/9/23	Wed 6/12/23	NA	NA	124	118	0%	
126	**IWSW3-01000**		**Inclement Weather to Section 3 of the Works**			**99 days**	**Mon 3/7/23**	**Sun 29/10/23**	**NA**	**NA**			**0%**	
127	IWSW3-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Mon 3/7/23	Sat 23/9/23	NA	NA	134	128	0%	
128	IWSW3-01020		Delay and Disruption of Works for the month of September 2022			15 days	Mon 25/9/23	Fri 13/10/23	NA	NA	127	129	0%	
129	IWSW3-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Sat 14/10/23	Sat 28/10/23	NA	NA	128	130	0%	
130	IWSW3-01040	SW3	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Sun 29/10/23	Sun 29/10/23	NA	NA	129		0%	
131	**OESW3-01000**		**Other Events affected to Section 3 of the Works**			**66 days**	**Wed 12/4/23**	**Sat 1/7/23**	**NA**	**NA**			**0%**	
132	OESW3-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Wed 12/4/23	Tue 18/4/23	NA	NA	29	133	0%	
133	OESW3-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Wed 19/4/23	Sat 22/4/23	NA	NA	132	134	0%	
134	OESW3-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Sun 23/4/23	Sat 1/7/23	NA	NA	133	127	0%	
135	**IWSW4-01000**		**Inclement Weather to Section 4 of the Works**			**101 days**	**Thu 24/11/22**	**Wed 29/3/23**	**NA**	**NA**			**0%**	
136	IWSW4-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Thu 24/11/22	Thu 23/2/23	NA	NA	143	137	0%	
137	IWSW4-01020		Delay and Disruption of Works for the month of September 2022			15 days	Thu 23/2/23	Mon 13/3/23	NA	NA	136	138	0%	
138	IWSW4-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Mon 13/3/23	Tue 28/3/23	NA	NA	137	139	0%	
139	IWSW4-01040	SW4	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Tue 28/3/23	Wed 29/3/23	NA	NA	138		0%	
140	**OESW4-01000**		**Other Events affected to Section 4 of the Works**			**68 days**	**Sat 3/9/22**	**Thu 24/11/22**	**NA**	**NA**			**0%**	
141	OESW4-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Sat 3/9/22	Fri 9/9/22	NA	NA	30	142	0%	
142	OESW4-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Sat 10/9/22	Thu 15/9/22	NA	NA	141	143	0%	
143	OESW4-01030		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Thu 15/9/22	Thu 24/11/22	NA	NA	142	136	0%	
144	**IWSW5-01000**		**Inclement Weather to Section 5 of the Works**			**101 days**	**Wed 16/10/24**	**Wed 12/2/25**	**NA**	**NA**			**0%**	
145	IWSW5-01010		Delay and Disruption of Works before September 2022	(437),		72 days	Wed 16/10/24	Thu 9/1/25	NA	NA	152	146	0%	
146	IWSW5-01020		Delay and Disruption of Works for the month of September 2022			15 days	Fri 10/1/25	Mon 27/1/25	NA	NA	145	147	0%	
147	IWSW5-01030		Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above before September 2022			15 days	Tue 28/1/25	Tue 11/2/25	NA	NA	146	148	0%	
148	IWSW5-01040	SW5	Delay and Disruption of works due to Red/Black Storm Signal/ Typhoon No.8 or above for September 2022			1 day	Wed 12/2/25	Wed 12/2/25	NA	NA	147		0%	
149	**OESW5-01000**		**Other Events affected to Section 5 of the Works**			**67 days**	**Fri 26/7/24**	**Tue 15/10/24**	**NA**	**NA**			**0%**	
150	OESW5-01010		Unforeseen Social Activities in Hong Kong in November 2019		(3)	6 days	Fri 26/7/24	Thu 1/8/24	NA	NA	31	151	0%	
151	OESW5-01020		Special Arrangement for Work After CNY due to Spread of Novel Coronavirus		5	4 days	Fri 2/8/24	Tue 6/8/24	NA	NA	150	152	0%	
152	OESW5-01020		Special Arrangement for Work After CNY due 5th wave of COVID-19 Outbreak		(436)	70 days	Wed 7/8/24	Tue 15/10/24	NA	NA	151	145	0%	
153	**SUB-00000**		**Submissions (cal. day)**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**91%**	
154	**SUBS-00000**		**Subletting Package**			**1069 days**	**Mon 16/9/19**	**Fri 19/8/22**	**Mon 16/9/19**	**NA**			**93%**	
155	SUBS-01000		Prepare & Submit Subletting Procedures			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2	156	100%	
156	SUBS-02000		PM Review & Accept Subletting Procedures			21 days	Mon 16/9/19	Mon 7/10/19	Mon 16/9/19	Mon 7/10/19	155	158,160,157,159,168,174,169,1	100%	
157	SUBS-03000		Subletting for Preliminary Works (Instrumentation Monitoring etc.)			30 days	Mon 7/10/19	Wed 6/11/19	Mon 7/10/19	Wed 6/11/19	156		100%	
158	SUBS-04000		Subletting for Drainage Diversion Works for UV System no.1& Effluent Pumping Station No.1 (NCE no. 3)			44 days	Tue 8/10/19	Wed 20/11/19	Tue 8/10/19	Wed 20/11/19	156	516	100%	
159	SUBS-05000		Subletting for the Temporary Site accommodation			114 days	Tue 22/10/19	Wed 12/2/20	Tue 22/10/19	Wed 12/2/20	156	248	100%	
160	SUBS-06000		Subletting for Pre-drilling Works (NCE no.3)			52 days	Tue 8/10/19	Thu 28/11/19	Tue 8/10/19	Thu 28/11/19	156	161SS+15 days,162SS+15 days	100%	
161	SUBS-07000		Subletting for Pre-bored Socketed Steel H-Pile			14 days	Fri 13/12/19	Sat 4/1/20	Fri 13/12/19	Sat 4/1/20	160SS+15 days	600,300,333,357,377,391,410,2	100%	
162	SUBS-08000		Subletting for Contractor's Designer for Temporary Works (NCE no.3)			32 days	Fri 25/10/19	Wed 27/11/19	Fri 25/10/19	Wed 27/11/19	160SS+15 days	166,164,179,171,165	100%	
163	SUBS-09000		Subletting for Independent Checking Engineer (NCE no.3)			27 days	Wed 30/10/19	Mon 25/11/19	Wed 30/10/19	Mon 25/11/19	156	266,309,336SS,359,380,393,60	100%	
164	SUBS-10000		Subletting for Sheetpile and ELS Works	17		58 days	Wed 8/1/20	Fri 20/3/20	Wed 8/1/20	Fri 20/3/20	162	266,309,336SS,359,380,393,41	100%	
165	SUBS-11000		Subletting for R.C Works (Portion A and UV no.1 building only)	33, 45, 46		44 days	Wed 24/6/20	Thu 6/8/20	Wed 24/6/20	Thu 6/8/20	162	269	100%	
166	SUBS-12000		Subletting for R.C Works (remaining buildings)	268, 338		41 days	Fri 5/2/21	Wed 17/3/21	Fri 5/2/21	Wed 17/3/21	162	361,606,421,438,451,466,480,4	100%	
167	SUBS-13000		Subletting for Waterproofing for Structures	(112), 268,338		110 days	Fri 4/12/20	Tue 23/3/21	Fri 4/12/20	Tue 23/3/21	2	272,275,278,383,310	100%	
168	SUBS-14000		Subletting for ABWF & BS Works	268 , 338,		400 days	Thu 1/4/21	Fri 19/8/22	Thu 1/4/21	NA	156	285SS,323SS,349SS,369SS,38	80%	
169	SUBS-15000		Subletting for External Works including pipeworks and road works for UV System no.1 (Diversion)			12 days	Thu 20/2/20	Mon 2/3/20	Thu 20/2/20	Mon 2/3/20	156	516,170	100%	
170	SUBS-16000		Subletting for Drainage and Pipe works at UV System no.1	21		22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	169		100%	
171	SUBS-17000		Subletting for Pipeworks, Utilities, and Roadworks	21		22 days	Wed 15/4/20	Wed 6/5/20	Wed 15/4/20	Wed 6/5/20	162	545	100%	
172	SUBS-18000		Subletting for trenchless construction	21		7 days	Wed 22/4/20	Tue 28/4/20	Wed 22/4/20	Tue 28/4/20	156	523	100%	
173	SUBS-19000		Subletting for Traffic Management Consultant			43 days	Thu 9/1/20	Thu 20/2/20	Thu 9/1/20	Thu 20/2/20	156	186	100%	
174	SUBS-20000		Subletting for Hard Landscape and Soft Landscape			60 days	Fri 4/3/22	Wed 4/5/22	Fri 4/3/22	Wed 4/5/22	156	589,581,582,583	100%	
175	SUBS-21000		Subletting for Pai Lau Detail Design			49 days	Sat 28/5/22	Fri 15/7/22	Sat 28/5/22	Fri 15/7/22			100%	
176	**SUBA-00000**		**Statutory Submission, Submission & Approval**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**90%**	
177	SUBA-01000		Prepare and Submit Subcontractor Management Plan (SMP)			1 day	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	Mon 16/9/19	2	296	100%	
178	SUBA-02000		Prepare, submit & approve the layout plan of the Temporary Site accommodation			97.9 days	Fri 20/9/19	Mon 21/9/20	Fri 20/9/19	Mon 21/9/20	2	248	100%	
179	SUBA-03000		Prepare, submit & accept the ELS design for deep excavation	17, 25, 27, 32		207 days	Thu 24/10/19	Sun 21/6/20	Thu 24/10/19	Sun 21/6/20	162	266,309,336SS,359,380,393,41	100%	
180	SUBA-04000		Prepare, submit & accept the Method Statement for Drainage Diversion Works	21, 22, 33		57 days	Tue 21/4/20	Tue 16/6/20	Tue 21/4/20	Tue 16/6/20	2	181,516	100%	
181	SUBA-05000		PM approve the Method Statement for Drainage Diversion Works			13 days	Wed 17/6/20	Mon 29/6/20	Wed 17/6/20	Mon 29/6/20	180	516	100%	
182	SUBA-06000		TTA Management			442 days	Mon 16/9/19	Mon 30/11/20	Mon 16/9/19	Mon 30/11/20			100%	
183	SUBA-06010		Excavation Permit Application for San Wan Road (Portion A)			442 days	Mon 16/9/19	Mon 30/11/20	Mon 16/9/19	Mon 30/11/20		624	100%	
184	SUBA-06020		Excavation Permit Application for Chuk Wan Street (Portion C)			329 days	Mon 7/10/19	Sun 30/8/20	Mon 7/10/19	Sun 30/8/20	2FS+21 days		100%	



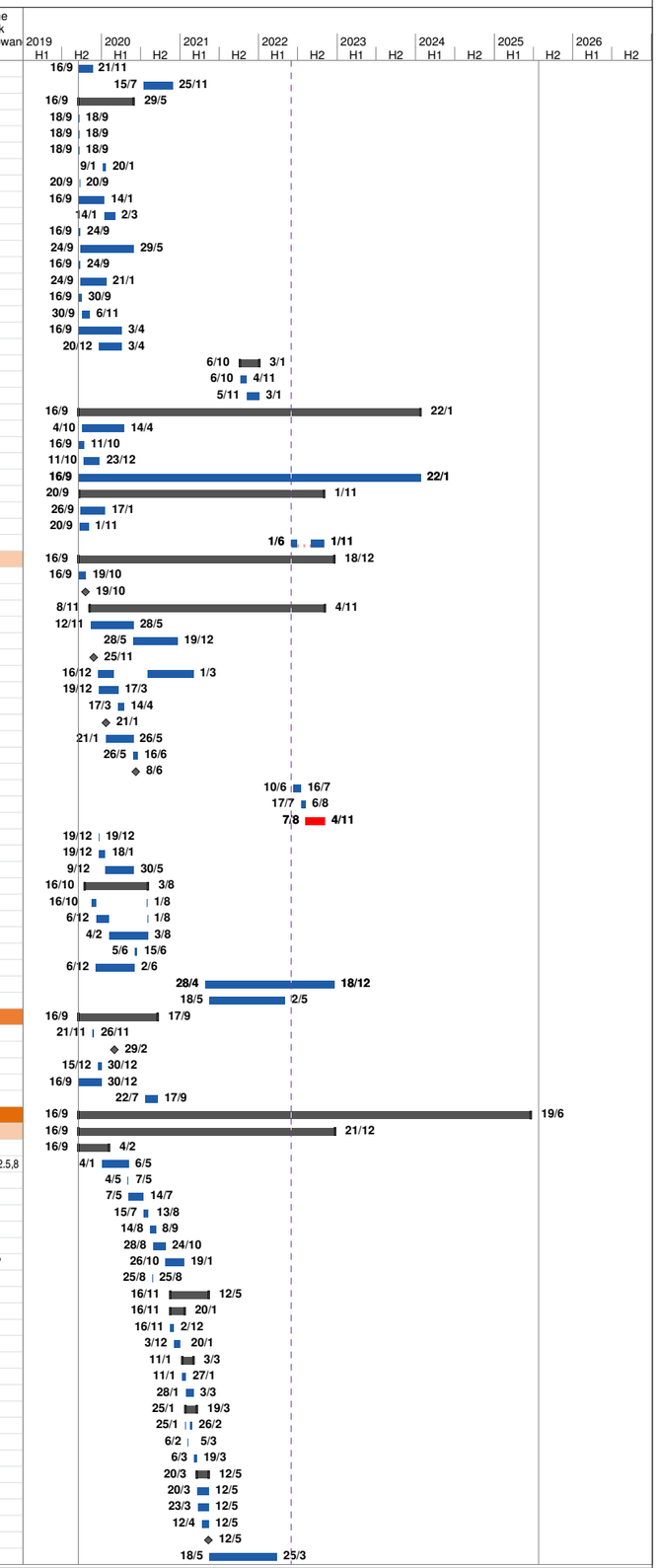
Critical Split | Task | Milestone | Summary | Critical

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: 30/09/2022)

群利－俊和聯營體
KL－CW JV

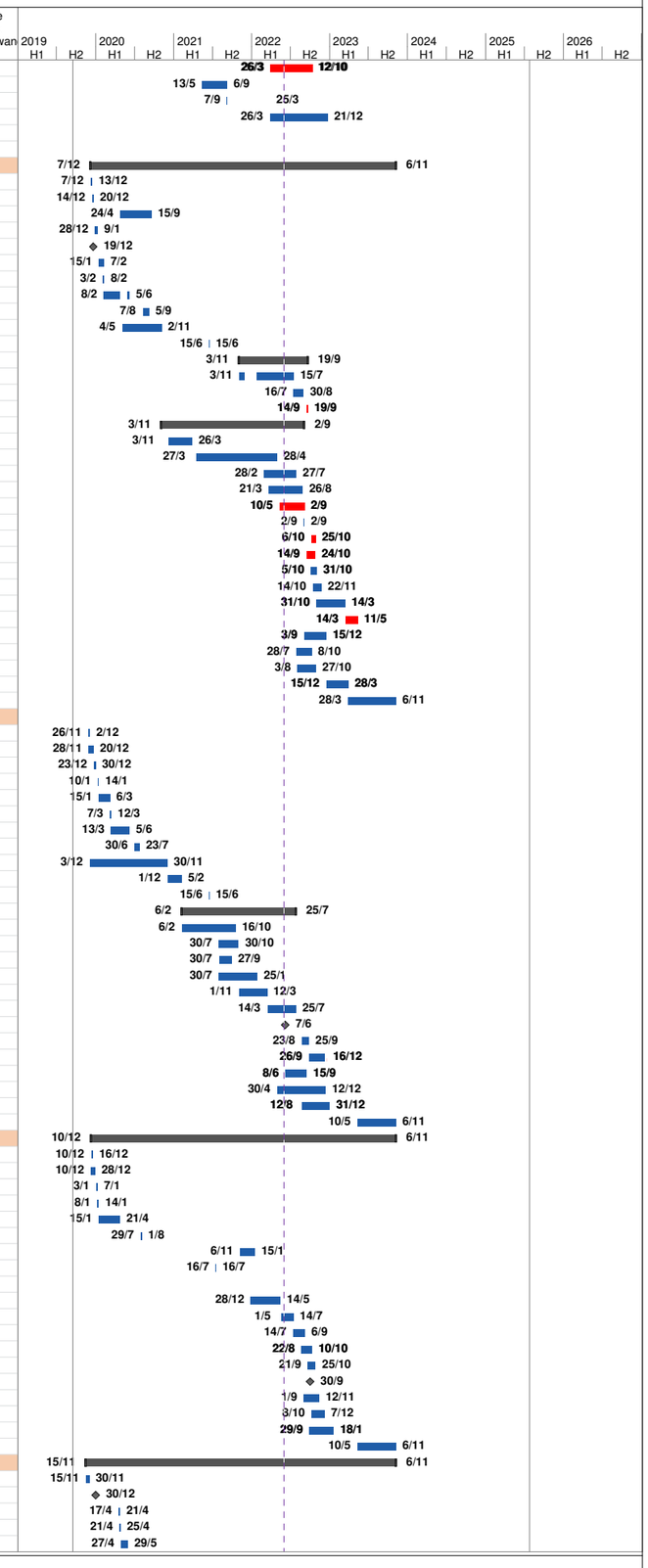
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
185	SUBA-06030		Prepare TTA Plan, submit & approve for footpath for Stage 1 - Drainage Diversion			67 days	Mon 16/9/19	Thu 21/11/19	Mon 16/9/19	Thu 21/11/19	2	516	100%	
186	SUBA-06040		Prepare TTA Plan, submit & approve for carriageway at San Wan Road for CLP 13kV substation			134 days	Wed 15/7/20	Wed 25/11/20	Wed 15/7/20	Wed 25/11/20	173	626	100%	
187	**SUBA-07000**		**Environmental Aspect Submissions**			**257 days**	**Mon 16/9/19**	**Fri 29/5/20**	**Mon 16/9/19**	**Fri 29/5/20**	**2**		**100%**	
188	SUBA-07010		Notification to EPD for Works Commencement			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	296	100%	
189	SUBA-07020		Apply & approve for Registration as a Chemical Waste Producer			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	296	100%	
190	SUBA-07030		Apply & approve for a Billing Account for Disposal of Construction Waste			1 day	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	Wed 18/9/19	2	296	100%	
191	SUBA-07040		Apply & approve for Effluent Discharge Licence			12 days	Thu 9/1/20	Mon 20/1/20	Thu 9/1/20	Mon 20/1/20	2	296	100%	
192	SUBA-07050		Prepare & submit of Project Layout Plan & O-Chart for EP			1 day	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	Fri 20/9/19	2	296	100%	
193	SUBA-07060		Prepare & submit Construction Noise Permits			121 days	Mon 16/9/19	Tue 14/1/20	Mon 16/9/19	Tue 14/1/20	2	194	100%	
194	SUBA-07070		Approval of Construction Noise Permits			48 days	Tue 14/1/20	Mon 2/3/20	Tue 14/1/20	Mon 2/3/20	193	296	100%	
195	SUBA-07080		Prepare, submit Site Management Plan for Trip Ticket System			9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	2		100%	
196	SUBA-07090		Approval of Site Management Plan for Trip Ticket System			249 days	Tue 24/9/19	Fri 29/5/20	Tue 24/9/19	Fri 29/5/20		296	100%	
197	SUBA-07100		Prepare & submit approve Waste Management Plan			9 days	Mon 16/9/19	Tue 24/9/19	Mon 16/9/19	Tue 24/9/19	2	198	100%	
198	SUBA-07110		Approval of Waste Management Plan			119 days	Tue 24/9/19	Tue 21/1/20	Tue 24/9/19	Tue 21/1/20	197	296	100%	
199	SUBA-07120		Prepare & submit Environmental Management Plan			15 days	Mon 16/9/19	Mon 30/9/19	Mon 16/9/19	Mon 30/9/19	2	200	100%	
200	SUBA-07130		Approval of Environmental Management Plan			37 days	Mon 30/9/19	Wed 6/11/19	Mon 30/9/19	Wed 6/11/19	199	296	100%	
201	SUBA-07140		Prepare& submit for Temporary Drainage and Management Plan			201 days	Mon 16/9/19	Fri 3/4/20	Mon 16/9/19	Fri 3/4/20	2	202	100%	
202	SUBA-07150		Approval of Temporary Drainage and Management Plan			106 days	Fri 20/12/19	Fri 3/4/20	Fri 20/12/19	Fri 3/4/20	201	516	100%	
203	SUBA-08000		Prepare, submit & approve for the FSD submissions for CLP 132kV Substation			90 days	Wed 6/10/21	Mon 3/1/22	Wed 6/10/21	Mon 3/1/22			100%	
204	SUBA-08010		Prepare and submit arrangement and schedule to FSD			30 days	Wed 6/10/21	Thu 4/11/21	Wed 6/10/21	Thu 4/11/21	205SS-1 emon		100%	
205	SUBA-08020		FSD approve the arrangement and schedule			60 days	Fri 5/11/21	Mon 3/1/22	Fri 5/11/21	Mon 3/1/22	621SS-2 emons	46FF,204SS-1 emon	100%	
206	**SUBA-09000**		**Trees Related Submissions**			**1590 days**	**Mon 16/9/19**	**Mon 22/1/24**	**Mon 16/9/19**	**NA**			**78%**	
207	SUBA-09010		Initial Tree survey and report submission			194 days	Fri 4/10/19	Tue 14/4/20	Fri 4/10/19	Tue 14/4/20	2	245	100%	
208	SUBA-09020		Prepare and submit and approve the Method Statement of Erection of the protective fencing			26 days	Mon 16/9/19	Fri 11/10/19	Mon 16/9/19	Fri 11/10/19	2	245	100%	
209	SUBA-09030		Prepare and submit and approve the Method Statement of Tree felling, Preservation, Prunning works &			74 days	Fri 11/10/19	Mon 23/12/19	Fri 11/10/19	Mon 23/12/19	2	245,295	100%	
210	SUBA-09040		Submit Yearly Tree Risk Assessment and Inspection Report			1590 days	Mon 16/9/19	Mon 22/1/24	Mon 16/9/19	NA	2		75%	
211	**SUBA-10000**		**Others**			**1138.2 days**	**Fri 20/9/19**	**Tue 1/11/22**	**Fri 20/9/19**	**NA**			**74%**	
212	SUBA-10010		Approval for Lighting Removal at Portion C-1A of the Site from Hyd			114 days	Thu 26/9/19	Fri 17/1/20	Thu 26/9/19	Fri 17/1/20	2	258	100%	
213	SUBA-10020		Prepare, submit & approve for commencement of Works near MTRCL protection zone at Sun Wan Road from			43 days	Fri 20/9/19	Fri 1/11/19	Fri 20/9/19	Fri 1/11/19	2	597	100%	
214	SUBA-10030		Prepare, submit & approve for commencement Works along the riverbank by DSD			90 days	Wed 1/6/22	Tue 1/11/22	Wed 1/6/22	NA		584,585,587,586	30%	
215	**SUBP-00000**		**Procurement**			**1190 days**	**Mon 16/9/19**	**Sun 18/12/22**	**Mon 16/9/19**	**NA**			**92%**	
216	SUBP-01000		Prepare and submit the Procurement Procedure			34 days	Mon 16/9/19	Sat 19/10/19	Mon 16/9/19	Sat 19/10/19	2	217	100%	
217	SUBP-02000		PM Review & Accept Procurement Procedure			0 days	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	Sat 19/10/19	216	218,235,239,240,241,242,246	100%	
218	SUBP-03000		Pipe works material			1093 days	Fri 8/11/19	Fri 4/11/22	Fri 8/11/19	NA	217		93%	
219	SUBP-03010		Prepare & submit concrete pipe material particular			199 days	Tue 12/11/19	Thu 28/5/20	Tue 12/11/19	Thu 28/5/20	2	220	100%	
220	SUBP-03020		Approval of concrete pipe material			205 days	Thu 28/5/20	Sat 19/12/20	Thu 28/5/20	Sat 19/12/20	219	221	100%	
221	SUBP-03030		Procurement, deliver & testing of concrete pipe material (1st batch)			0 days	Fri 8/11/19	Mon 25/11/19	Fri 8/11/19	Mon 25/11/19	220	515,516	100%	
222	SUBP-03040		Procurement, deliver & testing of concrete pipe material (remaining)			285 days	Mon 16/12/19	Mon 1/3/21	Mon 16/12/19	Mon 1/3/21			100%	
223	SUBP-03050		Prepare & submit ductile iron pipe material particular			90 days	Thu 19/12/19	Tue 17/3/20	Thu 19/12/19	Tue 17/3/20	2	224	100%	
224	SUBP-03060		Approval of ductile iron pipe material			28 days	Tue 17/3/20	Tue 14/4/20	Tue 17/3/20	Tue 14/4/20	223	225	100%	
225	SUBP-03070		Procurement, deliver & testing of ductile iorn pipe material			0 days	Wed 18/12/19	Tue 21/1/20	Wed 18/12/19	Tue 21/1/20	224		100%	
226	SUBP-03080		Prepare & submit HDPE pipe material particular			127 days	Tue 21/1/20	Tue 26/5/20	Tue 21/1/20	Tue 26/5/20	2FS+120 days	227	100%	
227	SUBP-03090		Approval of HDPE pipe material			21 days	Tue 26/5/20	Tue 16/6/20	Tue 26/5/20	Tue 16/6/20	226	228	100%	
228	SUBP-03100		Procurement, deliver & testing of HDPE pipe material			0 days	Fri 8/5/20	Mon 8/6/20	Fri 8/5/20	Mon 8/6/20	227		100%	
229	SUBP-03110		Prepare & submit stainless steel pipe material particular			37 days	Fri 10/6/22	Sat 16/7/22	Fri 10/6/22	Sat 16/7/22	2	230	100%	
230	SUBP-03120		Approval of stainless steel pipe material			21 days	Sun 17/7/22	Sat 6/8/22	Sun 17/7/22	Sat 6/8/22	229	231	100%	
231	SUBP-03130		Procurement, deliver & testing of stainless steel pipe material			90 days	Sun 7/8/22	Fri 4/11/22	Sun 7/8/22	NA	230		0%	
232	SUBP-03140		Prepare & submit mild steel steel pipe material particular			1 day	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	2	233	100%	
233	SUBP-03150		Approval of mild steel pipe material			30 days	Thu 19/12/19	Sat 18/1/20	Thu 19/12/19	Sat 18/1/20	232	234	100%	
234	SUBP-03160		Procurement, deliver & testing of mild steel pipe material			133 days	Mon 9/12/19	Sat 30/5/20	Mon 9/12/19	Sat 30/5/20	233		100%	
235	**SUBP-04000**		**Prefabricated steel reinforcement**			**292.61 days**	**Wed 16/10/19**	**Mon 3/8/20**	**Wed 16/10/19**	**Mon 3/8/20**	**217**		**100%**	
236	SUBP-04010		Prepare & submit steel reinforcement material particular			21 days	Wed 16/10/19	Sat 1/8/20	Wed 16/10/19	Sat 1/8/20	2FS+60 days	237	100%	
237	SUBP-04020		Approval of prefabricated steel reinforcement material supplier			60 days	Fri 6/12/19	Sat 1/8/20	Fri 6/12/19	Sat 1/8/20	236	238	100%	
238	SUBP-04030		Procurement, deliver & testing of prefabricated steel reinforcement material			180 days	Tue 4/2/20	Mon 3/8/20	Tue 4/2/20	Mon 3/8/20	237	606,466,451,438,421,396,361,3	100%	
239	SUBP-05000		Prepare, submit and approve the water proofing material			11 days	Fri 5/6/20	Mon 15/6/20	Fri 5/6/20	Mon 15/6/20	217	338,361,606,382	100%	
240	SUBP-06000		Prepare, submit and approve the concrete mix			180 days	Fri 6/12/19	Tue 2/6/20	Fri 6/12/19	Tue 2/6/20	217	338,361,606,382	100%	
241	SUBP-07000		Prepare, submit and approve the metal works material			600 days	Wed 28/4/21	Sun 18/12/22	Wed 28/4/21	NA	217		80%	
242	SUBP-08000		Prepare, submit and approve the ABWF works material			350 days	Tue 18/5/21	Mon 2/5/22	Tue 18/5/21	Mon 2/5/22	217	285SS,323SS,349SS,369SS,38	100%	
243	**CPW-00000**		**Site Preliminary Works**			**300 days**	**Mon 16/9/19**	**Thu 17/9/20**	**Mon 16/9/19**	**Thu 17/9/20**			**100%**	
244	CPW-01000		Mobilization for Hoarding			5 days	Thu 21/11/19	Tue 26/11/19	Thu 21/11/19	Tue 26/11/19	2	245	100%	
245	CPW-02000		Hoarding Erection at Portion C			0 days	Wed 27/11/19	Sat 29/2/20	Wed 27/11/19	Sat 29/2/20	244,207,208,209,246,163		100%	
246	CPW-03000		Project Signboard Erection			11 days	Sun 15/12/19	Mon 30/12/19	Sun 15/12/19	Mon 30/12/19	217	245	100%	
247	CPW-04000		Utility applications and Connection			87 days	Mon 16/9/19	Mon 30/12/19	Mon 16/9/19	Mon 30/12/19	2	248FF	100%	
248	CPW-05000		Construction of Site Accommodation in Works Area (MIC)			50 days	Wed 22/7/20	Thu 17/9/20	Wed 22/7/20	Thu 17/9/20	178,247FF,159		100%	
249	**CWPC-00000**	*	**Construction Works of Portion C of the Site**			**1708 days?**	**Mon 16/9/19**	**Thu 19/6/25**	**Mon 16/9/19**	**NA**			**45%**	
250	**CUV1-00000**	*	**UV System No. 1 & Effluent Pumping Station No. 1 (1)**			**970 days**	**Mon 16/9/19**	**Wed 21/12/22**	**Mon 16/9/19**	**NA**			**94%**	
251	**CUV1-01000**		**Preliminary Works**			**114 days**	**Mon 16/9/19**	**Tue 4/2/20**	**Mon 16/9/19**	**Tue 4/2/20**			**100%**	
261	CUV1-02000		Sheetpile Installation (FSP IV, 2200sq.m, 1 Rig)- stage 1	17, 21	23	97 days	Sat 4/1/20	Wed 6/5/20	Sat 4/1/20	Wed 6/5/20	260	263,265	100%	6.5,2.5,8
262	CUV1-03000		Setting up plant for pre-bored socked H-pile Installation			0 days	Mon 4/5/20	Thu 7/5/20	Mon 4/5/20	Thu 7/5/20	260,263SS-5 days		100%	
263	CUV1-04000		Pre-bored Socketed H-Pile Installation (34 Nos, 1 Rig, 3days/rig/pile)	22, 33, 45	23, 24/27, 26, (10)	57 days	Thu 7/5/20	Tue 14/7/20	Thu 7/5/20	Tue 14/7/20	161,518,261	264,390,262SS-5 days	100%	40
264	CUV1-05000		Pile Loading Test	45, 46		26 days	Wed 15/7/20	Thu 13/8/20	Wed 15/7/20	Thu 13/8/20	263,378FS+5 days	411FS+5 days,265	100%	
265	CUV1-06000		Sheetpile Installation (FSP IV, 2200sq.m, 1 Rig)- stage 2	46, 257	26	22 days	Fri 14/8/20	Tue 8/9/20	Fri 14/8/20	Tue 8/9/20	264,261	266FS-10 days	100%	17
266	CUV1-07000		ELS Works (incl. Strut (4-layers) Installation & Excavation (3,700 cu.m)	46, 257, 258,	26, (34)	48 days	Fri 28/8/20	Sat 24/10/20	Fri 28/8/20	Sat 24/10/20	179,164,163,265FS-10 days	267,268FF-2 emons	100%	8
267	*CUV1-08000*		*Additional Sump Pits*	*258, (92), (112)*	*(77)*	*70 days*	*Mon 26/10/20*	*Tue 19/1/21*	*Mon 26/10/20*	*Tue 19/1/21*	*266*	*271*	*100%*	*15,2*
268	CUV1-08900		Receiving of Civil Requirements from PM		(275), (366)	1 day	Tue 25/8/20	Tue 25/8/20	Tue 25/8/20	Tue 25/8/20	266FF-2 emons	269SS-2 emons	100%	
269	**CUV1-09000**		**R.C. Structure (370sq.m) - Revised Structural Layout**		**288**	**142 days**	**Mon 16/11/20**	**Wed 12/5/21**	**Mon 16/11/20**	**Wed 12/5/21**	**165,268SS-2 emons**		**100%**	
270	**CUV1-09010**		**Below Ground Level Stage no.1 @ -1.10mPD**			**54 days**	**Mon 16/11/20**	**Wed 20/1/21**	**Mon 16/11/20**	**Wed 20/1/21**			**100%**	**5**
271	CUV1-09011		Base slab Construction (162 sq.m)	(92)	24/27, 224, (38), (46), (48), (64), (72)	15 days	Mon 16/11/20	Wed 2/12/20	Mon 16/11/20	Wed 2/12/20	267	272	100%	
272	CUV1-09012		Walls and Slabs Construction @-1.10mPD to +2.50mPD [CHAX puddle (DN 1200 -> DN1600)	(112)	(38), (46), (48), (100)	39 days	Thu 3/12/20	Wed 20/1/21	Thu 3/12/20	Wed 20/1/21	271,167	274SS+30 days	100%	
273	**CUV1-09020**		**Below Ground Level Stage no.2 @ +1.50mPD**			**42 days**	**Mon 11/1/21**	**Wed 3/3/21**	**Mon 11/1/21**	**Wed 3/3/21**			**100%**	**5**
274	CUV1-09021		Base slab Construction (170sq.m)		(114), (115)	15 days	Mon 11/1/21	Wed 27/1/21	Mon 11/1/21	Wed 27/1/21	272SS+30 days	275	100%	
275	CUV1-09022		Walls and Slabs Construction @+1.5mPD to +4.9mPD [Additional CHA & CHL puddle (DN350), Additional CHLA	268	(38), (46), (100), (108), (114), (115),	27 days	Thu 28/1/21	Wed 3/3/21	Thu 28/1/21	Wed 3/3/21	274,167	277SS+14 days,519	100%	33
276	**CUV1-09030**		**Below Ground Level Stage no.3 @ +3.80mPD**			**44 days**	**Mon 25/1/21**	**Fri 19/3/21**	**Mon 25/1/21**	**Fri 19/3/21**			**100%**	**5**
277	CUV1-09031		Base slab Construction (15 sq.m + 40 sq.m) (NCE no. 0083,114)		(115)	25.25 days	Mon 25/1/21	Fri 26/2/21	Mon 25/1/21	Fri 26/2/21	275SS+14 days	278	100%	14
278	CUV1-09032		Walls and Slabs Construction @+3.80mPD to +7.4mPD [CHAW puddle (DN1200-> DN1400), CHBA puddle (DN	268, 338	(38), (46), (100), (108), (115), (120),	21 days	Sat 6/2/21	Fri 5/3/21	Sat 6/2/21	Fri 5/3/21	167,277	279,281	100%	21
279	CUV1-09033		Extraction of Sheetpiles	338		12 days	Sat 6/3/21	Fri 19/3/21	Sat 6/3/21	Fri 19/3/21	278		100%	
280	**CUV1-09040**		**Above Ground Level @ +7.4mPD**			**41 days**	**Sat 20/3/21**	**Wed 12/5/21**	**Sat 20/3/21**	**Wed 12/5/21**			**100%**	**4**
281	CUV1-09041	KD1A	Walls, Slabs and staircase Construction @+7.4mPD to 16.4mPD [Additional SP1-3 puddle (DN100 x 2 & DN80)	(204),(228)	(108), (146), (148), (179), (182)	41 days	Sat 20/3/21	Wed 12/5/21	Sat 20/3/21	Wed 12/5/21	278	284,285,283,287	100%	
282	CUV1-10000	KD1A	Construction of Switch room	(204),(228)		51 days	Tue 23/3/21	Wed 12/5/21	Tue 23/3/21	Wed 12/5/21			100%	
283	CUV1-10900		Additional slab and beam for external staircase		288, (197)	26 days	Mon 12/4/21	Wed 12/5/21	Mon 12/4/21	Wed 12/5/21	281	550	100%	
284	**CUV1-11000**	**KD1A**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**Wed 12/5/21**	**281**	**36FF**	**100%**	
285	CUV1-12000	SW1	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (296), (367), 359	256 days	Tue 18/5/21	Fri 25/3/22	Tue 18/5/21	Fri 25/3/22	242SS,168SS,281	581,582,583,286	100%	



Critical Split | Task | Milestone | Summary | Critical

Revised Programme (Status Date: 30/09/2022)

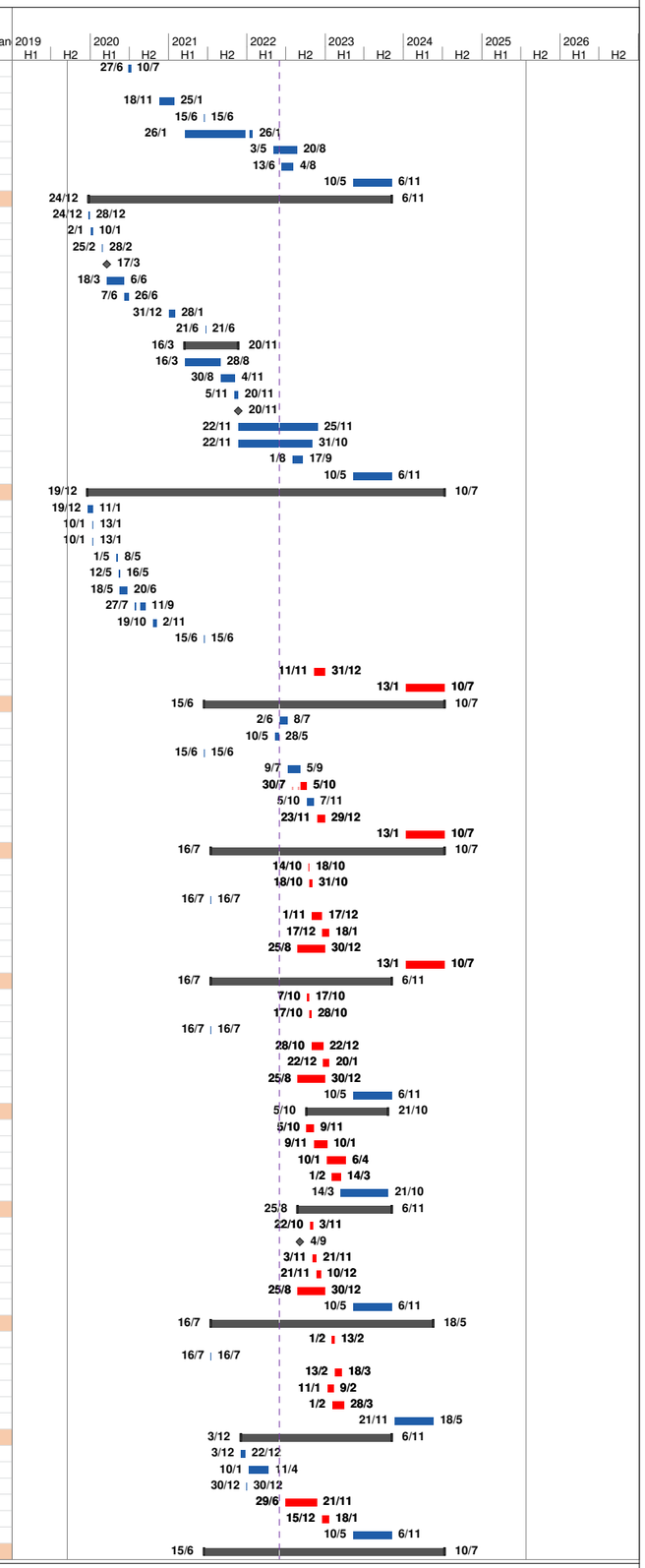
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
286	CUV1-12050		Remaining ABWF Works			200 days	Sat 26/3/22	Wed 12/10/22	Sat 26/3/22	NA	285	290FF	80%	
287	CUV1-12100		Underground Utilities Works in related to Effluent Chamber			97 days	Thu 13/5/21	Mon 6/9/21	Thu 13/5/21	Mon 6/9/21	281	288FS+1 day	100%	
288	CUV1-12200	SW1	Effluent Chamber (including Additional Works from PMI)		292	163 days	Tue 7/9/21	Fri 25/3/22	Tue 7/9/21	Fri 25/3/22	287FS+1 day	44FF,289	100%	
289	CUV1-12300		Remaining Works for underground pipe works			270 days	Sat 26/3/22	Wed 21/12/22	Sat 26/3/22	NA	288	48FF	80%	
290	CUV1-12500	SW4	Underground utilities works - Revised Cable Ducts plan		318, 276,219,248,207	47 days	Tue 16/8/22	Wed 12/10/22	NA	NA	286FF		0%	
291	CUV1-13000	SW5	Surrounding Site formation works and road works			180 days	Tue 28/3/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
292	**CSDC-00000**	*	**Sludge Digesters and Distribution Chamber (4)**			**1158 days**	**Sat 7/12/19**	**Mon 6/11/23**	**Sat 7/12/19**	**NA**			**62%**	
293	CSDC-01000		Site Clearance & Site Set Up			6 days	Sat 7/12/19	Fri 13/12/19	Sat 7/12/19	Fri 13/12/19	294SF		100%	
294	CSDC-02000		Trial Pit Excavation & UU Detection Works			6 days	Sat 14/12/19	Fri 20/12/19	Sat 14/12/19	Fri 20/12/19	296SF	293SF	100%	
295	CSDC-03000		Tree Transplanting Works (TC080)	21, 22, 33, 45,	(50), (51)	120 days	Fri 24/4/20	Tue 15/9/20	Fri 24/4/20	Tue 15/9/20	209	309FS-8 days	100%	
296	CSDC-04000		Predrilling Works (50no., 4rig, 3 days/drillhole/rig) - Change to Work Information		(10)	10 days	Sat 28/12/19	Thu 9/1/20	Sat 28/12/19	Thu 9/1/20	160,177,188,189,190,192,191,194,1	297,294SF,302	100%	
297	CSDC-05000		Installation of Monitoring Points			0 days	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	Thu 19/12/19	296	300	100%	
298	CSDC-06000		Sheetpile Installation- original		(310)	24 days	Wed 15/1/20	Fri 7/2/20	Wed 15/1/20	Fri 7/2/20			100%	
299	CSDC-07000		Setting up plant for pre-bored socked H-pile Installation			6 days	Mon 3/2/20	Sat 8/2/20	Mon 3/2/20	Sat 8/2/20		300	100%	
300	CSDC-08000		Pre-bored Sockedted H-Pile Installation (127nos, 3rig, 3days/rig/pile) (NCE no. 18A.25)	17, 21, 22, 33	(10)	69 days	Sat 8/2/20	Fri 5/6/20	Sat 8/2/20	Fri 5/6/20	161,297,302SS+20 days,299	301	100%	6
301	CSDC-09000		Pile Loading Test	46, 257, 333		26 days	Fri 7/8/20	Sat 5/9/20	Fri 7/8/20	Sat 5/9/20	300,411SS+10 days	309	100%	
302	CSDC-10000		Sheetpile Installation -Change to Work Information (Use of Auger)	22, 33, 45, 46,	(33), (47), (236), (24),364 , (40)	152 days	Mon 4/5/20	Mon 2/11/20	Mon 4/5/20	Mon 2/11/20	296	300SS+20 days,379FS+8	100%	
303	CSDC-10900		Receiving of Civil Requirements from PM		(233)	1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	309FF-2 emons	310SS-2 emons	100%	
304	CSDC-11015		Construction of Distribution Chamber			320 days	Wed 3/11/21	Mon 19/9/22	Wed 3/11/21	NA			98%	
305	CSDC-11015a		Construction of Distribution Chamber up to G/F	(204), (228)	(232), (233), (234), (429), 385, 413, 4	205 days	Wed 3/11/21	Fri 15/7/22	Wed 3/11/21	Fri 15/7/22	309SS+365 days	463SS+30 days,314,323FS+15	100%	
306	CSDC-11015b		Construction of Distribution Chamber up to 1/F	(204), (228)	(232), (233), (234), (429), 385, 413,	46 days	Sat 16/7/22	Tue 30/8/22	Sat 16/7/22	Tue 30/8/22	305	315FS+29 days,307FS+14	100%	
307	CSDC-11015c		Removal of propping and formwork			5 days	Wed 14/9/22	Mon 19/9/22	NA	NA	306FS+14 days		0%	
308	CSDC-11000a		Construction of Digestors		(125), (232), (233), (234), (364), (41	543 days	Tue 3/11/20	Fri 2/9/22	Tue 3/11/20	NA	302	414	87%	
309	CSDC-11010		ELS Works (incl. Strut (4-layers) Installation & Excavation (17,600 cu.m))	(112), 268, 338	(153), (76), (99), (94)	88 days	Tue 3/11/20	Fri 26/3/21	Tue 3/11/20	Fri 26/3/21	179,164,301,163,295FS-8 days,302	303FF-2 emons,305SS+365	100%	2,3
310	CSDC-11016		Construction of Digesters tank No.1,2,3,4 (Wall Portion)	(204),(228)	(76), (413), (419), (125), (306), (233)	398 days	Sat 27/3/21	Thu 28/4/22	Sat 27/3/21	Thu 28/4/22	309,238,167,303SS-2 emons	311FS-50 days,419FS+8 days	100%	
311	CSDC-11020a		Construction of the Roof Slab of SD No.1		(76), (413), (419), (125), (306), (233)	121 days	Mon 28/2/22	Wed 27/7/22	Mon 28/2/22	Wed 27/7/22	310FS-50 days	322,312SS+21 days,384FS-38	100%	30
312	CSDC-11020b		Construction of the Roof Slab of SD No.3, No.4		(76), (413), (419), (125), (306), (233)	159 days	Mon 21/3/22	Fri 26/8/22	Mon 21/3/22	Fri 26/8/22	311SS+21 days	313SS+50 days,316FS+15 days	100%	
313	CSDC-11020d		Construction of the Roof Slab of SD No.2		(76), (413), (419), (125), (306), (233)	116 days	Tue 10/5/22	Fri 2/9/22	Tue 10/5/22	NA	312SS+50 days	321,443FS+25 days,314,316	0%	
314	**CSDC-12000**	**KD3A**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**1 day**	**Fri 2/9/22**	**Fri 2/9/22**	**Fri 2/9/22**	**Fri 2/9/22**	**305,313**	**38FF**	**100%**	
315	CSDC-12050		Removal of ELS within Distribution Chamber			16 days	Thu 6/10/22	Tue 25/10/22	NA	NA	306FS+29 days		0%	
316	CSDC-11017		Water Test			32 days	Wed 14/9/22	Mon 24/10/22	NA	NA	312FS+15 days,313	318SS+1 emon,317SS+16 days	0%	
317	CSDC-11030d		Dismantle Scaffolding			22 days	Wed 5/10/22	Mon 31/10/22	NA	NA	316SS+16 days	499FS-35 days,506FS-42 days,	0%	
318	CSDC-11018		Apply Internal Anti-corrosion Protective Lining			33 days	Fri 14/10/22	Tue 22/11/22	NA	NA	316SS+1 emon	46FF	0%	
319	CSDC-11050		Backfill and Removal of ELS			134 days	Mon 31/10/22	Tue 14/3/23	NA	NA	317	320,499,506,446FS-35 days,46	0%	
320	CSDC-12050	SW3	Civil & Structural works at G/F			45 days	Tue 14/3/23	Thu 11/5/23	NA	NA	319	46FF	0%	
321	CSDC-13000		Drainage System (within Bldg/ Structure) Installation			86 days	Sat 3/9/22	Thu 15/12/22	NA	NA	313	324	0%	
322	CSDC-14000		FRP Walkway & Micellanous Installation			60 days	Thu 28/7/22	Sat 8/10/22	NA	NA	311	46FF	0%	
323	CSDC-15000	SW3	ABWF Works & BS Works, Change to Work Information (Apply Internal Anti-corrosion Protective Lining)		(173),594	71 days	Wed 3/8/22	Thu 27/10/22	Wed 3/8/22	NA	242SS,168SS,305FS+15 days	46FF	0%	
324	CSDC-15500	SW4	Surrounding sewerage, utility and process pipe works		358,298,222,248,205,206	82 days	Thu 15/12/22	Tue 28/3/23	NA	NA	321	47FF,581FS-360 days,582FS-3	0%	
325	CSDC-16000	SW5	Surrounding Site formation works and road works			180 days	Tue 28/3/23	Mon 6/11/23	NA	NA	324	48FF,351FF,371FF,385FF,403F	0%	
326	**CSDB-00000**	*	**Sludge Dewatering Building (2)**			**875.8 days?**	**Tue 26/11/19**	**Wed 9/11/22**	**Tue 26/11/19**	**NA**			**68%**	
327	CSDB-01000		Site Clearance & Site Set Up			6 days	Tue 26/11/19	Mon 2/12/19	Tue 26/11/19	Mon 2/12/19	2	328	100%	
328	CSDB-02000		Predrilling Works (39no.4rig, 3days/drillhole/rig) - Change to Work Information (Additional Predrill and Steel H-Pile)		(10)	20 days	Thu 28/11/19	Fri 20/12/19	Thu 28/11/19	Fri 20/12/19	160,327	330,329	100%	
329	CSDB-03000		Additional Predrilling Works (11no.)			8 days	Mon 23/12/19	Mon 30/12/19	Mon 23/12/19	Mon 30/12/19	328	330	100%	
330	CSDB-04000		Installation of Monitoring Points			4 days	Fri 10/1/20	Tue 14/1/20	Fri 10/1/20	Tue 14/1/20	328,329	335FS-3 days,331	100%	
331	CSDB-05000		Sheet Pile Installation - Original	17		52 days	Wed 15/1/20	Fri 6/3/20	Wed 15/1/20	Fri 6/3/20	330	333,332	100%	
332	CSDB-06000		Setting up plant for pre-bored socked H-pile Installation	17		5 days	Sat 7/3/20	Thu 12/3/20	Sat 7/3/20	Thu 12/3/20	331	333	100%	
333	CSDB-07000		Pre-bored Socketed H-Pile Installation (202 Nos, 4 Rig, 3days/rig/pile)	17, 21, 22, 33	(10)	67 days	Fri 13/3/20	Fri 5/6/20	Fri 13/3/20	Fri 5/6/20	161,332,331	376,334	100%	24
334	CSDB-08000		Pile Loading Test	33, 45		20 days	Tue 30/6/20	Thu 23/7/20	Tue 30/6/20	Thu 23/7/20	333	336	100%	
335	CSDB-09000		Sheet Pile Installation- stage2 - Additional Works (Removal of uncharted reinforced concrete structure at SD)	17, 21, 22, 33,	(47), (40), (14), (24), (33), (113),	295 days	Tue 3/12/19	Mon 30/11/20	Tue 3/12/19	Mon 30/11/20	330FS-3 days	336	100%	56
336	CSDB-10000		ELS Works (incl. Strut (3-layers) Installation & Excavation (25,000 cu.m)) - Change to Work Information / Removal of	258, (92), (112)	239, (40), (113), (153), (183),	55 days	Tue 1/12/20	Fri 5/2/21	Tue 1/12/20	Fri 5/2/21	179SS,164SS,334,163SS,335	338,339,545,337FF-2 emons	100%	10,2
337	CSDB-10900		Receiving of Civil Requirements from PM		(187), (319)	1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	336FF-2 emons	338SS-2 emons	100%	
338	CSDB-11000		R.C. Structure		438, (123), (183), (184), (187), (53),	430 days	Sat 6/2/21	Mon 25/7/22	Sat 6/2/21	Mon 25/7/22	239,240,336,238,337SS-2 emons		100%	10
339	CSDB-11010		Basement Construction & external waterproofing works - (Additional Sump Pit, wall layout, revised GA/Framing	268, 338,	239, (53), (110), (113), (115), (123),	203 days	Sat 6/2/21	Sat 16/10/21	Sat 6/2/21	Sat 16/10/21	336	359,340FS-90 days	100%	30
340	CSDB-11020		Ground Floor Construction @ +7.55mPD - Change to Work Information (Revised Layout)		(354), (187), (465), 465, (468),468,	477 days	Fri 30/7/21	Sat 30/10/21	Fri 30/7/21	Sat 30/10/21	339FS-90 days	343,341SS	100%	
341	CSDB-11030		Erect, maintain and dismantle the Additional Metal Scaffolding		596	60 days	Fri 30/7/21	Mon 27/9/21	Fri 30/7/21	Mon 27/9/21	340SS	342SS	100%	
342	CSDB-11040		Deploy one lifting plant (max. lifting capacity approx. 100tons)		596	180 days	Fri 30/7/21	Tue 25/1/22	Fri 30/7/21	Tue 25/1/22	341SS		100%	
343	CSDB-11050		1/F Construction @ +15.3mPD - Change to Work Information (Revised Layout)		(402), (414), (428), (446), (187), (41	108 days	Mon 1/11/21	Sat 12/3/22	Mon 1/11/21	Sat 12/3/22	340	344,346	100%	
344	CSDB-11060		Roof Construction @ +25.65mPD		(450), 450	107 days	Mon 14/3/22	Mon 25/7/22	Mon 14/3/22	Mon 25/7/22	343	345,579FS+120 days,349SS+3	100%	
345	**CSDB-12000**	**KD3B**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Tue 7/6/22**	**Tue 7/6/22**	**Tue 7/6/22**	**Tue 7/6/22**	**344**	**39FF,346FS+65 days,348**	**100%**	
346	CSDB-12100		Dismantle of Scaffolding			33 days	Tue 23/8/22	Sun 25/9/22	Tue 23/8/22	Sun 25/9/22	345FS+65 days,343	347,350SS,415FS+38 days,427	100%	
347	CSDB-12200		Backfill and Removal of ELS			69 days	Mon 26/9/22	Fri 16/12/22	Mon 26/9/22	NA	346	485SS+7 days	0%	
348	CSDB-13000		Drainage System (within Bldg/ structure) installation			84 days	Wed 8/6/22	Thu 15/9/22	Wed 8/6/22	NA	345		11%	
349	CSDB-14000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining		(95), (173),594	187 days	Sat 30/4/22	Mon 12/12/22	Sat 30/4/22	NA	242SS,168SS,344SS+37 days	46FF	0%	
350	CSDB-14500	SW4	Surrounding sewerage, utility and process pipe works		(335),(53),219,248,205,206,207	117 days	Fri 12/8/22	Sat 31/12/22	Fri 12/8/22	NA	346SS	47FF,581FS-367 days,582FS-3	0%	
351	CSDB-15000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
352	**CHPB-00000**	*	**Combined Heat Power Building (3)**			**1156 days**	**Tue 10/12/19**	**Mon 6/11/23**	**Tue 10/12/19**	**NA**			**46%**	
353	CHPB-01000		Site Clearance & Site Set Up			6 days	Tue 10/12/19	Mon 16/12/19	Tue 10/12/19	Mon 16/12/19	2,354SF		100%	
354	CHPB-02000		Predrilling Works (15no. 2rig, 3days/drillhole/rig) - Change to Work Information (Additional Predrill and Steel H-Pile)		(10)	15 days	Tue 10/12/19	Sat 28/12/19	Tue 10/12/19	Sat 28/12/19	160FS+28 days	355,353SF	100%	
355	CHPB-03000		Installation of Monitoring Points			4 days	Fri 3/1/20	Tue 7/1/20	Fri 3/1/20	Tue 7/1/20	354	357	100%	
356	CHPB-04000		Setting up plant for pre-bored socked H-pile Installation			6 days	Wed 8/1/20	Tue 14/1/20	Wed 8/1/20	Tue 14/1/20		357	100%	
357	CHPB-05000		Pre-bored Socketed H-Pile Installation (50 Nos, 2 Rig 3days/rig/pile) (PMI no.005)	17, 21	(10), (420)	77 days	Wed 15/1/20	Tue 21/4/20	Wed 15/1/20	Tue 21/4/20	161,355,356,600	358	100%	6
358	CHPB-06000		Pile Loading Test			4 days	Wed 29/7/20	Sat 1/8/20	Wed 29/7/20	Sat 1/8/20	357	359	100%	
359	CHPB-07000		Excavation for Pile Cap (2,060 cu.m)		(382), (385), (295), (420), (430), (95)	58 days	Sat 6/11/21	Sat 15/1/22	Sat 6/11/21	Sat 15/1/22	179,164,358,163,339	361,360FF-2 emons	100%	10
360	CHPB-07900		Receiving of Civil Requirements from PM			1 day	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	359FF-2 emons	361SS-2 emons	100%	
361	CHPB-08000		R.C. Structure - update on Civil Requirement & Change to the Works Information		(295), (416), (417), (418), (346), (43	200 days	Tue 28/12/21	Wed 31/8/22	Tue 28/12/21	NA	239,240,166,359,238,360SS-2 emon	368	76%	10
362	CHPB-08100		Lower Ground Floor @+7.55mPD - Change to the Works Information (Additional RC Beam and Revised Detail for		295	109 days	Tue 28/12/21	Sat 14/5/22	Tue 28/12/21	Sat 14/5/22		363	100%	
363	CHPB-08200		Upper Ground Floor @13.05mPD			60 days	Sun 1/5/22	Thu 14/7/22	Sun 1/5/22	Thu 14/7/22	362	364FS-10 days	100%	
364	CHPB-08300		First Floor @19.60mPD			47 days	Thu 14/7/22	Tue 6/9/22	Thu 14/7/22	Tue 6/9/22	363FS-10 days	365FS-14 days	100%	
365	CHPB-08400		Podium @24.15mPD			40 days	Mon 22/8/22	Mon 10/10/22	Mon 22/8/22	NA	364FS-14 days	366FS-14 days	0%	
366	CHPB-08500		Roof @27.15mPD			28 days	Wed 21/9/22	Tue 25/10/22	Wed 21/9/22	NA	365FS-14 days	367FS-20 days,369FS-15 days	0%	
367	**CHPB-09000**	**KD3C**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Fri 30/9/22**	**Fri 30/9/22**	**Fri 30/9/22**	**Fri 30/9/22**	**366FS-20 days**	**40FF,370FS-2 days**	**100%**	
368	CHPB-10000		Drainage System (within Bldg/ Structure) Installation			60 days	Thu 1/9/22	Sat 12/11/22	Thu 1/9/22	NA	361	46FF	0%	
369	CHPB-11000	SW3	ABWF Works & BS Works with additional/change to works information		(173)	52 days	Sat 8/10/22	Wed 7/12/22	NA	NA	242SS,168SS,366FS-15 days	46FF	0%	
370	CHPB-11500	SW4	Surrounding sewerage, utility and process pipe works		221,219,220,248,205,206	91 days	Thu 29/9/22	Wed 18/1/23	NA	NA	367FS-2 days	47FF,581FS-428 days,582FS-4	0%	
371	CHPB-12000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
372	**CSPS-00000**	*	**Sewage Pumping Station (9)**			**1177 days**	**Fri 15/11/19**	**Mon 6/11/23**	**Fri 15/11/19**	**NA**			**75%**	
373	CSPS-01000		Site Clearance & Site Set Up			14 days	Fri 15/11/19	Sat 30/11/19	Fri 15/11/19	Sat 30/11/19	2	374	100%	
374	CSPS-02000		Predrilling Works (4no.1rig, 3days/drillhole/rig)			0 days	Mon 2/12/19	Mon 30/12/19	Mon 2/12/19	Mon 30/12/19	160FS+14 days,373	375	100%	
375	CSPS-03000		Installation of Monitoring Points			4 days	Fri 17/4/20	Tue 21/4/20	Fri 17/4/20	Tue 21/4/20	374		100%	
376	CSPS-04000		Setting up plant for pre-bored socked H-pile Installation	25		5 days	Tue 21/4/20	Sat 25/4/20	Tue 21/4/20	Sat 25/4/20	333	377	100%	
377	CSPS-05000		Pre-bored Socketed H-Pile Installation (22 Nos, 1 Rig, 3days/rig/pile)	21, 22		27 days	Mon 27/4/20	Fri 29/5/20	Mon 27/4/20	Fri 29/5/20	161,376	378	100%	6



Critical Split · Task · Milestone · Summary · Critical

Revised Programme (Status Date: 30/09/2022)

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 Allowan
378	CSPS-06000		Pile Loading Test	33, 45		11 days	Sat 27/6/20	Fri 10/7/20	Sat 27/6/20	Fri 10/7/20	377,392FS+5 days	380,264FS+5 days,379	100%	
379	CSPS-07000		Sheet Pile Installation	258		0 days	Sat 10/10/20	Sat 10/10/20	Sat 10/10/20	Sat 10/10/20	378,302FS+8 days	380	100%	
380	CSPS-08000		ELS Works (incl. Strut (3-layers) Installation & Excavation (1,440 cu.m))	(92)		56 days	Wed 18/11/20	Mon 25/1/21	Wed 18/11/20	Mon 25/1/21	179,164,378,163,379	381FF-2 emons,382	100%	10
381	CSPS-08900		Receiving of Civil Requirements from PM			1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	380FF-2 emons	382SS-2 emons	100%	
382	CSPS-09000	KD3E	R.C. Structure & waterproofing works - Change to Work Information (Additional Puddle Flange and Civil Provision)	268, 338, (204),	*(63) ,(303), (341)*	297 days	Tue 26/1/21	Wed 26/1/22	Tue 26/1/21	Wed 26/1/22	380,166,238,239,240,381SS-2 emons	383,42FF	100%	
383	CSPS-10000	SW3	ABWF Works & BS Works & Apply Internal Anti-corrosion Protective Lining			90.5 days	Tue 3/5/22	Sat 20/8/22	Tue 3/5/22	Sat 20/8/22	242SS,168SS,167,382	46FF	100%	3
384	CSPS-10500	SW4	Surrounding sewerage, utility and process pipe works		386 , 299	45 days	Mon 13/6/22	Thu 4/8/22	Mon 13/6/22	Thu 4/8/22	311FS-38 days	47FF,581FS-148 days,582FS-1	100%	
385	CSPS-11000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
386	**CWS2-00000**	*	**Workshop No. 2 (5)**			**1144 days**	**Tue 24/12/19**	**Mon 6/11/23**	**Tue 24/12/19**	**NA**			**48%**	
387	CWS2-01000		Site Clearance & Site Set Up			3 days	Tue 24/12/19	Sat 28/12/19	Tue 24/12/19	Sat 28/12/19	2	388	100%	
388	CWS2-02000		Predrilling Works (10no.1rig, 3days/drillhole/rig)		16, (10)	8 days	Thu 2/1/20	Fri 10/1/20	Thu 2/1/20	Fri 10/1/20	160,387	389	100%	
389	CWS2-03000		Installation of Monitoring Points			4 days	Tue 25/2/20	Fri 28/2/20	Tue 25/2/20	Fri 28/2/20	388	391,390	100%	
390	CWS2-04000		Setting up plant for pre-bored socked H-pile Installation	17		0 days	Tue 10/3/20	Tue 17/3/20	Tue 10/3/20	Tue 17/3/20	389,263	391	100%	
391	CWS2-05000		Pre-bored Socketed H-Pile Installation (36 Nos, 2 Rig, 3days/rig/pile)	17, 21, 22, 33	(10)	64 days	Wed 18/3/20	Sat 6/6/20	Wed 18/3/20	Sat 6/6/20	161,389,390	392,410	100%	6
392	CWS2-06000		Pile Loading Test	33		16 days	Sun 7/6/20	Fri 26/6/20	Sun 7/6/20	Fri 26/6/20	391,601FS+5 days	393,378FS+5 days	100%	
393	CWS2-07000		Excavation for Pile Cap (1,800 cu.m) - Change to Work Information (Revised Layout of Foundation)	268, 338	(169), (85)	24 days	Thu 31/12/20	Thu 28/1/21	Thu 31/12/20	Thu 28/1/21	179,164,392,163	396,545,412,394FF-2 emons	100%	56
394	CWS2-07900		Receiving of Civil Requirements from PM		548, 557 , (170)	1 day	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	Mon 21/6/21	393FF-2 emons	395SS-2 emons	100%	
395	CWS2-08000		R.C. Structure		(303), 374, (85), (169), (185), (195),	204 days	Tue 16/3/21	Sat 20/11/21	Tue 16/3/21	Sat 20/11/21	394SS-2 emons		100%	10
396	CWS2-08010		Ground Floor Construction @ +6.30mpD - Revised Civil Requirements in G/F	(204), (228)	(169), (185), (195), (217), (223), (22	135 days	Tue 16/3/21	Sat 28/8/21	Tue 16/3/21	Sat 28/8/21	393,238	397	100%	
397	CWS2-08020		First Floor Construction @ +13.50mpD - Revised Civil Requirements in 1/F		(266), (299), (300)	55 days	Mon 30/8/21	Thu 4/11/21	Mon 30/8/21	Thu 4/11/21	396	398	100%	
398	CWS2-08030	KD3D	Roof Construction @+19.00mPD - Revised Civil Requirements in R/F		(302)	14 days	Fri 5/11/21	Sat 20/11/21	Fri 5/11/21	Sat 20/11/21	397	399	100%	
399	**CWS2-09000**	**KD3D**	**Allow access to Contractor DE/2018/03 for E&M Installation**			**0 days**	**Sat 20/11/21**	**Sat 20/11/21**	**Sat 20/11/21**	**Sat 20/11/21**	**398**	**41FF,400**	**100%**	
400	CWS2-10000		Drainage System (within Bldg/ Structure) Installation		(265), 366	300 days	Mon 22/11/21	Fri 25/11/22	Mon 22/11/21	NA	399	46FF	0%	
401	CWS2-11000	SW3	ABWF Works & BS Works - Revised Architectural Layout & Schedule for Doors, Louvers and Windows		(95), (173), (406,407,408)	278 days	Mon 22/11/21	Mon 31/10/22	Mon 22/11/21	NA	242SS,168SS	46FF	64%	
402	CWS2-11500	SW4	Surrounding sewerage, utility and process pipe works		221,219,220,205,206,207	41 days	Mon 1/8/22	Sat 17/9/22	Mon 1/8/22	Sat 17/9/22	384FS-4 days	47FF,581FS-200 days,582FS-2	100%	
403	CWS2-12000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
404	**CTHP-00000**	*	**Thermal Hydrolysis Pretreatment (6)**			**1339.8 days**	**Thu 19/12/19**	**Wed 10/7/24**	**Thu 19/12/19**	**NA**			**31%**	
405	CTHP-01000		Site Clearance & Site Set Up			18 days	Thu 19/12/19	Sat 11/1/20	Thu 19/12/19	Sat 11/1/20	2	406,407	100%	
406	CTHP-02000		Predrilling Works (3no.1rig, 3days/drillhole/rig)		21/24, (10)	1 day	Fri 10/1/20	Mon 13/1/20	Fri 10/1/20	Mon 13/1/20	160FS+24 days,405	408	100%	
407	CTHP-03000		Additional Predrilling Works (4no.)		(12)	1 day	Fri 10/1/20	Mon 13/1/20	Fri 10/1/20	Mon 13/1/20	405	408	100%	
408	CTHP-04000		Installation of Monitoring Points			6 days	Fri 1/5/20	Fri 8/5/20	Fri 1/5/20	Fri 8/5/20	406,407	410	100%	
409	CTHP-05000		Setting up plant for pre-bored socked H-pile Installation	22		5 days	Tue 12/5/20	Sat 16/5/20	Tue 12/5/20	Sat 16/5/20		410	100%	
410	CTHP-06000		Pre-bored Socketed H-Pile Installation (15 Nos, 1 Rig, 3days/rig/pile)	22, 33	(10)	30 days	Mon 18/5/20	Sat 20/6/20	Mon 18/5/20	Sat 20/6/20	161,408,409,391	411	100%	6
411	CTHP-07000		Pile Loading Test	45, 46, 257		25 days	Mon 27/7/20	Fri 11/9/20	Mon 27/7/20	Fri 11/9/20	410,264FS+5 days	412,301SS+10 days	100%	
412	CTHP-08000		Excavation for Pile Cap (160 cu.m)		225, (70), (75)	12 days	Mon 19/10/20	Mon 2/11/20	Mon 19/10/20	Mon 2/11/20	179,164,411,393	414,413FF-2 emons	100%	
413	CTHP-08900		Receiving of Civil Requirements from PM		(270)	1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	412FF-2 emons	414SS-2 emons	100%	
414	CTHP-09000	KD3E, SW3	R.C. Plinth - Change to Works Information	268, 338	225, (115),(236)	0 days	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20	Mon 2/11/20	412,308,413SS-2 emons	42FF,46FF	100%	
415	CTHP-09500	SW4	Surrounding sewerage, utility and process pipe works			42 days	Fri 11/11/22	Sat 31/12/22	NA	NA	346FS+38 days	47FF,581FS-200 days,582FS-2	0%	
416	CTHP-10000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	325FF	48FF	0%	
417	**CFCD-00000**	*	**Ferric Chloride Dosing Facilities (10)**			**903.8 days**	**Tue 15/6/21**	**Wed 10/7/24**	**Tue 15/6/21**	**NA**			**28%**	
418	CFCD-01000		Excavation & ELS for Raft Footing (105 cu.m)			30 days	Thu 2/6/22	Fri 8/7/22	Thu 2/6/22	Fri 8/7/22	419	421	100%	
419	CFCD-02000		Plate Load Test			19 days	Tue 10/5/22	Sat 28/5/22	Tue 10/5/22	Sat 28/5/22	310FS+8 days	421,420FF-2 emons,418	100%	
420	CFCD-02900		Receiving of Civil Requirements from PM			1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	419FF-2 emons	421SS-2 emons	100%	
421	CFCD-03000		R.C. Structure			50 days	Sat 9/7/22	Mon 5/9/22	Sat 9/7/22	Mon 5/9/22	166,238,420SS-2 emons,419,418	422	100%	5
422	CFCD-04000	KD3E	Steel Roof Structure (On-site Fabrication)			23 days	Sat 30/7/22	Wed 5/10/22	Sat 30/7/22	NA	421	423,42FF,470	0%	
423	CFCD-05000	SW3	ABWF Works & BS Works, Change to Work Information (Application of Protective Lining System)		*594*	28 days	Wed 5/10/22	Mon 7/11/22	NA	NA	422,242,168	46FF,581FS-185 days,582FS-1	0%	
424	CFCD-05500	SW4	Surrounding sewerage, utility and process pipe works - Updated Process Pipes Arrangement		386, 298	29 days	Wed 23/11/22	Thu 29/12/22	NA	NA	402FS+55 days	47FF,581FS-200 days,582FS-2	0%	
425	CFCD-06000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	325FF	48FF	0%	
426	**CFHB-00000**	*	**Fire Hydrant and Booster Pump Room (16)**			**877.8 days**	**Fri 16/7/21**	**Wed 10/7/24**	**Fri 16/7/21**	**NA**			**0%**	
427	CFHB-01000		Excavation for Raft Footing (160 cu.m)			3 days	Fri 14/10/22	Tue 18/10/22	NA	NA	2,346,558FS+6 days	428	0%	
428	CFHB-02000		Plate Load Test			11 days	Tue 18/10/22	Mon 31/10/22	NA	NA	427	430FS+1 day,429FF-2 emons	0%	
429	CFHB-02900		Receiving of Civil Requirements from PM			1 day	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	428FF-2 emons		100%	
430	CFHB-03000	KD3E	R.C. Structure & waterproofing works			40 days	Tue 1/11/22	Sat 17/12/22	NA	NA	428FS+1 day	431,42FF	0%	5
431	CFHB-04000	SW3	ABWF Works & BS Works			24 days	Sat 17/12/22	Wed 18/1/23	NA	NA	430,242SS,168SS	46FF,581FS-320 days,582FS-3	0%	
432	CFHB-04500	SW4	Surrounding sewerage, utility and process pipe works			105 days	Thu 25/8/22	Fri 30/12/22	NA	NA	346SS+2 days	47FF,581FS-200 days,582FS-2	0%	
433	CFHB-05000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	325FF	48FF	0%	
434	**CTFS-00000**	*	**Transformer and Switchroom (15)**			**686 days**	**Fri 16/7/21**	**Mon 6/11/23**	**Fri 16/7/21**	**NA**			**0%**	
435	CTFS-01000		ELS for Raft Footing (310 cu.m)		386	8 days	Fri 7/10/22	Mon 17/10/22	NA	NA	2,346,558	436	0%	
436	CTFS-02000		Plate Load Test			10 days	Mon 17/10/22	Fri 28/10/22	NA	NA	435	438,437FF-2 emons	0%	
437	CTFS-02900		Receiving of Civil Requirements from PM			1 day	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	436FF-2 emons	438	100%	
438	CTFS-03000	KD3E	R.C. Structure			47 days	Fri 28/10/22	Thu 22/12/22	NA	NA	436,166,238,437	439,42FF	0%	5
439	CTFS-04000	SW3	ABWF Works & BS Works		(95)	22 days	Thu 22/12/22	Fri 20/1/23	NA	NA	438,242SS,168SS	46FF	0%	
440	CTFS-04500	SW4	Surrounding sewerage, utility and process pipe works			105 days	Thu 25/8/22	Fri 30/12/22	NA	NA	346SS+2 days	47FF,581FS-200 days,582FS-2	0%	
441	CTFS-05000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
442	**CUC-00000**	*	**Utility Corridor (13)**		**204**	**311 days**	**Wed 5/10/22**	**Sat 21/10/23**	**NA**	**NA**			**0%**	
443	CUC-01000		Excavation for Trial Pit -Additional Works (Verification of Existing Utilities)		478	30 days	Wed 5/10/22	Wed 9/11/22	NA	NA	2,313FS+25 days	444	0%	
444	CUC-02000		Construction of Utility Corridor			50 days	Wed 9/11/22	Tue 10/1/23	NA	NA	166,238,443	445,446,459FS+1 day	0%	3
445	CUC-03000		ABWF Works & BS Works			70 days	Tue 10/1/23	Thu 6/4/23	NA	NA	444,242SS,168SS		0%	
446	CUC-03500	SW4	Surrounding sewerage, utility and process pipe works		248,205,207	35 days	Wed 1/2/23	Tue 14/3/23	NA	NA	444,319FS-35 days	47FF,581FS-200 days,582FS-2	0%	
447	CUC-04000	SW5	Surrounding Site formation works and road works			180 days	Tue 14/3/23	Sat 21/10/23	NA	NA	446	48FF	0%	
448	**CWMC-00000**	*	**Water Meter Cabinet (11)**		**204**	**356 days**	**Thu 25/8/22**	**Mon 6/11/23**	**NA**	**NA**			**0%**	
449	CWMC-01000		Excavation for Raft Footing (6 cu.m)			10 days	Sat 22/10/22	Thu 3/11/22	NA	NA	488SS	451,450FF-2 emons	0%	
450	CWMC-01900		Receiving of Civil Requirements from PM			0 days	Sun 4/9/22	Sun 4/9/22	NA	NA	449FF-2 emons	451SS-2 emons	0%	
451	CWMC-02000		R.C. Structure			15 days	Thu 3/11/22	Mon 21/11/22	NA	NA	166,238,449,450SS-2 emons	452	0%	3
452	CWMC-03000		ABWF Works & BS Works			17 days	Mon 21/11/22	Sat 10/12/22	NA	NA	451,242SS,168SS		0%	
453	CWMC-03500		Surrounding sewerage, utility and process pipe works		220	105 days	Thu 25/8/22	Fri 30/12/22	NA	NA	346SS+2 days	47FF,581FS-200 days,582FS-2	0%	
454	CWMC-04000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
455	**CGH-00000**	*	**Guard House (14)**			**834.8 days**	**Fri 16/7/21**	**Sat 18/5/24**	**Fri 16/7/21**	**NA**			**0%**	
456	CGH-01000		Excavation to Formation			10 days	Wed 1/2/23	Mon 13/2/23	NA	NA	2,446SS	457FF-2 emons,458	0%	
457	CGH-01900		Receiving of Civil Requirements from PM			1 day	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	456FF-2 emons	458SS-2 emons	100%	
458	CGH-02000		R.C. Structure			29 days	Mon 13/2/23	Sat 18/3/23	NA	NA	457SS-2 emons,166,456,238		0%	3
459	CGH-03000		ABWF Works & BS Works		(95)	22 days	Wed 11/1/23	Thu 9/2/23	NA	NA	242SS,168SS,444FS+1 day		0%	
460	CGH-03500	SW4	Surrounding sewerage, utility and process pipe works		205	47 days	Wed 1/2/23	Tue 28/3/23	NA	NA	319FS-35 days		0%	
461	CGH-04000	SW5	Surrounding Site formation works and road works			180 days	Tue 21/11/23	Sat 18/5/24	NA	NA	325FF	48FF	0%	
462	**CCPS-00000**	*	**THP Coolers Pumping Station (21)**			**569 days**	**Fri 3/12/21**	**Mon 6/11/23**	**Fri 3/12/21**	**NA**			**23%**	
463	CCPS-01010		Sheet Pile Installation			20 days	Fri 3/12/21	Wed 22/12/21	Fri 3/12/21	Wed 22/12/21	305SS+30 days		100%	
464	CCPS-01000		Excavation & ELS (185 cu.m)		(70)	75 days	Mon 10/1/22	Mon 11/4/22	Mon 10/1/22	Mon 11/4/22		465FF-2 emons,466FS+61 days	100%	
465	CCPS-01900		Receiving of Civil Requirements from PM			1 day	Thu 30/12/21	Thu 30/12/21	Thu 30/12/21	Thu 30/12/21	464FF-2 emons	466SS-2 emons	100%	
466	CCPS-02000	KD3E	R.C. Structure			121 days	Wed 29/6/22	Mon 21/11/22	Wed 29/6/22	NA	166,238,465SS-2 emons,464FS+61	467FS+21 days	0%	5
467	CCPS-02500	SW4	Surrounding sewerage, utility and process pipe works			26 days	Thu 15/12/22	Wed 18/1/23	NA	NA	466FS+21 days	47FF	0%	
468	CCPS-03000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF		0%	
469	**CWGB-00000**	*	**Waste Gas Burner (8)**			**903.8 days**	**Tue 15/6/21**	**Wed 10/7/24**	**Tue 15/6/21**	**NA**			**0%**	



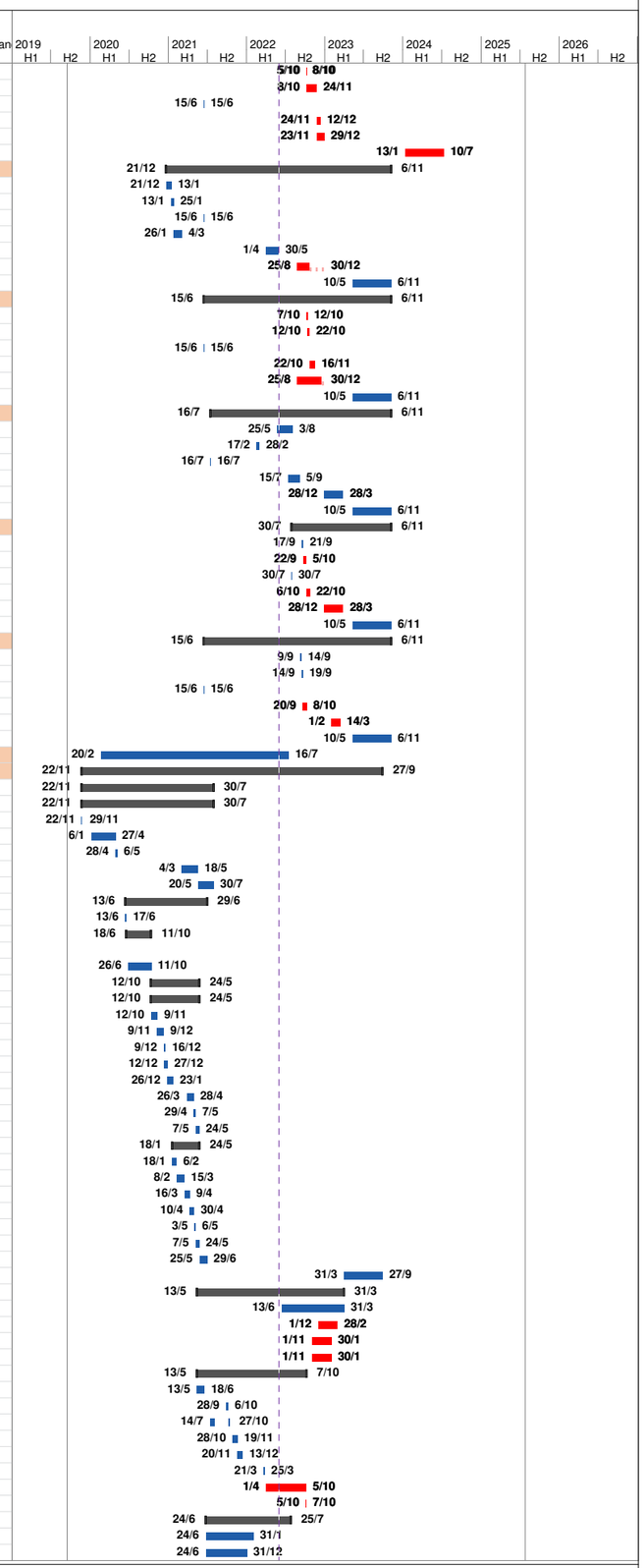
Critical Split · · · · · · · · · · · · · · · · Task ▬▬ Milestone ◆ Summary ▬▬ Critical ▬▬

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: 30/09/2022)

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 Allowan
470	CWGB-01000		Excavation for Raft Rooting (75cu.m)			3 days	Wed 5/10/22	Sat 8/10/22	NA	NA	422	471	0%	
471	CWGB-02000		Plate Load Test			40 days	Sat 8/10/22	Thu 24/11/22	NA	NA	470	472FF-2 emons,473	0%	
472	CWGB-02900		Receiving of Civil Requirements from PM			1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	471FF-2 emons	473SS-2 emons	100%	
473	CWGB-03000	KD3E	R.C. Plinth			15 days	Thu 24/11/22	Mon 12/12/22	NA	NA	166,472SS-2 emons,471	42FF	0%	
474	CWGB-03500	SW4	Surrounding sewerage, utility and process pipe works			29 days	Wed 23/11/22	Thu 29/12/22	NA	NA	402FS+55 days	47FF,581FS-200 days,582FS-2	0%	
475	CWGB-04000	SW5	Surrounding Site formation works and road works			180 days	Sat 13/1/24	Wed 10/7/24	NA	NA	325FF	48FF	0%	
476	**CPSW-00000**	*	**Plant Services Water System (20)**			**850 days**	**Mon 21/12/20**	**Mon 6/11/23**	**Mon 21/12/20**		**NA**		**29%**	
477	CPSW-01000		Excavation for Raft Footing (800 cu.m) - Unexpected Ground Condition, leads to modification of ELS		336,(81), (34)	18 days	Mon 21/12/20	Wed 13/1/21	Mon 21/12/20	Wed 13/1/21	2	478	100%	
478	CPSW-02000		Plate Load Test			10 days	Wed 13/1/21	Mon 25/1/21	Wed 13/1/21	Mon 25/1/21	477	480,479FF-2 emons	100%	
479	CPSW-02900		Receiving of Civil Requirements from PM		(136)	1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	478FF-2 emons	480SS-2 emons	100%	
480	CPSW-03000	KD3E	Basement Construction @+1.20mPD - Change to Works Information (Basement)		*(136), (117)*	30 days	Tue 26/1/21	Thu 4/3/21	Tue 26/1/21	Thu 4/3/21	478,166,479SS-2 emons	42FF,481	100%	
481	CPSW-03500	SW3	ABWF Works & BS Works			60 days	Fri 1/4/22	Mon 30/5/22	Fri 1/4/22	Mon 30/5/22	480	46FF	100%	
482	CPSW-03600	SW4	Surrounding sewerage, utility and process pipe works - (Updated Process Pipe Arrangement)		*439,455*	105 days	Thu 25/8/22	Fri 30/12/22	NA	NA	346SS+2 days	47FF,581FS-200 days,582FS-2	0%	
483	CPSW-04000	SW5	Surrounding Site formation works and road works	338,(204),		180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
484	**CDS11-00000**	*	**Deodorization System No. 11 (18)**			**712 days**	**Tue 15/6/21**	**Mon 6/11/23**	**Tue 15/6/21**		**NA**		**0%**	
485	CDS11-01000		Excavation for Raft Footing (1,280 cu.m)			4 days	Fri 7/10/22	Wed 12/10/22	NA	NA	558,347SS+7 days	486	0%	
486	CDS11-02000		Plate Load Test			9 days	Wed 12/10/22	Sat 22/10/22	NA	NA	485	488,487FF-2 emons	0%	
487	CDS11-02900		Receiving of Civil Requirements from PM			1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	486FF-2 emons	488SS-2 emons	100%	
488	CDS11-03000	KD3E, SW3	R.C. Plinth			21 days	Sat 22/10/22	Wed 16/11/22	NA	NA	486,166,487SS-2 emons	42FF,449SS,46FF	0%	
489	CDS11-03500	SW4	Surrounding sewerage, utility and process pipe works			105 days	Thu 25/8/22	Fri 30/12/22	NA	NA	346SS+2 days	47FF	0%	
490	CDS11-04000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
491	**CBGH-00000**	*	**Biogas Holder (7)**			**686 days**	**Fri 16/7/21**	**Mon 6/11/23**	**Fri 16/7/21**		**NA**		**31%**	
492	CBGH-01000		Excavation for Raft Footing (1,120 cu.m) - Uncharted Concrete		(452), (454), (455)	59 days	Wed 25/5/22	Wed 3/8/22	Wed 25/5/22	Wed 3/8/22	2	493,495FS-17 days	100%	
493	CBGH-02000		Plate Load Test			10 days	Thu 17/2/22	Mon 28/2/22	Thu 17/2/22	Mon 28/2/22	492	495,494FF-2 emons	100%	
494	CBGH-02900		Receiving of Civil Requirements from PM		299	1 day	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	Fri 16/7/21	493FF-2 emons	495SS-2 emons	100%	
495	CBGH-03000	KD3E, SW3	R.C. Plinth - Change to Works Information (Resize of Plinth)		481	45 days	Fri 15/7/22	Mon 5/9/22	Fri 15/7/22	Mon 5/9/22	493,166,494SS-2 emons,492FS-17	42FF,46FF,496	100%	
496	CBGH-03500	SW4	Surrounding sewerage, utility and process pipe works - update process pipe arrangement, Revised Plan for Pipe		262,297,248	73 days	Wed 28/12/22	Tue 28/3/23	NA	NA	495,324SS+9 days	47FF,581FS-200	0%	
497	CBGH-04000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
498	**CH2S-00000**	*	**H2S Removal System (12)**			**378 days**	**Sat 30/7/22**	**Mon 6/11/23**	**Sat 30/7/22**		**NA**		**2%**	
499	CH2S-01000		Excavation for Raft Footing (396 cu.m)			4 days	Sat 17/9/22	Wed 21/9/22	Sat 17/9/22	Wed 21/9/22	317FS-35 days,319	500	100%	
500	CH2S-02000		Receiving of Civil Requirements from PM			10 days	Thu 22/9/22	Wed 5/10/22	Thu 22/9/22	NA	499	501FF-2 emons,502	0%	
501	CH2S-02900					1 day	Sat 30/7/22	Sat 30/7/22	Sat 30/7/22	Sat 30/7/22	500FF-2 emons		100%	
502	CH2S-03000	KD3E, SW3	R.C. Plinth			15 days	Thu 6/10/22	Sat 22/10/22	NA	NA	500	42FF,46FF	0%	
503	CH2S-03500	SW4	Surrounding sewerage, utility and process pipe works	248		73 days	Wed 28/12/22	Tue 28/3/23	NA	NA	324SS+9 days	47FF,581FS-200 days,582FS-2	0%	
504	CH2S-04000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
505	**CDS12-00000**	*	**Deodorization System No. 12 (19)**			**712 days**	**Tue 15/6/21**	**Mon 6/11/23**	**Tue 15/6/21**		**NA**		**4%**	
506	CDS12-01000		Excavation to Formation			4 days	Fri 9/9/22	Wed 14/9/22	Fri 9/9/22	Wed 14/9/22	317FS-42 days,319	507	100%	
507	CDS12-02000		Plate Load Test			5 days	Wed 14/9/22	Mon 19/9/22	Wed 14/9/22	Mon 19/9/22	506	508FF-2 emons,509	100%	
508	CDS12-02900		Receiving of Civil Requirements from PM			1 day	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	Tue 15/6/21	507FF-2 emons	509SS-2 emons	100%	
509	CDS12-03000	KD3E, SW3	R.C. Plinth			15 days	Tue 20/9/22	Sat 8/10/22	NA	NA	166,508SS-2 emons,507	42FF,46FF	0%	
510	CDS12-03500	SW4	Surrounding sewerage, utility and process pipe works			35 days	Wed 1/2/23	Tue 14/3/23	NA	NA	319FS-35 days	47FF,581FS-200 days,582FS-2	0%	
511	CDS12-04000	SW5	Surrounding Site formation works and road works			180 days	Wed 10/5/23	Mon 6/11/23	NA	NA	325FF	48FF	0%	
512	CUPH-00000	SW5	Underpass & Pump House			711 days	Thu 20/2/20	Sat 16/7/22	Thu 20/2/20	NA		47FF	81%	
513	**CPWU-00000**	*	**Pipe Works and Utility Installation**			**1140 days**	**Fri 22/11/19**	**Wed 27/9/23**	**Fri 22/11/19**	**NA**			**77%**	
514	**CPWU-01000**		**Pipe Works At Chuk Wan Street**			**498 days**	**Fri 22/11/19**	**Fri 30/7/21**	**Fri 22/11/19**	**Fri 30/7/21**			**100%**	
515	**CPWU-01100**		**Drainage Diversion (Existing Drainage Culvert)**			**498 days**	**Fri 22/11/19**	**Fri 30/7/21**	**Fri 22/11/19**	**Fri 30/7/21**	**258,221**		**100%**	
516	CPWU-01110		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and			7 days	Fri 22/11/19	Fri 29/11/19	Fri 22/11/19	Fri 29/11/19	158,180,185,181,169,202,221	517	100%	
517	CPWU-01120		Stage 1 - Drainage Diversion of Drainage btw Reconstructed Storm Water Manhole SMH1003177A and Reconstr	17, 21	26, (8), (17), (34), (39)	90 days	Mon 6/1/20	Mon 27/4/20	Mon 6/1/20	Mon 27/4/20	516		100%	
518	CPWU-01130	KD1A	Stage 1 - Backfilling Works for Drainage Diversion			9 days	Tue 28/4/20	Wed 6/5/20	Tue 28/4/20	Wed 6/5/20		263	100%	
519	CPWU-01140	KD1A	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Cul	338, (204), (228		60 days	Thu 4/3/21	Tue 18/5/21	Thu 4/3/21	Tue 18/5/21	275	520	100%	
520	CPWU-01150	SW1	Stage 2 - Drainage Diversion of Drainage b/w MHD26 and SMHH1003177A, to Abandon of Exisitng Drainage Cul			60 days	Thu 20/5/21	Fri 30/7/21	Thu 20/5/21	Fri 30/7/21	519	44FF	100%	
521	**CPWU-01200**	**SW4**	**Trenchless Work for Pipe Installation**			**309 days**	**Sat 13/6/20**	**Tue 29/6/21**	**Sat 13/6/20**	**Tue 29/6/21**		**47FF**	**100%**	
522	CPWU-01210		Installation of Monitoring Points	33		4 days	Sat 13/6/20	Wed 17/6/20	Sat 13/6/20	Wed 17/6/20		524	100%	
523	**CPWU-01220**		**Construction of Temporary Jacking Pit**			**95 days**	**Thu 18/6/20**	**Sun 11/10/20**	**Thu 18/6/20**	**Sun 11/10/20**	**15,172**		**100%**	
524	CPWU-01221		Trial Pit Excavation & UU Detection Works			0 days	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	2,522	525	100%	
525	CPWU-01222		Pit Construction (11m x 9m)	33, 45, 46, 257,		89 days	Fri 26/6/20	Sun 11/10/20	Fri 26/6/20	Sun 11/10/20	524	528	100%	
526	**CPWU-01230**		**Pipe Jacking Operation**			**180 days**	**Mon 12/10/20**	**Mon 24/5/21**	**Mon 12/10/20**	**Mon 24/5/21**			**100%**	
527	CPWU-01231		Twin DN900 DI pipe (CHAT & CHAU)		(26), (128), 230	180 days	Mon 12/10/20	Mon 24/5/21	Mon 12/10/20	Mon 24/5/21			100%	
528	CPWU-01231a		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment	(69), (92)	(60)	24 days	Mon 12/10/20	Mon 9/11/20	Mon 12/10/20	Mon 9/11/20	525	529	100%	
529	CPWU-01231b		Pipe Jacking Operation for CHAT DN900 DI pipe (30m, 3m/day)	(92)		26 days	Mon 9/11/20	Wed 9/12/20	Mon 9/11/20	Wed 9/12/20	528	532,531,530	100%	6
530	CPWU-01231c		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment	(112)		7 days	Wed 9/12/20	Wed 16/12/20	Wed 9/12/20	Wed 16/12/20	529	531	100%	
531	CPWU-01231d		Pipe Jacking Operation for CHAU DN900 DI pipe (30m, 3m/day)	(112)		16 days	Sat 12/12/20	Sun 27/12/20	Sat 12/12/20	Sun 27/12/20	529,530	532	100%	
532	CPWU-01231e		Installation of grouting pipe and rail			23 days	Sat 26/12/20	Sat 23/1/21	Sat 26/12/20	Sat 23/1/21	529,531	533	100%	
533	CPWU-01231f		Pipe Laying Works			25 days	Fri 26/3/21	Wed 28/4/21	Fri 26/3/21	Wed 28/4/21	532	534	100%	
534	CPWU-01231g		Formwork Erection and grouting works			7 days	Thu 29/4/21	Fri 7/5/21	Thu 29/4/21	Fri 7/5/21	533		100%	
535	CPWU-01231h		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	542SS		100%	
536	**CPWU-01232**		**Pipe Jacking Operation for DN2200 MS pipe (CHAV)**			**100 days**	**Mon 18/1/21**	**Mon 24/5/21**	**Mon 18/1/21**	**Mon 24/5/21**			**100%**	
537	CPWU-01232a		Setting Up of Entrance Ring & Gantry, and Trenchless Equipment		(62)	18 days	Mon 18/1/21	Sat 6/2/21	Mon 18/1/21	Sat 6/2/21		538	100%	
538	CPWU-01232b		Pipe Jacking Operation for twin DN2200 DI pipe	268, 338		28 days	Mon 8/2/21	Mon 15/3/21	Mon 8/2/21	Mon 15/3/21	537	539	100%	6
539	CPWU-01232c		Installation of grouting pipe and rail	(204)		18 days	Tue 16/3/21	Fri 9/4/21	Tue 16/3/21	Fri 9/4/21	538	540	100%	
540	CPWU-01232d		Pipe Laying Works	(204)		18 days	Sat 10/4/21	Fri 30/4/21	Sat 10/4/21	Fri 30/4/21	539	541	100%	
541	CPWU-01232e		Formwork Erection and grouting works			4 days	Mon 3/5/21	Thu 6/5/21	Mon 3/5/21	Thu 6/5/21	540	543,542	100%	
542	CPWU-01232f		Backfilling works			14 days	Fri 7/5/21	Mon 24/5/21	Fri 7/5/21	Mon 24/5/21	541	543,535SS	100%	
543	CPWU-01240		Reinstatement of Temporary Launching Pit			30 days	Tue 25/5/21	Tue 29/6/21	Tue 25/5/21	Tue 29/6/21	541,542	544	100%	
544	CPWU-01020	SW5	Surrounding Site formation works and road works			180 days	Fri 31/3/23	Wed 27/9/23	NA	NA	543,545	48FF	0%	
545	**CPWU-02160**	**SW4**	Cable & Other Underground Utility Pipeworks	**17, 21, 22, 33, 4**	**(283)**	**561 days**	**Thu 13/5/21**	**Fri 31/3/23**	**Thu 13/5/21**		**NA**	**171,336,393**	**544,47FF**	**61%**	
546	CPWU-02160d		Cable works			291 days	Mon 13/6/22	Fri 31/3/23	Mon 13/6/22	NA		47FF	0%	
547	CPWU-02160a		Trench No.1 and associated utilities and pipeworks		297	90 days	Thu 1/12/22	Tue 28/2/23	NA	NA		47FF	0%	
548	CPWU-02160b		Trench No.2 and associated utilities and pipeworks		298	91 days	Tue 1/11/22	Mon 30/1/23	NA	NA		47FF	0%	
549	CPWU-02160c		Trench No.3 and associated utilities and pipeworks		299	91 days	Tue 1/11/22	Mon 30/1/23	NA	NA		47FF	0%	
550	**CPWU-02161**		**Portion C1-B, UV No.1 Building**			**417 days**	**Thu 13/5/21**	**Fri 7/10/22**	**Thu 13/5/21**		**NA**	**283**		**53%**	
551	CPWU-02161a		Falsework removal of UV no.1 building		288, 248	30 days	Thu 13/5/21	Fri 18/6/21	Thu 13/5/21	Fri 18/6/21		44FF	100%	
552	CPWU-02161b		Fence Wall (25m) - Footing		248, (323)	7 days	Tue 28/9/21	Wed 6/10/21	Tue 28/9/21	Wed 6/10/21		553,44FF	100%	
553	CPWU-02161c		Sewage & Drainage system & Concrete Pipe between MHD26 and SMH1003177A (+3.6mPD)			88 days	Wed 14/7/21	Wed 27/10/21	Wed 14/7/21	Wed 27/10/21	552	554,44FF	100%	
554	CPWU-02161d		Process pipe DN800 (CHAY)			20 days	Thu 28/10/21	Fri 19/11/21	Thu 28/10/21	Fri 19/11/21	553	555,44FF	100%	
555	CPWU-02161e		Fence wall (25m) - Wall		(323)	20 days	Sat 20/11/21	Mon 13/12/21	Sat 20/11/21	Mon 13/12/21	554	556,44FF	100%	
556	CPWU-02161f		Irrigation System		218	5 days	Mon 21/3/22	Fri 25/3/22	Mon 21/3/22	Fri 25/3/22	555	557,44FF	100%	
557	CPWU-02161g		Road works (footpath 25m)			150 days	Fri 1/4/22	Wed 5/10/22	Fri 1/4/22	NA	556	558	0%	
558	CPWU-02161h		Pedestrian Walkway diversion works			2 days	Wed 5/10/22	Fri 7/10/22	NA	NA	557	427FS+6 days,435,485	0%	
559	**CPWU-02162**		**Portion C1-B, EVA**			**322 days**	**Thu 24/6/21**	**Mon 25/7/22**	**Thu 24/6/21**	**Mon 25/7/22**		**47FF**	**100%**	
560	CPWU-02162a		Watermain works DN450, 350, 300, 150 & 100 (CHL, CHA, CHC, CHLA) (60m)		216, 248, 276,318, (295), (305)	183 days	Thu 24/6/21	Mon 31/1/22	Thu 24/6/21	Mon 31/1/22		561SS	100%	
561	CPWU-02162b		AC DN150 pipe (CHR)		216	191 days	Thu 24/6/21	Fri 31/12/21	Thu 24/6/21	Fri 31/12/21	560SS		100%	



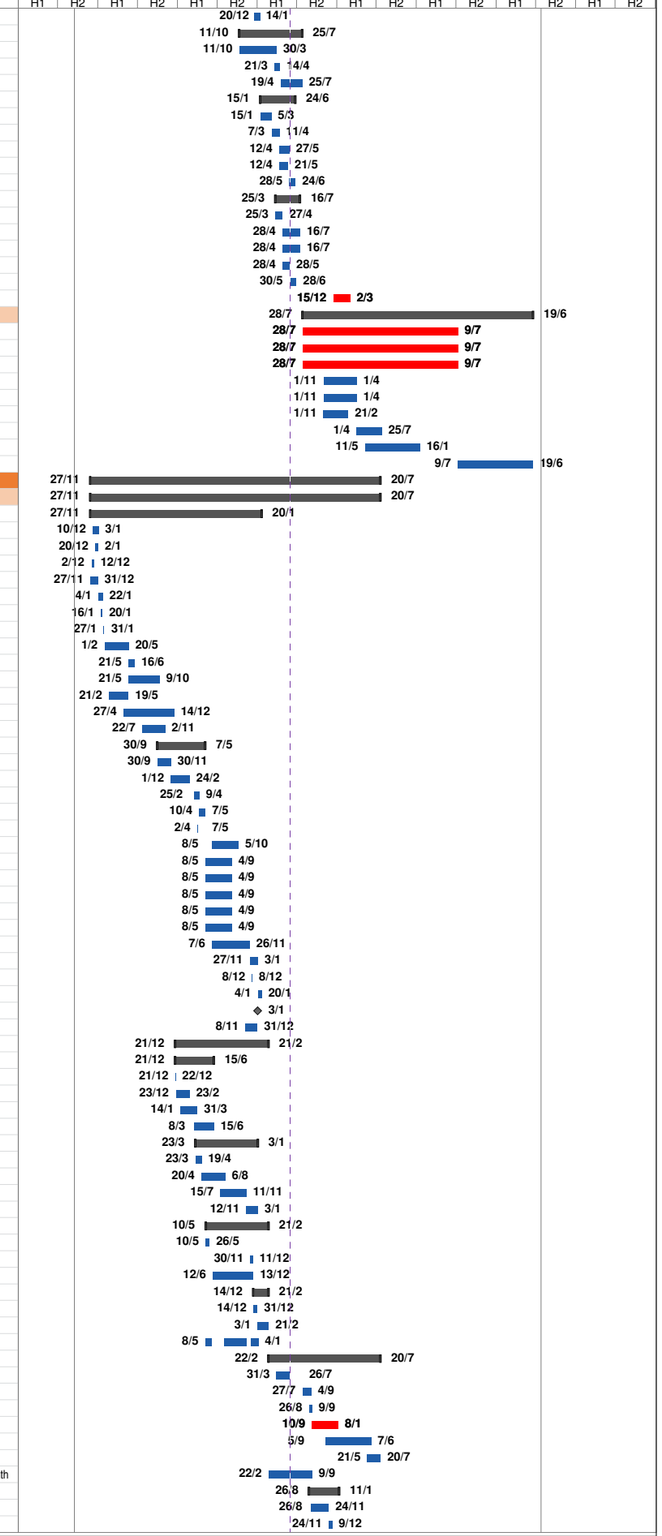
Critical Split | Task | Milestone | Summary | Critical

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: 30/09/2022)

群利－俊和聯營體
KL－CW JV

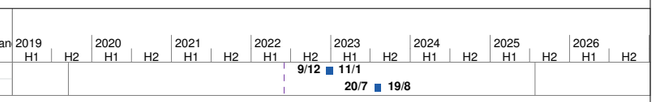
ID	Activity ID	KD	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	% Complete	Time Risk Allowan
562	CPWU-02162c		Fence wall near UV no.1 (30m)		(326)	20 days	Mon 20/12/21	Fri 14/1/22	Mon 20/12/21	Fri 14/1/22		567	100%	
563	CPWU-02162d		Area between Fence wall and UV no.1			232 days	Mon 11/10/21	Mon 25/7/22	Mon 11/10/21	Mon 25/7/22			100%	
564	CPWU-02162d1		Draiange system			140 days	Mon 11/10/21	Wed 30/3/22	Mon 11/10/21	Wed 30/3/22			100%	
565	CPWU-02162d2		Irrigation System		218	21 days	Mon 21/3/22	Thu 14/4/22	Mon 21/3/22	Thu 14/4/22		566	100%	
566	CPWU-02162d3		Road works (footpath 30m)			80 days	Tue 19/4/22	Mon 25/7/22	Tue 19/4/22	Mon 25/7/22	565		100%	
567	CPWU-02162j		Area between Fence wall and SSSH			128 days	Sat 15/1/22	Fri 24/6/22	Sat 15/1/22	Fri 24/6/22	562		100%	
568	CPWU-02162j0		300 Uchannel (50m)			40 days	Sat 15/1/22	Sat 5/3/22	Sat 15/1/22	Sat 5/3/22		569	100%	
569	CPWU-02162j1		HyD Lightng pole and drawpits			30 days	Mon 7/3/22	Mon 11/4/22	Mon 7/3/22	Mon 11/4/22	568	570,571	100%	
570	CPWU-02162j2		Road light & drawpit			35 days	Tue 12/4/22	Fri 27/5/22	Tue 12/4/22	Fri 27/5/22	569	572	100%	
571	CPWU-02162j3		Cable Drawpit & ducts			30 days	Tue 12/4/22	Sat 21/5/22	Tue 12/4/22	Sat 21/5/22	569	572	100%	
572	CPWU-02162j4		Road works (footpath & carriageway)		(343)	23 days	Sat 28/5/22	Fri 24/6/22	Sat 28/5/22	Fri 24/6/22	571,570		100%	
573	**CPWU-02163**		**Portion C1-B (Stage 3 - External Works)**			**90 days**	**Fri 25/3/22**	**Sat 16/7/22**	**Fri 25/3/22**	**Sat 16/7/22**			**100%**	
574	CPWU-02163b		Process Pipe DN1400 (CHAW) (35m)		273	25 days	Fri 25/3/22	Wed 27/4/22	Fri 25/3/22	Wed 27/4/22		577,576,575	100%	
575	CPWU-02163c		Process Pipe DN300 (CHBA) (35m)			80 days	Thu 28/4/22	Sat 16/7/22	Thu 28/4/22	Sat 16/7/22	574	577	100%	
576	CPWU-02163d		Process Pipe DN300 (CHAX) (10m)			80 days	Thu 28/4/22	Sat 16/7/22	Thu 28/4/22	Sat 16/7/22	574	577	100%	
577	CPWU-02163e		Cable drawpit and ducts			25 days	Thu 28/4/22	Sat 28/5/22	Thu 28/4/22	Sat 28/5/22	574,575,576	578	100%	
578	CPWU-02163f		Road Works (footpath & carriageway)			25 days	Mon 30/5/22	Tue 28/6/22	Mon 30/5/22	Tue 28/6/22	577		100%	
579	CPWU-02200	SW4	Pipe Bridge No.1		297	60 days	Thu 15/12/22	Thu 2/3/23	NA	NA	344FS+120 days		0%	
580	**CRWL-00000**	*	**Remaining Works & Landscape Works**			**861 days**	**Thu 28/7/22**	**Thu 19/6/25**	**NA**	**NA**			**0%**	
581	CRWL-01000	SW5	Irrigation System		218	570 days	Thu 28/7/22	Tue 9/7/24	NA	NA	174,285,324FS-360 days,350FS-36	748FF,50	0%	
582	CRWL-02000	SW5	Hard Landscape Works			570 days	Thu 28/7/22	Tue 9/7/24	NA	NA	174,285,324FS-360 days,350FS-36	748FF,50	0%	
583	CRWL-03000	SW5	Soft Landscape Works			570 days	Thu 28/7/22	Tue 9/7/24	NA	NA	174,285,324FS-360 days,350FS-36	7589,48FF,50	0%	
584	CRWL-04000	SW5	Outfall for Effluent Pipes			124 days	Tue 1/11/22	Sat 1/4/23	NA	NA	214	48FF	0%	
585	CRWL-05000	SW5	Slope Formation Works near Outfall			124 days	Tue 1/11/22	Sat 1/4/23	NA	NA	214	48FF,587	0%	
586	CRWL-06000	SW5	Removal of invasive trees along River Embankment		(37)	90 days	Tue 1/11/22	Tue 21/2/23	NA	NA	214	587	0%	
587	CRWL-07000	SW5	Retaining Wall along River Embankment, street furniture & road works			90 days	Sat 1/4/23	Tue 25/7/23	NA	NA	214,586,585	48FF	0%	
588	CRWL-08000	SW5	Remaining Site formation works, road works and boundary fence wall		(348), 299	250 days	Thu 11/5/23	Tue 16/1/24	NA	NA	46	48FF	0%	
589	CRWL-09000		Establishment Works (365 Calendar Days)			291 days	Tue 9/7/24	Thu 19/6/25	NA	NA	583,174	49FF	0%	
590	**CWPA-00000**	*	**Construction of Portion A of the Site**			**1077 days**	**Wed 27/11/19**	**Thu 20/7/23**	**Wed 27/11/19**	**NA**			**79%**	
591	**C132S-00000**	*	**132kV Substation**			**1077 days**	**Wed 27/11/19**	**Thu 20/7/23**	**Wed 27/11/19**	**NA**			**79%**	
592	**C132SI-00000**		**Internal Works**			**637 days**	**Wed 27/11/19**	**Thu 20/1/22**	**Wed 27/11/19**	**Thu 20/1/22**			**100%**	
593	C132SI-01000		Site Clearance & Site Set Up			19 days	Tue 10/12/19	Fri 3/1/20	Tue 10/12/19	Fri 3/1/20	2	594	100%	
594	C132SI-02000		Additional Tree Felling Works		(29)	14 days	Fri 20/12/19	Thu 2/1/20	Fri 20/12/19	Thu 2/1/20	593	596	100%	
595	C132SI-03000		Trial Pit Excavation & UU Detection Works			0 days	Mon 2/12/19	Thu 12/12/19	Mon 2/12/19	Thu 12/12/19	2	597	100%	
596	C132SI-04000		Additional Demolition of existing structure		4, (2), (36)	28 days	Wed 27/11/19	Tue 31/12/19	Wed 27/11/19	Tue 31/12/19	594	597	100%	
597	C132SI-05000		Predrilling Works (11no., 1rig, 3days/drillhole/rig)		(10)	16 days	Sat 4/1/20	Wed 22/1/20	Sat 4/1/20	Wed 22/1/20	160,595,213,596	598	100%	
598	C132SI-06000		Installation of Monitoring Points		29/32	4 days	Thu 16/1/20	Mon 20/1/20	Thu 16/1/20	Mon 20/1/20	597	599	100%	
599	C132SI-07000		Setting up plant for pre-bored socked H-pile Installation		5, (22)	3 days	Mon 27/1/20	Fri 31/1/20	Mon 27/1/20	Fri 31/1/20	598	600	100%	
600	C132SI-08000		Pre-bored Socketed H-Pile Installation (41 Nos, 2 Rig, 3days/rig/pile)	17, 21, 22	39/43, (10), (19), (36)	88 days	Sat 1/2/20	Wed 20/5/20	Sat 1/2/20	Wed 20/5/20	161,599	601,357,603	100%	6
601	C132SI-09000		Pile Load Test	22, 33		23 days	Thu 21/5/20	Tue 16/6/20	Thu 21/5/20	Tue 16/6/20	600	602,392FS+5 days,604	100%	
602	C132SI-10000		Sheetpile Installation Stage 1 - Obstruction of Uncharted Manhole and DI Pipe, and Fire Hydrants	45	234, (19), (24), (36), (56), (58), (59)	118 days	Thu 21/5/20	Fri 9/10/20	Thu 21/5/20	Fri 9/10/20	601,163	605	100%	6
603	C132SI-11000		CHP Cable Diversion Works	22, 33, 45, 46,	31/35, (23), (137)	70 days	Fri 21/2/20	Tue 19/5/20	Fri 21/2/20	Tue 19/5/20	600		100%	
604	C132SI-12000		Watermain diversion and relocation of water meter	33, 45, 46	(15), (35), (90)	192 days	Mon 27/4/20	Mon 14/12/20	Mon 27/4/20	Mon 14/12/20	601		100%	
605	C132SI-13000		Excavation Works Stage 1	45, 46, 257,	(16), (23), (36)	86 days	Wed 22/7/20	Mon 2/11/20	Wed 22/7/20	Mon 2/11/20	602	606	100%	8
606	C132SI-14000		R.C. Structure (880 sq.m)		(52)	175 days	Wed 30/9/20	Fri 7/5/21	Wed 30/9/20	Fri 7/5/21	239,240,166,238,605	642	100%	10
607	C132SI-14020		Basement -Revised 132kV Primary Substation Foundation Plan	(92), (112)	39/43, (56), (59), (115), (30)	50 days	Wed 30/9/20	Mon 30/11/20	Wed 30/9/20	Mon 30/11/20		608	100%	
608	C132SI-14030		Ground Floor - Change to Works Information / Revised Civil Requirement (G/F)	268	(106), (115), (143), (79),(103),(91),(8	68 days	Tue 1/12/20	Wed 24/2/21	Tue 1/12/20	Wed 24/2/21	607	609	100%	
609	C132SI-14040		First Floor - Change to Works Information / Revised Civil Requirement (1/F)	338	(143), (104)	19 days	Thu 25/2/21	Fri 9/4/21	Thu 25/2/21	Fri 9/4/21	608	610	100%	
610	C132SI-14050		Roof Floor (461sq.m) - Additional Roof Plinth	(204), (228)	(126), (143), (105)	23 days	Sat 10/4/21	Fri 7/5/21	Sat 10/4/21	Fri 7/5/21	609	611	100%	
611	C132SI-14060		Parapet			26 days	Fri 2/4/21	Fri 7/5/21	Fri 2/4/21	Fri 7/5/21	610	612,618,613,616,615,617,614	100%	
612	C132SI-22000		ABWF Works + Additional Works		(269), (271), (274), (324), (208), (29	100 days	Sat 8/5/21	Tue 5/10/21	Sat 8/5/21	Tue 5/10/21	242,168,611	618FF	100%	
613	C132SI-23000		BS Works + Additional Works		(316), (330), (362)	100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	168,611	618FF	100%	
614	C132SI-24000		Electricial Installation and Miscellaneous Metal Works (incl. MCB board, LV switchboard & cables, etc)		(268)	100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	611	618FF	100%	
615	C132SI-25000		Backfilling reinstatement & road works			100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	611	618FF	100%	
616	C132SI-26000		Installation of telephone line/ direct link for FSD Inspection			100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	611,620		100%	
617	C132SI-27000		Building Services Installation Works (incl. Fire Services, Plumbing, Drainage, etc.)			100 days	Sat 8/5/21	Sat 4/9/21	Sat 8/5/21	Sat 4/9/21	611		100%	
618	C132SI-28000		Architectual Works			144 days	Mon 7/6/21	Fri 26/11/21	Mon 7/6/21	Fri 26/11/21	612FF,613FF,614FF,615FF,611	619	100%	
619	C132SI-29000		Testing & Commissioning of the E&M Works			29 days	Sat 27/11/21	Mon 3/1/22	Sat 27/11/21	Mon 3/1/22	618	621,620SS+5 days,622	100%	
620	C132SI-30010		Handover to CLP for LV Transformer Room			1 day	Wed 8/12/21	Wed 8/12/21	Wed 8/12/21	Wed 8/12/21	619SS+5 days	616,622	100%	
621	C132SI-30000		FSD Inspection & FS Certificate			15 days	Tue 4/1/22	Thu 20/1/22	Tue 4/1/22	Thu 20/1/22	619	205SS-2 emons,643	100%	
622	**C132SI-31000**	**KD2A**	**Allow for CLP to carry out E&M installation works**			**0 days**	**Mon 3/1/22**	**Mon 3/1/22**	**Mon 3/1/22**	**Mon 3/1/22**	**620,619,640**	**623SS-30 days,37FF,643**	**100%**	
623	C132SI-32000		ABWF Works - External Finishing		(173)	45 days	Mon 8/11/21	Fri 31/12/21	Mon 8/11/21	Fri 31/12/21	622SS-30 days,242,168	643	100%	
624	**C132SE-00000**		**External Works**			**344 days**	**Mon 21/12/20**	**Mon 21/2/22**	**Mon 21/12/20**	**Mon 21/2/22**	**183**	**655**	**100%**	
625	**C132SE-01000**	**KD2A**	**Road Widening Works**		**(20)**	**139 days**	**Mon 21/12/20**	**Tue 15/6/21**	**Mon 21/12/20**	**Tue 15/6/21**		**643**	**100%**	
626	C132SE-01010		Trial Pit Excavation & UU Detection Works	(112)		2 days	Mon 21/12/20	Tue 22/12/20	Mon 21/12/20	Tue 22/12/20	186	627	100%	
627	C132SE-01020		Diversion of existing UU (i.e. 3no. Street light)	268		48 days	Wed 23/12/20	Tue 23/2/21	Wed 23/12/20	Tue 23/2/21	626	628SS+20 days	100%	
628	C132SI-17000		Dismantle existing boundary wall	268, 338	(21), (90), 370	63 days	Thu 14/1/21	Wed 31/3/21	Thu 14/1/21	Wed 31/3/21	627SS+20 days	629SS+40 days	100%	
629	C132SI-19000		Sheetpile Installation Stage 2	338, (204),	(35), (151), (155), (166)	70 days	Mon 8/3/21	Tue 15/6/21	Mon 8/3/21	Tue 15/6/21	628SS+40 days		100%	
630	C132SE-02000		Drainage & Sewerage Works		245	232 days	Tue 23/3/21	Mon 3/1/22	Tue 23/3/21	Mon 3/1/22		643	100%	
631	C132SI-20000		Excavation Works Stage 2	338, (204)	(35)	20 days	Tue 23/3/21	Mon 19/4/21	Tue 23/3/21	Mon 19/4/21		632	100%	
632	C132SE-02010		Trench Excavation and ELS works	(204), (228)	(162), (308), (312), (332)	90 days	Tue 20/4/21	Fri 6/8/21	Tue 20/4/21	Fri 6/8/21	631	633	100%	
633	C132SE-02020		Pipe Laying Works		(312), (314), (332), (322), (364)	100 days	Thu 15/7/21	Thu 11/11/21	Thu 15/7/21	Thu 11/11/21	632	634	100%	
634	C132SE-02030	KD2A	Backfilling and Reinstatement Works		(312), (332), (322)	42 days	Fri 12/11/21	Mon 3/1/22	Fri 12/11/21	Mon 3/1/22	633		100%	
635	C132SE-02040	KD2A	CLP Cable & Other Underground Utility Pipeworks			235 days	Mon 10/5/21	Mon 21/2/22	Mon 10/5/21	Mon 21/2/22		643	100%	
636	C132SE-02042		CLP cable diversion works within SWHSTW and along San Wan Road by others		(EWN210)(148)	14 days	Mon 10/5/21	Wed 26/5/21	Mon 10/5/21	Wed 26/5/21			100%	
637	C132SE-02043		CLP cable works along & across San Wan Road		(320), (363)	11 days	Tue 30/11/21	Sat 11/12/21	Tue 30/11/21	Sat 11/12/21			100%	
638	C132SE-02044		CLP cable connection to LV transformer Room (by CLP)			185 days	Sat 12/6/21	Mon 13/12/21	Sat 12/6/21	Mon 13/12/21		639,640	100%	
639	C132SE-02050		Road Works		(307), (309), (313), (333), (344), (34	54 days	Tue 14/12/21	Mon 21/2/22	Tue 14/12/21	Mon 21/2/22	638		100%	
640	C132SE-02060		Road Carriageway Works			18 days	Tue 14/12/21	Fri 31/12/21	Tue 14/12/21	Fri 31/12/21	638	641SS+20 days,622	100%	
641	C132SE-02070		Footpath works			50 days	Mon 3/1/22	Mon 21/2/22	Mon 3/1/22	Mon 21/2/22	640SS+20 days	650	100%	
642	C132SE-03000	KD2A	Construction of New Boundary Wall		(155)	135 days	Sat 8/5/21	Tue 4/1/22	Sat 8/5/21	Tue 4/1/22	606	655	100%	
643	C132SE-04000	SW2	Remaining Works after allowing CLP Plant and Power Cables Installation			416 days	Tue 22/2/22	Thu 20/7/23	Tue 22/2/22	NA	623,621,622,625,630,635	45FF,655	22%	
644	C132SE-04100		Coordination with CLP & SWHSTW to identify alignment & levels to suit site			118 days	Thu 31/3/22	Tue 26/7/22	Thu 31/3/22	Tue 26/7/22		645	100%	
645	C132SE-04200		UU Detection/ Trial Pit Works			40 days	Wed 27/7/22	Sun 4/9/22	Wed 27/7/22	Sun 4/9/22	644	646,652	100%	
646	C132SE-04300		Confirmation on Extent of works			15 days	Fri 26/8/22	Fri 9/9/22	Fri 26/8/22	Fri 9/9/22	645	647	100%	
647	C132SE-04400		Material ordering & Delivery on Site			120 days	Sat 10/9/22	Sun 8/1/23	Sat 10/9/22	NA	646	648SS+60 days	0%	
648	C132SE-04500		Construct Cable Ducts & Draw Pits			275 days	Mon 5/9/22	Wed 7/6/23	Mon 5/9/22	NA	647SS+60 days	649FF+43 days	0%	
649	C132SE-04600		Reinstatement Works			60 days	Sun 21/5/23	Thu 20/7/23	NA	NA	648FF+43 days		0%	
650	C132SE-02080		Highway Lighting Works - Coordination with Highways Department			164 days	Tue 22/2/22	Fri 9/9/22	Tue 22/2/22	NA	641	48FF	0%	1month
651	C132SE-05000		Additional Trial Pit and Inspection Pit for Stage 2 Geotechnical Works		393	138 days	Fri 26/8/22	Wed 11/1/23	Fri 26/8/22	NA		655	0%	
652	C132SE-05100		Apply XP			75 days	Fri 26/8/22	Thu 24/11/22	Fri 26/8/22	NA	645	653	0%	
653	C132SE-05200		TTA (RMO/TD Approval)			13 days	Thu 24/11/22	Fri 9/12/22	NA	NA	652	654	0%	



Critical Split | Task | Milestone | Summary | Critical

Revised Programme (Status Date: 30/09/2022)

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 Allowan
654	C132SE-05300		Additional Trial Pit and Inspection Pit Works			25 days	Fri 9/12/22	Wed 11/1/23		NA	NA 653		0%	
655	C132SE-06000		Inspection and Handover to DSD			30 days	Thu 20/7/23	Sat 19/8/23		NA	NA 624,642,643,651	48FF,45FF	0%	

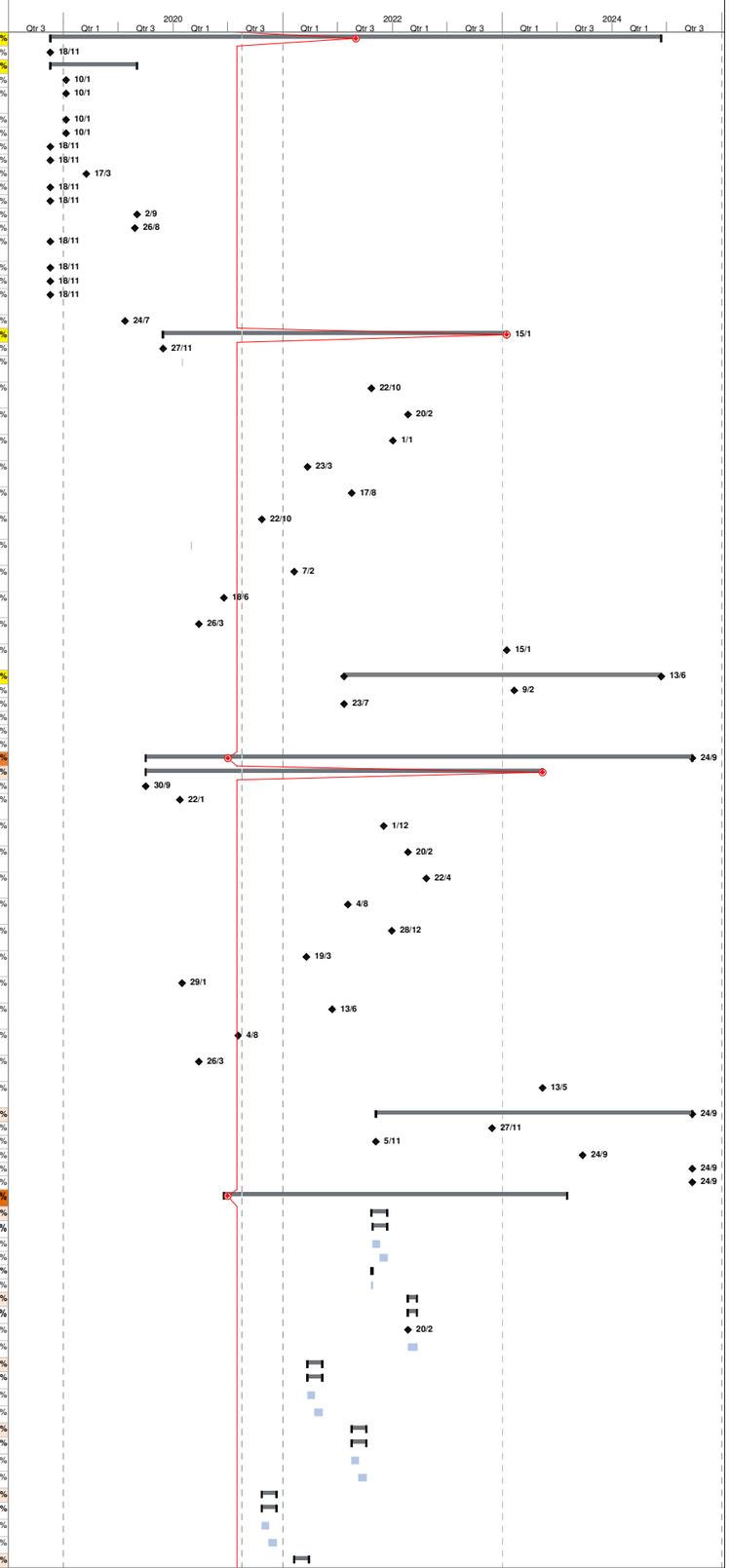


Critical Split | Task | Milestone | Summary | Critical

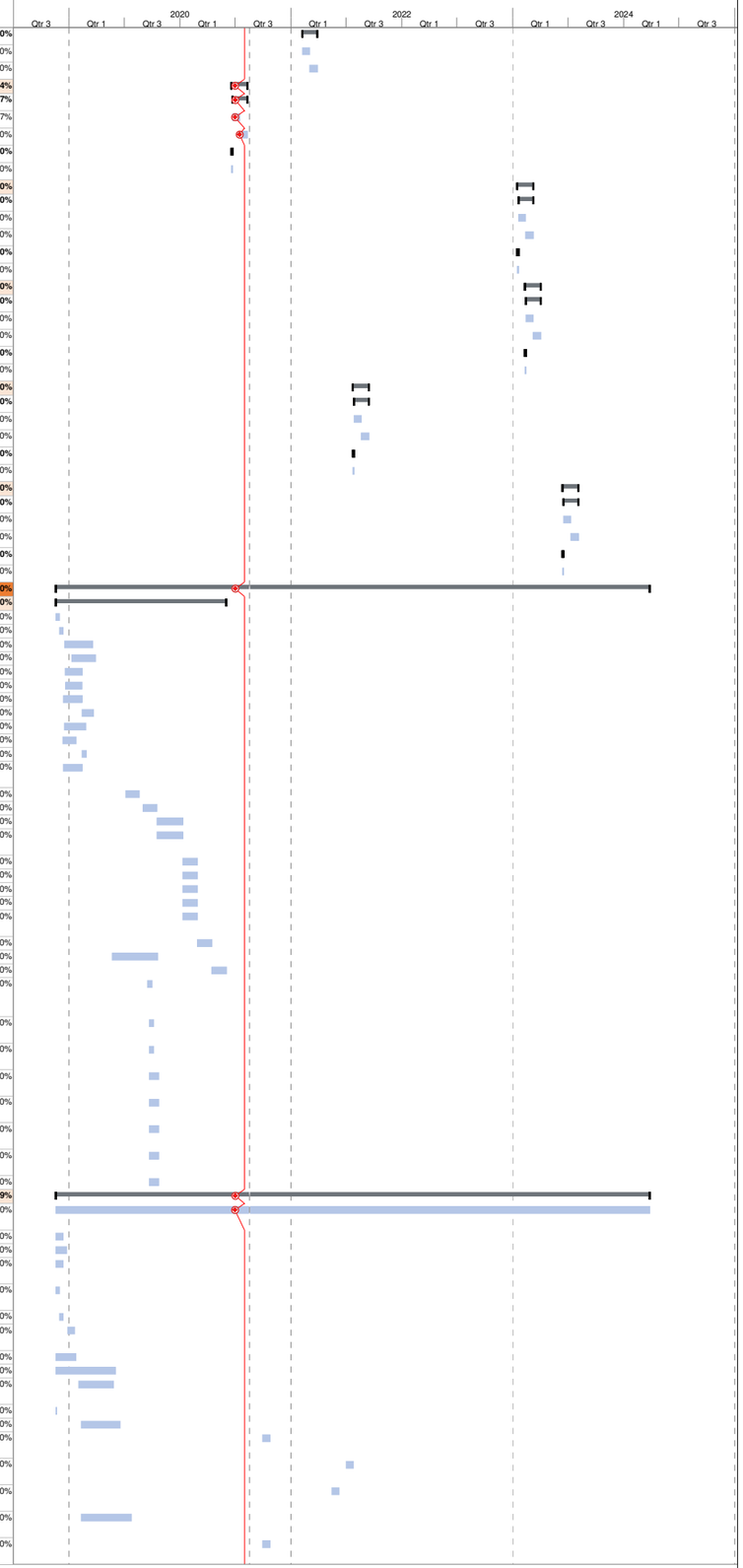
Contract No. DC/2018/07
Shek Wu Hui Effluent Polishing Plant - Main Works Stage 1

Revised Works Programme (Status Date: 31/07/2021)

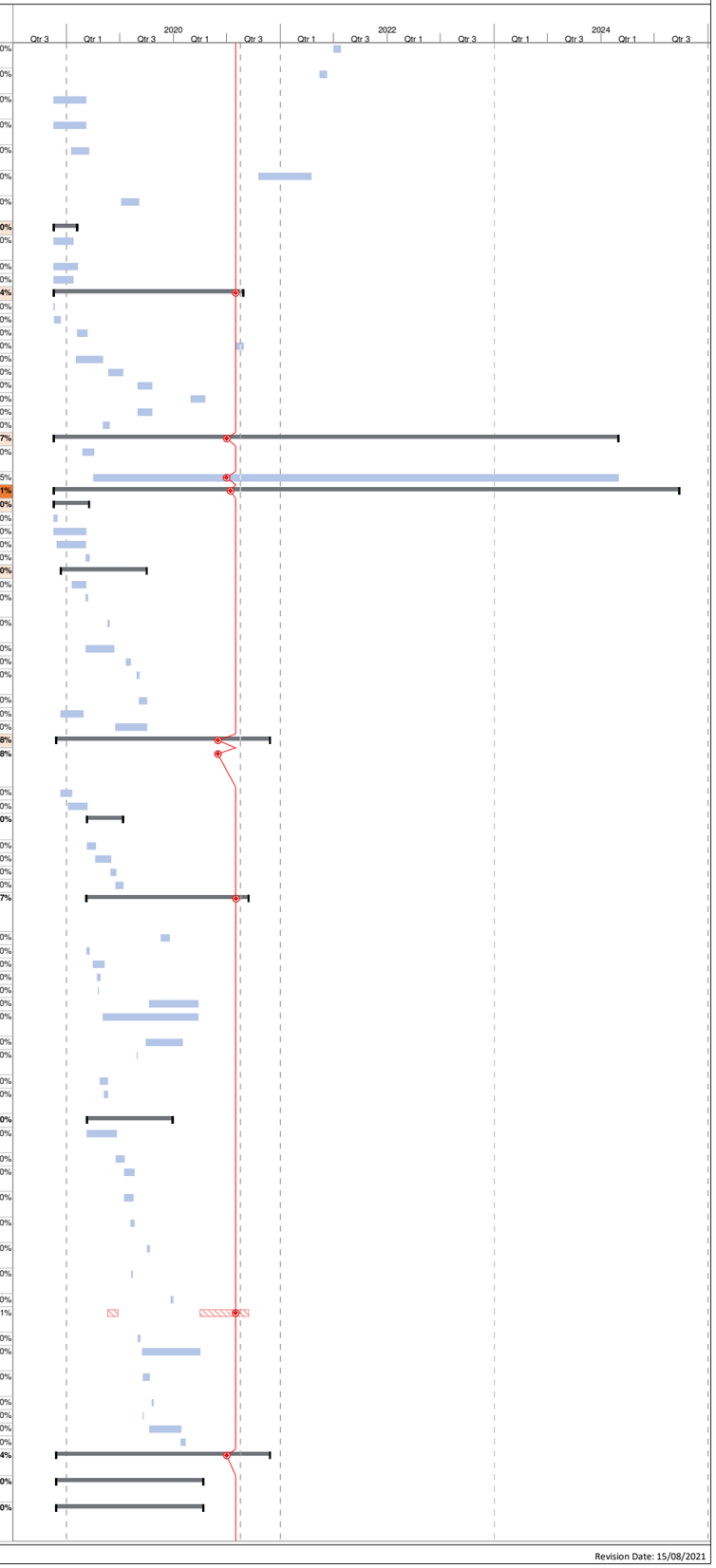
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
1	**CD-1000**		**Contract Dates**			**1585 days**	**Mon 18/11/19**	**Thu 27/3/25**	**1651.5 days**	**Mon 18/11/19**	**Fri 13/6/25**	**Mon 18/11/19**	**NA**			**88.5 days**		**0%**
2	CD-1010		Starting Date			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19		8,9,13FS+290 days,14FS+311 days	0 days		100%
3	**CAD-1000**		**Access Dates (cal. day)**			**310 days**	**Mon 18/11/19**	**Wed 23/9/20**	**289 days**	**Mon 18/11/19**	**Wed 2/9/20**	**Mon 18/11/19**	**Wed 2/9/20**			**0 days**		**100%**
4	CAD-1010		Portion B-1 (Access Road AR3)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	2	201	0 days		100%
5	CAD-1020		Portion B-1A (Area for the works for Sidestream Treatment Facilities by Others			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	2		0 days		100%
6	CAD-1030		Portion B-2 (Inlet Works No.1)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	2	295,306	0 days		100%
7	CAD-1040		Portion B-2A (Area for the pipe-jacking works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	Fri 10/1/20	2		0 days		100%
8	CAD-1050		Portion B-3 (Primary Sedimentation Tanks No. 1-4)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	335	0 days		100%
9	CAD-1060		Portion B-4 (Bioreactor No. 2A & 2B)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	353	0 days		100%
10	CAD-1070		Portion B-5 (Membrane Facilities Building No.2)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20	Tue 17/3/20	2	402,419,425	0 days		100%
11	CAD-1080		Portion B-6 (SAS Pumping Station)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	434	0 days		100%
12	CAD-1090		Portion B-7 (Ancillary structures)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	461	0 days		100%
13	CAD-1100		Portion B-7A (Alternation works for existing Power House)			0 days	Wed 2/9/20	Wed 2/9/20	0 days	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20	Wed 2/9/20	2FS+290 days	539FS-1 day,29FS+179 days	0 days		100%
14	CAD-1110		Portion B-8 (Alternation for existing Membrane Facilities Building No.1)			0 days	Tue 22/9/20	Tue 22/9/20	0 days	Wed 26/8/20	Wed 26/8/20	Wed 26/8/20	Wed 26/8/20	2FS+311 days	541FS-1 day	0 days		100%
15	CAD-1020		Portion B-8A (Alternation of air supply main for existing Air Blower House No.2)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	532	0 days		100%
16	CAD-1130		Portion B-9 (remainder works in Zone B)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2	542,556	0 days		100%
17	CAD-1140		Portion B-9A (Area for the pipe-jacking works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2		0 days		100%
18	CAD-1150		Portion B-9B (Area for underground pipework modification and connection works by others)			0 days	Mon 18/11/19	Mon 18/11/19	0 days	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	Mon 18/11/19	2		0 days		100%
19	CAD-1160		Portion B-9C (Area for the works for pipeworks)			0 days	Wed 22/7/20	Wed 22/7/20	0 days	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20	Fri 24/7/20	2FS+151 days		0 days		100%
20	**CKD-1000**		**Key Dates (cal. day)**			**1440 days**	**Tue 19/11/19**	**Sat 28/10/23**	**1144 days**	**Fri 27/11/20**	**Mon 15/1/24**	**Fri 27/11/20**	**NA**			**618 days**		**99%**
21	CKD-1010		KD1A completion of AR3 in Portion B-1 (375 days after starting date)			300 days	Tue 19/11/19	Sun 13/9/20	0 days	Fri 27/11/20	Fri 27/11/20	Fri 27/11/20	Fri 27/11/20	2FS+376 days		0 days		100%
22	CKD-1020		KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (438.5 days after starting date)			360 days	Tue 19/11/19	Thu 12/11/20	1 day	Sat 30/1/21	Sat 30/1/21	Sat 30/1/21	Sat 30/1/21	2FS+439.5 days		0 days		100%
23	CKD-1030		KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (1068.5 days after starting date)			990 days	Tue 19/11/19	Thu 4/8/22	0 days	Sat 22/10/22	Sat 22/10/22	NA	NA	2FS+1069.5 days	67	1056.5 days		0%
24	CKD-1040		KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)			1190 days	Tue 19/11/19	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	2FS+1191 days	70	947 days		0%
25	CKD-1050		KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1140days after starting date)			1140 days	Tue 19/11/19	Sun 1/1/23	0 days	Sun 1/1/23	Sun 1/1/23	NA	NA	2FS+1141 days		997 days		0%
26	CKD-1060		KD1F completion of civil and structural works of MFB from B2 floor to 1st floor level in Portion B-5 (855.5 days after starting date)			800 days	Tue 19/11/19	Wed 26/1/22	0 days	Wed 23/3/22	Wed 23/3/22	NA	NA	2FS+856.5 days	74	1273.5 days		0%
27	CKD-1070		KD1G completion of civil and structural works of MFB in Portion B-5 (1002.5 days after starting date)			950 days	Tue 19/11/19	Sat 25/6/22	0 days	Wed 17/8/22	Wed 17/8/22	NA	NA	2FS+1003.5 days	78	1126.5 days		0%
28	CKD-1080		KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (703.5 days after starting date)			630 days	Tue 19/11/19	Mon 9/8/21	0 days	Fri 22/10/21	Fri 22/10/21	NA	NA	2FS+704.5 days	82	1425.5 days		0%
29	CKD-1090		KD1I completion alternation works for existing Power House in Portion B-7A (179days after access date of B-7A)			150 days	Fri 4/9/20	Sun 31/1/21	1 day	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	Mon 1/3/21	13FS+179 days		0 days		100%
30	CKD-1100		KD1J completion of auxiliary facilites in Portion B-7 (811.5 days after starting date)			800 days	Tue 19/11/19	Wed 26/1/22	0 days	Mon 7/2/22	Mon 7/2/22	NA	NA	2FS+812.5 days	86	1317.5 days		0%
31	CKD-1110		KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (577.5 days after starting date)			495 days	Tue 19/11/19	Sat 27/3/21	0 days	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21	Fri 18/6/21	2FS+578.5 days	93	0 days		100%
32	CKD-1120		KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (494 days after starting date)			420 days	Tue 19/11/19	Mon 11/1/21	0 days	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	2FS+495 days		0 days		100%
33	CKD-1130		KD3A completion of all utilities and road works (1519 days after starting date)			1440 days	Tue 19/11/19	Sat 28/10/23	0 days	Mon 15/1/24	Mon 15/1/24	NA	NA	2FS+1520 days	99	606 days		0%
34	**CCD-1000**		**Completion Date (cal. Day)**			**1956 days**	**Tue 19/11/19**	**Thu 27/3/25**	**1056 days**	**Sat 23/7/22**	**Fri 13/6/25**	**Sat 23/7/22**	**NA**			**50.5 days**		**0%**
35	CCD-1010		Section 1 of the Works (1,543.5 after starting date)			1460 days	Tue 19/11/19	Fri 17/11/23	0 days	Fri 9/2/24	Fri 9/2/24	NA	NA	2FS+1544.5 days	105	0 days		0%
36	CCD-1020		Section 2 of the Works (977.5 after starting date)			900 days	Tue 19/11/19	Fri 6/5/22	0 days	Sat 23/7/22	Sat 23/7/22	NA	NA	2FS+978.5 days	111	0 days		0%
37	CCD-1030		Section 3 of the Works (1,667.5 after starting date)			1590 days	Tue 19/11/19	Tue 26/3/24	0 days	Wed 12/6/24	Wed 12/6/24	Wed 12/6/24	NA	2FS+1668.5 days	39FS+1 day,117,38FS+1 day	-77.5 days		99%
38	CCD-1040		Defects Liability Period			365 days	Wed 27/3/24	Thu 27/3/25	365 days	Thu 13/6/24	Fri 13/6/25	NA	NA	37FS+1 day		0 days		0%
39	CCD-1050		Landscape Establishment Works			365 days	Wed 27/3/24	Thu 27/3/25	365 days	Thu 13/6/24	Fri 13/6/25	NA	NA	37FS+1 day		103.5 days		0%
40	**PD-1000**	*	**Planned Completion**			**1686 days**	**Fri 14/8/20**	**Thu 27/3/25**	**1820 days**	**Wed 30/9/20**	**Wed 24/9/25**	**Wed 30/9/20**	**NA**			**0 days**		**3%**
41	**PCD-1000**	*	**Planned Completion - Key Dates (cal. day)**			**1170 days**	**Fri 14/8/20**	**Sat 28/10/23**	**1321 days**	**Wed 30/9/20**	**Mon 13/5/24**	**Wed 30/9/20**	**NA**			**-119 days**		**99%**
42	PKD-1010	KD1A	KD1A completion of AR3 in Portion B-1 (300days after starting date)			0 days	Sat 12/9/20	Sat 12/9/20	0 days	Wed 30/9/20	Wed 30/9/20	Wed 30/9/20	Wed 30/9/20	210FF		0 days		100%
43	PCD-1020	KD1B	KD1B completion of utilities diversion for commencement of Inlet Works No.1 in Portion B-2 (360days after starting date)			0 days	Fri 14/8/20	Fri 14/8/20	0 days	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21	Fri 22/1/21	286FF,291FF,273FF		0 days		100%
44	PCD-1030	KD1C	KD1C completion of civil and structural works of Inlet Works No.1 in Portion B-2 (990days after starting date)			0 days	Thu 4/8/22	Thu 4/8/22	0 days	Thu 1/12/22	Thu 1/12/22	NA	NA	330FF,322FF,248FF,294FF,212FF,250FF		-40 days		0%
45	PCD-1040	KD1D	KD1D completion of civil and structural works of Primary Sedimentation Tanks in Portion B-3 (1190days after starting date)			0 days	Mon 20/2/23	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	349FF,348FF,351FF,333FF		0 days		0%
46	PCD-1050	KD1E	KD1E completion of civil and structural works of Bioreactor in Portion B-4 (1,140days after starting date)			0 days	Sat 31/12/22	Sat 31/12/22	0 days	Sat 22/4/23	Sat 22/4/23	NA	NA	391FF,397FF,393FF,396FF,392FF		-111 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 (800days after starting date)			0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 4/8/22	Thu 4/8/22	NA	NA	430FF		-135 days		0%
48	PCD-1070	KD1G	KD1G completion of civil and structural works of MFB in Portion B-5 (950days after starting date)			0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 28/12/22	Wed 28/12/22	NA	NA	431FF		-133 days		0%
49	PCD-1080	KD1H	KD1H completion of civil and structural works of SAS Pumping Station in Portion B-6 (630days after starting date)			0 days	Mon 9/8/21	Mon 9/8/21	0 days	Sat 19/3/22	Sat 19/3/22	NA	NA	459FF,458FF		-148 days		0%
50	PCD-1090	KD1I	KD1I completion alternation works for existing Power House in Portion B-7A (150days after access date of B-7A)			0 days	Sat 30/1/21	Sat 30/1/21	1 day	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21	Fri 29/1/21	539FF		0 days		100%
51	PCD-1100	KD1J	KD1J completion of auxiliary facilites in Portion B-7 (800days after starting date)			0 days	Wed 26/1/22	Wed 26/1/22	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA	496FF,495FF,521FF,520FF,513FF,512FF		-126 days		0%
52	PCD-1110	KD2A	KD2A completion of effluent pipes to UV system and connection to its downstream in Portion B-9 (495days after starting date)			0 days	Sat 27/3/21	Sat 27/3/21	0 days	Wed 4/8/21	Wed 4/8/21	NA	NA	545FF,543FF		-47 days		0%
53	PCD-1120	KD2B	KD2B completion of air supply main alternation to existing air blower house No.2 in Portion B-8A (420days after starting date)			0 days	Thu 3/9/20	Thu 3/9/20	1 day	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	Fri 26/3/21	532FF,536FF,537FF,538FF		0 days		100%
54	PCD-1130	KD3A	KD3A completion of all utilities and road works (1440days after starting date)			0 days	Sat 28/10/23	Sat 28/10/23	0 days	Mon 13/5/24	Mon 13/5/24	NA	NA	555FF,557FF		-119 days		0%
55	**PCD-1000**	*	**Planned Completion Date (cal. Day)**			**1056 days**	**Fri 6/5/22**	**Thu 27/3/25**	**1054 days**	**Sat 5/11/22**	**Wed 24/9/25**	**NA**	**NA**			**-106 days**		**0%**
56	PCD-1010	SW1	Section 1 of the Works (1,460 after starting date)			0 days	Wed 23/8/23	Wed 23/8/23	0 days	Mon 27/11/23	Mon 27/11/23	NA	NA	522FF,514FF,477FF,504FF,488FF,460FF		73 days		0%
57	PCD-1020	SW2	Section 2 of the Works (900 after starting date)			0 days	Fri 6/5/22	Fri 6/5/22	0 days	Sat 5/11/22	Sat 5/11/22	NA	NA	549FF,399FF,433FF,352FF,334FF,550FF		-106 days		0%
58	PCD-1030	SW3	Section 3 of the Works (1,590 after starting date)			0 days	Tue 26/3/24	Tue 26/3/24	0 days	Tue 24/9/24	Tue 24/9/24	NA	NA	558FF,559FF,541FF,540FF		-105 days		0%
59	PCD-1040	DLP	Defects Liability Period			0 days	Thu 27/3/25	Thu 27/3/25	0 days	Wed 24/9/25	Wed 24/9/25	NA	NA	560FF,153FF		0 days		0%
60	PCD-1050		Landscape Establishment Works			0 days	Thu 27/3/25	Thu 27/3/25	0 days	Wed 24/9/25	Wed 24/9/25	NA	NA	560FF		0 days		0%
61	**ET-1000**		**Effects from Inclement Weather and Other Time Affected Events**			**0 days**	**NA**	**NA**	**1143 days**	**Fri 18/6/21**	**Sun 4/8/24**	**Fri 18/6/21**	**NA**			**416.5 days**		**2%**
62	**ET1C-1000**		**Effects to KD1C**			**0 days**	**NA**	**NA**	**53 days**	**Sat 22/10/22**	**Wed 14/12/22**	**NA**	**NA**			**1015.5 days**		**0%**
63	**ET1C-1100**		**Inclement Weather to KD1C (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Wed 26/10/22**	**Wed 14/12/22**	**NA**	**NA**			**1015.5 days**		**0%**
64	ET1C-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Wed 26/10/22	Fri 18/11/22	NA	NA	67	65	1015.5 days		0%
65	ET1C-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Fri 18/11/22	Wed 14/12/22	NA	NA	64		1015.5 days		0%
66	**ET1C-1200**		**Other Events to KD1C (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Sat 22/10/22**	**Wed 26/10/22**	**NA**	**NA**			**1015.5 days**		**0%**
67	ET1C-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Sat 22/10/22	Wed 26/10/22	NA	NA	23	64	1056.5 days		0%
68	**ET1D-1000**		**Effects to KD1D**			**0 days?**	**NA**	**NA**	**26 days**	**Mon 20/2/23**	**Wed 22/3/23**	**NA**	**NA**			**749 days**		**0%**
69	**ET1D-1100**		**Inclement Weather to KD1D (cal. Day)**			**0 days?**	**NA**	**NA**	**26 days**	**Mon 20/2/23**	**Wed 22/3/23**	**NA**	**NA**			**749 days**		**0%**
70	ET1D-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	24	71	749 days		0%
71	ET1D-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Tue 21/2/23	Wed 22/3/23	NA	NA	70		749 days		0%
72	**ET1F-1000**		**Effects to KD1F**			**0 days**	**NA**	**NA**	**49 days**	**Wed 23/3/22**	**Wed 11/5/22**	**NA**	**NA**			**1232.5 days**		**0%**
73	**ET1F-1100**		**Inclement Weather to KD1F (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Wed 23/3/22**	**Wed 11/5/22**	**NA**	**NA**			**1232.5 days**		**0%**
74	ET1F-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Wed 23/3/22	Fri 15/4/22	NA	NA	26	75	1232.5 days		0%
75	ET1F-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Fri 15/4/22	Wed 11/5/22	NA	NA	74		1232.5 days		0%
76	**ET1G-1000**		**Effects to KD1G**			**0 days**	**NA**	**NA**	**49 days**	**Wed 17/8/22**	**Wed 5/10/22**	**NA**	**NA**			**1085.5 days**		**0%**
77	**ET1G-1100**		**Inclement Weather to KD1G (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Wed 17/8/22**	**Wed 5/10/22**	**NA**	**NA**			**1085.5 days**		**0%**
78	ET1G-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Wed 17/8/22	Fri 9/9/22	NA	NA	27	79	1085.5 days		0%
79	ET1G-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Fri 9/9/22	Wed 5/10/22	NA	NA	78		1085.5 days		0%
80	**ET1H-1000**		**Effects to KD1H**			**0 days**	**NA**	**NA**	**49 days**	**Fri 22/10/21**	**Fri 10/12/21**	**NA**	**NA**			**1384.5 days**		**0%**
81	**ET1H-1100**		**Inclement Weather to KD1H (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Fri 22/10/21**	**Fri 10/12/21**	**NA**	**NA**			**1384.5 days**		**0%**
82	ET1H-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Fri 22/10/21	Sun 14/11/21	NA	NA	28	83	1384.5 days		0%
83	ET1H-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Sun 14/11/21	Fri 10/12/21	NA	NA	82		1384.5 days		0%
84	**ET1H-1000**		**Effects to KD1J**			**0 days**	**NA**	**NA**	**49 days**	**Mon 7/2/22**	**Mon 28/3/22**	**NA**	**NA**			**1276.5 days**		**0%**



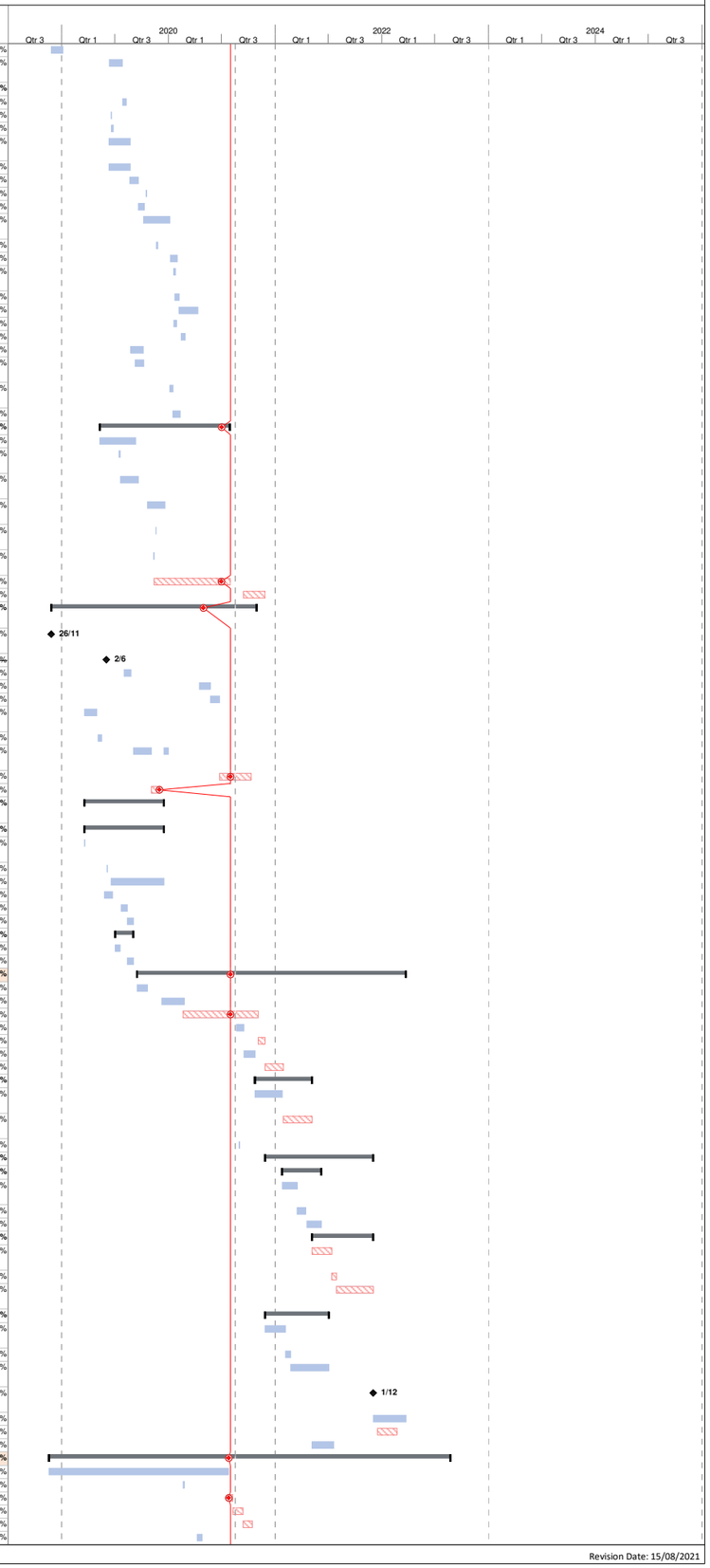
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
85	**ET1H-1100**		**Inclement Weather to KD1J (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Mon 7/2/22**	**Mon 28/3/22**	**NA**	**NA**			**1276.5 days**		**0%**
86	ET1H-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Mon 7/2/22	Wed 2/3/22	NA	NA	30	87	1276.5 days		0%
87	ET1H-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Wed 2/3/22	Mon 28/3/22	NA	NA	86		1276.5 days		0%
88	**ET2A-1000**		**Effects to KD2A**			**0 days**	**NA**	**NA**	**53 days**	**Fri 18/6/21**	**Tue 10/8/21**	**Fri 18/6/21**	**NA**			**1506.5 days**		**24%**
89	**ET2A-1100**		**Inclement Weather to KD2A (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Tue 22/6/21**	**Tue 10/8/21**	**Tue 22/6/21**	**NA**			**1506.5 days**		**17%**
90	ET2A-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Tue 22/6/21	Thu 15/7/21	Tue 22/6/21	NA	93	91	1506.5 days		37%
91	ET2A-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Thu 15/7/21	Tue 10/8/21	NA	NA	90		1506.5 days		0%
92	**ET2A-1200**		**Other Events to KD2A (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Fri 18/6/21**	**Tue 22/6/21**	**Fri 18/6/21**	**Tue 22/6/21**			**0 days**		**100%**
93	ET2A-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Fri 18/6/21	Tue 22/6/21	Fri 18/6/21	Tue 22/6/21	31	90	0 days		100%
94	**ET3A-1000**		**Effects to KD3A**			**0 days**	**NA**	**NA**	**53 days**	**Tue 16/1/24**	**Fri 8/3/24**	**NA**	**NA**			**565 days**		**0%**
95	**ET3A-1100**		**Inclement Weather to KD3A (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Sat 20/1/24**	**Fri 8/3/24**	**NA**	**NA**			**565 days**		**0%**
96	ET3A-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Sat 20/1/24	Sun 11/2/24	NA	NA	99	97	565 days		0%
97	ET3A-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Mon 12/2/24	Fri 8/3/24	NA	NA	96		565 days		0%
98	**ET3A-1200**		**Other Events to KD3A (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Tue 16/1/24**	**Fri 19/1/24**	**NA**	**NA**			**565 days**		**0%**
99	ET3A-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Tue 16/1/24	Fri 19/1/24	NA	NA	33	96	565 days		0%
100	**ETS1-1000**		**Effects to Section 1 of the Works**			**0 days**	**NA**	**NA**	**53 days**	**Fri 9/2/24**	**Tue 2/4/24**	**NA**	**NA**			**540.5 days**		**0%**
101	**ETS1-1100**		**Inclement Weather to Section 1 of the Works (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Tue 13/2/24**	**Tue 2/4/24**	**NA**	**NA**			**540.5 days**		**0%**
102	ETS1-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Tue 13/2/24	Thu 7/3/24	NA	NA	105	103	540.5 days		0%
103	ETS1-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Thu 7/3/24	Tue 2/4/24	NA	NA	102		540.5 days		0%
104	**ETS1-1200**		**Other Events to Section 1 of the Works (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Fri 9/2/24**	**Tue 13/2/24**	**NA**	**NA**			**540.5 days**		**0%**
105	ETS1-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Fri 9/2/24	Tue 13/2/24	NA	NA	35	102	540.5 days		0%
106	**ETS2-1000**		**Effects to Section 2 of the Works**			**0 days**	**NA**	**NA**	**53 days**	**Sat 23/7/22**	**Wed 14/9/22**	**NA**	**NA**			**1106.5 days**		**0%**
107	**ETS2-1100**		**Inclement Weather to Section 2 of the Works (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Wed 27/7/22**	**Wed 14/9/22**	**NA**	**NA**			**1106.5 days**		**0%**
108	ETS2-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Wed 27/7/22	Fri 19/8/22	NA	NA	111	109	1106.5 days		0%
109	ETS2-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Fri 19/8/22	Wed 14/9/22	NA	NA	108		1106.5 days		0%
110	**ETS2-1200**		**Other Events to Section 2 of the Works (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Sat 23/7/22**	**Wed 27/7/22**	**NA**	**NA**			**1106.5 days**		**0%**
111	ETS2-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Sat 23/7/22	Wed 27/7/22	NA	NA	36	108	1106.5 days		0%
112	**ETS3-1000**		**Effects to Section 3 of the Works**			**0 days**	**NA**	**NA**	**53 days**	**Wed 12/6/24**	**Sun 4/8/24**	**NA**	**NA**			**416.5 days**		**0%**
113	**ETS3-1100**		**Inclement Weather to Section 3 of the Works (cal. Day)**			**0 days**	**NA**	**NA**	**49 days**	**Sun 16/6/24**	**Sun 4/8/24**	**NA**	**NA**			**416.5 days**		**0%**
114	ETS3-1110		Delay and Disruption of Works before June 2021			0 days	NA	NA	23 days	Sun 16/6/24	Tue 9/7/24	NA	NA	117	115	416.5 days		0%
115	ETS3-1120		Delay and Disruption of Works in June 2021			0 days	NA	NA	26 days	Tue 9/7/24	Sun 4/8/24	NA	NA	114		416.5 days		0%
116	**ETS3-1200**		**Other Events to Section 3 of the Works (not all)**			**0 days**	**NA**	**NA**	**4 days**	**Wed 12/6/24**	**Sun 16/6/24**	**NA**	**NA**			**416.5 days**		**0%**
117	ETS3-1210		Special working arrangement due to COVID-19 in January 2020			0 days	NA	NA	4 days	Wed 12/6/24	Sun 16/6/24	NA	NA	37	114	416.5 days		0%
118	**SUB-1000**		**Submissions (cal.day)**			**1564 days**	**Mon 18/11/19**	**Wed 28/2/24**	**1956 days**	**Mon 18/11/19**	**Wed 26/3/25**	**Mon 18/11/19**	**NA**			**182 days**		**60%**
119	**SUBS-1000**		**Subletting Package**			**96 days**	**Mon 18/11/19**	**Fri 21/2/20**	**562 days**	**Mon 18/11/19**	**Tue 1/6/21**	**Mon 18/11/19**	**Tue 1/6/21**			**0 days**		**100%**
120	SUBS-1010		Prepare & submit subletting procedure			12 days	Mon 18/11/19	Fri 29/11/19	12 days	Mon 18/11/19	Fri 29/11/19	Mon 18/11/19	Fri 29/11/19	2	121	0 days		100%
121	SUBS-1020		PM review and accept subletting procedure			15 days	Sat 30/11/19	Wed 11/12/19	12 days	Sat 30/11/19	Wed 11/12/19	Sat 30/11/19	Wed 11/12/19	120	142,122,125,124,123	0 days		100%
122	SUBS-1030		Subletting for demolition works			24 days	Thu 12/12/19	Sat 4/1/20	93 days	Tue 17/12/19	Wed 18/3/20	Tue 17/12/19	Wed 18/3/20	121,154	339,462,295,402,539,359	0 days		100%
123	SUBS-1040		Subletting for UU diversion for Inlet Works No.1			24 days	Thu 12/12/19	Sat 4/1/20	78 days	Fri 10/1/20	Fri 27/3/20	Fri 10/1/20	Fri 27/3/20	121	212	0 days		100%
124	SUBS-1050		Subletting for Inspection pit excavation			0 days	NA	NA	56 days	Thu 19/12/19	Wed 12/2/20	Thu 19/12/19	Wed 12/2/20	121,154	214,126	0 days		100%
125	SUBS-1060		Subletting for Preliminary Works (topographic surveying)			14 days	Thu 12/12/19	Wed 25/12/19	54 days	Fri 20/12/19	Tue 11/2/20	Fri 20/12/19	Tue 11/2/20	121,154	159,198,129,130,131,127	0 days		100%
126	SUBS-1070		Subletting for AR3 access road			24 days	Thu 12/12/19	Sat 4/1/20	0 days	Fri 13/12/19	Tue 11/2/20	Fri 13/12/19	Tue 11/2/20	124	127,210	0 days		100%
127	SUBS-1080		Subletting for pre-drilling works			24 days	Thu 12/12/19	Sat 4/1/20	38 days	Thu 6/2/20	Fri 20/3/20	Thu 6/2/20	Fri 20/3/20	125,126	452,342,414,128	0 days		100%
128	SUBS-1090		Subletting for Contractor designer for temporary works and ICE			24 days	Thu 12/12/19	Sat 4/1/20	71 days	Mon 16/12/19	Mon 24/2/20	Mon 16/12/19	Mon 24/2/20	127		0 days		100%
129	SUBS-1100		Subletting for independent BIM consultant			24 days	Thu 12/12/19	4/1/120	0 days	Wed 11/12/19	Thu 23/1/20	Wed 11/12/19	Thu 23/1/20	125	193	0 days		100%
130	SUBS-1110		Subletting for independent BIM services			0 days	NA	NA	15 days	Tue 14/1/20	Wed 26/2/20	Tue 14/1/20	Wed 26/2/20	125	193	0 days		100%
131	SUBS-1120		Subletting for Design, Supply & Install of Temporary Activated Carbon Deodorization Units (E&M Works)			0 days	NA	NA	0 days	Fri 13/12/19	Tue 11/2/20	Fri 13/12/19	Tue 11/2/20	125	132,133	0 days		100%
132	SUBS-1130		Subletting for pre-bored H pile works			36 days	Thu 12/12/19	Thu 16/1/20	45 days	Sun 5/7/20	Tue 18/8/20	Sun 5/7/20	Tue 18/8/20	131	343,415,453,309	0 days		100%
133	SUBS-1140		Subletting for Sheetpile installation works			0 days	NA	NA	45 days	Tue 1/9/20	Thu 15/10/20	Tue 1/9/20	Thu 15/10/20	131	344,455,134,135	0 days		100%
134	SUBS-1150		Subletting for ELS works for Inlet Works No.1			48 days	Sun 5/1/20	Fri 21/2/20	85 days	Fri 16/10/20	Fri 8/1/21	Fri 16/10/20	Fri 8/1/21	133		0 days		100%
135	SUBS-1160		Subletting for ELS works for Membrance Facilities Building and other buildings			48 days	Sun 5/1/20	Fri 21/2/20	85 days	Fri 16/10/20	Fri 8/1/21	Fri 16/10/20	Fri 8/1/21	133	346,389,456,136,137,138,139,140,4	0 days		100%
136	SUBS-1170		Subletting for structural works for Inlet Works Building			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21	135		0 days		100%
137	SUBS-1180		Subletting for structural works for Primary Sedimentation Tanks			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21	135	348	0 days		100%
138	SUBS-1190		Subletting for structural works for Bioreactors			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21	135	391	0 days		100%
139	SUBS-1200		Subletting for structural works for Membrance Facilities Building			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21	135	426	0 days		100%
140	SUBS-1210		Subletting for structural works for SAS pumping house and ancillary structures			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Sat 9/1/21	Thu 25/2/21	Sat 9/1/21	Thu 25/2/21	135	141	0 days		100%
141	SUBS-1220		Subletting for ABWF works			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Fri 26/2/21	Wed 14/4/21	Fri 26/2/21	Wed 14/4/21	140	332,350,398,460,488,504,514,522,	0 days		100%
142	SUBS-1230		Subletting for Process Pipeworks, Utilities and Roadworks			48 days	Thu 12/12/19	Tue 28/1/20	150 days	Fri 22/5/20	Sun 18/10/20	Fri 22/5/20	Sun 18/10/20	121	532,549,551,552,553,554,543	0 days		100%
143	SUBS-1240		Subletting for Landscape Hardworks and Softworks			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Thu 15/4/21	Tue 1/6/21	Thu 15/4/21	Tue 1/6/21	141	559,560	0 days		100%
144	SUBS-1250		Subletting for Trial dewatering works and installation of additional stop logs at BR2 connon channel due to malfucntioned of existing penstock at FST no. 5 and 7 (EWN 055)			0 days	NA	NA	15 days	Tue 15/9/20	Tue 29/9/20	Tue 15/9/20	Tue 29/9/20		355	0 days		100%
145	SUBS-1260		Subletting for Diversion of Power supply for existing Slaghter House pump station (CE 034)			0 days	NA	NA	14 days	Mon 21/9/20	Sun 4/10/20	Mon 21/9/20	Sun 4/10/20			0 days		100%
146	SUBS-1270		Subletting for Decommission of exisiting power and signal systems in leachate Pump station switch room (PMI 039)			0 days	NA	NA	14 days	Mon 21/9/20	Sun 4/10/20	Mon 21/9/20	Sun 4/10/20		439	0 days		100%
147	SUBS-1280		Subletting for Diversion of Existing DN250 Leachate Raising Main (PPMI 025)			0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20			0 days		100%
148	SUBS-1290		Subletting for Construction of Cable trough for CLP 11kv Cable Diversion (PPMI 041)			0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20		453	0 days		100%
149	SUBS-1300		Subletting for Demolition of Existing Pillar box and its concrete plinth (CE 030)			0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20		441	0 days		100%
150	SUBS-1310		Subletting for Excavation to locate existing underground cable near SAS Pump Station (PPMI 038)			0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20			0 days		100%
151	SUBS-1320		Subletting for Diversion of pumping system sewerage (PPMI 083)			0 days	NA	NA	31 days	Mon 21/9/20	Wed 21/10/20	Mon 21/9/20	Wed 21/10/20		446	0 days		100%
152	**SUBA-1000**		**Statutory Submission, Submission and Approval**			**1564 days**	**Mon 18/11/19**	**Wed 28/2/24**	**1956 days**	**Mon 18/11/19**	**Wed 26/3/25**	**Mon 18/11/19**	**NA**			**182 days**		**49%**
153	SUBA-1010		Liaison with operator of SWHSTW and obtain their consent of associated method statement of major activities			0 days	NA	NA	1584 days	Mon 18/11/19	Wed 26/3/25	Mon 18/11/19	NA	2	59FF	156 days		30%
154	SUBA-1020		Prepare and submit Subcontractor Management Plan (SMP)			24 days	Mon 18/11/19	Wed 11/12/19	24 days	Mon 18/11/19	Wed 11/12/19	Mon 18/11/19	Wed 11/12/19	2	122,125,124	0 days		100%
155	SUBA-1030		Prepare and submit Interface Management Plan			36 days	Mon 18/11/19	Mon 23/12/19	36 days	Mon 18/11/19	Mon 23/12/19	Mon 18/11/19	Mon 23/12/19	2		0 days		100%
156	SUBA-1040		Prepare and submit the TTA plans inside Treatment Plant for UU diversion and buildings construction			24 days	Mon 18/11/19	Wed 11/12/19	24 days	Mon 18/11/19	Wed 11/12/19	Mon 18/11/19	Wed 11/12/19	2	201	0 days		100%
157	SUBA-1050		Prepare and submit method statement for UU diversion for Inlet Works No.1			12 days	Mon 18/11/19	Fri 29/11/19	12 days	Mon 18/11/19	Fri 29/11/19	Mon 18/11/19	Fri 29/11/19	2	158	0 days		100%
158	SUBA-1060		PM review and accept the method statement			12 days	Sat 30/11/19	Wed 11/12/19	0 days	Sat 30/11/19	Wed 11/12/19	Sat 30/11/19	Wed 11/12/19	157	213,214	0 days		100%
159	SUBA-1070		Prepare and submit combine underground services drawing for PM's review the alignment			24 days	Thu 26/12/19	Sat 18/1/20	23 days	Thu 26/12/19	Sat 18/1/20	Thu 26/12/19	Sat 18/1/20	125		0 days		100%
160	SUBA-1080		Prepare and submit method statement for demolition existing structures			24 days	Mon 18/11/19	Wed 11/12/19	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19	Wed 22/1/20	2	402,339,462,295,539	0 days		100%
161	SUBA-1090		Prepare and submit method statement for structural works for buildings			24 days	Mon 18/11/19	Wed 11/12/19	197 days	Mon 18/11/19	Mon 1/6/20	Mon 18/11/19	Mon 1/6/20	2		0 days		100%
162	SUBA-1100		Prepare and submit method statements to MTRC regarding the works within railing protection boundary			36 days	Mon 18/11/19	Mon 23/12/19	92 days	Sat 1/2/20	Mon 25/5/20	Sat 1/2/20	Mon 25/5/20	2	339,462,539,359	0 days		100%
163	SUBA-1110		Prepare and submit & approve Safety Management Plan			24 days	Mon 18/11/19	Wed 11/12/19	3 days	Mon 18/11/19	Wed 20/11/19	Mon 18/11/19	Wed 20/11/19	2		0 days		100%
164	SUBA-1120		Prepare and submit Excavation and lateral support (ELS) proposal			24 days	Mon 10/2/20	Wed 4/3/20	128 days	Mon 10/2/20	Tue 16/6/20	Mon 10/2/20	Tue 16/6/20	2		0 days		100%
165	SUBA-1120a		Prepare and submit Excavation and lateral support (ELS) proposal for Inlet Works No.1			0 days	NA	NA	24 days	Wed 29/9/21	Sat 23/10/21	NA	NA	314SF		1433 days		0%
166	SUBA-1120b		Prepare and submit Excavation and lateral support (ELS) proposal for Primnary Sedimentation tanks No.1-4			0 days	NA	NA	24 days	Fri 1/7/22	Mon 25/7/22	NA	NA	346SF		1158 days		0%
167	SUBA-1120c		Prepare and submit Excavation and lateral support (ELS) proposal for Bioreactor No. 2A&2B			0 days	NA	NA	24 days	Sun 15/5/22	Wed 8/6/22	NA	NA	389SF		1205 days		0%
168	SUBA-1130		Prepare and submit Dewatering proposal for basement construction			24 days	Mon 10/2/20	Wed 4/3/20	165 days	Mon 10/2/20	Thu 23/7/20	Mon 10/2/20	Thu 23/7/20	2		0 days		100%
169	SUBA-1130a		Prepare and submit Dewatering proposal for basement construction for Inlet Works No.1			0 days	NA	NA	24 days	Wed 29/9/21	Sat 23/10/21	NA	NA	314SF		1433 days		0%



ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
170	SUBA-1130b		Prepare and submit Dewatering proposal for basement construction for Primnary Sedimentation tanks No.1-4			0 days	NA	NA	24 days	Fri 1/7/22	Mon 25/7/22	NA	NA	346SF		1158 days		0%
171	SUBA-1130c		Prepare and submit Dewatering proposal for basement construction for Bioreactor No. 2A&2B			0 days	NA	NA	24 days	Sun 15/5/22	Wed 8/6/22	NA	NA	389SF		1205 days		0%
172	SUBA-1140		Prepare and submit Pre-construction condition survey of existing structures/ services			24 days	Wed 5/2/20	Fri 28/2/20	0 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	198		0 days		100%
173	SUBA-1150		Prepare and submit Settlement and movement monitoring proposal of existing structures/ services			24 days	Wed 5/2/20	Fri 28/2/20	110 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	198FS+120 days		0 days		100%
174	SUBA-1160		Prepare and submit design of structure elements of the temporary activated carbon deodourization unit			60 days	Fri 17/1/20	Mon 16/3/20	60 days	Mon 18/11/19	Mon 16/3/20	Mon 18/11/19	Mon 16/3/20	2FS+60 days		0 days		100%
175	SUBA-1170		Prepare of RSE and structural design for alternation and additional (A&A) works at Membrane Facilities Building No.1			180 days	Mon 18/10/21	Fri 15/4/22	180 days	Mon 18/10/21	Fri 15/4/22	NA	NA	NA	541	332 days		0%
176	SUBA-1180		Prepare of RSE and structural design for alternation and additional (A&A) works at Main Power House			44 days	Wed 15/7/20	Thu 3/9/20	60 days	Mon 6/7/20	Thu 3/9/20	Mon 6/7/20	Thu 3/9/20		539	0 days		100%
177	**SUBE-1000**		**Environmental Aspect Submissions**			**45 days**	**Mon 18/11/19**	**Wed 1/1/20**	**81 days**	**Mon 18/11/19**	**Thu 6/2/20**	**Mon 18/11/19**	**Thu 6/2/20**			**0 days**		**100%**
178	SUBE-1010		Prepare, submit & approve Site Management Plan for Trip Tricket System			45 days	Mon 18/11/19	Wed 1/1/20	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19	Wed 22/1/20	2		0 days		100%
179	SUBE-1020		Prepare, submit & approve Waste Management Plan			45 days	Mon 18/11/19	Wed 1/1/20	81 days	Mon 18/11/19	Thu 6/2/20	Mon 18/11/19	Thu 6/2/20	2		0 days		100%
180	SUBE-1030		Prepare, submit & approve Environmental Management Plan			45 days	Mon 18/11/19	Wed 1/1/20	66 days	Mon 18/11/19	Wed 22/1/20	Mon 18/11/19	Wed 22/1/20	2		0 days		100%
181	**SUBP-1000**		**Procurement**			**731 days**	**Mon 18/11/19**	**Wed 17/11/21**	**648 days**	**Mon 18/11/19**	**Thu 26/8/21**	**Mon 18/11/19**	**NA**			**278 days**		**94%**
182	SUBP-1010		Prepare and submit the Procurement Procedure			12 days	Mon 18/11/19	Fri 29/11/19	2 days	Mon 18/11/19	Tue 19/11/19	Mon 18/11/19	Tue 19/11/19	2	183	0 days		100%
183	SUBP-1020		PM Review & Accept Procurement Procedure			12 days	Sat 30/11/19	Wed 11/12/19	21 days	Tue 19/11/19	Tue 10/12/19	Tue 19/11/19	Tue 10/12/19	182	184,185,186,187,188,189,190,191	0 days		100%
184	SUBP-1030		Prepare, submit and approve the pipe works material			25 days	Thu 12/12/19	Sun 5/1/20	34 days	Thu 6/2/20	Tue 10/3/20	Thu 6/2/20	Tue 10/3/20	183	212,532,551,552,554,553,549,557,5	0 days		100%
185	SUBP-1040		Prepare, submit and approve the water proofing material			25 days	Thu 12/12/19	Sun 5/1/20	25 days	Mon 2/8/21	Thu 26/8/21	NA	NA	183	329,325	278 days		0%
186	SUBP-1050		Prepare, submit and approve the concrete mix material			48 days	Thu 12/12/19	Tue 28/1/20	90 days	Mon 3/2/20	Sat 2/5/20	Mon 3/2/20	Sat 2/5/20	183	391,426	0 days		100%
187	SUBP-1060		Prepare, submit and approve the rebar material			48 days	Thu 12/12/19	Tue 28/1/20	49 days	Sat 23/5/20	Fri 10/7/20	Sat 23/5/20	Fri 10/7/20	183	391,426	0 days		100%
188	SUBP-1070		Prepare, submit and approve the metal works material			48 days	Thu 12/12/19	Tue 28/1/20	48 days	Tue 1/9/20	Sun 18/10/20	Tue 1/9/20	Sun 18/10/20	183	391,426	0 days		100%
189	SUBP-1080		Prepare, submit and approve the ABWF works material			48 days	Sat 12/12/20	Tue 28/1/20	48 days	Mon 1/3/21	Sat 17/4/21	Mon 1/3/21	Sat 17/4/21	183	332,350,398,460,488,504,514,522,4	0 days		100%
190	SUBP-1090		Prepare, submit and approve the protective lining to concrete			0 days	NA	NA	48 days	Tue 1/9/20	Sun 18/10/20	Tue 1/9/20	Sun 18/10/20	183	391,426	0 days		100%
191	SUBP-1100		Prepare, submit and approve the multi-part covers			0 days	NA	NA	21 days	Tue 5/5/20	Mon 25/5/20	Tue 5/5/20	Mon 25/5/20	183		0 days		100%
192	**SUBB-1000**		**BIM**			**1205 days**	**Thu 6/2/20**	**Wed 28/2/24**	**1562 days**	**Mon 18/11/19**	**Fri 28/2/25**	**Mon 18/11/19**	**NA**			**178 days**		**27%**
193	SUBB-1010		Prepare, submit and approve the proposal of details of Common data environment (CDE)			48 days	Thu 6/2/20	Wed 1/4/20	37 days	Mon 18/11/19	Wed 1/4/20	Mon 18/11/19	Wed 1/4/20	129,130	194	0 days		100%
194			Prepare and submit BIM submission			1484 days	Thu 6/2/20	Wed 28/2/24	1451 days	Thu 2/4/20	Fri 28/2/25	Thu 2/4/20	NA	193		178 days		25%
195	**C-1000**	*	**Construction Works (Working day)**			**1957 days**	**Mon 18/11/19**	**Thu 27/3/25**	**2138 days**	**Mon 18/11/19**	**Wed 24/9/25**	**Mon 18/11/19**	**NA**			**0 days**		**51%**
196	**CPW-1000**		**Preliminary Works**			**109 days**	**Mon 18/11/19**	**Thu 5/3/20**	**121 days**	**Mon 18/11/19**	**Tue 17/3/20**	**Mon 18/11/19**	**Tue 17/3/20**			**0 days**		**100%**
197	CPW-1000		Initial Survey			24 days	Mon 18/11/19	Sat 14/12/19	10 days	Mon 18/11/19	Thu 28/11/19	Mon 18/11/19	Thu 28/11/19	2	198	0 days		100%
198	CPW-2000		Condition Survey			30 days	Fri 27/12/19	Tue 4/2/20	89 days	Mon 18/11/19	Fri 6/3/20	Mon 18/11/19	Fri 6/3/20	125,197	199,172,173FS+120 days,200	0 days		100%
199	CPW-3000		Installation of Monitoring Markers			26 days	Wed 5/2/20	Thu 5/3/20	78 days	Fri 29/11/19	Thu 5/3/20	Fri 29/11/19	Thu 5/3/20	198		0 days		100%
200	CPW-4000		Tree Felling Works		22, 235	0 days	NA	NA	9 days	Sat 7/3/20	Tue 17/3/20	Sat 7/3/20	Tue 17/3/20	198		0 days		100%
201	**CAR-0000**	*	**Access Road (AR3), B-1**			**193 days**	**Mon 20/1/20**	**Sat 12/9/20**	**238 days**	**Thu 12/12/19**	**Wed 30/9/20**	**Thu 12/12/19**	**Wed 30/9/20**	**4,156**		**0 days**		**100%**
202	CAR-1000		Site setup and clearance wroks		05	28 days	Mon 20/1/20	Mon 24/2/20	38 days	Mon 20/1/20	Fri 6/3/20	Mon 20/1/20	Fri 6/3/20		203	0 days		100%
203	CAR-1001		Awaiting for AECOM instruction for alignment confirmation for road works		055	0 days	NA	NA	5 days	Mon 17/2/20	Thu 12/3/20	Mon 17/2/20	Thu 12/3/20	202	204	0 days		100%
204	CAR-1002		Additional Works in Access Road AR3 to Settle Left-in Material by Contract DC/2016/07		215-1	0 days	NA	NA	4 days	Thu 21/5/20	Mon 25/5/20	Thu 21/5/20	Mon 25/5/20	203	205	0 days		100%
205	CAR-2000		Drainage and Utilities Works			76 days	Fri 6/3/20	Tue 9/6/20	75 days	Sat 7/3/20	Tue 9/6/20	Sat 7/3/20	Tue 9/6/20	204	206	0 days		100%
206	CAR-2000a		Trimming of Existing Sheet Piles in Access Road AR3		215-2	0 days	NA	NA	20 days	Tue 14/7/20	Wed 5/8/20	Tue 14/7/20	Wed 5/8/20	205	207	0 days		100%
207	CAR-2000b		Installation of Multi-part Cover and Manhole Cover of Chamber RP6 and Associated Concreting Works in Portion B-1		215	0 days	NA	NA	7 days	Fri 28/8/20	Fri 4/9/20	Fri 28/8/20	Fri 4/9/20	206	208	0 days		100%
208	CAR-2001		Diversion of Existing Underground Cables in Portion B-1A		036	0 days	NA	NA	172 days	Thu 5/3/20	Wed 30/9/20	Thu 5/3/20	Wed 30/9/20	207	210	0 days		100%
209	CAR-2002		Additional U-channel, beam barrier and footway concrete pavement		055	0 days	NA	NA	60 days	Thu 12/12/19	Wed 26/2/20	Thu 12/12/19	Wed 26/2/20		210	0 days		100%
210	CAR-3000	KD1A	Roadworks			80 days	Wed 10/6/20	Sat 12/9/20	133 days	Fri 24/4/20	Wed 30/9/20	Fri 24/4/20	Wed 30/9/20	126,209,208	42FF	0 days		100%
211	**CIW-0000**	*	**Inlet Works No.1, B-2**			**854 days**	**Mon 6/1/20**	**Mon 21/11/22**	**594 days**	**Tue 26/11/19**	**Thu 25/11/21**	**Tue 26/11/19**	**NA**			**0 days**		**88%**
212	**CIW-1000**		**Diversion Works (1. Inlet Trunk Sewer, Leachate Rising Mains, Sludge Pipes, Tank Drains and Pipelines near Primary Sludge Thinkeners)**			**180 days**	**Mon 6/1/20**	**Fri 14/8/20**	**459 days**	**Tue 26/11/19**	**Wed 16/6/21**	**Tue 26/11/19**	**NA**	**184,123**	**44FF**	**111 days**		**88%**
213	CIW-1100		Utilities scanning to idenify existing UU arrangement			12 days	Mon 6/1/20	Sat 18/1/20	0 days	Fri 13/12/19	Sat 18/1/20	Fri 13/12/19	Sat 18/1/20	158	214SS,216	0 days		100%
214	CIW-1200		Trial pits to locate the collection points			24 days	Mon 6/1/20	Wed 5/2/20	0 days	Mon 6/1/20	Tue 10/3/20	Mon 6/1/20	Tue 10/3/20	158,213SS,124	232,251	0 days		100%
215	**CIW-1300**		**Installation and Commissioning of Temporary Activated Carbon Deodorization Unit for the Existing Inlet Works**			**0 days**	**NA**	**NA**	**98 days**	**Wed 11/3/20**	**Sat 11/7/20**	**Wed 11/3/20**	**Sat 11/7/20**			**0 days**		**100%**
216	CIW-1310		Construction of concrete plinth			0 days	NA	NA	24 days	Wed 11/3/20	Wed 8/4/20	Wed 11/3/20	Wed 8/4/20	213	217	0 days		100%
217	CIW-1320		Installation of Deodorizer			0 days	NA	NA	40 days	Thu 9/4/20	Sat 30/5/20	Thu 9/4/20	Sat 30/5/20	216	218	0 days		100%
218	CIW-1330		Testing & commissioning			0 days	NA	NA	15 days	Mon 1/6/20	Wed 17/6/20	Mon 1/6/20	Wed 17/6/20	217	219FS-1 day	0 days		100%
219	CIW-1340		Demolishment of the existing carbon deodorization unit			0 days	NA	NA	20 days	Wed 17/6/20	Sat 11/7/20	Wed 17/6/20	Sat 11/7/20	218FS-1 day		0 days		100%
220	**CIW-1400**		**Diversion of Inlet Trunk Sewer (approx. 40m 1800mm dia concrete pipe, 4 deep manholes and Inlet Reception Chamber)**			**146 days**	**Thu 6/2/20**	**Mon 3/8/20**	**451 days**	**Mon 9/3/20**	**Mon 13/9/21**	**Mon 9/3/20**	**NA**			**0 days**		**97%**
221	CIW-1405		Joint Initial Survey arrangement with MTRCL			0 days	NA	NA	24 days	Thu 19/11/20	Wed 16/12/20	Thu 19/11/20	Wed 16/12/20		222	0 days		100%
222	CIW-1410		Remedial Works for uncharted sludge Pipe leakage		41	0 days	NA	NA	8 days	Mon 9/3/20	Tue 17/3/20	Mon 9/3/20	Tue 17/3/20	221	223	0 days		100%
223	CIW-1420		Diversion of uncharted DN250 sludge pipe		41	0 days	NA	NA	27 days	Tue 31/3/20	Thu 7/5/20	Tue 31/3/20	Thu 7/5/20	222	230,224,225	0 days		100%
224	CIW-1421		Diversion of uncharted 2' water pipe		24	0 days	NA	NA	9 days	Wed 15/4/20	Fri 24/4/20	Wed 15/4/20	Fri 24/4/20	223	230	0 days		100%
225	CIW-1422		Additional Underground Utility Scanning for existing sludge pipe		32	0 days	NA	NA	1 day	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	Sat 18/4/20	223		0 days		100%
226	CIW-1423		HV Cable Diversion for Inlet Works		84	0 days	NA	NA	135 days	Sat 10/10/20	Wed 24/3/21	Sat 10/10/20	Wed 24/3/21			0 days		100%
227	CIW-1423a		Exposing, Removal and Diversion of Existing Cables near Inlet Works No. 1		236	0 days	NA	NA	268 days	Mon 4/5/20	Wed 24/3/21	Mon 4/5/20	Wed 24/3/21			0 days		100%
228	CIW-1424		Diversion of Existing Sludge Rising Main and Sewerage System		81	0 days	NA	NA	102 days	Mon 28/9/20	Sat 30/1/21	Mon 28/9/20	Sat 30/1/21		307,309,279,280	0 days		100%
229	CIW-1425		Demolition of Deodorization System and Facilities between Existing Primary Sludge Thickeners and Primary Sludge Pump Pit		037	0 days	NA	NA	1 day	Fri 28/8/20	Fri 28/8/20	Fri 28/8/20	Fri 28/8/20			0 days		100%
230	CIW-1430		Removal of concrete surround and uncharted sludge pipe		030	0 days	NA	NA	20 days	Fri 24/4/20	Tue 19/5/20	Fri 24/4/20	Tue 19/5/20	223,224	231	0 days		100%
231	CIW-1440		Remedial works for uncharted pipe and unforeseen water seepage		273	0 days	NA	NA	10 days	Fri 8/5/20	Tue 19/5/20	Fri 8/5/20	Tue 19/5/20	230	232,233	0 days		100%
232	**CIW-1450**		**Trench Excavation for 1800mm dia pipeline and manholes**			**146 days**	**Thu 6/2/20**	**Mon 3/8/20**	**238 days**	**Wed 11/3/20**	**Mon 28/12/20**	**Wed 11/3/20**	**Mon 28/12/20**	**214,231**		**0 days**		**100%**
233	CIW-1450a		Sheetpile installation (on hold due to identification of uncharted obstruction)		28	0 days	NA	NA	80 days	Wed 11/3/20	Thu 18/6/20	Wed 11/3/20	Thu 18/6/20	231	234	0 days		100%
234	CIW-1450b		Trench Excavation for 1800mm dia pipeline and manholes			45 days	Thu 6/2/20	Sat 28/3/20	22 days	Thu 18/6/20	Wed 15/7/20	Thu 18/6/20	Wed 15/7/20	233	235,247	0 days		100%
235	CIW-1450c		Identification of uncharted concrete surround and pipes near MHA01		28	0 days	NA	NA	29 days	Thu 16/7/20	Tue 18/8/20	Thu 16/7/20	Tue 18/8/20	234	238,243,247	0 days		100%
236	CIW-1450d		Removal of existing DSD drawpits near IRC & exposure of CLP cables with installation of additional temporary support		215-2	0 days	NA	NA	26 days	Thu 16/7/20	Fri 14/8/20	Thu 16/7/20	Fri 14/8/20			0 days		100%
237	CIW-1450e		Removal of uncharted concrete surround and pipes near MHA01 and Sheetpile installation		(045)	0 days	NA	NA	10 days	Fri 7/8/20	Tue 18/8/20	Fri 7/8/20	Tue 18/8/20		238,243	0 days		100%
238	CIW-1450f		Revised type of pipe bedding between Manholes no. MHA01 and MHA02		096	0 days	NA	NA	6 days	Sat 3/10/20	Fri 9/10/20	Sat 3/10/20	Fri 9/10/20	237,235	239	0 days		100%
239	CIW-1450g		Replace top soil with Grade 200 Rockfill below Formation level of the proposed pipe between MHA01 and MHA02		079	0 days	NA	NA	3 days	Mon 10/8/20	Wed 12/8/20	Mon 10/8/20	Wed 12/8/20	238	241	0 days		100%
240	CIW-1450h		Grade 200 Rockfill in ELS cofferdam of IRC		(161)	0 days	NA	NA	3 days	Wed 23/12/20	Mon 28/12/20	Wed 23/12/20	Mon 28/12/20		241	0 days		100%
241	CIW-1451		Construct M/H MHA01, MHA02, MHA04 and Inlet Reception Chamber			65 days	Mon 30/3/20	Fri 19/6/20	395 days	Wed 20/5/20	Mon 13/9/21	Wed 20/5/20	NA	239,243,242,244,240	283	-135 days		91%
242	CIW-1452		Enlarged size of Manhole MHA02		052	0 days	NA	NA	6 days	Tue 1/9/20	Mon 7/9/20	Tue 1/9/20	Mon 7/9/20		241	0 days		100%
243	CIW-1453		Additional Works for Manhole MHA01 Construction and Pipe Connection to Manhole MHA01		(094) (146)	0 days	NA	NA	160 days	Wed 16/9/20	Wed 31/3/21	Wed 16/9/20	Wed 31/3/21	235,237	241	0 days		100%
244	CIW-1454		Additional Works for IRC and Pipe Connection to IRC from Existing Manhole FMH1004115		(096)	0 days	NA	NA	17 days	Fri 18/9/20	Fri 9/10/20	Fri 18/9/20	Fri 9/10/20		245,247,241	0 days		100%
245	CIW-1455		Removal of left-in sheetpiles at IRC		381	0 days	NA	NA	3 days	Mon 19/10/20	Wed 21/10/20	Mon 19/10/20	Wed 21/10/20	244		0 days		100%
246	CIW-1456		Compliance Test for DN1800 Precast Concrete Pipe		065	0 days	NA	NA	1 day	Fri 18/9/20	Fri 18/9/20	Fri 18/9/20	Fri 18/9/20			0 days		100%
247	CIW-1457		Lay 1800mm dia concretre pipe			24 days	Sat 20/6/20	Mon 20/7/20	88 days	Thu 17/9/20	Mon 25/1/21	Thu 17/9/20	Mon 25/1/21	234,235,244	248	0 days		100%
248	CIW-1458		Connection to existing Inlet Chamber			12 days	Tue 21/7/20	Mon 3/8/20	12 days	Tue 26/1/21	Mon 8/2/21	Tue 26/1/21	Mon 8/2/21	247	307,44FF	0 days		100%
249	**CIW-1500**		**Diversion of Leachate Rising Main, Sludge Pipes and Tank Drain**			**150 days**	**Thu 6/2/20**	**Fri 7/8/20**	**594 days**	**Tue 26/11/19**	**Thu 25/11/21**	**Tue 26/11/19**	**NA**			**-99 days**		**94%**
250	**CIW-1510**	**KD1B**	**Diversion of Tank Drain MHD9.5 (approx. 70m CHES1 & CHES2)**			**150 days**	**Thu 6/2/20**	**Fri 7/8/20**	**406 days**	**Tue 26/11/19**	**Mon 12/4/21**	**Tue 26/11/19**	**Sat 10/4/21**	**278**	**307,44FF**	**0 days**		**100%**
251	**CIW-1500a**		**Diversion of Tank Drain MHD9.5 to MHA04 (approx. 70m 675mm dia conrete pipe, 24m DN250 DI leachate rising main, 90m CHES1&S2 DN250 CI)**			150 days	Thu 6/2/20	Fri 7/8/20	**406 days**	**Tue 26/11/19**	**Mon 12/4/21**	**Tue 26/11/19**	**Sat 10/4/21**	**214**		**0 days**		**100%**

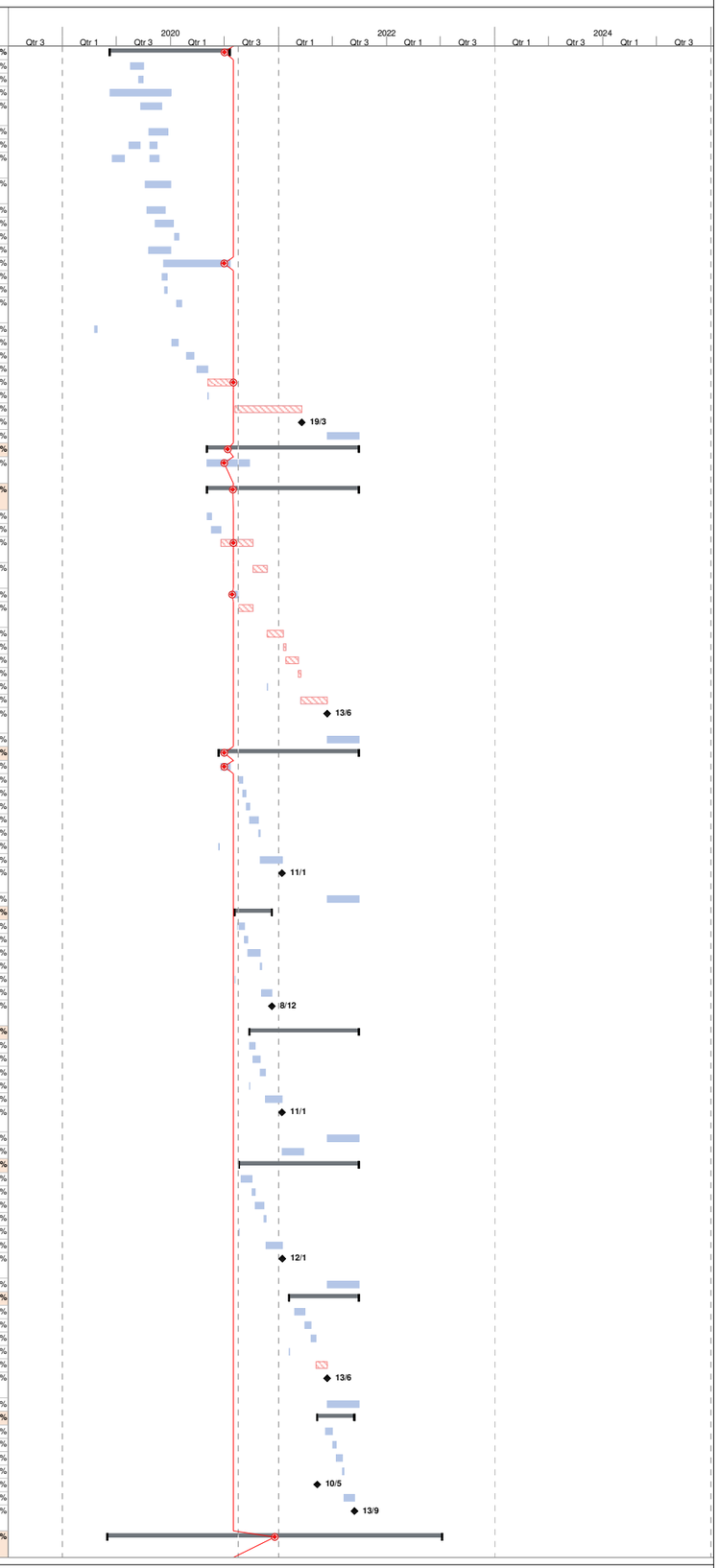


ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
252	CIW-1500b		Joint Initial Survey arrangement with MTRCL			0 days	NA	NA	158 days	Tue 26/11/19	Wed 10/6/20	Tue 26/11/19	Wed 10/6/20			0 days		100%
253	CIW-1500c		Site Clearance & inspection pit excavation under conforming alignments			0 days	NA	NA	36 days	Fri 12/6/20	Sat 25/7/20	Fri 12/6/20	Sat 25/7/20			0 days		100%
254	**CIW-1511**		**Tank Drain Diversion near MTRCL track**			**0 days**	**NA**	**NA**	**248 days**	**Thu 11/6/20**	**Mon 12/4/21**	**Thu 11/6/20**	**Sat 10/4/21**			**0 days**		**100%**
255	CIW-1511a		Excavation of trial pit near MHD9.5 (TP45 & 47)		040	0 days	NA	NA	12 days	Mon 27/7/20	Sat 8/8/20	Mon 27/7/20	Sat 8/8/20		256,260	0 days		100%
256	CIW-1511b		Uncharted cables found near MTRC track and identification			0 days	NA	NA	1 day	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	Thu 18/6/20	255		0 days		100%
257	CIW-1511c		Excavation of trial pit near MHD8.5			0 days	NA	NA	5 days	Fri 19/6/20	Wed 24/6/20	Fri 19/6/20	Wed 24/6/20		258	0 days		100%
258	CIW-1511d		Lower the ground surface, opening and additional trial pit (TP38)		(046)	0 days	NA	NA	60 days	Thu 11/6/20	Fri 21/8/20	Thu 11/6/20	Fri 21/8/20	257	259	0 days		100%
259	CIW-1511e		Excavation of Trial Pits near Manhole MHA04 and MH09		040	0 days	NA	NA	60 days	Thu 11/6/20	Fri 21/8/20	Thu 11/6/20	Fri 21/8/20	258		0 days		100%
260	CIW-1511f		Additional Trial Pit between MHD9.5 and MHA04		040	0 days	NA	NA	25 days	Fri 21/8/20	Fri 18/9/20	Fri 21/8/20	Fri 18/9/20	255		0 days		100%
261	CIW-1511g		Sheetpile installation for MHD9.5			0 days	NA	NA	38 days	Tue 1/9/20	Fri 16/10/20	Tue 1/9/20	Fri 16/10/20			0 days		100%
262	CIW-1511h		Sheetpile installation between MHD9.5 & MHA04			0 days	NA	NA	25 days	Tue 8/9/20	Thu 8/10/20	Tue 8/9/20	Thu 8/10/20			0 days		100%
263	CIW-1511i		UU supporting & ELS works& excavatuib between MHD9.5 & MHA04			0 days	NA	NA	73 days	Wed 7/10/20	Mon 4/1/21	Wed 7/10/20	Mon 4/1/21			0 days		100%
264	CIW-1511j		Unsuit excavated material from MHD9.5 to MHA04		261	0 days	NA	NA	4 days	Fri 20/11/20	Tue 24/11/20	Fri 20/11/20	Tue 24/11/20			0 days		100%
265	CIW-1511k		Revise design of manhole MHD9.5		(167)	0 days	NA	NA	20 days	Thu 7/1/21	Fri 29/1/21	Thu 7/1/21	Fri 29/1/21			0 days		100%
266	CIW-1511l		Break up opening and plugging existing concrete pipe at MHD9.5			0 days	NA	NA	6 days	Mon 18/1/21	Sat 23/1/21	Mon 18/1/21	Sat 23/1/21			0 days		100%
267	CIW-1511l1		Trimming existing concrete pipe at MHD9.5			0 days	NA	NA	13 days	Fri 22/1/21	Fri 5/2/21	Fri 22/1/21	Fri 5/2/21			0 days		100%
268	CIW-1511l2		Construction of manhole MHD9.5			0 days	NA	NA	49 days	Sat 6/2/21	Sat 10/4/21	Sat 6/2/21	Sat 10/4/21			0 days		100%
269	CIW-1511m		Additional work to prevent backflow from MHI1 to MHD9.5		(176)	0 days	NA	NA	9 days	Mon 18/1/21	Wed 27/1/21	Mon 18/1/21	Wed 27/1/21			0 days		100%
270	CIW-1511n		Sewage overflow incident of MHD11		(180)	0 days	NA	NA	9 days	Sat 13/2/21	Thu 25/2/21	Sat 13/2/21	Thu 25/2/21			0 days		100%
271	CIW-1512		Additional Special manhole for tank drain (NCE)			0 days	NA	NA	35 days	Mon 24/8/20	Mon 5/10/20	Mon 24/8/20	Mon 5/10/20		272,273	0 days		100%
272	CIW-1513		Breaking of concrete surround of cables (0.8mx0.8mx70m) (NCE)			0 days	NA	NA	24 days	Tue 8/9/20	Wed 7/10/20	Tue 8/9/20	Wed 7/10/20	271		0 days		100%
273	CIW-1514	KD1B	Construction of tank drain along revised alignment w/ concrete surround		051	0 days	NA	NA	10 days	Tue 5/1/21	Fri 15/1/21	Tue 5/1/21	Fri 15/1/21	271	43FF,307	0 days		100%
274	CIW-1516		Backfilling trench between MHD9.5 & MHA04			0 days	NA	NA	20 days	Sat 16/1/21	Mon 8/2/21	Sat 16/1/21	Mon 8/2/21			0 days		100%
275	**CIW-1520**		**Diversion of Sludge Pipes**			75 days	Tue 21/4/20	Tue 21/7/20	**364 days**	**Mon 11/5/20**	**Thu 29/7/21**	**Mon 11/5/20**	**NA**			**0 days**		**96%**
276	CIW-1520a		Excavation of trial pit and identification of connection point		351	0 days	NA	NA	103 days	Mon 11/5/20	Wed 9/9/20	Mon 11/5/20	Wed 9/9/20		277	0 days		100%
277	CIW-1520b		Trench excavation for twin DN250 sludge pipe ,on hold due to encounter of uncharted sludge pipe		351	75 days	Tue 21/4/20	Tue 21/7/20	4 days	Wed 15/7/20	Sat 18/7/20	Wed 15/7/20	Sat 18/7/20	276	278	0 days		100%
278	CIW-1520c		Additional hole drilling works and identification of connetion point			0 days	NA	NA	53 days	Mon 20/7/20	Fri 18/9/20	Mon 20/7/20	Fri 18/9/20	277	250	0 days		100%
279	CIW-1520d		Temporary diversion of substandard DI 250 Leachate raising main		202	0 days	NA	NA	127 days	Tue 20/10/20	Wed 24/3/21	Tue 20/10/20	Wed 24/3/21	228		0 days		100%
280	CIW-1520e		Protection work for substandard DI 500 tank drain Pipe (near MHD 9.5)		302	0 days	NA	NA	93 days	Wed 18/11/20	Fri 12/3/21	Wed 18/11/20	Fri 12/3/21	228		0 days		100%
281	CIW-1520f		Encounter of uncharted concrete pipe within sheetpile cofferdam at MHA04			0 days	NA	NA	2 days	Tue 10/11/20	Wed 11/11/20	Tue 10/11/20	Wed 11/11/20		282	0 days		100%
282	CIW-1520g		Resumption and construction of sludge pipe construction			0 days	NA	NA	253 days	Sat 19/9/20	Thu 29/7/21	Sat 19/9/20	NA	281	307,44FF	-36 days		91%
283	CIW-1530		Diversion of Leachate Rising Main			60 days	Tue 21/4/20	Fri 3/7/20	60 days	Tue 14/9/21	Thu 25/11/21	NA	NA	241		-135 days		0%
284	**CIW-1600**		**Diversion of pipelines near Primary Sludge Thickeners (approx. 180m long 150mm to 375mm concrete pipes)**			**156 days**	**Thu 6/2/20**	**Fri 14/8/20**	**570 days**	**Tue 26/11/19**	**Thu 28/10/21**	**Tue 26/11/19**	**NA**			**0 days**		**55%**
285	CIW-1610		~~Trench Excavation from M/H MHD1E to MHD5 (approx. 90m long with M/Hs MHD1A, 1B, 1C, 1D & 1E) - realigned~~		87	~~60 days~~	~~Thu 6/2/20~~	~~Mon 20/4/20~~	~~0 days~~	~~Tue 26/11/19~~	~~Tue 26/11/19~~	~~Tue 26/11/19~~	~~Tue 26/11/19~~			0 days		100%
286	~~CIW-1620~~		~~Manholes construction and Pipe laying - omitted~~		87	~~60 days~~	~~Mon 30/3/20~~	~~Sat 13/6/20~~	~~0 days~~	~~Tue 2/6/20~~	~~Tue 2/6/20~~	~~Tue 2/6/20~~	~~Tue 2/6/20~~		~~43FF,291~~	~~0 days~~		~~100%~~
287	CIW-1621		Temporary Diversion of Existing DN200 Filitrate Rising Main		034	0 days	NA	NA	20 days	Sat 1/8/20	Mon 24/8/20	Sat 1/8/20	Mon 24/8/20		288	0 days		100%
288	CIW-1623		Pipeline Diversion Works near Primary Sludge Thickening Tank		(114)	0 days	NA	NA	30 days	Fri 16/4/21	Sat 22/5/21	Fri 16/4/21	Sat 22/5/21	287	289	0 days		100%
289	CIW-1625		Uncharted underground utilities near Proposed MHD5B		0260	0 days	NA	NA	26 days	Mon 24/5/21	Wed 23/6/21	Mon 24/5/21	Wed 23/6/21	288	290,293	0 days		100%
290	CIW-1630		Trench Excavation from M/H (approx. 90m long with M/Hs M1A to M3B)			60 days	Tue 21/4/20	Fri 3/7/20	32 days	Thu 19/3/20	Wed 29/4/20	Thu 19/3/20	Wed 29/4/20	289	291,292	0 days		100%
291	CIW-1640		Manholes construction (M1A, M1B, M2B, M3B) and Pipe laying			25 days	Mon 15/6/20	Wed 15/7/20	12 days	Mon 4/5/20	Sat 16/5/20	Mon 4/5/20	Sat 16/5/20	290,286	43FF	0 days		100%
292	CIW-1650		Trench Excavation from MHD5 to MHD9.5 (approx. 90m long with M/Hs MHD5A & 5B)		(114)	50 days	Thu 16/7/20	Fri 11/9/20	60 days	Wed 2/9/20	Wed 30/12/20	Wed 2/9/20	Wed 30/12/20	290,296,301,303,305		0 days		100%
293	CIW-1660		Provision of Pumping System from Screen to Flume Channel		87	0 days	NA	NA	287 days	Tue 10/11/20	Thu 28/10/21	Tue 10/11/20	NA	289	294	-111 days		75%
294	CIW-1670		Manholes construction (MHD5A, MHD5B, MHD5C) and Pipe laying			45 days	Sat 23/5/20	Thu 16/7/20	293 days	Tue 3/11/20	Thu 28/10/21	Tue 3/11/20	NA	293	44FF	-111 days		8%
295	**CIW-2000**		**Decommission and Demolition of Existing Faciliates and Structures**			**240 days**	**Mon 2/3/20**	**Fri 18/12/20**	**222 days**	**Thu 19/3/20**	**Tue 15/12/20**	**Thu 19/3/20**	**Tue 15/12/20**	**6,122,160**		**0 days**		**100%**
296	**CIW-2100**		**Primary Sludge Thickening Tank No.1 and No.2**			**80 days**	**Mon 2/3/20**	**Tue 9/6/20**	**222 days**	**Thu 19/3/20**	**Tue 15/12/20**	**Thu 19/3/20**	**Tue 15/12/20**		**292**	**0 days**		**100%**
297	CIW-2101		Additional Works for Temporary Diversion of Bypass Pipe near Primary Sludge Thickeners			0 days	NA	NA	45 days	Thu 19/3/20	Sun 17/5/20	Thu 19/3/20	Sun 17/5/20			0 days		100%
298	CIW-2110		Removal of E&M equipment of primary sludge thickening tank			0 days	NA	NA	1 day	Thu 4/6/20	Thu 4/6/20	Thu 4/6/20	Thu 4/6/20		299	0 days		100%
299	CIW-2120		Decommission and Demolition the tank			80 days	Mon 2/3/20	Tue 9/6/20	150 days	Thu 18/6/20	Tue 15/12/20	Thu 18/6/20	Tue 15/12/20	298	301	0 days		100%
300	CIW-2130		Demolition of structure no.2			0 days	NA	NA	24 days	Mon 18/5/20	Mon 22/6/20	Mon 18/5/20	Mon 22/6/20			0 days		100%
301	CIW-2200		Primary Sludge Pump Pit			60 days	Wed 10/6/20	Thu 20/8/20	18 days	Wed 22/7/20	Tue 11/8/20	Wed 22/7/20	Tue 11/8/20	299	302,303,292,304	0 days		100%
302	CIW-2300		Septic Tank			50 days	Fri 21/8/20	Tue 20/10/20	18 days	Wed 12/8/20	Tue 1/9/20	Wed 12/8/20	Tue 1/9/20	301		0 days		100%
303	**CIW-2400**		**Diesel Tank**			**50 days**	**Wed 21/10/20**	**Fri 18/12/20**	**53 days**	**Thu 2/7/20**	**Tue 1/9/20**	**Thu 2/7/20**	**Tue 1/9/20**	**301**	**292**	**0 days**		**100%**
304	CIW-2410		Transfers of Remaining Diesel Fuel of Existing Diesel Tank			0 days	NA	NA	15 days	Thu 2/7/20	Tue 21/7/20	Thu 2/7/20	Tue 21/7/20	301	305	0 days		100%
305	CIW-2420		Demolition of diesel tank			50 days	Wed 21/10/20	Fri 18/12/20	18 days	Wed 12/8/20	Tue 1/9/20	Wed 12/8/20	Tue 1/9/20	304	**292**	0 days		100%
306	**CIW-3000**	*	**Inlet Works No.1 Building (1)**			**569 days**	**Sat 19/12/20**	**Mon 21/11/22**	**747 days**	**Tue 15/9/20**	**Thu 23/3/23**	**Tue 15/9/20**	**NA**	**6**		**748 days**		**18%**
307	CIW-3100		Predrilling (10nrs, 1rigs, 2.5days/drillhole/rig) - stage 1			40 days	Mon 4/1/21	Mon 22/2/21	28 days	Tue 15/9/20	Mon 19/10/20	Tue 15/9/20	Mon 19/10/20	248,250,273,228,282		0 days	1	100%
308	CIW-3100a		Predrilling (22nrs, 1rigs, 2.5days/drillhole/rig) - stage 2			0 days	NA	NA	60 days	Tue 8/12/20	Mon 22/2/21	Tue 8/12/20	Mon 22/2/21			0 days		100%
309	CIW-3200		Pre-bored H piles (188nos, 1.8rigs, 2days/rig/pile)			133 days	Tue 23/2/21	Wed 4/8/21	210 days	Fri 19/2/21	Tue 2/11/21	Fri 19/2/21	NA	228,132	310SS+150 days,311	-34 days	5	63%
310	CIW-3400a		Pile Load Test at stage 1			26 days	Thu 5/8/21	Fri 3/9/21	21 days	Sat 21/8/21	Tue 14/9/21	NA	NA	309SS+150 days	312	83 days		0%
311	CIW-3400b		Pile Load Test at stage 2 & 3			0 days	NA	NA	21 days	Wed 3/11/21	Fri 26/11/21	NA	NA	309	328,313	-34 days		0%
312	CIW-3300a		Sheetpile Installation at Phase C(900sq.m, 1rigs, 50sqm/rig/day)			80 days	Tue 23/3/21	Wed 30/6/21	30 days	Wed 15/9/21	Fri 22/10/21	NA	NA	310	315	83 days		0%
313	CIW-3300b		Sheetpile Installation at Phase B (2300sq.m, 1rigs, 50sqm/rig/day)			0 days	NA	NA	50 days	Sat 27/11/21	Thu 27/1/22	NA	NA	311	316	-34 days		0%
314	CIW-3500		**ELS works**			**77 days**	**Sat 4/9/21**	**Mon 6/12/21**	**157 days**	**Sat 23/10/21**	**Fri 6/5/22**	**NA**	**NA**		**334,165SF,169SF**	**3 days**	**5**	**0%**
315	CIW-3510		Phrase C (Grid G3 to L7)) - Excavation to -3.3mPD and blinding (strutting 2 layers, excavate soil 2250 cu.m)			77 days	Fri 4/6/21	Mon 6/12/21	77 days	Sat 23/10/21	Mon 24/1/22	NA	NA	312	320,333	83 days		0%
316	CIW-3520		Phrase B (Grid A1 to G3) - Excavation to -7.5mPD and blinding (strutting 4 layers, excavate soil 11000cu.m)			77 days	Fri 4/6/21	Mon 6/12/21	77 days	Fri 28/1/22	Fri 6/5/22	NA	NA	313	324	-34 days		0%
317	CIW-3590		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Mon 30/8/21	Mon 30/8/21	NA	NA	318SS-3 emons		1211 days		0%
318	CIW-3600		**R.C. Structure works**			**296 days**	**Thu 5/8/21**	**Thu 4/8/22**	**300 days**	**Sat 27/11/21**	**Thu 1/12/22**	**NA**	**NA**		**317SS-3 emons,332**	**-34 days**	**5**	**0%**
319	CIW-3610		**Phase C (Grid G3 to L7)**			**105 days**	**Thu 5/8/21**	**Wed 8/12/21**	**105 days**	**Tue 25/1/22**	**Tue 7/6/22**	**NA**	**NA**			**114 days**		**0%**
320	CIW-3611		Rebar fix and formwork and concreting for the pile cap (G/F) (including ELS demolition works)			40 days	Thu 5/8/21	Mon 20/9/21	40 days	Tue 25/1/22	Tue 15/3/22	NA	NA	315	321	114 days		0%
321	CIW-3612		Rebar fix and formwork and concreting upto +13.45mPD (1/F)			25 days	Tue 21/9/21	Fri 22/10/21	25 days	Wed 16/3/22	Thu 14/4/22	NA	NA	320	322	114 days		0%
322	CIW-3613	KD1C	Rebar fix and formwork and concreting upto +25.80mPD (R/F)			40 days	Sat 23/10/21	Wed 8/12/21	40 days	Tue 19/4/22	Tue 7/6/22	NA	NA	321	44FF,331,524	114 days		0%
323	CIW-3620		**Phase B (Gride A1 to G3)**			**193 days**	**Tue 7/12/21**	**Thu 4/8/22**	**173 days**	**Sat 7/5/22**	**Thu 1/12/22**	**NA**	**NA**			**-34 days**		**0%**
324	CIW-3621		Rebar fix and formwork and concreting for the Inlet Works structure upto Ground Level (including ELS demolition works)			54 days	Tue 7/12/21	Mon 14/2/22	54 days	Sat 7/5/22	Tue 12/7/22	NA	NA	316	325	-34 days		0%
325	CIW-3622		Apply waterproofing membrance and backfilling			14 days	Tue 15/2/22	Wed 2/3/22	14 days	Wed 13/7/22	Thu 28/7/22	NA	NA	324,185	326	-34 days		0%
326	CIW-3623	KD1C	Rebar fix and formwork and concreting for the Inlet Works structure upto Roof Level			105 days	Thu 3/3/22	Thu 4/8/22	105 days	Fri 29/7/22	Thu 1/12/22	NA	NA	325	331	-34 days		0%
327	CIW-3630		**Phase A (G1 to L3)**			**193 days**	**Tue 7/12/21**	**Thu 4/8/22**	**173 days**	**Sat 27/11/21**	**Sat 2/7/22**	**NA**	**NA**			**93 days**		**0%**
328	CIW-3631		Rebar fix and formwork and concreting for the Inlet Works structure upto Ground Level (including ELS demolition works)			54 days	Tue 7/12/21	Mon 14/2/22	54 days	Sat 27/11/21	Fri 4/2/22	NA	NA	311	329	93 days		0%
329	CIW-3632		Apply waterproofing membrance and backfilling			14 days	Tue 15/2/22	Wed 2/3/22	14 days	Sat 5/2/22	Mon 21/2/22	NA	NA	328,185	330	93 days		0%
330	CIW-3633	KD1C	Rebar fix and formwork and concreting for the Inlet Works structure upto Roof Level			105 days	Thu 3/3/22	Thu 4/8/22	105 days	Tue 22/2/22	Sat 2/7/22	NA	NA	329	332,44FF,331	93 days		0%
331	CIW-3700	KD1C	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Thu 4/8/22	Thu 4/8/22	0 days	Thu 1/12/22	Thu 1/12/22	NA	NA	330,322,326	44FF	-34 days		0%
332	CIW-3800	SW1	ABWF works + BS works			90 days	Fri 5/8/22	Mon 21/11/22	90 days	Fri 2/12/22	Thu 23/3/23	NA	NA	330,189,141,318	56FF	262 days		0%
333	CIW-3900	KD1D	Process Pipe CHE chainage 0-20 & CHF chainage 0-20			0 days	NA	NA	50 days	Sat 17/12/22	Mon 20/2/23	NA	NA	315,351FF	45FF	0 days		0%
334	CIW-4000	SW2	Remaining sewerage and utilities in Portion B1 & B2			0 days	NA	NA	60 days	Sat 7/5/22	Tue 19/7/22	NA	NA	314	57FF,555	3 days		0%
335	**CPS-0000**	*	**Primary Sedimentation Tanks, B-3 (2)**			**1115 days**	**Mon 18/11/19**	**Wed 23/8/23**	**1115 days**	**Mon 18/11/19**	**Wed 23/8/23**	**Mon 18/11/19**	**NA**	**8**		**139 days**		**44%**
336	CPS-1000		Operation of the Existing Primary sedimentation Tanks			615 days	Mon 18/11/19	Sat 24/7/21	615 days	Mon 18/11/19	Sat 24/7/21	Mon 18/11/19	Sat 24/7/21	2	339,338	0 days		100%
337	CPS-1100		Identification of existing cables near Primary Sedimentation Tank		88	0 days	NA	NA	3 days	Fri 19/2/21	Mon 22/2/21	Fri 19/2/21	Mon 22/2/21			0 days		100%
338	CPS-1200		Removal of residual sludge			0 days	NA	NA	12 days	Mon 26/7/21	Sat 7/8/21	NA	NA	336	339	-62 days		0%
339	CPS-2000		Demolition of existing primary sedimentation tanks no. 1			45 days	Mon 13/12/21	Wed 9/2/22	30 days	Mon 9/8/21	Sat 11/9/21	NA	NA	122,160,162,336,338	342,340	-62 days		0%
340	CPS-2000a		Demolition of existing primary sedimentation tanks no. 2			0 days	NA	NA	25 days	Mon 13/9/21	Wed 13/10/21	NA	NA	339	342	-62 days		0%
341	CPS-3000a		Predrilling (5nrs, 1rigs, 3days/drillhole/rig) - In-advanced stage			0 days	NA	NA	15 days	Thu 8/4/21	Sat 24/4/21	Thu 8/4/21	Sat 24/4/21		343	0 days		100%

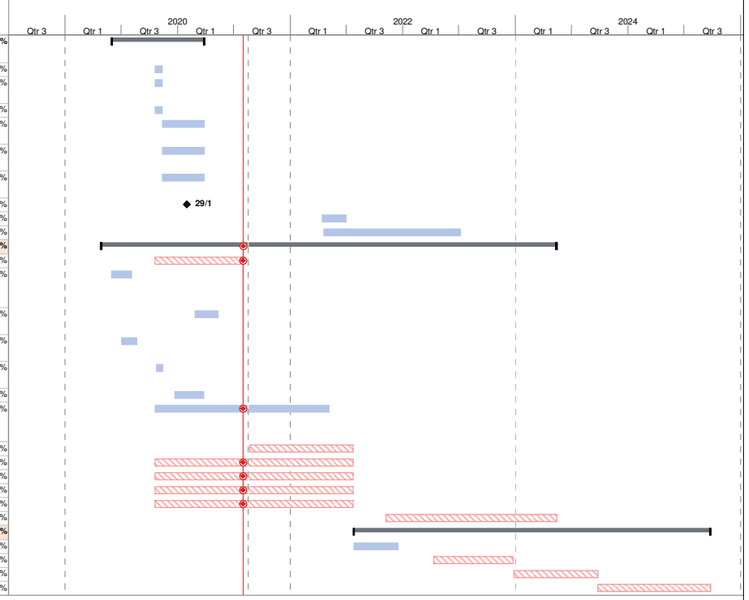


ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
342	CPS-3000		Predrilling (63nrs, 3rigs, 3days/drillhole/rig)			38 days	Thu 10/2/22	Fri 25/3/22	38 days	Fri 15/10/21	Sat 27/11/21	NA	NA	127,452,339,340	343	-62 days	1	0%
343	CPS-4000		Pre-bored H piles (205nos, 2.5rigs, 2days/pile/rig)			102 days	Sat 26/3/22	Mon 1/8/22	164 days	Mon 29/11/21	Wed 22/6/22	NA	NA	132,453,341,342	344FS-40 days,346,345	-62 days	5	0%
344	CPS-5000		Sheetpile Installation (FSP-II, 3360sq.m, 1rigs, 50sqm/rig/day)			85 days	Wed 25/5/22	Fri 2/9/22	42 days	Thu 5/5/22	Fri 24/6/22	NA	NA	343FS-40 days,133	346,352SS+27 days	-62 days		0%
345	CPS-6000		Pile Load Test			26 days	Tue 2/8/22	Wed 31/8/22	26 days	Thu 23/6/22	Sat 23/7/22	NA	NA	343	346	0 days		0%
346	CPS-7000		ELS works (20000cu.m soil with 2 layers wailing / strutting)			45 days	Sat 3/9/22	Fri 28/10/22	60 days	Mon 25/7/22	Wed 5/10/22	NA	NA	343,135,345,344	347FF-3 emons,348,166SF,170SF	0 days	3	0%
347	CPS-7900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 7/7/22	Thu 7/7/22	NA	NA	346FF-3 emons	348SS-3 emons	186 days		0%
348	CPS-8000	KD1D	R.C. Structure works (including ELS demolition works)			92 days	Sat 29/10/22	Mon 20/2/23	112 days	Thu 6/10/22	Mon 20/2/23	NA	NA	137,346,347SS-3 emons	349,350,45FF,351FF	0 days	3	0%
349	CPS-9000	KD1D	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 20/2/23	Mon 20/2/23	0 days	Mon 20/2/23	Mon 20/2/23	NA	NA	348	45FF	0 days		0%
350	CPS-10000	SW1	ABWF works + BS works			150 days	Tue 21/2/23	Wed 23/8/23	150 days	Tue 21/2/23	Wed 23/8/23	NA	NA	348,189,141	56FF	139 days		0%
351	CPS-11000	KD1D	Flowmeter Chamber no.1			60 days	Tue 21/2/23	Sat 6/5/23	60 days	Tue 6/12/22	Mon 20/2/23	NA	NA	348FF	45FF,333FF	0 days		0%
352	CPS-12000	SW2	Process Pipe CHG chainage 0-50, CHH chainage 0-80, CHI chainage 0-95 & CHJ chianage 0-40 and surrounding utilities			0 days	NA	NA	100 days	Wed 8/6/22	Thu 6/10/22	NA	NA	344SS+27 days	57FF,555	-62 days		0%
353	**CBR-0000**	*	**Bioreactors No.2A & 2B, B-4 (3)**			**1106 days**	**Mon 18/11/19**	**Sat 12/8/23**	**1194 days**	**Mon 18/11/19**	**Mon 27/11/23**	**Mon 18/11/19**	**NA**	**9**		**546 days**		**38%**
354	CBR-1000		Operation of 2no. Existing 800mm air mains over bioreactor no.2			360 days	Mon 18/11/19	Wed 11/11/20	292 days	Mon 18/11/19	Wed 11/11/20	Mon 18/11/19	Wed 11/11/20	2		0 days		100%
355	CBR-2000		Construction of Removable Steel Shutter in the Common Channel of BR2 and 3		67	0 days	NA	NA	86 days	Thu 1/10/20	Fri 15/1/21	Thu 1/10/20	Fri 15/1/21	144	365	0 days		100%
356	CBR-4100		Take Down E&M Equipment & cables in Bioreactor BR2 and Return to DSD		95	0 days	NA	NA	90 days	Thu 15/10/20	Mon 1/2/21	Thu 15/10/20	Mon 1/2/21		366	0 days		100%
357	CBR-4200		Installation of monitoring points before demolition of BR2		219	0 days	NA	NA	5 days	Wed 27/1/21	Mon 1/2/21	Wed 27/1/21	Mon 1/2/21	363	358	0 days		100%
358	CBR-4300		Condition Survey for BR2			0 days	NA	NA	1 day	Fri 30/10/20	Fri 30/10/20	Fri 30/10/20	Fri 30/10/20	357	366	0 days		100%
359	**CBR-5000**		**Demolition of existing bioreactor no.2**			**60 days**	**Wed 3/2/21**	**Tue 20/4/21**	**98 days**	**Tue 10/11/20**	**Wed 10/3/21**	**Tue 10/11/20**	**Wed 10/3/21**	**122,162**		**0 days**		**100%**
360	CBR-5100		Identification and removal of existing cables on air main pipe bridge		210	0 days	NA	NA	35 days	Tue 10/11/20	Sat 19/12/20	Tue 10/11/20	Sat 19/12/20		361,365	0 days		100%
361	CBR-5300		Plugging and demolition of existing DN800 air main			0 days	NA	NA	5 days	Mon 28/12/20	Sat 2/1/21	Mon 28/12/20	Sat 2/1/21	360		0 days		100%
362	CBR-5200		Diversion of existing lighting cable and Earthing ducts_stage 1		264	0 days	NA	NA	43 days	Fri 4/12/20	Tue 26/1/21	Fri 4/12/20	Tue 26/1/21	363	366	0 days		100%
363	CBR-5400		Overflow incident from BR1 to BR2 works area no.1 (Dec 2020)		285	0 days	NA	NA	33 days	Fri 18/12/20	Thu 28/1/21	Fri 18/12/20	Thu 28/1/21	364	357,362	0 days		100%
364	CBR-5410		Overflow incident from BR1 to BR2 works area (Feb 2021)		340	0 days	NA	NA	8 days	Tue 16/2/21	Wed 24/2/21	Tue 16/2/21	Wed 24/2/21	365	366,363	0 days		100%
365	CBR-3000		Construction of Isolation Wall & stoplog in common channel of BR2 & BR3		277	0 days	NA	NA	43 days	Sat 16/1/21	Wed 10/3/21	Sat 16/1/21	Wed 10/3/21	355,360	364	0 days		100%
366	CBR-5500		Demolition of existing pipe bridge, partition wall and base slab (Stage 1)			30 days	Wed 3/2/21	Fri 12/3/21	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21	362,358,364,356	367SS,368	0 days		100%
367	CBR-5520		Removal of additional concrete infill within the partition walls		(174)	0 days	NA	NA	26 days	Tue 2/2/21	Sat 6/3/21	Tue 2/2/21	Sat 6/3/21	366SS	368	0 days		100%
368	CBR-5900		Construction of precautionary measures (i.e. isolation wall)		322	0 days	NA	NA	2 days	Tue 9/3/21	Wed 10/3/21	Tue 9/3/21	Wed 10/3/21	366,367	369,371	0 days		100%
369	CBR-5905		Construction of precautionary measures (i.e. bund wall)		305	0 days	NA	NA	3 days	Thu 15/4/21	Sat 17/4/21	Thu 15/4/21	Sat 17/4/21	368		0 days		100%
370	CBR-5910		Removal of abandoned DN250 air pipe		209	0 days	NA	NA	6 days	Tue 20/4/21	Mon 26/4/21	Tue 20/4/21	Mon 26/4/21			0 days		100%
371	CBR-6000		Predrilling (33nrs, 3rigs, 2days/drillhole/rig)_stage 1			44 days	Wed 21/4/21	Sat 12/6/21	44 days	Mon 1/3/21	Wed 5/5/21	Mon 1/3/21	Wed 5/5/21	368	372	0 days	1	100%
372	CBR-7000		Pre-bored H piles (113nos, 2rigs, 2days/pile/rig)_stage 1			113 days	Tue 15/6/21	Thu 18/11/21	113 days	Thu 6/5/21	Fri 17/9/21	Thu 6/5/21	NA	371	382SS+30 days,377SS+45 days,38	1 day	5	41%
373	CBR-7100		**External works between BR2 and MFB2**			**0 days**	**NA**	**NA**	**217 days**	**Wed 30/6/21**	**Mon 21/3/22**	**Wed 30/6/21**	**NA**			**1046 days**		**9%**
374	CBR-7110		DN700 (CHER)RAS Diversion			0 days	NA	NA	45 days	Wed 30/6/21	Sat 21/8/21	Wed 30/6/21	NA	372SS+45 days	375	1212 days		2%
375	CBR-7120		Temporary vehicle diversion for RAS operation			0 days	NA	NA	6 days	Mon 23/8/21	Sat 28/8/21	NA	NA	374		1212 days		0%
376	CBR-7130		**DN600 Temporary Sewage diversion**			**0 days**	**NA**	**NA**	**120 days**	**Wed 30/6/21**	**Sat 20/11/21**	**Wed 30/6/21**	**NA**			**-45 days**		**18%**
377	CBR-7131		2nos. Manhole Construction (MHTD1 and MHTD2)		204, 353	0 days	NA	NA	75 days	Wed 30/6/21	Mon 27/9/21	Wed 30/6/21	NA	372SS+45 days	378FS-30 days	-88 days		36%
378	CBR-7132		Existing DN600 tank drain diversion		204, 353	45 days	NA	NA	75 days	Mon 23/8/21	Sat 20/11/21	NA	NA	377FS-30 days	379	-88 days		0%
379	CBR-7140		Demolition of abandoned DN600 pipe and existing surrounded wall & channel of BR2		353, 336	30 days	NA	NA	45 days	Mon 22/11/21	Sat 15/1/22	NA	NA	378	380	-88 days		0%
380	CBR-7150		Pre-drilling(3nr.) & Pre-bored H piles (20nrs, 1rig, 2days/drillhole/rig)_stage 2A			26 days	NA	NA	26 days	Mon 17/1/22	Fri 18/2/22	NA	NA	379	381	-88 days		0%
381	CBR-7160		Pile load test			26 days	NA	NA	26 days	Sat 19/2/22	Mon 21/3/22	NA	NA	380,386	389,388	-88 days		0%
382	CBR-7200		**External works between BR2 and PST**			**0 days**	**NA**	**NA**	**141 days**	**Wed 30/6/21**	**Wed 15/12/21**	**Wed 30/6/21**	**NA**	**372SS+30 days**		**-38 days**		**19%**
383	CBR-7210		Demolition of existing DN1200. DN900 and DN500 pipe (w/ ELS works)		91	0 days	NA	NA	75 days	Wed 30/6/21	Mon 27/9/21	Wed 30/6/21	NA	372SS+45 days	384	-38 days		36%
384	CBR-7220		Diversion of existing lighting cable and Earthing ducts (w/ ELS)		264	0 days	NA	NA	30 days	Tue 28/9/21	Wed 3/11/21	NA	NA	383	385	-38 days		0%
385	CBR-7230		Demolition of existing side wall		336	0 days	NA	NA	12 days	Thu 4/11/21	Wed 17/11/21	NA	NA	384	386	-38 days		0%
386	CBR-7240		Pre-bored H piles (24nrs, 2rig, 2days/drillhole/rig)_stage 2B			24 days	NA	NA	24 days	Thu 18/11/21	Wed 15/12/21	NA	NA	385	381	-38 days		0%
387	CBR-7340		Demolition of existing side wall between BR2 & BR3 and baseslab			0 days	NA	NA	60 days	Sat 18/9/21	Tue 30/11/21	NA	NA	372	388	1 day		0%
388	CBR-8000		Sheetpile Installation (3000sq.m, 1rigs, 50sqm/rig/day)			60 days	Wed 8/9/21	Fri 19/11/21	60 days	Tue 22/3/22	Tue 7/6/22	NA	NA	381,387	389	-88 days		0%
389	CBR-10000		ELS works (18100cu.m soil with 4 layers wailing / strutting)			125 days	Mon 20/12/21	Fri 27/5/22	80 days	Wed 8/6/22	Fri 9/9/22	NA	NA	135,381,388	391,390FF-3 emons,399SS+46 day	-88 days	3	0%
390	CBR-10900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Sat 11/6/22	Sat 11/6/22	NA	NA	389FF-3 emons	391SS-3 emons	168 days		0%
391	CBR-11000	KD1E	R.C. Structure works (including ELS demolition works)			180 days	Sat 28/5/22	Sat 31/12/22	180 days	Sat 10/9/22	Sat 22/4/23	NA	NA	138,186,187,190,188,389,390SS-3 emons	398,46FF,397,393FF,394SS+25 da	-88 days	5	0%
392		KD1E	Process Pipe CHO chainage 65-140			0 days	NA	NA	60 days	Wed 8/2/23	Sat 22/4/23	NA	NA	391FF	46FF	-88 days		0%
393	CBR-11020	KD1E	Additional backfill works after end wall construction at BR2 common channel		277	0 days	NA	NA	30 days	Wed 15/3/23	Sat 22/4/23	NA	NA	391FF	46FF	-88 days		0%
394	CBR-13000	KD1E	Flowmeter no. 2-4			180 days	2023/1/3	2023/8/12	60 days	Thu 13/10/22	Wed 21/12/22	NA	NA	391SS+25 days	395FS-13 days	-88 days		0%
395	CBR-14000	KD1E	Gate Valve Chamber no.1-3			180 days	2023/1/3	2023/8/12	60 days	Wed 7/12/22	Tue 21/2/23	NA	NA	394FS-13 days	396FS-12 days	-88 days		0%
396	CBR-15000	KD1E	Plug Valve Chamber no.1-2			180 days	2023/1/3	2023/8/12	60 days	Wed 8/2/23	Sat 22/4/23	NA	NA	395FS-12 days	46FF	-88 days		0%
397	CBR-12000	KD1E	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Sat 31/12/22	Sat 31/12/22	0 days	Sat 22/4/23	Sat 22/4/23	NA	NA	391	46FF	-88 days		0%
398	CBR-16000	SW1	ABWF works + BS works			180 days	Tue 3/1/23	Sat 12/8/23	180 days	Mon 24/4/23	Mon 27/11/23	NA	NA	391,189,141	56FF	60 days		0%
399	CBR-17000	SW2	Process Pipe CHQ chainage 65-170, CHP chainage 60-130, CHL chainage 0-35 & CHK chianage 0-50 and surrounding utilities			0 days	NA	NA	80 days	Tue 2/8/22	Sat 5/11/22	NA	NA	389SS+46 days	57FF,555	-88 days		0%
400	**CMF-0000**	*	**Membrane Facilities Building, B-5**			**941 days**	**Mon 6/1/20**	**Thu 9/3/23**	**1133 days**	**Mon 18/11/19**	**Wed 13/9/23**	**Mon 18/11/19**	**NA**	**2**		**121 days**		**45%**
401			Operation of existing Final Sedimentation Tanks no.3 & 4		26	0 days	NA	NA	98 days	Mon 18/11/19	Tue 17/3/20	Mon 18/11/19	Tue 17/3/20	2		0 days		100%
402	**CMF-1000**		**Demolition of existing final sedimentation tanks no. 3 & 4**			**14 days**	**Mon 6/1/20**	**Tue 21/1/20**	**340 days**	**Mon 6/1/20**	**Sun 28/2/21**	**Mon 6/1/20**	**Sun 28/2/21**	**160,122,10**		**0 days**		**100%**
403	CMF-1100		Confirmation of Decommission Schedule	68	30	0 days	NA	NA	58 days	Mon 6/1/20	Mon 16/3/20	Mon 6/1/20	Mon 16/3/20		404	0 days		100%
404	CMF-1200		Provision of new submersed pump	68	26	0 days	NA	NA	27 days	Wed 4/3/20	Fri 3/4/20	Wed 4/3/20	Fri 3/4/20	403	405	0 days		100%
405	CMF-1205		Assistant to decommissioning of Final Sedimentation Tank No. 3 and 4	68	7	0 days	NA	NA	14 days	Wed 4/3/20	Fri 3/4/20	Wed 4/3/20	Fri 3/4/20	404	406	0 days		100%
406	CMF-1300		Additional dismantling works to retain specified electrical and mechanical equipment	75	(013)	0 days	NA	NA	21 days	Tue 7/4/20	Wed 6/5/20	Tue 7/4/20	Wed 6/5/20	405	407	0 days		100%
407	CMF-1400		Additional pluging works for DN 1200 Conc. S&S pipe at wash water pumping station chamber	76, 77, 144	(015)	0 days	NA	NA	70 days	Mon 8/6/20	Sat 29/8/20	Mon 8/6/20	Sat 29/8/20	406	408	0 days		100%
408	CMF-1500		Diversion of wash water main	76, 77	032	0 days	NA	NA	21 days	Mon 15/6/20	Fri 10/7/20	Mon 15/6/20	Fri 10/7/20	407	409	0 days		100%
409	CMF-1600		Isolation wall for RAS Channel No.1	76, 77	035	0 days	NA	NA	40 days	Mon 1/6/20	Sat 18/7/20	Mon 1/6/20	Sat 18/7/20	408	413	0 days		100%
410	CMF-1710		Removal of DN1400 Bioreactor No. 2 Effluent Pipe		043	0 days	NA	NA	8 days	Fri 19/2/21	Sun 28/2/21	Fri 19/2/21	Sun 28/2/21			0 days		100%
411	CMF-1800		Exposed and disconnet uncharted existing cable between FST3 and FST 4	77	038	0 days	NA	NA	20 days	Thu 2/7/20	Fri 24/7/20	Thu 2/7/20	Fri 24/7/20			0 days		100%
412	CMF-1110		Demolition of structure no. 3 & 4	68, 75, 76, 77, 144		14 days	Mon 6/1/20	Tue 21/1/20	122 days	Wed 1/4/20	Sat 29/8/20	Wed 1/4/20	Sat 29/8/20		414	0 days		100%
413	CMF-1900		Removal of Existing DN150 SAS Rising Main at RAS Channel No. 1	212	060	0 days	NA	NA	23 days	Mon 31/8/20	Fri 25/9/20	Mon 31/8/20	Fri 25/9/20	409	415	0 days		100%
414	CMF-2000		Predrilling (83nrs, 4rigs, 2.5days/drillhole/rig)	144, 212	120	42 days	Sat 6/6/20	Mon 27/7/20	31 days	Mon 10/8/20	Mon 14/9/20	Mon 10/8/20	Mon 14/9/20	127,412	415	0 days	1	100%
415	CMF-3000		Pre-bored H piles (171nos, 2rigs, 1.5days/pile/rig) [Extended working hours 0700-1900 & shortern pile length]	212, 308, 309	120	140 days	Tue 28/7/20	Wed 13/1/21	96 days	Mon 28/9/20	Sat 23/1/21	Mon 28/9/20	Sat 23/1/21	414,132,413	416,417	0 days	5	100%
416	CMF-3100		Change of Layout of Basement of MFB no. 2		(102)	0 days	NA	NA	17 days	Tue 3/11/20	Sat 21/11/20	Tue 3/11/20	Sat 21/11/20	415		0 days		100%
417	CMF-4000		Pile Load Test			25 days	Thu 14/1/21	Tue 16/2/21	19 days	Mon 4/1/21	Mon 25/1/21	Mon 4/1/21	Mon 25/1/21	415	421,418	0 days		100%
418	CMF-5000		Installation of sheetpile [with pre-boring]		120	40 days	Wed 22/1/20	Wed 11/3/20	120 days	Mon 28/12/20	Thu 24/6/21	Mon 28/12/20	Thu 24/6/21	417	421	0 days		100%
419	**CMF-6000**		**ELS works**			**169 days**	**Wed 17/2/21**	**Thu 9/9/21**	**188 days**	**Fri 25/6/21**	**Thu 10/2/22**	**Fri 25/6/21**	**NA**	**10**	**424FF-3 emons**	**-87 days**	**5**	**22%**
420	**CMF-6100**		**Pharse A (A1 to N6) - Excavation to -9mPD and blinding**		**45**	**169 days**	**Wed 17/2/21**	**Thu 9/9/21**	**188 days**	**Fri 25/6/21**	**Thu 10/2/22**	**Fri 25/6/21**	**NA**		**423SS**	**-100 days**		**16%**
421	CMF-6110		Soil Excavation [Extended working hours 0700-1900 & reduction of excavation volume]		120, 207	169 days	Wed 17/2/21	Thu 9/9/21	88 days	Fri 25/6/21	Fri 8/10/21	Fri 25/6/21	NA	418,135,417	422	-117 days		35%
422	CMF-6120		Additional Rock Excavation [2200 cu.m, 7.5cu.m/group x 2]		120, 207	0 days	NA	NA	100 days	Sat 9/10/21	Thu 10/2/22	NA	NA	421	426	-117 days		0%
423	CMF-6200		Pharse B (A6 to N10) - Excavation to -1.9mPD and blinding			169 days	Wed 17/2/21	Thu 9/9/21	100 days	Fri 25/6/21	Sat 23/10/21	Fri 25/6/21	NA	420SS	427,433	1 day		31%
424	CMF-6900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Fri 12/11/21	Fri 12/11/21	NA	NA	419FF-3 emons	425SS-3 emons	216 days		0%
425	**CMF-7000**		**RC Structure works**			**232 days**	**Fri 10/9/21**	**Sat 25/6/22**	**262 days**	**Fri 11/2/22**	**Wed 28/12/22**	**NA**	**NA**	**10,424SS-3 emons**		**-117 days**	**5**	**0%**
426	CMF-7100	KD1F	Phase A - from B2 - Level 1 (including ELS demolition works)			112 days	Fri 10/9/21	Tue 25/1/22	112 days	Fri 11/2/22	Wed 29/6/22	NA	NA	139,186,187,190,188,422	427SS+30 days,428,430	-117 days		0%
427	CMF-7110	KD1F	Phase B - from B1 - Level 1 (including ELS demolition works)			112 days	Fri 10/9/21	Tue 25/1/22	112 days	Fri 18/3/22	Thu 4/8/22	NA	NA	426SS+30 days,423	429,430	-117 days		0%
428	CMF-7120	KD1G	Phase A - from Level 1 to Roof			120 days	Wed 26/1/22	Sat 25/6/22	120 days	Thu 30/6/22	Mon 21/11/22	NA	NA	427	431,432	-87 days		0%
429	CMF-7130	KD1G	Phase B - from Level 1 to Roof			120 days	Wed 26/1/22	Sat 25/6/22	120 days	Fri 5/8/22	Wed 28/12/22	NA	NA	427	431,432	-117 days		0%
430	CMF-8000	KD1F	Allow access to Contractor DE/2018/04 for E&M installation and T&C works (from B2-level 1)			0 days	Tue 25/1/22	Tue 25/1/22	0 days	Thu 4/8/22	Thu 4/8/22	NA	NA	426,427	47FF	-115 days		0%
431	CMF-9000	KD1G	Allow access to Contractor DE/2018/04 for E&M installation and T&C works (from Level to Roof)			0 days	Sat 25/6/22	Sat 25/6/22	0 days	Wed 28/12/22	Wed 28/12/22	NA	NA	428,429	48FF	-117 days		0%
432	CMF-10000	SW1	ABWF works + BS works			210 days	Mon 27/6/22	Thu 9/3/23	210 days	Thu 29/12/22	Wed 13/9/23	NA	NA	189,428,429	56FF	121 days		0%
433	CMF-11000	SW2	Process Pipe CHQ chainage 0-65, CHM chainage 0-120, CHN chainage 0-125, CHO chainage 0-65, CHP chainage 0-60 & CHV chainge 0-50 and surrounding utilities			0 days	NA	NA	176 days	Mon 25/10/21	Tue 31/5/22	NA	NA	423	57FF,555	43 days		0%
434	**CSA-0000**	*	**SAS Pumping Station, B-6**			**455 days**	**Wed 20/5/20**	**Thu 25/11/21**	**728 days**	**Sat 18/4/20**	**Wed 28/9/22**	**Sat 18/4/20**	**NA**	**11**		**891 days**		**78%**

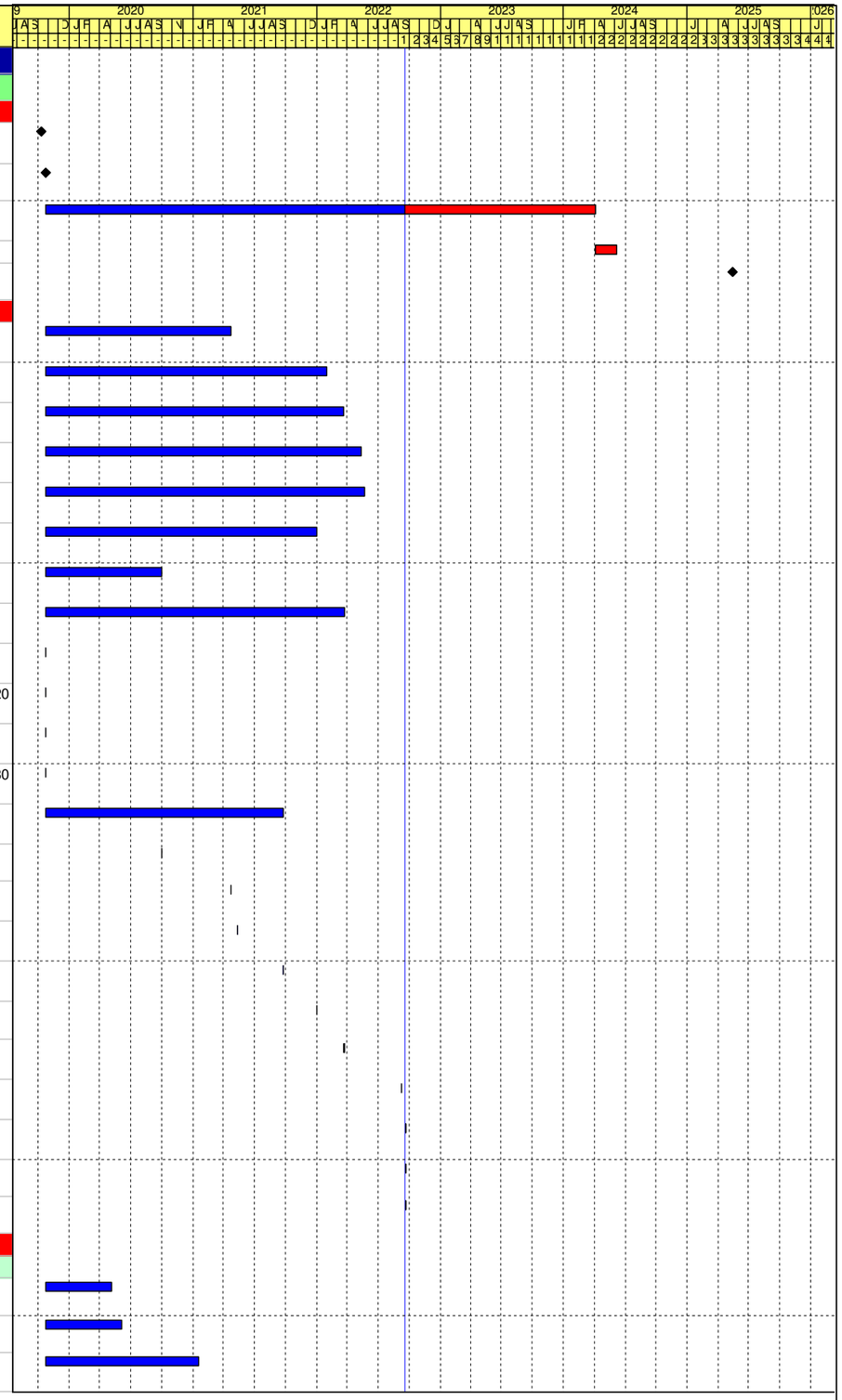
ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
435	**CSA-1000**		**Additional Preliminary Works**			**0 days**	**NA**	**NA**	**330 days**	**Tue 9/6/20**	**Mon 19/7/21**	**Tue 9/6/20**	**NA**			**1247 days**		**98%**
436	CSA-1020		Expose and abandon existing electric cable & trial pits		78	0 days	NA	NA	39 days	Mon 17/8/20	Wed 30/9/20	Mon 17/8/20	Wed 30/9/20			0 days		100%
437	CSA-1030		Installation of standpipes		71	0 days	NA	NA	13 days	Mon 14/9/20	Mon 28/9/20	Mon 14/9/20	Mon 28/9/20			0 days		100%
438	CSA-1100		Diversion of Existing SAS Rising Main near SAS Pumping Station	68, 75, 76	69	0 days	NA	NA	170 days	Tue 9/6/20	Thu 31/12/20	Tue 9/6/20	Thu 31/12/20		453	0 days		100%
439	CSA-1200		Decommission of exisiting power and signal systems in leachate Pump station switch room	312, 309, 310	74	0 days	NA	NA	58 days	Mon 21/9/20	Mon 30/11/20	Mon 21/9/20	Mon 30/11/20	146	453	0 days		100%
440	CSA-1300		Construction of Cable trough for CLP 11kv Cable Diversion	75, 76, 77, 161		0 days	NA	NA	54 days	Mon 19/10/20	Mon 21/12/20	Mon 19/10/20	Mon 21/12/20		453	0 days		100%
441	CSA-1400		Demolition of Existing Pillar box and its concrete plinth	144, 212, 30	30	0 days	NA	NA	53 days	Wed 12/8/20	Sat 14/11/20	Wed 12/8/20	Sat 14/11/20	149	453	0 days		100%
442	CSA-1500		Excavation to locate existing underground cble near SAS Pump Station		78	0 days	NA	NA	59 days	Wed 17/6/20	Sat 21/11/20	Wed 17/6/20	Sat 21/11/20		453	0 days		100%
443	CSA-1600		Diversion of Existing DN80 Permeate Rising Main near SAS Pumping station		89	0 days	NA	NA	72 days	Tue 6/10/20	Thu 31/12/20	Tue 6/10/20	Thu 31/12/20		453	0 days		100%
444	CSA-1800		Trench Excavation near SAS for CLP diversion of 11kV cable	309, 310	97	0 days	NA	NA	53 days	Mon 12/10/20	Sat 12/12/20	Mon 12/10/20	Sat 12/12/20		453	0 days		100%
445	CSA-1700		Relocation of Oil Interceptor Near Existing Compressor House	144, 212, 30	70	0 days	NA	NA	50 days	Mon 9/11/20	Fri 8/1/21	Mon 9/11/20	Fri 8/1/21		453	0 days		100%
446	CSA-1900		Diversion of pumping system sewerage	212, 309, 31	83	0 days	NA	NA	36 days	Wed 13/1/21	Fri 26/2/21	Wed 13/1/21	Fri 26/2/21	151	455,453,447	0 days		100%
447	CSA-1910		Diversion of Existing copper pipe near proposed SAS pumping station	309, 310	225	0 days	NA	NA	61 days	Mon 19/10/20	Thu 31/12/20	Mon 19/10/20	Thu 31/12/20	446	453	0 days		100%
448	CSA-1920		Pipework of proposed SAS Pumping Station - 13 nos. of puddles		221	0 days	NA	NA	180 days	Mon 7/12/20	Mon 19/7/21	Mon 7/12/20	NA			1247 days		92%
449	CSA-1930		Additional DN150 Rising main for SAS		220/69	0 days	NA	NA	15 days	Wed 2/12/20	Fri 18/12/20	Wed 2/12/20	Fri 18/12/20			0 days		100%
450	CSA-1940		Additional DN90 PE pipe diversion		89	0 days	NA	NA	7 days	Fri 11/12/20	Fri 18/12/20	Fri 11/12/20	Fri 18/12/20			0 days		100%
451	CSA-1970		Additional diversion of existing sludge rising main and sewerage system		81	0 days	NA	NA	15 days	Thu 21/1/21	Sat 6/2/21	Thu 21/1/21	Sat 6/2/21			0 days		100%
452	CSA-2000		Predrilling (4nrs, 1rig, 4days/drillhole/rig)	68		16 days	Wed 20/5/20	Sat 6/6/20	7 days	Sat 18/4/20	Sat 25/4/20	Sat 18/4/20	Sat 25/4/20	127	342,453	0 days		100%
453	CSA-3000		Pre-bored H piles (12nos, 1rigs, 4days/pile/rig)			60 days	Mon 8/6/20	Tue 18/8/20	19 days	Mon 4/1/21	Mon 25/1/21	Mon 4/1/21	Mon 25/1/21	132,452,148,438,439,441,442,443,445,44	343,454	0 days	2	100%
454	CSA-4000		Pile Load Test			21 days	Wed 19/8/20	Thu 17/9/20	22 days	Tue 23/2/21	Fri 19/3/21	Tue 23/2/21	Fri 19/3/21	453	456,455	0 days		100%
455	CSA-5000		Sheetpile Installation (FSP-II, 690sq.m, 40sqm/day)			28 days	Wed 19/8/20	Sat 19/9/20	28 days	Tue 30/3/21	Wed 5/5/21	Tue 30/3/21	Wed 5/5/21	133,454,446	456	0 days		100%
456	CSA-6000		ELS works (1300cu.m soil with 2 layers wailing / strutting)			75 days	Mon 21/9/20	Wed 19/2/20	75 days	Thu 6/5/21	Wed 4/8/21	Thu 6/5/21	NA	455,135,454	458,457FF-3 emons	-121 days	2	96%
457	CSA-6900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 6/5/21	Thu 6/5/21	Thu 6/5/21	Thu 6/5/21	456FF-3 emons	458SS-3 emons	0 days		100%
458	CSA-7000	KD1H	R.C. Structure works (including ELS demolition works)			186 days	Mon 21/12/20	Mon 9/8/21	186 days	Thu 5/8/21	Sat 19/3/22	NA	NA	456,457SS-3 emons	459,460,49FF	-121 days	5	0%
459	CSA-8000	KD1H	Allow access to Contractor DE/2018/03 for E&M installation and T&C works			0 days	Mon 9/8/21	Mon 9/8/21	0 days	Sat 19/3/22	Sat 19/3/22	NA	NA	458	49FF	-121 days		0%
460	CSA-9000	SW1	ABWF works + BS works			90 days	Tue 10/8/21	Thu 25/11/21	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	458,189,141,522SS	56FF	405 days		0%
461	**CAS-0000**	*	**Ancillary Structures, B-7**			**503 days**	**Mon 7/9/20**	**Sat 21/5/22**	**420 days**	**Mon 3/5/21**	**Wed 28/9/22**	**Mon 3/5/21**	**NA**	**12**		**891 days**		**7%**
462	**CAS-1000**		Demolition of Existing Faciliates and Structures (leachate pump pit & pumping station)			120 days	Mon 7/9/20	Sat 30/1/21	120 days	Mon 3/5/21	Thu 23/9/21	Mon 3/5/21	NA	122,160,162	497	48 days		41%
463	**CFS-1000**	*	**Fire Services Sprinkler Pumping Room & Emergency Generator House (9)+(10)****		**301**	**220 days**	**Sat 10/4/21**	**Sun 3/1/21**	**419 days**	**Tue 4/5/21**	**Wed 28/9/22**	**Tue 4/5/21**	**NA**			**405 days**		**14%**
464	CFS-1000		Water Sampling and Testing for existing effluent pump pit		384	0 days	NA	NA	12 days	Tue 4/5/21	Mon 17/5/21	Tue 4/5/21	Mon 17/5/21		465	0 days		100%
465	CFS-1150		Identification, decommission and demolition of the existing kiosk		86	0 days	NA	NA	26 days	Tue 18/5/21	Fri 18/6/21	Tue 18/5/21	Fri 18/6/21	464	466,479	0 days		100%
466	CFS-1100		Provision of Flowmeter chamber, gate valve chamber and associated seweage		85	0 days	NA	NA	90 days	Sat 19/6/21	Tue 5/10/21	Sat 19/6/21	NA	465	467,469FF	-101 days		40%
467	CFS-1200		Decommission and demolistion of the existing pump pit and associated sewerage manholes and pipes		86	0 days	NA	NA	40 days	Wed 6/10/21	Mon 22/11/21	NA	NA	466	470	-101 days		0%
468	CFS-1250		Diversion of Leachate Rising Main near SSSH		241	0 days	NA	NA	18 days	Wed 28/7/21	Wed 18/8/21	NA	NA	469SF	480	18 days		0%
469	CFS-1300		E&M provision of flowmeter chamber and associated sewerage for effluent and sewage from SSSH		256	0 days	NA	NA	40 days	Wed 18/8/21	Tue 5/10/21	NA	NA	466FF	470,468SF	-61 days		0%
470	CFS-2000		Excavation for Raft Footing (800cu.m)			65 days	NA	NA	44 days	Tue 23/11/21	Sat 15/1/22	NA	NA	469,467	471	-101 days		0%
471	CFS-2800		Plate load test at bottom level of compacted generall fill(2no.)			12 days	NA	NA	7 days	Mon 17/1/22	Mon 24/1/22	NA	NA	470	472	-101 days		0%
472	CFS-2900		Soil Replacement (14 layers SRT)			0 days	NA	NA	42 edays	Mon 24/1/22	Mon 7/3/22	NA	NA	471	473	-124.42 edays		0%
473	CFS-3000		Plate load test at bottom level of base slab (3no.)			28 days	Fri 4/6/21	Mon 21/6/21	7 days	Tue 8/3/22	Tue 15/3/22	NA	NA	472	474FF-3 mons,475	-101 days		0%
474	CFS-3900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Tue 23/11/21	Tue 23/11/21	NA	NA	473FF-3 mons	475SS-3 emons	59 days		0%
475	CFS-4000	KD1J	R.C. structure works			120 days	NA	NA	70 days	Wed 16/3/22	Mon 13/6/22	NA	NA	473,474SS-3 emons	477,476,51FF,521FF,520FF	-101 days	2	0%
476	CFS-5000	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 13/9/21	Mon 13/9/21	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA	475	51FF	-101 days		0%
477	CFS-6000	SW1	ABWF works + BS works			90 days	Tue 14/9/21	Mon 3/1/22	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	475	56FF	405 days		0%
478	**CCS-1000**	*	**Chemical System No.1 (8)***			**168 days**	**Mon 1/2/21**	**Thu 26/8/21**	**386 days**	**Sat 12/6/21**	**Wed 28/9/22**	**Sat 12/6/21**	**NA**			**891 days**		**4%**
479	CCS-1310		Demolition of SSSH Pump Pit and Associated Sewerage System		086	0 days	NA	NA	26 days	Sat 19/6/21	Tue 20/7/21	Sat 19/6/21	NA	465	481	54 days		38%
480	CCS-1110		Removal of existing Leachate Rising Main near SSSH		241	0 days	NA	NA	12 days	Wed 18/8/21	Tue 31/8/21	NA	NA	468	481	18 days		0%
481	CCS-1100		Excavation for Raft Footing (20cu.m)			10 days	Mon 1/2/21	Thu 11/2/21	10 days	Wed 1/9/21	Sat 11/9/21	NA	NA	480,479	485FF-3 emons,486,482	18 days		0%
482	CCS-1080		Plate load test at bottom level of compacted generall fill(2no.)			9 days	NA	NA	9 days	Mon 13/9/21	Thu 23/9/21	NA	NA	481	483	18 days		0%
483	CCS-1090		Soil Replacement (10 layers SRT)			0 days	NA	NA	30 edays	Thu 23/9/21	Sat 23/10/21	NA	NA	482	484	23.58 edays		0%
484	CCS-1200		Plate load test at bottom level of base slab (1no.)			5 days	Tue 16/2/21	Wed 3/3/21	5 days	Mon 25/10/21	Fri 29/10/21	NA	NA	483	486,493	19 days		0%
485	CCS-1190		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Sat 12/6/21	Sat 12/6/21	Sat 12/6/21	Sat 12/6/21	481FF-3 emons	486SS-3 emons	0 days		100%
486	CCS-1300	KD1J	R.C. structure works			45 days	Mon 15/3/21	Mon 10/5/21	60 days	Sat 30/10/21	Tue 11/1/22	NA	NA	481,485SS-3 emons,484	51FF,488,487	20 days	2	0%
487	CCS-1400	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 10/5/21	Mon 10/5/21	0 days	Tue 11/1/22	Tue 11/1/22	NA	NA	486	51FF	20 days		0%
488	CCS-1500	SW1	ABWF works + BS works			90 days	Tue 11/5/21	Thu 26/8/21	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	189,141,486,522SS	56FF	405 days		0%
489	**CDS-0000**	*	**Deodorization System No.3A (7)***			**149 days**	**Tue 16/11/21**	**Sat 21/5/22**	**105 days**	**Thu 5/8/21**	**Wed 8/12/21**	**NA**	**NA**			**90 days**		**0%**
490	CDS-2000		Excavation for Raft Footing (400cu.m)			20 days	Tue 16/11/21	Wed 8/12/21	20 days	Sat 14/8/21	Tue 7/9/21	NA	NA	491SF		1205 days		0%
491	CDS-2008		Plate load test at bottom level of compacted generall fill(2no.)			10 days	NA	NA	10 days	Tue 7/9/21	Sat 18/9/21	NA	NA	492SF	490SF	1195 days		0%
492	CDS-2100		Soil Replacement (14 layers SRT)			0 days	NA	NA	42 edays	Sat 18/9/21	Sat 30/10/21	NA	NA	493SF	491SF	1425.42 edays		0%
493	CDS-3000		Plate load test at bottom level of base slab (1no.)			4 days	Thu 9/12/21	Fri 24/12/21	4 days	Sat 30/10/21	Wed 3/11/21	NA	NA	484	494FF-3 emons,495,492SF,500FS	-19 days		0%
494	CDS-3900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 5/8/21	Thu 5/8/21	NA	NA	493FF-3 emons	495SS-3 emons	150 days		0%
495	CDS-4000	KD1J	Footing works			20 days	Tue 4/1/22	Wed 26/1/22	30 days	Thu 4/11/21	Wed 8/12/21	NA	NA	493,494SS-3 emons	496,51FF	46 days		0%
496	CDS-5000	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Wed 26/1/22	Wed 26/1/22	0 days	Wed 8/12/21	Wed 8/12/21	NA	NA	495	51FF	46 days		0%
497	**CCS-2000**	*	**Chemical System No.2 (11)**			**189 days**	**Thu 4/3/21**	**Thu 21/10/21**	**300 days**	**Fri 24/9/21**	**Wed 28/9/22**	**NA**	**NA**	**462**		**48 days**		**0%**
498	CCS-2100		Excavation for Raft Footing (100cu.m)			15 days	Thu 4/3/21	Sat 20/3/21	14 days	Fri 24/9/21	Mon 11/10/21	NA	NA	499SF		1177 days		0%
499	CCS-2110		Soil Replacement (8 layers SRT)			0 days	NA	NA	24 edays	Wed 6/10/21	Sat 30/10/21	NA	NA	500SF	498SF	1425.42 edays		0%
500	CCS-2200		Plate load test (2no.)			14 days	Mon 22/3/21	Fri 9/4/21	15 days	Sat 30/10/21	Tue 16/11/21	NA	NA	493FS-4 days	501FF-3 emons,502,499SF,510FS	-19 days		0%
501	CCS-2290		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Fri 24/9/21	Fri 24/9/21	NA	NA	500FF-3 emons	502SS-3 emons	108 days		0%
502	CCS-2300	KD1J	R.C. structure works			45 days	Tue 11/5/21	Mon 5/7/21	45 days	Wed 17/11/21	Tue 11/1/22	NA	NA	500,501SS-3 emons	503,51FF,504,505	20 days	2	0%
503	CCS-2400	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Mon 5/7/21	Mon 5/7/21	0 days	Tue 11/1/22	Tue 11/1/22	NA	NA	502	51FF	20 days		0%
504	CCS-2500	SW1	ABWF works + BS works			90 days	Tue 6/7/21	Thu 21/10/21	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	189,141,502,522SS	56FF	405 days		0%
505	CCS-2600	SW1	Demolition of existing chemical room			60 days	Tue 6/7/21	Mon 13/9/21	60 days	Wed 12/1/22	Fri 25/3/22	NA	NA	502	56FF	556 days		0%
506	**CTC-0000**	*	**Temporary Chemical Dosing System (5)**			**191 days**	**Tue 22/6/21**	**Thu 10/2/22**	**330 days**	**Thu 19/8/21**	**Wed 28/9/22**	**NA**	**NA**			**89 days**		**0%**
507	CTC-2000		Excavation for Raft Footing (300cu.m)			30 days	Tue 22/6/21	Tue 27/7/21	30 days	Thu 26/8/21	Sat 2/10/21	NA	NA	508SF		1185 days		0%
508	CTC-2080		Plate load test at bottom level of compacted generall fill(2no.)			9 days	NA	NA	9 days	Sat 2/10/21	Wed 13/10/21	NA	NA	509SF	507SF	1176 days		0%
509	CTC-2100		Soil Replacement (10 layers SRT)			0 days	NA	NA	30 edays	Wed 13/10/21	Fri 12/11/21	NA	NA	510SF	508SF	1412.42 edays		0%
510	CTC-1000		Plate load test at bottom level of base slab (1no.)			5 days	Wed 28/7/21	Thu 12/8/21	5 days	Fri 12/11/21	Wed 17/11/21	NA	NA	500FS-4 days	509SF,511FF-3 emons,512	19 days		0%
511	CTC-2900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Thu 19/8/21	Thu 19/8/21	NA	NA	510FF-3 emons	512SS-3 emons	138 days		0%
512	CTC-3000	KD1J	R.C. structure works			30 days	Tue 14/9/21	Thu 21/10/21	45 days	Thu 18/11/21	Wed 12/1/22	NA	NA	511SS-3 emons,510	513,51FF,514	19 days	1	0%
513	CTC-4000	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Thu 21/10/21	Thu 21/10/21	0 days	Wed 12/1/22	Wed 12/1/22	NA	NA	512	51FF	19 days		0%
514	CTC-5000	SW1	ABWF works + BS works			90 days	Fri 22/10/21	Thu 10/2/22	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	189,141,512,522SS	56FF	405 days		0%
515	**CFB-0000**	*	**Fire Hydrant and Booster Pump Room (13)***			**177 days**	**Fri 13/8/21**	**Thu 17/3/22**	**193 days**	**Sat 5/2/22**	**Wed 28/9/22**	**NA**	**NA**			**-28 days**		**0%**
516	CFB-1000		Excavation for Raft Footing (200cu.m)			30 days	Fri 13/8/21	Thu 16/9/21	30 days	Wed 23/2/22	Wed 30/3/22	NA	NA	517SF		1039 days		0%
517	CFB-1100		Soil Replacement (7 layers SRT)			0 days	NA	NA	21 edays	Wed 30/3/22	Wed 20/4/22	NA	NA	518SF	516SF	1253.42 edays		0%
518	CFB-2000		Plate load test (3no.)			14 days	Fri 17/9/21	Tue 5/10/21	14 days	Wed 20/4/22	Sat 7/5/22	NA	NA	520SF	519FF-3 emons,517SF	1011 days		0%
519	CFB-2900		Receiving of Civil Requirements from PM			0 days	NA	NA	1 day	Sat 5/2/22	Sun 6/2/22	NA	NA	518FF-3 emons		1083 days		0%
520	CFB-3000	KD1J	R.C. structure works			30 days	Fri 22/10/21	Thu 25/11/21	30 days	Sat 7/5/22	Mon 13/6/22	NA	NA	475FF	521,522,51FF,518SF	-101 days	1	0%
521	CFB-4000	KD1J	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	Thu 25/11/21	Thu 25/11/21	0 days	Mon 13/6/22	Mon 13/6/22	NA	NA	520,475FF	51FF	-101 days		0%
522	CFB-5000	SW1	ABWF works + BS works			90 days	Fri 26/11/21	Thu 17/3/22	90 days	Tue 14/6/22	Wed 28/9/22	NA	NA	520,189,141	56FF,514SS,504SS,488SS,460SS	405 days		0%
523	**CDS1-0000**		**Deodorization System No.1 (6)***			**64 days**	**NA**	**NA**	**105 days**	**Tue 10/5/22**	**Tue 13/9/22**	**NA**	**NA**			**418 days**		**0%**
524	CDS1-1000		Excavation for Raft Footing (400cu.m)			20 days	NA	NA	20 days	Wed 8/6/22	Thu 30/6/22	NA	NA	522	525	420 days		0%
525	CDS1-1080		Plate load test at bottom level of compacted generall fill(2no.)			10 days	NA	NA	10 days	Sat 2/7/22	Wed 13/7/22	NA	NA	524	526	420 days		0%
526	CDS1-1100		Soil Replacement (7 layers SRT)			0 days	NA	NA	21 edays	Wed 13/7/22	Wed 3/8/22	NA	NA	525	527	513.58 edays		0%
527	CDS1-2000		Plate load test at bottom level of base slab (1no.)			4 days	NA	NA	4 days	Thu 4/8/22	Mon 8/8/22	NA	NA	526	529,528FF-3 emons	418 days		0%
528	CDS1-2900		Receiving of Civil Requirements from PM			0 days	NA	NA	0 days	Tue 10/5/22	Tue 10/5/22	NA	NA	527FF-3 emons	529SS-3 emons	523 days		0%
529	CDS1-3000	SW1	Footing works			30 days	NA	NA	30 days	Tue 9/8/22	Tue 13/9/22	NA	NA	527,528SS-3 emons	530,56FF	418 days		0%
530	CDS1-4000	SW1	Allow access to Contractor DE/2018/04 for E&M installation and T&C works			0 days	NA	NA	0 days	Tue 13/9/22	Tue 13/9/22	NA	NA	529	56FF	418 days		0%
531	**CAA-0000**	*	**Additional and Alternation Works for Existing Facilities (B-7A, B-8, B-8A)**			**662 days**	**Wed 29/1/20**	**Fri 22/4/22**	**918 days**	**Mon 1/6/20**	**Thu 6/7/23**	**Mon 1/6/20**	**NA**			**269 days**		**64%**



ID	Activity ID	Key Date	Task Name	Inclement Weather CE no. (NCE no.)	PMI & CE no. (NCE no.)	Baseline Duration	Baseline Start	Baseline Finish	Duration	Start	Finish	Actual Start	Actual Finish	Predecessors	Successors	Total Slack	Risk Allowance	% Complete
532	**CAA-1000**	**KD2B**	**B-8A Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)**			**180 days**	**Wed 29/1/20**	**Thu 3/9/20**	**246 days**	**Mon 1/6/20**	**Fri 26/3/21**	**Mon 1/6/20**	**Fri 26/3/21**	**15,142,184**	**53FF**	**0 days**		**100%**
533	CAA-1100		Change of pipe bridge design		(057)	0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
534	CAA-1200		Additional inspection pit to verilify the connection point to existing (CE xxx)			0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
535	CAA-1300		Additional MBV installation (CE xxx)			0 days	NA	NA	135 days	Mon 1/6/20	Tue 10/11/20	Mon 1/6/20	Tue 10/11/20		536,537,538	0 days		100%
536	CAA-1400		Alternation works for existing Air Blower House No.2 (Pipeline CHTA, approx. 133m DN800 D.I.)			180 days	Wed 29/1/20	Thu 3/9/20	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF	0 days		100%
537	CAA-1500	KD2B	Re-alignmnet of DN800 Temporary Air Main (CHTA) and Provision of FRP Staircases		064	0 days	NA	NA	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF	0 days		100%
538	CAA-1600	KD2B	Elevated Section of DN800 Temporary Air Main (CHTA) across existing Bioreactor's Distibution Chamber No. 2		062	0 days	NA	NA	111 days	Wed 11/11/20	Fri 26/3/21	Wed 11/11/20	Fri 26/3/21	533,534,535	53FF,539	0 days		100%
539	CAA-2000	KD1I	B7-A Alternation works for existing Power House			122 days	Fri 4/9/20	Sat 30/1/21	0 days	Wed 11/11/20	Fri 29/1/21	Wed 11/11/20	Fri 29/1/21	13FS-1 day,122,160,162,176,538	50FF,540FS+356 days	0 days		100%
540	CAA-2100	SW3	Additional works for Power House		224	0 days	NA	NA	60 days	Thu 14/4/22	Wed 29/6/22	NA	NA	539FS+356 days	58FF	570 days		0%
541	CAA-3000	SW3	Alternation works for existing Membrane Facilities Building No.1			360 days	Mon 1/2/21	Fri 22/4/22	360 days	Tue 19/4/22	Thu 6/7/23	NA	NA	14FS-1 day,175	58FF	269 days		0%
542	**CUU-0000**	*	**External Underground Service, Utilities, Road/Drain**			**1091 days**	**Mon 24/2/20**	**Sat 28/10/23**	**1192 days**	**Mon 27/4/20**	**Mon 13/5/24**	**Mon 27/4/20**	**NA**	**16**		**-88 days**		**46%**
543	CUU-1000	KD2A	Process Pipes CHR and CHS (approx. 93m twin DN900 D.I.)		33, 222, 255	325 days	Mon 24/2/20	Sat 27/3/21	379 days	Mon 27/4/20	Wed 4/8/21	Mon 27/4/20	NA	184,142	554SS+48 days,552SS+48 days,55	-39 days		99%
544	CUU-1000a		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		33	0 days	NA	NA	54 days	Sat 30/5/20	Mon 3/8/20	Sat 30/5/20	Mon 3/8/20			0 days		100%
545	CUU-1000b		Trenchless work for Process Pipes CHR and CHS (approx. 7m twin DN900 D.I.)		255	0 days	NA	NA	60 days	Thu 25/2/21	Mon 10/5/21	Thu 25/2/21	Mon 10/5/21		52FF	0 days		100%
546	CUU-1001		Removal of Abandoned DN1800 Concrete Pipe and Concrete Mass near Existing UV Disinfection Channel at CHR & CHS Process Pipe Works Area		033	0 days	NA	NA	43 days	Thu 2/7/20	Thu 20/8/20	Thu 2/7/20	Thu 20/8/20			0 days		100%
547	CUU-1002		Grouting for Sheung Shui Slaughter House Boundary Walls along CHR & CHS Pipes Works Area		222	0 days	NA	NA	20 days	Fri 23/10/20	Mon 16/11/20	Fri 23/10/20	Mon 16/11/20			0 days		100%
548	CUU-1004		Delay Delivery of DI pipes due to COVID-19		(076)	0 days	NA	NA	75 days	Tue 22/12/20	Thu 25/3/21	Tue 22/12/20	Thu 25/3/21		549FF	0 days		100%
549	CUU-2000	SW2	Process Pipes, including CHT, CHX, CHY, CHPS1&2, CHS S1&2, CHDO 1&2, CHPSW 1-8, CHTPS, CHPT1&2, CHTFT 1&2, CHTE, CHTD, Foam Collection & Surplus activated sludge rising main pipe			550 days	Mon 29/6/20	Fri 6/5/22	457 days	Mon 19/10/20	Fri 6/5/22	Mon 19/10/20	NA	184,142,548FF,543SS+48 days	57FF,555,550SS+250 days	63 days		51%
550	CUU-2100	SW2	Remaining Process Pipes			0 days	NA	NA	270 days	Mon 23/8/21	Fri 22/7/22	NA	NA	549SS+250 days	57FF	0 days		0%
551	CUU-3000	SW2	Remaining Drainage			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142	555,57FF	0 days	5	45%
552	CUU-4000	SW2	Remaining Sewerage			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	555,57FF	0 days	5	45%
553	CUU-5000	SW2	Remaining Waterworks			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	557FS+2 days,57FF	0 days	5	45%
554	CUU-6000	SW2	Remaining Cable Ducts			550 days	Mon 29/6/20	Fri 6/5/22	520 days	Mon 19/10/20	Fri 22/7/22	Mon 19/10/20	NA	184,142,543SS+48 days	555,57FF	0 days	5	45%
555	CUU-7000	KD3A	Roadworks			540 days	Fri 31/12/21	Sat 28/10/23	440 days	Mon 7/11/22	Mon 13/5/24	NA	NA	554,551,552,549,352,399,334,433	54FF,558SS+123 days	-88 days	5	0%
556	**CLW-0000**	*	**Landscaping Works**			**854 days**	**Wed 11/5/22**	**Thu 27/3/25**	**946 days**	**Tue 26/7/22**	**Wed 24/9/25**	**NA**	**NA**	**16**		**0 days**		**0%**
557	CLW-1000	KD3A	Irrigation System			120 days	Wed 11/5/22	Fri 30/9/22	120 days	Tue 26/7/22	Thu 15/12/22	NA	NA	553FS+2 days,184	558,54FF	1 day		0%
558	CLW-2000	SW3	Hard Landscaping Works			220 days	Mon 3/10/22	Mon 3/7/23	214 days	Tue 11/4/23	Sat 23/12/23	NA	NA	557,555SS+123 days	559,58FF	-88 days	5	0%
559	CLW-3000	SW3	Soft Landscaping Works			220 days	Tue 4/7/23	Tue 26/3/24	214 days	Wed 27/12/23	Tue 24/9/24	NA	NA	558,143	560,58FF	-88 days	5	0%
560	CLW-4000	DLP	Establishment Works (365 days)			294 days	Wed 27/3/24	Thu 27/3/25	365 days	Wed 25/9/24	Wed 24/9/25	NA	NA	559,143	59FF,60FF	0 days	5	0%



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SWH - Main Works Stage 1 Sidestream Treatment Facilities & E&M Works for Slu		2044	11-Oct-19 A	15-May-25	12-Oct-21	15-May-25	0		
Contract Data		2044	11-Oct-19 A	15-May-25	17-Nov-21	15-May-25	0		
Starting Date & Completion Date		2044	11-Oct-19 A	15-May-25	17-Nov-21	15-May-25	0		
CD1000	Contract Date (LOA)	0	11-Oct-19 A		17-Nov-21				CD1010, S1P1000,
CD1010	Starting Date	0	23-Oct-19 A		17-Nov-21			CD1000	S1D1040, AD1050,
CD1020	Whole Contract Period (1626 days from starting date)	1626	23-Oct-19 A	04-Apr-24	21-Sep-22	04-Apr-24	0	CD1010	CD1040, CD1030
CD1030	Extension of Time Granted (Total 61.5days)	62	05-Apr-24	05-Jun-24*	05-Apr-24	05-Jun-24	0	CD1020	CD1040
CD1040	Completion Date for the whole of the Works	0		15-May-25		15-May-25	0	CD1020, CD1010,	
Access Date		1434	23-Oct-19 A	21-Sep-22	17-Nov-21	15-May-25	967		
AD1000	Portion C-1A (within 480 to 550 days from starting date)	550	23-Oct-19 A	24-Apr-21 A	16-Apr-22	16-Apr-22		CD1010	AD1010
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)	831	23-Oct-19 A	30-Jan-22 A	15-May-25	15-May-25		CD1010	AD1040
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)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22		CD1010	AD1060
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)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22		CD1010	AD1080
AD1090	Portion C-2D (within 825 to 945 days from starting date)	945	23-Oct-19 A	24-May-22 A	24-May-22	24-May-22		CD1010	AD1100
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)	815	23-Oct-19 A	31-Dec-21 A	02-Sep-22	02-Sep-22		CD1010	AD1120
AD1130	Portion B-1 (within 285 to 345 days from starting date)	345	23-Oct-19 A	30-Sep-20 A	17-Nov-21	17-Nov-21		CD1010	AD1140
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)	891	23-Oct-19 A	23-Mar-22 A	31-Oct-22	31-Oct-22		CD1010	AD1160
AD1190	Works Area WA1-B (starting date)	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010	AD1200
AD1200	Planned Access Date for Works Area WA1-B	1	23-Oct-19 A	23-Oct-19 A	05-Jul-22	05-Jul-22		CD1010, AD1190	PL1000, PL1020
AD1210	Works Area WA3 (starting date)	1	23-Oct-19 A	23-Oct-19 A	01-Sep-23	01-Sep-23		CD1010	AD1220
AD1220	Planned Access Date for Works Area WA3	1	23-Oct-19 A	23-Oct-19 A	01-Sep-23	01-Sep-23		CD1010, AD1210	PL1000, PL1030
AD1170	Portion B-2b (within 615 to 705 days from starting date) (SS by NCE-NCE-219)	705	23-Oct-19 A	24-Sep-21 A	15-May-25	15-May-25			
AD1140	Planned Access Date for Portion B-1	1	30-Sep-20 A	30-Sep-20 A	17-Nov-21	17-Nov-21		AD1130	KD1030, S3C1020,
AD1010	Planned Access Date for Portion C-1A (Partial Access)	1	24-Apr-21 A	24-Apr-21 A	16-Apr-22	16-Apr-22		CD1010, AD1000	PL1470, S4C1010
AD1020	Planned Access Date for Portion C-1A (Access for Remaining Area)	1	12-May-21 A	12-May-21 A	16-Apr-22	16-Apr-22			S4C1010
AD1180	Planned Access Date for Portion B-2b (SS by NCE-NCE-219)	1	24-Sep-21 A	24-Sep-21 A	15-May-25	15-May-25			
AD1120	Planned Access Date for Portion C-3 (SS by NCE-NCE-273)	1	31-Dec-21 A	31-Dec-21 A	02-Sep-22	02-Sep-22		AD1110, S2D1110	KD1060, S5WS2C1000,
AD1160	Planned Access Date for Portion B-2a (SS by NCE-NCE-219)	1	23-Mar-22 A	23-Mar-22 A	31-Oct-22	31-Oct-22		AD1150	S5SASC1010, S5SASC1000
AD1040	Planned Access Date for Portion C-2A	1	09-Sep-22 A	09-Sep-22 A	15-May-25	15-May-25		CD1010, AD1030	
AD1060	Planned Access Date for Portion C-2B	1	21-Sep-22	21-Sep-22*	20-Mar-22	20-Mar-22	-185	CD1010, AD1050	S5CHPC1020
AD1080	Planned Access Date for Portion C2-C	1	21-Sep-22	21-Sep-22*	13-May-22	13-May-22	-131	CD1010, AD1070	S5DIGC1040, S5DIGC1210,
AD1100	Planned Access Date for Portion C-2D	1	21-Sep-22	21-Sep-22*	24-May-22	24-May-22	-120	AD1090	S5BIOC1020, S5BIOC1030,
Key Dates		1608	23-Oct-19 A	17-Mar-24	16-Apr-22	15-May-25	425		
Contractual Completion (Include Implemented CE)		1546	23-Oct-19 A	15-Jan-24	16-Apr-22	15-May-25	487		
KD1000	KD1A Submission of Civil Requirement Dwgs, Elec. Schematic Dwgs of UV System No.1 and Effluent Pumping Station No.1	196	23-Oct-19 A	05-May-20 A	16-Apr-22	16-Apr-22		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.	226	23-Oct-19 A	04-Jun-20 A	15-May-25	15-May-25		CD1010, S2D1080,	KD1020
KD1020	KD2B Submission of Remaining Civil Requirement Dwgs, Elec. Schematic Dwgs of SD Bldg, SD & DC, CHP Bldg, etc.	461	23-Oct-19 A	16-Jan-21 A	15-May-25	15-May-25		CD1010, S2D1120,	SC21110

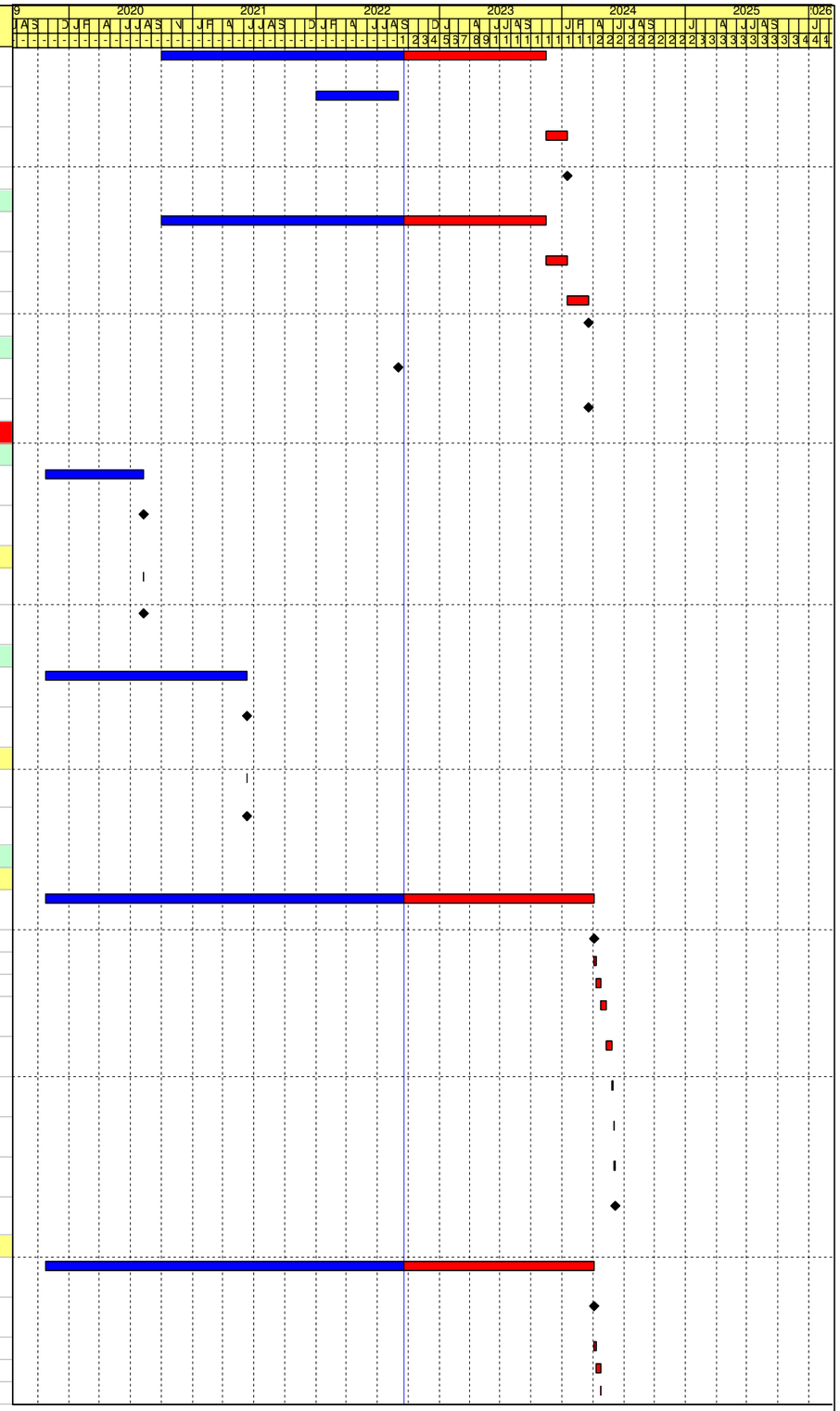


Remaining Work
Critical Activity
Milestone
Actual Progress

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 Sep 2022

Date	Revision	Checked	Approved
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
KD1030	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	21-Sep-22	14-Nov-23	0	AD1140	KD1040
KD1060	KD5A - Completion of BS Fitting at CLP Sub-Station at Workshop No.2 (245d after Portion C-3 Access)(Impacted by NCE-273)	246	31-Dec-21 A	02-Sep-22 A	15-May-25	15-May-25		AD1120, S5WS2C1010	
KD1040	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	15-Nov-23	15-Jan-24	0	KD1030	SC31110, KD1050
KD1050	Revised Completion Date for KD3A	0		15-Jan-24*		15-Jan-24	0	KD1040	
Expected Completion (Include Non-implemented CE)		1213	30-Sep-20 A	17-Mar-24	21-Sep-22	17-Mar-24	0		
KD1030-1	KD3A Completion of Phase 1 Commissioning of Sidestream Treatment Facilities (1140d after Portion B-1 Access)	1141	30-Sep-20 A	14-Nov-23*	21-Sep-22	14-Nov-23	0	AD1140	KD1040-1
KD1040-1	Extension of Time Granted for KD3A (Total 61.5days)	62	15-Nov-23	15-Jan-24	15-Nov-23	15-Jan-24	0	KD1030-1	SC31110, KD1045
KD1045	Extension of Time for KD3A - Non-implemented (Total 62days)	62	15-Jan-24	17-Mar-24	15-Jan-24	17-Mar-24	0	KD1040-1	KD1050-1
KD1050-1	Expected Completion Date for KD3A	0		17-Mar-24*		17-Mar-24	0	KD1045	
Planned Completion		531	02-Sep-22 A	17-Mar-24	15-Jan-24	15-May-25	425		
KD1060-1	Planned Completion Date for KD5A	0		02-Sep-22 A		15-May-25		AD1120, S5WS2C1010	
KD1050-2	Planned Completion Date for KD3A	0		17-Mar-24*		15-Jan-24	-62	S3T1100	SC31110
Completion Date		2032	23-Oct-19 A	15-May-25	09-May-22	15-May-25	0		
Section 1 - Complete All Design at UV System No.1 & EP Station No. 1		312	23-Oct-19 A	08-Aug-20 A	15-May-25	15-May-25			
SC11000	Contract Duration of Section 1	291	23-Oct-19 A	08-Aug-20 A	15-May-25	15-May-25		CD1010	SC11100
SC11100	Completion date - Section 1 (290 days after starting date)	0		08-Aug-20 A		15-May-25		SC11000	SC11120
Time Risk Allowance and Planned Completion		1	08-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25			
SC11110	Time Risk Allowance for Section 1	1	08-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25		S1P1000, S1P1040,	SC11120
SC11120	Planned Completion for Section 1	0		08-Aug-20 A		15-May-25		SC11110, SC11100	CD1040
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		632	23-Oct-19 A	11-Jun-21 A	15-May-25	15-May-25			
SC21000	Contract Duration of Section 2	601	23-Oct-19 A	11-Jun-21 A	15-May-25	15-May-25		CD1010	SC21100
SC21100	Completion date - Section 2 (600 days after starting date)	0		11-Jun-21 A		15-May-25		SC21000	SC21120
Time Risk Allowance and Planned Completion		9	11-Jun-21 A	11-Jun-21 A	15-May-25	15-May-25			
SC21110	Time Risk Allowance for Section 2	6	11-Jun-21 A	11-Jun-21 A	15-May-25	15-May-25		S2P1000, S2P1010,	SC21120
SC21120	Planned Completion for Section 2	0		11-Jun-21 A		15-May-25		SC21110, SC21100,	CD1040
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		2032	23-Oct-19 A	15-May-25	21-Sep-22	15-May-25	0		
Contractual Completion (Include Implemented CE)		1688	23-Oct-19 A	05-Jun-24	21-Sep-22	05-Jun-24	0		
SC31000	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Sep-22	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	SC31100, 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	SC31100, 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	SC31100
SC31100	Revised Completion for Section 3	0		05-Jun-24*		05-Jun-24	0	SC31005, SC31006,	
Expected Completion (Include Non-implemented CE)		2032	23-Oct-19 A	15-May-25	21-Sep-22	15-May-25	0		
SC31000-1	Contract Duration of Section 3	1626	23-Oct-19 A	04-Apr-24	21-Sep-22	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	SC31110, SC31002-1
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



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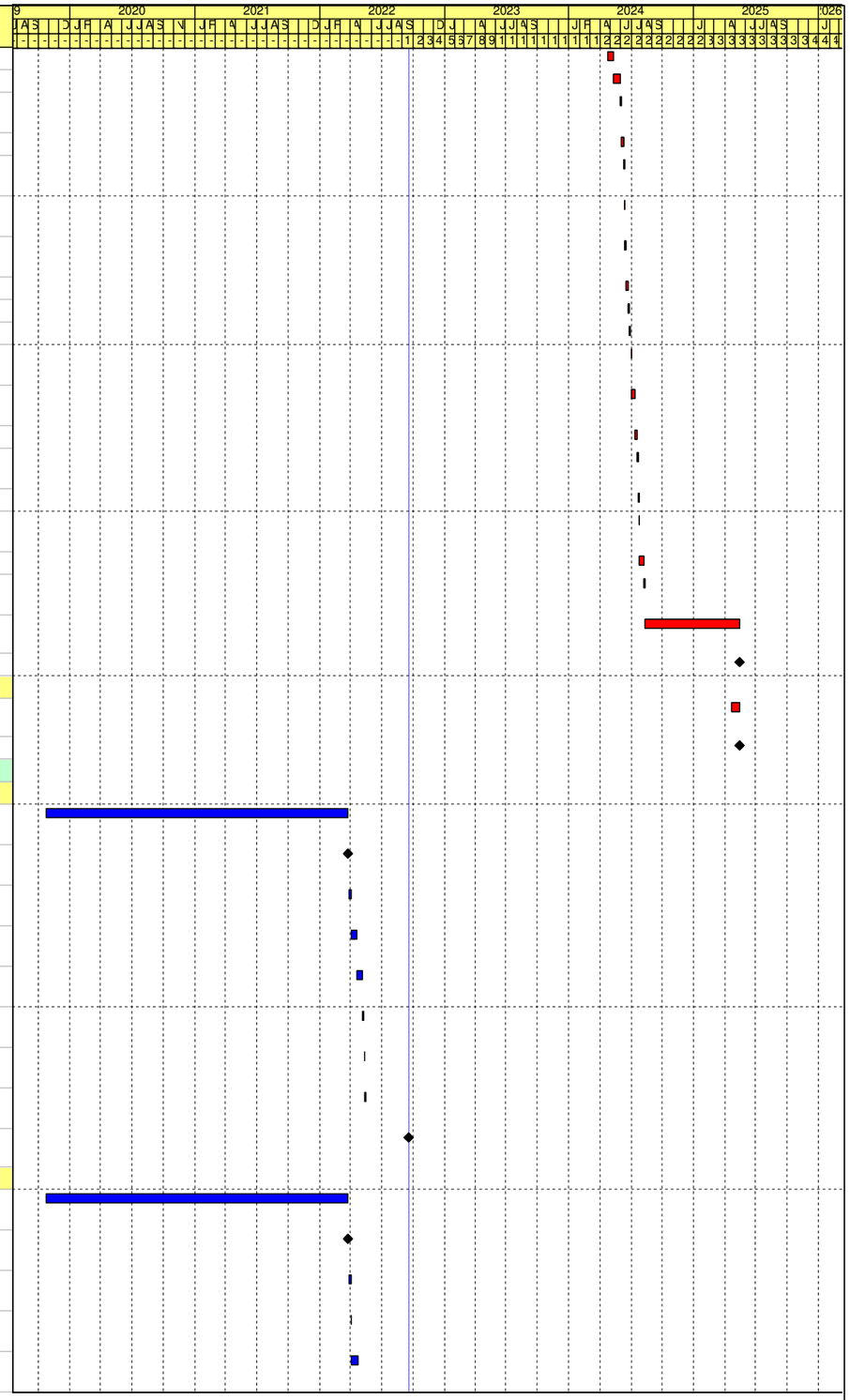
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SC31005-1	NICE-CNE-0264 Inclement Weather (July 2021) - 15days (Implemented)	15	25-Apr-24	10-May-24	25-Apr-24	10-May-24	0	SC31004-1	SC31006-1
SC31006-1	NICE-CNE-0292 Inclement 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	SC31008-1
SC31008-1	CNE-019 Inclement Weather (October 2021) - 7days	7	02-Jun-24	08-Jun-24	02-Jun-24	08-Jun-24	0	SC31007-1	SC31009-1
SC31009-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	09-Jun-24	12-Jun-24	09-Jun-24	12-Jun-24	0	SC31008-1	SC31010-1
SC31010-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	13-Jun-24	13-Jun-24	13-Jun-24	13-Jun-24	0	SC31009-1	SC31011-1
SC31011-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	13-Jun-24	17-Jun-24	13-Jun-24	17-Jun-24	0	SC31010-1	SC31012-1
SC31012-1	CNE-036 Inclement Weather (January 2022) - 4days	4	17-Jun-24	21-Jun-24	17-Jun-24	21-Jun-24	0	SC31011-1	SC31013-1
SC31013-1	CNE-040 Inclement Weather (February 2022) - 5days	5	21-Jun-24	26-Jun-24	21-Jun-24	26-Jun-24	0	SC31012-1	SC31014-1
SC31014-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	26-Jun-24	30-Jun-24	26-Jun-24	30-Jun-24	0	SC31013-1	SC31015-1
SC31015-1	CNE-048 Inclement Weather (April 2022) - 2days	2	01-Jul-24	02-Jul-24	01-Jul-24	02-Jul-24	0	SC31014-1	SC31099-1, SC31016-1
SC31016-1	CNE-050 Inclement Weather (May 2022) - 8days	8	03-Jul-24	10-Jul-24	03-Jul-24	10-Jul-24	0	SC31015-1	SC31099-1, SC31017-1
SC31017-1	CNE-052 Inclement Weather (June 2022) - 9days	9	11-Jul-24	19-Jul-24	11-Jul-24	19-Jul-24	0	SC31016-1	SC31018-1
SC31018-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1	20-Jul-24	20-Jul-24	20-Jul-24	20-Jul-24	0	SC31017-1	SC31099-1, SC31019-1
SC31019-1	CNE-054 Inclement Weather (July 2022) - 4days	4	21-Jul-24	24-Jul-24	21-Jul-24	24-Jul-24	0	SC31018-1	SC31020-1
SC31020-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	25-Jul-24	25-Jul-24	25-Jul-24	25-Jul-24	0	SC31019-1	SC31099-1, SC31021-1
SC31021-1	CNE-056 Inclement Weather (August 2022) - 13.5days	14	26-Jul-24	08-Aug-24	26-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	SC31099-1
SC31099-1	EWN-0314 Extention of Time for change of access date	280	09-Aug-24	15-May-25	09-Aug-24	15-May-25	0	SC31015-1, SC31016-1,	SC31100-1
SC31100-1	Expected Completion for Section 3	0		15-May-25*		15-May-25	0	SC31099-1	
Time Risk Allowance and Planned Completion		26	20-Apr-25	15-May-25	10-May-24	05-Jun-24	-345		
SC31110	Time Risk Allowance for Section 3	26	20-Apr-25	15-May-25	10-May-24	05-Jun-24	-345	SC31001-1, S3C1160,	SC31120
SC31120	Planned Completion for Section 3	0		15-May-25*		05-Jun-24	-345	SC31110	CD1040
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		1103	23-Oct-19 A	29-Oct-22	09-May-22	28-Jun-22	-123		
Contractual Completion (Include Implemented CE)		1064	23-Oct-19 A	20-Sep-22	16-May-22	16-May-22	-128		
SC41000	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22 A	16-May-22	16-May-22			SC41001
SC41001	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		16-May-22		SC41000	SC41002
SC41002	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22 A	02-Apr-22 A	16-May-22	16-May-22		SC41001	SC41004
SC41004	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	02-Apr-22 A	21-Apr-22 A	16-May-22	16-May-22		SC41002	SC41100, SC41005
SC41005	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	16	21-Apr-22 A	07-May-22 A	16-May-22	16-May-22		SC41004	SC41100, SC41006
SC41006	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	5	07-May-22 A	11-May-22 A	16-May-22	16-May-22		SC41005	SC41009
SC41009	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	12-May-22 A	12-May-22 A	16-May-22	16-May-22		SC41006	SC41010
SC41010	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	12-May-22 A	16-May-22 A	16-May-22	16-May-22		SC41009	SC41100
SC41100	Revised Completion for Section 4	0		20-Sep-22*		16-May-22	-128	SC41004, SC41005,	
Expected Completion (Include Non-implemented CE)		1079	23-Oct-19 A	20-Sep-22	16-May-22	28-Jun-22	-84		
SC41000-1	Contract Duration of Section 4	886	23-Oct-19 A	26-Mar-22 A	16-May-22	16-May-22		CD1010	SC41001-1
SC41001-1	Completion date - Section 4 (885 days after starting date)	0		26-Mar-22 A		16-May-22		SC41000-1	SC41110, SC41002-1
SC41002-1	NICE-CNE-0256 Inclement Weather (June 2021) - 6.5days (Implemented)	7	27-Mar-22 A	02-Apr-22 A	28-Jun-22	28-Jun-22		SC41001-1	SC41004-1, SC41003-1
SC41003-1	CNE-007 Black and Red Rainstorm Warning (June 2021) - 1day	1	02-Apr-22 A	03-Apr-22 A	28-Jun-22	28-Jun-22		SC41002-1	SC41004-1
SC41004-1	NICE-CNE-0264 Inclement Weather (July 2021) - 19days (Implemented)	19	03-Apr-22 A	22-Apr-22 A	28-Jun-22	28-Jun-22		SC41002-1, SC41003-1	SC41005-1



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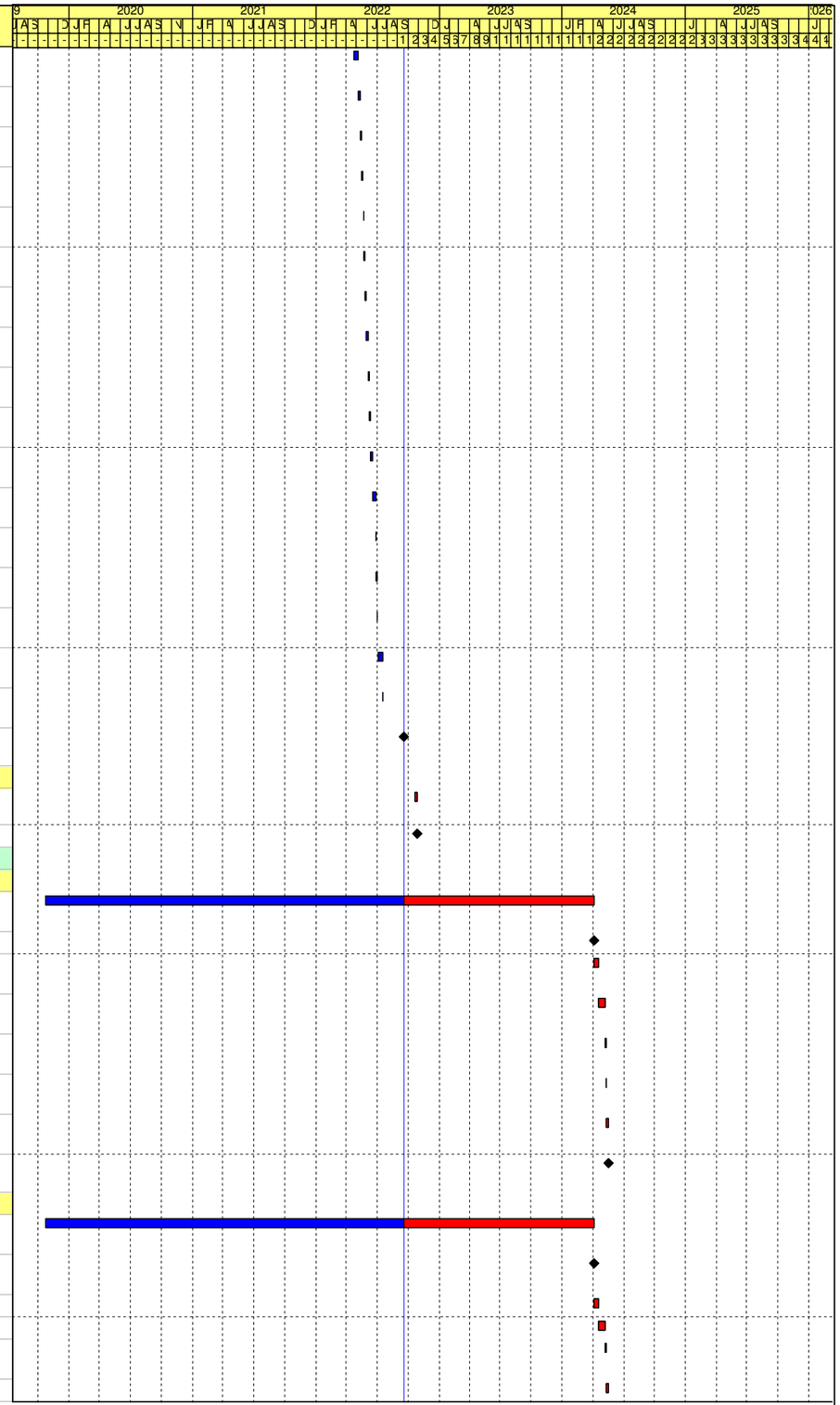
SC41005-1	NICE-CNE-0292 Inclement Weather (August 2021) - 16days (Implemented)	16	22-Apr-22 A	08-May-22 A	28-Jun-22	28-Jun-22		SC41004-1	SC41006-1
SC41006-1	NICE-CNE-0293 Inclement Weather (September 2021) - 4.5days (Implemented)	5	08-May-22 A	12-May-22 A	28-Jun-22	28-Jun-22		SC41005-1	SC41007-1
SC41007-1	CNE-019 Inclement Weather (October 2021) - 5days	5	13-May-22 A	17-May-22 A	28-Jun-22	28-Jun-22		SC41006-1	SC41008-1
SC41008-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	18-May-22 A	21-May-22 A	28-Jun-22	28-Jun-22		SC41007-1	SC41009-1
SC41009-1	NICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemented)	1	22-May-22 A	22-May-22 A	28-Jun-22	28-Jun-22		SC41008-1	SC41010-1
SC41010-1	NICE-CNE-0343 Inclement Weather (December 2021) - 4days (Implemented)	4	22-May-22 A	26-May-22 A	28-Jun-22	28-Jun-22		SC41009-1	SC41011-1
SC41011-1	CNE-036 Inclement Weather (January 2022) - 4days	4	26-May-22 A	30-May-22 A	28-Jun-22	28-Jun-22		SC41010-1	SC41012-1
SC41012-1	CNE-040 Inclement Weather (February 2022) - 5days	5	30-May-22 A	04-Jun-22 A	28-Jun-22	28-Jun-22		SC41011-1	SC41013-1
SC41013-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	04-Jun-22 A	08-Jun-22 A	28-Jun-22	28-Jun-22		SC41012-1	SC41014-1
SC41014-1	CNE-048 Inclement Weather (April 2022) - 2days	2	09-Jun-22 A	10-Jun-22 A	28-Jun-22	28-Jun-22		SC41013-1	SC41015-1
SC41015-1	CNE-050 Inclement Weather (May 2022) - 8days	8	11-Jun-22 A	18-Jun-22 A	28-Jun-22	28-Jun-22		SC41014-1	SC41100-1, SC41016-1
SC41016-1	CNE-052 Inclement Weather (June 2022) - 9days	9	19-Jun-22 A	27-Jun-22 A	28-Jun-22	28-Jun-22		SC41015-1	SC41017-1
SC41017-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1	28-Jun-22 A	28-Jun-22 A	28-Jun-22	28-Jun-22		SC41016-1	SC41100-1, SC41018-1
SC41018-1	CNE-054 Inclement Weather (July 2022) - 4days	4	29-Jun-22 A	02-Jul-22 A	28-Jun-22	28-Jun-22		SC41017-1	SC41019-1
SC41019-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	03-Jul-22 A	03-Jul-22 A	28-Jun-22	28-Jun-22		SC41018-1	SC41100-1, SC41020-1
SC41020-1	CNE-056 Inclement Weather (August 2022) - 13.5days	14	04-Jul-22 A	17-Jul-22 A	28-Jun-22	28-Jun-22		SC41019-1	SC41021-1
SC41021-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1	17-Jul-22 A	18-Jul-22 A	28-Jun-22	28-Jun-22		SC41020-1	SC41100-1
SC41100-1	Expected Completion for Section 4	0		20-Sep-22*		28-Jun-22	-84	SC41015-1, SC41017-1,	
Time Risk Allowance and Planned Completion		7	23-Oct-22	29-Oct-22	09-May-22	16-May-22	-167		
SC41110	Time Risk Allowance for Section 4	7	23-Oct-22	29-Oct-22	09-May-22	16-May-22	-167	SC41001-1, S4C1100,	SC41120
SC41120	Planned Completion for Section 4	0		29-Oct-22*		16-May-22	-167	SC41110	CD1040
Section 5 - Complete all remaining Works (incl. T&C)		2018	23-Oct-19 A	01-May-25	21-Sep-22	01-May-25	0		
Contractual Completion (Include Implemented CE)		1668	23-Oct-19 A	16-May-24	21-Sep-22	16-May-24	0		
SC51000	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Sep-22	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	SC51100, 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	SC51100, 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	SC51100
SC51100	Revised Completion for Section 5	0		16-May-24*		16-May-24	0	SC51002, SC51003,	
Expected Completion (Include Non-implemented CE)		2018	23-Oct-19 A	01-May-25	21-Sep-22	01-May-25	0		
SC51000-1	Contract Duration of Section 5	1626	23-Oct-19 A	04-Apr-24	21-Sep-22	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	SC51110, SC51002-1
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	SC51005-1
SC51005-1	CNE-019 Inclement Weather (October 2021) - 6days	6	11-May-24	17-May-24	11-May-24	17-May-24	0	SC51004-1	SC51006-1



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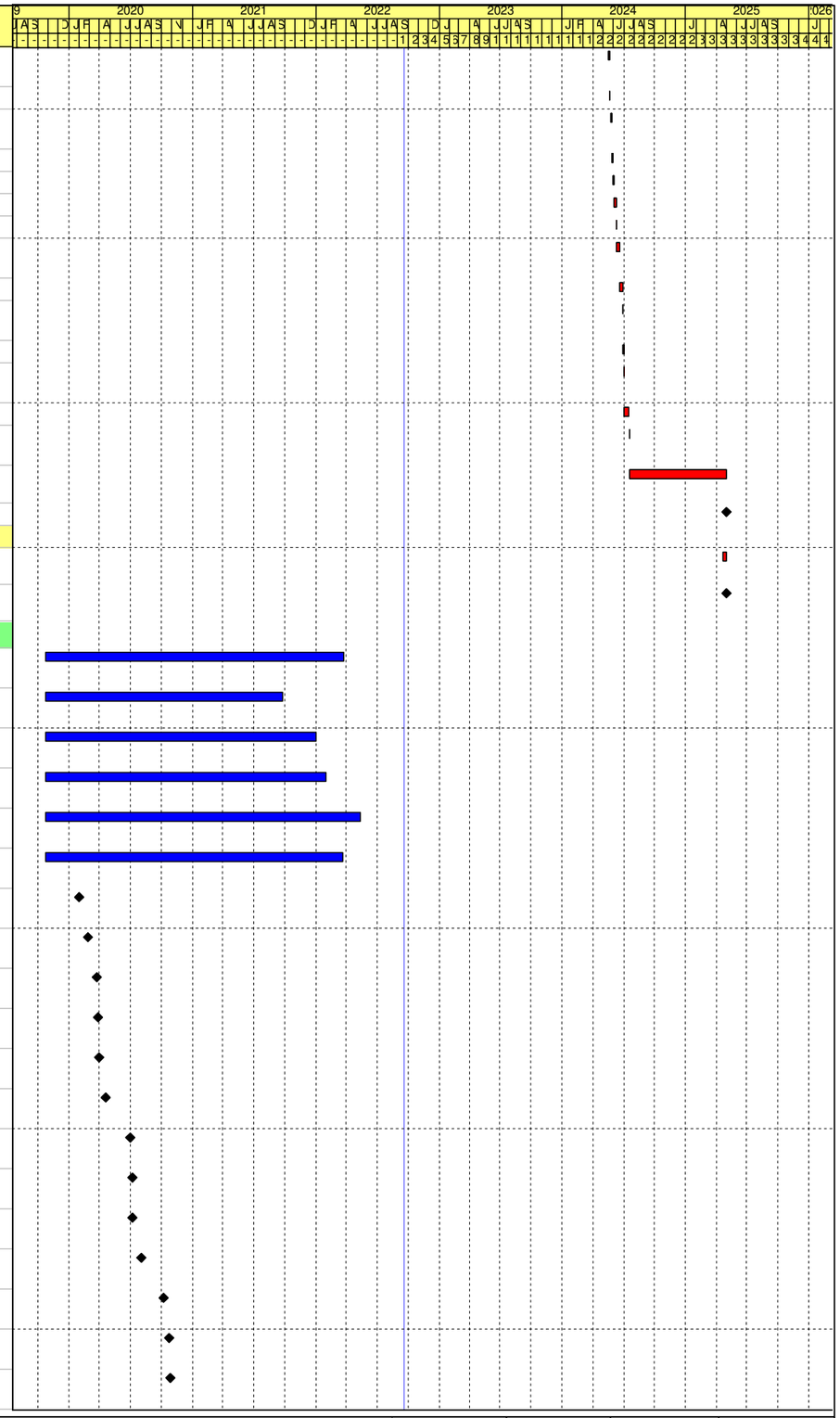
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
SC51006-1	CNE-020 Inclement Weather (October 2021) (Time and Cost Implication) - 4days	4	17-May-24	21-May-24	17-May-24	21-May-24	0	SC51005-1	SC51007-1
SC51007-1	ICE-CNE-0313 Inclement Weather (November 2021) - 0.5days (Implemen	1	21-May-24	21-May-24	21-May-24	21-May-24	0	SC51006-1	SC51008-1
SC51008-1	NICE-CNE-0343 Inclement Weather (December 2021) - 5days (Implemented)	5	22-May-24	26-May-24	22-May-24	26-May-24	0	SC51007-1	SC51009-1
SC51009-1	CNE-036 Inclement Weather (January 2022) - 3days	3	27-May-24	29-May-24	27-May-24	29-May-24	0	SC51008-1	SC51010-1
SC51010-1	CNE-040 Inclement Weather (February 2022) - 5days	5	30-May-24	03-Jun-24	30-May-24	03-Jun-24	0	SC51009-1	SC51011-1
SC51011-1	CNE-044 Inclement Weather (March 2022) - 4.5days	5	04-Jun-24	08-Jun-24	04-Jun-24	08-Jun-24	0	SC51010-1	SC51012-1
SC51012-1	CNE-048 Inclement Weather (April 2022) - 2days	2	08-Jun-24	10-Jun-24	08-Jun-24	10-Jun-24	0	SC51011-1	SC51013-1
SC51013-1	CNE-050 Inclement Weather (May 2022) - 8days	8	10-Jun-24	18-Jun-24	10-Jun-24	18-Jun-24	0	SC51012-1	SC51099-1, SC51014-1
SC51014-1	CNE-052 Inclement Weather (June 2022) - 9days	9	18-Jun-24	27-Jun-24	18-Jun-24	27-Jun-24	0	SC51013-1	SC51015-1
SC51015-1	CNE-053 Inclement Weather (June 2022) (Time and Cost Implication) - 1day	1	27-Jun-24	28-Jun-24	27-Jun-24	28-Jun-24	0	SC51014-1	SC51099-1, SC51016-1
SC51016-1	CNE-054 Inclement Weather (July 2022) - 4days	4	28-Jun-24	02-Jul-24	28-Jun-24	02-Jul-24	0	SC51015-1	SC51017-1
SC51017-1	CNE-055 Inclement Weather (July 2022) (Time and Cost Implication) - 1day	1	02-Jul-24	03-Jul-24	02-Jul-24	03-Jul-24	0	SC51016-1	SC51099-1, SC51018-1
SC51018-1	CNE-056 Inclement Weather (August 2022) - 13.5days	14	03-Jul-24	16-Jul-24	03-Jul-24	16-Jul-24	0	SC51017-1	SC51019-1
SC51019-1	CNE-057 Inclement Weather (August 2022) (Time and Cost Implication) - 1day	1	17-Jul-24	17-Jul-24	17-Jul-24	17-Jul-24	0	SC51018-1	SC51099-1
SC51099-1	EWN-0314 Extention of Time for change of access date	288	18-Jul-24	01-May-25	18-Jul-24	01-May-25	0	SC51013-1, SC51015-1,	SC51100-1
SC51100-1	Expected Completion for Section 5	0		01-May-25*		01-May-25	0	SC51099-1	
Time Risk Allowance and Planned Completion		12	20-Apr-25	01-May-25	05-May-24	16-May-24	-350		
SC51110	Time Risk Allowance for Section 5	12	20-Apr-25	01-May-25	05-May-24	16-May-24	-350	SC51001-1, S5S1250,	SC51120
SC51120	Planned Completion for Section 5	0		01-May-25*		16-May-24	-350	SC51110, PL1520,	CD1040
Compensation Event		1621	23-Oct-19 A	21-Sep-22	30-Jan-22	15-May-25	967		
CE0219a	NCE-NCE-0219 - Portion B-2a (within 771 to 891 days from starting date)	891	23-Oct-19 A	23-Mar-22 A	31-Oct-22	31-Oct-22		CD1010	CE0219b
CE0219c	NCE-NCE-0219 - Portion B-2b (within 615 to 705 days from starting date)	705	23-Oct-19 A	24-Sep-21 A	02-Dec-22	02-Dec-22			CE0219d
CE0273a	NCE-NCE-0273 - Portion C-3 (within 615 to 815 days from starting date)	815	23-Oct-19 A	31-Dec-21 A	15-May-25	15-May-25			CE0273b
CE0288a	NCE-NCE-0288 - Portion C-2A (within 705 to 831 days from starting date)	831	23-Oct-19 A	30-Jan-22 A	30-Jan-22	30-Jan-22			CE0288b
CE0287a	NCE-NCE-0287 - Portion C-2C (within 715 to 934 days from starting date)	934	23-Oct-19 A	13-May-22 A	13-May-22	13-May-22			CE0287b
CE0286a	NCE-NCE-0286 - Portion C-2B (within 765 to 880 days from starting date)	880	23-Oct-19 A	20-Mar-22 A	20-Mar-22	20-Mar-22			CE0286b
CE0001	CE No.001 - Special Work Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	0		30-Jan-20 A		15-May-25			
CE0004	CE No.004 - Designated Area for the Contractor's Site Accommodation in Works Area WA1	0		26-Feb-20 A		15-May-25			
CE0002	CE No.002 - The Contractor's Site Accomodation by Modular Integrated Construction (MIC) Method	0		23-Mar-20 A		15-May-25			
CE0006	CE No.006 - Additional Duty Point for Effluent Transfer Pumps	0		27-Mar-20 A		15-May-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		15-May-25			
CE0003	CE No.003 - Flowmeter Relocation & Pipework Rearrangement at Effluent Transfer Pumping Station	0		20-Apr-20 A		15-May-25			
CE0007	CE No.007 - Additional Adjustable Weir at UV System No.1 & Effluent Pumping Station No.1	0		30-Jun-20 A		15-May-25			
CE0009	CE No.009 - Employment of Temporary Staff under Anti-Epidemic Fund	0		07-Jul-20 A		15-May-25			
CE0010	CE No.010 - Revised Setting Out Plan for Sidestream Treatment Facilities	0		07-Jul-20 A		15-May-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		15-May-25			
CE0012	CE No.012 - Provision of Touchscreen Display System for the Project Manager's Office	0		06-Oct-20 A		15-May-25			
CE0013	CE No.013 - Feasibility Study for Adopting emMiC & DfMA	0		22-Oct-20 A		15-May-25			
CE0014	CE No.014 - Revised FS Water Supply Arrangement for CHP, Guard House, Workshop No.2, SludgeDigester&DistributionChamber	0		28-Oct-20 A		15-May-25			



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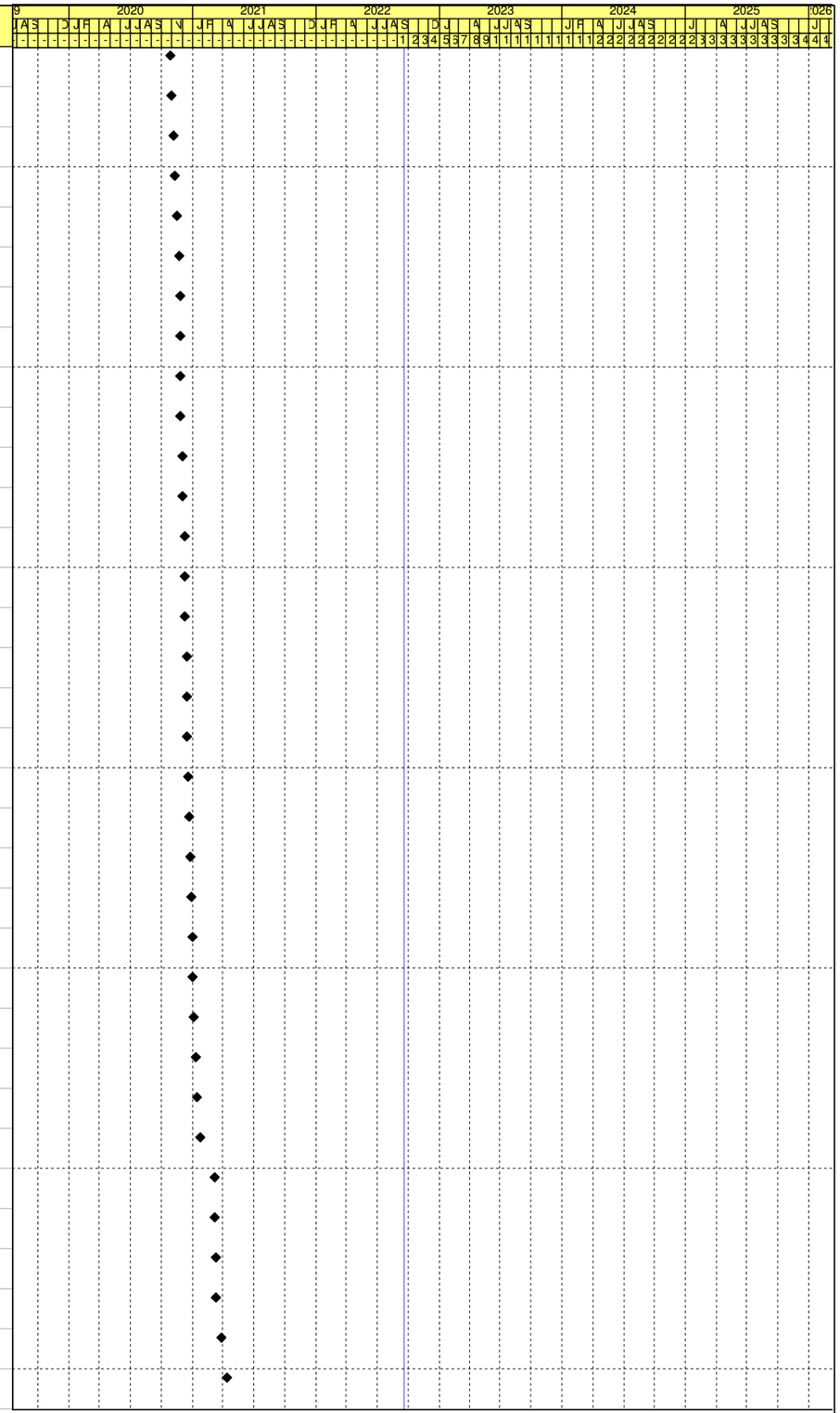
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0016	CE No.016 - Elect. Provisions for Addit. 800A ACB w/ CMPD as Standby Supply for MBBR for UV No.2 for Future Expansion	0		28-Oct-20 A		15-May-25			
CE0015	CE No.015 - 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		15-May-25			
CE0018	CE No.018 - MVAC Layout for Plant Service Water System	0		05-Nov-20 A		15-May-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		15-May-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		15-May-25			
CE0205	NCE-PPMI-0205 - Fibre Optics Network Connection for SCADA Systems between Zone B & Zone C	0		23-Nov-20 A		15-May-25			
CE0203	NCE-PPMI-0203 - MVAC Layout for SAS Pumping Station	0		25-Nov-20 A		15-May-25			
CE0202	NCE-PMI-0202 - Revised Plumbing Arrangement for Sludge Dewatering Building	0		26-Nov-20 A		15-May-25			
CE0208	NCE-PPMI-0208 - Provision of Drainage service Layout for SAS Pumping Station	0		26-Nov-20 A		15-May-25			
CE0209	NCE-PPMI-0209 - Drainage System for Plant Service Water System	0		26-Nov-20 A		15-May-25			
CE0207	NCE-PMI-0207 - TX Rm & Switch Rm - Provision of ATS for Power Supply for UPS	0		01-Dec-20 A		15-May-25			
CE0211	NCE-PPMI-0211 - Revised MVAC Layout & Electrical Provisions for MVAC in TX and Switch Rm	0		02-Dec-20 A		15-May-25			
CE0212	NCE-PMI-0212 - Provision of Louvre Panel for Outdoor AC Units at Contractor's Site Accomodation	0		07-Dec-20 A		15-May-25			
CE0204	NCE-PMI-0204 - CHP - Provisional of Additional ATS for Power Supply for UPS	0		08-Dec-20 A		15-May-25			
CE0210	NCE-PPMI-0210 - Electrical provisions for MVAC & Drainage Systems in SAS Pumping Station	0		08-Dec-20 A		15-May-25			
CE0214	NCE-PPMI-0214 - Additional Sump Pump & Drain Pipes at UV System No.1 & Effluent Pumping Station	0		14-Dec-20 A		15-May-25			
CE0215	NCE-PPMI-0215 - Revised MVAC Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-20 A		15-May-25			
CE0206	NCE-PMI-0206 - SDB - Provisional of Additional ATS for Power Supply for UPS	0		15-Dec-20 A		15-May-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		15-May-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		15-May-25			
CE0221	NCE-PPMI-0221 - General Arrangement for Fire Hydrant & Booster Pump Room	0		24-Dec-20 A		15-May-25			
CE0217	NCE-PMI-0217 - Revised Duty Points for Effluent Transfer Pumps	0		29-Dec-20 A		15-May-25			
CE0220	NCE-PMI-0220 - Supply of Puddle Pipes for Effluent to Shek Sheung River	0		30-Dec-20 A		15-May-25			
CE0216	NCE-PPMI-0216 - Electrical Provisions for MVAC & drainage Sytems in Plant Service Water System	0		31-Dec-20 A		15-May-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		15-May-25			
CE0222	NCE-PMI-0222 - Revised Water Supply Arrangement (FS Water) to Sludge Dewatering Building	0		12-Jan-21 A		15-May-25			
CE0223	NCE-PMI-0223 - Construction of Trial Pits for Sidestream Treatment Facilities	0		15-Jan-21 A		15-May-25			
CE0224	NCE-PMI-0224 - Independent Inspection Body (IIB) for the Factory Acceptance Test (FAT) for UV Disinfeciton System	0		25-Jan-21 A		15-May-25			
CE0225	NCE-PMI-0225 - Supply of Ductile Iron Puddle Pipes at the Basement of Sludge Dewatering Building	0		09-Mar-21 A		15-May-25			
CE0226	NCE-PMI-0226 - Provision of Solar Water Heating System at the Contractor's Site Accomodation	0		09-Mar-21 A		15-May-25			
CE0227	NCE-PMI-0227 - Dual Power Fedder for LV Switch Panel at Sewage Pumping Station	0		11-Mar-21 A		15-May-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		15-May-25			
CE0230	NCE-PMI-0230 - Provision of Project Jackets with Fleece Vests	0		26-Mar-21 A		15-May-25			
CE0231	NCE-PMI-0231 - Extension of Sampling Pipe From Low Level on Sludge Digesters	0		12-Apr-21 A		15-May-25			



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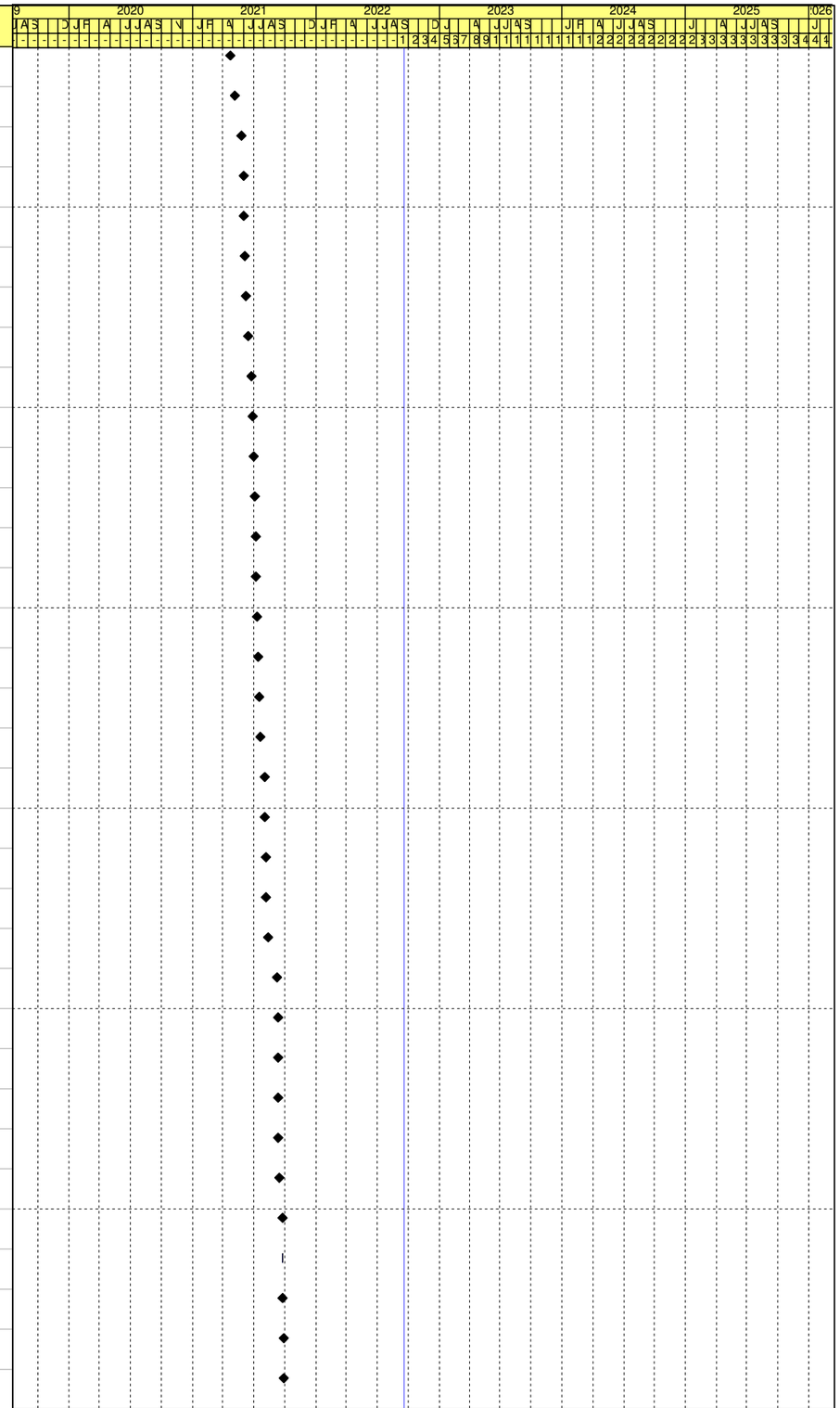
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0232	NCE-PMI-0232 - Dual Power Fedder for LV Switch Panel at 1/F LV Switch Room of Combined Heat and Power (CHP) Building	0		22-Apr-21 A		15-May-25			
CE0233	NCE-PMI-0233 - Sampling, Simulating and Testing of Existing Sludge for Obtaining the Viscosity of the Mixed Sludge	0		06-May-21 A		15-May-25			
CE0238	NCE-PMI-0238 - Supply of Stainless Steel Puddle Pipes for Surplus Activated Sludge (SAS) Pumping Station	0		27-May-21 A		15-May-25			
CE0239	NCE-PMI-0239 - Revised the Arrangement for Process Water Supply and Plant Services Water System	0		01-Jun-21 A		15-May-25			
CE0234	NCE-PMI-0234 - Provision of FRP Walkway, Access Platform & Handrailing for Sludge Digester No. 2	0		02-Jun-21 A		15-May-25			
CE0241	NCE-PMI-0241 - Revised Diesel Fuel Tank at Combined Heat and Power (CHP) Building	0		04-Jun-21 A		15-May-25			
CE0240	NCE-PMI-0240 - Revised Coping and Invert Levels for Penstock and Stoplog of SAS Pumping Station	0		09-Jun-21 A		15-May-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		15-May-25			
CE0237	NCE-CNE-0237 - Provision of Inspectin Windows for Sludge Digester	0		25-Jun-21 A		15-May-25			
CE0244	RCNE-CNE-0244 - Access to and use of portion C-1A	0		29-Jun-21 A		15-May-25			
CE0245	NCE-PMI-0245 - Provision of Augmented Reality (AR) Mobile Application	0		30-Jun-21 A		15-May-25			
CE0248	NCE-PMI-0248 - Inclement Weather - May 2021 (Time Implication)	0		05-Jul-21 A		15-May-25			
CE0246	NCE-PMI-0246 - Revised HV Remote Control Panels at CHP & Workshop No. 2	0		06-Jul-21 A		15-May-25			
CE0247	NCE-PMI-0247 - Temporary 4G System for SCADA System Monitoring	0		07-Jul-21 A		15-May-25			
CE0243	NCE-PMI-0243 - Provision of Flow Signal Inputs for UV Disinfection System	0		12-Jul-21 A		15-May-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		15-May-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		15-May-25			
CE0252	NCE-PMI-0252 - Provision of Neutral Earthing Resistor (NER) at Workshop No. 2	0		19-Jul-21 A		15-May-25			
CE0258	NCE-PMI-0258 - Provision of FRP Cover for Overflow Chambers of Sludge Digesters	0		04-Aug-21 A		15-May-25			
CE0260	NCE-PMI-0260 - Provision of Chequer Plates at UV System No. 1 & Effluent Pumping Station No. 1	0		04-Aug-21 A		15-May-25			
CE0256	RCNE-CNE-0256 - Amber Rainstrom Warning and Inclement Weather - June 2021 (Time Implication)	0		05-Aug-21 A		15-May-25			
CE0257	RCNE-CNE-0257 - Black and Red Rainstrom Warning - June 2021 (Time & Cost Implication)	0		05-Aug-21 A		15-May-25			
CE0259	NCE-PMI-0259 - Provision of Virtual Reality (VR) Safety Training Platform	0		13-Aug-21 A		15-May-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		15-May-25			
CE0264	RCNE-CNE-0264 - Inclement Weather - July 2021 (Time Implication)	0		10-Sep-21 A		15-May-25			
CE0269	NCE-PMI-0269 - Additional Cleansing Points at Sludge Skip Area of Sludge Dewatering Building	0		10-Sep-21 A		15-May-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		15-May-25			
CE0254	NCE-CNE-0254 - Removal of Obstructions at Trail Pit No. 3 at Sidestreamt Facilities	0		10-Sep-21 A		15-May-25			
CE0265	NCE-PMI-0265 - Water Supply to Emergency Drench Shower and Eye Fountain at Deodorization System No. 11	0		16-Sep-21 A		15-May-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		15-May-25			
CE0219d	NCE-NCE-0219 - Revised Access Date for Portion B-2b	1	24-Sep-21 A	24-Sep-21 A	02-Dec-22	02-Dec-22		CE0219c	S5ECHC1000
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		15-May-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		15-May-25			
CE0275	NCE-PMI-0275 - Additional Lighting Fittings for UV System No.1 & Effluent Pumping Station No.1	0		29-Sep-21 A		15-May-25			



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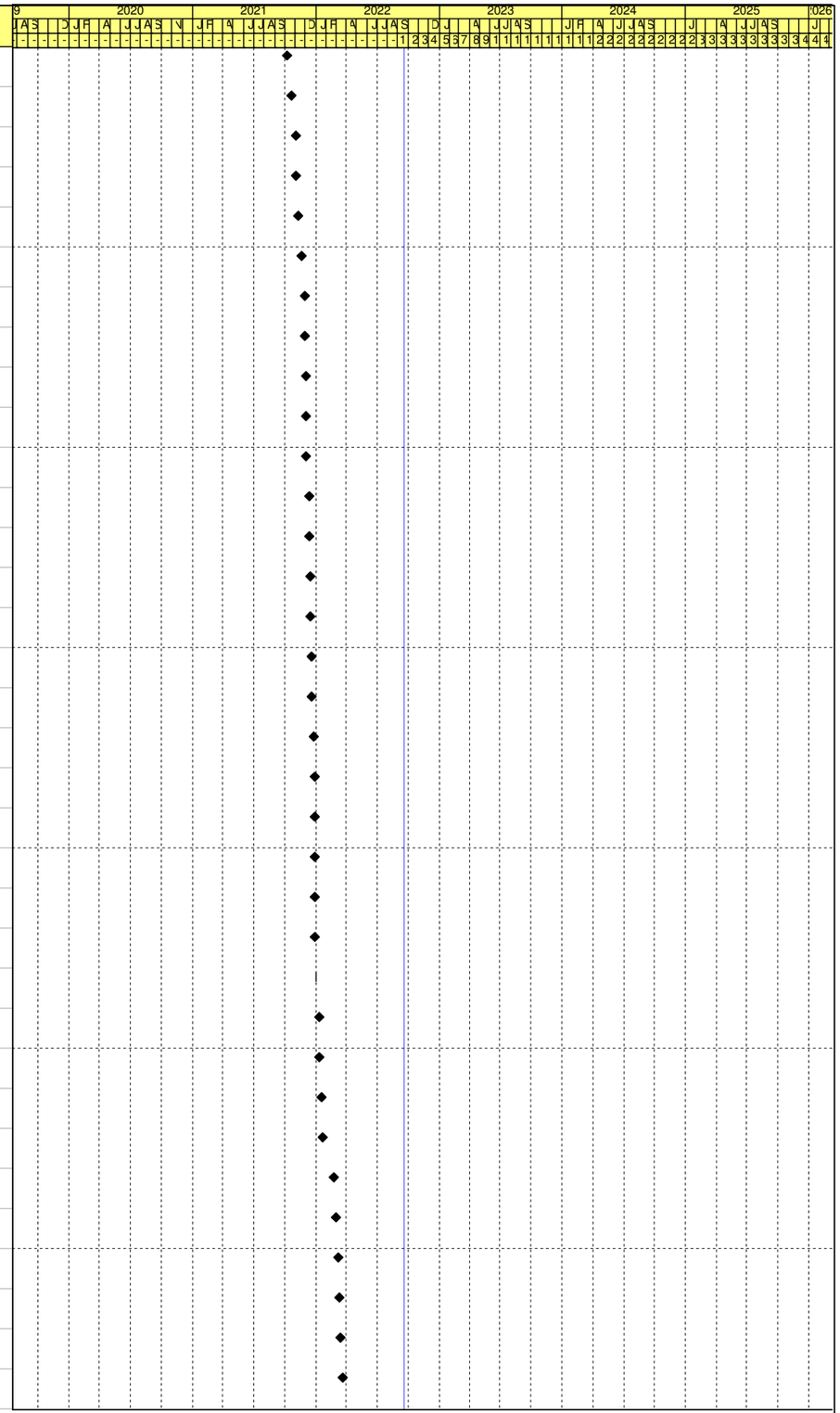
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0272	NCE-PMI-0272 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		08-Oct-21 A		15-May-25			
CE0280	NCE-PMI-0280 - Employment of Temporary Staff under Job Creation Scheme 2.0 (JCS 2.0) under Anti-Epidemiv Fund (AEF)	0		21-Oct-21 A		15-May-25			
CE0292	RCNE-CNE-0292 - Inclement Weather - August 2021 (Time Implication)	0		02-Nov-21 A		15-May-25			
CE0293	RCNE-CNE-0293 - Inclement Weather - September 2021 (Time Implication)	0		02-Nov-21 A		15-May-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		15-May-25			
CE0262	NCE-PMI-0262 - Emergency Access Door for Lift at Sludge Dewatering Building	0		18-Nov-21 A		15-May-25			
CE0294	NCE-PMI-0294 - IIB for FAT for THP System	0		30-Nov-21 A		15-May-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		15-May-25			
CE0284	NCE-PMI-0284 - Revised Road Lighting System for Zone C	0		03-Dec-21 A		15-May-25			
CE0296	NCE-PMI-0296 - Provision of emMiC Adoption of FRP Walkway and Platform for Sludge Digesters	0		03-Dec-21 A		15-May-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		15-May-25			
CE0307	NCE-PMI-0307 - Revised Quantity for Stoplogs of Sewage Pumping Station	0		13-Dec-21 A		15-May-25			
CE0299	NCE-PMI-0299 - Revised Plumbing Layout for UV System No.1 & Effluent Pumping Station No.1	0		14-Dec-21 A		15-May-25			
CE0309	RCNE-CNE-0309 - Inclement Weather - October 2021 (Time Implication)	0		16-Dec-21 A		15-May-25			
CE0302	NCE-PMI-0302 - Revised Lighting Layout Plan for Workshop No.2	0		17-Dec-21 A		15-May-25			
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		15-May-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		15-May-25			
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		15-May-25			
CE0311	NCE-PMI-0311 - Temp. Setup for SCADA System Monitoring & CCTV System Surveillance	0		29-Dec-21 A		15-May-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		15-May-25			
CE0313	CNE-0313 - Inclement Weather - November 2021 (Time Implication)	0		29-Dec-21 A		15-May-25			
CE0304	NCE-PMI-0304 - Provision of Digital Displaying Screen and Softwarewithin Portion B Area	0		29-Dec-21 A		15-May-25			
CE0315	NCE-PMI-0315 - Modification of Monorali LA-01-04 in Sludge Dewatering Building	0		30-Dec-21 A		15-May-25			
CE0273b	NCE-NCE-0273 - Revised Access Date for Portion C-3	1	31-Dec-21 A	31-Dec-21 A	15-May-25	15-May-25		CE0273a	
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		15-May-25			
CE0305	NCE-PMI-0305 - Process Review for Advance Works	0		12-Jan-22 A		15-May-25			
CE0303	NCE-CNE-0303 - Revise Fire Services Provision for Server Room of Workshop No.2	0		19-Jan-22 A		15-May-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		15-May-25			
CE0301	NCE-PMI-0301 - Revised Plumbing Layout for SDB & FeCl3 Dosing System	0		24-Feb-22 A		15-May-25			
CE0306	NCE-CNE-0306 - Additional Trial Pits & the Associated Modification Works for Uncharted Utilities at STF	0		01-Mar-22 A		15-May-25			
CE0327	NCE-PMI-0327 - Change of Material for Electrical Wiring Accessories	0		08-Mar-22 A		15-May-25			
CE0300	NCE-PMI-0300 - Revised Plumbing Layout for CHP, DOU 12 and SD&DC	0		10-Mar-22 A		15-May-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		15-May-25			
CE0328	NCE-PMI-0328 - Provision of Chequer Plates at SAS Pumping Station	0		22-Mar-22 A		15-May-25			



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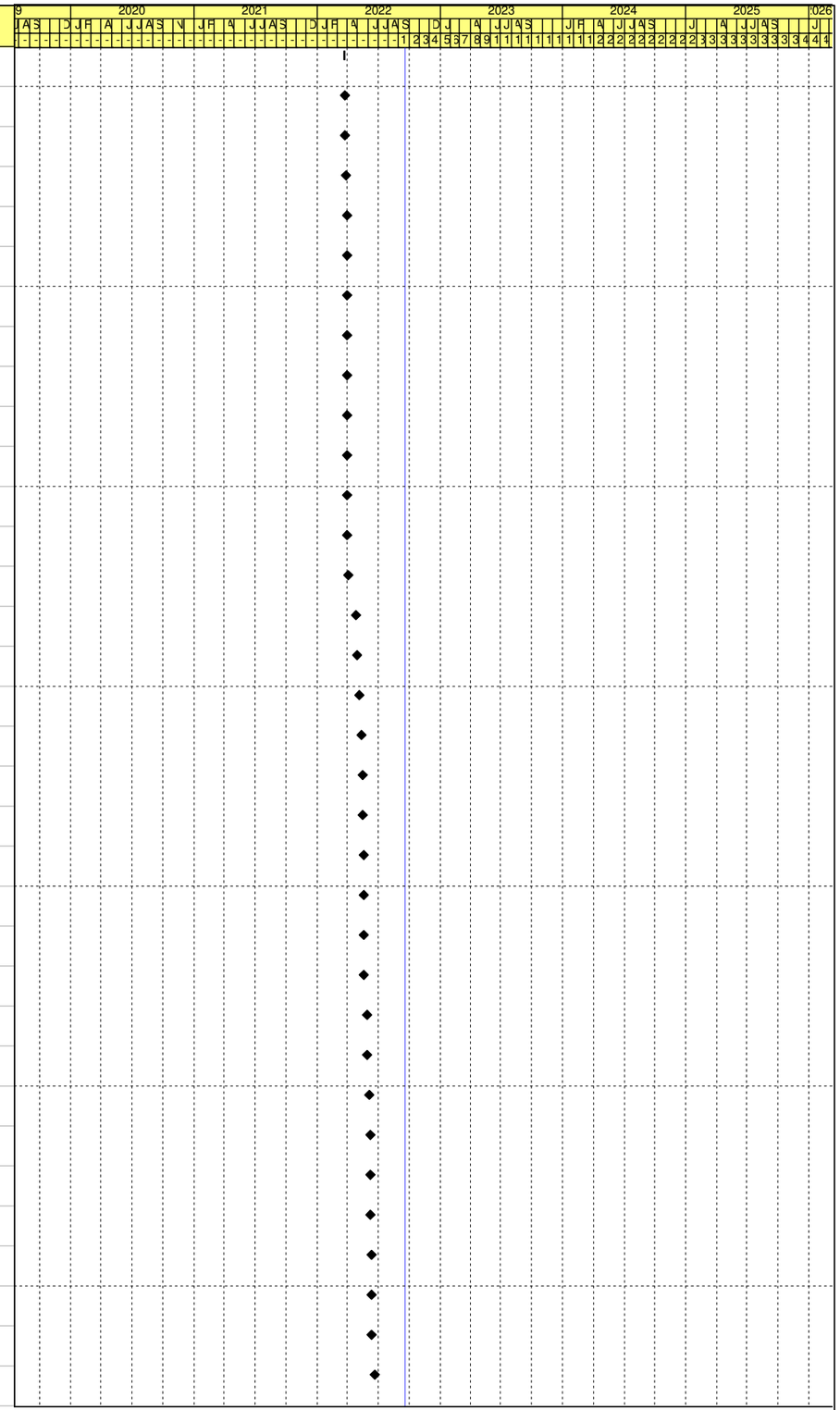
CE0219b	NCE-NCE-0219 - Revised Access Date for Portion B-2a	1	23-Mar-22 A	23-Mar-22 A	31-Oct-22	31-Oct-22		CE0219a	S5SASC1010
CE0329	NCE-PMI-0329 - Provision of IIB for FAT for Sludge Thickening and Dewatering Centrifuges	0		23-Mar-22 A		15-May-25			
CE0337	NCE-PMI-0337 - Revised Pipe Trenches in Zone C	0		24-Mar-22 A		15-May-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		15-May-25			
CE0336	NCE-PMI-0336 - Provision of Additional Temporary Storage Area	0		30-Mar-22 A		15-May-25			
CE0335	NCE-PMI-0335 - Revised Power & Control for MVAC Provision at Workshop No.2	0		01-Apr-22 A		15-May-25			
CE0338	NCE-PMI-0338 - Provision of Additional RFID Handheld Readers with 4G Data SIM Card Service	0		01-Apr-22 A		15-May-25			
CE0339	NCE-PMI-0339 - Revised Lighting Layout for SDB	0		01-Apr-22 A		15-May-25			
CE0340	NCE-PMI-0340 - Buillding Services & SCADA Interface Provisions for Workshop No.2	0		01-Apr-22 A		15-May-25			
CE0343	CNE-0343 - Inclement Weather - December 2021 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0344	CNE-0344 - Inclement Weather - January 2022 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0345	CNE-0345 - Inclement Weather - February 2022 (Time Implication)	0		01-Apr-22 A		15-May-25			
CE0347	NCE-PMI-0347 - IIB for FAT for 11kV Switchboards	0		01-Apr-22 A		15-May-25			
CE0348	NCE-PMI-0348 - Provision of (IIB) for FAT for CHP Generating Sets	0		04-Apr-22 A		15-May-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		15-May-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		15-May-25			
CE0341	NCE-PMI-0341 - Revised MVAC Layout for Sludge Digesters and Distribution Chamber	0		05-May-22 A		15-May-25			
CE0342	NCE-PMI-0342 - Provision and Installation of Additional Pipes to Manhole MHSS1	0		12-May-22 A		15-May-25			
CE0359	NCE-PMI-0359 - Revised Lighting Layout for Sludge Digesters and Districbution Chamber (Basement 1 and Basement 2)	0		16-May-22 A		15-May-25			
CE0364	NCE-PMI-0364 - Provision of Security and Utility Services for Additional Temporary Storage Area	0		16-May-22 A		15-May-25			
CE0366	CNE-0366 - No Access to and Use of Portion C-2B for Area for CHP	0		20-May-22 A		15-May-25			
CE0367	NCE-PMI-0367 - Sealing Works for UV System & Effluent Pumping Station No. 1	0		20-May-22 A		15-May-25			
CE0369	CNE-0369 - No Access to and use of Portion C-2C for Area for SD & DC	0		20-May-22 A		15-May-25			
CE0370	CNE-0370 - No Access to and Use of Portion C-2A for Area for SDB	0		20-May-22 A		15-May-25			
CE0333	NCE-PMI-0333 - Revised MVAC Layout and Control Schematic for Workshop No.2	0		30-May-22 A		15-May-25			
CE0363	NCE-PMI-0363 - Revised MVAC Layout and Control Schematic for CHP Building	0		30-May-22 A		15-May-25			
CE0375	NCE-PMI-0375 - Gas Detection System for Pipe Trench No.3 in Zone C	0		06-Jun-22 A		15-May-25			
CE0361	NCE-PMI-0361 - Revised Power Layout for Sludge Dewatering Building	0		08-Jun-22 A		15-May-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		15-May-25			
CE0384	NCE-PMI-0384 - Enhanced Protective Measures against Spread of Omicron COVID Variant	0		08-Jun-22 A		15-May-25			
CE0352	NCE-PMI-0352 - Revised MVAC Layout and for Transformer and Switch Room	0		10-Jun-22 A		15-May-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		15-May-25			
CE0376	NCE-PMI-0376 - BS Provisions for SDDC (G/F & Roof) & Pipe Trench No.2	0		10-Jun-22 A		15-May-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		15-May-25			



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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
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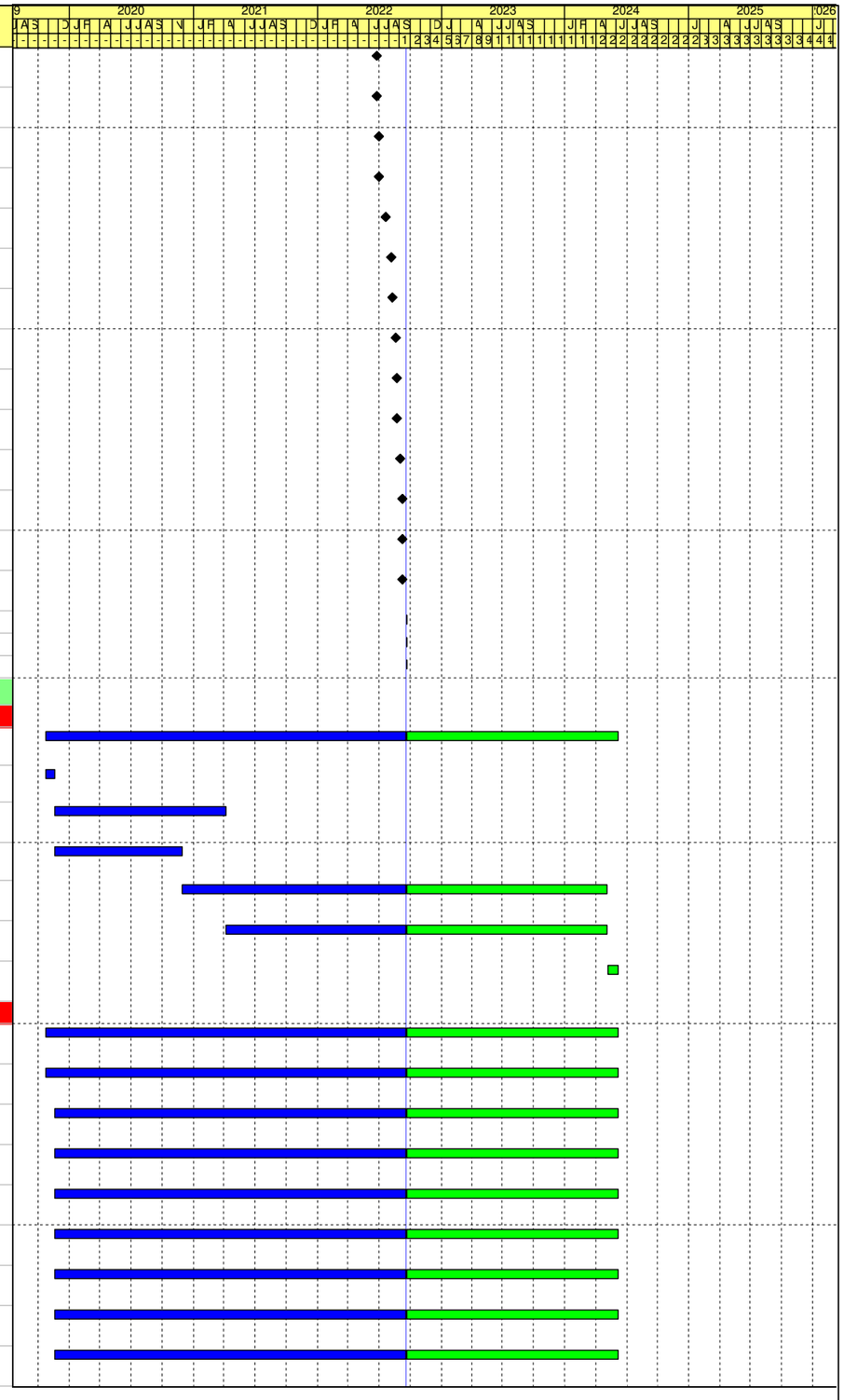
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
CE0386	CNE-0386 - Inclement Weather - March 2022 (Time Implication)	0		24-Jun-22 A		15-May-25			
CE0387	CNE-0387 - Inclement Weather - April 2022 (Time Implication)	0		24-Jun-22 A		15-May-25			
CE0391	CNE-0391 - Inclement Weather - May 2022 (Time Implication)	0		30-Jun-22 A		15-May-25			
CE0397	CNE-0397 - Inclement Weather - Jun 2022 (Time Implication)	0		30-Jun-22 A		15-May-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		15-May-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		15-May-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		15-May-25			
CE0362	NCE-CNE-0362 - Amendment of Dangers Goods Ordinance (Cap.295)	0		19-Aug-22 A		15-May-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		15-May-25			
CE0402	NCE-PMI-0402 - Provision of Flow Control System for Effluent to Shek Sheung River	0		24-Aug-22 A		15-May-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		15-May-25			
CE0398	CNE-0398 - Red Rainstorm Warning -June 2022 (Time and Cost Implication)	0		08-Sep-22 A		15-May-25			
CE0405	CNE-0405 - Inclement Weather -July 2022 (Time Implication)	0		08-Sep-22 A		15-May-25			
CE0406	CNE-0406 - Tropical Cyclone Warning Signal No. 8 - July 2022 (Time and Cost Implication)	0		08-Sep-22 A		15-May-25			
CE0288b	NCE-NCE-0288 - Revised Access Date for Portion C-2A	1	21-Sep-22	21-Sep-22*	30-Jan-22	30-Jan-22	-234	CE0288a	
CE0287b	NCE-NCE-0287 - Revised Access Date for Portion C2-C	1	21-Sep-22	21-Sep-22*	13-May-22	13-May-22	-131	CE0287a	
CE0286b	NCE-NCE-0286 - Revised Access Date for Portion C2-B	1	21-Sep-22	21-Sep-22*	20-Mar-22	20-Mar-22	-185	CE0286a	
Preliminaries		2032	23-Oct-19 A	15-May-25	17-Nov-21	15-May-25	0		
Mobilisation		1687	23-Oct-19 A	04-Jun-24	17-Nov-21	15-May-25	345		
PL1000	Provison of Equipment / Facilities for the PM's Office	1687	23-Oct-19 A	04-Jun-24	01-Sep-23	15-May-25	345	AD1200, AD1220,	CD1040
PL1010	Mobilisation	28	23-Oct-19 A	19-Nov-19 A	17-Nov-21	17-Nov-21		CD1010	PL1240, S2P1010,
PL1030	Design, Procurement & PO & Construction of Contractor's Storage Area (Works Area WA3)	503	20-Nov-19 A	05-Apr-21 A	01-Sep-23	01-Sep-23		AD1220, PL1010	PL1050
PL1020	Design, Procurement & PO & Construction of Contractor's Site Office (Works Area WA1-B)	270	20-Nov-19 A	27-Nov-20 A	05-Jul-22	05-Jul-22		AD1200, PL1010	PL1040, S2D1930,
PL1040	Maintain Contractor's Site Office	1255	28-Nov-20 A	05-May-24	01-Sep-23	15-Apr-25	345	PL1020	PL1060
PL1050	Maintain Contractor's Storage Area	1126	06-Apr-21 A	05-May-24	01-Sep-23	15-Apr-25	345	PL1030	PL1060
PL1060	Removal of Site Office, Storage & Relevant Facilities	30	06-May-24	04-Jun-24	16-Apr-25	15-May-25	345	PL1040, PL1050	CD1040
Site Preliminaries		2032	23-Oct-19 A	15-May-25	07-Apr-22	15-May-25	0		
PL1070	Provision of Insurance, Third Party Insurances & PII	1687	23-Oct-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010	CD1040
PL1080	Provision of 2 Contract Car for the Use of the PM & Supervisor	1687	23-Oct-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010	CD1040
PL1100	Provision of Photographs	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1110	Provision of Environmental Mitigation Measures	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1120	Provision of Air Pollution Abatment	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1130	Provision of Noise Pollution Abatment	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1140	Provision of Wastewater Pollution Abatement	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1150	Provision of Wastement Management	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1160	Provision of Monitoring the Use of Ultra Low Sulphur Diesel	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040



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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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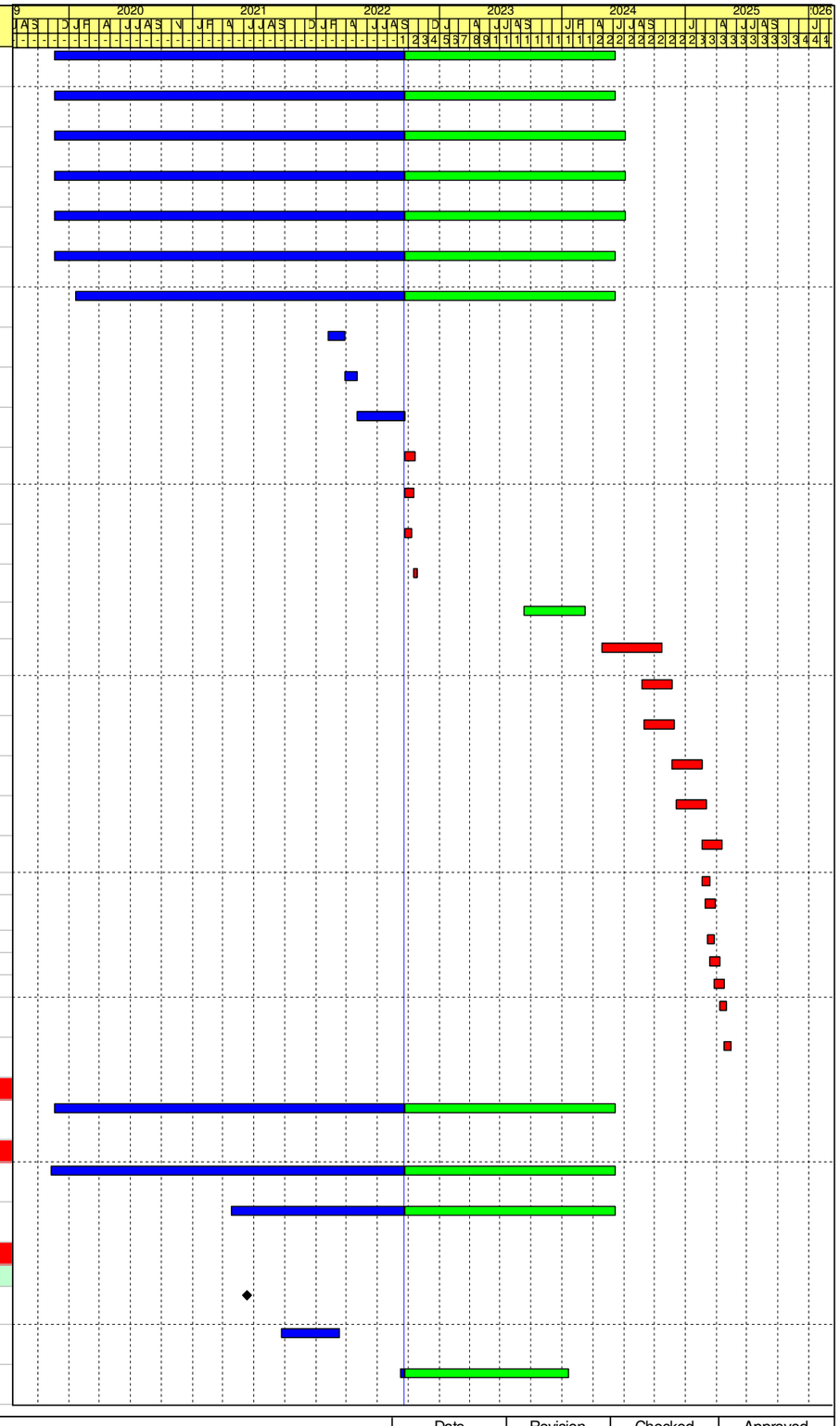
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
PL1170	Provision of Environmental Management	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1180	Provision of Site Management Plan for Trip Ticket System	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1220	Provision of Systematic Risk Management	1659	20-Nov-19 A	05-Jul-24	01-Aug-23	15-May-25	314	CD1010, PL1010	CD1040
PL1230	Provision of Site Liaison Group & Community Liaison Group	1659	20-Nov-19 A	05-Jul-24	01-Aug-23	15-May-25	314	CD1010, PL1010	CD1040
PL1240	Provision of 24-Hour Telephone Line	1659	20-Nov-19 A	05-Jul-24	01-Aug-23	15-May-25	314	CD1010, PL1010	CD1040
PL1440	Provision of ICE for Certification of the Design, Cal, Dwgs, Plans and all relevant Doc and Process Commissioning	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1090	Provision of 1 Electric Car for the Use of the PM & Supervisor	1596	22-Jan-20 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
PL1360	Prepare & Submit O&M Manual for Section 4	50	07-Feb-22 A	28-Mar-22 A	24-Apr-22	24-Apr-22		CD1010	CD1040, PL1370
PL1370	PM Reivew & Comment O&M Manual for Section 4	36	29-Mar-22 A	03-May-22 A	24-Apr-22	24-Apr-22		PL1360	PL1380
PL1380	Revise & Re-submit O&M Manual for Section 4	79	04-May-22 A	21-Sep-22	24-Apr-22	25-Apr-22	-150	PL1370	PL1390
PL1200	Provision of As-constructed Drawings for Section 4	30	21-Sep-22	20-Oct-22	16-Apr-22	16-May-22	-158	CD1010, S4C1160,	CD1040, SC41110
PL1280	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 4	27	21-Sep-22	17-Oct-22	07-Apr-22	04-May-22	-167		PL1290
PL1390	PM Reivew & Approval of O&M Manual for Section 4	21	22-Sep-22	12-Oct-22	25-Apr-22	16-May-22	-150	PL1380	CD1040, SC41110
PL1290	Provision of Training for Employer's Staff for Section 4	12	18-Oct-22	29-Oct-22	04-May-22	16-May-22	-167	CD1010, S4T1020,	CD1040, SC41110
PL1190	Provision of As-constructed Drawings for Section 3	180	11-Sep-23	08-Mar-24	12-Nov-23	10-May-24	63	CD1010, S3C1150,	CD1040, SC31110
PL1210	Provision of As-constructed Drawings for Section 5	180	27-Apr-24	23-Oct-24	07-Nov-23	04-May-24	-172	CD1010, S5DIGC1040,	CD1040, SC51110
PL1260	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 3	90	23-Aug-24	20-Nov-24	13-Sep-23	12-Dec-23	-345		PL1270
PL1300	Submission & Acceptance of Training Programme, Training Manual & Syllabus for Section 5	90	31-Aug-24	28-Nov-24	08-Oct-23	05-Jan-24	-328		PL1310
PL1400	Prepare & Submit O&M Manual for Section 5	90	21-Nov-24	18-Feb-25	07-Dec-23	05-Mar-24	-350	CD1010	CD1040, PL1410
PL1320	Prepare & Submit O&M Manual for Section 3	90	05-Dec-24	04-Mar-25	26-Dec-23	25-Mar-24	-345	CD1010, S3T1120	CD1040, PL1330
PL1270	Provision of Training for Employer's Staff for Section 3	60	19-Feb-25	19-Apr-25	11-Mar-24	10-May-24	-345	CD1010, PL1260,	CD1040, SC31110
PL1410	PM Reivew & Comment O&M Manual for Section 5	21	19-Feb-25	11-Mar-25	06-Mar-24	26-Mar-24	-350	PL1400	PL1420
PL1310	Provision of Training for Employer's Staff for Section 5	30	27-Feb-25	28-Mar-25	05-Apr-24	04-May-24	-328	CD1010, S5T1180,	CD1040, SC51110
PL1330	PM Reivew & Comment O&M Manual for Section 3	21	05-Mar-25	25-Mar-25	25-Mar-24	15-Apr-24	-345	PL1320	PL1340
PL1420	Revise & Re-submit O&M Manual for Section 5	30	12-Mar-25	10-Apr-25	27-Mar-24	25-Apr-24	-350	PL1410	PL1430
PL1340	Revise & Re-submit O&M Manual for Section 3	30	26-Mar-25	24-Apr-25	15-Apr-24	15-May-24	-345	PL1330	PL1350
PL1430	PM Reivew & Approval of O&M Manual for Section 5	21	11-Apr-25	01-May-25	26-Apr-24	16-May-24	-350	PL1420	CD1040, SC51110
PL1350	PM Reivew & Approval of O&M Manual for Section 3	21	25-Apr-25	15-May-25	15-May-24	05-Jun-24	-345	PL1340	CD1040, SC31110
Site Upkeeping		1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345		
PL1450	General Site Upkeeping of the Site	1659	20-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1010, PL1010	CD1040
Safety and Environmental Management		1675	10-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345		
PL1460	Construction Health and Safety Plan	1669	10-Nov-19 A	04-Jun-24	01-Sep-23	15-May-25	345	CD1000	CD1040
PL1470	Site Traffic Safety Management Plan	1137	25-Apr-21 A	04-Jun-24	01-Sep-23	15-May-25	345	AD1010	CD1040
Compliance with BEAM Requirements		1158	11-Jun-21 A	11-Sep-24	17-Nov-22	16-May-24	-118		
Sludge Dewatering Building		1068	11-Jun-21 A	13-Jun-24	17-Nov-22	16-May-24	-28		
PL1490	Material Submission & Design Calculation Approved	0		11-Jun-21 A		17-Nov-22		S2D1290, S2D1330,	PL1500, SC21120
PL1500	Issued approved submission & Calculation to Cinotech	161	21-Sep-21 A	11-Mar-22 A	17-Nov-22	17-Nov-22		PL1490	PL1510
PL1510	Monthly Review & Submission	500	09-Sep-22 A	20-Jan-24	17-Nov-22	17-Mar-24	57	PL1500	PL1520



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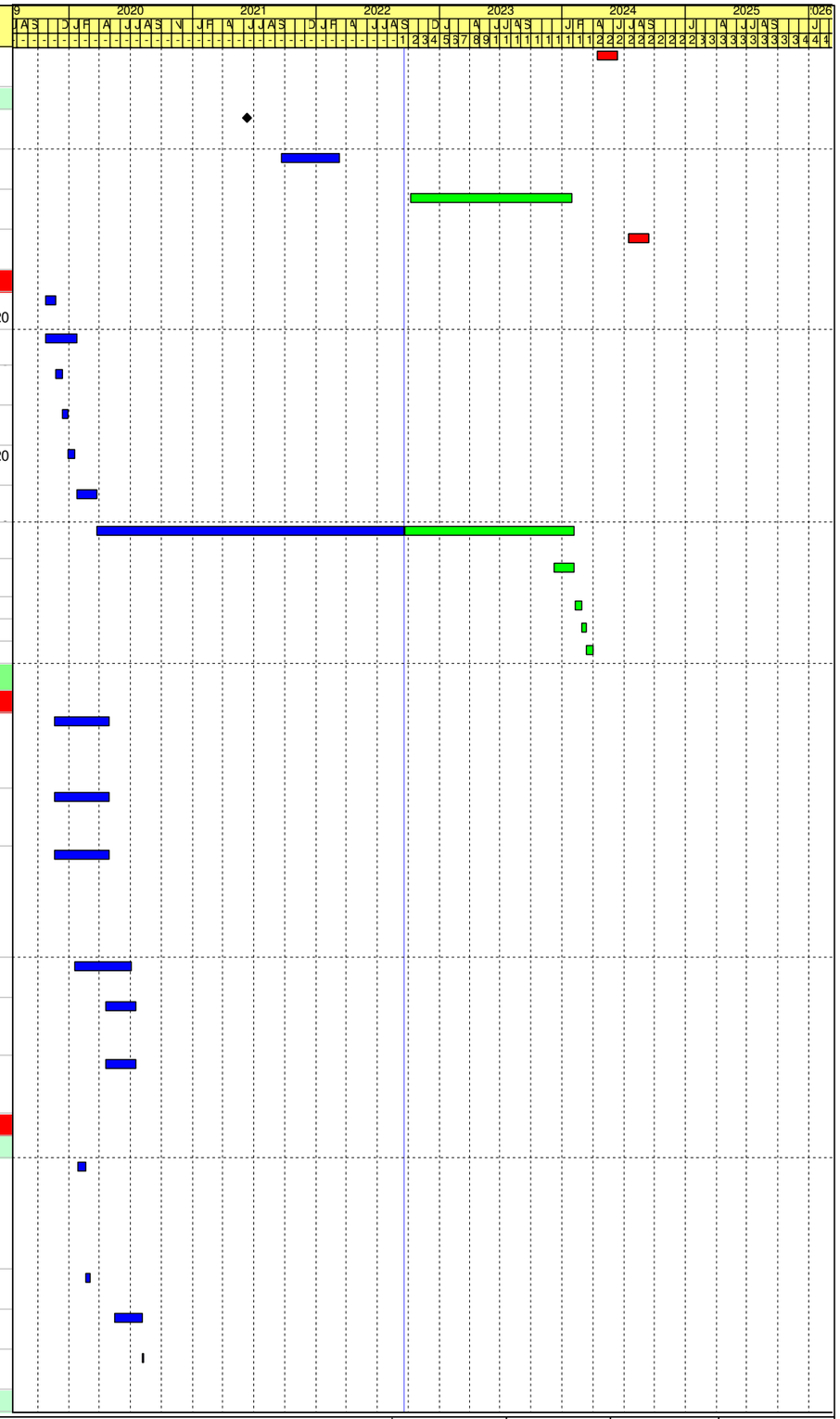
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
PL1520	Submission & Approval of Test Record	60	15-Apr-24	13-Jun-24	18-Mar-24	16-May-24	-28	PL1510, S5T1060	SC51120
CHP Building		1158	11-Jun-21 A	11-Sep-24	24-Nov-22	16-May-24	-118		
PL1530	Material Submission & Design Calculation Approved	0		11-Jun-21 A		24-Nov-22		S2D1610	PL1540, SC21120
PL1540	Issued approved submission & Calculation to Cinotech	168	21-Sep-21 A	11-Mar-22 A	24-Nov-22	24-Nov-22		PL1530	PL1550
PL1550	Monthly Review & Submission	480	07-Oct-22	29-Jan-24	24-Nov-22	17-Mar-24	48	S5CHPC1020, PL1540	PL1560
PL1560	Submission & Approval of Test Record	60	14-Jul-24	11-Sep-24	18-Mar-24	16-May-24	-118	PL1550, S5T1100	SC51120
BIM		1623	24-Oct-19 A	02-Apr-24	03-Nov-23	15-May-25	408		
PL1570	Prepare & Submit Construction Stage BIM Execution Plan	30	24-Oct-19 A	22-Nov-19 A	03-Nov-23	03-Nov-23		CD1010	PL1580, PL1630, PL1620
PL1610	Contractor Review & Study Design Stage BIM	92	24-Oct-19 A	23-Jan-20 A	03-Nov-23	03-Nov-23		CD1010	CD1040, PL1640,
PL1580	PM Reivew & Comment Construction Stage BIM Execution Plan	21	23-Nov-19 A	13-Dec-19 A	03-Nov-23	03-Nov-23		PL1570	PL1590
PL1590	Revise & Re-submit Construction Stage BIM Execution Plan	14	14-Dec-19 A	27-Dec-19 A	03-Nov-23	03-Nov-23		PL1580	PL1600
PL1600	PM Reivew & Approval of Construction Stage BIM Execution Plan	21	28-Dec-19 A	17-Jan-20 A	03-Nov-23	03-Nov-23		PL1590	PL1630, PL1620
PL1620	Contractor Develop 1st Construction Stage BIM	60	24-Jan-20 A	23-Mar-20 A	03-Nov-23	03-Nov-23		PL1600, PL1570,	CD1040, PL1640,
PL1630	Review & Update BIM Execution Plan & BIM Model	1415	24-Mar-20 A	06-Feb-24	03-Nov-23	20-Mar-25	408	PL1570, PL1620,	CD1040, PL1640
PL1640	Prepare & Submit the Fully Coordinated BIM	60	09-Dec-23	06-Feb-24	20-Jan-25	20-Mar-25	408	PL1620, PL1630,	PL1650
PL1650	PM Reivew & Comment Fully Coordinated BIM	21	07-Feb-24	27-Feb-24	21-Mar-25	10-Apr-25	408	PL1640	PL1660
PL1660	Revise & Re-submit Fully Coordinated BIM	14	28-Feb-24	12-Mar-24	11-Apr-25	24-Apr-25	408	PL1650	PL1670
PL1670	PM Reivew & Approval of Fully Coordinated BIM	21	13-Mar-24	02-Apr-24	25-Apr-25	15-May-25	408	PL1660	CD1040
Section 1 - Design for UV System No. 1 & Effluent Pumping Station No.1		284	21-Nov-19 A	08-Aug-20 A	19-Feb-22	15-May-25			
Major Plant & Materials Procurement		240	21-Nov-19 A	17-Jul-20 A	19-Feb-22	16-Apr-22			
S1P1000	Procurement & PO for UV Disinfection System (S10)	150	21-Nov-19 A	28-Apr-20 A	19-Feb-22	19-Feb-22		CD1000, CD1010, PL1010	SC11110, S4P1040, S1D1000, S1P1030
S1P1010	Procurement & PO for Lift-up Pumps (S11)	150	21-Nov-19 A	28-Apr-20 A	19-Feb-22	19-Feb-22		CD1010, PL1010	SC11110, S4P1070, S1D1000
S1P1020	Procurement & PO for Transfer Pumps (S13)	150	21-Nov-19 A	28-Apr-20 A	19-Feb-22	19-Feb-22		CD1010, PL1010	SC11110, S4P1080, S1P1040, S1P1050, S1D1000, S4P1090
S1P1030	Procurement & PO for EOT Cranes (2T & 5T) (S19)	150	19-Jan-20 A	03-Jul-20 A	16-Apr-22	16-Apr-22		S1P1000	SC11110, S4P1100
S1P1040	Procurement & PO for Stoplogs (S21)	90	18-Apr-20 A	17-Jul-20 A	16-Apr-22	16-Apr-22		S1P1020, PL1010	SC11110, S4P1110, S2P1160
S1P1050	Procurement & PO for Penstocks (S21)	90	18-Apr-20 A	17-Jul-20 A	16-Apr-22	16-Apr-22		S1P1020, PL1010	SC11110, S4P1120, S2P1170
Design & Submission		217	27-Jan-20 A	08-Aug-20 A	19-Feb-22	15-May-25			
General Arrangement Drawings		217	27-Jan-20 A	08-Aug-20 A	19-Feb-22	19-Feb-22			
S1D1000	Prepare & Submit General Arrangement Drawings	90	27-Jan-20 A	19-Feb-20 A	19-Feb-22	19-Feb-22		S1P1000, S1P1010, S1P1020, PL1010	S1D1010, S1D1040, S1D1100, S1D1180, S1D1260, S4P1010
S1D1010	Review & Comment on General Arrangement Drawings by PM	21	20-Feb-20 A	04-Mar-20 A	19-Feb-22	19-Feb-22		S1D1000	S1D1020
S1D1020	Revise & Re-submit General Arrangement Drawings	14	16-May-20 A	05-Aug-20 A	19-Feb-22	19-Feb-22		S1D1010	S1D1030
S1D1030	Review & Accept of General Arrangement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	19-Feb-22	19-Feb-22		S1D1020	SC11110, S3C1170
Civil & Dimensional / Tolerance Requirement Drawings		176	07-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			



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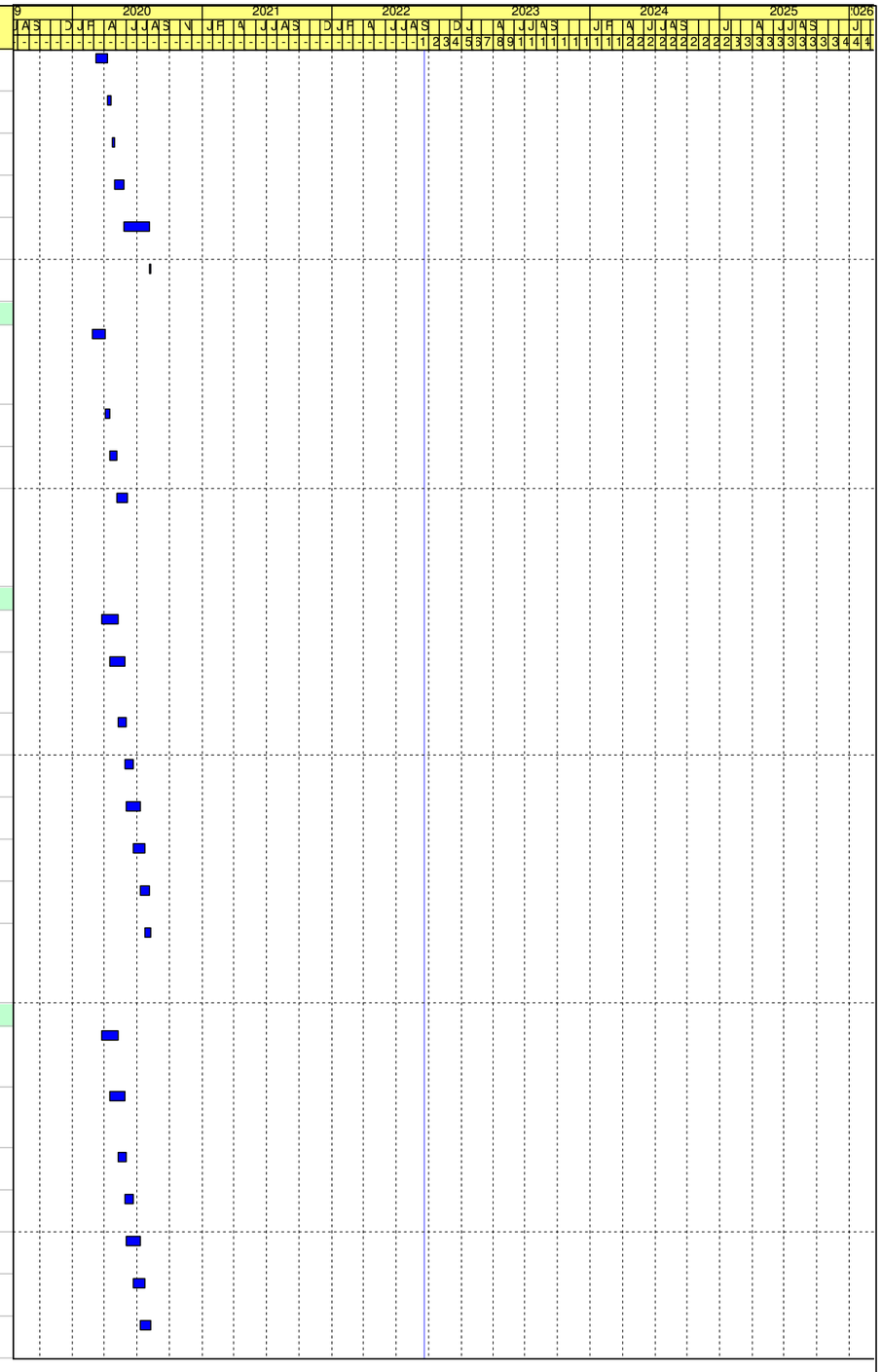
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S1D1040	Prepare & Submit Civil Requirement Drawings	60	07-Mar-20 A	08-Apr-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1000	S1D1050, KD1000
S1D1050	Review & Comment on Civil Requirement Drawings by PM	21	09-Apr-20 A	20-Apr-20 A	15-May-25	15-May-25		S1D1040	S1D1060
S1D1060	Revise & Re-submit Civil Requirement Drawings	14	21-Apr-20 A	29-Apr-20 A	15-May-25	15-May-25		S1D1050	S1D1070
S1D1070	Review & Comment of Civil Requirement Drawings by PM	21	30-Apr-20 A	25-May-20 A	15-May-25	15-May-25		S1D1060	SC11110, S1D1080
S1D1080	Revise & Re-submit Civil Requirement Drawings	28	26-May-20 A	05-Aug-20 A	15-May-25	15-May-25		S1D1070	S1D1090
S1D1090	Review & Accept of Civil Requirement Drawings by PM	5	06-Aug-20 A	08-Aug-20 A	15-May-25	15-May-25		S1D1080	SC11110
Electrical Schematic Drawings		116	25-Feb-20 A	03-Jun-20 A	16-Apr-22	16-Apr-22			
S1D1100	Prepare & Submit Elec. Schematic Drawings	60	25-Feb-20 A	03-Apr-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1000	S1D1110, KD1000, S1D1140, S1D1220
S1D1110	Review & Comment on Elec. Schematic Drawings by PM	21	04-Apr-20 A	16-Apr-20 A	16-Apr-22	16-Apr-22		S1D1100	S1D1120
S1D1120	Revise & Re-submit Elec. Schematic Drawings	14	17-Apr-20 A	04-May-20 A	16-Apr-22	16-Apr-22		S1D1110	S1D1130
S1D1130	Review & Accept of Elec. Schematic Drawings by PM	21	05-May-20 A	03-Jun-20 A	16-Apr-22	16-Apr-22		S1D1120	S5TXRP1000, S4C1000, S4C1010, S4P1020, SC11110
UV System No. 1		146	24-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			
S1D1140	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1100	S1D1150, S1D1180
S1D1180	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1140, S1D1000	S1D1190, S4C1020
S1D1150	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	15-May-25	15-May-25		S1D1140	S1D1160
S1D1190	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	16-Apr-22	16-Apr-22		S1D1180	S1D1200
S1D1160	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	15-May-25	15-May-25		S1D1150	S1D1170
S1D1200	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	16-Apr-22	16-Apr-22		S1D1190	S1D1210
S1D1170	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	06-Aug-20 A	15-May-25	15-May-25		S1D1160	SC11110
S1D1210	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	16-Apr-22	16-Apr-22		S1D1200	S4P1040, S5TXRP1000, S5TXRP1010, SC11110
Effluent Pumping Station No. 1		139	24-Mar-20 A	08-Aug-20 A	16-Apr-22	15-May-25			
S1D1220	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	60	24-Mar-20 A	08-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1100	S1D1230, S1D1260, S1D1300
S1D1260	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	60	15-Apr-20 A	29-May-20 A	16-Apr-22	16-Apr-22		CD1010, S1D1220, S1D1000	S1D1270, S4C1020
S1D1230	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	09-May-20 A	01-Jun-20 A	15-May-25	15-May-25		S1D1220	S1D1240
S1D1270	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	30-May-20 A	19-Jun-20 A	16-Apr-22	16-Apr-22		S1D1260	S1D1280
S1D1240	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	14	02-Jun-20 A	10-Jul-20 A	15-May-25	15-May-25		S1D1230	S1D1250
S1D1280	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	14	20-Jun-20 A	23-Jul-20 A	16-Apr-22	16-Apr-22		S1D1270	S1D1290
S1D1250	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	11-Jul-20 A	08-Aug-20 A	15-May-25	15-May-25		S1D1240	SC11110



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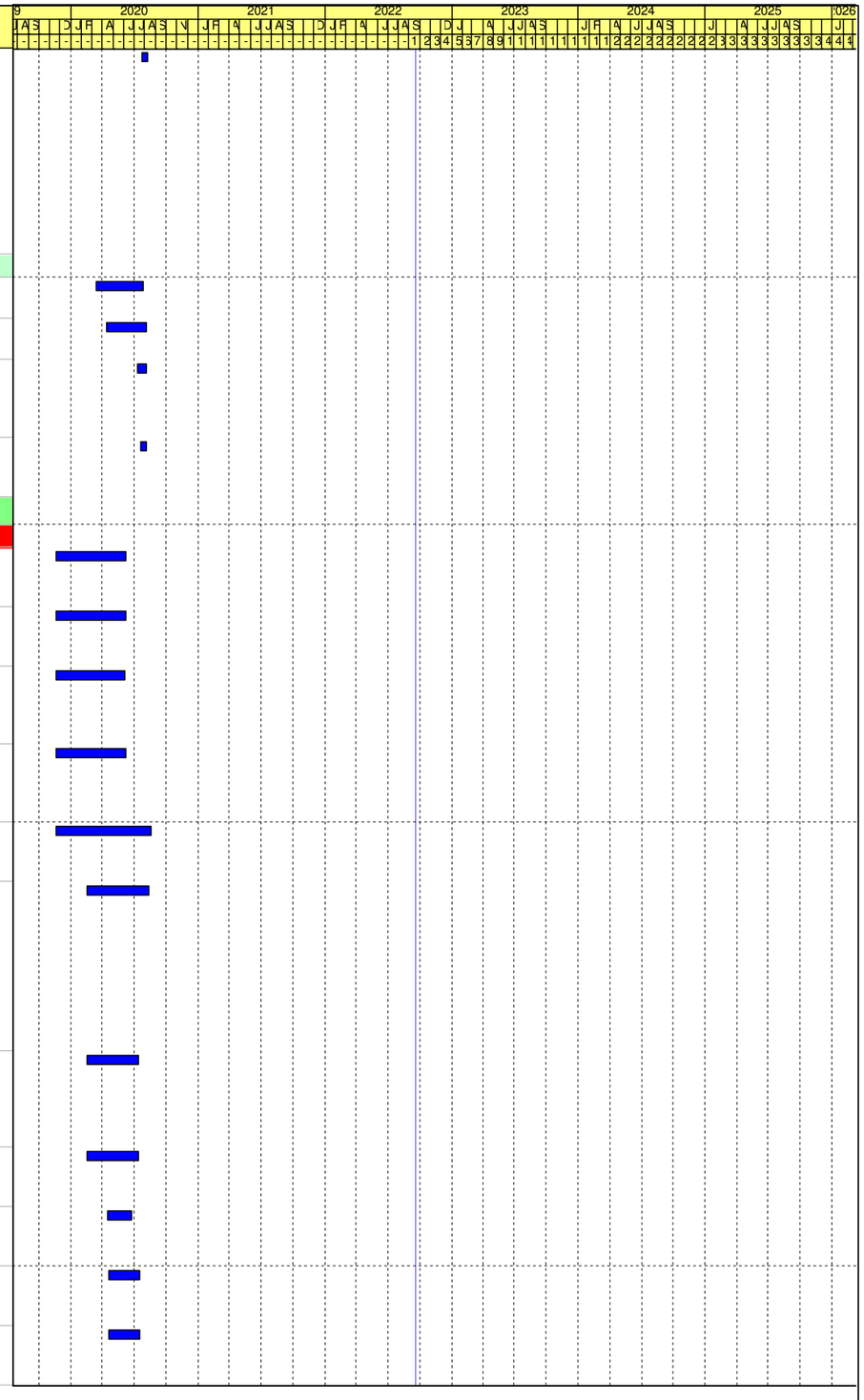
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S1D1290	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	14	24-Jul-20 A	08-Aug-20 A	16-Apr-22	16-Apr-22		S1D1280	S4P1110, S4P1120, S4P1070, S4P1080, S4P1090, S4P1100, S5TXRP1000, S5TXRP1010, S5TXRP1020, S4P1130, SC11110
Building Services		147	15-Mar-20 A	06-Aug-20 A	16-Apr-22	16-Apr-22			
S1D1300	Prepare & Submit BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	90	15-Mar-20 A	27-Jul-20 A	16-Apr-22	16-Apr-22		S1D1220	S1D1320, S1D1310
S1D1320	Prepare & Submit FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	60	14-Apr-20 A	05-Aug-20 A	16-Apr-22	16-Apr-22		S1D1300	S1D1330
S1D1330	Review & Accept of FS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8	09-Jul-20 A	06-Aug-20 A	16-Apr-22	16-Apr-22		S1D1320	SC11110, S4P1030, S4P1140, S4P1150
S1D1310	Review & Accept of BS Works Design & Dwgs UV System No.1 & Effluent Pumping Station No.1	8	21-Jul-20 A	05-Aug-20 A	16-Apr-22	16-Apr-22		S1D1300	SC11110, S5TXRC1030, S4C1110
Section 2 - Complete All Designs (exclude Sec. 1 & 3)		943	20-Nov-19 A	21-Sep-22	31-Oct-21	15-May-25	967		
Major Plant & Materials Procurement		571	20-Nov-19 A	23-Apr-21 A	26-May-22	15-May-25			
S2P1010	Procurement & PO for Sludge Thickening System (S3)	180	20-Nov-19 A	08-Jun-20 A	15-Aug-22	15-Aug-22		PL1010, CD1010	SC21110, S2D1300, S2P1030
S2P1030	Procurement & PO for Sludge Dewatering System (S6)	180	20-Nov-19 A	08-Jun-20 A	15-Aug-22	15-Aug-22		PL1010, CD1010, S2P1010	SC21110, S2D1460
S2P1040	Procurement & PO for THP System (S4)	180	20-Nov-19 A	05-Jun-20 A	06-Jun-22	06-Jun-22		CD1010, PL1010	SC21110, S5THPP1000, S2D1340, S2P1020
S2P1070	Procurement & PO for CHP System (S8)	180	20-Nov-19 A	08-Jun-20 A	26-May-22	26-May-22		PL1010	SC21110, S5CHPP1010, S2D1540, S2P1110
S2P1050	Procurement & PO for Biogas Holding Tanks(S7)	180	20-Nov-19 A	20-Aug-20 A	01-Jun-22	01-Jun-22		PL1010	SC21110, S5BIOP1010, S2D1500
S2P1020	Procurement & PO for Sludge Digestion System (S5)	150	18-Feb-20 A	12-Aug-20 A	19-Jun-22	19-Jun-22		CD1010, S2P1040	SC21110, S5DIGP1000, S2D1420, S5DIGP1010, S2P1180, S2P1210, S5P1040, S2P1000, S5P1020
S2P1110	Procurement & PO for Transfomers (S17)	150	18-Feb-20 A	13-Jul-20 A	26-May-22	26-May-22		S2P1070	SC21110, S5WS2P1000, S2P1120, S2P1140, S5TXRP1000
S2P1120	Procurement & PO for 11 kV Switchboard (S17)	150	18-Feb-20 A	13-Jul-20 A	12-Jun-22	12-Jun-22		S2P1110	SC21110, S5WS2P1060, S2P1130
S2P1150	Procurement & PO for DO System (S21)	150	15-Apr-20 A	24-Jun-20 A	03-Nov-22	03-Nov-22		S2P1000	SC21110, S5DOUP1000, S2D1930
S2P1160	Procurement & PO for Stoplog (S21)	90	18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23		PL1010, S1P1040	SC21110, S5SASP1010, S2P1170
S2P1170	Procurement & PO for Penstock (S21)	90	18-Apr-20 A	17-Jul-20 A	12-Mar-23	12-Mar-23		PL1010, S2P1160, S1P1050	SC21110, S5SASP1020



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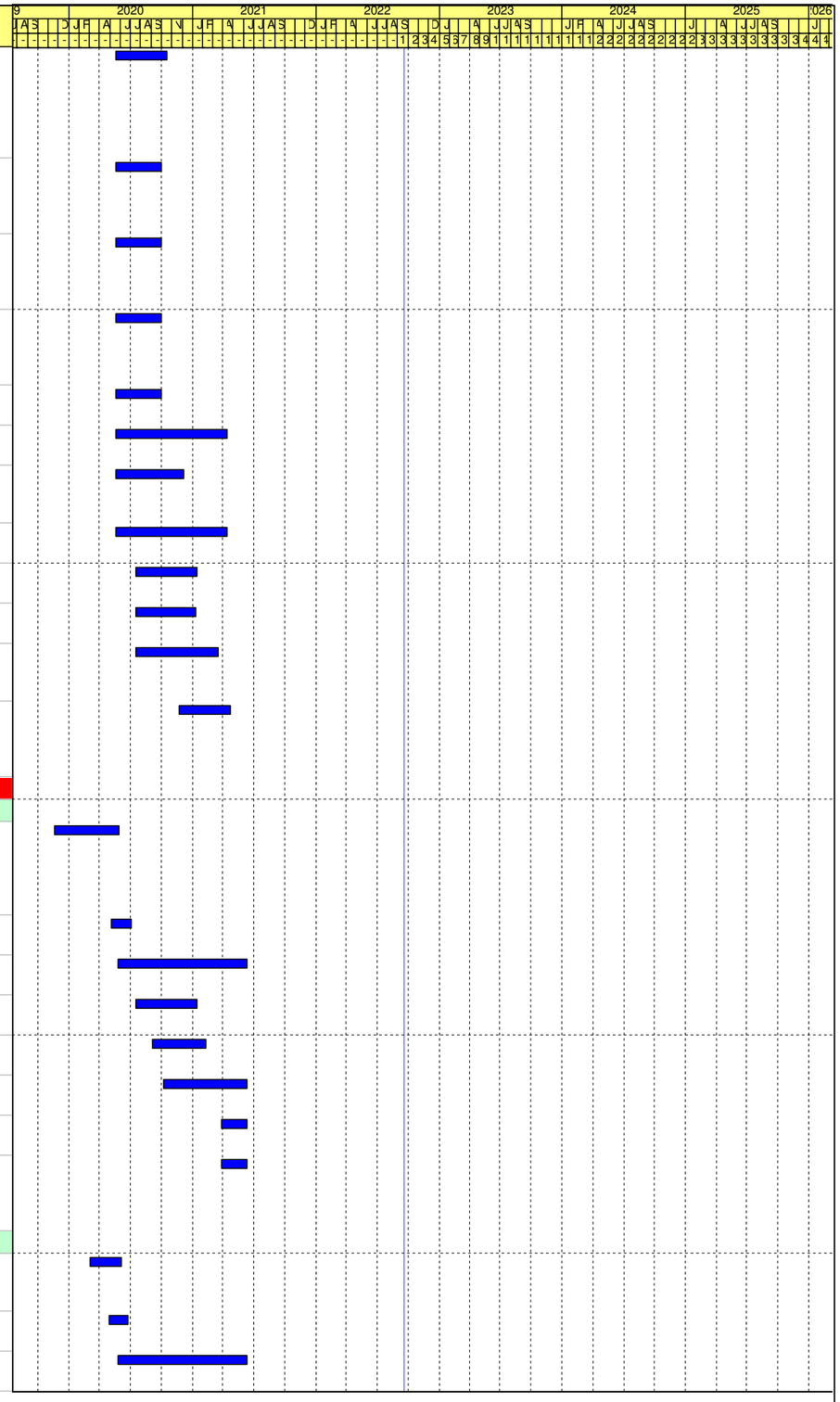
S2P1000	Procurement & PO for Sludge Screening System (S2)	150	18-May-20 A	16-Oct-20 A	19-Jun-22	19-Jun-22		S2P1020	SC21110, S2D1260, S5P1000, S2P1060, S2P1150, S5P1030
S2P1090	Procurement & PO for Plant Service Water System (S12)	150	18-May-20 A	30-Sep-20 A	15-Aug-22	15-Aug-22			SC21110, S5PSWP1000, S2D1660, S2P1190
S2P1100	Procurement & PO for SAS Pumping System (S14)	150	18-May-20 A	30-Sep-20 A	05-Jul-22	05-Jul-22			SC21110, S5SASP1000, S2D1700, S2P1220
S2P1180	Procurement & PO for Sewage Pump (S21)	120	18-May-20 A	30-Sep-20 A	13-Nov-22	13-Nov-22		S2P1020	SC21110, S5SPSP1000, S2D1940, S2P1200
S2P1190	Procurement & PO for Process Water Pump (S21)	120	18-May-20 A	30-Sep-20 A	15-May-25	15-May-25		S2P1090	SC21110, S2D1950
S2P1200	Procurement & PO for External Sludge Transfer Pump (S21)	348	18-May-20 A	14-Apr-21 A	29-Dec-22	29-Dec-22		S2P1180	SC21110, S2D1960
S2P1210	Procurement & PO for THP Cooling Pump (S21)	150	18-May-20 A	04-Dec-20 A	29-Dec-22	29-Dec-22		S2P1020	SC21110, S5TCWP1000, S2D1970
S2P1220	Procurement & PO for Temporary Primary Sludge Pump (S21)	348	18-May-20 A	14-Apr-21 A	05-Jul-22	05-Jul-22		PL1010, S2P1100	SC21110, S5ECHP1000
S2P1080	Procurement & PO for Waste Gas Burning System (S9)	150	17-Jul-20 A	15-Jan-21 A	09-Sep-22	09-Sep-22			SC21110, S5WGBP1000
S2P1140	Procurement & PO for Control & Monitoring System (S18)	183	17-Jul-20 A	11-Jan-21 A	27-Jan-23	27-Jan-23		PL1010, S2P1110	SC21110, S5TXRP1020
S2P1060	Procurement & PO for H2S Removal System (S7)	234	17-Jul-20 A	17-Mar-21 A	15-Aug-22	15-Aug-22		S2P1000	SC21110, S5H2SP1000, S2D1500
S2P1130	Procurement & PO for 380V Switchboard (S17)	174	21-Nov-20 A	23-Apr-21 A	19-Jun-22	19-Jun-22		S2P1120, S2D1220	SC21110, S5WS2P1090, S5P1050, S5TXRP1010
Design & Submission		860	20-Nov-19 A	11-Jun-21 A	20-May-22	15-May-25			
General Arrangement Drawings		715	20-Nov-19 A	11-Jun-21 A	01-Jun-22	15-May-25			
S2D1000	Prepare & Submit General Arrangement Drawings (from formation level up to +8mPD)	180	20-Nov-19 A	29-May-20 A	01-Jun-22	01-Jun-22		PL1010	S2D1010, S2D1080, S2D1160, S2D1040, S2D1340
S2D1010	Review & Comment on General Arrangement Drawings by PM (from formation level up to +8mPD)	21	07-May-20 A	02-Jul-20 A	15-May-25	15-May-25		S2D1000	S2D1020
S2D1020	Revise & Re-submit General Arrangement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1010	S2D1030
S2D1040	Prepare & Submit General Arrangement Drawings (remaining)	177	17-Jul-20 A	15-Jan-21 A	01-Jun-22	01-Jun-22		PL1010, S2D1000	S2D1050, S2D1120
S2D1050	Review & Comment on General Arrangement Drawings by PM (remaining)	21	05-Sep-20 A	08-Feb-21 A	01-Jun-22	01-Jun-22		S2D1040	S2D1060
S2D1060	Revise & Re-submit General Arrangement Drawings (remaining)	248	06-Oct-20 A	10-Jun-21 A	01-Jun-22	01-Jun-22		S2D1050	S2D1070
S2D1030	Review & Accept of General Arrangement Drawings by PM (from formation level up to +8mPD)	77	26-Mar-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1020	SC21110
S2D1070	Review & Accept of General Arrangement Drawings by PM (remaining)	77	26-Mar-21 A	11-Jun-21 A	01-Jun-22	01-Jun-22		S2D1060	SC21110, S5S1060, S5P1010, S5S1050
Civil & Dimensional / Tolerance Requirement Drawings		522	04-Mar-20 A	11-Jun-21 A	15-Aug-22	15-May-25			
S2D1080	Prepare & Submit Civil Requirement Drawings (from formation level up to +8mPD) -KD2A	90	04-Mar-20 A	04-Jun-20 A	15-Aug-22	15-Aug-22		S2D1000	S2D1090, S2D1660, KD1010
S2D1090	Review & Comment on Civil Requirement Drawings by PM (from formation level up to +8mPD)	21	30-Apr-20 A	23-Jun-20 A	02-Sep-22	02-Sep-22		S2D1080	S2D1100
S2D1100	Revise & Re-submit Civil Requirement Drawings (from formation level up to +8mPD)	381	26-May-20 A	10-Jun-21 A	02-Sep-22	02-Sep-22		S2D1090	S2D1110



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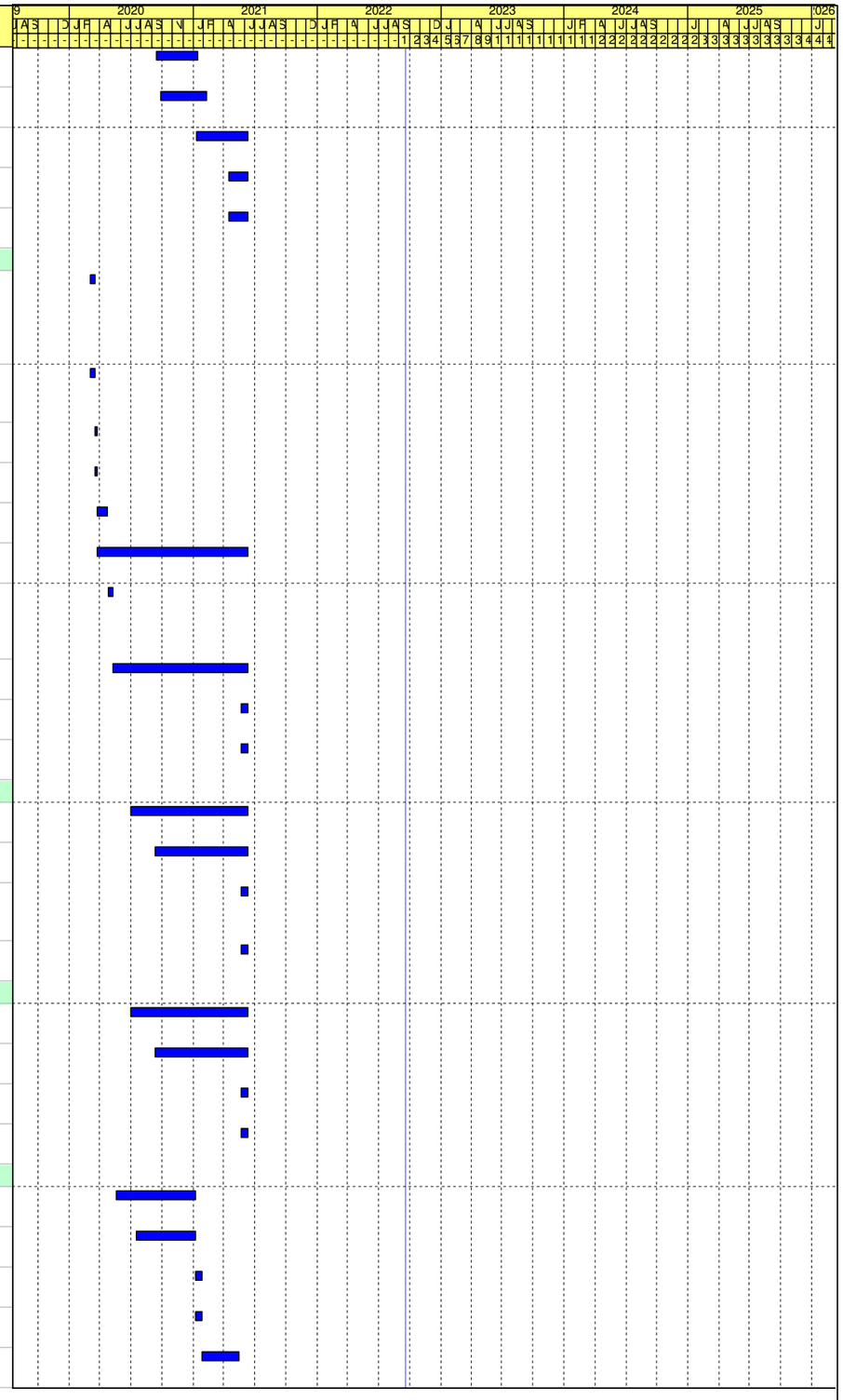
S2D1120	Prepare & Submit Civil Requirement Drawings (remaining) -KD2B	120	15-Sep-20 A	15-Jan-21 A	15-May-25	15-May-25		S2D1040	S2D1130, KD1020
S2D1130	Review & Comment on Civil Requirement Drawings by PM (remaining)	21	28-Sep-20 A	08-Feb-21 A	15-May-25	15-May-25		S2D1120	S2D1140
S2D1140	Revise & Re-submit Civil Requirement Drawings (remaining)	150	12-Jan-21 A	10-Jun-21 A	15-May-25	15-May-25		S2D1130	S2D1150
S2D1110	Review & Accept of Civil Requirement Drawings by PM (from formation level up to +8mPD)	55	17-Apr-21 A	11-Jun-21 A	02-Sep-22	02-Sep-22		S2D1100	SC21110, AD1120
S2D1150	Review & Accept of Civil Requirement Drawings by PM (remaining)	55	17-Apr-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1140	SC21110
Electrical Schematic Drawings		754	05-Mar-20 A	11-Jun-21 A	19-Jun-22	15-May-25			
S2D1160	Prepare & Elec. Schematic Drawings (from formation level up to +8mPD) -KD2A	90	05-Mar-20 A	16-Mar-20 A	19-Jun-22	19-Jun-22		S2D1000	S2D1170, S2D1260, S2D1660, KD1010, S2D1220
S2D1220	Prepare & Submit Elec. Schematic Drawings (remaining) -KD2B	120	05-Mar-20 A	16-Mar-20 A	19-Jun-22	19-Jun-22		S2D1160, S2D1180, S2D1190	S2D1230, KD1020, S2P1130
S2D1170	Review & Comment on Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	17-Mar-20 A	24-Mar-20 A	19-Jun-22	19-Jun-22		S2D1160	S2D1180
S2D1230	Review & Comment on Elec. Schematic Drawings by PM (remaining)	21	17-Mar-20 A	24-Mar-20 A	19-Jun-22	19-Jun-22		S2D1220	S2D1240
S2D1180	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	28	25-Mar-20 A	23-Apr-20 A	19-Jun-22	19-Jun-22		S2D1170	S2D1190, S2D1220
S2D1240	Revise & Re-submit Elec. Schematic Drawings (remaining)	443	25-Mar-20 A	10-Jun-21 A	19-Jun-22	19-Jun-22		S2D1230	S2D1250
S2D1190	Review & Comment of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	24-Apr-20 A	08-May-20 A	19-Jun-22	19-Jun-22		S2D1180	S2D1250, S5WS2P1090, S2D1220, S2D1200
S2D1200	Revise & Re-submit Elec. Schematic Drawings (from formation level up to +8mPD)	398	09-May-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1190	S2D1210
S2D1210	Review & Accept of Elec. Schematic Drawings by PM (from formation level up to +8mPD)	21	21-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1200	SC21110
S2D1250	Review & Accept of Elec. Schematic Drawings by PM (remaining)	21	24-May-21 A	11-Jun-21 A	19-Jun-22	19-Jun-22		S2D1240, S2D1190	SC21110, S5WS2P1090
Sludge Screening (SSc)		357	02-Jul-20 A	11-Jun-21 A	19-Jun-22	17-Nov-22			
S2D1260	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	19-Jun-22	19-Jun-22		S2D1160, S2P1000	S2D1270
S2D1280	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	17-Nov-22	17-Nov-22			S2D1290
S2D1270	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	19-Jun-22	19-Jun-22		S2D1260	S5WS2P1090, S5P1050, SC21110
S2D1290	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	17-Nov-22	17-Nov-22		S2D1280	SC21110, PL1490
Sludge Thickening (STh)		357	02-Jul-20 A	11-Jun-21 A	15-Aug-22	17-Nov-22			
S2D1300	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22		S2P1010	S2D1310
S2D1320	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	274	10-Sep-20 A	10-Jun-21 A	17-Nov-22	17-Nov-22			S2D1330
S2D1310	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1300	SC21110, S5P1050
S2D1330	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	17-Nov-22	17-Nov-22		S2D1320	SC21110, PL1490
Thermal Hydrolysis Process (THP)		416	18-May-20 A	11-Jun-21 A	06-Jun-22	02-Nov-22			
S2D1340	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	241	18-May-20 A	07-Jan-21 A	06-Jun-22	06-Jun-22		S2P1040, S2D1000	S2D1350, S2D1970
S2D1380	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	17-Jul-20 A	07-Jan-21 A	02-Nov-22	02-Nov-22			S2D1390
S2D1350	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	08-Jan-21 A	27-Jan-21 A	06-Jun-22	06-Jun-22		S2D1340	S2D1360
S2D1390	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	08-Jan-21 A	27-Jan-21 A	02-Nov-22	02-Nov-22		S2D1380	S2D1400
S2D1360	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	117	28-Jan-21 A	17-May-21 A	06-Jun-22	06-Jun-22		S2D1350	S2D1370



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
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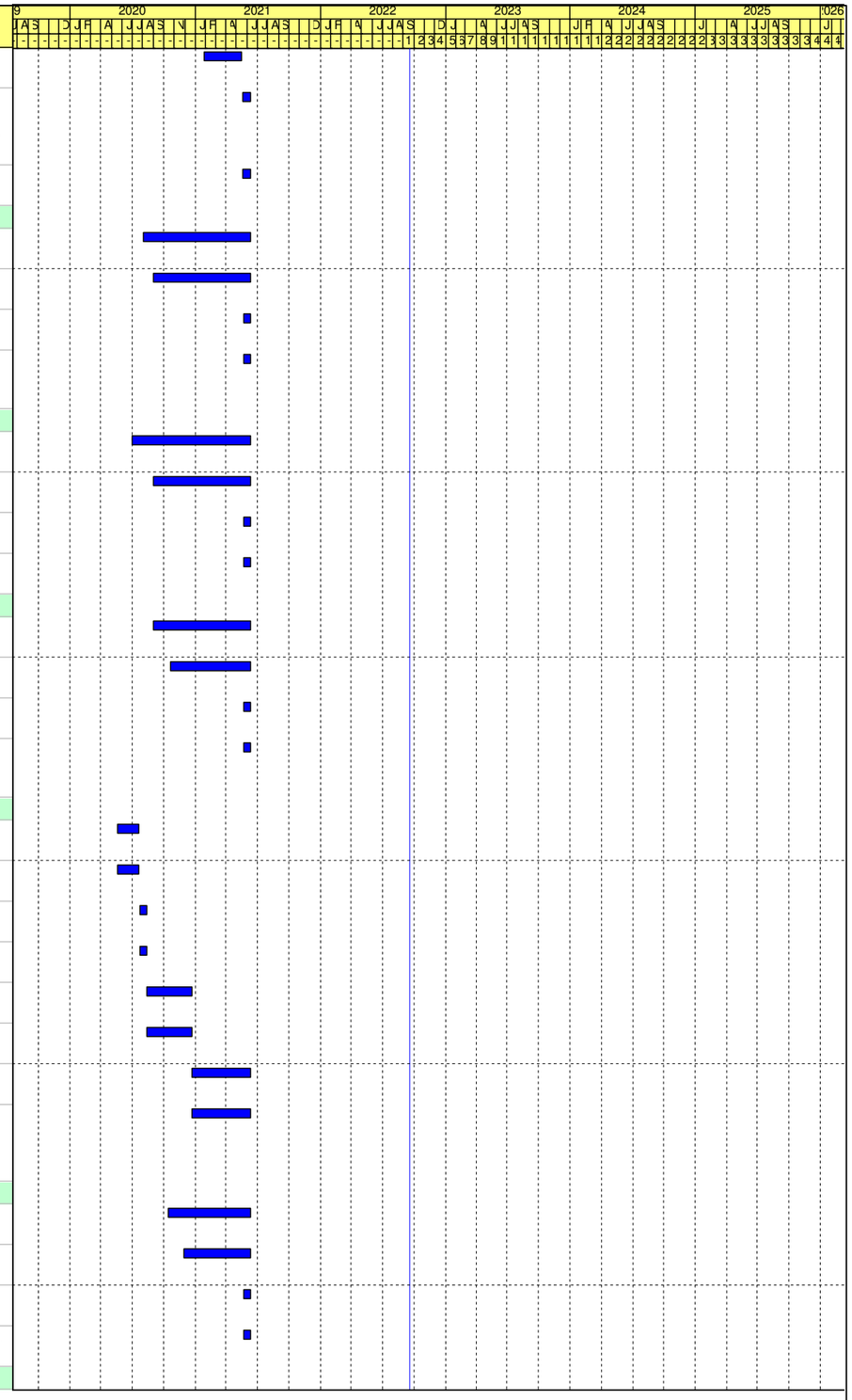
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2D1400	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	117	28-Jan-21 A	17-May-21 A	02-Nov-22	02-Nov-22		S2D1390	S2D1410
S2D1370	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	24	18-May-21 A	11-Jun-21 A	06-Jun-22	06-Jun-22		S2D1360	SC21110, S5THPP1000, S5TCWP1000, S5P1050
S2D1410	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	24	18-May-21 A	11-Jun-21 A	02-Nov-22	02-Nov-22		S2D1400	S5THPP1000, SC21110
Sludge Digestion (SDi)		325	01-Aug-20 A	11-Jun-21 A	22-Jul-22	15-Aug-22			
S2D1420	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	314	01-Aug-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22		S2P1020	S2D1430
S2D1440	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	22-Jul-22	22-Jul-22			S2D1450
S2D1430	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1420	SC21110, S5P1050
S2D1450	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	22-Jul-22	22-Jul-22		S2D1440	S5DIGP1000, SC21110, PL1490
Sludge Dewatering (SDe)		357	02-Jul-20 A	11-Jun-21 A	15-Aug-22	17-Nov-22			
S2D1460	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	344	02-Jul-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22		S2P1030	S2D1470
S2D1480	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	284	31-Aug-20 A	10-Jun-21 A	17-Nov-22	17-Nov-22			S2D1490
S2D1470	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1460	SC21110, S5P1050
S2D1490	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	17-Nov-22	17-Nov-22		S2D1480	SC21110, PL1490
Biogas Storage & Pre-Treatment (BSPT)		295	31-Aug-20 A	11-Jun-21 A	01-Jun-22	15-Aug-22			
S2D1500	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	284	31-Aug-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22		S2P1060, S2P1050	S2D1510
S2D1520	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	232	22-Oct-20 A	10-Jun-21 A	01-Jun-22	01-Jun-22			S2D1530
S2D1510	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1500	SC21110, S5P1050
S2D1530	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	01-Jun-22	01-Jun-22		S2D1520	S5BIOP1010, S5H2SP1000, SC21110
Combined Heat & Power Generation (CHP)		512	18-May-20 A	11-Jun-21 A	20-May-22	15-Aug-22			
S2D1540	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	233	18-May-20 A	21-Jul-20 A	15-Aug-22	15-Aug-22		S2P1070	S2D1550
S2D1580	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	180	18-May-20 A	21-Jul-20 A	20-May-22	20-May-22			S2D1590
S2D1550	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	22-Jul-20 A	11-Aug-20 A	15-Aug-22	15-Aug-22		S2D1540	S2D1560, S2D1870
S2D1590	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	22-Jul-20 A	11-Aug-20 A	20-May-22	20-May-22		S2D1580	S2D1600
S2D1560	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	28	12-Aug-20 A	21-Dec-20 A	15-Aug-22	15-Aug-22		S2D1550	S2D1570
S2D1600	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	28	12-Aug-20 A	21-Dec-20 A	20-May-22	20-May-22		S2D1590	S2D1610
S2D1570	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	171	22-Dec-20 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1560	SC21110, S5P1050
S2D1610	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	171	22-Dec-20 A	11-Jun-21 A	20-May-22	20-May-22		S2D1600	S5CHPP1010, SC21110, S5S1020, PL1530
Waste Gas Burning System (WGB)		264	15-Oct-20 A	11-Jun-21 A	15-Aug-22	09-Sep-22			
S2D1620	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	239	15-Oct-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22			S2D1630
S2D1640	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	194	29-Nov-20 A	10-Jun-21 A	09-Sep-22	09-Sep-22			S2D1650
S2D1630	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1620	SC21110, S5P1050
S2D1650	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	09-Sep-22	09-Sep-22		S2D1640	S5WGBP1000, SC21110
Plant Service Water System (PSW)		325	16-Aug-20 A	11-Jun-21 A	15-Aug-22	15-Sep-22			



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31-May-22	Rev.22	LT	KM
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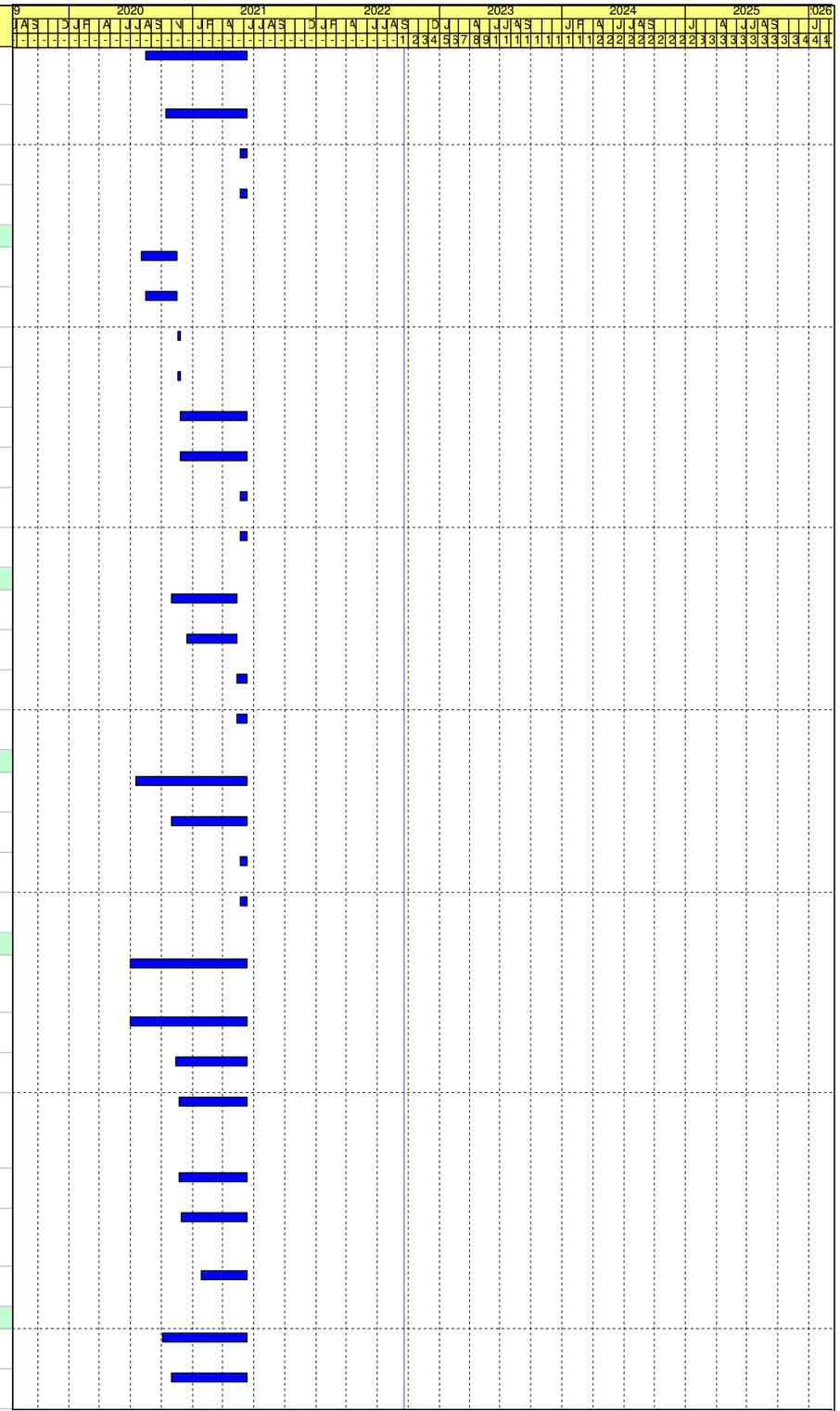
S2D1660	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	299	16-Aug-20 A	10-Jun-21 A	15-Aug-22	15-Aug-22		S2D1080, S2D1160, S2P1090	S2D1670
S2D1680	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	239	15-Oct-20 A	10-Jun-21 A	15-Sep-22	15-Sep-22			S2D1690
S2D1670	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-Aug-22	15-Aug-22		S2D1660	SC21110, S5P1050
S2D1690	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	15-Sep-22	15-Sep-22		S2D1680	S5PSWP1000, SC21110
Surplus Activated Sludge Pumping Station (SAS)		440	01-Aug-20 A	11-Jun-21 A	18-Feb-23	15-May-25			
S2D1700	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	202	01-Aug-20 A	17-Nov-20 A	15-May-25	15-May-25		S2P1100	S2D1710
S2D1740	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	183	16-Aug-20 A	17-Nov-20 A	18-Feb-23	18-Feb-23			S2D1750
S2D1710	Review & Comment on Wiring Dwgs, Cable Schedule & Design Cal.	21	18-Nov-20 A	24-Nov-20 A	15-May-25	15-May-25		S2D1700	S2D1720
S2D1750	Review & Comment on the Schedule, Design Cal. & Fixing Details of Equipment	21	18-Nov-20 A	24-Nov-20 A	18-Feb-23	18-Feb-23		S2D1740	S2D1760
S2D1720	Revise & Re-submit Wiring Dwgs, Cable Schedule & Design Cal.	198	25-Nov-20 A	10-Jun-21 A	15-May-25	15-May-25		S2D1710	S2D1730
S2D1760	Revise & Re-submit the Schedule, Design Cal. & Fixing Details of Equipment	198	25-Nov-20 A	10-Jun-21 A	18-Feb-23	18-Feb-23		S2D1750	S2D1770
S2D1730	Review & Accept of Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1720	SC21110
S2D1770	Review & Accept of the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	18-Feb-23	18-Feb-23		S2D1760	S5SASP1000, SC21110
Control and Monitoring System		211	30-Oct-20 A	11-Jun-21 A	15-May-25	15-May-25			
S2D1780	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	193	30-Oct-20 A	11-May-21 A	15-May-25	15-May-25			S2D1790
S2D1800	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	148	14-Dec-20 A	11-May-21 A	15-May-25	15-May-25			S2D1810
S2D1790	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	30	12-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1780	SC21110
S2D1810	Review & Accept on the Schedule, Design Cal. & Fixing Details of Equipment	30	12-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1800	SC21110
Lifting Appliances		358	17-Jul-20 A	11-Jun-21 A	15-May-25	15-May-25			
S2D1820	Prepare & Submit Wiring Dwgs, Cable Schedule & Design Cal.	329	17-Jul-20 A	10-Jun-21 A	15-May-25	15-May-25			S2D1830
S2D1840	Prepare & Submit the Schedule, Design Cal. & Fixing Details of Equipment	224	30-Oct-20 A	10-Jun-21 A	15-May-25	15-May-25			S2D1850
S2D1830	Review & Accept on Wiring Dwgs, Cable Schedule & Design Cal.	21	24-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1820	SC21110
S2D1850	Review & Acceptt on the Schedule, Design Cal. & Fixing Details of Equipment	21	24-May-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1840	SC21110
Building Services		357	02-Jul-20 A	11-Jun-21 A	22-May-22	15-May-25			
S2D1890	Submit & Accept BS Works Design & Dwgs for Workshop No. 2	344	02-Jul-20 A	11-Jun-21 A	02-Sep-22	02-Sep-22			SC21110, S5S1030, S5S1120
S2D1910	Submit & Accept BS Works Design & Dwgs for FS Installation	344	02-Jul-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23			SC21110, S5S1120
S2D1870	Submit & Accept BS Works Design & Dwgs for CHP Building	209	14-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23		S2D1550	SC21110, S5S1120
S2D1860	Submit & Accept BS Works Design & Dwgs for Sludge Dewatering Building	202	21-Nov-20 A	11-Jun-21 A	22-May-22	22-May-22			SC21110, S5S1260, S5S1010, S5S1120
S2D1880	Submit & Accept BS Works Design & Dwgs for Sludge Digester & Distribution Chamber	202	21-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23			SC21110, S5S1120
S2D1900	Submit & Accept BS Works Design & Dwgs for Other Facilities	194	29-Nov-20 A	11-Jun-21 A	11-Feb-23	11-Feb-23			S2D1920, SC21110, S5S1120
S2D1920	Submit & Accept BS Works Design & Dwgs for Outdoor Lighting Installation	134	28-Jan-21 A	11-Jun-21 A	15-May-25	15-May-25		S2D1900	SC21110
Miscellaneous		264	05-Oct-20 A	11-Jun-21 A	05-Jul-22	15-May-25			
S2D1950	Submit & Accept Design & Dwgs for Process Water Pumping System	249	05-Oct-20 A	11-Jun-21 A	15-May-25	15-May-25		S2P1190	SC21110
S2D1940	Submit & Accept Design & Dwgs for Sewage Pumping Station	224	30-Oct-20 A	11-Jun-21 A	13-Nov-22	13-Nov-22		S2P1180	S5SPSP1000, SC21110



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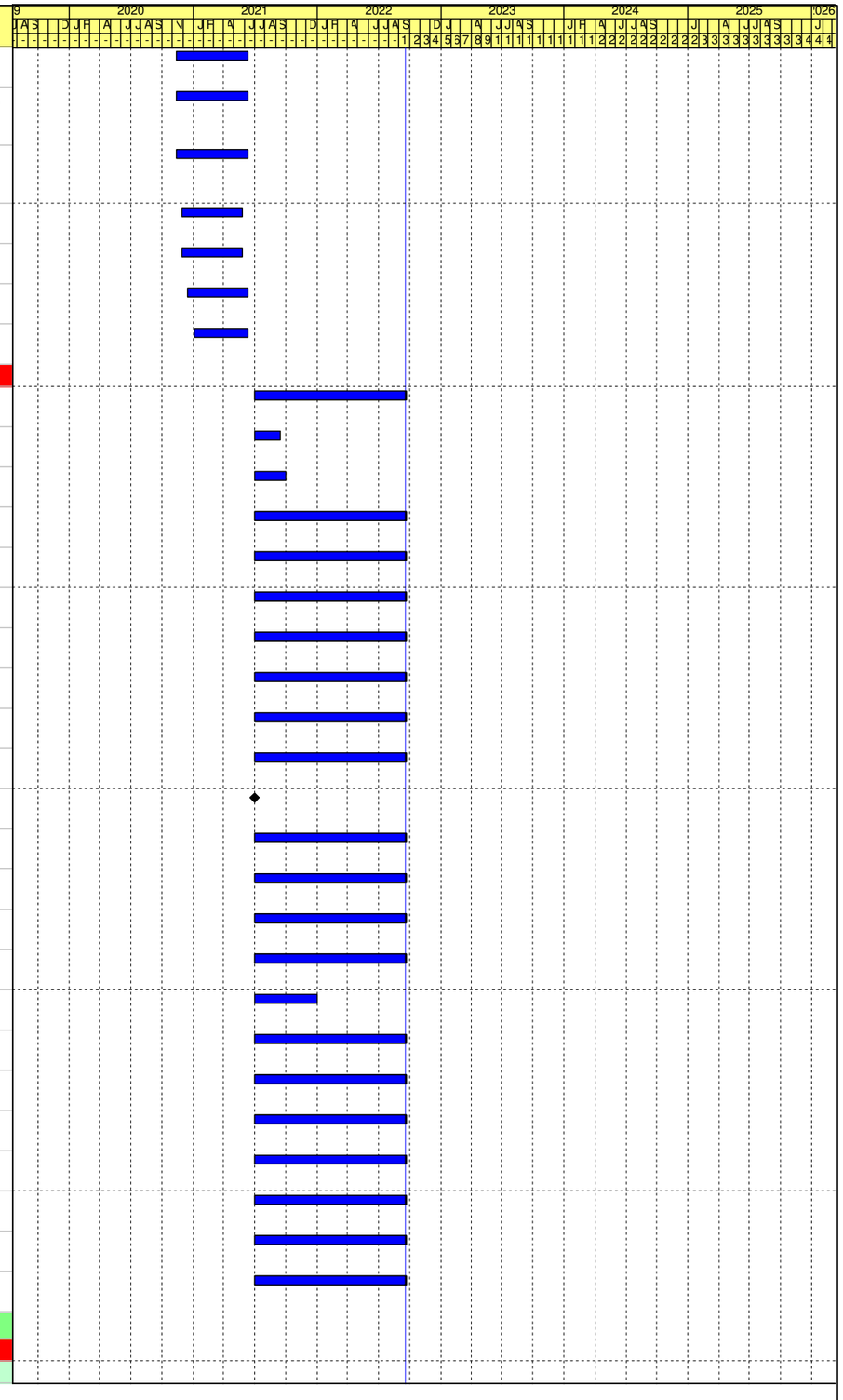
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S2D1960	Submit & Accept Design & Dwgs for External Sludge Transfer Pumping System	209	14-Nov-20 A	11-Jun-21 A	29-Dec-22	29-Dec-22		S2P1200	S2D1970, SC21110
S2D1970	Submit & Accept Design & Dwgs for THP Cooling Water Pumping Station	209	14-Nov-20 A	10-Jun-21 A	29-Dec-22	29-Dec-22		S2D1340, S2D1960, S2P1210	S5TCWP1000, SC21110
S2D1980	Submit & Accept Design & Dwgs for Ferric Chloride Dosing System	209	14-Nov-20 A	11-Jun-21 A	30-Sep-22	30-Sep-22			S5FCDP1000, S5FCDP1010, SC21110
S2D2000	Submit & Accept Design & Dwgs for Gas Detection System	194	29-Nov-20 A	24-May-21 A	13-Nov-22	13-Nov-22			SC21110, S5CHPP1040
S2D2010	Submit & Accept Design & Dwgs for CCTV System	194	29-Nov-20 A	26-May-21 A	15-May-25	15-May-25			SC21110
S2D1930	Submit & Accept Design & Dwgs for DO System	179	14-Dec-20 A	11-Jun-21 A	03-Nov-22	03-Nov-22		S2P1150, PL1020	S5DOUP1000, SC21110
S2D1990	Submit & Accept Design & Dwgs for Temporary Primary Sludge Pumping Facility	158	04-Jan-21 A	11-Jun-21 A	05-Jul-22	05-Jul-22		PL1020	S5ECHP1000, SC21110
Outstanding Works		334	02-Jul-21 A	21-Sep-22	31-Oct-21	15-May-25	967		
S2D2030	Provide ICE Certificate for all design, calculations, drawings, plans & relevant documents	334	02-Jul-21 A	21-Sep-22*	31-May-22	31-May-22	-113		
S2D2040	Submit finalized design calculations, drawings & material submissions for BS systems (Workshop No.2)	76	02-Jul-21 A	15-Sep-21 A	15-May-25	15-May-25			
S2D2060	Submit finalized sizing calculations for the actuators and stems for penstocks	91	02-Jul-21 A	30-Sep-21 A	15-May-25	15-May-25			
S2D2160	Submit finalized design calculations, drawings & material submissions for ELV systems	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2170	Submit finalized design submissions of SCADA, PMS, CMMS, IDMS, UPS for FCS	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2200	Submit finalized design & philosophy of the process instrument	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2210	Submit finalized Process Design Submission	152	02-Jul-21 A	21-Sep-22*	30-Nov-21	30-Nov-21	-295		
S2D2220	Submit finalized acoustic and noise calculations for all equipment	303	02-Jul-21 A	21-Sep-22*	30-Apr-22	30-Apr-22	-144		
S2D2230	Submit finalized design of THP feeding system	122	02-Jul-21 A	21-Sep-22*	31-Oct-21	31-Oct-21	-325		
S2D2240	Submit finalized design of the centrifuge discharge system	152	02-Jul-21 A	21-Sep-22*	30-Nov-21	30-Nov-21	-295		
S2D2020	Certifiate of Completion - Section 2 of the works (Ref: RCYK:ccm:60427128/92-2021004626w)	0	02-Jul-21 A		15-May-25				
S2D2050	Submit finalized design calculations, drawings & material submissions for BS systems (except Workshop No.2)	303	02-Jul-21 A	21-Sep-22*	30-Apr-22	30-Apr-22	-144		
S2D2070	Submit finalized cable schedules & sizing calculation (LV System)	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2080	Submit finalized pumps and associated motor and VSD calculations	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2090	Submit finalized electrical loads to verify the rating of the switchgears, transformers and protective devices	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2100	Submit finalized material submissions of the cables, cable tray, ladder and accessories	294	02-Jul-21 A	31-Dec-21 A	15-May-25	15-May-25			
S2D2110	Submit finalized cable route drawings	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2120	Submit finalized layout and control wiring diagrams for switchboard, MCC, control panel, etc	294	02-Jul-21 A	21-Sep-22*	31-Jan-22	31-Jan-22	-233		
S2D2130	Submit finalized design submissions of the CHP system	294	02-Jul-21 A	21-Sep-22*	31-Jan-22	31-Jan-22	-233		
S2D2140	Submit finalized interlock devices for electrical equipment and system	303	02-Jul-21 A	21-Sep-22*	30-Apr-22	30-Apr-22	-144		
S2D2150	Submit finalized calculations for total harmonic distortion, electrical faults and touch voltage	303	02-Jul-21 A	21-Sep-22*	30-Apr-22	30-Apr-22	-144		
S2D2180	Submit finalized configuration of SCADA / PLC system, CMMS & PMS	294	02-Jul-21 A	21-Sep-22*	31-Dec-21	31-Dec-21	-264		
S2D2190	Submit finalized PLC and MCC panel design	294	02-Jul-21 A	21-Sep-22*	28-Feb-22	28-Feb-22	-205		
Section 3 - Complete Design, Construction & T&C for Sidestream Facilities		1978	20-Nov-19 A	19-Apr-25	12-Oct-21	15-May-25	26		
Major Subcontractor / Supplier Procurement		633	20-Nov-19 A	06-Sep-21 A	17-Nov-21	15-May-25			
Design		320	20-Nov-19 A	12-Jul-20 A	17-Nov-21	15-May-25			



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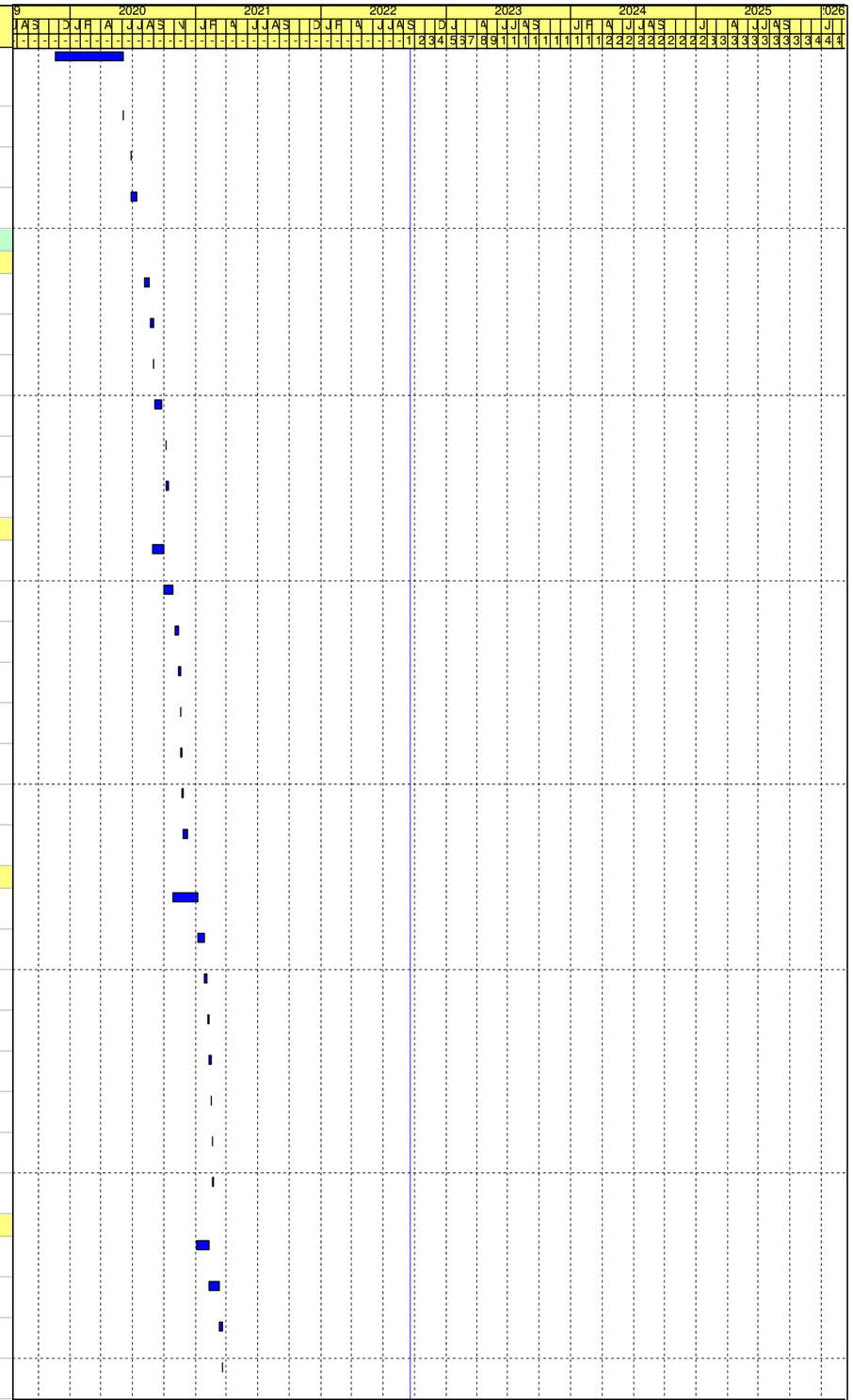
S3P1000	Procurement & PO for Deammonification Sidestream Treatment Facilities	200	20-Nov-19 A	05-Jun-20 A	17-Nov-21	17-Nov-21		CD1010, PL1010	S3D1000, S3D1440, S3P1470
S3P1010	E&M (Process) Designer Award	1	05-Jun-20 A	05-Jun-20 A	15-May-25	15-May-25			
S3P1020	Civil & BS Designer Award	1	26-Jun-20 A	26-Jun-20 A	15-May-25	15-May-25			S3P1030
S3P1030	Mobilisation	14	27-Jun-20 A	12-Jul-20 A	15-May-25	15-May-25		S3P1020	
Civil & Building Contractor		327	05-Aug-20 A	06-Sep-21 A	17-Nov-21	17-Nov-21			
For Site Clearance & Survey		36	05-Aug-20 A	12-Oct-20 A	17-Nov-21	17-Nov-21			
S3P1040	Submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	05-Aug-20 A	20-Aug-20 A	17-Nov-21	17-Nov-21			S3P1050
S3P1050	Review & Comment the Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	21-Aug-20 A	01-Sep-20 A	17-Nov-21	17-Nov-21		S3P1040	S3P1060
S3P1060	Re-submit Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	02-Sep-20 A	02-Sep-20 A	17-Nov-21	17-Nov-21		S3P1050	S3P1070
S3P1070	Review & Accept Tender proprosal of Civil Contractor (Site Clearance & Survey)	14	03-Sep-20 A	23-Sep-20 A	17-Nov-21	17-Nov-21		S3P1060	S3P1080
S3P1080	Civil Contractor (Site Clearance & Survey) Award	1	07-Oct-20 A	07-Oct-20 A	17-Nov-21	17-Nov-21		S3P1070	S3P1090
S3P1090	Mobilisation	5	08-Oct-20 A	12-Oct-20 A	17-Nov-21	17-Nov-21		S3P1080	S3C1010
For Ground Investigation		98	29-Aug-20 A	08-Dec-20 A	17-Nov-21	17-Nov-21			
S3P1100	Submit Tender proprosal of Civil Contractor (Ground Investigation)	14	29-Aug-20 A	29-Sep-20 A	17-Nov-21	17-Nov-21			S3P1110
S3P1110	Review & Accept the Tender proprosal of Civil Contractor (Ground Investigation)	21	30-Sep-20 A	27-Oct-20 A	17-Nov-21	17-Nov-21		S3P1100	S3P1120
S3P1120	Tender Invitation of Civil Contractor (Ground Investigation)	7	02-Nov-20 A	13-Nov-20 A	17-Nov-21	17-Nov-21		S3P1110	S3P1130
S3P1130	Submission of Tender Report	7	14-Nov-20 A	18-Nov-20 A	17-Nov-21	17-Nov-21		S3P1120	S3P1140
S3P1140	Review & Accept the Tender Report by PM	21	19-Nov-20 A	19-Nov-20 A	17-Nov-21	17-Nov-21		S3P1130	S3P1150
S3P1150	Contract Preparation	3	20-Nov-20 A	23-Nov-20 A	17-Nov-21	17-Nov-21		S3P1140	S3P1160
S3P1160	Civil Contractor (Ground Investigation) Award	1	24-Nov-20 A	24-Nov-20 A	17-Nov-21	17-Nov-21		S3P1150	S3P1170
S3P1170	Mobilisation	7	25-Nov-20 A	08-Dec-20 A	17-Nov-21	17-Nov-21		S3P1160	S3C1020
For Pre-drilling & Post-drilling		116	26-Oct-20 A	21-Feb-21 A	17-Nov-21	17-Nov-21			
S3P1180	Submit Tender proprosal of Civil Contractor (Pre-drilling & Post-drilling)	74	26-Oct-20 A	06-Jan-21 A	17-Nov-21	17-Nov-21		S3D1300, S3D1240	S3P1190
S3P1190	Review & Accept the Tender proprosal of Civil Contractor (Predrill & Proof drill)	21	07-Jan-21 A	27-Jan-21 A	17-Nov-21	17-Nov-21		S3P1180	S3P1200
S3P1200	Tender Invitation of Civil Contractor (Pre-drilling & Post-drilling)	14	28-Jan-21 A	04-Feb-21 A	17-Nov-21	17-Nov-21		S3P1190	S3P1210
S3P1210	Submission of Tender Report	4	05-Feb-21 A	10-Feb-21 A	17-Nov-21	17-Nov-21		S3P1200	S3P1220
S3P1220	Review & Accept the Tender Report by PM	21	11-Feb-21 A	16-Feb-21 A	17-Nov-21	17-Nov-21		S3P1210	S3P1230
S3P1230	Contract Preparation	3	17-Feb-21 A	17-Feb-21 A	17-Nov-21	17-Nov-21		S3P1220	S3P1240
S3P1240	Civil Contractor (Pre-drilling & Post-drilling) Award	1	18-Feb-21 A	18-Feb-21 A	17-Nov-21	17-Nov-21		S3P1230	S3P1250
S3P1250	Mobilisation	3	19-Feb-21 A	21-Feb-21 A	17-Nov-21	17-Nov-21		S3P1240	S3C1030
For Piling		90	04-Jan-21 A	01-Apr-21 A	17-Nov-21	17-Nov-21			
S3P1260	Submit Tender proprosal of Civil Contractor (Piling)	39	04-Jan-21 A	10-Feb-21 A	17-Nov-21	17-Nov-21			S3P1270
S3P1270	Review & Accept the Tender proprosal of Civil Contractor (Piling)	25	11-Feb-21 A	12-Mar-21 A	17-Nov-21	17-Nov-21		S3P1260	S3P1280
S3P1280	Tender Invitation of Civil Contractor (Piling)	14	12-Mar-21 A	19-Mar-21 A	17-Nov-21	17-Nov-21		S3P1270	S3P1290
S3P1290	Submission of Tender Report	7	20-Mar-21 A	22-Mar-21 A	17-Nov-21	17-Nov-21		S3P1280	S3P1300



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 Sep 2022

Date	Revision	Checked	Approved
31-May-22	Rev.22	LT	KM
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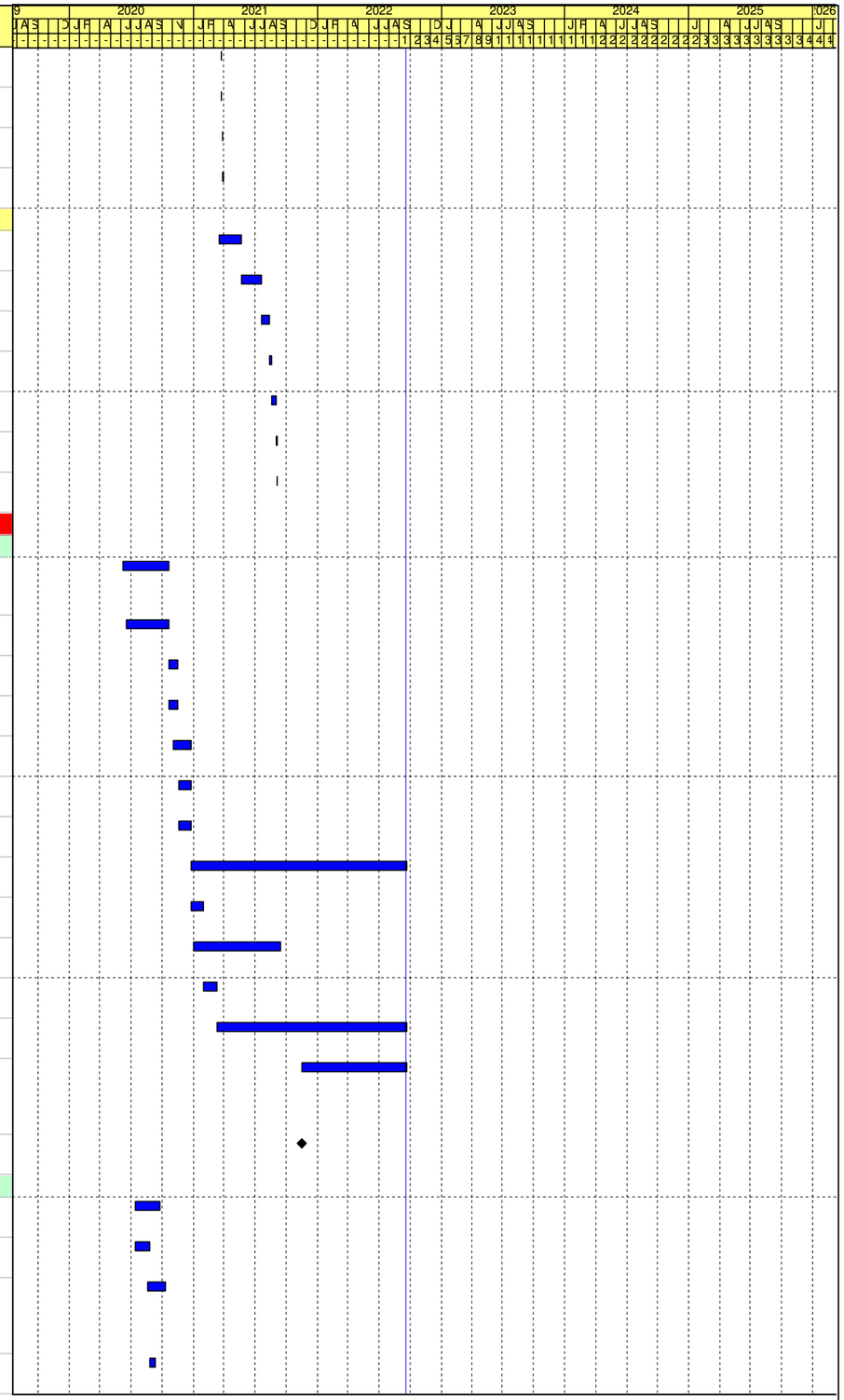
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3P1300	Review & Accept the Tender Report by PM	21	23-Mar-21 A	23-Mar-21 A	17-Nov-21	17-Nov-21		S3P1290	S3P1310
S3P1310	Contract Preparation	3	24-Mar-21 A	25-Mar-21 A	17-Nov-21	17-Nov-21		S3P1300	S3P1320
S3P1320	Civil Contractor (Piling) Award	1	26-Mar-21 A	26-Mar-21 A	17-Nov-21	17-Nov-21		S3P1310	S3P1330
S3P1330	Mobilisation	3	26-Mar-21 A	01-Apr-21 A	17-Nov-21	17-Nov-21		S3P1320	S3C1030
For Main Civil Works		146	17-Mar-21 A	06-Sep-21 A	17-Nov-21	17-Nov-21			
S3P1340	Submit Tender proprosal of Civil Contractor (Main Civil Works)	30	17-Mar-21 A	21-May-21 A	17-Nov-21	17-Nov-21			S3P1350
S3P1350	Review & Accept the Tender proprosal of Civil Contractor (Main Civil Works)	42	22-May-21 A	19-Jul-21 A	17-Nov-21	17-Nov-21		S3P1340	S3P1360
S3P1360	Tender Invitation of Civil Contractor (Main Civil Works)	14	21-Jul-21 A	11-Aug-21 A	17-Nov-21	17-Nov-21		S3P1350	S3P1370
S3P1370	Submission of Tender Report	1	12-Aug-21 A	19-Aug-21 A	17-Nov-21	17-Nov-21		S3P1360	S3P1380
S3P1380	Review & Accept the Tender Report by PM	6	20-Aug-21 A	31-Aug-21 A	17-Nov-21	17-Nov-21		S3P1370	S3P1390
S3P1390	Contract Preparation	1	01-Sep-21 A	05-Sep-21 A	17-Nov-21	17-Nov-21		S3P1380	S3P1400
S3P1400	Civil Contractor (Main Civil Works) Award	1	06-Sep-21 A	06-Sep-21 A	17-Nov-21	17-Nov-21		S3P1390	S3D1360, S3C1070
Design & Submission		922	07-Jun-20 A	21-Sep-22	12-Oct-21	15-May-25	967		
Architectural		922	07-Jun-20 A	21-Sep-22	16-Mar-23	17-Mar-23	177		
S3D1000	Prepare & Submit Building Layout Plan	60	07-Jun-20 A	21-Oct-20 A	16-Mar-23	16-Mar-23		CD1010, S3P1000	S3D1010, S3D1050, S3D1100
S3D1050	Prepare & Submit Architectural Design / Drawings	60	17-Jun-20 A	21-Oct-20 A	16-Mar-23	16-Mar-23		S3D1000	S3D1060
S3D1010	Review & Comment on Buildingl Layout Plan by PM	67	22-Oct-20 A	17-Nov-20 A	16-Mar-23	16-Mar-23		S3D1000	S3D1020
S3D1060	Review & Comment on Architectural Design / Drawings by PM	67	22-Oct-20 A	17-Nov-20 A	16-Mar-23	16-Mar-23		S3D1050	S3D1070
S3D1100	Prepare & Submit ABWF Works Drawings	68	03-Nov-20 A	24-Dec-20 A	16-Mar-23	16-Mar-23		S3D1000	S3D1110
S3D1020	Revise & Re-submit Building Layout Plan	28	18-Nov-20 A	24-Dec-20 A	16-Mar-23	16-Mar-23		S3D1010	S3D1030
S3D1070	Revise & Re-submit Architectural Design / Drawings	28	18-Nov-20 A	24-Dec-20 A	16-Mar-23	16-Mar-23		S3D1060	S3D1080
S3D1080	Review & Accept of Architectural Design / Drawings by PM	483	25-Dec-20 A	21-Sep-22	16-Mar-23	17-Mar-23	177	S3D1070	S3D1090
S3D1110	Review & Comment on ABWF Works Drawings by PM	21	25-Dec-20 A	29-Jan-21 A	16-Mar-23	16-Mar-23		S3D1100	S3D1120
S3D1030	Review & Accept of Building Layout Plan by PM	214	01-Jan-21 A	16-Sep-21 A	16-Mar-23	16-Mar-23		S3D1020	S3D1090
S3D1120	Revise & Re-submit ABWF Works Drawings	41	30-Jan-21 A	11-Mar-21 A	16-Mar-23	16-Mar-23		S3D1110	S3D1130
S3D1130	Review & Accept of ABWF Works Drawings by PM	406	12-Mar-21 A	21-Sep-22	16-Mar-23	17-Mar-23	177	S3D1120	S3C1140, S3D1090
S3D1090	Review & Accept of Architectural Design / Drawings by DSD (incl. VCAB) & DAP of ArchSD	300	15-Nov-21 A	21-Sep-22	16-Mar-23	17-Mar-23	177	S3D1080, S3D1130, S3D1030, S3D1040	S3C1140, S3P1490
S3D1040	Coordination Meeting with DSD (Employer) for the Architectural Drawing	0		15-Nov-21 A		16-Mar-23			S3D1090
Civil / Structural		639	13-Jul-20 A	18-Feb-22 A	12-Oct-21	15-May-25			
S3D1140	Prepare & Submit Loading Plan to ICE	60	13-Jul-20 A	25-Sep-20 A	12-Oct-21	12-Oct-21			S3D1150
S3D1200	Prepare & Submit GI Plan	60	13-Jul-20 A	26-Aug-20 A	17-Nov-21	17-Nov-21			S3D1210
S3D1240	Prepare & Submit Foundation Design / Drawings to ICE & PM	60	20-Aug-20 A	09-Oct-20 A	04-Nov-21	04-Nov-21			S3D1250, S3C1010, S3D1300, S3P1180
S3D1210	Review & Comment on GI Plan by PM	14	27-Aug-20 A	10-Sep-20 A	17-Nov-21	17-Nov-21		S3D1200	S3D1220



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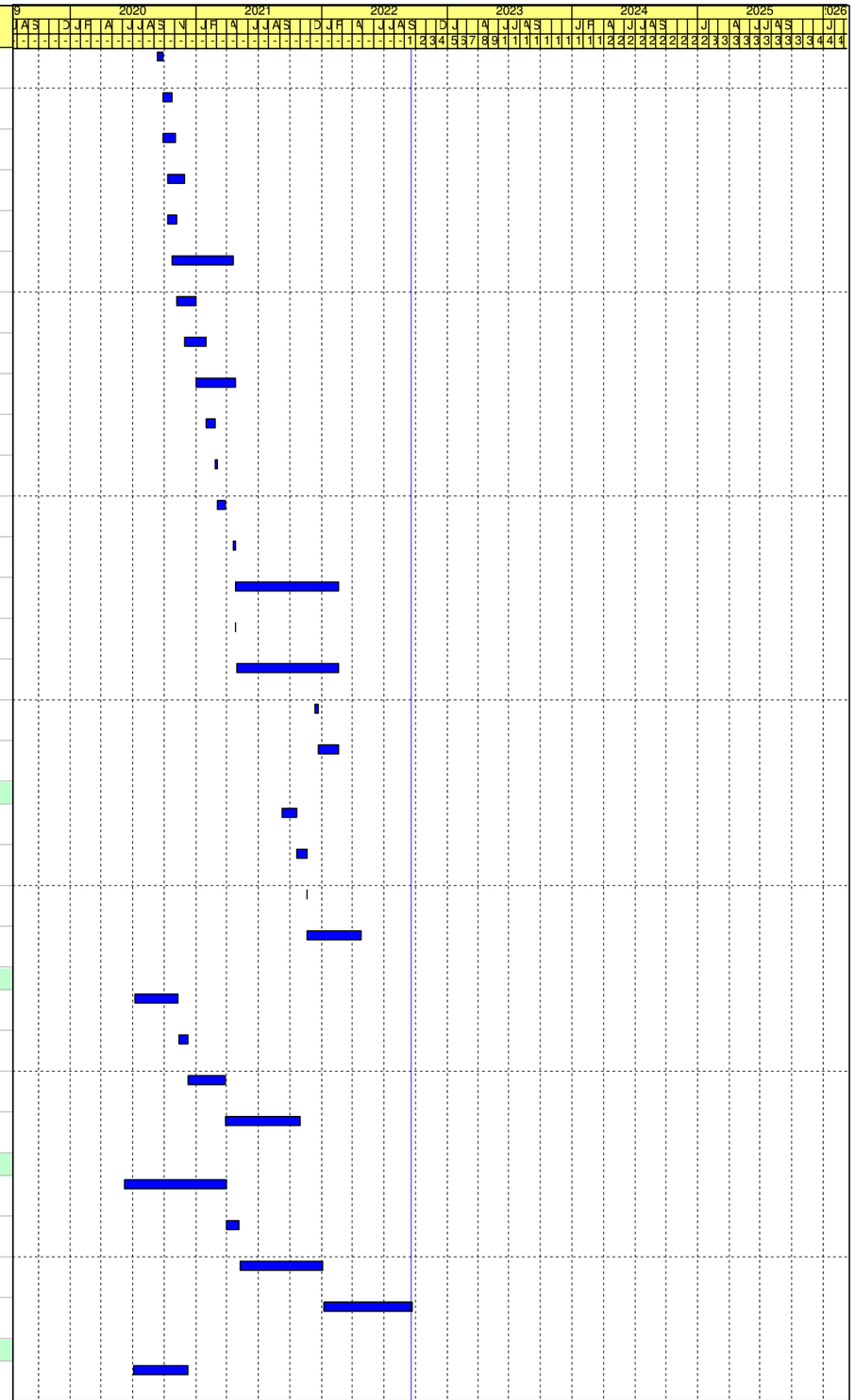
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3D1220	Revise & Re-submit GI Plan	7	11-Sep-20 A	28-Sep-20 A	17-Nov-21	17-Nov-21		S3D1210	S3D1230
S3D1150	Review & Comment on Loading Plan by ICE	14	26-Sep-20 A	23-Oct-20 A	12-Oct-21	12-Oct-21		S3D1140	S3D1160
S3D1230	Review & Accept of GI Plan by PM	21	29-Sep-20 A	02-Nov-20 A	17-Nov-21	17-Nov-21		S3D1220	S3C1020
S3D1250	Review & Comment on Foundation Design / Drawings by ICE & PM	79	10-Oct-20 A	27-Nov-20 A	15-May-25	15-May-25		S3D1240	S3D1260
S3D1300	Prepare & Submit Substructure / Superstructure Design / Drawings to ICE & PM	25	10-Oct-20 A	05-Nov-20 A	04-Nov-21	04-Nov-21		S3D1240	S3D1310, S3P1180
S3D1160	Revise & Re-submit Loading Plan to ICE	175	24-Oct-20 A	20-Apr-21 A	12-Oct-21	12-Oct-21		S3D1150	S3D1170
S3D1310	Review & Comment on Substructure / Superstructure Design / Drawings by ICE & PM	55	06-Nov-20 A	30-Dec-20 A	04-Nov-21	04-Nov-21		S3D1300	S3D1320
S3D1260	Revise & Re-submit Foundation Design / Drawings to ICE & PM	14	28-Nov-20 A	29-Jan-21 A	15-May-25	15-May-25		S3D1250	S3D1270
S3D1320	Revise & Re-submit Substructure / Superstructure Design / Drawings to ICE & PM	72	31-Dec-20 A	26-Apr-21 A	04-Nov-21	04-Nov-21		S3D1310	S3D1330
S3D1270	Review & Accept of Foundation Design / Drawings by ICE & PM	10	30-Jan-21 A	26-Feb-21 A	15-May-25	15-May-25		S3D1260	S3D1280
S3D1280	Prepare & Submit Foundation Design / Drawings to DSD (incl. BCM)	7	27-Feb-21 A	05-Mar-21 A	15-May-25	15-May-25		S3D1270	S3D1290
S3D1290	Review & Accept of Foundation Design / Drawings by DSD (incl. BCM)	45	06-Mar-21 A	26-Mar-21 A	15-May-25	15-May-25		S3D1280	
S3D1170	Review & Accept of Loading Plan by ICE	7	21-Apr-21 A	26-Apr-21 A	12-Oct-21	12-Oct-21		S3D1160	S3D1180
S3D1330	Review & Accept of Substructure / Superstructure Design / Drawings by ICE & PM	271	27-Apr-21 A	18-Feb-22 A	04-Nov-21	04-Nov-21		S3D1320	S3D1340
S3D1180	Prepare & Submit Loading Plan to PM	7	27-Apr-21 A	27-Apr-21 A	12-Oct-21	12-Oct-21		S3D1170	S3D1190
S3D1190	Review & Accept of Loading Plan by PM & DSD (incl. BCM)	359	28-Apr-21 A	18-Feb-22 A	12-Oct-21	12-Oct-21		S3D1180	S3C1090
S3D1340	Prepare & Submit Substructure / Superstructure Design / Drawings to DSD (incl. BCM)	2	13-Dec-21 A	23-Dec-21 A	04-Nov-21	04-Nov-21		S3D1330	S3D1350
S3D1350	Review & Accept of Substructure / Superstructure Design / Drawings by DSD (incl. BCM)	119	24-Dec-21 A	18-Feb-22 A	04-Nov-21	04-Nov-21		S3D1340	S3C1100
ELS		214	07-Sep-21 A	26-Apr-22 A	17-Nov-21	17-Nov-21			
S3D1360	Prepare & Submit ELS Plan to ICE	45	07-Sep-21 A	20-Oct-21 A	17-Nov-21	17-Nov-21		S3P1400	S3D1370
S3D1370	Review & Accept of ELS Plan by ICE	5	21-Oct-21 A	18-Nov-21 A	17-Nov-21	17-Nov-21		S3D1360	S3D1380
S3D1380	Prepare & Submit ELS Plan to PM	3	19-Nov-21 A	19-Nov-21 A	17-Nov-21	17-Nov-21		S3D1370	S3D1390
S3D1390	Review & Accept of ELS Plan by PM	153	20-Nov-21 A	26-Apr-22 A	17-Nov-21	17-Nov-21		S3D1380	S3C1080
Process Design		454	06-Jul-20 A	29-Oct-21 A	19-Feb-22	19-Feb-22			
S3D1400	Prepare & Submit E&M Works (Process) Design Drawings	198	06-Jul-20 A	10-Nov-20 A	19-Feb-22	19-Feb-22			S3D1410
S3D1410	Review & Comment on E&M Works (Process) Design Drawings by PM	21	11-Nov-20 A	08-Dec-20 A	19-Feb-22	19-Feb-22		S3D1400	S3D1420
S3D1420	Revise & Re-submit E&M Works (Process) Design Drawings	87	09-Dec-20 A	26-Mar-21 A	19-Feb-22	19-Feb-22		S3D1410	S3D1430
S3D1430	Review & Accept of E&M Works (Process) Design Drawings by PM	278	27-Mar-21 A	29-Oct-21 A	19-Feb-22	19-Feb-22		S3D1420	S3C1170
E&M Design		715	07-Jun-20 A	21-Sep-22	17-Nov-21	18-Feb-22	-215		
S3D1440	Prepare & Submit General Arrangement Drawings	298	07-Jun-20 A	31-Mar-21 A	17-Nov-21	17-Nov-21		S3P1000	S3D1450, S3C1080
S3D1450	Review & Comment on General Arrangement Drawings by PM	37	01-Apr-21 A	07-May-21 A	18-Feb-22	18-Feb-22		S3D1440	S3D1460
S3D1460	Revise & Re-submit General Arrangement Drawings	247	08-May-21 A	06-Jan-22 A	18-Feb-22	18-Feb-22		S3D1450	S3D1470
S3D1470	Review & Accept of General Arrangement Drawings by PM	105	07-Jan-22 A	21-Sep-22	18-Feb-22	18-Feb-22	-215	S3D1460	S3C1170
BS		598	03-Jul-20 A	21-Sep-22	26-Jan-22	26-Jan-22	-238		
S3D1480	Prepare & Submit BS Works Design & Dwgs for Sidestream Treatment Facilities	264	03-Jul-20 A	10-Dec-20 A	26-Jan-22	26-Jan-22			S3D1490



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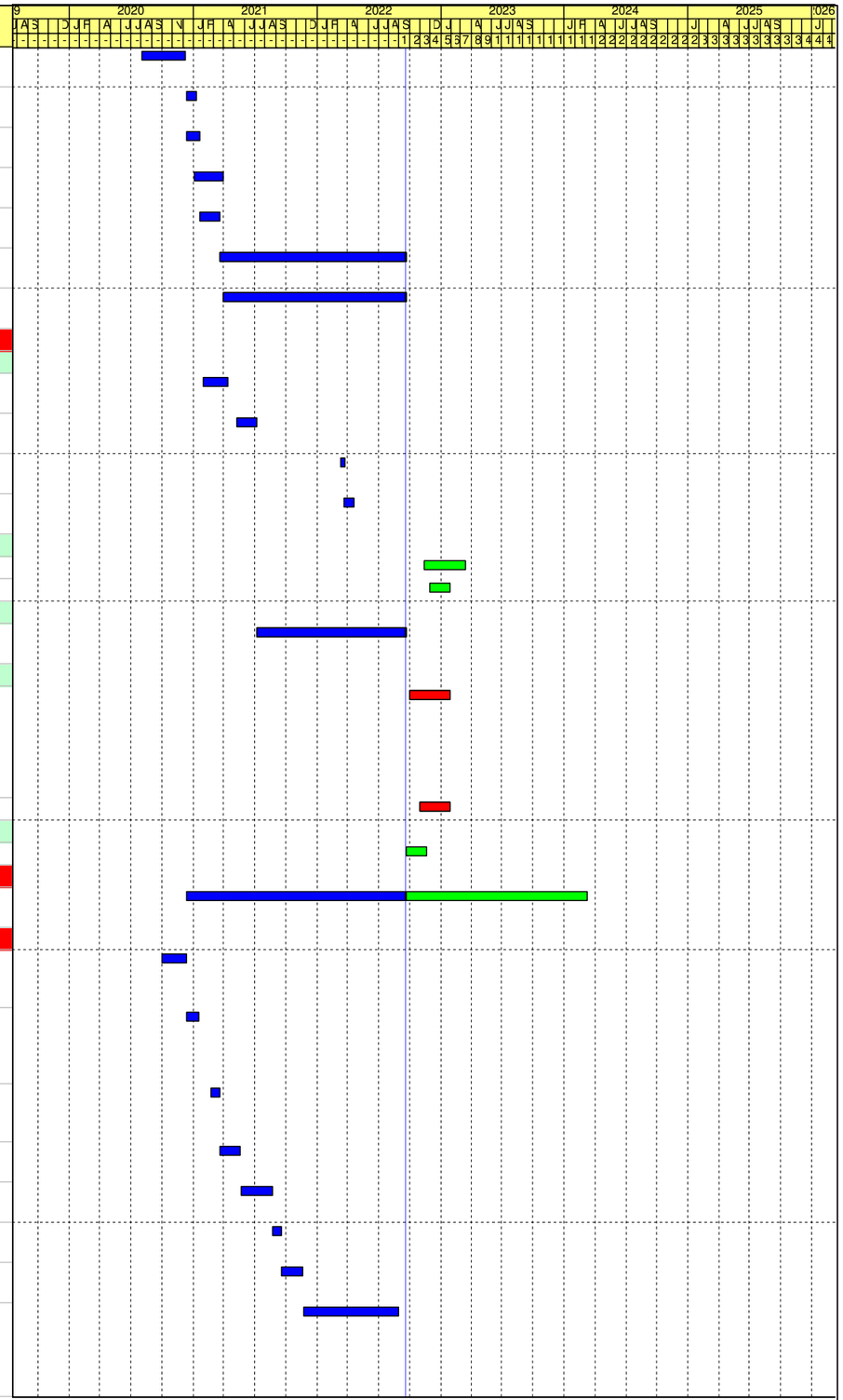
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3D1520	Submission & Submit FS Works Design & Dwgs for Sidestream Treatment Facilities	182	03-Aug-20 A	10-Dec-20 A	26-Jan-22	26-Jan-22			S3D1530
S3D1490	Review & Comment on BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	11-Jan-21 A	26-Jan-22	26-Jan-22		S3D1480	S3D1500
S3D1530	Review & Comment on FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	21	11-Dec-20 A	19-Jan-21 A	26-Jan-22	26-Jan-22		S3D1520	S3D1540
S3D1500	Revise & Re-submit BS Works Design & Dwgs for Sidestream Treatment Facilities	102	05-Jan-21 A	31-Mar-21 A	26-Jan-22	26-Jan-22		S3D1490	S3D1510
S3D1540	Revise & Re-submit FS Works Design & Dwgs for Sidestream Treatment Facilities	66	20-Jan-21 A	19-Mar-21 A	26-Jan-22	26-Jan-22		S3D1530	S3D1550
S3D1550	Review & Accept of FS Works Design & Dwgs for Sidestream Treatment Facilities by PM	398	20-Mar-21 A	21-Sep-22	26-Jan-22	26-Jan-22	-238	S3D1540	S3C1200, S3S1020
S3D1510	Review & Accept of BS Works Design & Dwgs for Sidestream Treatment Facilities by PM	386	01-Apr-21 A	21-Sep-22	26-Jan-22	26-Jan-22	-238	S3D1500	S3C1220, S3S1020
Major Plant & Materials Procurement		722	01-Feb-21 A	14-Mar-23	12-Oct-21	16-May-23	63		
Civil & Structure		378	01-Feb-21 A	19-Apr-22 A	12-Oct-21	17-Nov-21			
S3P1410	Procurement, Manufacture & Delivery of Piling	60	01-Feb-21 A	14-Apr-21 A	17-Nov-21	17-Nov-21			S3C1040
S3P1440	Procurement, Manufacture & Delivery of Metal Works Material	80	09-May-21 A	07-Jul-21 A	17-Nov-21	17-Nov-21			S3C1080
S3P1430	Procurement, Manufacture & Delivery of Steel Reinforcement	15	11-Mar-22 A	25-Mar-22 A	12-Oct-21	12-Oct-21			S3C1090
S3P1420	Procurement, Manufacture & Delivery of Concrete Mix	15	21-Mar-22 A	19-Apr-22 A	12-Oct-21	12-Oct-21			S3C1090
ABWF		120	15-Nov-22	14-Mar-23	16-Jan-23	16-May-23	63		
S3P1460	Procurement, Manufacture & Delivery of ABWF Works Material	120	15-Nov-22	14-Mar-23	16-Jan-23	16-May-23	63		S3C1140
S3P1450	Procurement, Manufacture & Delivery of Water Proofing Material	60	30-Nov-22	28-Jan-23	31-Jan-23	01-Apr-23	63		S3C1130
E&M Process		360	07-Jul-21 A	21-Sep-22	18-Feb-22	18-Feb-22	-215		
S3P1470	Procurement, Manufacture & Delivery of Deammonification Sidestream Treatment Facilities	360	07-Jul-21 A	21-Sep-22	18-Feb-22	18-Feb-22	-215	S3P1000	S3C1170
BS		120	01-Oct-22	28-Jan-23	28-Dec-21	04-Jun-22	-238		
S3P1480	Procurement, Manufacture & Delivery of BS Works Material	120	01-Oct-22	28-Jan-23	28-Dec-21	26-Apr-22	-277		S3C1190, S3C1200, S3C1220, S3C1240, S3T1060, S3C1250
S3P1485	Procurement, Manufacture & Delivery of LV Switchboard	90	31-Oct-22	28-Jan-23	07-Mar-22	04-Jun-22	-238		S3C1190
Fitting-out		60	22-Sep-22	20-Nov-22	17-Mar-23	16-May-23	177		
S3P1490	Procurement, Manufacture & Delivery of Fit-out Works Material	60	22-Sep-22	20-Nov-22	17-Mar-23	16-May-23	177	S3D1090	S3C1140
Ground Settlement, Tilting & Utility Monitoring		1184	12-Dec-20 A	09-Mar-24	21-Nov-22	10-May-24	62		
S3C1000	Ground Settlement, Tilting & Utility Monitoring	1184	12-Dec-20 A	09-Mar-24	21-Nov-22	10-May-24	62	S3C1010	S3T1200
Civil Works Construction		1642	30-Sep-20 A	19-Apr-25	12-Oct-21	10-May-24	-345		
S3C1010	Site Clearance & Survey	50	30-Sep-20 A	11-Dec-20 A	17-Nov-21	17-Nov-21		S3D1240, AD1140, S3P1090	S3C1020, S3C1000
S3C1020	Ground Investigation	65	12-Dec-20 A	18-Jan-21 A	17-Nov-21	17-Nov-21		AD1140, S3C1010, S3P1170, S3D1230	S3C1030
S3C1030	Pre-drilling Works	180	22-Feb-21 A	19-Mar-21 A	17-Nov-21	17-Nov-21		S3C1020, S3P1250, S3P1330	S3C1040
S3C1040	Minor Civil Works & Preperation Works for Piling	31	20-Mar-21 A	20-May-21 A	17-Nov-21	17-Nov-21		S3C1030, S3P1410	S3C1050
S3C1050	Piling Works (Impacted by Inclement Weather)	69	21-May-21 A	21-Aug-21 A	17-Nov-21	17-Nov-21		S3C1040	S3C1060
S3C1060	Post-drilling, Proof test & remaining works (Impacted by Inclement Weather)	23	22-Aug-21 A	17-Sep-21 A	17-Nov-21	17-Nov-21		S3C1050	S3C1080, S3C1070
S3C1070	Site Set-up / Mobilisation (Impacted by Inclement Weather)	51	18-Sep-21 A	20-Nov-21 A	17-Nov-21	17-Nov-21		S3C1060, S3P1400	S3C1080
S3C1080	Excavation / ELS (Impacted by Inclement Weather)	157	24-Nov-21 A	31-Aug-22 A	17-Nov-21	17-Nov-21		S3D1440, S3P1440, S3D1390, S3C1060, S3C1070	S3C1090



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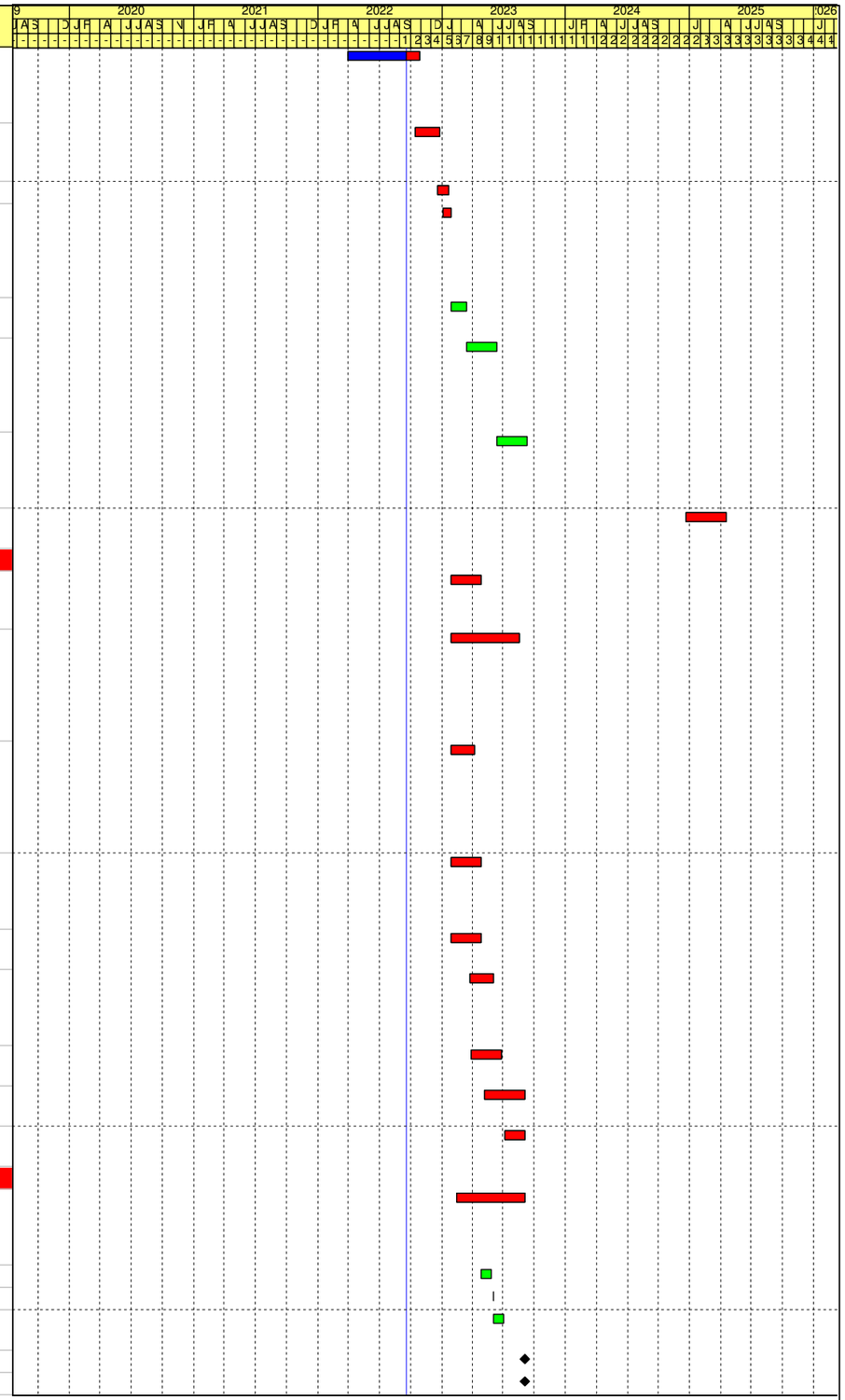
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S3C1090	Pile Caps installation	89	01-Apr-22 A	27-Oct-22	12-Oct-21	17-Nov-21	-344	S3C1080, S3P1420, S3P1430, S3D1190	S3C1100
S3C1100	Construction of Basement up to G/F Slab	73	14-Oct-22	25-Dec-22	04-Nov-21	15-Jan-22	-344	S3C1090, S3D1350, S3S1010	S3C1110
S3C1110	Construction of G/F up to 1/F Slab	33	19-Dec-22	20-Jan-23	09-Jan-22	10-Feb-22	-344	S3C1100	S3C1120
S3C1120	Construction of 1/F up to Roof	25	04-Jan-23	28-Jan-23	25-Jan-22	18-Feb-22	-344	S3C1110	S3C1170, S3C1130, S3C1180, S3C1200, S3C1220
S3C1130	Waterproofing	45	29-Jan-23	14-Mar-23	01-Apr-23	16-May-23	63	S3P1450, S3C1120	S3C1140
S3C1140	External & Internal Finishes - 1st Fix (Blockwork, Plastering, Wet Trade)	90	15-Mar-23	12-Jun-23	16-May-23	14-Aug-23	63	S3C1130, S3P1460, S3D1090, S3D1130, S3P1490	S3C1150, S3C1160
S3C1150	External & Internal Finishes - 2nd Fix (Ceiling / Wall / Floor Finishing, Door)	90	13-Jun-23	10-Sep-23	14-Aug-23	12-Nov-23	63	S3C1140	SC31110, S3S1170, S3C1160, PL1190
S3C1160	Landscaping Works	120	21-Dec-24	19-Apr-25	11-Jan-24	10-May-24	-345	S3C1140, S3C1150	SC31110
E&M Installation		217	29-Jan-23	02-Sep-23	19-Feb-22	23-Sep-22	-344		
S3C1190	Installation of Electrical Supply Systems (TX, LV Switchboard & Temp. Power)	90	29-Jan-23	28-Apr-23	05-Jun-22	02-Sep-22	-238	S3C1170, S3P1480, S3P1485	S3T1030, S3T1000, PL1190
S3C1170	E&M Installation of Deammonification Sidestream Treatment Facilities	200	29-Jan-23	16-Aug-23	19-Feb-22	06-Sep-22	-344	S3P1470, S3D1430, S3C1120, S1D1030, S3D1470	S3C1190, S3T1030, S3C1240, S3T1060, S3C1250, PL1190
S3C1200	FS Installation - Conduits, Trunking, & Pipeworks	70	29-Jan-23	08-Apr-23	21-May-22	29-Jul-22	-253	S3S1000, S3S1010, S3S1020, S3P1480, S3D1550, S3C1120	S3C1210, S3S1030, PL1190
S3C1220	BS Fitting Installation - Conduits, Trunking, & Ductworks	90	29-Jan-23	28-Apr-23	27-Apr-22	25-Jul-22	-277	S3S1020, S3P1480, S3D1510, S3C1120	S3C1230, S3S1030, PL1190
S3C1180	E&M installation of DG Plant Room	90	29-Jan-23	28-Apr-23	16-Apr-22	14-Jul-22	-288	S3S1100, S3C1120	S3S1110, PL1190
S3C1210	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	70	26-Mar-23	03-Jun-23	16-Jul-22	23-Sep-22	-253	S3C1200	S3T1060, S3S1150, S3T1020, PL1190
S3C1230	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	90	30-Mar-23	27-Jun-23	26-Jun-22	23-Sep-22	-277	S3C1220	S3T1030, PL1190
S3C1240	Installation of Control & Monitoring System	120	06-May-23	02-Sep-23	27-May-22	23-Sep-22	-344	S3C1170, S3P1480	S3T1030, PL1190
S3C1250	Installation of Gas Detection System	60	05-Jul-23	02-Sep-23	26-Jul-22	23-Sep-22	-344	S3C1170, S3P1480	S3T1060, PL1190
Testing & Commissioning		795	15-Feb-23	19-Apr-25	08-Mar-22	10-May-24	-345		
S3T1030	SAT for Deammonification Sidestream Treatment Facilities (Ref. to PS6B.1.18.3)	200	15-Feb-23	02-Sep-23	08-Mar-22	23-Sep-22	-344	S3C1170, S3C1190, S3C1240, S3C1230	S3T1060, S3T1060
S3T1000	SAT for TX & LV Switchboard	30	29-Apr-23	28-May-23	08-Nov-23	08-Dec-23	194	S3C1190	S3T1010
S3T1010	Power Energization (Power Provision from DE/2018/04 Contract)	1	03-Jun-23	03-Jun-23	08-Dec-23	09-Dec-23	189	S3T1000	S3T1020
S3T1020	Essential T&C for FSD Inspection	30	04-Jun-23	03-Jul-23	09-Dec-23	08-Jan-24	189	S3T1010, S3C1210	S3S1150
S3T1040	Existing sludge dewatering facilities Ready (by DE/2018/04 Contract)	0		02-Sep-23		23-Sep-22	-344		S3T1060
S3T1050	Plant service water from zone B/C Ready (Zone B by DE/2018/04 Contract)	0		02-Sep-23		23-Sep-22	-344		S3T1060



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30-Sep-22	Rev.26	LT	KM

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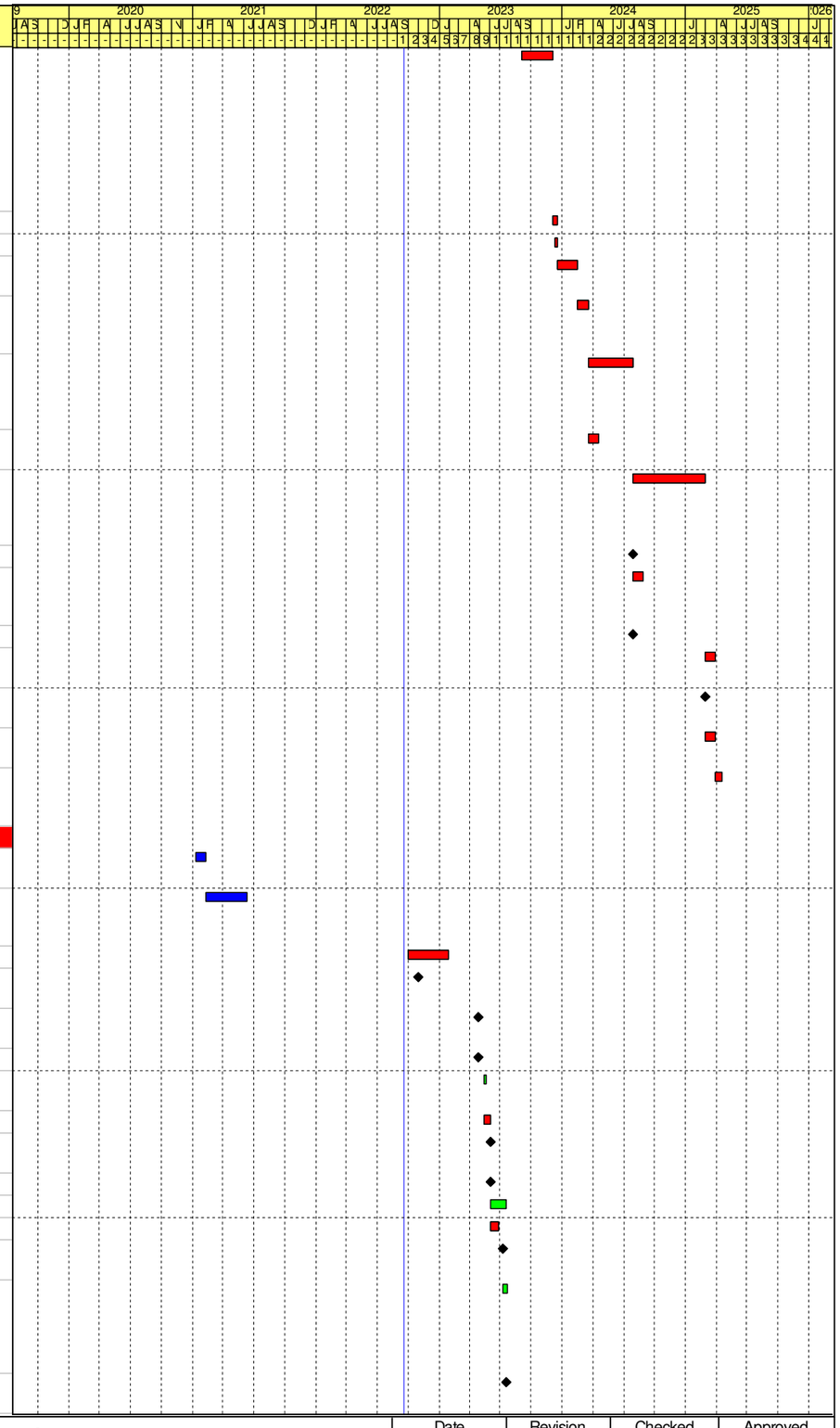
S3T1060	Process Start Up	92	03-Sep-23	03-Dec-23	24-Sep-22	24-Dec-22	-344	S3T1030, S3C1210, S3T1050, S3T1040, S3S1140, S3C1250, S3C1170, S3P1480, S3T1030	S3T1070
S3T1070	Submission & Acceptance of Process Start Up Report	14	04-Dec-23	17-Dec-23	25-Dec-22	07-Jan-23	-344	S3T1060	S3T1080
S3T1080	Notice for Commencement of Phase 1 Commissioning Tests	7	11-Dec-23	17-Dec-23	01-Jan-23	07-Jan-23	-344	S3T1070	S3T1090
S3T1090	Phase 1 Commissioning Tests with daily result to PM	60	18-Dec-23	15-Feb-24	08-Jan-23	08-Mar-23	-344	S3T1080	S3T1110, S3T1100
S3T1100	Phase 1 Re-commissioning Tests with daily result to PM (If Failure)	31	16-Feb-24	17-Mar-24	09-Mar-23	08-Apr-23	-344	S3T1090	S3T1110, S3T1120, KD1050-2
S3T1120	Phase 1 Post Commissioning with daily result to PM	133	17-Mar-24	28-Jul-24	08-Apr-23	19-Aug-23	-344	S3T1100	S3T1140, PL1320, S3T1160, S5T1120
S3T1110	Submission & Acceptance of Phase 1 Commissioning Tests Report	30	17-Mar-24	16-Apr-24	19-Jan-24	18-Feb-24	-58	S3T1090, S3T1100	S3T1140
S3T1160	Phase 2 Commissioning Tests with daily result to PM	213	28-Jul-24	26-Feb-25	19-Aug-23	19-Mar-24	-344	S3T1150, S3T1120	S3T1170, S3T1180, S3T1190, S5T1200
S3T1150	THP digested sludge centrate from Zone C Ready	0		28-Jul-24		19-Aug-23	-344		S3T1160
S3T1140	Submission & Acceptance of Phase 1 Post Commissioning Report	30	29-Jul-24	27-Aug-24	18-Feb-24	19-Mar-24	-162	S3T1120, S3T1130, S3T1110	S3T1170
S3T1130	Ready to Process start up of the first Anaerobic Digester in Zone C	0	29-Jul-24		18-Feb-24		-162	S5T1120	S3T1140
S3T1170	Submission & Acceptance of Phase 2 Commissioning Tests Report	30	26-Feb-25	28-Mar-25	19-Mar-24	18-Apr-24	-344	S3T1160, S3T1140	S3T1200
S3T1180	Commissioning of new Anaerobic Digesters (2 nos.) in Zone C Finished	0		26-Feb-25		19-Mar-24	-345	S5T1180, S3T1160	S3T1190
S3T1190	Phase 3 Commissioning Tests with daily result to PM	30	27-Feb-25	28-Mar-25	19-Mar-24	18-Apr-24	-345	S3T1180, S3T1160	S3T1200
S3T1200	Submission & Acceptance of Phase 3 Commissioning Tests Report	22	29-Mar-25	19-Apr-25	18-Apr-24	10-May-24	-345	S3T1190, S3C1000, S3T1170	SC31110, PL1270
Statutory Submission / Inspection (FSD)		1051	12-Jan-21 A	07-Dec-23	04-Nov-21	10-May-24	155		
S3S1000	Prepare & Submit GBP for FSD approval	90	12-Jan-21 A	10-Feb-21 A	04-Nov-21	04-Nov-21			S3C1200, S3S1010
S3S1010	FSD Review & Approval of GBP	180	11-Feb-21 A	11-Jun-21 A	04-Nov-21	04-Nov-21		S3S1000	S3C1200, S3S1150, S3C1100
S3S1100	Submission & Approval of DG Application to FSD	120	01-Oct-22	28-Jan-23	17-Dec-21	15-Apr-22	-288		S3C1180
S3S1020	Submit WWO46 Part I/II to WSD (FS / PD)	0	31-Oct-22		27-Jan-22		-277	S3D1550, S3D1510	S3C1200, S3C1220
S3S1030	Submit WWO46 Part IV to WSD (FS / PD)	0	29-Apr-23		04-Dec-23		220	S3C1200, S3C1220	S3S1040
S3S1110	Submit Application to FSD for DG Licence	0	29-Apr-23		15-Jul-22		-288	S3C1180	S3S1120
S3S1040	WSD Inspection	7	13-May-23	19-May-23	18-Dec-23	25-Dec-23	220	S3S1030	S3S1060, S3S1050
S3S1120	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	21	14-May-23	03-Jun-23	30-Jul-22	19-Aug-22	-288	S3S1110	S3S1130
S3S1060	Issuance of Form WWO46 Part Va	0		02-Jun-23		12-Mar-24	284	S3S1040	S3S1080, S3S1070
S3S1050	Issuance of FS Water Certifcate	0		02-Jun-23		08-Jan-24	220	S3S1040	S3S1150
S3S1070	System Flushing / Sampling	45	03-Jun-23	17-Jul-23	12-Mar-24	26-Apr-24	284	S3S1060	S3S1080
S3S1130	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	21	04-Jun-23	24-Jun-23	20-Aug-22	09-Sep-22	-288	S3S1120	S3S1140
S3S1140	DG Licence issued	0		08-Jul-23		23-Sep-22	-288	S3S1130	S3S1150, S3T1060
S3S1150	Prepare & Submit FS/314, FS/501 & FS/501a	14	09-Jul-23	22-Jul-23	08-Jan-24	22-Jan-24	184	S3S1010, S3C1210, S3T1020, S3S1140, S3S1050	S3S1160
S3S1080	Issuance of Form WWO46 Part Vb	0		17-Jul-23		26-Apr-24	284	S3S1060, S3S1070	S3S1090



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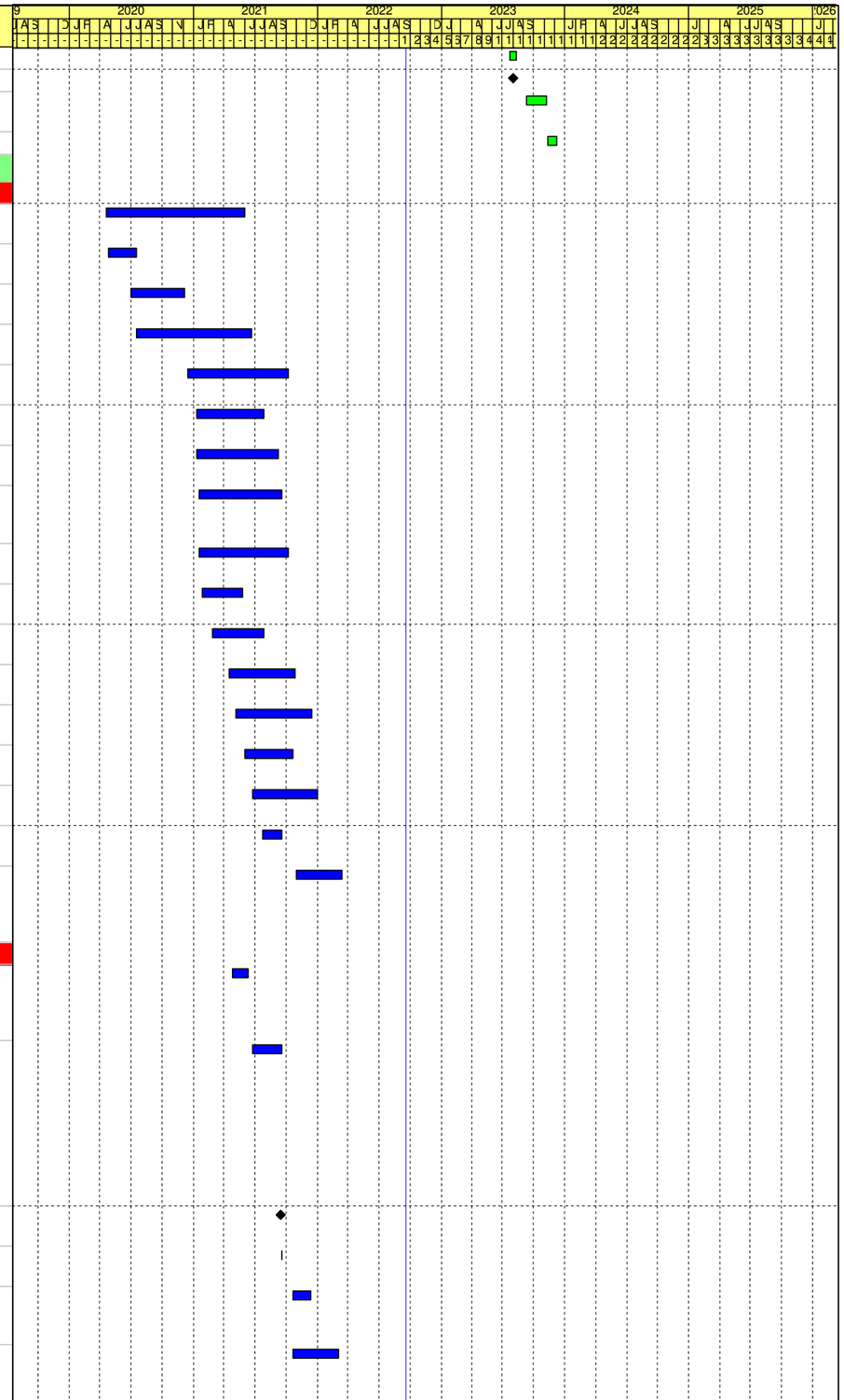
S3S1160	FSD Review & Approval of FS/314, FS/501 & FS/501a	21	23-Jul-23	12-Aug-23	22-Jan-24	12-Feb-24	184	S3S1150	S3S1170
S3S1090	Issuance of Water Certificate	0		31-Jul-23		10-May-24	284	S3S1080	SC31110
S3S1170	F.S. Inspection, Defects Rectification & Re-inspection	60	11-Sep-23	09-Nov-23	12-Feb-24	12-Apr-24	155	S3S1160, S3C1150	S3S1180
S3S1180	Issuance of Acceptance Letter	28	10-Nov-23	07-Dec-23	12-Apr-24	10-May-24	155	S3S1170	SC31110
Section 4 - Complete Construction & T&C for UV System No.1 & EP Station No. 1		921	18-Apr-20 A	13-Oct-22	16-Apr-22	17-Mar-23	154		
Major Plant & Materials Fabrication & Delivery		725	18-Apr-20 A	16-Mar-22 A	16-Apr-22	17-Mar-23			
S4P1000	Procurement & PO for FRP Cover	409	18-Apr-20 A	31-May-21 A	23-Apr-22	23-Apr-22		PL1010	S4P1090
S4P1010	Procurement & PO for Pipeworks & Associated Valves	90	25-Apr-20 A	15-Jul-20 A	16-Apr-22	16-Apr-22		S1D1000	S4P1130
S4P1030	Procurement & PO for FS System	60	02-Jul-20 A	04-Dec-20 A	16-Apr-22	16-Apr-22		S1D1330	S4P1150
S4P1020	Procurement & PO for Elec. Materials	365	18-Jul-20 A	22-Jun-21 A	16-Apr-22	16-Apr-22		S1D1130	S4P1140
S4P1110	Fabrication & Delivery of Stoplogs	289	16-Dec-20 A	07-Oct-21 A	16-Apr-22	16-Apr-22		S1P1040, S1D1290	S4C1070
S4P1070	Fabrication & Delivery of Lift-up Pumps	225	11-Jan-21 A	26-Jul-21 A	16-Apr-22	16-Apr-22		S1P1010, S1D1290	S4C1040
S4P1130	Fabrication & Delivery of Pipeworks & Associated Valves	200	11-Jan-21 A	08-Sep-21 A	16-Apr-22	16-Apr-22		S4P1010, S1D1290	S4C1040
S4P1040	Fabrication of UV Disinfection System	239	18-Jan-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S1P1000, KD1000, S1D1210	S4C1080, S4P1050
S4P1120	Fabrication & Delivery of Penstocks	256	18-Jan-21 A	07-Oct-21 A	16-Apr-22	16-Apr-22		S1P1050, S1D1290	S4C1070
S4P1100	Fabrication & Delivery of EOT Cranes (2T & 5T)	170	28-Jan-21 A	27-May-21 A	16-Apr-22	16-Apr-22		S1P1030, S1D1290	S4C1020
S4P1080	Fabrication & Delivery of Transfer Pumps	218	26-Feb-21 A	26-Jul-21 A	17-Mar-23	17-Mar-23		S1P1020, S1D1290	S5UVPC1000
S4P1150	Fabrication & Delivery of FS System	187	18-Apr-21 A	28-Oct-21 A	16-Apr-22	16-Apr-22		S4P1030, S1D1330	S4C1100
S4P1160	Fabrication & Delivery of Temp. Switchboard	194	05-May-21 A	15-Dec-21 A	23-Apr-22	23-Apr-22			S4C1000
S4P1060	Delivery of UV Disinfection System	149	01-Jun-21 A	22-Oct-21 A	16-Apr-22	16-Apr-22		S4P1050	S4C1080
S4P1140	Fabrication & Delivery of Elec. Materials	190	24-Jun-21 A	31-Dec-21 A	16-Apr-22	16-Apr-22		S4P1020, S1D1330	S4C1120
S4P1050	FAT for UV Disinfection System	71	23-Jul-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S4P1040	S4P1060
S4P1090	Fabrication & Delivery of FRP Cover	89	01-Nov-21 A	16-Mar-22 A	23-Apr-22	23-Apr-22		S1D1290, S4P1000, S1P1020, PL1010	S4T1010
E&M Installation		449	25-Apr-21 A	23-Jun-22 A	16-Apr-22	09-May-22			
S4C1010	Mobilisation (Partial Access on 24 Apr 2021, Remaining Access on 12 May 2021)	30	25-Apr-21 A	12-Jun-21 A	16-Apr-22	16-Apr-22		AD1010, S1D1130, AD1020	S4C1020, S5TXRC1030, S4C1090, S4C1000
S4C1020	E&M Installation of EOT Cranes (2T)	46	25-Jun-21 A	17-Sep-21 A	16-Apr-22	16-Apr-22		S1D1180, S1D1260, S4C1010, S4P1100	S4T1010, S4C1030, S4C1040, S4C1110, S4C1090, S4T1000, S4C1080, S4C1070, PL1200
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		16-Apr-22				S4C1070
S4C1050	Preperation Works for E&M Installation of Penstocks & Stoplogs	3	17-Sep-21 A	19-Sep-21 A	16-Apr-22	16-Apr-22			S4C1070
S4C1030	E&M Installation of EOT Cranes (5T)	60	20-Oct-21 A	11-Dec-21 A	16-Apr-22	16-Apr-22		S4C1020	S5UVPC1000, S4T1000, PL1200
S4C1040	E&M Installation of Transfer Pumps & Associated Pipeworks / Valves	103	21-Oct-21 A	05-Mar-22 A	16-Apr-22	16-Apr-22		S4C1020, S4P1070, S4P1130	S5TXRC1050, S4T1010, PL1200



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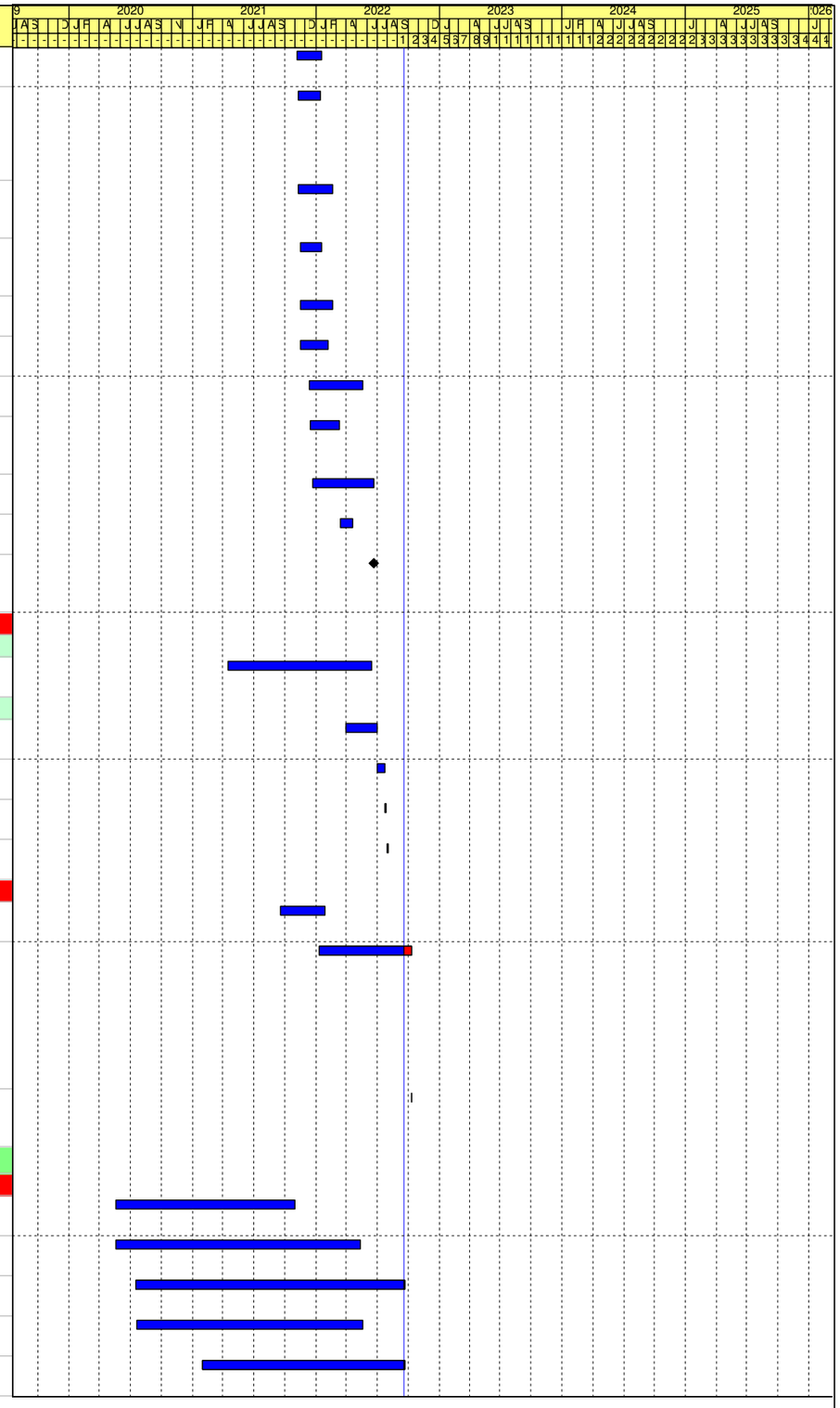
S4C1090	FS Installation - Conduits, Trunking, & Pipeworks	74	08-Nov-21 A	18-Jan-22 A	16-Apr-22	16-Apr-22		S4C1010, S4C1020	S4C1100, PL1200
S4C1070	E&M Installation of Penstocks & Stoplogs (Impacted by CNE-014)	66	11-Nov-21 A	15-Jan-22 A	16-Apr-22	16-Apr-22		S4P1110, S4P1120, S4C1020, S4C1050, S4C1060	S4T1010, S5TXRC1050, PL1200
S4C1080	E&M Installation of UV System	44	11-Nov-21 A	19-Feb-22 A	16-Apr-22	16-Apr-22		S4P1040, S4P1060, S4C1020	S4T1010, S5TXRC1050, PL1200
S4C1100	FS Installation - Cable Laying, Termination, Associated Fitting & Field Devices	67	15-Nov-21 A	18-Jan-22 A	16-Apr-22	16-Apr-22		S4P1150, S4C1090	SC41110, S4S1010, PL1200
S4C1110	BS Fitting Installation - Conduits, Trunking, & Ductworks	111	15-Nov-21 A	19-Feb-22 A	16-Apr-22	16-Apr-22		S4C1020, S1D1310	S4C1120, PL1200
S4C1160	Installation of FS Link	84	17-Nov-21 A	08-Feb-22 A	16-Apr-22	16-Apr-22			S4S1010, PL1200
S4C1120	BS Fitting Installation - Cable Laying, Termination, Associated Fitting & Field Devices	139	13-Dec-21 A	21-May-22 A	16-Apr-22	16-Apr-22		S4C1110, S4P1140	S4C1150, PL1200
S4C1000	Provision of Temporary Power for UV System No.1 & Effluent Transfer Pumping Station	45	15-Dec-21 A	11-Mar-22 A	23-Apr-22	23-Apr-22		S4C1010, S1D1130, S4P1160	S4T1010, S4C1140
S4C1130	Excavation Works & Cable Laying - by CLP (Impacted by CNE-035)	184	22-Dec-21 A	23-Jun-22 A	09-May-22	09-May-22			S4C1140
S4C1150	Installation of CCTV System	37	14-Mar-22 A	19-Apr-22 A	16-Apr-22	16-Apr-22		S4C1120	SC41110, PL1200
S4C1140	Ready for Power Energization	0		23-Jun-22 A		09-May-22		S4C1000, S4C1130, S4S1000	S4S1030, S4T1010
Statutory Submission / Inspection		511	17-Apr-21 A	02-Aug-22 A	09-May-22	09-May-22			
CLP Submission		425	17-Apr-21 A	15-Jun-22 A	09-May-22	09-May-22			
S4S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP (Temp. Power)	425	17-Apr-21 A	15-Jun-22 A	09-May-22	09-May-22			S4C1140
FSD Submission & Inspection		176	01-Apr-22 A	02-Aug-22 A	09-May-22	09-May-22			
S4S1010	Prepare & Submit FS/314, FS/501 & FS/501a	91	01-Apr-22 A	30-Jun-22 A	09-May-22	09-May-22		S4C1100, S4C1160	S4S1020
S4S1020	FSD Review & Approval of FS/314, FS/501 & FS/501a	25	01-Jul-22 A	25-Jul-22 A	09-May-22	09-May-22		S4S1010	S4S1030
S4S1030	F.S. Inspection, Defects Rectification & Re-inspection	4	26-Jul-22 A	29-Jul-22 A	09-May-22	09-May-22		S4S1020, S4C1140	S4S1040
S4S1040	Issuance of Acceptance Letter	14	30-Jul-22 A	02-Aug-22 A	09-May-22	09-May-22		S4S1030	SC41110
Testing & Commissioning		318	18-Sep-21 A	13-Oct-22	23-Apr-22	16-May-22	-151		
S4T1000	T&C and R.P.E inspection for EOT Cranes	133	18-Sep-21 A	28-Jan-22 A	13-May-22	13-May-22		S4C1020, S4C1030	S4T1010
S4T1010	SAT for UV System No. 1 & Effluent Transfer Pumping Station No. 1 (Impacted by CNE-035)	217	10-Jan-22 A	10-Oct-22	23-Apr-22	13-May-22	-151	S4C1020, S4C1070, S4C1080, S4C1000, S4T1000, S4C1040, S4P1090, S4C1140	S4T1020
S4T1020	System Commissioning Tests	3	11-Oct-22	13-Oct-22	13-May-22	16-May-22	-151	S4T1010	SC41110, PL1290, S5UVPC1000
Section 5 - Complete all remaining Works (incl. T&C)		1798	18-May-20 A	19-Apr-25	22-Mar-22	15-May-25	26		
Fabrication, FAT & Delivery of Major Plant & Materials		802	18-May-20 A	30-Nov-22	06-Jun-22	15-May-25	897		
S5P1020	Procurement & PO for Lifting Appliances	530	18-May-20 A	29-Oct-21 A	15-May-25	15-May-25		S2P1020	
S5P1040	Procurement & PO for Ferric Chloride Dosing Pump	726	18-May-20 A	13-May-22 A	24-Nov-22	24-Nov-22		S2P1020	S5FCDP1010
S5P1000	Procurement & PO for Biogas Booster and Transfer Pumps	735	17-Jul-20 A	21-Sep-22	30-Jul-22	30-Jul-22	-53	S2P1000	S5BIOP1000
S5P1030	Procurement & PO for Ferric Chloride Storage Tank	668	20-Jul-20 A	18-May-22 A	30-Sep-22	30-Sep-22		S2P1000	S5FCDP1000
S5P1010	Procurement & PO for Pipeworks & Associated Valves	539	29-Jan-21 A	21-Sep-22	04-Aug-22	04-Aug-22	-48	S2D1070	S5CHPP1070, S5DIGP1020



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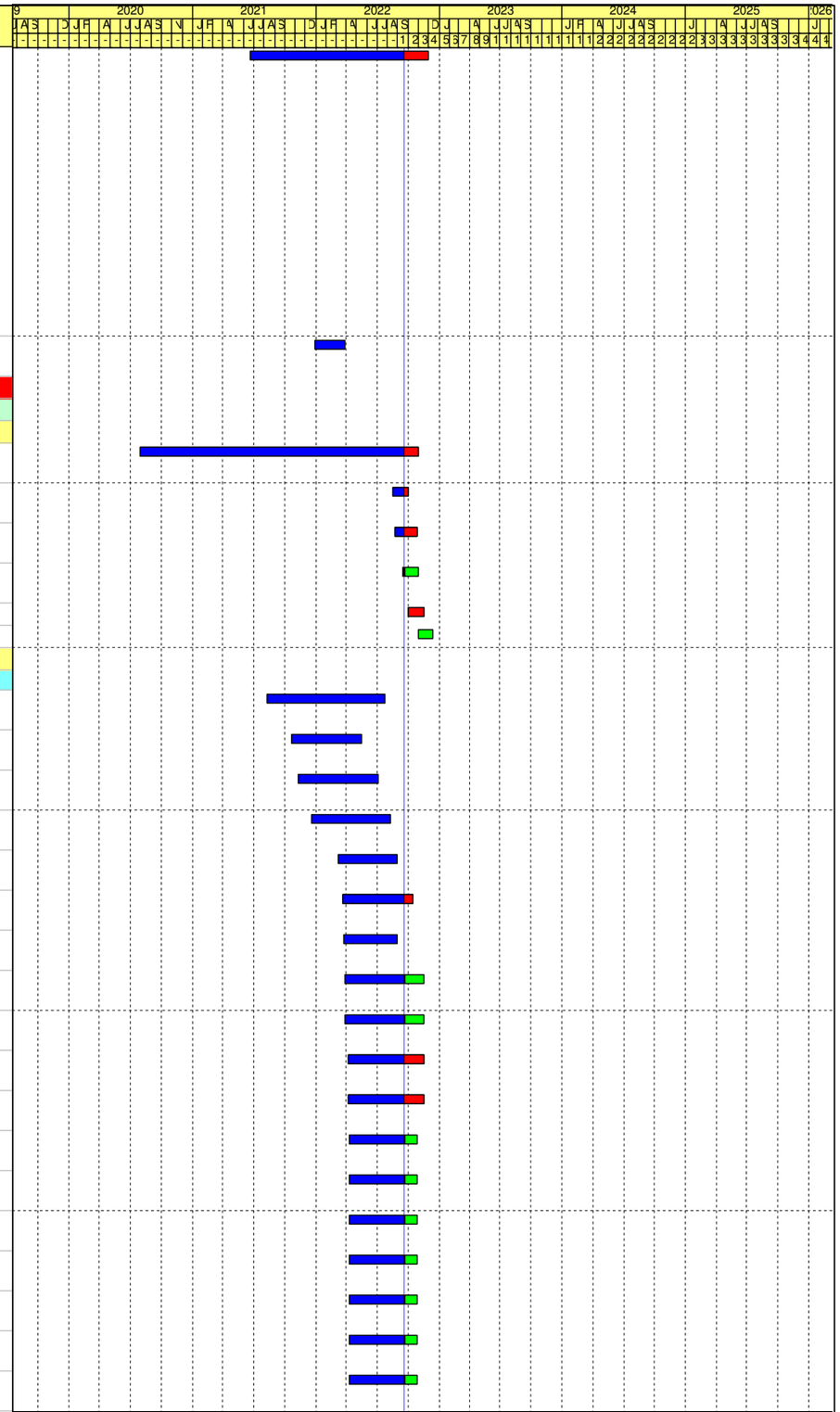
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5P1050	Procurement & PO for Electrical Sub-contractor	396	21-Jun-21 A	30-Nov-22	06-Jun-22	15-Aug-22	-107	PL1010, S2P1130, S2D1370, S2D1570, S2D1270, S2D1310, S2D1430, S2D1470, S2D1510, S2D1630, S2D1670	S5SDBC1710, S5SDBC1680, S5SDBC1740, S5CHPC1100, S5CHPC1230, S5CHPC1290, S5TXRC1030, S5TXRC1040, S5DIGC1120, S5DIGC1160, S5DIGC1200, S5DIGC1260, S5EXAC1030, S5EXAC1040, S5EXAC1050, S5EXAC1060
S5P1070	Procurement & PO for mechanical ventilation system	90	28-Dec-21 A	28-Mar-22 A	15-May-25	15-May-25			
Sludge Dewatering Building		1258	31-Jul-20 A	09-Jan-24	22-Mar-22	27-Feb-24	49		
Procurement, Fabrication, FAT & Delivery of Major Plant & Materials		1213	31-Jul-20 A	25-Nov-23	22-Mar-22	01-Sep-23	-86		
Procurement		867	31-Jul-20 A	14-Dec-22	10-Jun-22	07-Jan-23	24		
S5SDBP1190	Procurement & PO for Genset	721	31-Jul-20 A	31-Oct-22	10-Jun-22	20-Jul-22	-103		S5SDBP1200
S5SDBP1615	Procurement & PO for DI pipework (B/F)	45	17-Aug-22 A	30-Sep-22	25-Jul-22	03-Aug-22	-58		S5SDBP1605
S5SDBP1485	Procurement & PO for DI pipework (G/F and 1/F)	45	24-Aug-22 A	27-Oct-22	28-Jul-22	02-Sep-22	-55		S5SDBP1555
S5SDBP1630	Procurement & PO for Sludge Skip (PS Screen & Dewatering Screen)	45	17-Sep-22 A	31-Oct-22	30-Oct-22	09-Dec-22	39		S5SDBP1310
S5SDBP1575	Procurement & PO for Process Water Pumps	45	03-Oct-22*	16-Nov-22	03-Sep-22	17-Oct-22	-30		S5SDBP1565
S5SDBP1595	Procurement & PO for FRP ductworks	45	31-Oct-22*	14-Dec-22	24-Nov-22	07-Jan-23	24		S5SDBP1585
Mechanical		603	11-Aug-21 A	08-Mar-23	29-Jun-22	01-Sep-23	176		
Fabrication and FAT		603	11-Aug-21 A	06-Feb-23	29-Jun-22	01-Sep-23	206		
S5SDBP1150	Fabrication & FAT of Sludge Screen	350	11-Aug-21 A	26-Jul-22 A	14-Jan-23	14-Jan-23			S5SDBP1155
S5SDBP1260	Fabrication of Sludge Thickening Centrifuges	206	22-Oct-21 A	15-May-22 A	17-Oct-22	17-Oct-22			S5SDBP1212
S5SDBP1290	Fabrication of Sludge Dewatering Centrifuges	238	10-Nov-21 A	05-Jul-22 A	07-Dec-22	07-Dec-22			S5SDBP1242
S5SDBP1210	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	01-Sep-23	01-Sep-23			S5SDBC1770
S5SDBP1230	Fabrication and FAT of Recirculation Pumps	175	10-Mar-22 A	31-Aug-22 A	09-Aug-22	09-Aug-22			S5SDBP1185
S5SDBP1520	Fabrication and FAT of Hoist	197	21-Mar-22 A	15-Oct-22	25-Jul-22	18-Aug-22	-58		S5SDBP1525
S5SDBP1320	Fabrication and FAT of Centrate Transfer Pumps	160	25-Mar-22 A	31-Aug-22 A	02-Aug-22	02-Aug-22			S5SDBP1295
S5SDBP1340	Fabrication and FAT of Preparation Tank Mixers	235	28-Mar-22 A	17-Nov-22	20-Oct-22	16-Dec-22	29		S5SDBP1325
S5SDBP1350	Fabrication and FAT of Storage Tank Mixers	120	28-Mar-22 A	17-Nov-22	20-Oct-22	16-Dec-22	29		S5SDBP1335
S5SDBP1330	Fabrication and FAT of Thickening Polymer Powder Unit	226	06-Apr-22 A	17-Nov-22	07-Jul-22	02-Sep-22	-76		S5SDBP1315, S5SDBP1380
S5SDBP1380	Fabrication and FAT of Dewatering Polymer Powder Unit	226	06-Apr-22 A	17-Nov-22	07-Jul-22	02-Sep-22	-76	S5SDBP1330	S5SDBP1385
S5SDBP1170	Fabrication & FAT of External Sludge Transfer Pump	201	11-Apr-22 A	28-Oct-22	16-Nov-22	23-Dec-22	56		S5SDBP1085
S5SDBP1140	Fabrication & FAT of PS Screen Feed Pump	201	11-Apr-22 A	28-Oct-22	09-Nov-22	16-Dec-22	49		S5SDBP1145
S5SDBP1250	Fabrication and FAT of Thickening Centrifuge Feed Pump	201	11-Apr-22 A	28-Oct-22	09-Nov-22	16-Dec-22	49		S5SDBP1205
S5SDBP1360	Fabrication and FAT of Polymer Transfer Pumps	201	11-Apr-22 A	28-Oct-22	02-Nov-22	09-Dec-22	42		S5SDBP1345
S5SDBP1390	Fabrication and FAT of Polymer Dosing Pumps	201	11-Apr-22 A	28-Oct-22	24-Dec-22	30-Jan-23	94		S5SDBP1355
S5SDBP1450	Fabrication and FAT of Dewatering Centrifuge Feed Pumps	201	11-Apr-22 A	28-Oct-22	09-Nov-22	16-Dec-22	49		S5SDBP1455
S5SDBP1470	Fabrication and FAT of Sludge Transfer Pumps (THP By Pass)	201	11-Apr-22 A	28-Oct-22	02-Nov-22	09-Dec-22	42		S5SDBP1475



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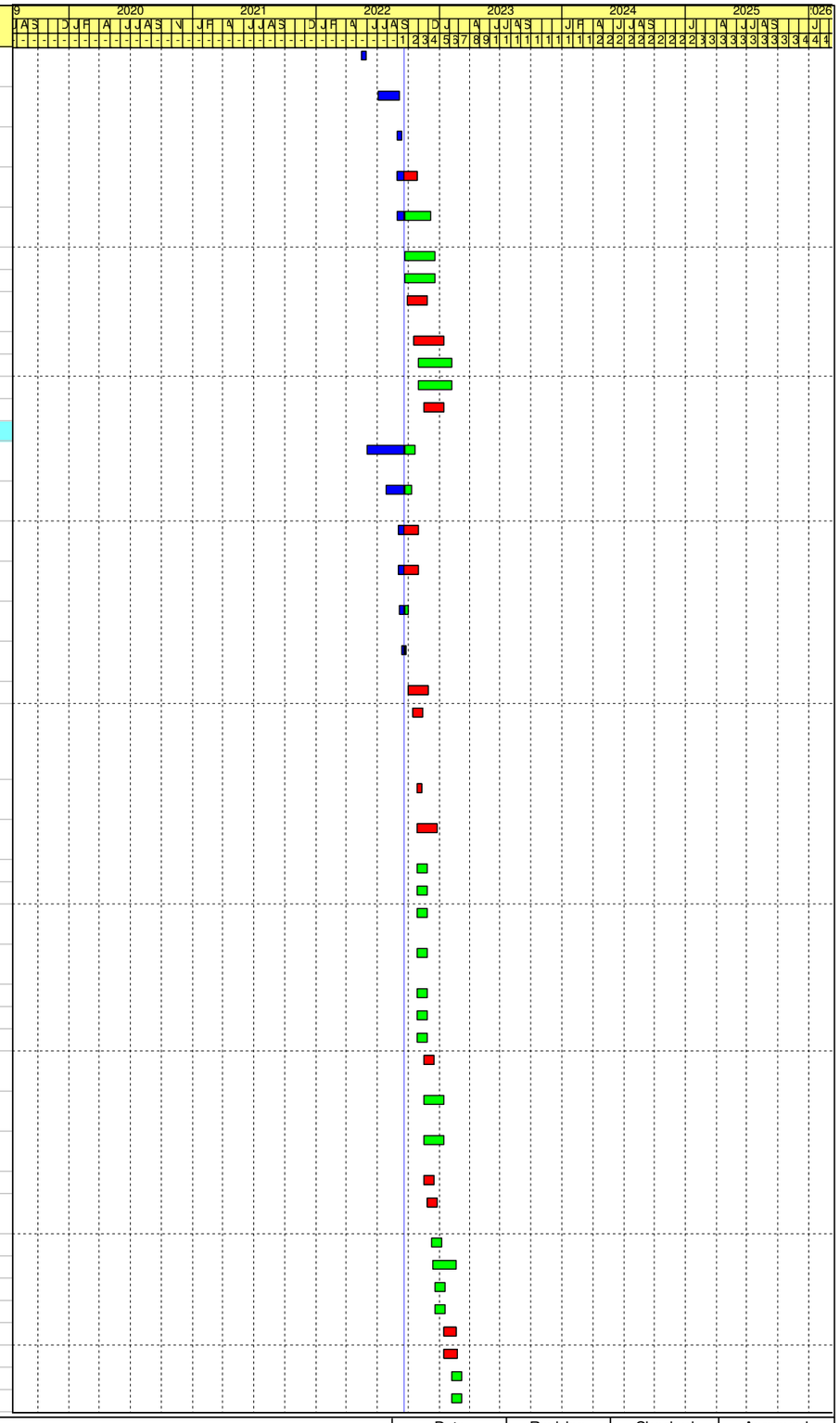
S5SDBP1212	FAT of Sludge Thickening Centrifuges	16	16-May-22 A	31-May-22 A	17-Oct-22	17-Oct-22		S5SDBP1260	S5SDBP1215
S5SDBP1242	FAT of Sludge Dewatering Centrifuges	62	06-Jul-22 A	05-Sep-22 A	07-Dec-22	07-Dec-22		S5SDBP1290	S5SDBP1245
S5SDBP1530	Fabrication and FAT of Steel Work (Monorails)	14	29-Aug-22 A	11-Sep-22 A	20-Dec-22	20-Dec-22			S5SDBP1535
S5SDBP1540	Fabrication and FAT of Steel Work (EOT)	60	29-Aug-22 A	27-Oct-22	29-Jun-22	04-Aug-22	-84		S5SDBP1545
S5SDBP1280	Fabrication and FAT of THP Feed Pump	100	31-Aug-22 A	08-Dec-22	07-Oct-22	24-Dec-22	16		S5SDBP1235
S5SDBP1240	Fabrication and FAT of Primary Sludge Holding Tank Mixer	90	22-Sep-22*	20-Dec-22	07-Nov-22	04-Feb-23	46		S5SDBP1195
S5SDBP1460	Fabrication and FAT of Mixers (Digested Sludge Holding Tank)	90	22-Sep-22*	20-Dec-22	07-Nov-22	04-Feb-23	46		S5SDBP1465
S5SDBP1370	Fabrication and FAT of FRP Tank (Thickening & Dewatering Polymer Dosing System)	60	29-Sep-22*	27-Nov-22	08-Sep-22	06-Nov-22	-21		S5SDBP1365
S5SDBP1300	Fabrication and FAT of Conveyor	90	17-Oct-22*	14-Jan-23	10-Oct-22	07-Jan-23	-7		S5SDBP1265
S5SDBP1270	Fabrication and FAT of Thickening Sludge Silo	98	01-Nov-22*	06-Feb-23	09-Dec-22	16-Mar-23	38		S5SDBP1225
S5SDBP1310	Fabrication and FAT of Sludge Skip (PS Screen & Dewatering Screen)	98	01-Nov-22	06-Feb-23	10-Dec-22	17-Mar-23	39	S5SDBP1630	S5SDBP1275
S5SDBP1565	Fabrication and FAT of Process Water Pumps	60	17-Nov-22	15-Jan-23	18-Oct-22	16-Dec-22	-30	S5SDBP1575	S5SDBP1495
Delivery		169	01-Jun-22 A	08-Mar-23	02-Aug-22	16-Apr-23	39		
S5SDBP1215	Delivery of Sludge Thickening Centrifuges	143	01-Jun-22 A	21-Oct-22	17-Oct-22	16-Nov-22	26	S5SDBP1212	S5SDBC1570
S5SDBP1155	Delivery of Sludge Screen	76	27-Jul-22 A	12-Oct-22	14-Jan-23	04-Feb-23	115	S5SDBP1150	S5SDBC1590
S5SDBP1185	Delivery of Recirculation Pumps	60	01-Sep-22 A	31-Oct-22	09-Aug-22	18-Sep-22	-43	S5SDBP1230	S5SDBC1115, S5SDBC1165
S5SDBP1295	Delivery of Centrate Transfer Pumps	60	01-Sep-22 A	31-Oct-22	02-Aug-22	11-Sep-22	-50	S5SDBP1320	S5SDBC1105
S5SDBP1245	Delivery of Sludge Dewatering Centrifuges	24	06-Sep-22 A	30-Sep-22	07-Dec-22	16-Dec-22	77	S5SDBP1242	S5SDBC1580
S5SDBP1535	Delivery of Steel Work (Monorails)	14	12-Sep-22 A	25-Sep-22	20-Dec-22	24-Dec-22	90	S5SDBP1530	S5SDBC1440, S5SDBC1550
S5SDBP1605	Fabrication and delivery of DI pipework (B/F)	60	01-Oct-22	29-Nov-22	04-Aug-22	02-Oct-22	-58	S5SDBP1615	S5SDBC1400
S5SDBP1525	Delivery of Hoist	30	16-Oct-22	14-Nov-22	19-Aug-22	17-Sep-22	-58	S5SDBP1520	S5SDBC1440, S5SDBC1550, S5SDBC1530, S5SDBC1540
S5SDBP1545	Delivery of Steel Work (EOT)	14	28-Oct-22	10-Nov-22	05-Aug-22	18-Aug-22	-84	S5SDBP1540	S5SDBC1530, S5SDBC1540
S5SDBP1555	Fabrication and delivery of DI pipework (G/F and 1/F)	60	28-Oct-22	26-Dec-22	03-Sep-22	01-Nov-22	-55	S5SDBP1485	S5SDBC1460, S5SDBC1620
S5SDBP1145	Delivery of PS Screen Feed Pump	31	29-Oct-22	28-Nov-22	17-Dec-22	16-Jan-23	49	S5SDBP1140	S5SDBC1790
S5SDBP1205	Delivery of Thickening Centrifuges Feed Pump	31	29-Oct-22	28-Nov-22	17-Dec-22	16-Jan-23	49	S5SDBP1250	S5SDBC1175
S5SDBP1345	Delivery of Polymer Transfer Pumps	31	29-Oct-22	28-Nov-22	10-Dec-22	09-Jan-23	42	S5SDBP1360	S5SDBC1145, S5SDBC1810
S5SDBP1355	Delivery of Polymer Dosing Pumps	31	29-Oct-22	28-Nov-22	31-Jan-23	02-Mar-23	94	S5SDBP1390	S5SDBC1610, S5SDBC1325
S5SDBP1455	Delivery of Dewatering Centrifuges Feed Pumps	31	29-Oct-22	28-Nov-22	17-Dec-22	16-Jan-23	49	S5SDBP1450	S5SDBC1185
S5SDBP1475	Delivery of Sludge Transfer Pumps (THP By Pass)	31	29-Oct-22	28-Nov-22	10-Dec-22	09-Jan-23	42	S5SDBP1470	S5SDBC1165
S5SDBP1085	Delivery of External Sludge Transfer Pump	31	29-Oct-22	28-Nov-22	24-Dec-22	23-Jan-23	56	S5SDBP1170	S5SDBC1135
S5SDBP1315	Delivery of Thickening Polymer Powder Unit	30	18-Nov-22	17-Dec-22	03-Sep-22	02-Oct-22	-76	S5SDBP1330	S5SDBC1470, S5SDBC1265
S5SDBP1325	Delivery of Preparation Tank Mixers	60	18-Nov-22	16-Jan-23	17-Dec-22	14-Feb-23	29	S5SDBP1340	S5SDBC1600, S5SDBC1285
S5SDBP1335	Delivery of Storage Tank Mixers	60	18-Nov-22	16-Jan-23	17-Dec-22	14-Feb-23	29	S5SDBP1350	S5SDBC1600, S5SDBC1285
S5SDBP1385	Delivery of Dewatering Polymer Powder Unit	30	18-Nov-22	17-Dec-22	03-Sep-22	02-Oct-22	-76	S5SDBP1380	S5SDBC1265
S5SDBP1365	Delivery of FRP Tank (Thickening & Dewatering Polymer Dosing System)	30	28-Nov-22	27-Dec-22	07-Nov-22	06-Dec-22	-21	S5SDBP1370	S5SDBC1560, S5SDBC1275
S5SDBP1235	Delivery of THP Feed Pump	30	09-Dec-22	07-Jan-23	25-Dec-22	23-Jan-23	16	S5SDBP1280	S5SDBC1780
S5SDBP1585	Fabrication and delivery of FRP ductworks	68	15-Dec-22	20-Feb-23	08-Jan-23	16-Mar-23	24	S5SDBP1595	S5SDBC1860
S5SDBP1195	Delivery of Primay Sludge Holding Tank Mixer	30	21-Dec-22	19-Jan-23	05-Feb-23	06-Mar-23	46	S5SDBP1240	S5SDBC1314
S5SDBP1465	Delivery of Mixers (Digested Sludge Holding Tank)	30	21-Dec-22	19-Jan-23	05-Feb-23	06-Mar-23	46	S5SDBP1460	S5SDBC1312
S5SDBP1265	Delivery of Conveyor	38	15-Jan-23	21-Feb-23	08-Jan-23	14-Feb-23	-7	S5SDBP1300	S5SDBC1450
S5SDBP1495	Delivery of Process Water Pumps	38	16-Jan-23	22-Feb-23	17-Dec-22	23-Jan-23	-30	S5SDBP1565	S5SDBC1125
S5SDBP1225	Delivery of Thickening Sludge Silo	30	07-Feb-23	08-Mar-23	17-Mar-23	15-Apr-23	38	S5SDBP1270	S5SDBC1450
S5SDBP1275	Delivery of Sludge Skip (PS Screen & Dewatering Screen)	30	07-Feb-23	08-Mar-23	18-Mar-23	16-Apr-23	39	S5SDBP1310	S5SDBC1870



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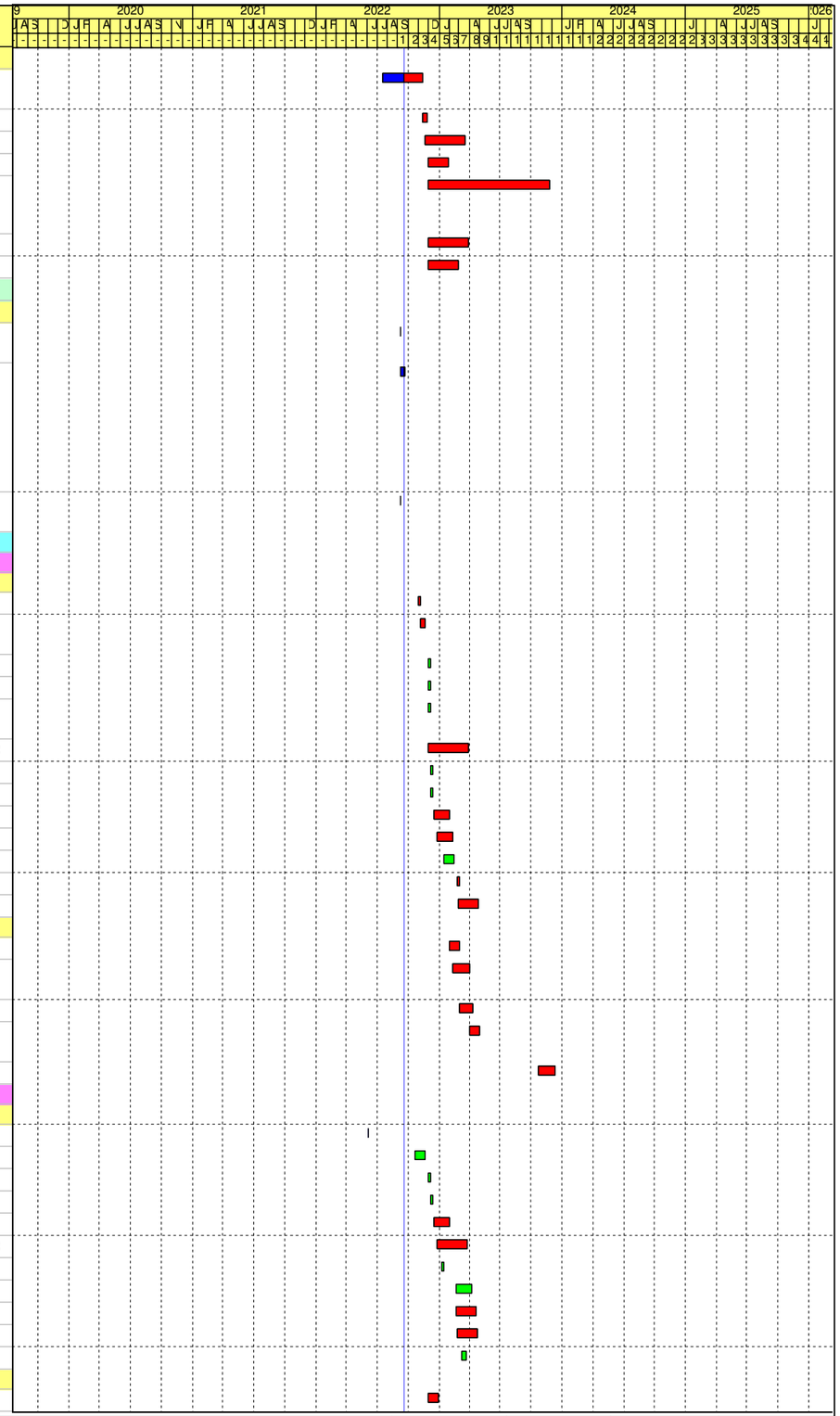
Electrical and Control		431	18-Jul-22 A	25-Nov-23	22-Mar-22	16-Mar-23	-254		
S5SDBP1600	Fabrication of 380V Transfomers	120	18-Jul-22 A	14-Nov-22	22-Jun-22	15-Aug-22	-91		S5SDBP1610
S5SDBP1610	FAT for 380V Transfomers	14	15-Nov-22	28-Nov-22	16-Aug-22	29-Aug-22	-91	S5SDBP1600	S5SDBP1620
S5SDBP1200	Fabrication & Delivery of Genset	120	20-Nov-22	19-Mar-23	21-Jul-22	17-Nov-22	-122	S5SDBP1190	S5SDBC1500
S5SDBP1620	Delivery of 380V Transfomers	60	29-Nov-22	27-Jan-23	30-Aug-22	28-Oct-22	-91	S5SDBP1610	S5SDBC1510
S5SDBP1180	Delivery of SCADA System	360	01-Dec-22*	25-Nov-23	22-Mar-22	16-Mar-23	-254		S5SDBC1730, S5SDBC1760, S5SDBC1700
S5SDBP1220	Fabrication & Delivery of LV Switchboard	120	01-Dec-22*	30-Mar-23	15-Jul-22	11-Nov-22	-139		S5SDBC1520
S5SDBP1171	Fabrication & Delivery of Cable	90	01-Dec-22*	28-Feb-23	13-Sep-22	11-Dec-22	-79		S5SDBC1225
Installation		497	06-Jun-22 A	10-Dec-23	19-Aug-22	01-Jan-24	22		
NCE-PMI-0325 - Provision of 2 nos of 3 Tons Mobile A-frame with Electrical Hoist in SDB		497	06-Jun-22 A	10-Dec-23	19-Aug-22	01-Jan-24	22		
S5SDBC1650	Access to Sludge Dewatering Building (Impacted by EWN-0314)	1	09-Sep-22 A	09-Sep-22 A	21-Aug-22	21-Aug-22			S5SDBC1670
S5SDBC1670	Mobilisation	15	09-Sep-22 A	23-Sep-22	21-Aug-22	23-Aug-22	-31	S5SDBC1650, S5SDBC1660	S5SDBC1430, S5SDBC1480, S5SDBC1520, S5SDBC1410, S5SDBC1500, S5SDBC1115, S5SDBC1265
S5SDBC1660	Access to Sludge Dewatering Building (Impacted by EWN-0314-1)	1	09-Sep-22 A	09-Sep-22 A	21-Aug-22	21-Aug-22			S5SDBC1670
E&M Installation		497	06-Jun-22 A	10-Dec-23	19-Aug-22	30-Apr-23	-224		
Basement		405	01-Nov-22	10-Dec-23	12-Sep-22	31-Mar-23	-254		
Mechanical		179	01-Nov-22	28-Apr-23	12-Sep-22	16-Mar-23	-43		
S5SDBC1105	Installation of Centrate Transfer Pumps (3 nos.)	7	01-Nov-22	07-Nov-22	12-Sep-22	18-Sep-22	-50	S5SDBP1295	S5SDBC1400,
S5SDBC1115	Installation of Recirculation Pumps for Centrate Tank, Sludge Blend Tanks & THP by-pass Sludge Holding Tank (6 nos,)	14	08-Nov-22	21-Nov-22	19-Sep-22	02-Oct-22	-50	S5SDBP1185, S5SDBC1670,	S5SDBT1080, S5SDBC1400
S5SDBC1135	Installation of External Sludge Transfer Pumps (2 nos.)	7	29-Nov-22	05-Dec-22	24-Jan-23	30-Jan-23	56	S5SDBP1085	S5SDBT1080,
S5SDBC1145	Installation of Sludge Dewatering Polymer Transfer Pumps (2 nos.)	7	29-Nov-22	05-Dec-22	10-Jan-23	16-Jan-23	42	S5SDBP1345	S5SDBT1080,
S5SDBC1165	Installation of THP by-pass Sludge Holding Tank Transfer Pumps (4 nos.)	7	29-Nov-22	05-Dec-22	10-Jan-23	16-Jan-23	42	S5SDBP1475, S5SDBP1185,	S5SDBT1080, S5SDBC1400,
S5SDBC1400	Installation of Process Pipe	120	30-Nov-22	29-Mar-23	03-Oct-22	30-Jan-23	-58	S5SDBC1115,	S5SDBT1100,
S5SDBC1175	Installation of Thickening Centrifuges Feed Pumps (4 nos.)	7	06-Dec-22	12-Dec-22	17-Jan-23	23-Jan-23	42	S5SDBP1205,	S5SDBT1080,
S5SDBC1185	Installation of Dewatering Centrifuges Feed Pumps (3 nos.)	7	06-Dec-22	12-Dec-22	17-Jan-23	23-Jan-23	42	S5SDBP1455,	S5SDBT1080,
S5SDBC1265	Installation of Dewatering Polymer Powder Feed Units	45	18-Dec-22	31-Jan-23	03-Oct-22	16-Nov-22	-76	S5SDBP1385,	S5SDBC1710,
S5SDBC1275	Installation of Dewatering Polymer Preparation Tanks	45	28-Dec-22	10-Feb-23	07-Dec-22	20-Jan-23	-21	S5SDBP1365	S5SDBC1560
S5SDBC1285	Installation of Polymer Mixer	30	17-Jan-23	15-Feb-23	15-Feb-23	16-Mar-23	29	S5SDBP1335,	S5SDBT1160
S5SDBC1125	Installation of Process Water Pumps (3 nos.)	7	23-Feb-23	01-Mar-23	24-Jan-23	30-Jan-23	-30	S5SDBP1495,	S5SDBT1080,
S5SDBC1305	Installation of Instruments	60	28-Feb-23	28-Apr-23	01-Jan-23	01-Mar-23	-58	S5SDBC1400	S5SDBT1181
Electrical		313	01-Feb-23	10-Dec-23	17-Nov-22	31-Mar-23	-254		
S5SDBC1710	Installation of Electrical System - Cable Containment	30	01-Feb-23	02-Mar-23	17-Nov-22	16-Dec-22	-76	S5SDBC1265	S5SDBC1072,
S5SDBC1072	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50	11-Feb-23	01-Apr-23	27-Nov-22	15-Jan-23	-76	S5SDBC1710	S5SDBC1074
S5SDBC1095	Installation of Control Cable Laying	40	03-Mar-23	11-Apr-23	01-Jan-23	09-Feb-23	-61	S5SDBC1710	S5SDBC1730
S5SDBC1074	Installation of Electrical System - Lighting and Small Power Accessories	30	02-Apr-23	01-May-23	16-Jan-23	14-Feb-23	-76	S5SDBC1072	S5SDBT1120
S5SDBC1730	Installation of SCADA System / Control Monitoring System	50	22-Oct-23	10-Dec-23	10-Feb-23	31-Mar-23	-254	S5SDBP1180,	S5SDBT1180
Ground Floor		497	06-Jun-22 A	10-Dec-23	18-Sep-22	30-Apr-23	-224		
Mechanical		268	06-Jun-22 A	25-Apr-23	18-Sep-22	30-Apr-23	5		
S5SDBC1430	Installation of A-Frame (Effected by NCE-PMI-0325)	3	06-Jun-22 A	06-Jun-22 A	18-Sep-22	18-Sep-22		S5SDBC1670	S5SDBC1560,
S5SDBC1440	Installation of Monorail LA-01-01	30	23-Oct-22	21-Nov-22	25-Dec-22	23-Jan-23	63	S5SDBC1550	S5SDBC1810
S5SDBC1790	Installation of PS Screen Feed Pumps (3 nos.)	7	29-Nov-22	05-Dec-22	17-Jan-23	23-Jan-23	49	S5SDBP1145	S5SDBT1080,
S5SDBC1810	Installation of Sludge Thickening Polymer Transfer Pumps (2 nos.)	7	06-Dec-22	12-Dec-22	24-Jan-23	30-Jan-23	49	S5SDBP1345,	S5SDBT1080,
S5SDBC1470	Installation of Sludge Thickening Polymer Preparation Tanks	45	18-Dec-22	31-Jan-23	17-Dec-22	30-Jan-23	-1	S5SDBP1315	S5SDBT1058,
S5SDBC1460	Installation of Process Pipe	90	27-Dec-22	26-Mar-23	02-Nov-22	30-Jan-23	-55	S5SDBP1555,	S5SDBT1100,
S5SDBC1780	Installation of THP Feed Pumps (4 nos.)	7	08-Jan-23	14-Jan-23	24-Jan-23	30-Jan-23	16	S5SDBP1235	S5SDBT1080,
S5SDBC1860	Installation of DOU Ductworks	45	21-Feb-23	06-Apr-23	17-Mar-23	30-Apr-23	24	S5SDBP1585	S5T1060
S5SDBC1450	Installation of Silo & Conveyor	60	22-Feb-23	22-Apr-23	15-Feb-23	15-Apr-23	-7	S5SDBP1225,	S5SDBT1068
S5SDBC1840	Installation of Instruments	60	25-Feb-23	25-Apr-23	01-Jan-23	01-Mar-23	-55	S5SDBC1460	S5SDBT1181
S5SDBC1870	Position of Sludge Skips and Installation of Hydraulic System	14	09-Mar-23	22-Mar-23	17-Apr-23	30-Apr-23	39	S5SDBP1275	S5T1060
Electrical		375	01-Dec-22	10-Dec-23	03-Oct-22	31-Mar-23	-254		
S5SDBC1680	Installation of Electrical System - Cable Containment	30	01-Dec-22	30-Dec-22	03-Oct-22	01-Nov-22	-59	S5SDBC1480	S5SDBC1172,



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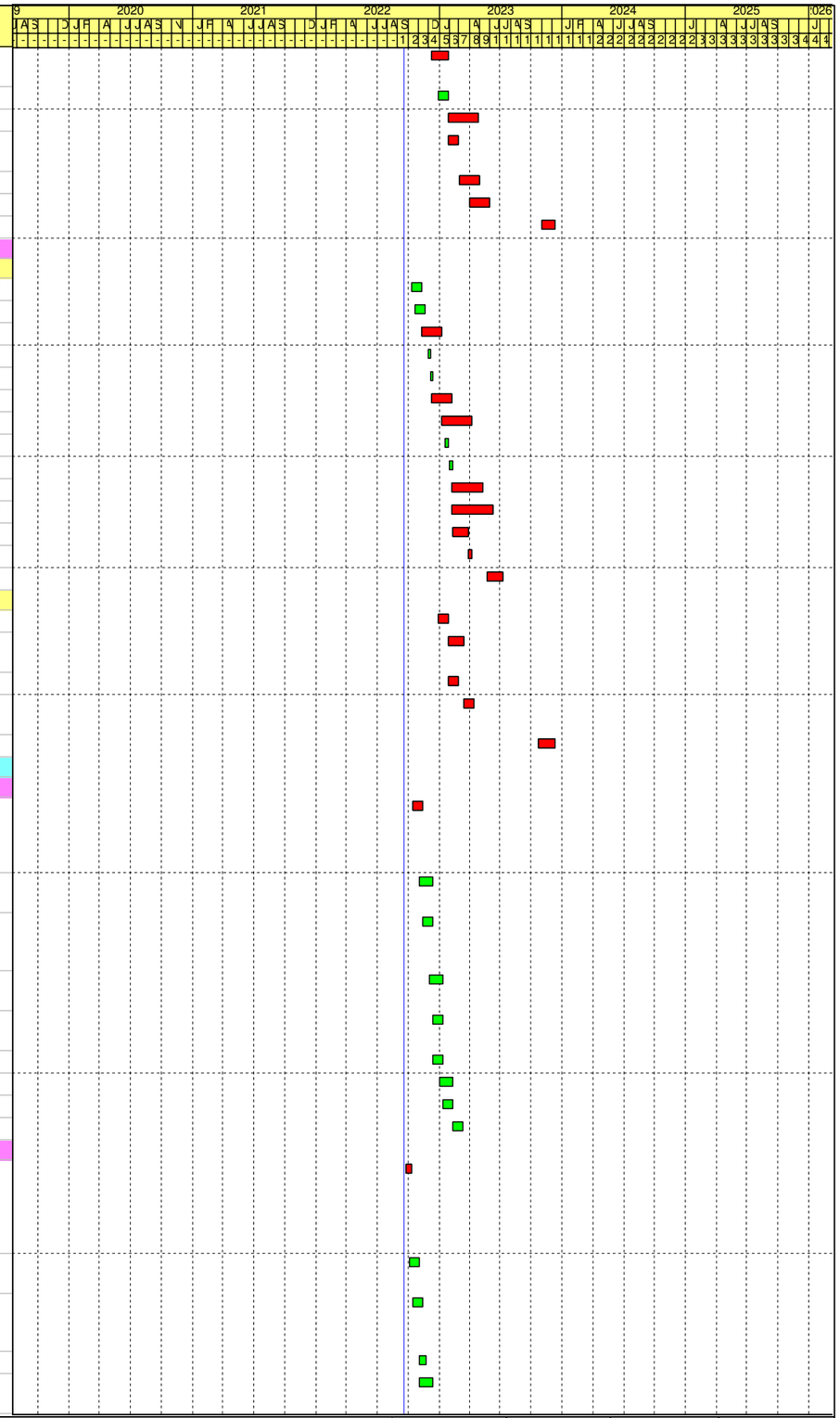
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5SDBC1172	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	50	11-Dec-22	29-Jan-23	27-Nov-22	15-Jan-23	-14	S5SDBC1680	S5SDBC1174
S5SDBC1195	Installation of Control Cable Laying	30	31-Dec-22	29-Jan-23	21-Jan-23	19-Feb-23	21	S5SDBC1680	S5SDBC1700
S5SDBC1510	TX Room Installation	90	28-Jan-23	27-Apr-23	29-Oct-22	26-Jan-23	-91	S5SDBP1620	S5SDBT1190
S5SDBC1174	Installation of Electrical System - Lighting and Small Power Accessories	30	30-Jan-23	28-Feb-23	16-Jan-23	14-Feb-23	-14	S5SDBC1172	S5SDBT1120
S5SDBC1520	LV Switch Room Installation	60	01-Mar-23	29-Apr-23	13-Oct-22	11-Dec-22	-139	S5SDBC1670	S5SDBT1090,
S5SDBC1225	Installation of Power Cable Laying and Termination	60	01-Apr-23	30-May-23	12-Dec-22	09-Feb-23	-110	S5SDBC1520	S5SDBT1060
S5SDBC1700	Installation of SCADA System / Control Monitoring System	40	01-Nov-23	10-Dec-23	20-Feb-23	31-Mar-23	-254	S5SDBP1180,	S5SDBT1180
First Floor		424	13-Oct-22	10-Dec-23	19-Aug-22	15-Apr-23	-239		
Mechanical		269	13-Oct-22	08-Jul-23	19-Aug-22	15-Apr-23	-84		
S5SDBC1590	Installation of Screen Press	30	13-Oct-22	11-Nov-22	05-Feb-23	06-Mar-23	115	S5SDBC1430	S5SDBT1170,
S5SDBC1550	Installation of Monorail LA-01-04	30	23-Oct-22	21-Nov-22	25-Dec-22	23-Jan-23	63	S5SDBP1535,	S5SDBC1440
S5SDBC1540	Installation of EOT Crane LA-01-02	60	11-Nov-22	09-Jan-23	19-Aug-22	17-Oct-22	-84	S5SDBP1545,	S5SDBC1580,
S5SDBC1610	Installation of Sludge Dewatering Polymer Dosing Pumps (4 nos.)	7	29-Nov-22	05-Dec-22	03-Mar-23	09-Mar-23	94	S5SDBP1355	S5SDBT1080,
S5SDBC1325	Installation of Sludge Thickening Polymer Dosing Pumps (5 nos.)	7	06-Dec-22	12-Dec-22	10-Mar-23	16-Mar-23	94	S5SDBP1355,	S5SDBT1080,
S5SDBC1530	Installation of EOT Crane LA-01-03	60	11-Dec-22	08-Feb-23	18-Sep-22	16-Nov-22	-84	S5SDBC1430	S5SDBC1570
S5SDBC1580	Installation of Sludge Dewatering Centrifuges (3 nos)	90	10-Jan-23	09-Apr-23	17-Dec-22	16-Mar-23	-24	S5SDBC1540	S5SDBT1070,
S5SDBC1314	Installation of Mixer for PS holding tank	10	20-Jan-23	29-Jan-23	07-Mar-23	16-Mar-23	46	S5SDBP1195,	S5SDBT1160
S5SDBC1312	Installation of Mixer for Digested Sludge Holding Tank	10	01-Feb-23	10-Feb-23	07-Mar-23	16-Mar-23	34	S5SDBP1465,	S5SDBT1160
S5SDBC1570	Installation of Sludge Thickening Centrifuges (4 nos.)	90	09-Feb-23	09-May-23	17-Nov-22	14-Feb-23	-84	S5SDBC1530	S5SDBT1032,
S5SDBC1620	Installation of Process Pipe	120	09-Feb-23	08-Jun-23	17-Nov-22	16-Mar-23	-84	S5SDBP1555,	S5SDBT1100,
S5SDBC1560	Installation of Sludge Dewatering / Thickening Polymer Dilution Tanks	45	11-Feb-23	27-Mar-23	21-Jan-23	06-Mar-23	-21	S5SDBC1430	S5SDBT1058,
S5SDBC1600	Installation of Mixer for Polymer Tank	10	28-Mar-23	06-Apr-23	07-Mar-23	16-Mar-23	-21	S5SDBP1335,	S5SDBT1160
S5SDBC1850	Installation of Instruments	45	25-May-23	08-Jul-23	02-Mar-23	15-Apr-23	-84	S5SDBC1620	S5SDBT1181
Electrical		345	31-Dec-22	10-Dec-23	02-Nov-22	31-Mar-23	-254		
S5SDBC1740	Installation of Electrical System - Cable Containment	30	31-Dec-22	29-Jan-23	02-Nov-22	01-Dec-22	-59	S5SDBC1680	S5SDBT1060,
S5SDBC1372	Installation of Electrical System - Wall Mount Equipment, Conduit & Wiring	45	30-Jan-23	15-Mar-23	02-Dec-22	15-Jan-23	-59	S5SDBC1740	S5SDBC1374
S5SDBC1800	Installation of Control Cable Laying	30	30-Jan-23	28-Feb-23	11-Jan-23	09-Feb-23	-19	S5SDBC1740	S5SDBC1760
S5SDBC1374	Installation of Electrical System - Lighting and Small Power Accessories	30	16-Mar-23	14-Apr-23	16-Jan-23	14-Feb-23	-59	S5SDBC1372	S5SDBT1120
S5SDBC1760	Installation of SCADA System / Control Monitoring System	50	22-Oct-23	10-Dec-23	10-Feb-23	31-Mar-23	-254	S5SDBC1740	S5SDBT1180
BS Installation		267	24-Sep-22	17-Jun-23	24-Aug-22	01-Jan-24	198		
Basement		150	14-Oct-22	12-Mar-23	13-Sep-22	01-Jan-24	295		
S5SDBC1410	Installation of FS System - Main Pipework	30	14-Oct-22	12-Nov-22	13-Sep-22	12-Oct-22	-31	S5SDBC1670, S5SDBC1480	S5SDBC1420, S5SDBC1052, S5SDBC1710, S5SDBC1630
S5SDBC1052	Installation of FS System - Branch Pipework, Conduit & Wiring	40	03-Nov-22	12-Dec-22	13-Aug-23	21-Sep-23	283	S5SDBC1410	S5SDBC1054, S5S1130
S5SDBC1420	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30	13-Nov-22	12-Dec-22	19-Jun-23	18-Jul-23	218	S5SDBC1410, S5SDBC1490	S5SDBC1640, S5SDBC1062, S5SDBC1720
S5SDBC1062	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40	03-Dec-22	11-Jan-23	08-Aug-23	16-Sep-23	248	S5SDBC1420	S5SDBC1064
S5SDBC1720	Installation of Plumbing System - Main Pipework	30	13-Dec-22	11-Jan-23	04-Sep-23	03-Oct-23	265	S5SDBC1690, S5SDBC1420	S5SDBC1082, S5SDBC1750
S5SDBC1054	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	30	13-Dec-22	11-Jan-23	02-Oct-23	31-Oct-23	293	S5SDBC1052	S5SDBT1130
S5SDBC1082	Installation of Plumbing System - Branch Pipework	40	02-Jan-23	10-Feb-23	24-Oct-23	02-Dec-23	295	S5SDBC1720	S5SDBC1084
S5SDBC1064	Installation of MVAC System - Air Grills & Diffuser	30	12-Jan-23	10-Feb-23	17-Sep-23	16-Oct-23	248	S5SDBC1062	S5SDBT1140
S5SDBC1084	Installation of Plumbing System - Sanitary Fitting	30	11-Feb-23	12-Mar-23	03-Dec-23	01-Jan-24	295	S5SDBC1082	S5SDBT1150
Ground Floor		267	24-Sep-22	17-Jun-23	24-Aug-22	01-Jan-24	198		
S5SDBC1480	Installation of FS System - Main Pipework	20	24-Sep-22	13-Oct-22	24-Aug-22	12-Sep-22	-31	S5SDBC1670	S5SDBC1490, S5SDBC1680, S5SDBC1690, S5SDBC1152, S5SDBC1410
S5SDBC1152	Installation of FS System - Branch Pipework, Conduit & Wiring	30	04-Oct-22	02-Nov-22	23-Aug-23	21-Sep-23	323	S5SDBC1480	S5SDBC1154, S5S1130
S5SDBC1490	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30	14-Oct-22	12-Nov-22	20-May-23	18-Jun-23	218	S5SDBC1480	S5SDBC1162, S5SDBC1690, S5SDBC1420
S5SDBC1154	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	20	03-Nov-22	22-Nov-22	12-Oct-23	31-Oct-23	343	S5SDBC1152	S5SDBT1130
S5SDBC1162	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40	03-Nov-22	12-Dec-22	08-Aug-23	16-Sep-23	278	S5SDBC1490	S5SDBC1164



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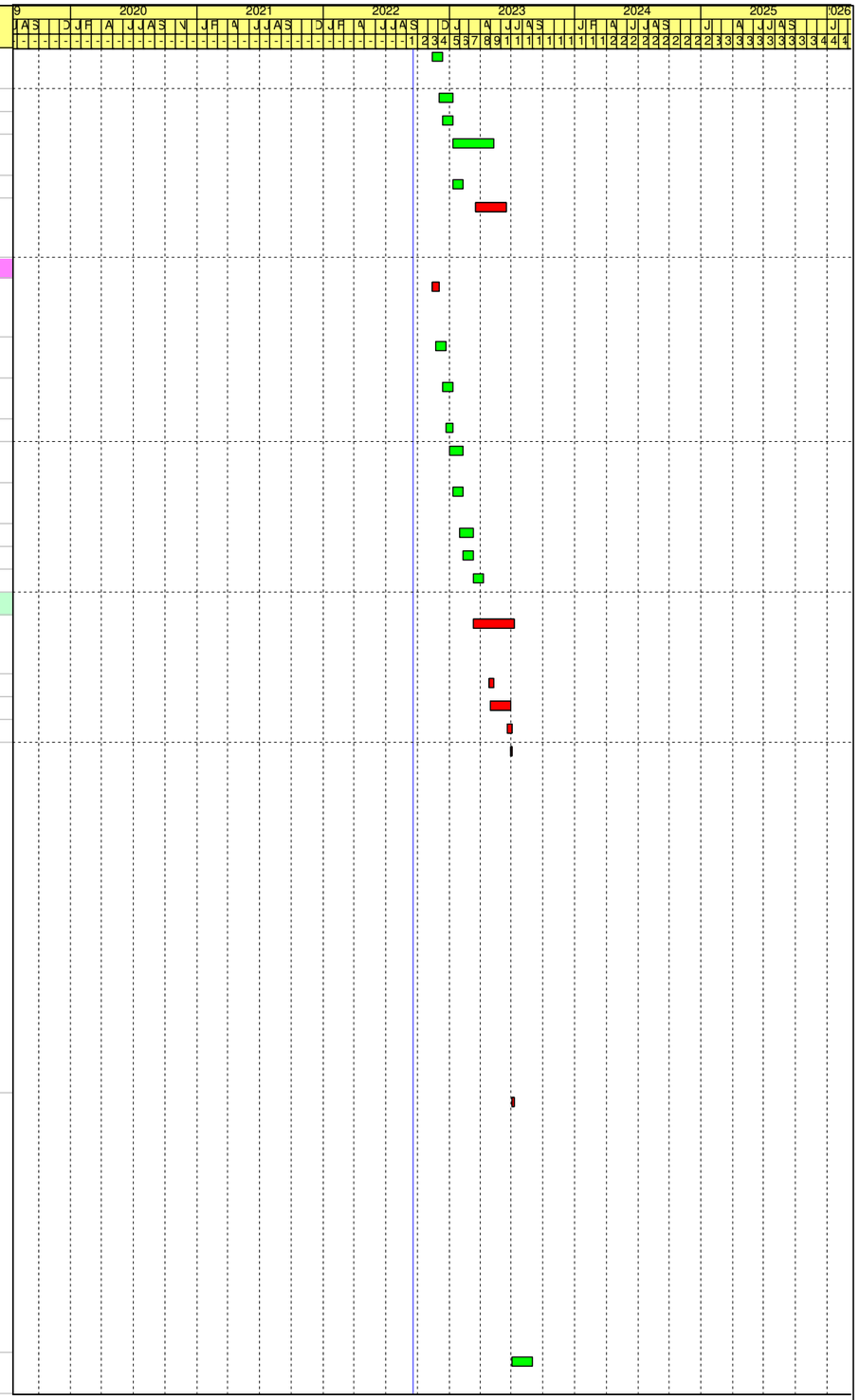
S5SDBC1690	Installation of Plumbing System - Main Pipework	30	13-Nov-22	12-Dec-22	05-Aug-23	03-Sep-23	265	S5SDBC1480, S5SDBC1490	S5SDBC1720, S5SDBC1182
S5SDBC1182	Installation of Plumbing System - Branch Pipework	40	03-Dec-22	11-Jan-23	24-Oct-23	02-Dec-23	325	S5SDBC1690	S5SDBC1184
S5SDBC1164	Installation of MVAC System - Air Grills & Diffuser	30	13-Dec-22	11-Jan-23	17-Sep-23	16-Oct-23	278	S5SDBC1162	S5SDBT1140
S5SDBC1770	Installation of Lift	120	11-Jan-23	10-May-23	01-Sep-23	29-Dec-23	233	S5SDBP1210, S5WS2C1190	S5SDBT1110
S5SDBC1184	Installation of Plumbing System - Sanitary Fitting	30	12-Jan-23	10-Feb-23	03-Dec-23	01-Jan-24	325	S5SDBC1182	S5SDBT1150
S5SDBC1500	Generator & Fuel Room Installation	90	20-Mar-23	17-Jun-23	18-Nov-22	15-Feb-23	-122	S5SDBP1200, S5SDBC1670, S5S1010	S5SDBT1078
First Floor		150	13-Nov-22	11-Apr-23	13-Oct-22	01-Jan-24	265		
S5SDBC1630	Installation of FS System - Main Pipework	20	13-Nov-22	02-Dec-22	13-Oct-22	01-Nov-22	-31	S5SDBC1410	S5SDBC1352, S5SDBC1740, S5SDBC1640
S5SDBC1352	Installation of FS System - Branch Pipework, Conduit & Wiring	30	23-Nov-22	22-Dec-22	23-Aug-23	21-Sep-23	273	S5SDBC1630	S5SDBC1354, S5S1130
S5SDBC1640	Installation of MVAC System - Ceiling Mount Equipment, Main Ductwork and Pipework	30	13-Dec-22	11-Jan-23	19-Jul-23	17-Aug-23	218	S5SDBC1420, S5SDBC1630	S5SDBC1362, S5SDBC1750
S5SDBC1354	Installation of FS System - Dropper, Sprinkler Head, Detector & Devices	20	23-Dec-22	11-Jan-23	12-Oct-23	31-Oct-23	293	S5SDBC1352	S5SDBT1130
S5SDBC1362	Installation of MVAC System - Wall Mount Equipment, Branch Duct & Pipework	40	02-Jan-23	10-Feb-23	08-Aug-23	16-Sep-23	218	S5SDBC1640	S5SDBC1364
S5SDBC1750	Installation of Plumbing System - Main Pipework	30	12-Jan-23	10-Feb-23	04-Oct-23	02-Nov-23	265	S5SDBC1640, S5SDBC1720	S5SDBC1820
S5SDBC1820	Installation of Plumbing System - Branch Pipework	40	01-Feb-23	12-Mar-23	24-Oct-23	02-Dec-23	265	S5SDBC1750	S5SDBC1830
S5SDBC1364	Installation of MVAC System - Air Grills & Diffuser	30	11-Feb-23	12-Mar-23	17-Sep-23	16-Oct-23	218	S5SDBC1362	S5SDBT1140
S5SDBC1830	Installation of Plumbing System - Sanitary Fitting	30	13-Mar-23	11-Apr-23	03-Dec-23	01-Jan-24	265	S5SDBC1820	S5SDBT1150
Testing and Commissioning		305	11-Mar-23	09-Jan-24	12-Dec-22	27-Feb-24	49		
S5SDBT1100	Pipe Pressure Test	120	11-Mar-23	08-Jul-23	01-Jan-23	30-Apr-23	-69	S5SDBC1620, S5SDBC1460, S5SDBC1400	S5T1060
S5SDBT1190	SAT for Tranformer	14	28-Apr-23	11-May-23	27-Jan-23	09-Feb-23	-91	S5SDBC1510	S5SDBT1060
S5SDBT1090	SAT for Switchboard	60	30-Apr-23	28-Jun-23	12-Dec-22	09-Feb-23	-139	S5SDBC1520	S5SDBT1060
S5SDBT1078	SAT of Emergency Generator System	15	18-Jun-23	02-Jul-23	16-Feb-23	02-Mar-23	-122	S5SDBC1500	S5S1280
S5SDBT1060	Ready for Power Energisation - LV	5	29-Jun-23	03-Jul-23	10-Feb-23	14-Feb-23	-139	S5SDBC1740, S5SDBT1090, S5SDBC1225, S5SDBT1190	S5SDBT1070, S5SDBT1110, S5SDBT1032, S5SDBT1048, S5SDBT1047, S5SDBT1058, S5SDBT1068, S5SDBT1120, S5SDBT1130, S5SDBT1140, S5SDBT1150, S5SDBT1160, S5SDBT1170, S5SDBT1180, S5SDBT1181, S5SDBT1044, S5SDBT1045, S5SDBT1080, S5SDBT1191
S5SDBT1080	Dry Test for Pumps	7	04-Jul-23	10-Jul-23	10-Apr-23	16-Apr-23	-85	S5SDBC1790, S5SDBC1115, S5SDBC1125, S5SDBC1135, S5SDBC1145, S5SDBC1165, S5SDBC1175, S5SDBC1185, S5SDBC1780, S5SDBC1810, S5SDBC1610, S5SDBC1325, S5SDBC1105, S5SDBT1060	S5SDBT1044, S5SDBT1047
S5SDBT1110	SAT for Lift	60	04-Jul-23	01-Sep-23	30-Dec-23	27-Feb-24	179	S5SDBC1770, S5SDBT1060	S5S1090



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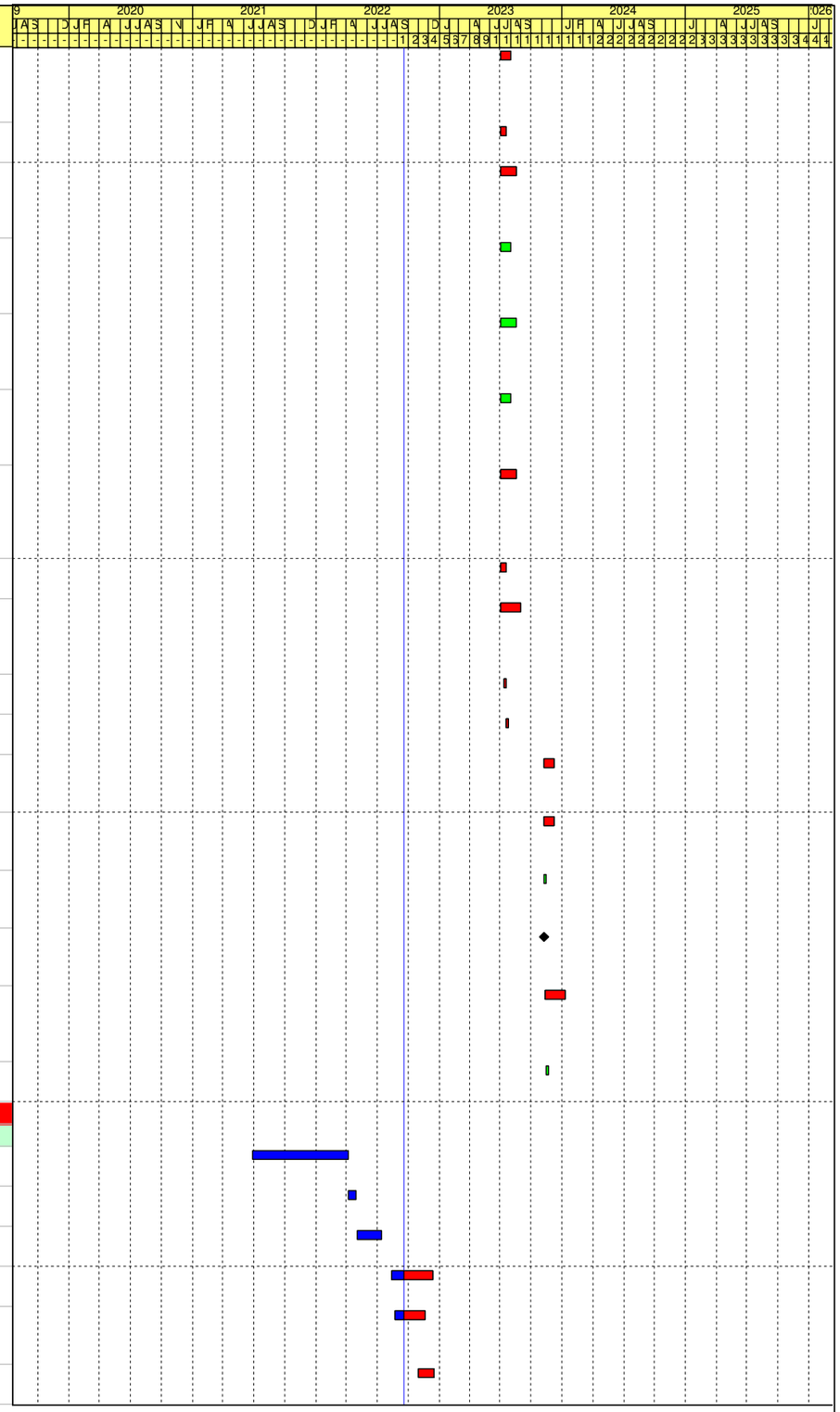
S5SDBT1058	SAT for Polymer System	30	04-Jul-23	02-Aug-23	01-Apr-23	30-Apr-23	-94	S5SDBC1560, S5SDBC1470, S5SDBC1265, S5SDBT1060	S5T1060
S5SDBT1068	SAT for Conveyor	15	04-Jul-23	18-Jul-23	16-Apr-23	30-Apr-23	-79	S5SDBC1450, S5SDBT1060	S5T1060
S5SDBT1120	SAT of Electrical System	45	04-Jul-23	17-Aug-23	15-Feb-23	31-Mar-23	-139	S5SDBC1174, S5SDBC1074, S5SDBC1374, S5SDBT1060	S5SDBT1191
S5SDBT1130	SAT of FS System	30	04-Jul-23	02-Aug-23	01-Nov-23	30-Nov-23	120	S5SDBC1354, S5SDBC1154, S5SDBC1054, S5SDBT1060	S5S1220
S5SDBT1140	SAT of MVAC System	45	04-Jul-23	17-Aug-23	17-Oct-23	30-Nov-23	105	S5SDBC1364, S5SDBC1164, S5SDBC1064, S5SDBT1060	S5S1220
S5SDBT1150	SAT of Plumbing System	30	04-Jul-23	02-Aug-23	02-Jan-24	31-Jan-24	182	S5SDBC1084, S5SDBC1184, S5SDBC1830, S5SDBT1060	S5S1160
S5SDBT1160	SAT of Mixer	45	04-Jul-23	17-Aug-23	17-Mar-23	30-Apr-23	-109	S5SDBC1600, S5SDBC1312, S5SDBC1314, S5SDBC1285, S5SDBT1060	S5T1060
S5SDBT1170	SAT of Screen Press	15	04-Jul-23	18-Jul-23	16-Apr-23	30-Apr-23	-79	S5SDBC1590, S5SDBT1060	S5T1060
S5SDBT1181	SAT of Instrumentation	60	04-Jul-23	01-Sep-23	02-Mar-23	30-Apr-23	-124	S5SDBC1850, S5SDBC1840, S5SDBC1305, S5SDBT1060	S5T1060
S5SDBT1044	Wet Test for Pumps (excluded FS Water Pumps and Process Water Pumps)	7	11-Jul-23	17-Jul-23	17-Apr-23	23-Apr-23	-85	S5SDBT1080, S5SDBT1060	S5SDBT1045
S5SDBT1045	Functional Check for Pumps (excluded FS Water Pumps and Process Water Pumps)	7	18-Jul-23	24-Jul-23	24-Apr-23	30-Apr-23	-85	S5SDBT1044, S5SDBT1060	S5T1060
S5SDBT1070	SAT for Sludge Dewatering Centrifuges	30	09-Nov-23	08-Dec-23	01-Apr-23	30-Apr-23	-222	S5SDBT1060, S5SDBC1580, S5SDBT1191	S5T1060
S5SDBT1032	SAT for Sludge Thickening Cnetrifuge	30	09-Nov-23	08-Dec-23	01-Apr-23	30-Apr-23	-222	S5SDBT1060, S5SDBC1570, S5SDBT1191	S5T1060
S5SDBT1047	Wet Test for Pumps (FS Water Pumps and Process Water Pumps)	7	09-Nov-23	15-Nov-23	17-Nov-23	23-Nov-23	8	S5SDBT1080, S5SDBT1060, S5SDBT1191	S5SDBT1048
S5SDBT1191	Permanent Power ready for T&C	0	09-Nov-23		01-Apr-23		-222	S5SDBT1060, S5WS2C1120, S5SDBT1120	S5SDBT1032, S5SDBT1047, S5SDBT1070
S5SDBT1180	SAT of SCADA, PMS, CMMS and IDMS	60	11-Nov-23	09-Jan-24	02-Mar-23	30-Apr-23	-254	S5SDBC1760, S5SDBC1700, S5SDBC1730, S5SDBT1060	S5T1060
S5SDBT1048	Functional Check for Pumps (FS Water Pumps and Process Water Pumps)	7	16-Nov-23	22-Nov-23	24-Nov-23	30-Nov-23	8	S5SDBT1060, S5SDBT1047	S5S1220
Combined Heat & Power Building		919	29-Jun-21 A	25-Jan-24	16-Apr-22	31-Jan-24	6		
Fabrication, FAT & Delivery of Major Plant & Materials		889	29-Jun-21 A	26-Dec-23	16-Apr-22	11-Apr-23	-259		
S5CHPP1010	Fabrication of CHP System	270	29-Jun-21 A	06-Apr-22 A	15-Sep-22	15-Sep-22		S2P1070, S2D1610	S5CHPP1020
S5CHPP1020	FAT for CHP Generators	14	07-Apr-22 A	30-Apr-22 A	15-Sep-22	15-Sep-22		S5CHPP1010	S5CHPP1030
S5CHPP1030	Delivery of CHP Generators	60	02-May-22 A	14-Jul-22 A	15-Sep-22	15-Sep-22		S5CHPP1020	S5CHPC1050
S5CHPP1000	Fabrication & Delivery of Pre-Treatment	120	15-Aug-22 A	12-Dec-22	27-Jun-22	17-Sep-22	-86		S5CHPC1170
S5CHPP1060	Fabrication & Delivery of Lifting Appliances	90	24-Aug-22 A	21-Nov-22	16-Apr-22	16-Jun-22	-158		S5CHPC1030, S5CHPC1160, S5CHPC1040
S5CHPP1070	Fabrication & Delivery of Pipeworks & Associated Valves	45	01-Nov-22*	15-Dec-22	04-Aug-22	17-Sep-22	-89	S5P1010	S5CHPC1070, S5CHPC1200



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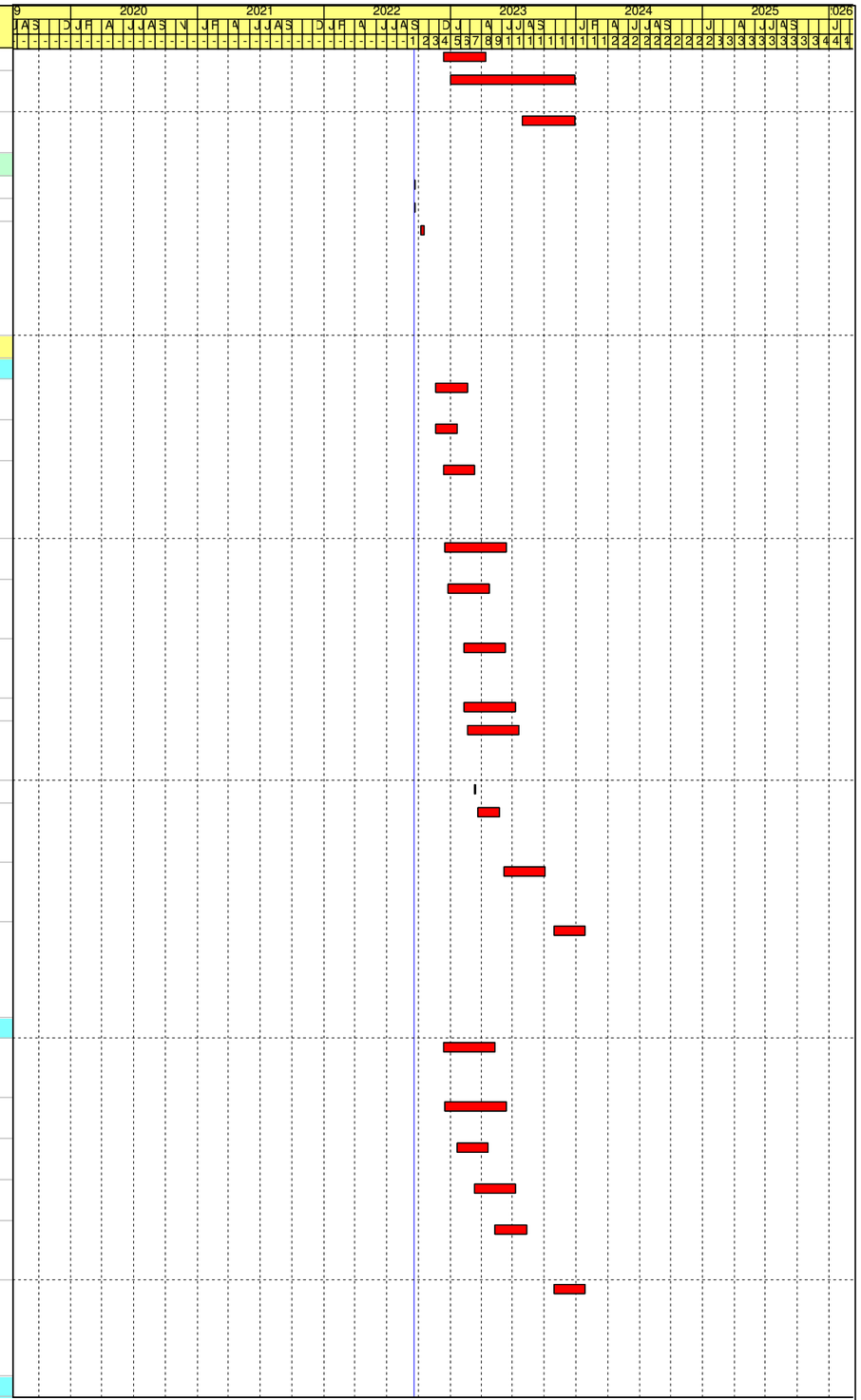
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5CHPP1050	Fabrication & Delivery of LV Switchboard	120	15-Dec-22*	13-Apr-23	16-Aug-22	13-Dec-22	-121		S5CHPC1260
S5CHPP1080	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5CHPC1120, S5CHPC1250
S5CHPP1040	Fabrication & Delivery of Gas Detection System	150	30-Jul-23	26-Dec-23	13-Nov-22	11-Apr-23	-259	S2D2000, PL1020	S5CHPC1120, S5CHPC1250
Installation		492	21-Sep-22	25-Jan-24	04-Jun-22	31-Jan-24	6		
S5CHPC1000	Access to CHP Building (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	04-Jun-22	04-Jun-22	-109		S5CHPC1020
S5CHPC1010	Access to CHP Building (Impacted by EWN-0314-1)	1	21-Sep-22*	21-Sep-22	04-Jun-22	04-Jun-22	-109		S5CHPC1020
S5CHPC1020	Mobilisation	12	07-Oct-22	18-Oct-22	05-Jun-22	16-Jun-22	-124	AD1060, S5S1020, S5CHPC1000, S5CHPC1010	PL1550, S5CHPC1030, S5CHPC1040, S5CHPC1080, S5CHPC1130, S5CHPC1140
E&M Installation		430	22-Nov-22	25-Jan-24	17-Jun-22	11-May-23	-259		
Ground Floor		430	22-Nov-22	25-Jan-24	17-Jun-22	11-May-23	-259		
S5CHPC1030	Installation of EOT Crane LA-04-01	90	22-Nov-22	19-Feb-23	17-Jun-22	14-Sep-22	-158	S5CHPC1020, S5CHPP1060	S5CHPC1050
S5CHPC1040	Installation of Monorail LA-04-02 (total 3nos.)	60	22-Nov-22	20-Jan-23	15-Jul-22	12-Sep-22	-130	S5CHPC1020, S5CHPP1060	S5CHPC1160, S5CHPC1060
S5CHPC1060	Installation of Steam Boiler System - Mechanical Work	90	13-Dec-22	12-Mar-23	05-Aug-22	02-Nov-22	-130	S5CHPC1040	S5CHPC1070, S5CHPC1150, S5CHPC1170, S5CHPT1050
S5CHPC1070	Installation of pipework	180	16-Dec-22	13-Jun-23	18-Sep-22	16-Mar-23	-89	S5CHPC1060, S5CHPP1070	S5CHPT1000
S5CHPC1140	HV Switchroom Installation	120	26-Dec-22	24-Apr-23	20-Aug-22	17-Dec-22	-128	S5CHPC1020, S5WS2P1080	S5CHPC1190, S5CHPT1020, S5CHPT1010
S5CHPC1130	Transfomers Room Installation	120	10-Feb-23	09-Jun-23	15-Oct-22	11-Feb-23	-118	S5WS2P1020, S5CHPC1020	S5CHPT1020, S5CHPC1260, S5CHPT1010
S5CHPC1150	Diesel Storage & Pump Room Installation	150	11-Feb-23	10-Jul-23	04-Oct-22	02-Mar-23	-130	S5CHPC1060	S5S1280
S5CHPC1050	Installation of CHP System - Mechanical Work	150	20-Feb-23	19-Jul-23	15-Sep-22	11-Feb-23	-158	S5CHPC1030, S5CHPP1030	S5CHPC1100, S5CHPT1030, S5CHPC1270
S5CHPC1180	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	15-Nov-22	15-Nov-22	-119		S5CHPC1190
S5CHPC1190	Main Cables Laying between 11kV SwitchRoom of CHP Bldg to Tx Rm of Workshop No.2	60	24-Mar-23	22-May-23	16-Nov-22	14-Jan-23	-128	S5CHPC1180, S5CHPC1140	S5WS2C1110, S5WS2T1010, PL1210
S5CHPC1100	Installation of Electrical System	120	05-Jun-23	02-Oct-23	01-Jan-23	30-Apr-23	-155	S5CHPC1090, S5CHPC1050, S5P1050	S5CHPC1120, S5CHPT1050, S5CHPT1030
S5CHPC1120	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90	28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	S5CHPC1100, S5CHPP1040, S5CHPP1080	S5T1100, S5T1000, S5T1010, S5T1020, S5T1030
First Floor		409	13-Dec-22	25-Jan-24	18-Sep-22	11-May-23	-259		
S5CHPC1170	Installation of Biogas Pre-treatment System - Mechanical Work	150	13-Dec-22	11-May-23	18-Sep-22	14-Feb-23	-86	S5CHPC1060, S5CHPC1160, S5CHPP1000	S5CHPC1200, S5CHPC1230, S5CHPT1040
S5CHPC1200	Installation of pipework	180	16-Dec-22	13-Jun-23	18-Sep-22	16-Mar-23	-89	S5CHPC1170, S5CHPP1070	S5CHPT1000
S5CHPC1160	Installation of Monorail / Davit LA-04-03 to LA-04-10 (total 8nos.)	90	21-Jan-23	20-Apr-23	17-Nov-22	14-Feb-23	-65	S5CHPC1040, S5CHPP1060	S5CHPC1170
S5CHPC1230	Installation of Electrical System	120	13-Mar-23	10-Jul-23	12-Jan-23	11-May-23	-60	S5CHPC1170, S5P1050	S5CHPC1250, S5CHPT1040
S5CHPC1260	LV Switchroom Installation	90	12-May-23	09-Aug-23	14-Dec-22	13-Mar-23	-149	S5WS2P1110, S5CHPC1130, S5CHPP1050	S5CHPT1020, S5CHPT1010
S5CHPC1250	Installation of SCADA System / Control Monitoring System / Gas Detection System / CCTV	90	28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	S5CHPC1230, S5CHPP1040, S5CHPP1080	S5T1100, S5T1000, S5T1010, S5T1020, S5T1030
Roof		210	20-Feb-23	17-Sep-23	15-Sep-22	12-Apr-23	-158		



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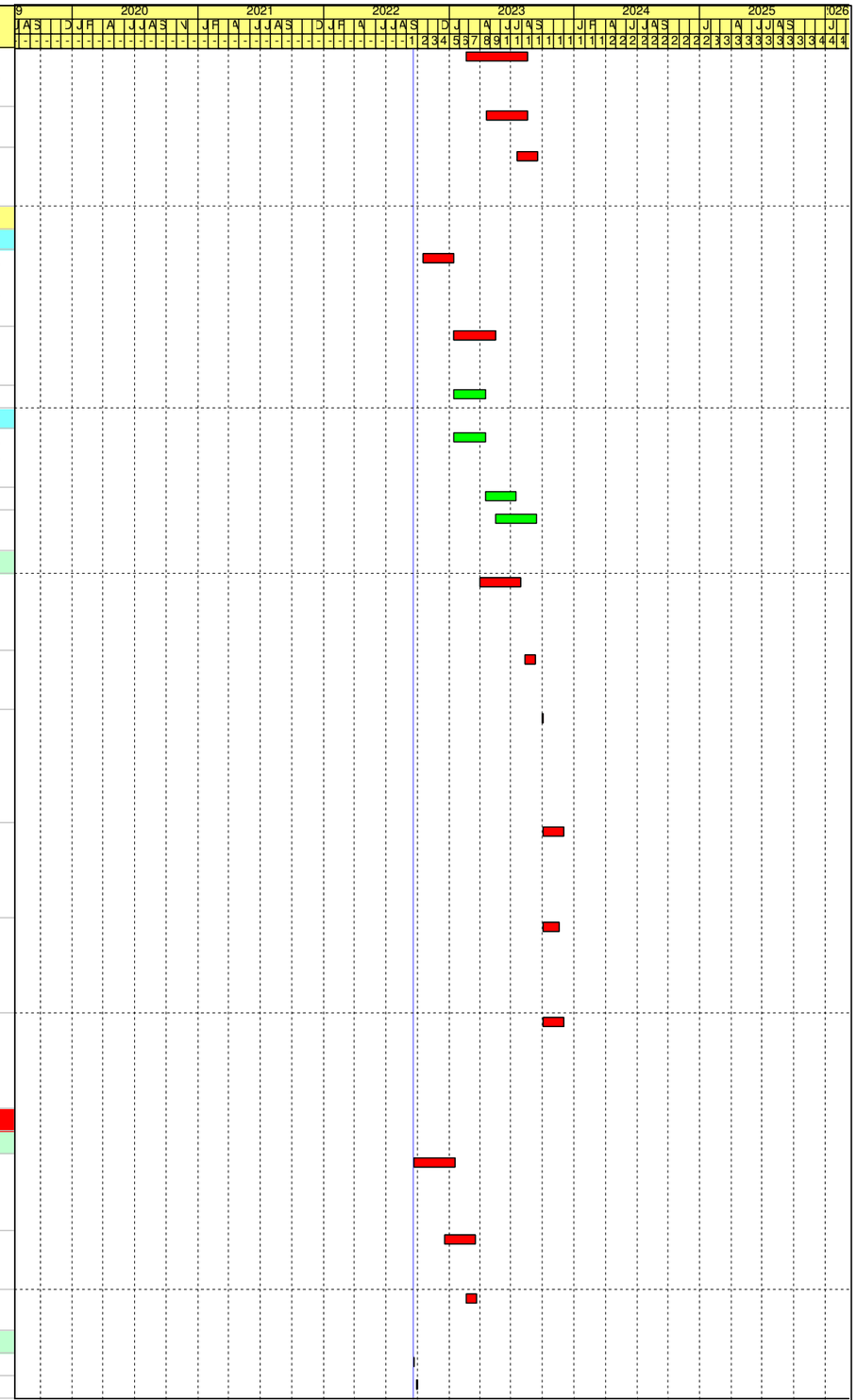
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5CHPC1270	Installation of CHP System - Mechanical Work	180	20-Feb-23	18-Aug-23	15-Sep-22	13-Mar-23	-158	S5CHPC1050	S5CHPT1030, S5CHPC1280, S5CHPC1290
S5CHPC1280	Installation of Steam Boiler System - Mechanical Work	120	21-Apr-23	18-Aug-23	14-Nov-22	13-Mar-23	-158	S5CHPC1270	S5CHPT1050, S5CHPC1290
S5CHPC1290	Installation of Electrical System	60	20-Jul-23	17-Sep-23	12-Feb-23	12-Apr-23	-158	S5CHPC1270, S5CHPC1280, S5P1050	S5CHPT1040, S5CHPT1020
BS Installation		330	19-Oct-22	13-Sep-23	03-Oct-22	31-Jan-24	140		
Ground Floor		210	19-Oct-22	16-May-23	03-Oct-22	31-Jan-24	260		
S5CHPC1080	Installation of FS System	90	19-Oct-22	16-Jan-23	03-Oct-22	31-Dec-22	-16	S5CHPC1020	S5CHPC1090, S5CHPC1110, S5CHPC1210, S5S1220
S5CHPC1090	Installation of MVAC System	120	17-Jan-23	16-May-23	01-Jan-23	30-Apr-23	-16	S5CHPC1080	S5CHPC1100, S5S1220, S5CHPC1220
S5CHPC1110	Installation of Plumbing System	90	17-Jan-23	16-Apr-23	03-Nov-23	31-Jan-24	290	S5CHPC1080	S5S1160
First Floor		240	17-Jan-23	13-Sep-23	05-May-23	31-Jan-24	140		
S5CHPC1210	Installation of FS System	90	17-Jan-23	16-Apr-23	05-May-23	02-Aug-23	108	S5CHPC1080	S5CHPC1220, S5CHPC1240, S5S1220
S5CHPC1240	Installation of Plumbing System	90	17-Apr-23	15-Jul-23	03-Nov-23	31-Jan-24	200	S5CHPC1210	S5S1160
S5CHPC1220	Installation of MVAC System	120	17-May-23	13-Sep-23	03-Aug-23	30-Nov-23	78	S5CHPC1210, S5CHPC1090	S5S1220
Testing and Commissioning		246	31-Mar-23	01-Dec-23	01-Jan-23	29-Jun-23	-155		
S5CHPT1000	Pipe Pressure Test	120	31-Mar-23	28-Jul-23	01-Jan-23	30-Apr-23	-89	S5CHPC1200, S5CHPC1070	S5T1100, S5CHPT1030, S5CHPT1040, S5CHPT1050
S5CHPT1010	SAT for Transformer & Switchboard	30	10-Aug-23	08-Sep-23	14-Mar-23	12-Apr-23	-149	S5CHPC1260, S5CHPC1140, S5CHPC1130	S5CHPT1020
S5CHPT1020	Ready for Power Energisation	3	30-Sep-23	02-Oct-23	13-Apr-23	15-Apr-23	-170	S5CHPC1260, S5WS2C1110, S5CHPC1130, S5CHPC1140, S5CHPT1010, S5CHPC1290	S5CHPT1030, S5BIOT1010, S5THPT1010, S5CHPT1040, S5CHPT1050
S5CHPT1030	SAT for CHP System	60	03-Oct-23	01-Dec-23	01-May-23	29-Jun-23	-155	S5CHPT1020, S5CHPC1050, S5CHPC1100, S5CHPC1270, S5CHPT1000	S5T1100
S5CHPT1040	SAT for Pre-treatment System	45	03-Oct-23	16-Nov-23	16-May-23	29-Jun-23	-140	S5CHPC1170, S5CHPT1020, S5CHPC1230, S5CHPC1290, S5CHPT1000	S5T1100
S5CHPT1050	SAT for Steam Boiler System	60	03-Oct-23	01-Dec-23	01-May-23	29-Jun-23	-155	S5CHPC1060, S5CHPC1100, S5CHPT1020, S5CHPC1280, S5CHPT1000	S5T1100
Tx Rm & LV Switchroom (for UV)		462	21-Sep-22	26-Dec-23	30-Jun-22	11-May-23	-229		
Fabrication, FAT & Delivery of Major Plant & Materials		182	21-Sep-22	21-Mar-23	30-Jun-22	25-Feb-23	-24		
S5TXRP1000	Fabrication & Delivery of Transfomers -UV (Tx 07 & 08)	120	21-Sep-22	18-Jan-23	30-Jun-22	27-Oct-22	-83	S1D1130, S1D1290, S1D1210, S2P1110	S5TXRC1030
S5TXRP1010	Fabrication & Delivery of LVSB -UV	90	20-Dec-22	19-Mar-23	28-Sep-22	26-Dec-22	-83	S1D1210, S1D1290, S2P1130	S5TXRC1040
S5TXRP1020	Fabrication & Delivery of Control & Monitoring System -UV	30	20-Feb-23*	21-Mar-23	27-Jan-23	25-Feb-23	-24	S1D1290, S2P1140	S5TXRC1050
Installation		257	21-Sep-22	04-Jun-23	11-Sep-22	11-May-23	-24		
S5TXRC1000	Access to TX Rm & LV Switchroom (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	11-Sep-22	11-Sep-22	-10		S5TXRC1020
S5TXRC1010	Access to TX Rm & LV Switchroom (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	11-Sep-22	11-Sep-22	-19		S5TXRC1020



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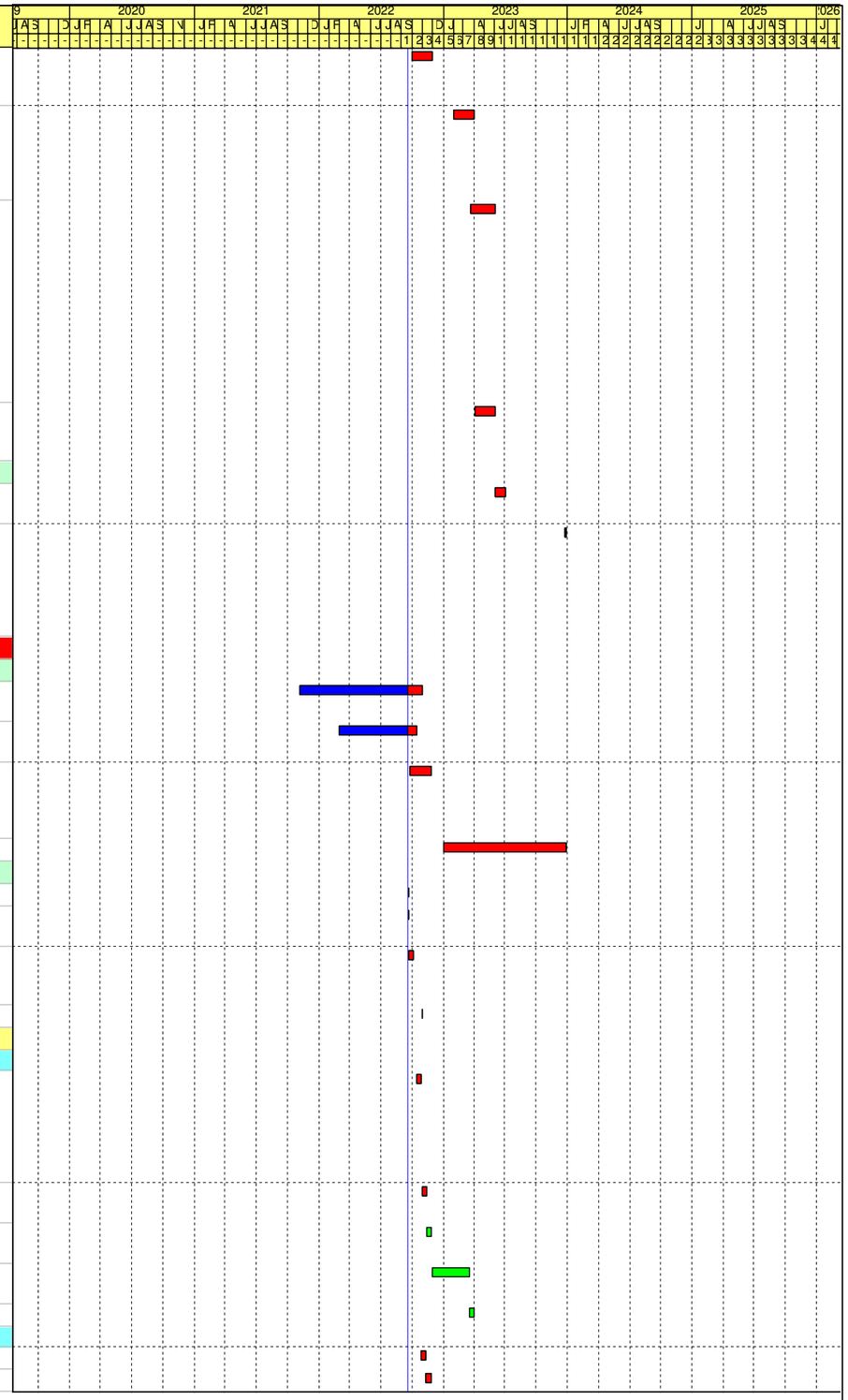
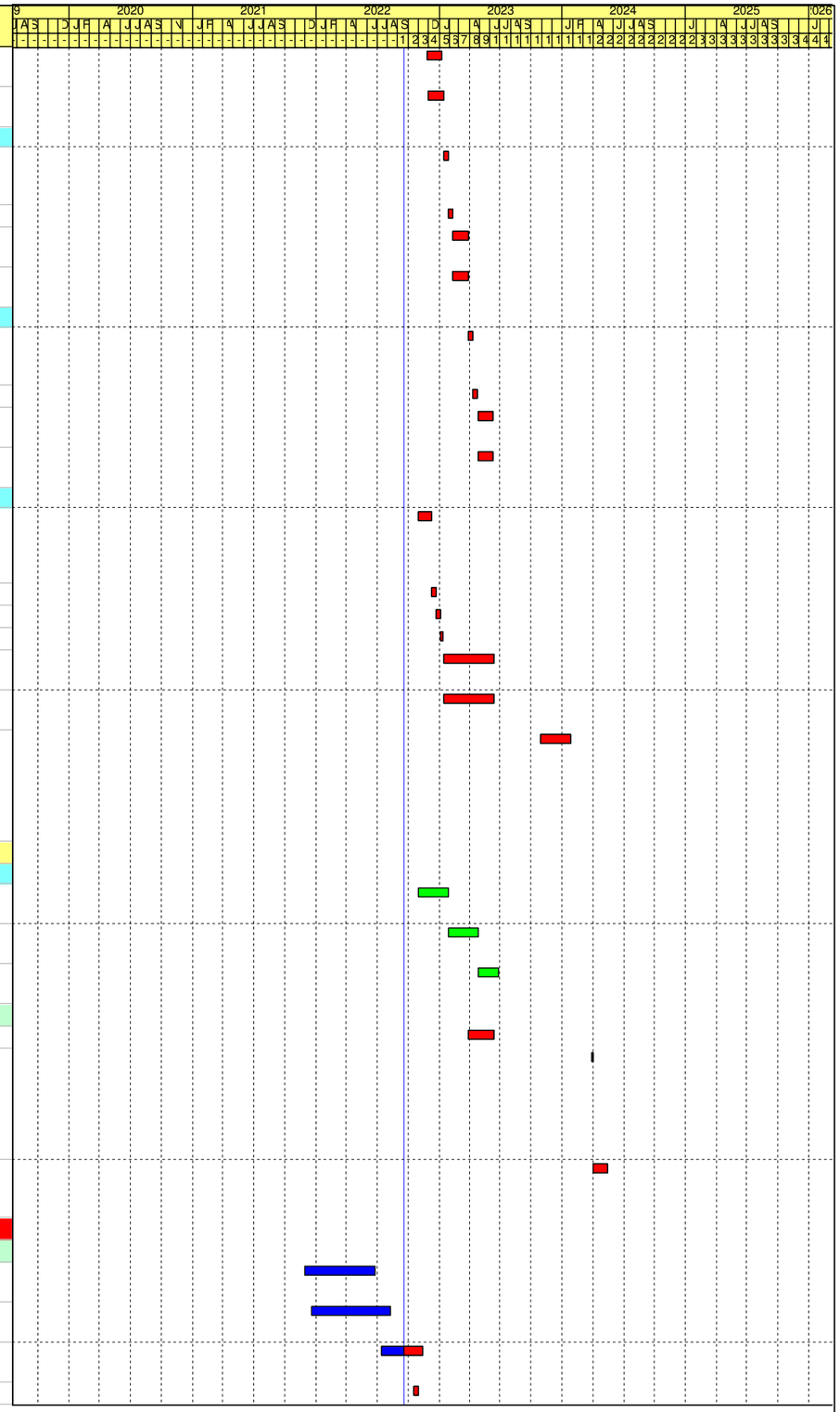
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5TXRC1020	BS Fitting Intallation (at Tx Rm & LV Switchroom)	60	01-Oct-22	29-Nov-22	12-Sep-22	10-Nov-22	-19	AD1100, S5TXRC1000, S5TXRC1010	S5TXRT1010, S5TXRC1030
S5TXRC1030	E&M Installation of Transfomers in Tx Rm	60	02-Feb-23	02-Apr-23	11-Nov-22	09-Jan-23	-83	S5TXRC1020, S4C1010, S5TXRP1000, S1D1310, S5P1050	S5TXRC1040, S5TXRT1000
S5TXRC1050	Installation of Control & Monitoring System - UV	75	22-Mar-23	04-Jun-23	26-Feb-23	11-May-23	-24	S4C1040, S5TXRP1020, S4C1070, S4C1080	S5T1200, S5T1120, S5T1000, S5T1010, S5T1020, S5T1030, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
S5TXRC1040	E&M Installation of LVSB	60	03-Apr-23	01-Jun-23	10-Jan-23	10-Mar-23	-83	S5TXRC1030, S5TXRP1010, S5P1050	S5TXRT1010, S5TXRT1000
Testing and Commissioning		208	02-Jun-23	26-Dec-23	11-Mar-23	12-Apr-23	-258		
S5TXRT1000	SAT for Transformer & Switchboard	30	02-Jun-23	01-Jul-23	11-Mar-23	09-Apr-23	-83	S5TXRC1040, S5TXRC1030	S5TXRT1010
S5TXRT1010	Ready for Power Energisation	3	24-Dec-23	26-Dec-23	10-Apr-23	12-Apr-23	-258	S5TXRC1020, S5TXRC1040, S5WS2C1060, S5WS2C1040, S5WS2C1130, S5TXRT1000	SC51110, S5SHPT1000, S5DOUT1000, S5PSWT1000
Sludge Digesters & Distribution Chamber		906	06-Nov-21 A	14-May-24	17-Apr-22	31-Jan-24	-104		
Fabrication, FAT & Delivery of Major Plant & Materials		766	06-Nov-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5DIGP1000	Fabrication & Delivery of Sludge Digestion System	180	06-Nov-21 A	30-Oct-22	22-Jul-22	30-Aug-22	-61	S2P1020, S2D1450	S5DIGC1210
S5DIGP1010	Fabrication & Delivery of FRP Walkway / Cover	90	01-Mar-22 A	14-Oct-22	24-Jul-22	16-Aug-22	-59	S2P1020	S5DIGC1040
S5DIGP1020	Fabrication & Delivery of Pipeworks & Associated Valves	60	27-Sep-22	25-Nov-22	05-Aug-22	03-Oct-22	-53	S5P1010	S5DIGC1110, S5DIGC1150, S5DIGC1190, S5DIGC1250
S5DIGP1050	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5DIGC1270
Installation		492	21-Sep-22	25-Jan-24	02-Aug-22	31-Jan-24	6		
S5DIGC1000	Access to Sludge Digesters & Distribution Chamber (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	02-Aug-22	02-Aug-22	-50		S5DIGC1030
S5DIGC1010	Access to Sludge Digester No.1 & Distribution Chamber (Impacted by EWN-0314-1)	1	21-Sep-22*	21-Sep-22	02-Aug-22	02-Aug-22	-50		S5DIGC1030
S5DIGC1030	Mobilisation	14	22-Sep-22	05-Oct-22	03-Aug-22	16-Aug-22	-50	AD1080, S5DIGC1000, S5DIGC1010	S5DIGC1210, S5DIGC1040
S5DIGC1020	Access to Sludge Digesters - Remaining (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	03-Nov-22	03-Nov-22	3		S5DIGC1050
E&M Installation		468	15-Oct-22	25-Jan-24	17-Aug-22	11-May-23	-259		
FRP Walkway / Cover Installation		169	15-Oct-22	01-Apr-23	17-Aug-22	15-Apr-23	14		
S5DIGC1040	Installation of Working Platform for Digester 1 (Roof)	14	15-Oct-22	28-Oct-22	17-Aug-22	30-Aug-22	-59	AD1080, S5DIGP1010, S5DIGC1030	SC51110, PL1210, PL1310, S5DIGC1050, S5DIGC1090, S5DIGC1210
S5DIGC1050	Installation of Working Platform for Digester 3 (Roof)	14	01-Nov-22	14-Nov-22	04-Nov-22	17-Nov-22	3	S5DIGC1040, S5DIGC1020	S5DIGC1060, S5DIGC1130
S5DIGC1060	Installation of Working Platform for Digester 4 (Roof)	14	15-Nov-22	28-Nov-22	29-Nov-22	12-Dec-22	14	S5DIGC1050	S5DIGC1070, S5DIGC1170
S5DIGC1070	Installation of Working Platform for Distribution Chamber & Overflow Chamber	110	29-Nov-22	18-Mar-23	13-Dec-22	01-Apr-23	14	S5DIGC1060	S5DIGC1080
S5DIGC1080	Installation of Working Platform for Digester 2 (Roof)	14	19-Mar-23	01-Apr-23	02-Apr-23	15-Apr-23	14	S5DIGC1070	S5DIGT1020
Sludge Digester 1		78	29-Oct-22	14-Jan-23	06-Sep-22	17-Nov-22	-58		
S5DIGC1090	Installation of Sludge Mixer (4 nos.)	14	29-Oct-22	11-Nov-22	06-Sep-22	19-Sep-22	-53	S5DIGC1040	S5DIGC1100
S5DIGC1100	Installation of Motor with Belt adjustment	14	12-Nov-22	25-Nov-22	20-Sep-22	03-Oct-22	-53	S5DIGC1090	S5DIGC1110



Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5DIGC1110	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	26-Nov-22	09-Jan-23	04-Oct-22	17-Nov-22	-53	S5DIGC1100, S5DIGP1020	S5DIGC1120, S5DIGC1130
S5DIGC1120	Installation of Electrical System	45	01-Dec-22	14-Jan-23	04-Oct-22	17-Nov-22	-58	S5DIGC1110, S5P1050	S5DIGC1130, S5DIGT1010
Sludge Digester 3		73	15-Jan-23	28-Mar-23	18-Nov-22	29-Jan-23	-58		
S5DIGC1130	Installation of Sludge Mixer (4 nos.)	14	15-Jan-23	28-Jan-23	18-Nov-22	01-Dec-22	-58	S5DIGC1120, S5DIGC1110, S5DIGC1050	S5DIGC1140
S5DIGC1140	Installation of Motor with Belt adjustment	14	29-Jan-23	11-Feb-23	02-Dec-22	15-Dec-22	-58	S5DIGC1130	S5DIGC1150
S5DIGC1150	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	12-Feb-23	28-Mar-23	16-Dec-22	29-Jan-23	-58	S5DIGC1140, S5DIGP1020	S5DIGC1160, S5DIGC1170
S5DIGC1160	Installation of Electrical System	45	12-Feb-23	28-Mar-23	16-Dec-22	29-Jan-23	-58	S5DIGC1150, S5P1050	S5DIGC1170, S5DIGT1010
Sludge Digester 4		73	29-Mar-23	09-Jun-23	30-Jan-23	12-Apr-23	-58		
S5DIGC1170	Installation of Sludge Mixer (4 nos.)	14	29-Mar-23	11-Apr-23	30-Jan-23	12-Feb-23	-58	S5DIGC1150, S5DIGC1160, S5DIGC1060	S5DIGC1180
S5DIGC1180	Installation of Motor with Belt adjustment	14	12-Apr-23	25-Apr-23	13-Feb-23	26-Feb-23	-58	S5DIGC1170	S5DIGC1190
S5DIGC1190	Installation of Pipework, Valve, Inpsection Window, Telescopic Valve & Instruments	45	26-Apr-23	09-Jun-23	27-Feb-23	12-Apr-23	-58	S5DIGC1180, S5DIGP1020	S5DIGC1200
S5DIGC1200	Installation of Electrical System	45	26-Apr-23	09-Jun-23	27-Feb-23	12-Apr-23	-58	S5DIGC1190, S5P1050	S5DIGT1010
Distribution Chamber		452	31-Oct-22	25-Jan-24	31-Aug-22	11-May-23	-259		
S5DIGC1210	Installation of Sludge Recirculation Pumps (5 nos.)	40	31-Oct-22	09-Dec-22	31-Aug-22	09-Oct-22	-61	AD1080, S5DIGP1000, S5DIGC1030, S5DIGC1040	S5DIGC1220, S5DIGC1280
S5DIGC1220	Installation of Heat Exchanger (3 nos.)	14	10-Dec-22	23-Dec-22	10-Oct-22	23-Oct-22	-61	S5DIGC1210	S5DIGC1230
S5DIGC1230	Installation of Sludge Transfer Pump (2 nos.)	14	24-Dec-22	06-Jan-23	24-Oct-22	06-Nov-22	-61	S5DIGC1220	S5DIGC1240
S5DIGC1240	Installation of Vertical Mixer at Sludge Buffer Tank (2 nos.)	7	07-Jan-23	13-Jan-23	07-Nov-22	13-Nov-22	-61	S5DIGC1230	S5DIGC1250
S5DIGC1250	Installation of Pipework, Valve & Instruments	150	14-Jan-23	12-Jun-23	14-Nov-22	12-Apr-23	-61	S5DIGC1240, S5DIGP1020	S5DIGC1260, S5DIGT1000
S5DIGC1260	Installation of Electrical System	150	14-Jan-23	12-Jun-23	14-Nov-22	12-Apr-23	-61	S5DIGC1250, S5P1050	S5DIGC1270, S5DIGT1010
S5DIGC1270	Installation of SCADA & PLC System	90	28-Oct-23	25-Jan-24	11-Feb-23	11-May-23	-259	S5DIGC1260, S5DIGP1050	S5T1080, S5T1000, S5T1010, S5T1020, S5T1030, PL1210
BS Installation		240	31-Oct-22	27-Jun-23	04-Jun-23	31-Jan-24	218		
Distribution Chamber		240	31-Oct-22	27-Jun-23	04-Jun-23	31-Jan-24	218		
S5DIGC1280	Installation of FS System	90	31-Oct-22	28-Jan-23	04-Jun-23	01-Sep-23	216	S5DIGC1210	S5DIGC1290, S5S1220
S5DIGC1290	Installation of MVAC System	90	29-Jan-23	28-Apr-23	02-Sep-23	30-Nov-23	216	S5DIGC1280	S5DIGC1300, S5S1220
S5DIGC1300	Installation of Plumbing System	60	29-Apr-23	27-Jun-23	03-Dec-23	31-Jan-24	218	S5S1120, S5DIGC1290	S5S1160
Testing and Commissioning		412	30-Mar-23	14-May-24	31-Jan-23	30-May-23	-350		
S5DIGT1000	Pipe Pressure Test	75	30-Mar-23	12-Jun-23	31-Jan-23	15-Apr-23	-58	S5DIGC1250	S5DIGT1020
S5DIGT1010	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5DIGC1260, S5DIGC1200, S5DIGC1160, S5DIGC1120, S5WS2C1110, S5EXAC1030	S5DIGT1020
S5DIGT1020	SAT for Sludge Digestion System	45	31-Mar-24	14-May-24	16-Apr-23	30-May-23	-350	S5DIGC1080, S5DIGT1010, S5DIGT1000	S5T1080
Workshop No. 2		860	29-Nov-21 A	29-May-24	26-May-22	27-Feb-24	-92		
Fabrication, FAT & Delivery of Major Plant & Materials		705	29-Nov-21 A	26-Dec-23	26-May-22	08-Sep-23	-109		
S5WS2P1060	Fabrication of 11 kV Switchboard	210	29-Nov-21 A	26-Jun-22 A	12-Jun-22	12-Jun-22		S2P1120	S5WS2P1070
S5WS2P1120	Fabrication & Delivery of Lift	210	18-Dec-21 A	10-Aug-22 A	12-May-23	12-May-23			S5WS2C1190
S5WS2P1000	Fabrication of 11kV to 380V Transformers	123	14-Jul-22 A	13-Nov-22	26-May-22	18-Jul-22	-118	S2P1110	S5WS2P1010
S5WS2P1070	FAT for 11 kV Switchboard	14	18-Oct-22*	31-Oct-22	12-Jun-22	25-Jun-22	-128	S5WS2P1060	S5WS2P1080



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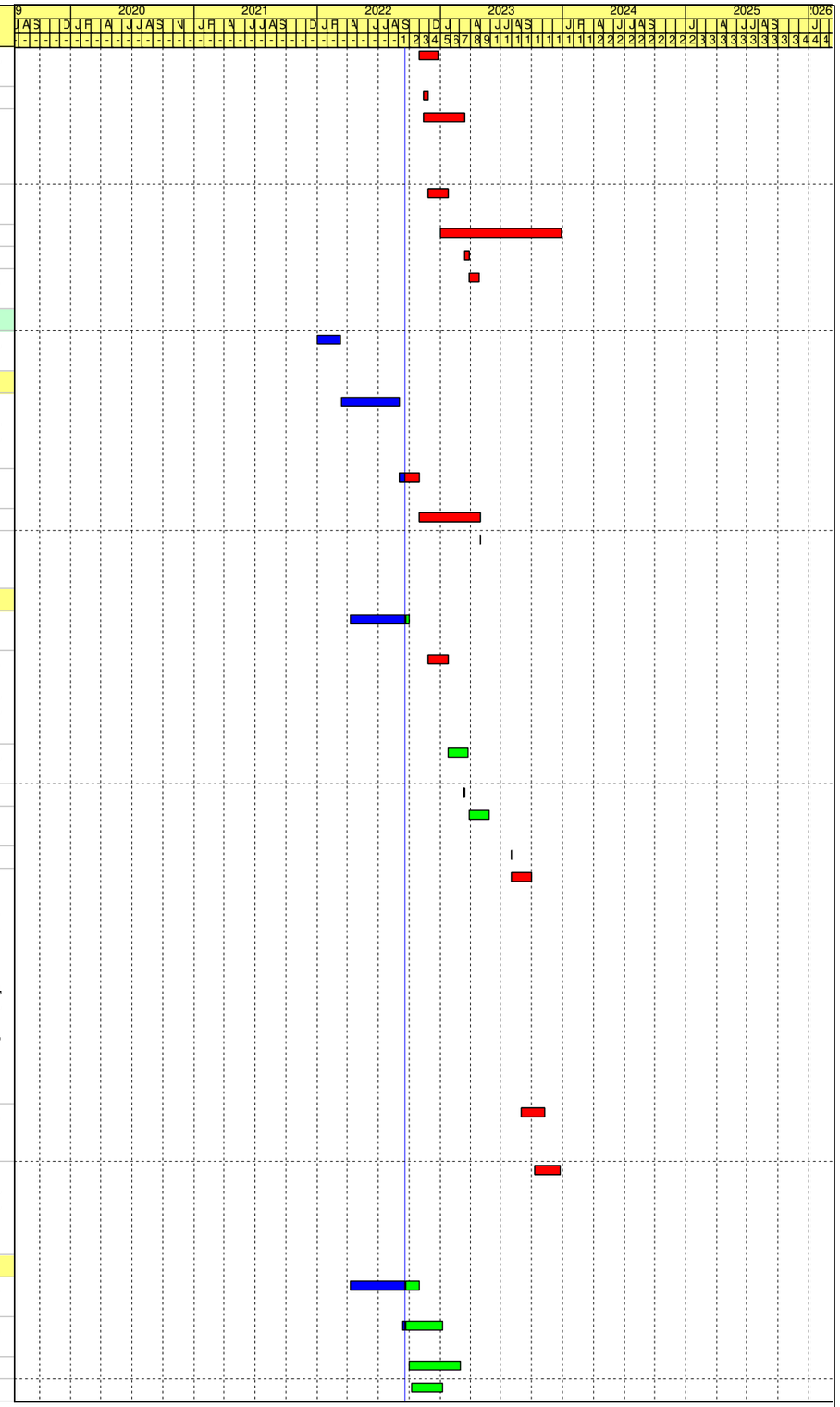
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5WS2P1080	Delivery of 11kV Switchboard	55	01-Nov-22	25-Dec-22	26-Jun-22	19-Aug-22	-128	S5WS2P1070	S5WS2C1060, S5CHPC1140
S5WS2P1010	FAT for 11kV to 380V Transfomers	14	14-Nov-22	27-Nov-22	19-Jul-22	01-Aug-22	-118	S5WS2P1000	S5WS2P1020
S5WS2P1090	Fabrication of LV Switchboard	120	15-Nov-22*	14-Mar-23	19-Jun-22	16-Oct-22	-149	S2P1130, S2D1250, S2D1190, S2D1270	S5WS2P1100
S5WS2P1020	Delivery of 11kV to 380V Transfomers	60	28-Nov-22	26-Jan-23	02-Aug-22	30-Sep-22	-118	S5WS2P1010	S5CHPC1130, S5WS2C1070
S5WS2P1130	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	14-Sep-22	08-Sep-23	-109		S5WS2C1180
S5WS2P1100	FAT for LV Switchboard	14	15-Mar-23	28-Mar-23	17-Oct-22	30-Oct-22	-149	S5WS2P1090	S5WS2P1110
S5WS2P1110	Delivery of LV Switchboard	30	29-Mar-23	27-Apr-23	31-Oct-22	29-Nov-22	-149	S5WS2P1100	S5CHPC1260, S5WS2C1080
Installation		735	31-Dec-21 A	25-Jan-24	02-Sep-22	31-Jan-24	6		
S5WS2C1000	Mobilisation	14	31-Dec-21 A	12-Mar-22 A	02-Sep-22	02-Sep-22		AD1120, S5S1030	S5WS2C1010, S5WS2C1050
CLP Substation		407	14-Mar-22 A	01-May-23	02-Sep-22	12-Apr-23	-19		
S5WS2C1010	BS Fitting Installation (at CLP Sub-station in Workshop No.2)	60	14-Mar-22 A	02-Sep-22 A	02-Sep-22	02-Sep-22		S5WS2C1000, AD1120	KD1060, S5WS2C1020, S5WS2C1050, KD1060-1
S5WS2C1020	Inspections, Rectification & H/O to CLP	60	03-Sep-22 A	01-Nov-22	02-Sep-22	13-Oct-22	-19	S5WS2C1010	S5WS2C1030
S5WS2C1030	E&M Installation of HV Transformer (By CLP)	180	02-Nov-22	30-Apr-23	14-Oct-22	11-Apr-23	-19	S5WS2C1020	S5WS2C1040
S5WS2C1040	Energisation (By CLP)	1	01-May-23	01-May-23	12-Apr-23	12-Apr-23	-19	S5WS2C1030, S5WS2C1060, S5S1000	S5TXRT1010
HV Switchroom / Transformer Room / LV Switchroom		610	11-Apr-22 A	23-Dec-23	14-Nov-22	26-Nov-23	-27		
S5WS2C1050	BS Fitting Intallation	60	11-Apr-22 A	02-Oct-22	14-Nov-22	25-Nov-22	54	S5WS2C1000, S5WS2C1010	S5WS2C1060
S5WS2C1060	HV Switchroom Installation	60	26-Nov-22	24-Jan-23	26-Nov-22	24-Jan-23	0	S5WS2C1050, S5WS2P1080	S5WS2C1130, S5TXRT1010, S5WS2C1040, S5WS2C1070, S5WS2T1000
S5WS2C1070	TX Room Installation	60	25-Jan-23	25-Mar-23	30-Jul-23	27-Sep-23	186	S5WS2C1060, S5WS2P1020	S5WS2C1080, S5WS2T1000
S5WS2C1090	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	15-Nov-22	15-Nov-22	-119		S5WS2C1110
S5WS2C1080	LV Switchroom Installation	60	29-Mar-23	27-May-23	28-Sep-23	26-Nov-23	183	S5WS2C1070, S5WS2P1110	S5WS2T1000
S5WS2C1100	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	15-Nov-22	15-Nov-22	-258		S5WS2C1110
S5WS2C1110	Main Cables Laying between Workshop No.2 & Tx Rm for CHP Bldg	60	01-Aug-23	29-Sep-23	16-Nov-22	14-Jan-23	-258	S5CHPC1190, S5WS2C1090, S5WS2C1100	S5CHPT1020, S5DIGT1010, S5WS2C1120, S5WS2T1010, S5BIOT1000, S5THPT1000, S5H2ST1000, S5WGBT1000, S5DOUT1010, S5SPST1000, S5TCWT1000, S5FCDT1000, PL1210
S5WS2C1120	Main Cables Laying between Workshop No.2 & Tx Rm for Sludge Dewatering Bldg	70	31-Aug-23	08-Nov-23	16-Dec-22	23-Feb-23	-258	S5WS2C1110	S5WS2C1130, PL1210, S5SDBT1191
S5WS2C1130	Main Cables Laying between Workshop No.2 & Tx Rm for UV System No.1	75	10-Oct-23	23-Dec-23	25-Jan-23	09-Apr-23	-258	S5WS2C1060, S5WS2C1120	S5TXRT1010, S5PSWT1000, S5DOUT1000, S5SHPT1000, PL1210
Building Services		492	11-Apr-22 A	25-Jan-24	13-Dec-22	31-Jan-24	6		
S5WS2C1140	Installation of FS System	204	11-Apr-22 A	31-Oct-22	24-May-23	03-Jul-23	245	S5S1120	S5WS2C1150, S5S1130
S5WS2C1190	Installation of Lift	120	13-Sep-22 A	10-Jan-23	12-May-23	31-Aug-23	233	S5WS2P1120	S5WS2T1020, S5SDBC1770
S5WS2C1160	Installation of Electrical System	150	03-Oct-22*	01-Mar-23	13-Dec-22	11-May-23	71		S5WS2C1180
S5WS2C1170	Installation of Plumbing System	90	10-Oct-22*	07-Jan-23	03-Nov-23	31-Jan-24	389	S5S1120	S5S1160



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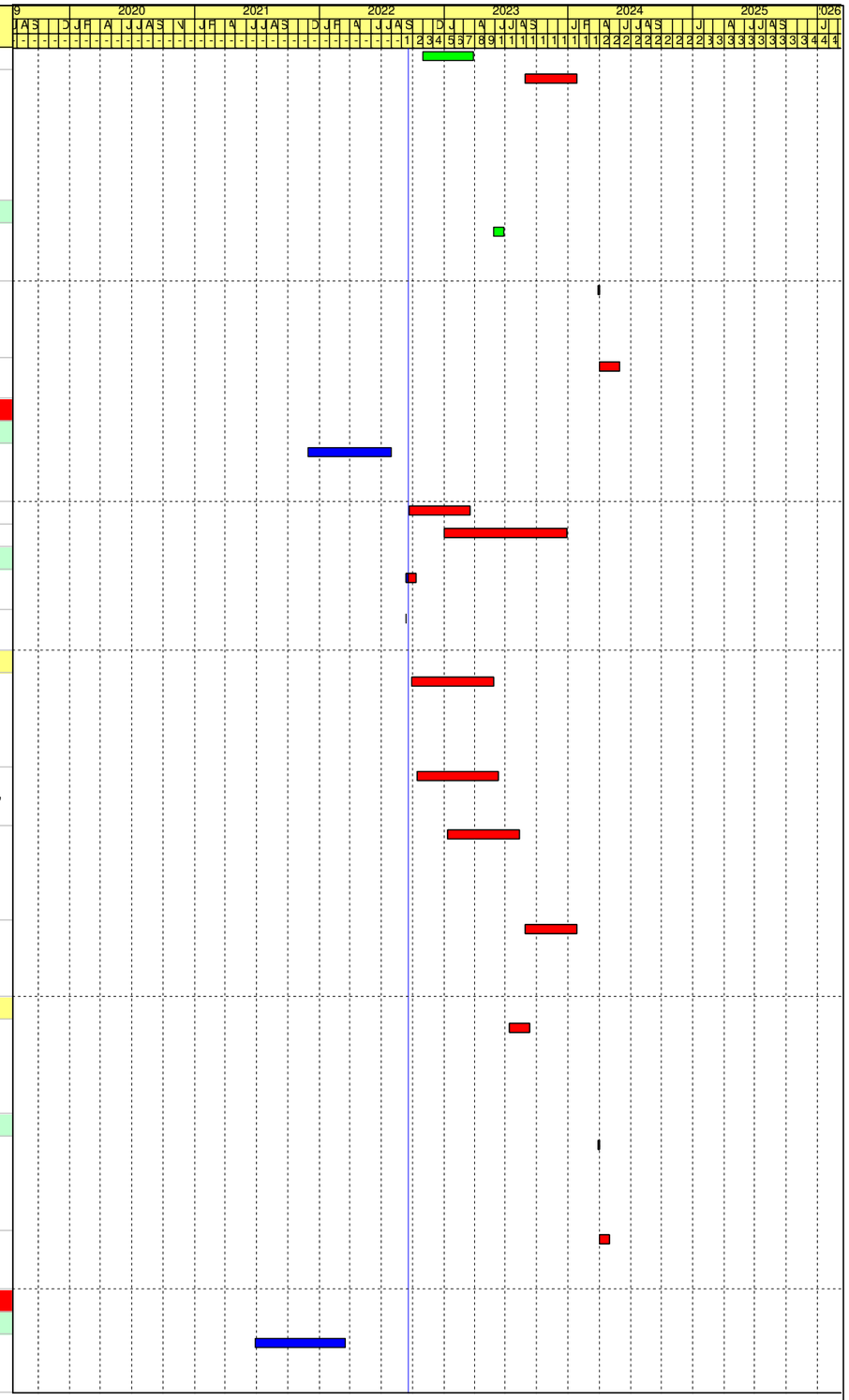
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5WS2C1150	Installation of MVAC System	150	01-Nov-22	30-Mar-23	04-Jul-23	30-Nov-23	245	S5WS2C1140	S5S1220
S5WS2C1180	Installation of SCADA Sys. / Control Monitoring Sys. / Gas Detection Sys. / CCTV Sys. / IT&PABX Sys. / ACS Sys.	150	29-Aug-23	25-Jan-24	12-May-23	08-Oct-23	-109	S5WS2C1160, S5WS2P1130	S5T1200, S5T1000, S5T1010, S5T1020, S5T1030, S5S0990, PL1210
Testing and Commissioning		368	28-May-23	29-May-24	27-Nov-23	27-Feb-24	-92		
S5WS2T1000	SAT for Transformer & Switchboard	30	28-May-23	26-Jun-23	27-Nov-23	26-Dec-23	183	S5WS2C1080, S5WS2C1070, S5WS2C1060	S5WS2T1010
S5WS2T1010	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	27-Dec-23	29-Dec-23	-92	S5WS2T1000, S5WS2C1110, S5CHPC1190, S5EXAC1030	S5WS2T1020
S5WS2T1020	SAT for Lift	60	31-Mar-24	29-May-24	30-Dec-23	27-Feb-24	-92	S5WS2C1190, S5WS2T1010	S5S1090
Biogas Storage		861	29-Nov-21 A	29-Apr-24	17-Apr-22	29-Jun-23	-305		
Fabrication, FAT & Delivery of Major Plant & Materials		736	29-Nov-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5BIOP1010	Fabrication & Delivery of Biogas Storage	180	29-Nov-21 A	30-Jul-22 A	01-Jun-22	01-Jun-22		S2P1050, S2D1530	S5BIOC1020, S5BIOC1030, S5BIOC1040
S5BIOP1000	Fabrication & Delivery of Biogas Booster and Transfer Pumps	180	22-Sep-22	20-Mar-23	31-Jul-22	26-Jan-23	-53	S5P1000	S5BIOC1020
S5BIOP1020	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5BIOC1050
Installation		492	13-Sep-22 A	25-Jan-24	25-May-22	11-May-23	-259		
S5BIOC1010	Mobilisation	30	13-Sep-22 A	12-Oct-22	25-May-22	14-Jun-22	-120	AD1100, S5BIOC1000	S5BIOC1020
S5BIOC1000	Access to Biogas Holding Tanks (Impacted by EWN-0314-1)	1	13-Sep-22 A	13-Sep-22 A	25-May-22	25-May-22			S5BIOC1010
E&M Installation		484	29-Sep-22	25-Jan-24	01-Jun-22	11-May-23	-259		
S5BIOC1020	E&M Installation of Biogas Storage Tank 1	240	29-Sep-22	26-May-23	01-Jun-22	26-Jan-23	-120	AD1100, S5BIOP1010, S5S1060, S5BIOP1000, S5BIOC1010	S5BIOC1030, S5BIOT1000
S5BIOC1030	E&M Installation of Biogas Storage Tank 2	240	14-Oct-22	10-Jun-23	16-Jun-22	10-Feb-23	-120	AD1100, S5BIOC1020, S5BIOP1010	S5BIOC1040, S5WGBC1020, S5BIOT1000
S5BIOC1040	E&M Installation of Biogas Storage Tank 3	210	12-Jan-23	09-Aug-23	14-Sep-22	11-Apr-23	-120	AD1100, S5BIOC1030, S5BIOP1010	S5BIOT1010, S5BIOC1060, S5BIOT1000, PL1210, S5BIOC1050
S5BIOC1050	Installation of SCADA System / Control Monitoring System	150	29-Aug-23	25-Jan-24	13-Dec-22	11-May-23	-259	S5BIOC1040, S5BIOP1020	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		60	11-Jul-23	08-Sep-23	13-Mar-23	11-May-23	-120		
S5BIOC1060	BS Installation for Biogas Holding Tanks	60	11-Jul-23	08-Sep-23	13-Mar-23	11-May-23	-120	S5THPC1050, S5BIOC1040	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	28-May-23	29-Jun-23	-305		
S5BIOT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-May-23	30-May-23	-305	S5BIOC1040, S5BIOC1030, S5BIOC1020, S5WS2C1110, S5EXAC1030	S5BIOT1010
S5BIOT1010	SAT for Biogas Storage System	30	31-Mar-24	29-Apr-24	31-May-23	29-Jun-23	-305	S5BIOC1040, S5CHPT1020, S5BIOT1000	S5T1070
THP Area		994	29-Jun-21 A	29-Apr-24	17-Apr-22	15-May-23	-350		
Fabrication, FAT & Delivery of Major Plant & Materials		869	29-Jun-21 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5THPP1000	Fabrication of THP System	300	29-Jun-21 A	18-Mar-22 A	02-Nov-22	02-Nov-22		S2P1040, S2D1410, S2D1370	S5THPP1010



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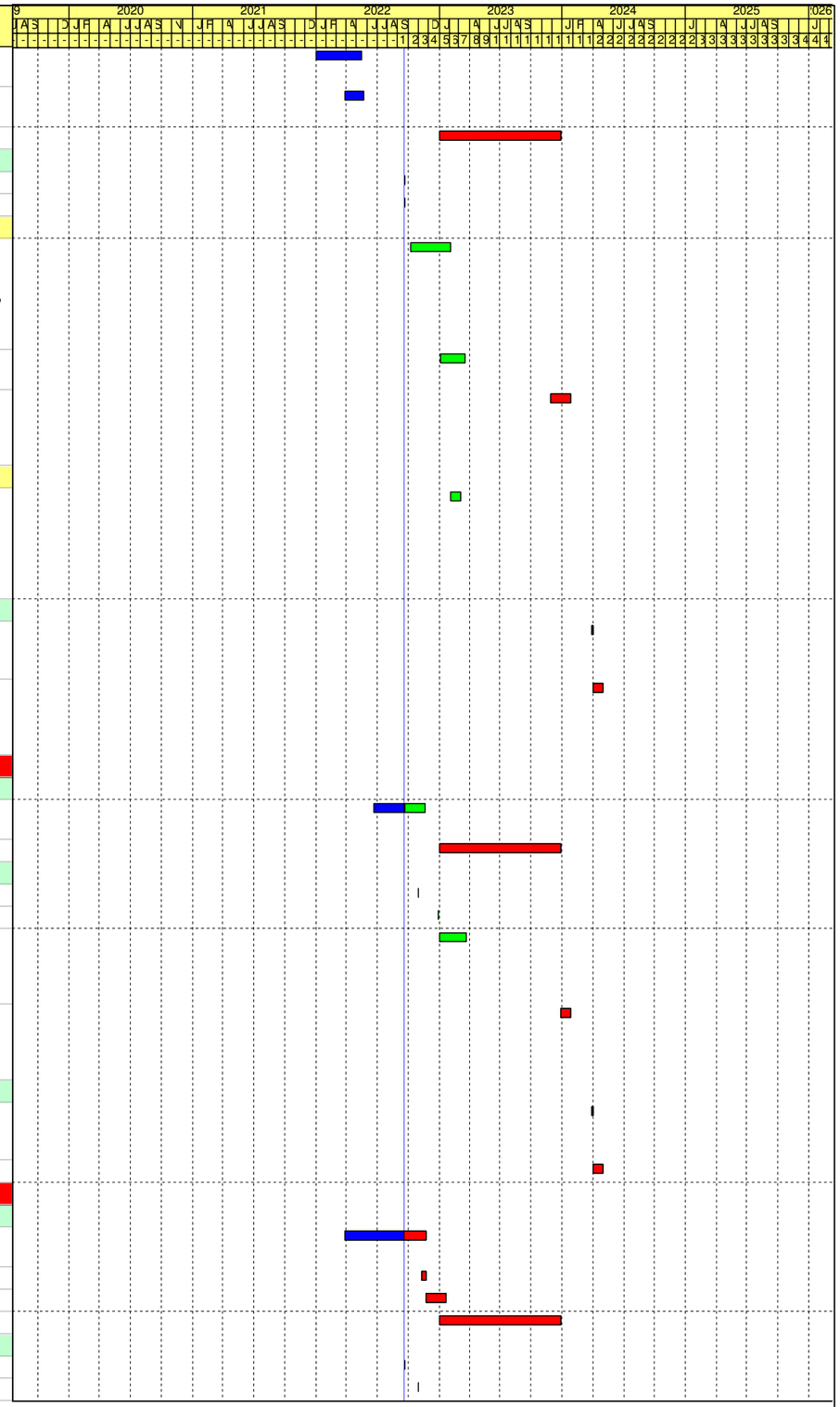
Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5THPP1010	FAT for THP System	14	03-Jan-22 A	17-May-22 A	02-Nov-22	02-Nov-22		S5THPP1000	S5THPP1020
S5THPP1020	Delivery of THP System	60	29-Mar-22 A	23-May-22 A	02-Nov-22	02-Nov-22		S5THPP1010	S5THPC1020
S5THPP1030	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5THPC1040
Installation		492	21-Sep-22	25-Jan-24	01-Nov-22	11-May-23	-259		
S5THPC1000	Access to THP Area (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	01-Nov-22	01-Nov-22	41		S5THPC1020
S5THPC1010	Access to THP Area (Impacted by EWN-0314-1)	1	21-Sep-22*	21-Sep-22	01-Nov-22	01-Nov-22	41		S5THPC1020
E&M Installation		476	07-Oct-22	25-Jan-24	02-Nov-22	11-May-23	-259		
S5THPC1020	E&M Installation of THP System	120	07-Oct-22	03-Feb-23	02-Nov-22	01-Mar-23	26	AD1100, S5THPP1020, S5S1020, S5THPC1000, S5THPC1010	S5THPC1030, S5THPT1010, S5THPC1050, S5WGBC1020, S5THPT1000, S5THPC1040
S5THPC1030	E&M Installation of Thickened Sludge Feed Pipe to THP System	75	05-Jan-23	20-Mar-23	31-Jan-23	15-Apr-23	26	S5THPC1020	S5THPT1010, PL1210
S5THPC1040	Installation of SCADA System / Control Monitoring System	60	27-Nov-23	25-Jan-24	13-Mar-23	11-May-23	-259	S5THPC1020, S5THPP1030	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		30	04-Feb-23	05-Mar-23	12-Apr-23	11-May-23	67		
S5THPC1050	BS Installation for THP Facilities	30	04-Feb-23	05-Mar-23	12-Apr-23	11-May-23	67	S5THPC1020	S5BIOC1060, S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	13-Apr-23	15-May-23	-350		
S5THPT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5THPC1020, S5WS2C1110, S5EXAC1030	S5THPT1010
S5THPT1010	SAT of THP System	30	31-Mar-24	29-Apr-24	16-Apr-23	15-May-23	-350	S5THPC1020, S5THPC1030, S5CHPT1020, S5THPT1000	S5T1050
H2S Removal Area		618	23-Jun-22 A	29-Apr-24	17-Apr-22	30-May-23	-335		
Fabrication, FAT & Delivery of Major Plant & Materials		493	23-Jun-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5H2SP1000	Fabrication & Delivery of H2S Removal System	150	23-Jun-22 A	19-Nov-22	25-Nov-22	23-Jan-23	65	S2P1060, S2D1530	S5H2SC1020
S5H2SP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5H2SC1030
Installation		452	31-Oct-22	25-Jan-24	06-Feb-23	11-May-23	-259		
S5H2SC1000	Access to H2S Removal Area (Impacted by EWN-0314)	1	31-Oct-22*	31-Oct-22	06-Feb-23	06-Feb-23	98		S5H2SC1020
S5H2SC1010	Access to H2S Removal Area (Impacted by EWN-0314-1)	1	31-Dec-22*	31-Dec-22	06-Feb-23	06-Feb-23	37		S5H2SC1020
S5H2SC1020	E&M Installation of H2S Removal System	80	01-Jan-23	21-Mar-23	07-Feb-23	27-Apr-23	37	AD1100, S5H2SP1000, S5H2SC1000, S5H2SC1010	S5H2ST1000, PL1210, S5H2SC1030
S5H2SC1030	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5H2SC1020, S5H2SP1010	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	28-Mar-24	29-Apr-24	28-Apr-23	30-May-23	-335		
S5H2ST1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-Apr-23	30-Apr-23	-335	S5H2SC1020, S5WS2C1110, S5EXAC1030	S5H2ST1010
S5H2ST1010	SAT of H2S Removal System	30	31-Mar-24	29-Apr-24	01-May-23	30-May-23	-335	S5H2ST1000	S5T1080
Waste Gas Burning Area		664	29-Mar-22 A	14-Apr-24	17-Apr-22	14-Jul-23	-275		
Fabrication, FAT & Delivery of Major Plant & Materials		554	29-Mar-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5WGBP1000	Fabrication of Waste Gas Burning System	210	29-Mar-22 A	24-Nov-22	09-Sep-22	12-Nov-22	-12	S2P1080, S2D1650	S5WGBP1010
S5WGBP1010	FAT for Waste Gas Burning System	14	11-Nov-22	24-Nov-22	30-Oct-22	12-Nov-22	-12	S5WGBP1000	S5WGBP1020
S5WGBP1020	Delivery of Waste Gas Burning System	60	25-Nov-22	23-Jan-23	13-Nov-22	11-Jan-23	-12	S5WGBP1010	S5WGBC1020
S5WGBP1030	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5WGBC1030
Installation		492	21-Sep-22	25-Jan-24	11-Jan-23	11-May-23	-259		
S5WGBC1000	Access to Waste Gas Burning Area (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	11-Jan-23	11-Jan-23	112		S5WGBC1020
S5WGBC1010	Access to Waste Gas Burning Area (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	11-Jan-23	11-Jan-23	72		S5WGBC1020



Remaining Work
Critical Activity
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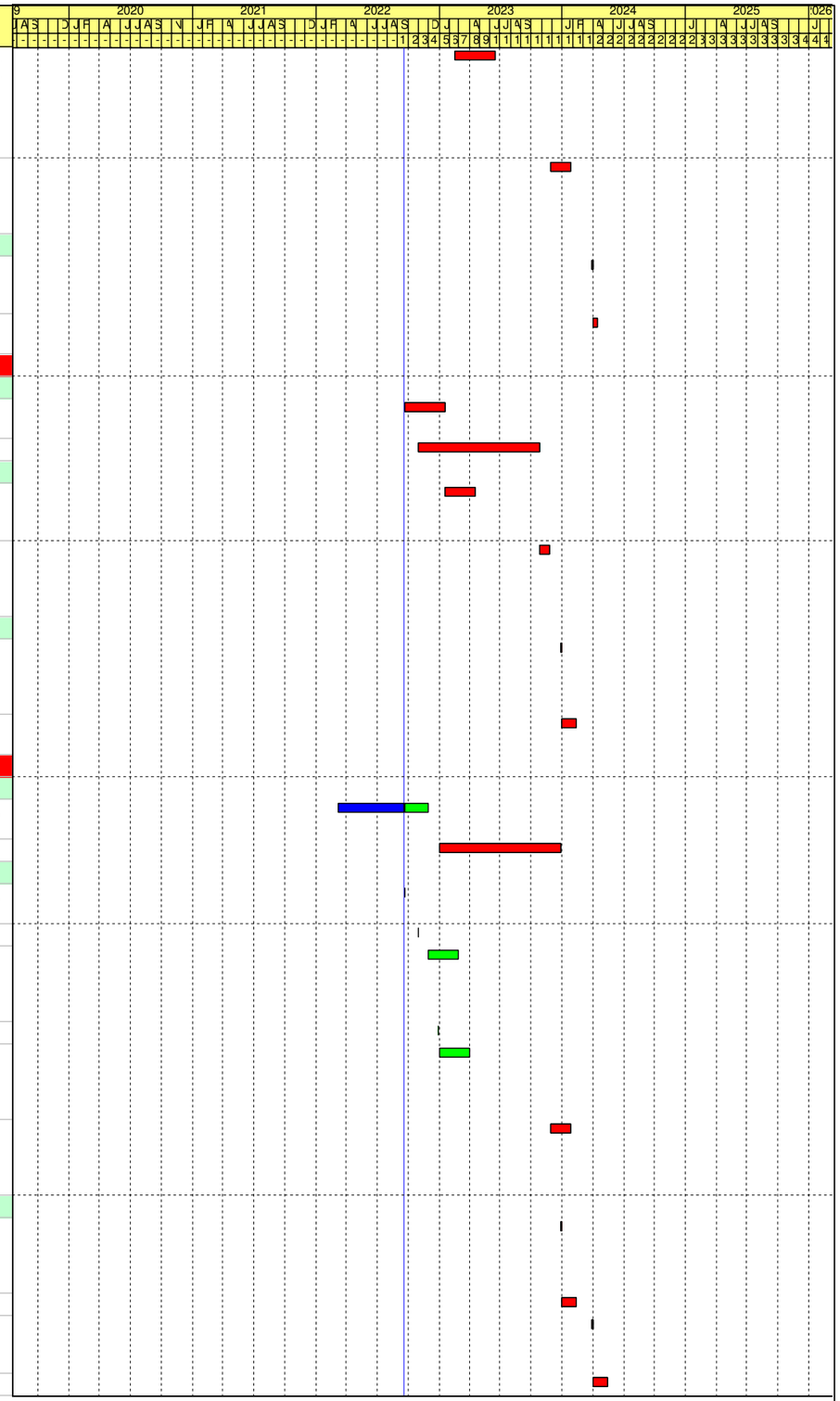
Actual Progress

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 Sep 2022

Date	Revision	Checked	Approved
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5WGBC1020	E&M Installation of Waste Gas Burning System	120	18-Feb-23	17-Jun-23	12-Jan-23	11-May-23	-37	AD1100, S5WGBP1020, S5BIOC1030, S5THPC1020, S5WGBC1000, S5WGBC1010	S5WGBT1010, S5WGBT1000, PL1210, S5WGBC1030
S5WGBC1030	Installation of SCADA System / Control Monitoring System	60	27-Nov-23	25-Jan-24	13-Mar-23	11-May-23	-259	S5WGBP1030, S5WGBC1020	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		18	28-Mar-24	14-Apr-24	27-Jun-23	14-Jul-23	-275		
S5WGBT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	27-Jun-23	29-Jun-23	-275	S5WGBC1020, S5WS2C1110, S5EXAC1030	S5WGBT1010
S5WGBT1010	SAT for Gas Burning System	15	31-Mar-24	14-Apr-24	30-Jun-23	14-Jul-23	-275	S5WGBC1020, S5WGBT1000	S5T1090
Plant Service Water Area		510	21-Sep-22	12-Feb-24	17-Apr-22	30-May-23	-258		
Fabrication, FAT & Delivery of Major Plant & Materials		401	21-Sep-22	26-Oct-23	17-Apr-22	11-Apr-23	-198		
S5PSWP1000	Fabrication & Delivery of Plant Service Water System	120	21-Sep-22	18-Jan-23	15-Sep-22	12-Jan-23	-6	S2P1090, S2D1690	S5PSWC1000
S5PSWP1010	Delivery of SCADA System	360	01-Nov-22*	26-Oct-23	17-Apr-22	11-Apr-23	-198		S5PSWC1010
Installation		311	19-Jan-23	25-Nov-23	13-Jan-23	11-May-23	-198		
S5PSWC1000	E&M Installation of Plant Service Water System	90	19-Jan-23	18-Apr-23	13-Jan-23	12-Apr-23	-6	AD1100, S5PSWP1000	S5PSWT1000, PL1210, S5PSWC1010
S5PSWC1010	Installation of SCADA System / Control Monitoring System	30	27-Oct-23	25-Nov-23	12-Apr-23	11-May-23	-198	S5PSWP1010, S5PSWC1000	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		48	27-Dec-23	12-Feb-24	13-Apr-23	30-May-23	-258		
S5PSWT1000	Ready for Power Energisation	3	27-Dec-23	29-Dec-23	13-Apr-23	15-Apr-23	-258	S5PSWC1000, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5PSWT1010
S5PSWT1010	SAT & System Commissioning Tests for Plant Services Water System	45	30-Dec-23	12-Feb-24	16-Apr-23	30-May-23	-258	S5PSWT1000, S5UVPC1000	S5T1060
DO Area		725	10-Mar-22 A	14-May-24	17-Apr-22	29-Jun-23	-320		
Fabrication, FAT & Delivery of Major Plant & Materials		585	10-Mar-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5DOUP1000	Fabrication & Delivery of DO System	150	10-Mar-22 A	30-Nov-22	03-Nov-22	12-Jan-23	43	S2P1150, S2D1930	S5DOUC1030, S5DOUC1040
S5DOUP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5DOUC1050
Installation		492	21-Sep-22	25-Jan-24	12-Jan-23	11-May-23	-259		
S5DOUC1000	Access to DO Area (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	12-Jan-23	12-Jan-23	113		S5DOUC1030, S5DOUC1040
S5DOUC1010	Access to DO Area No.11 (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	12-Jan-23	12-Jan-23	73		S5DOUC1030
S5DOUC1030	E&M Installation of DO System No.11	90	01-Dec-22	28-Feb-23	13-Jan-23	12-Apr-23	43	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1010	S5DOUT1000
S5DOUC1020	Access to DO Area No.12 (Impacted by EWN-0314-1)	1	31-Dec-22*	31-Dec-22	10-Feb-23	10-Feb-23	41		S5DOUC1040
S5DOUC1040	E&M Installation of DO System No.12	90	01-Jan-23	31-Mar-23	11-Feb-23	11-May-23	41	AD1100, S5DOUP1000, S5DOUC1000, S5DOUC1020	S5DOUT1010, PL1210, S5DOUC1050
S5DOUC1050	Installation of SCADA System / Control Monitoring System	60	27-Nov-23	25-Jan-24	13-Mar-23	11-May-23	-259	S5DOUP1010, S5DOUC1040	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		140	27-Dec-23	14-May-24	13-Apr-23	29-Jun-23	-320		
S5DOUT1000	Ready for Power Energisation of DO No.11	3	27-Dec-23	29-Dec-23	13-Apr-23	15-Apr-23	-258	S5DOUC1030, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5DOUT1020
S5DOUT1020	SAT & System Commissioning Tests for DO System No.11	45	30-Dec-23	12-Feb-24	16-Apr-23	30-May-23	-258	S5DOUT1000	S5T1060
S5DOUT1010	Ready for Power Energisation of DO No.12	3	28-Mar-24	30-Mar-24	13-May-23	15-May-23	-320	S5DOUC1040, S5WS2C1110, S5EXAC1030	S5DOUT1030
S5DOUT1030	SAT & System Commissioning Tests for DO System No.12	45	31-Mar-24	14-May-24	16-May-23	29-Jun-23	-320	S5DOUT1010	S5T1080



Remaining Work
Critical Activity
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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
Revised Programme - as at 20 Sep 2022

Date	Revision	Checked	Approved
31-May-22	Rev.22	LT	KM
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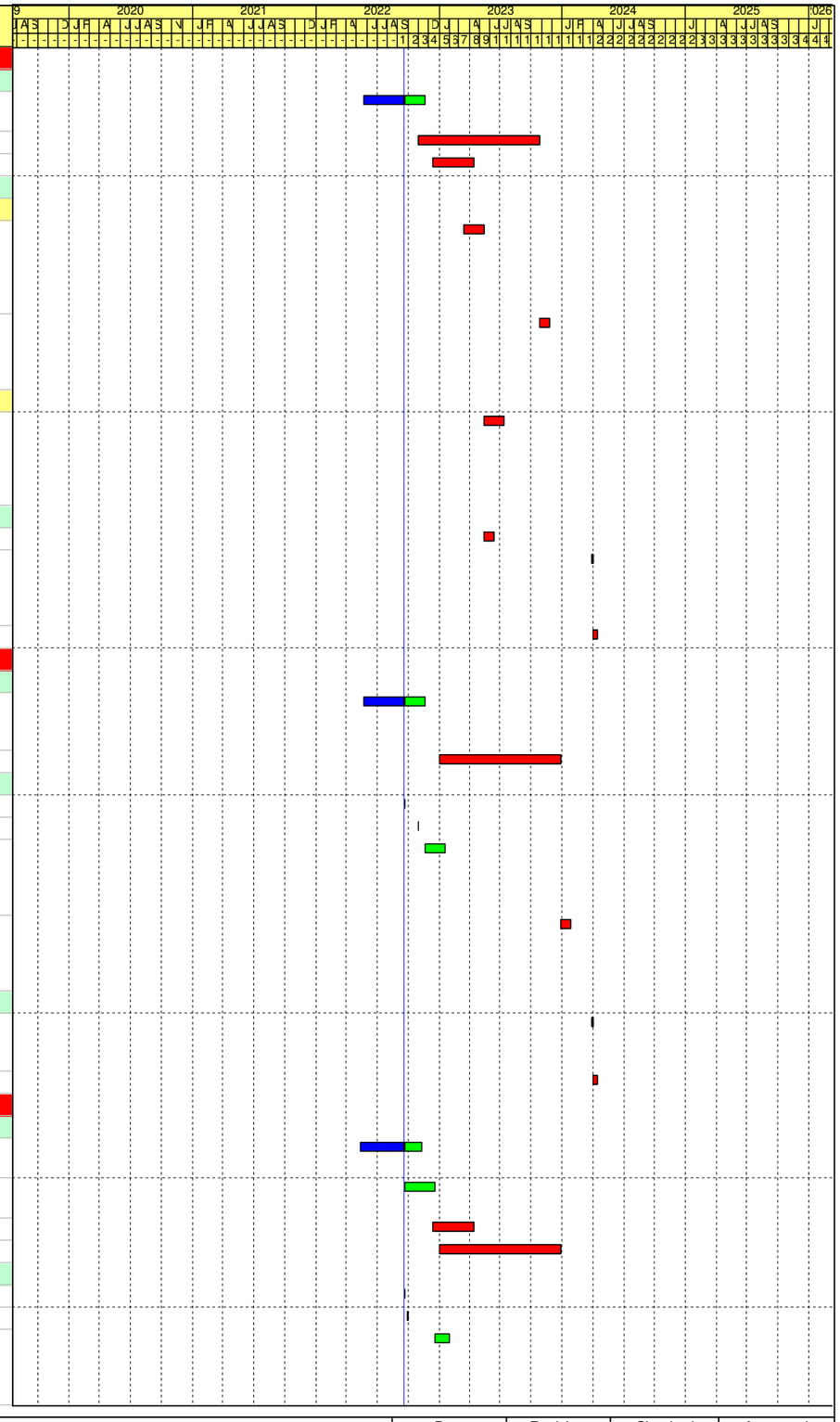
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
Sewage Pump Station		664	23-May-22 A	14-Apr-24	17-Apr-22	30-May-23	-320		
Fabrication, FAT & Delivery of Major Plant & Materials		493	23-May-22 A	26-Oct-23	17-Apr-22	11-Apr-23	-198		
S5SPSP1000	Fabrication & Delivery of Sewage Pump	150	23-May-22 A	19-Nov-22	13-Nov-22	11-Jan-23	53	S2P1180, S2D1940	S5SPSC1000
S5SPSP1020	Delivery of Control & Monitoring System / SCADA System	360	01-Nov-22*	26-Oct-23	17-Apr-22	11-Apr-23	-198		S5SPSC1010
S5SPSP1010	Fabrication & Delivery of LV Switchboard	120	15-Dec-22*	13-Apr-23	14-Oct-22	10-Feb-23	-62		S5SPSC1000
Installation		256	15-Mar-23	25-Nov-23	12-Jan-23	11-May-23	-198		
E&M Installation		256	15-Mar-23	25-Nov-23	12-Jan-23	11-May-23	-198		
S5SPSC1000	E&M Installation of Sewage Pump	60	15-Mar-23	13-May-23	12-Jan-23	12-Mar-23	-62	AD1100, S5SPSP1000, S5SPSP1010	S5SPSC1020, S5SPST1000, S5SPST0990, PL1210, S5SPSC1010
S5SPSC1010	Installation of SCADA System / Control Monitoring System	30	27-Oct-23	25-Nov-23	12-Apr-23	11-May-23	-198	S5SPSP1020, S5SPSC1000	S5T1000, S5T1010, S5T1020, S5T1030
BS Installation		60	14-May-23	12-Jul-23	13-Mar-23	11-May-23	-62		
S5SPSC1020	BS Installation for Sewage Pumping Station	60	14-May-23	12-Jul-23	13-Mar-23	11-May-23	-62	S5SPSC1000	S5S1160, S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		337	14-May-23	14-Apr-24	13-Apr-23	30-May-23	-320		
S5SPST0990	SAT of Switchboard	30	14-May-23	12-Jun-23	13-Apr-23	12-May-23	-31	S5SPSC1000	S5SPST1000
S5SPST1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-May-23	15-May-23	-320	S5SPSC1000, S5WS2C1110, S5EXAC1030, S5SPST0990	S5SPST1010
S5SPST1010	SAT & System Commissioning Tests for Sewage Pumping Station	15	31-Mar-24	14-Apr-24	16-May-23	30-May-23	-320	S5SPST1000	S5T1060
THP Cooling Water Transfer Pumping Station		664	23-May-22 A	14-Apr-24	17-Apr-22	15-May-23	-335		
Fabrication, FAT & Delivery of Major Plant & Materials		554	23-May-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5TCWP1000	Fabrication & Delivery of THP Cooling Pump	150	23-May-22 A	19-Nov-22	29-Dec-22	26-Feb-23	99	S2P1210, S2D1970, S2D1370	S5TCWC1020
S5TCWP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5TCWC1030
Installation		492	21-Sep-22	25-Jan-24	26-Feb-23	11-May-23	-259		
S5TCWC1000	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	26-Feb-23	26-Feb-23	158		S5TCWC1020
S5TCWC1010	Access to THP CW Transfer Pumping Station (Impacted by EWN-0314-1)	1	31-Oct-22*	31-Oct-22	26-Feb-23	26-Feb-23	118		S5TCWC1020
S5TCWC1020	E&M Installation of THP Cooling Pump	60	20-Nov-22	18-Jan-23	27-Feb-23	27-Apr-23	99	AD1100, S5TCWP1000, S5TCWC1000, S5TCWC1010	S5TCWT1000, PL1210, S5TCWC1030
S5TCWC1030	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5TCWP1010, S5TCWC1020	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		18	28-Mar-24	14-Apr-24	28-Apr-23	15-May-23	-335		
S5TCWT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	28-Apr-23	30-Apr-23	-335	S5TCWC1020, S5WS2C1110, S5EXAC1030	S5TCWT1010
S5TCWT1010	SAT & System Commissioning Tests for THP Cooling Water Pumping System	15	31-Mar-24	14-Apr-24	01-May-23	15-May-23	-335	S5TCWT1000	S5T1050
Ferric Chloride Dosing Facility		635	14-May-22 A	14-May-24	17-Apr-22	30-May-23	-350		
Fabrication, FAT & Delivery of Major Plant & Materials		495	14-May-22 A	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5FCDP1010	Fabrication & Delivery of Ferric Chloride Dosing Pump	150	14-May-22 A	10-Nov-22	24-Nov-22	13-Jan-23	64	S5P1040, S2D1980	S5FCDC1030
S5FCDP1000	Fabrication & Delivery of Ferric Chloride Storage Tank	90	21-Sep-22	19-Dec-22	30-Sep-22	28-Dec-22	9	S5P1030, S2D1980	S5FCDC1020
S5FCDP1020	Fabrication & Delivery of LV Switchboard	120	15-Dec-22*	13-Apr-23	30-Sep-22	27-Jan-23	-76		S5FCDC1030
S5FCDP1030	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5FCDP1040
Installation		492	21-Sep-22	25-Jan-24	28-Dec-22	11-May-23	-259		
S5FCDC1000	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	28-Dec-22	28-Dec-22	98		S5FCDC1020
S5FCDC1010	Access to Ferric Chloride Dosing Facility (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	28-Dec-22	28-Dec-22	89		S5FCDC1020
S5FCDC1020	E&M Installation of Ferric Chloride Storage Tank	45	20-Dec-22	02-Feb-23	29-Dec-22	11-Feb-23	9	AD1100, S5FCDP1000, S5FCDC1000, S5FCDC1010	S5FCDC1030, S5S1280



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Sidestream Treatment Facilities and E&M Works for Sludge Treatment Facilities
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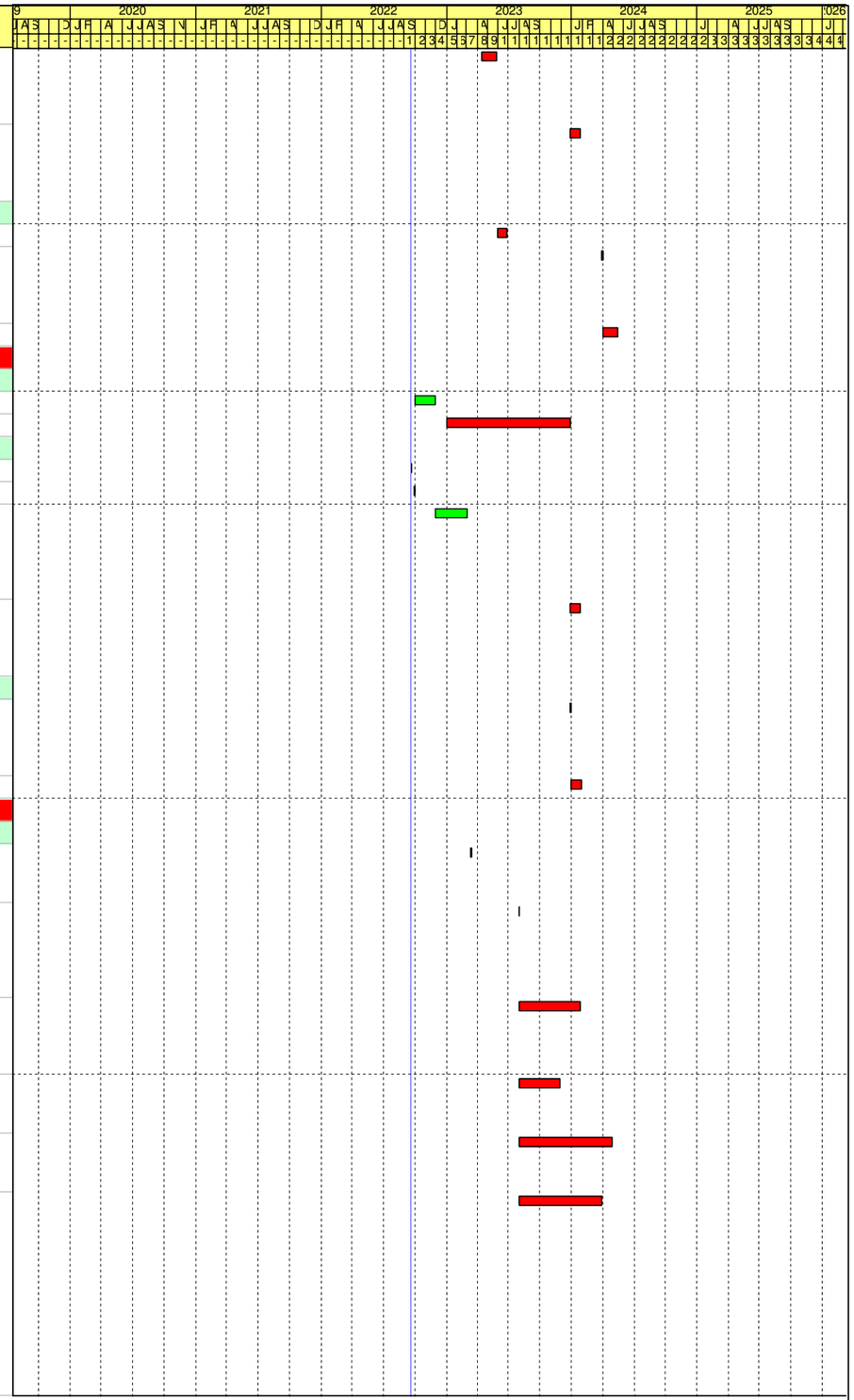
30-Sep-22	Rev.26	LT	KM

Activity ID	Activity Name	Original Duration	Early Start	Early Finish	Late Start	Late Finish	Total Float	Predecessors	Successors
S5FCDC1030	E&M Installation of Ferric Chloride Dosing Pump	45	14-Apr-23	28-May-23	28-Jan-23	13-Mar-23	-76	AD1100, S5FCDC1020, S5FCDP1010, S5FCDP1020	S5FCDT1000, S5FCDT0990, PL1210, S5FCDP1040
S5FCDP1040	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5FCDP1030, S5FCDC1030	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		352	29-May-23	14-May-24	14-Mar-23	30-May-23	-350		
S5FCDT0990	SAT of Switchboard	30	29-May-23	27-Jun-23	14-Mar-23	12-Apr-23	-76	S5FCDC1030	S5FCDT1000
S5FCDT1000	Ready for Power Energisation	3	28-Mar-24	30-Mar-24	13-Apr-23	15-Apr-23	-350	S5FCDC1030, S5WS2C1110, S5EXAC1030, S5FCDT0990	S5FCDT1010
S5FCDT1010	SAT & System Commissioning Tests for FeCl3 Dosing Facility	45	31-Mar-24	14-May-24	16-Apr-23	30-May-23	-350	S5FCDT1000	S5T1080
Fire Hydrant and Booster Pump Room		495	21-Sep-22	28-Jan-24	17-Apr-22	30-Nov-23	-59		
Fabrication, FAT & Delivery of Major Plant & Materials		450	03-Oct-22	26-Dec-23	17-Apr-22	11-Apr-23	-259		
S5SHPP1000	Fabrication & Delivery of Fire Hydrant and Booster Pump	60	03-Oct-22*	01-Dec-22	13-Dec-22	10-Feb-23	71		S5SHPC1020
S5SHPP1010	Delivery of Control & Monitoring System / SCADA System	360	01-Jan-23*	26-Dec-23	17-Apr-22	11-Apr-23	-259		S5SHPC1030
Installation		492	21-Sep-22	25-Jan-24	10-Feb-23	11-May-23	-259		
S5SHPC1000	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314)	1	21-Sep-22*	21-Sep-22	10-Feb-23	10-Feb-23	142		S5SHPC1020
S5SHPC1010	Access to Fire Hydrant and Booster Pump Room (Impacted by EWN-0314-1)	1	30-Sep-22*	30-Sep-22	10-Feb-23	10-Feb-23	133		S5SHPC1020
S5SHPC1020	Fire Hydrant and Booster Pump Room Installation	90	02-Dec-22	01-Mar-23	11-Feb-23	11-May-23	71	S5S1120, AD1100, S5SHPC1000, S5SHPC1010, S5SHPP1000	S5S1130, S5SHPT1000, PL1210, S5SHPC1030
S5SHPC1030	Installation of SCADA System / Control Monitoring System	30	27-Dec-23	25-Jan-24	12-Apr-23	11-May-23	-259	S5SHPP1010, S5SHPC1020	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		33	27-Dec-23	28-Jan-24	29-Oct-23	30-Nov-23	-59		
S5SHPT1000	Ready for Power Energisation	3	27-Dec-23	29-Dec-23	29-Oct-23	31-Oct-23	-59	S5SHPC1020, S5WS2C1130, S5EXAC1040, S5TXRT1010	S5SHPT1010
S5SHPT1010	SAT for Fire Hydrant and Booster Pump	30	30-Dec-23	28-Jan-24	01-Nov-23	30-Nov-23	-59	S5SHPT1000	S5S1220
External Area		410	14-Mar-23	26-Apr-24	15-Aug-22	06-Nov-23	-172		
Installation		410	14-Mar-23	26-Apr-24	15-Aug-22	06-Nov-23	-172		
S5EXAC1000	Access to Other Peripheral Systems (Impacted by EWN-0314)	1	14-Mar-23*	14-Mar-23	18-Aug-22	18-Aug-22	-208		S5EXAC1020, S5EXAC1050, S5EXAC1060
S5EXAC1010	Access to Other Peripheral Systems (Impacted by EWN-0314-1)	1	31-Jul-23*	31-Jul-23	15-Aug-22	15-Aug-22	-350		S5EXAC1020, S5EXAC1050, S5EXAC1060, S5EXAC1030, S5EXAC1040
S5EXAC1050	Road Lighting Installation	180	01-Aug-23	27-Jan-24	11-May-23	06-Nov-23	-82	AD1100, S5EXAC1000, S5EXAC1010, S5P1050	S5S1220, PL1210
S5EXAC1060	Landscape Lighting Installation	120	01-Aug-23*	28-Nov-23	10-Jul-23	06-Nov-23	-22	S5EXAC1000, S5EXAC1010, S5P1050	S5S1220, PL1210
S5EXAC1020	E&M Installation of Pipe Trench No.1, No.2 & No.3	270	01-Aug-23	26-Apr-24	19-Aug-22	15-May-23	-347	AD1100, S5EXAC1000, S5EXAC1010	S5T1050, PL1210
S5EXAC1030	Cable Laying from CHP to related Building / Area	240	01-Aug-23	27-Mar-24	16-Aug-22	12-Apr-23	-350	S5EXAC1010, S5P1050	S5FCDT1000, S5TCWT1000, S5SPST1000, S5DOUT1010, S5WGBT1000, S5H2ST1000, S5THPT1000, S5BIOT1000, S5WS2T1010, S5DIGT1010, PL1210



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30-Sep-22	Rev.26	LT	KM

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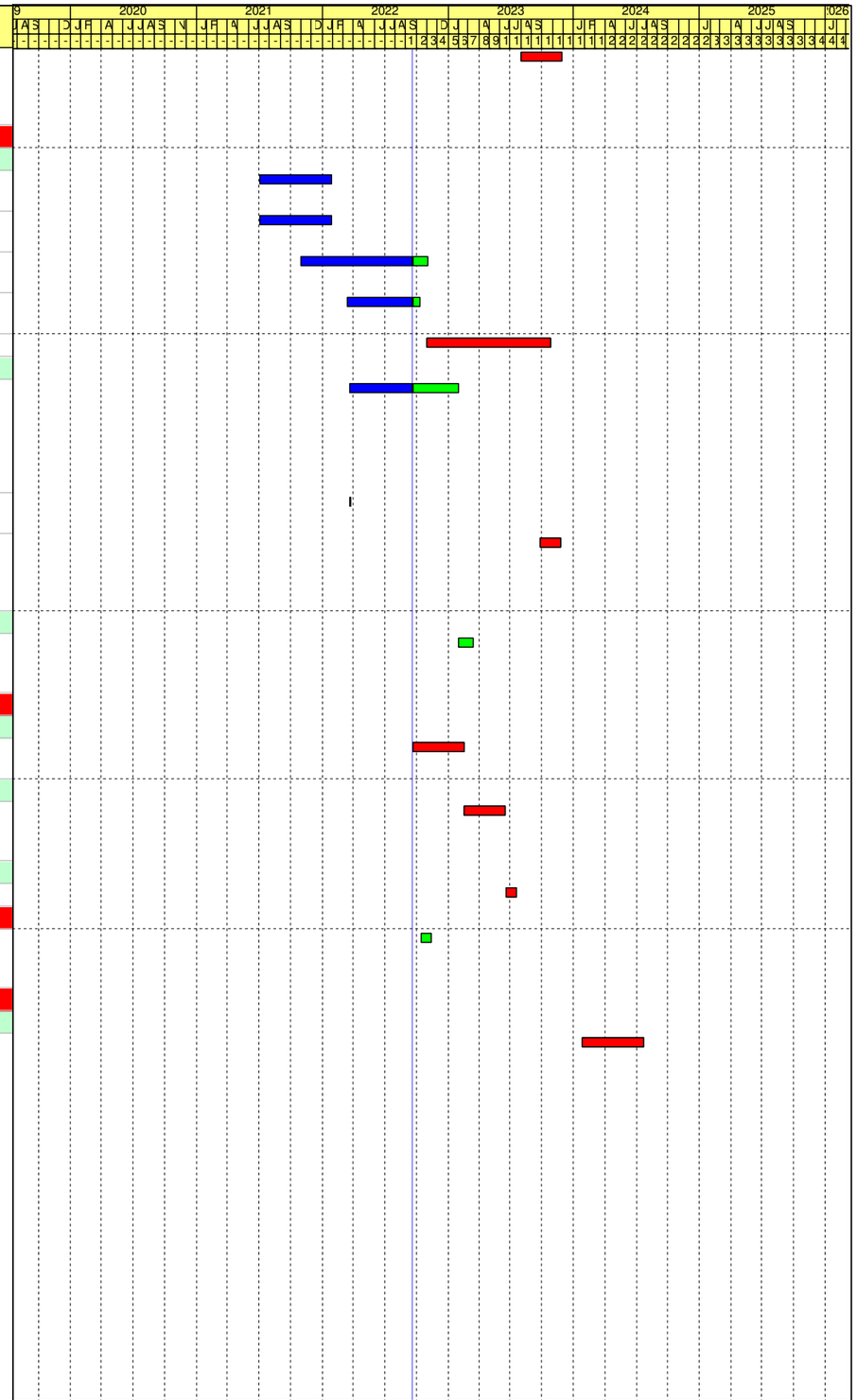
S5EXAC1040	Cable Laying from TX & SW Room to related Building / Area	120	01-Aug-23	28-Nov-23	14-Dec-22	12-Apr-23	-230	S5EXAC1010, S5P1050	S5SHPT1000, S5DOUT1000, S5PSWT1000, PL1210
SAS Pumping Station		796	04-Jul-21 A	25-Nov-23	17-Apr-22	15-May-25	537		
Fabrication, FAT & Delivery of Major Plant & Materials		766	04-Jul-21 A	26-Oct-23	17-Apr-22	15-May-25	567		
S5SASP1010	Fabrication & Delivery of Stoplog	270	04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1160	S5SASC1010
S5SASP1020	Fabrication & Delivery of Penstock	270	04-Jul-21 A	27-Jan-22 A	12-Mar-23	12-Mar-23		S2P1170	S5SASC1010
S5SASP1030	Fabrication & Delivery of Lifting Appliances	309	30-Oct-21 A	04-Nov-22	01-Apr-25	15-May-25	923		
S5SASP1000	Fabrication & Delivery of SAS Pumping System	120	16-Mar-22 A	13-Oct-22	18-Feb-23	12-Mar-23	150	S2P1100, S2D1770	S5SASC1010
S5SASP1040	Delivery of Control & Monitoring System / SCADA System	360	01-Nov-22*	26-Oct-23	17-Apr-22	11-Apr-23	-198		S5SASC1020
Installation		523	23-Mar-22 A	25-Nov-23	31-Oct-22	11-May-23	-198		
S5SASC1010	E&M Installation of SAS Pumping System	210	23-Mar-22 A	31-Jan-23	31-Oct-22	12-Mar-23	40	AD1160, S5SASP1000, CE0219b, S5SASP1010, S5SASP1020, S5SASC1000	S5SAST1000, PL1210, S5SASC1020
S5SASC1000	Access to SAS Pumping Station (Impacted by NCE-NCE-219)	1	23-Mar-22 A	23-Mar-22 A	31-Oct-22	31-Oct-22		AD1160	S5SASC1010
S5SASC1020	Installation of SCADA System / Control Monitoring System	60	27-Sep-23	25-Nov-23	13-Mar-23	11-May-23	-198	S5SASP1040, S5SASC1010	S5T1000, S5T1010, S5T1020, S5T1030
Testing and Commissioning		45	01-Feb-23	17-Mar-23	16-Apr-23	30-May-23	74		
S5SAST1000	SAT & System Commissioning Tests for SAS Pumping Station	45	01-Feb-23	17-Mar-23	16-Apr-23	30-May-23	74	S5SASC1010	S5T1110, S5T1120, S5T1060
Existing Consolidation House		300	21-Sep-22	17-Jul-23	05-Jul-22	30-Apr-23	-78		
Fabrication, FAT & Delivery of Major Plant & Materials		150	21-Sep-22	17-Feb-23	05-Jul-22	01-Dec-22	-78		
S5ECHP1000	Fabrication & Delivery of Temporary Primary Sludge Pump	150	21-Sep-22	17-Feb-23	05-Jul-22	01-Dec-22	-78	S2P1220, S2D1990	S5ECHC1000
Installation		120	18-Feb-23	17-Jun-23	02-Dec-22	31-Mar-23	-78		
S5ECHC1000	E&M Installation of Existing Consolidation House	120	18-Feb-23	17-Jun-23	02-Dec-22	31-Mar-23	-78	CE0219d, S5ECHP1000	S5T1060, S5ECHT1000, PL1210
Testing and Commissioning		30	18-Jun-23	17-Jul-23	01-Apr-23	30-Apr-23	-78		
S5ECHT1000	SAT for Temporary Primary Sludge Pump	30	18-Jun-23	17-Jul-23	01-Apr-23	30-Apr-23	-78	S5ECHC1000	S5T1060
Miscellaneous		30	14-Oct-22	12-Nov-22	17-Mar-23	15-Apr-23	154		
S5UVPC1000	E&M Installation of Lift-up Pumps & Associated Pipeworks / Valves	30	14-Oct-22	12-Nov-22	17-Mar-23	15-Apr-23	154	S4C1030, S4P1080, S4T1020	S5PSWT1010, PL1210
Testing & Commissioning		450	26-Jan-24	19-Apr-25	01-May-23	04-May-24	-350		
T&C of Control Monitoring System		270	26-Jan-24	21-Oct-24	12-May-23	05-Feb-24	-259		
S5T1000	SAT of SCADA System	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040



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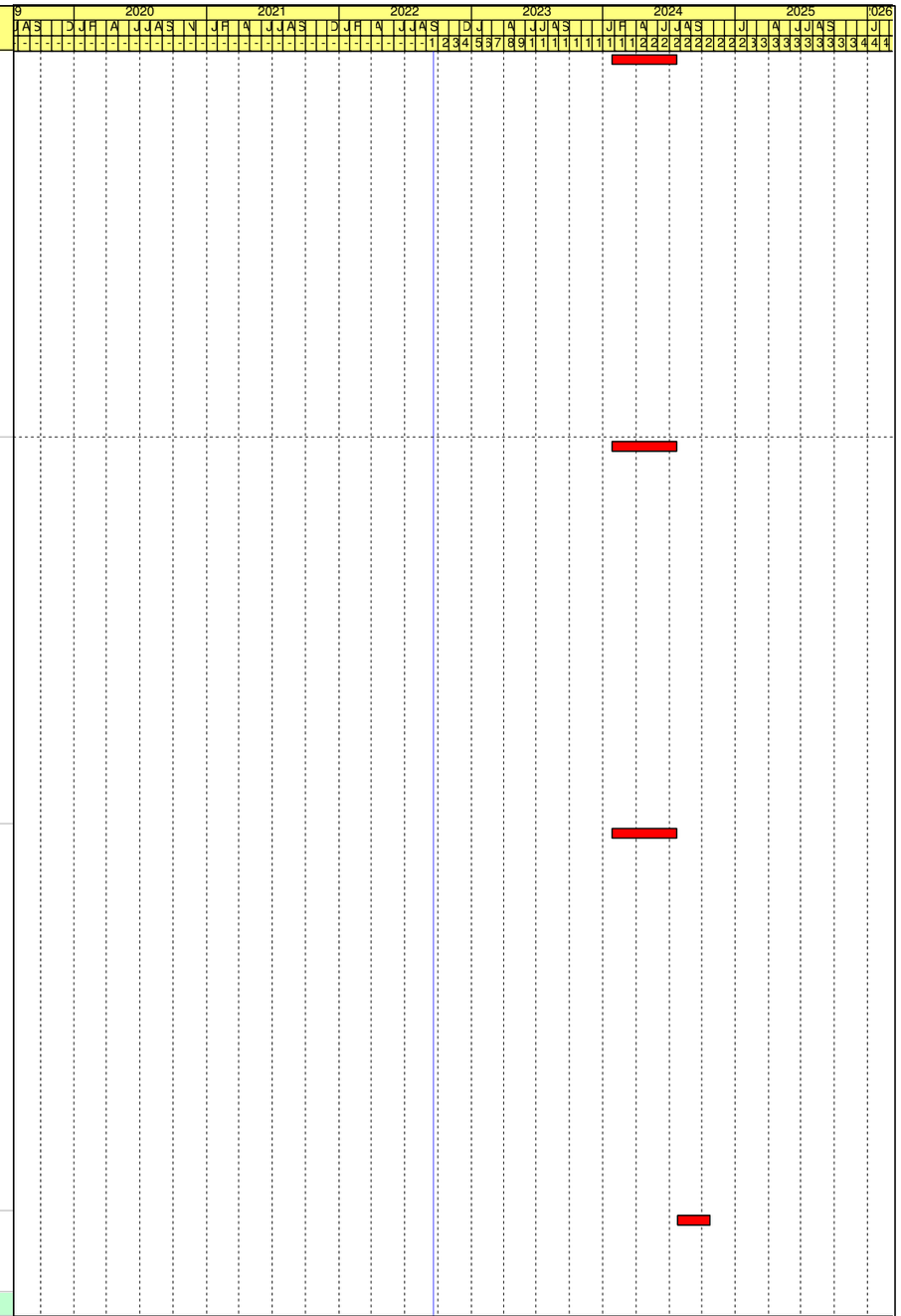
S5T1010	SAT of PMS	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1020	SAT of CMMS	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1030	SAT of IDMS	180	26-Jan-24	23-Jul-24	12-May-23	07-Nov-23	-259	S5TXRC1050, S5WS2C1180, S5CHPC1120, S5CHPC1250, S5TXRC1050, S5DIGC1270, S5BIOC1060, S5THPC1050, S5SPSC1020, S5BIOC1050, S5THPC1040, S5H2SC1030, S5WGBC1030, S5PSWC1010, S5DOUC1050, S5SPSC1010, S5TCWC1030, S5FCDP1040, S5SHPC1030, S5SASC1020	S5T1040
S5T1040	Overall Testing for Whole System	90	24-Jul-24	21-Oct-24	08-Nov-23	05-Feb-24	-259	S5T1000, S5T1010, S5T1020, S5T1030	SC51110, S5T1140
T&C of E&M Process		400	16-Mar-24	19-Apr-25	01-May-23	04-May-24	-350		



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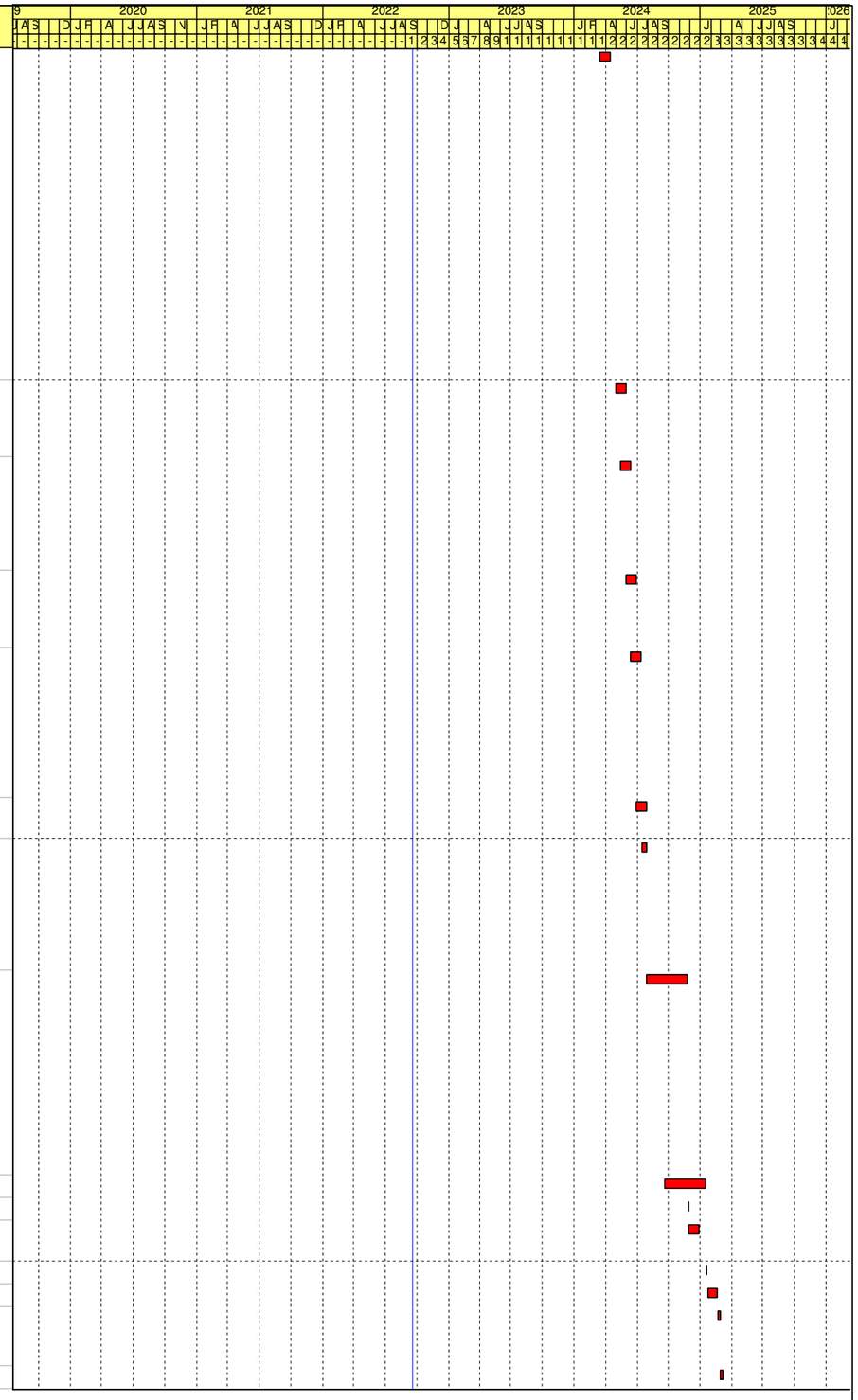
S5T1060	System Commissioning Tests for Sludge Dewatering System	30	16-Mar-24	14-Apr-24	01-May-23	30-May-23	-320	S5ECHC1000, S5DOUT1020, S5SPST1010, S5PSWT1010, S5SAST1000, S5ECHT1000, S5SDBT1180, S5SDBT1032, S5SDBT1070, S5SDBT1181, S5SDBT1160, S5SDBT1058, S5SDBT1045, S5SDBT1170, S5SDBT1068, S5SDBT1100, S5SDBC1870, S5SDBC1860	S5T1120, S5T1110, PL1520, S5T1050
S5T1050	System Commissioning Tests for THP System	30	30-Apr-24	29-May-24	16-May-23	14-Jun-23	-350	S5THPT1010, S5EXAC1020, S5T1060, S5TCWT1010	S5T1120, S5T1080, S5T1110
S5T1080	System Commissioning Tests for Sludge Digestion System	30	15-May-24	13-Jun-24	31-May-23	29-Jun-23	-350	S5DIGT1020, S5T1050, S5DIGC1270, S5H2ST1010, S5DOUT1030, S5FCDT1010	S5T1120, S5T1110, S5T1070
S5T1070	System Commissioning Tests for Biogas Storage System	30	30-May-24	28-Jun-24	15-Jun-23	14-Jul-23	-350	S5BIOT1010, S5T1080	S5T1120, S5T1110, S5S1070, S5T1100
S5T1100	System Commissioning Tests for CHP System	30	14-Jun-24	13-Jul-24	30-Jun-23	29-Jul-23	-350	S5CHPT1030, S5S1310, S5CHPC1120, S5CHPT1000, S5CHPC1250, S5CHPT1040, S5CHPT1050, S5T1070	S5T1120, S5T1110, PL1560, S5T1090
S5T1090	System Commissioning Tests for Gas Burning System	30	29-Jun-24	28-Jul-24	15-Jul-23	13-Aug-23	-350	S5WGBT1010, S5T1100	S5T1120, S5T1110
S5T1110	Seeding	14	15-Jul-24	28-Jul-24	31-Jul-23	13-Aug-23	-350	S5T1090, S5T1070, S5T1080, S5T1100, S5T1060, S5T1050, S5SAST1000	S5T1120
S5T1120	Process Start Up - Digester 1	120	29-Jul-24	25-Nov-24	14-Aug-23	11-Dec-23	-350	S5T1090, S5T1070, S5T1080, S5T1100, S5T1060, S5T1050, S5T1110, S5S1080, S5TXRC1050, S5SAST1000, S3T1120	S5T1150, S5T1130, S3T1130
S5T1150	Process Start Up - Digester 2	120	20-Sep-24	17-Jan-25	06-Oct-23	02-Feb-24	-350	S5T1120	S5T1160
S5T1130	Notice to Commence Phase 1 System Commissioning - Digester 1	3	26-Nov-24	28-Nov-24	03-Feb-24	05-Feb-24	-297	S5T1120	S5T1140
S5T1140	Phase 1 System Commissioning - Digester 1	30	29-Nov-24	28-Dec-24	06-Feb-24	06-Mar-24	-297	S5T1130, S5T1040	S5T1180
S5T1160	Notice to Commence Phase 1 System Commissioning - Digester 2	3	18-Jan-25	20-Jan-25	03-Feb-24	05-Feb-24	-350	S5T1150	S5T1170
S5T1170	Phase 1 System Commissioning - Digester 2	30	21-Jan-25	19-Feb-25	06-Feb-24	06-Mar-24	-350	S5T1160	S5T1180
S5T1180	Phase 2 System Commissioning - Digester 1 & 2	7	20-Feb-25	26-Feb-25	07-Mar-24	13-Mar-24	-350	S5T1170, S5T1140	S5T1190, PL1310, S3T1180
S5T1190	Notice to Commence Plant Commissioning	7	27-Feb-25	05-Mar-25	14-Mar-24	20-Mar-24	-350	S5T1180	S5T1200



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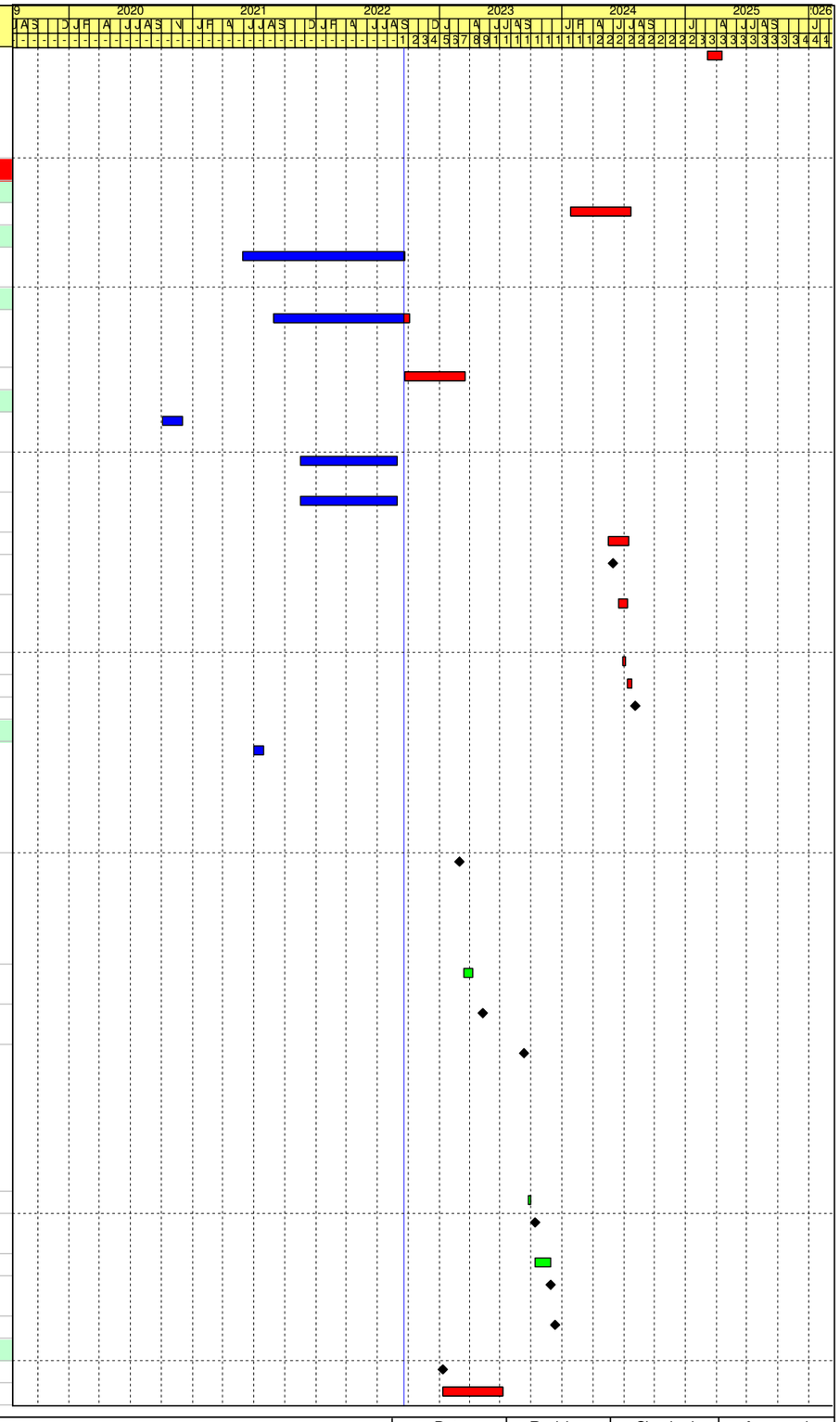
S5T1200	Plant Commissioning Tests	45	06-Mar-25	19-Apr-25	21-Mar-24	04-May-24	-350	S5T1190, S5S1020, S5TXRC1050, S5WS2C1180, S5S1150, S3T1160	SC51110
Statutory Submission / Inspection		1185	03-Oct-20 A	04-Aug-24	20-May-22	16-May-24	-80		
HKT Submission		180	26-Jan-24	23-Jul-24	07-Nov-23	04-May-24	-80		
S5S0990	Application of Telemetry Lines for Workshop No. 2.	180	26-Jan-24	23-Jul-24	07-Nov-23	04-May-24	-80	S5WS2C1180	SC51110
CLP Submission		275	30-May-21 A	21-Sep-22	11-Jan-23	11-Jan-23	112		
S5S1000	Submission & Approval of Electrical Schematic Wiring Diagram to CLP	275	30-May-21 A	21-Sep-22	11-Jan-23	11-Jan-23	112		S5WS2C1040
EPD Submission / Inspection		569	28-Aug-21 A	19-Mar-23	20-May-22	17-Nov-22	-122		
S5S1020	EPD Submission & Approval for Air Pollution Control - CHP & Burner	180	28-Aug-21 A	06-Oct-22	20-May-22	04-Jun-22	-124	S2D1610	S5T1200, S5THPC1020, S5CHPC1020
S5S1010	EPD Submission & Approval for Air Pollution Control - Genset	180	21-Sep-22	19-Mar-23	22-May-22	17-Nov-22	-122	S2D1860	S5SDBC1500
EMSD Submission / Inspection		1185	03-Oct-20 A	04-Aug-24	01-Jun-22	16-May-24	-80		
S5S1030	BEEO Stage one: Submit EE1 & EE-SU to EMSD	60	03-Oct-20 A	02-Dec-20 A	02-Sep-22	02-Sep-22		S2D1890	S5WS2C1000
S5S1060	Application for Construction Approval of Notifiable Gas Installation (Form 104)	180	15-Nov-21 A	30-Aug-22 A	01-Jun-22	01-Jun-22		S2D1070, S5S1050	S5S1070, S5BIOC1020
S5S1050	Application & Approval of the Zone Classification of Hazardous Area - including Fire Risk Assessment Report	180	15-Nov-21 A	30-Aug-22 A	01-Jun-22	01-Jun-22		S2D1070	S5S1070, S5S1060
S5S1040	BEEO Stage two: Submit EE2 & EE-SU to EMSD	60	16-May-24	14-Jul-24	18-Mar-24	16-May-24	-59	S5S1250	SC51120
S5S1090	Form 5 Submission to EMSD - Lift Installation	0	30-May-24		28-Feb-24		-92	S5WS2T1020, S5SDBT1110	S5S1100
S5S1070	Application for Approval of Use of Notifiable Gas Installation (Form 105)	28	15-Jun-24	12-Jul-24	03-Jul-23	30-Jul-23	-348	S5S1060, S5T1070, S5S1050	S5S1080
S5S1100	EMSD Inspection - Lift Installation	7	29-Jun-24	05-Jul-24	29-Mar-24	04-Apr-24	-92	S5S1090	S5S1110
S5S1080	EMSD Inspection - Gas Holding Tanks	14	13-Jul-24	26-Jul-24	31-Jul-23	13-Aug-23	-348	S5S1070	S5T1120
S5S1110	Issuance of Form 6 - Lift Installation	0		04-Aug-24		04-May-24	-92	S5S1100	SC51110
WSD Submission / Inspection		894	01-Jul-21 A	11-Dec-23	11-Feb-23	04-May-24	145		
S5S1120	Submit WWO46 Part I / II to WSD (FS/PD)	30	01-Jul-21 A	30-Jul-21 A	11-Feb-23	11-Feb-23		S2D1910, S2D1860, S2D1870, S2D1880, S2D1890, S2D1900	S5S1130, S5WS2C1140, S5SHPC1020, S5DIGC1300, S5WS2C1170
S5S1130	Submit WWO46 Part IV to WSD (FS)	0	02-Mar-23		22-Sep-23		204	S5S1120, S5WS2C1140, S5SHPC1020, S5SDBC1352, S5SDBC1152, S5SDBC1052	S5S1140, S5S1150
S5S1140	WSD Inspection (FS)	28	16-Mar-23	12-Apr-23	06-Oct-23	02-Nov-23	204	S5S1130	S5S1250, S5S1150
S5S1150	Issuance of FS Water Certificate	0		10-May-23		30-Nov-23	204	S5S1130, S5S1140	S5T1200, S5S1220
S5S1160	Submit WWO46 Part IV to WSD (PD)	0	09-Sep-23		01-Feb-24		145	S5THPC1050, S5BIOC1060, S5SPSC1020, S5CHPC1240, S5CHPC1110, S5DIGC1300, S5WS2C1170, S5SDBT1150	S5S1170
S5S1170	WSD Inspection	7	23-Sep-23	29-Sep-23	15-Feb-24	21-Feb-24	145	S5S1160	S5S1180
S5S1180	Issuance of Form WWO46 Part Va	0		13-Oct-23		06-Mar-24	145	S5S1170	S5S1200, S5S1190
S5S1190	System Flushing / Sampling	45	14-Oct-23	27-Nov-23	07-Mar-24	20-Apr-24	145	S5S1180	S5S1200
S5S1200	Issuance of Form WWO46 Part Vb	0		27-Nov-23		20-Apr-24	145	S5S1180, S5S1190	S5S1210
S5S1210	Issuance of Water Certificate	0		11-Dec-23		04-May-24	145	S5S1200	SC51110
FSD Submission / Inspection		490	12-Jan-23	15-May-24	04-Sep-22	17-Mar-24	-59		
S5S1260	Application of D.G. Licence	0	12-Jan-23		04-Sep-22		-130	S2D1860	S5S1270
S5S1270	Processing of D.G. Licence Application	180	12-Jan-23	10-Jul-23	04-Sep-22	02-Mar-23	-130	S5S1260	S5S1280



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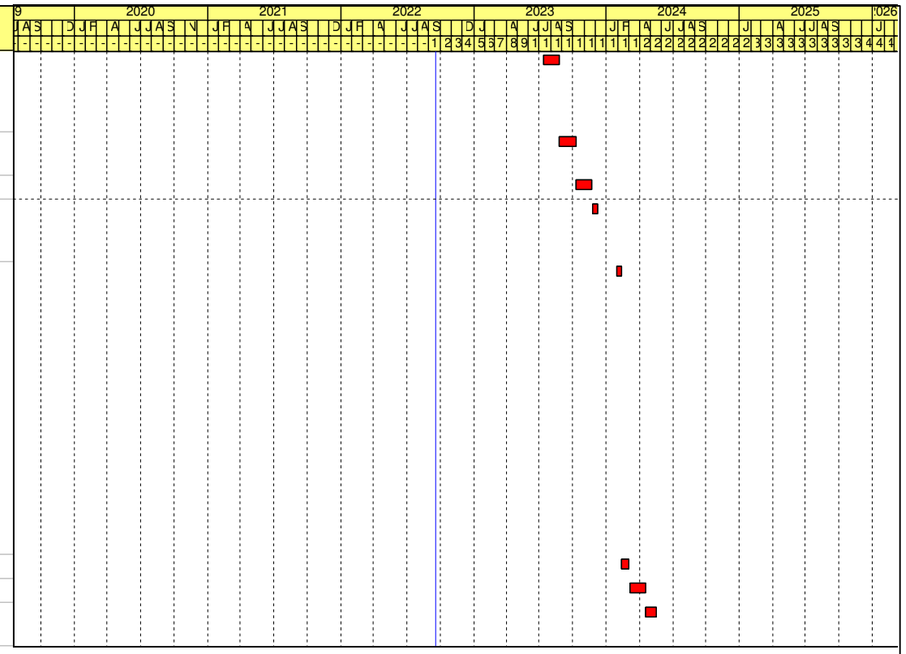
S5S1280	Apply for D.G. Inspection	45	11-Jul-23	24-Aug-23	03-Mar-23	16-Apr-23	-130	S5S1270, S5CHPC1150, S5FCDC1020, S5SDBT1078	S5S1310, S5S1290
S5S1290	D.G. Inspection, Defects Rectification & Re-inspection (Ventilation Division)	45	25-Aug-23	08-Oct-23	17-Apr-23	31-May-23	-130	S5S1280	S5S1310, S5S1300
S5S1300	D.G. Inspection, Defects Rectification & Re-inspection (DG Division)	45	09-Oct-23	22-Nov-23	01-Jun-23	15-Jul-23	-130	S5S1290	S5S1310
S5S1310	Issue D.G. Licence	14	23-Nov-23	06-Dec-23	16-Jul-23	29-Jul-23	-130	S5S1290, S5S1300, S5S1280	S5S1220, S5T1100
S5S1220	Prepare & Submit FSI/314 & FSI/501	14	29-Jan-24	11-Feb-24	01-Dec-23	14-Dec-23	-59	S5WS2C1150, S5S1310, S5S1150, S5EXAC1050, S5EXAC1060, S5CHPC1080, S5CHPC1090, S5CHPC1210, S5CHPC1220, S5DIGC1280, S5DIGC1290, S5SHPT1010, S5SDBT1048, S5SDBT1130, S5SDBT1140	S5S1230
S5S1230	FSD Review & Approval of FSI/314 & FSI/501	21	12-Feb-24	03-Mar-24	15-Dec-23	04-Jan-24	-59	S5S1220	S5S1240
S5S1240	F.S. Inspection, Defects Rectification & Re-inspection	45	04-Mar-24	17-Apr-24	05-Jan-24	18-Feb-24	-59	S5S1230	S5S1250
S5S1250	Issuance of Acceptance Letter	28	18-Apr-24	15-May-24	19-Feb-24	17-Mar-24	-59	S5S1240, S5S1140	SC51110, S5S1040

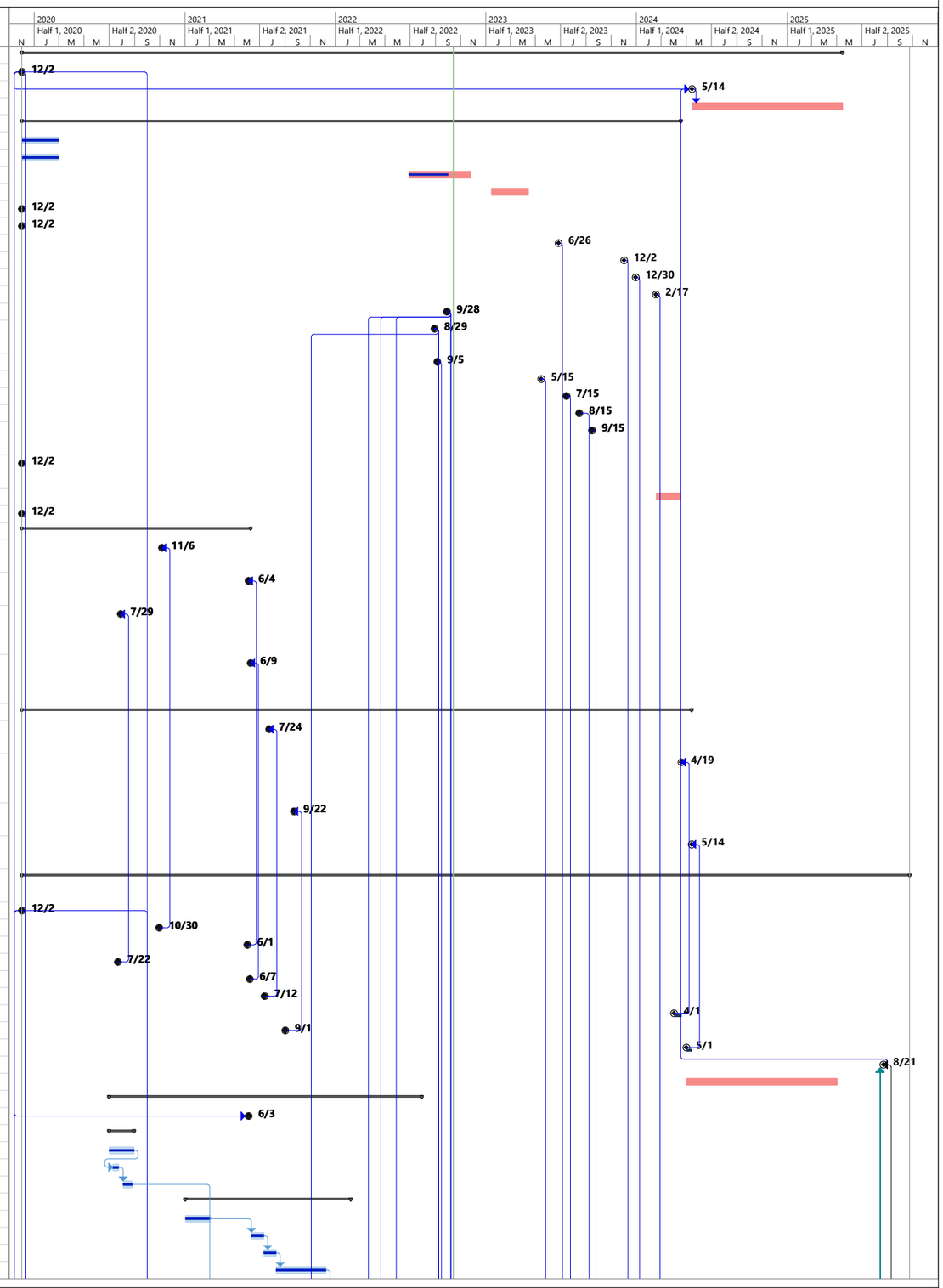


Remaining Work
Critical Activity
Milestone
Actual Progress

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 Sep 2022

Date	Revision	Checked	Approved
31-May-22	Rev.22	LT	KM
30-Jun-22	Rev.23	LT	KM
31-Jul-22	Rev.24	LT	KM
31-Aug-22	Rev.25	LT	KM
30-Sep-22	Rev.26	LT	KM

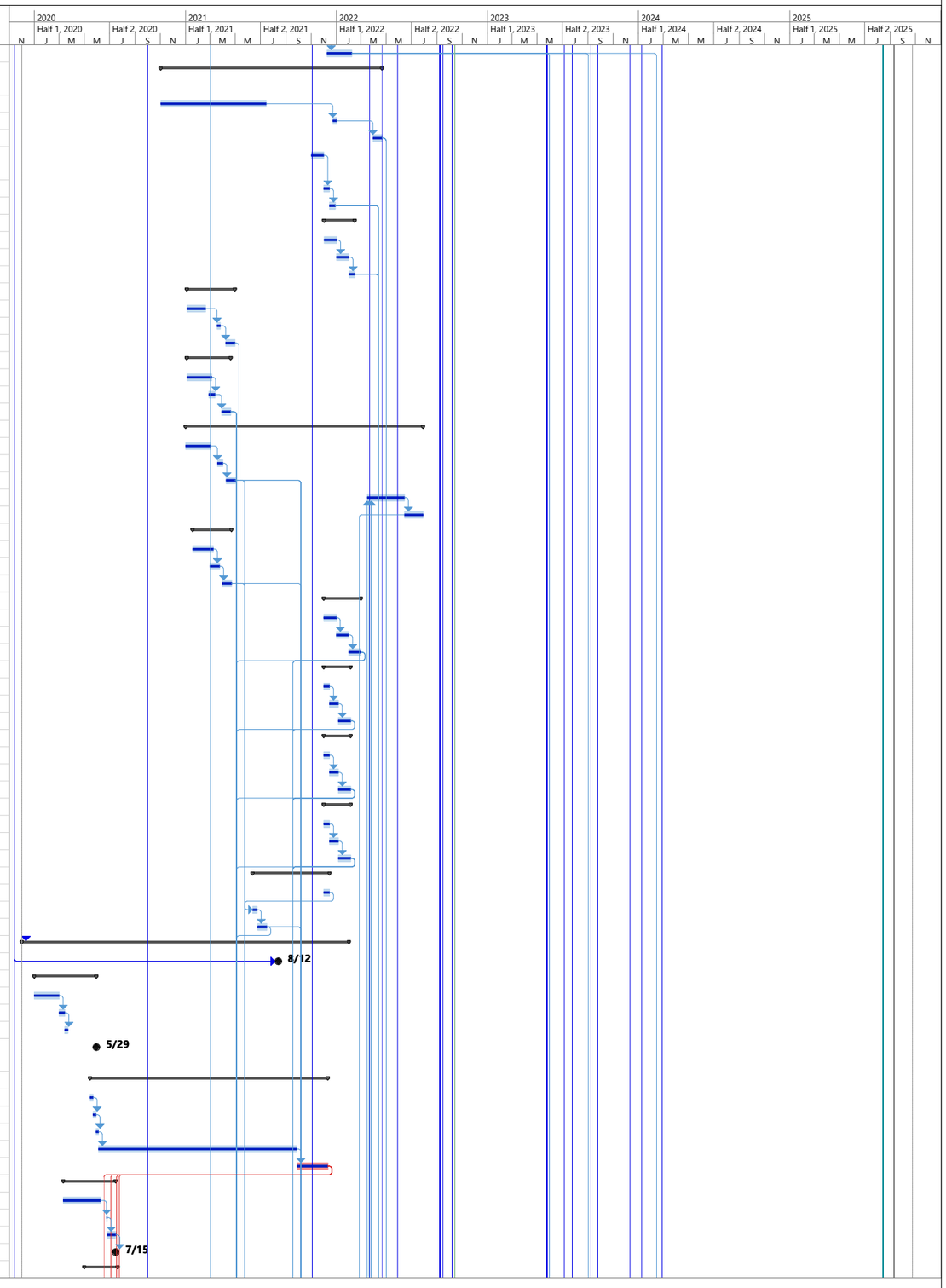
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1	1	1	**DE/2018/04 - Contract Master Programme**	**1991 days**	**Dec 2 '19**	**May 14 '25**	**Dec 2 '19**	**May 14 '25**	**0 days**			
2	2	1.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		3SS+1625 edays,	
3	3	1.2	Completion Date	0 days	May 14 '24	May 14 '24	May 14 '24	May 14 '24	0 days	2SS+1625 eda	4	
4	4	1.3	Defect Dates with respect to Completion Date	365 days	May 15 '24	May 14 '25	May 15 '24	May 14 '25	0 days	3		
5	5	2	**Access Dates**	**1599 days**	**Dec 2 '19**	**Apr 18 '24**	**Dec 2 '19**	**Apr 18 '24**	**0 days**			
6	6	2.1	Access Date for Works Area WA1-C	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days			
7	7	2.2	Access Date for Works Area WA2-C	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days			
8	8	2.3	Access Date for Portion B-2, Inlet Works No. 1	150 edays	Jun 28 '22	Nov 25 '22	Jun 28 '22	Nov 25 '22	0 edays			
9	9	2.4	Access Date for Portion B-3, PST No. 1~4	90 edays	Jan 14 '23	Apr 14 '23	Jan 14 '23	Apr 14 '23	0 edays			
10	10	2.5	Access Date for Portion B-3A, Existing PST No. 4 and No. 6	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days			
11	11	2.6	Access Date for Portion B-3B, Temporary Filtrate Lifting Well and Eq. Tank	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days			
12	12	2.7	Access Date for Portion B-4, BR 2A & 2B	0 edays	Jun 26 '23	Jun 26 '23	Jun 26 '23	Jun 26 '23	0 edays		673	
13	13	2.8	Access Date for Portion B-5A, MFB No. 2 below 1st floor level (G.L. 1-8)	0 edays	Dec 2 '23	Dec 2 '23	Dec 2 '23	Dec 2 '23	0 edays		875	
14	14	2.9	Access Date for Portion B-5B, MFB No. 2 remaining portion	0 edays	Dec 30 '23	Dec 30 '23	Dec 30 '23	Dec 30 '23	0 edays		950	
15	15	2.10	Access Date for Portion B-5B, MFB No. 2 below 1st floor level (G.L. 8-10)	0 edays	Feb 17 '24	Feb 17 '24	Feb 17 '24	Feb 17 '24	0 edays		955,886,885	
16	16	2.11	Access Date for Portion B-7 & 7B, DOU3A & Temporary Chemical System	0 edays	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 edays		1258,1176,1177,	
17	17	2.12	Access Date for Portion B-7 & 7B, Emergency Generator House, FS & Sprinkler Pumping House	0 edays	Aug 29 '22	Aug 29 '22	Aug 29 '22	Aug 29 '22	0 edays		1202,1486,1203,	
18	18	2.13	Access Date for Portion B-7 & 7B, Chemical System No.1	0 edays	Sep 5 '22	Sep 5 '22	Sep 5 '22	Sep 5 '22	0 edays		1129,1130	
19	19	2.14	Access Date for Portion B-7 & 7B, Street Fire Hydrant & Booster Pump Room	0 edays	May 15 '23	May 15 '23	May 15 '23	May 15 '23	0 edays		1499,1185,1186,	
20	20	2.15	Access Date for Portion B-7 & 7B, DOU No.1	0 edays	Jul 15 '23	Jul 15 '23	Jul 15 '23	Jul 15 '23	0 edays		1236,1237	
21	21	2.16	Access Date for Portion B-7 & 7B, Flowmeter Chamber No.1	0 edays	Aug 15 '23	Aug 15 '23	Aug 15 '23	Aug 15 '23	0 edays		1277	
22	22	2.17	Access Date for Portion B-7 & 7B, Gate Valve Chamber No. 1 & 2, Flowmeter Chamber No. 2 & 3, Plug Valve Chamber	0 edays	Sep 15 '23	Sep 15 '23	Sep 15 '23	Sep 15 '23	0 edays		1277	
23	23	2.18	Access Date for Portion B-7A & 7B, area for modification of existing emergency generator electrical works	0 edays	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 edays			
24	24	2.19	Access Date for Portion B-9B, underground pipework	60 edays	Feb 18 '24	Apr 18 '24	Feb 18 '24	Apr 18 '24	0 edays			
25	25	2.20	Access Date for B-10, existing sludge thickening building	0 edays	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 edays			
26	26	3	**Key Dates**	**555 days**	**Dec 2 '19**	**Jun 9 '21**	**Dec 2 '19**	**Jun 9 '21**	**0 days**			
27	27	3.1	KD1A - Submission of civil and dimensional requirement drawings, electrical schematic drawings etc. Part 1	340 edays	Dec 2 '19	Nov 6 '20	Dec 2 '19	Nov 6 '20	0 edays	38FF		
28	28	3.2	KD1B - Submission of remaining civil and dimensional requirement drawings, electrical schematic drawings etc. Part 2	550 edays	Dec 2 '19	Jun 4 '21	Dec 2 '19	Jun 4 '21	0 edays	39FF		
29	29	3.3	KD3A - Completion of E&M Installation works of existing power house in Portions B-7A and B-7B of the Site necessary for the contractor of Contract No. DC/2018/07 to carry out civil alternation works for existing power house	240 edays	Dec 2 '19	Jul 29 '20	Dec 2 '19	Jul 29 '20	0 edays	40FF		
30	30	3.4	KD3B - Completion of all work for reprovision of the existing Primary Sedimentation Tanks No. 4 & 6 and associated systems including testing and commissioning and obtaining the relevantory statutory approval.	555 edays	Dec 2 '19	Jun 9 '21	Dec 2 '19	Jun 9 '21	0 edays	41FF		
31	31	4	**Sectional Completion Dates**	**1625 days**	**Dec 2 '19**	**May 14 '24**	**Dec 2 '19**	**May 14 '24**	**0 days**			
32	32	4.1	Section 1 - Completion of the design of E&M Works for all works as defined in WI_GP Cl. 10.1(a)of the Works (600 days after starting date)	600 edays	Dec 2 '19	Jul 24 '21	Dec 2 '19	Jul 24 '21	0 edays	42FF		
33	33	4.2	Section 2 - Completion of all works for Inlet Works, PST No. 1~4, BR No. 2A & 2B, MFB No. 2, temporary chemical dosing system, deodorisation systems, chemical system no. 1 & no. 2, FS and sprinkler pump room, ...etc as define (1600d after	1600 edays	Dec 2 '19	Apr 19 '24	Dec 2 '19	Apr 19 '24	0 edays	43FF		
34	34	4.3	Section 3 - Completion of all works for retrofitting of the existing PST...etc (660 days after starting date)	660 edays	Dec 2 '19	Sep 22 '21	Dec 2 '19	Sep 22 '21	0 edays	44FF		
35	35	4.4	Section 4 - Completion of Work for remainder of the works (1625 days after starting date)	1625 edays	Dec 2 '19	May 14 '24	Dec 2 '19	May 14 '24	0 edays	45FF		
36	36	5	**DE/2018/04 - the Contractor's Programme (w/ Defects Date of Planned Completion Date)**	**2154 days?**	**Dec 2 '19**	**Oct 24 '25**	**Dec 2 '19**	**May 4 '25**	**0 days?**			
37	37	5.1	Starting Date	0 days	Dec 2 '19	Dec 2 '19	Dec 2 '19	Dec 2 '19	0 days		743,232SS+30 ec	
38	38	5.2	Planned Key Date Completion Date - KD1A	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days		27FF	
39	39	5.3	Planned Key Date Completion Date - KD1B	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days		28FF	
40	40	5.4	Planned Key Date Completion Date - KD3A	0 days	Jul 22 '20	Jul 22 '20	Jul 22 '20	Jul 22 '20	0 days		29FF	
41	41	5.5	Planned Key Date Completion Date - KD3B	0 days	Jun 7 '21	Jun 7 '21	Jun 7 '21	Jun 7 '21	0 days		30FF	
42	42	5.6	Planned Sectional Completion Date - Section 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days		32FF	
43	43	5.7	Planned Sectional Completion Date - Section 2	0 days	Apr 1 '24	Apr 1 '24	Apr 19 '24	Apr 19 '24	18 days		33FF	
44	44	5.8	Planned Sectional Completion Date - Section 3	0 days	Sep 1 '21	Sep 1 '21	Sep 1 '21	Sep 1 '21	0 days		34FF	
45	45	5.9	Planned Sectional Completion Date - Section 4	0 days	May 1 '24	May 1 '24	May 14 '24	May 14 '24	13 days		35FF	
46	46	5.10	Planned Completion Date	0 days	Aug 21 '25	Aug 21 '25	May 14 '24	May 14 '24	0 days	1540,1541,15	3	
47	47	5.11	Defect Dates with respect to planned completion date	365 days	May 1 '24	Apr 30 '25	May 1 '24	Apr 30 '25	0 days			
48	48	5.12	**Part A: Procurement and Delivery of Major Plant and Materials (for multi buildi**	**758 days**	**Jul 1 '20**	**Jul 28 '22**	**Jul 1 '20**	**Jul 28 '22**	**0 days**			
49	49	5.12.1	Planned Completion Date for Procurement of major plant and materials	0 days	Jun 3 '21	Jun 3 '21	Jun 3 '21	Jun 3 '21	0 days	37SS+550 days		
50	50	5.12.2	**General - stoplogs and penstocks, C11, EQT013**	**60 days**	**Jul 1 '20**	**Aug 29 '20**	**Jul 1 '20**	**Aug 29 '20**	**0 days**			
51	51	5.12.2.1	Submission for acceptance of purchasing package	60 days	Jul 1 '20	Aug 29 '20	Jul 1 '20	Aug 29 '20	0 days		52	
52	52	5.12.2.2	Invitation of quotations for purchasing package	14 days	Jul 10 '20	Jul 23 '20	Jul 10 '20	Jul 23 '20	0 days	51	53	
53	53	5.12.2.3	Acceptance of conforming quotation (Completed)	22 days	Aug 4 '20	Aug 25 '20	Aug 4 '20	Aug 25 '20	0 days	52	283	
54	54	5.12.3	**General - Instrumentations except use at BR, C11, EQT035-1**	**401 days**	**Jan 2 '21**	**Feb 6 '22**	**Jan 2 '21**	**Feb 6 '22**	**0 days**			
55	55	5.12.3.1	Submission for acceptance of purchasing package	60 days	Jan 2 '21	Mar 2 '21	Jan 2 '21	Mar 2 '21	0 days		56	
56	56	5.12.3.2	Invitation of quotations for purchasing package (Rev. 10)	30 days	Jun 11 '21	Jul 10 '21	Jun 11 '21	Jul 10 '21	0 days	55	57	
57	57	5.12.3.3	Acceptance of conforming quotation (Rev. 10)	30 days	Jul 11 '21	Aug 9 '21	Jul 11 '21	Aug 9 '21	0 days	56	58	
58	58	5.12.3.4	Manufacturing and Factory Acceptance Test of Plant (Rev. 10)	121 days	Aug 10 '21	Dec 8 '21	Aug 10 '21	Dec 8 '21	0 days	57	59	



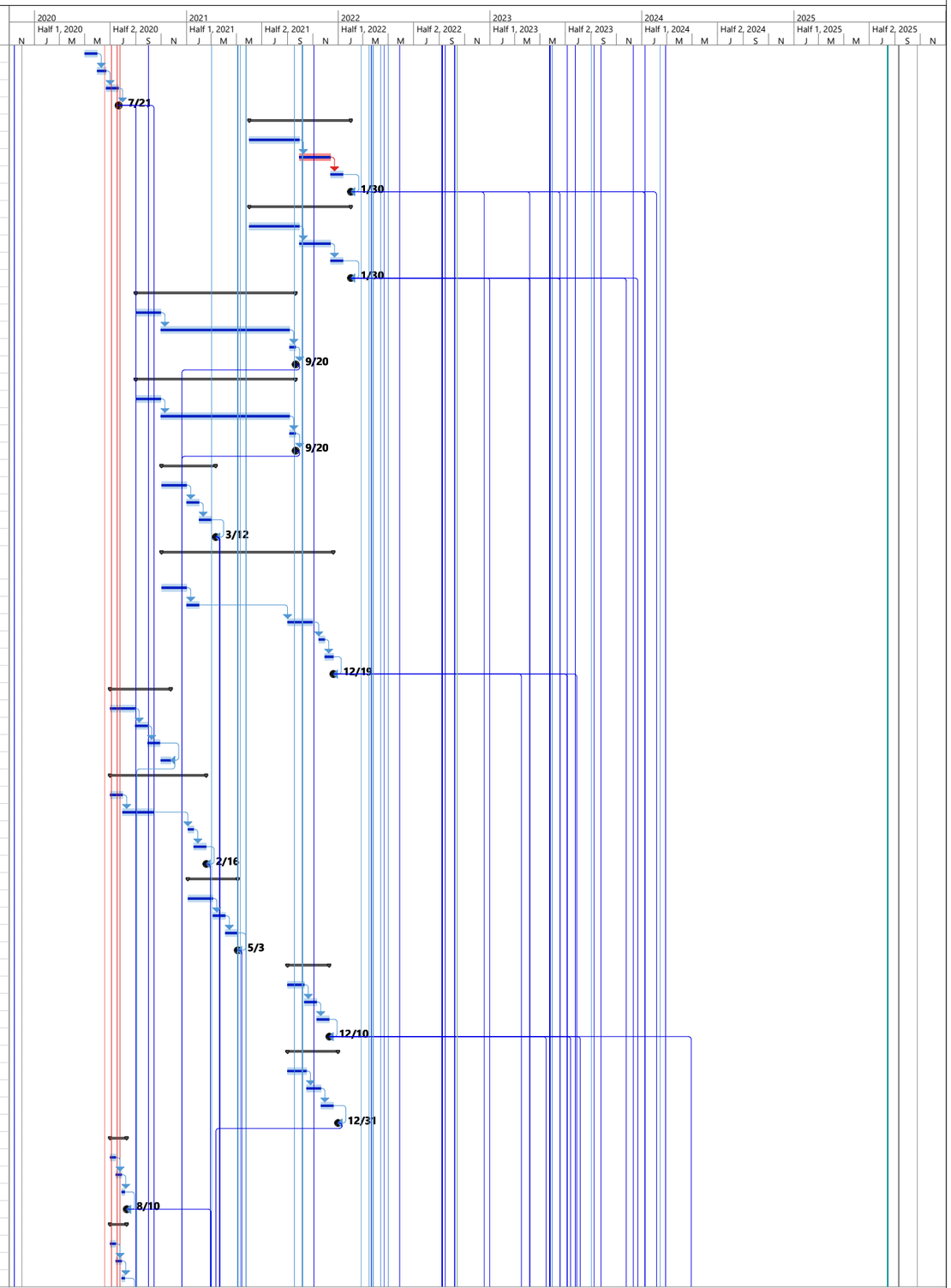
Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
59	59	5.12.3.5	Shipping and Delivery of Plant (Rev. 10)	60 days	Dec 9 '21	Feb 6 '22	Dec 9 '21	Feb 6 '22	0 days	58	371,540,977	
60	**60**	**5.12.4**	**General - Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, C11, ref. EQT036**	**535 days**	**Nov 2 '20**	**Apr 20 '22**	**Nov 2 '20**	**Apr 20 '22**	**0 days**			
61	61	5.12.4.1	Submission for acceptance of purchasing package (Rev. 11)	255 days	Nov 2 '20	Jul 14 '21	Nov 2 '20	Jul 14 '21	0 days		62	
62	62	5.12.4.2	Invitation of quotations for purchasing package (Rev. 11)	9 days	Dec 23 '21	Dec 31 '21	Dec 23 '21	Dec 31 '21	0 days	61	63	
63	63	5.12.4.3	Acceptance of conforming quotation (Rev. 11)	22 days	Mar 30 '22	Apr 20 '22	Mar 30 '22	Apr 20 '22	0 days	62	305,311,494,638	
64	64	5.12.4.4	Submission for acceptance of purchasing package for remaining pipework and valves (Rev. 13)	30 days	Nov 1 '21	Nov 30 '21	Nov 1 '21	Nov 30 '21	0 days		65	
65	65	5.12.4.5	Invitation of quotations for purchasing package (Rev. 13)	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days	64	66	
66	66	5.12.4.6	Acceptance of conforming quotation (Rev. 13)	14 days	Dec 15 '21	Dec 28 '21	Dec 15 '21	Dec 28 '21	0 days	65	305,311,494,638	
67	**67**	**5.12.5**	**General - Electric actuators for valves, C11, ref. EQT072 (Rev. 11)**	**74 days**	**Dec 2 '21**	**Feb 13 '22**	**Dec 2 '21**	**Feb 13 '22**	**0 days**			
68	68	5.12.5.1	Submission for acceptance of purchasing package (Rev. 11)	30 days	Dec 2 '21	Dec 31 '21	Dec 2 '21	Dec 31 '21	0 days		69	
69	69	5.12.5.2	Invitation of quotations for purchasing package (Rev. 11)	30 days	Jan 1 '22	Jan 30 '22	Jan 1 '22	Jan 30 '22	0 days	68	70	
70	70	5.12.5.3	Acceptance of conforming quotation (Rev. 11)	14 days	Jan 31 '22	Feb 13 '22	Jan 31 '22	Feb 13 '22	0 days	69	311,494,638,819	
71	**71**	**5.12.6**	**General - HV Switchboards, C9, ref. 04SC012 (Rev. 14)**	**116 days**	**Jan 4 '21**	**Apr 29 '21**	**Jan 4 '21**	**Apr 29 '21**	**0 days**			
72	72	5.12.6.1	Submission for acceptance of purchasing package	45 days	Jan 4 '21	Feb 17 '21	Jan 4 '21	Feb 17 '21	0 days		73	
73	73	5.12.6.2	Invitation of quotations for purchasing package	8 days	Mar 18 '21	Mar 25 '21	Mar 18 '21	Mar 25 '21	0 days	72	74	
74	74	5.12.6.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Apr 8 '21	Apr 29 '21	Apr 8 '21	Apr 29 '21	0 days	73	780	
75	**75**	**5.12.7**	**General - LV Switchboards, C9, ref. 04SC013 (Rev. 14)**	**106 days**	**Jan 4 '21**	**Apr 19 '21**	**Jan 4 '21**	**Apr 19 '21**	**0 days**			
76	76	5.12.7.1	Submission for acceptance of purchasing package	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days		77	
77	77	5.12.7.2	Invitation of quotations for purchasing package	15 days	Feb 26 '21	Mar 12 '21	Feb 26 '21	Mar 12 '21	0 days	76	78	
78	78	5.12.7.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Mar 29 '21	Apr 19 '21	Mar 29 '21	Apr 19 '21	0 days	77	286,612,467,779	
79	**79**	**5.12.8**	**General - VSDs & Passive Type Harmonic Filters, C11, ref. EQT034 (Rev. 5)**	**574 days**	**Jan 1 '21**	**Jul 28 '22**	**Jan 1 '21**	**Jul 28 '22**	**0 days**			
80	80	5.12.8.1	Submission for acceptance of purchasing package	60 days	Jan 1 '21	Mar 1 '21	Jan 1 '21	Mar 1 '21	0 days		81	
81	81	5.12.8.2	Invitation of quotations for purchasing package	13 days	Mar 19 '21	Mar 31 '21	Mar 19 '21	Mar 31 '21	0 days	80	82	
82	82	5.12.8.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Apr 9 '21	Apr 30 '21	Apr 9 '21	Apr 30 '21	0 days	81	284,465,610,775	
83	83	5.12.8.4	Manufacturing and Factory Acceptance Test of Plant	90 days	Mar 16 '22	Jun 13 '22	Mar 16 '22	Jun 13 '22	0 days	284,465,610,784		
84	84	5.12.8.5	Shipping and Delivery of Plant to LVSB Sub-Contractor	45 days	Jun 14 '22	Jul 28 '22	Jun 14 '22	Jul 28 '22	0 days	83	318SS-90 edays	
85	**85**	**5.12.9**	**General - 11kV/380V Stepdown Power Transformers, C11, EQT032 (Rev. 5)**	**94 days**	**Jan 18 '21**	**Apr 21 '21**	**Jan 18 '21**	**Apr 21 '21**	**0 days**			
86	86	5.12.9.1	Submission for acceptance of purchasing package	50 days	Jan 18 '21	Mar 8 '21	Jan 18 '21	Mar 8 '21	0 days		87	
87	87	5.12.9.2	Invitation of quotations for purchasing package	23 days	Mar 1 '21	Mar 23 '21	Mar 1 '21	Mar 23 '21	0 days	86	88	
88	88	5.12.9.3	Acceptance of conforming quotation (Rev. 11, Completed)	22 days	Mar 31 '21	Apr 21 '21	Mar 31 '21	Apr 21 '21	0 days	87	284,775	
89	**89**	**5.12.10**	**General - UPS, C11, EQT039A (Rev. 14)**	**90 days**	**Dec 1 '21**	**Feb 28 '22**	**Dec 1 '21**	**Feb 28 '22**	**0 days**			
90	90	5.12.10.1	Submission for acceptance of purchasing package (Rev. 13)	30 days	Dec 1 '21	Dec 30 '21	Dec 1 '21	Dec 30 '21	0 days		91	
91	91	5.12.10.2	Invitation of quotations for purchasing package (Rev. 13)	30 days	Dec 31 '21	Jan 29 '22	Dec 31 '21	Jan 29 '22	0 days	90	92	
92	92	5.12.10.3	Acceptance of conforming quotation (Rev. 13)	30 days	Jan 30 '22	Feb 28 '22	Jan 30 '22	Feb 28 '22	0 days	91	284,465,610,775	
93	**93**	**5.12.11**	**General - HV Cables, C11, EQT041 (Rev. 13)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
94	94	5.12.11.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		95	
95	95	5.12.11.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	94	96	
96	96	5.12.11.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	95	284,775	
97	**97**	**5.12.12**	**General - LV Cables, C11, EQT042 (Rev. 13)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
98	98	5.12.12.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		99	
99	99	5.12.12.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	98	100	
100	100	5.12.12.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	99	284,465,610,775	
101	**101**	**5.12.12.4**	**General - FRP Covers & Walkways & Platform & Ladders, EQT050 (Rev.18)**	**65 days**	**Dec 1 '21**	**Feb 3 '22**	**Dec 1 '21**	**Feb 3 '22**	**0 days**			
102	102	5.12.12.4.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		103	
103	103	5.12.12.4.2	Invitation of quotations for purchasing package	21 days	Dec 15 '21	Jan 4 '22	Dec 15 '21	Jan 4 '22	0 days	102	104	
104	104	5.12.12.4.3	Acceptance of conforming quotation	30 days	Jan 5 '22	Feb 3 '22	Jan 5 '22	Feb 3 '22	0 days	103	284,465,610,775	
105	**105**	**5.12.13**	**General - Gas Detection System, C11, EQT051 (Rev. 16)**	**186 days**	**Jun 12 '21**	**Dec 14 '21**	**Jun 12 '21**	**Dec 14 '21**	**0 days**			
106	106	5.12.13.1	Submission for acceptance of purchasing package	14 days	Dec 1 '21	Dec 14 '21	Dec 1 '21	Dec 14 '21	0 days		107	
107	107	5.12.13.2	Invitation of quotations for purchasing package	11 days	Jun 12 '21	Jun 22 '21	Jun 12 '21	Jun 22 '21	0 days	106	108	
108	108	5.12.13.3	Acceptance of conforming quotation (Completed)	22 days	Jun 24 '21	Jul 15 '21	Jun 24 '21	Jul 15 '21	0 days	107	284,465,610,775	
109	**109**	**5.13**	**Part B: Subletting of major sub-contract works**	**791 days**	**Dec 2 '19**	**Jan 30 '22**	**Dec 2 '19**	**Jan 30 '22**	**0 days**	**2,37**		
110	110	5.13.1	Planned Completion Date for major sub-contract works	0 days	Aug 12 '21	Aug 12 '21	Aug 12 '21	Aug 12 '21	0 days	2SS+620 days,		
111	**111**	**5.13.2**	**General - Independent BEAM Plus Consultant (04SC007)**	**150 days**	**Jan 1 '20**	**May 29 '20**	**Jan 1 '20**	**May 29 '20**	**0 days**			
112	112	5.13.2.1	Submission for acceptance of proposed Independent BEAM Plus Consultant	60 edays	Jan 1 '20	Mar 1 '20	Jan 1 '20	Mar 1 '20	0 edays		113	
113	113	5.13.2.2	Acceptance of proposed Independent BEAM Plus Consultant	14 edays	Mar 1 '20	Mar 15 '20	Mar 1 '20	Mar 15 '20	0 edays	112	114	
114	114	5.13.2.3	Engagement with an Independent BEAM Plus Consultant	7 days	Mar 15 '20	Mar 21 '20	Mar 15 '20	Mar 21 '20	0 days	113		
115	115	5.13.2.4	Actual Date for engagement with an independent BEAM Plus Consultant (Completed)	0 days	May 29 '20	May 29 '20	May 29 '20	May 29 '20	0 days			
116	**116**	**5.13.3**	**General - Conduction of Pump sump physical model test (04SC015)**	**575 days**	**May 15 '20**	**Dec 10 '21**	**May 15 '20**	**Dec 10 '21**	**0 days**			
117	117	5.13.3.1	Submission for acceptance of proposed hydraulic laboratory to conduct the	7 edays	May 15 '20	May 22 '20	May 15 '20	May 22 '20	0 edays		118	
118	118	5.13.3.2	Invitation to quotations for provision of service	7 edays	May 22 '20	May 29 '20	May 22 '20	May 29 '20	0 edays	117	119	
119	119	5.13.3.3	Acceptance of proposed hydraulic laboratory	6 days	May 29 '20	Jun 3 '20	May 29 '20	Jun 3 '20	0 days	118	120	
120	120	5.13.3.4	Commencement of detailed proposal and conduction of test (Rev 13)	480 days	Jun 4 '20	Sep 26 '21	Jun 4 '20	Sep 26 '21	0 days	119	121	
121	121	5.13.3.5	Acceptance of hydraulic Report (Rev 16)	75 days	Sep 27 '21	Dec 10 '21	Sep 27 '21	Dec 10 '21	0 days	120	279,460,605,770	
122	**122**	**5.13.4**	**General - Independent Checking Engineer (04SC004)**	**127 days**	**Mar 11 '20**	**Jul 15 '20**	**Mar 11 '20**	**Jul 15 '20**	**0 days**			
123	123	5.13.4.1	Submission for acceptance of proposed Independent Checking Engineer	90 edays	Mar 11 '20	Jun 9 '20	Mar 11 '20	Jun 9 '20	0 edays		124	
124	124	5.13.4.2	Acceptance of proposed Independent Checking Engineer	1 eday	Jun 24 '20	Jun 25 '20	Jun 24 '20	Jun 25 '20	0 edays	123	125	
125	125	5.13.4.3	Engagement with an Independent Checking Engineer	21 days	Jun 25 '20	Jul 15 '20	Jun 25 '20	Jul 15 '20	0 days	124	126	
126	126	5.13.4.4	Actual Date for engagement with an ICE (Completed)	0 days	Jul 15 '20	Jul 15 '20	Jul 15 '20	Jul 15 '20	0 days	125		
127	**127**	**5.13.5**	**General - Lifting Appliances (04SC008)**	**81 days**	**May 1 '20**	**Jul 21 '20**	**May 1 '20**	**Jul 21 '20**	**0 days**			



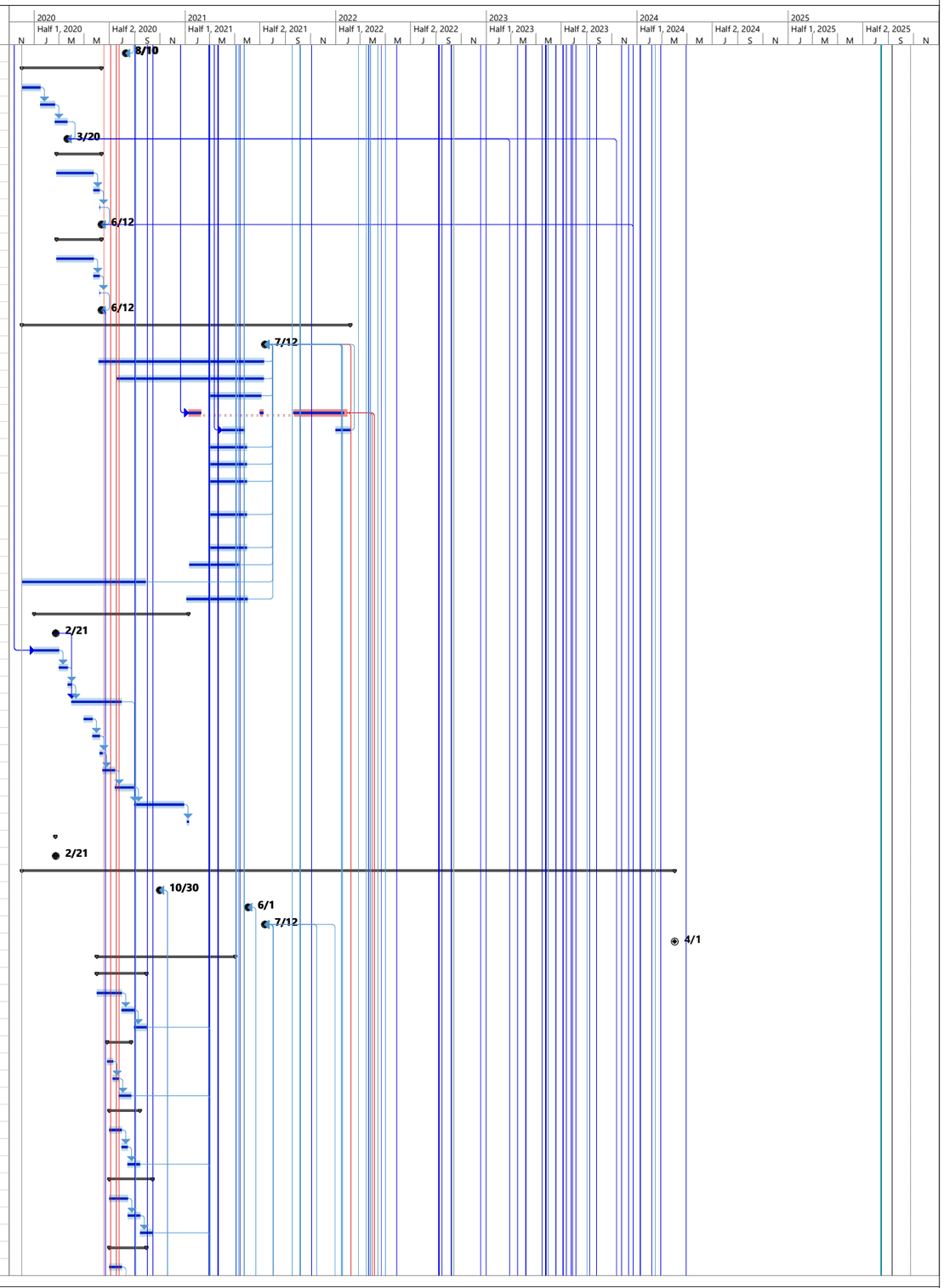
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
128	128	5.13.5.1	Submission for acceptance of subcontract works package	30 edays	May 1 '20	May 31 '20	May 1 '20	May 31 '20	0 edays		129	
129	129	5.13.5.2	Invitation of tender for subcontract works	21 edays	May 31 '20	Jun 21 '20	May 31 '20	Jun 21 '20	0 edays	128	130	
130	130	5.13.5.3	Acceptance of conforming tender	30 edays	Jun 21 '20	Jul 21 '20	Jun 21 '20	Jul 21 '20	0 edays	129	131	
131	131	5.13.5.4	Sub-contract work commencement date (Completed)	0 days	Jul 21 '20	Jul 21 '20	Jul 21 '20	Jul 21 '20	0 days	130	287,468,615,783	
132	**132**	**5.13.6**	**General - Mechanical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
133	133	5.13.6.1	Submission for acceptance of subcontract works package	120 days	Jun 1 '21	Sep 28 '21	Jun 1 '21	Sep 28 '21	0 days		134	
134	134	5.13.6.2	Invitation of tender for subcontract works	75 days	Sep 29 '21	Dec 12 '21	Sep 29 '21	Dec 12 '21	0 days	133	135	
135	135	5.13.6.3	Acceptance of conforming tender	30 days	Dec 13 '21	Jan 11 '22	Dec 13 '21	Jan 11 '22	0 days	134	136FF	
136	136	5.13.6.4	Sub-contract work commencement date	1 day	Jan 30 '22	Jan 30 '22	Jan 30 '22	Jan 30 '22	0 days	135FF	359,530,683,884	
137	**137**	**5.13.7**	**General - Electrical Installations**	**244 days**	**Jun 1 '21**	**Jan 30 '22**	**Jun 1 '21**	**Jan 30 '22**	**0 days**			
138	138	5.13.7.1	Submission for acceptance of subcontract works package	120 edays	Jun 1 '21	Sep 29 '21	Jun 1 '21	Sep 29 '21	0 edays		139	
139	139	5.13.7.2	Invitation of tender for subcontract works	75 edays	Sep 29 '21	Dec 13 '21	Sep 29 '21	Dec 13 '21	0 edays	138	140	
140	140	5.13.7.3	Acceptance of conforming tender	30 edays	Dec 13 '21	Jan 12 '22	Dec 13 '21	Jan 12 '22	0 edays	139	141FF	
141	141	5.13.7.4	Sub-contract work commencement date	1 day	Jan 30 '22	Jan 30 '22	Jan 30 '22	Jan 30 '22	0 days	140FF	374,543,706,908	
142	**142**	**5.13.8**	**General - Facility Computerized Systems (SCADA & PMS) 04SC018**	**384 days**	**Sep 1 '20**	**Sep 20 '21**	**Sep 1 '20**	**Sep 20 '21**	**0 days**			
143	143	5.13.8.1	Submission for acceptance of subcontract works package	60 edays	Sep 1 '20	Oct 31 '20	Sep 1 '20	Oct 31 '20	0 edays		144	
144	144	5.13.8.2	Invitation of tender for subcontract works	310 edays	Oct 31 '20	Sep 6 '21	Oct 31 '20	Sep 6 '21	0 edays	143	145	
145	145	5.13.8.3	Acceptance of conforming tender (Completed)	14 edays	Sep 6 '21	Sep 20 '21	Sep 6 '21	Sep 20 '21	0 edays	144	146	
146	146	5.13.8.4	Sub-contract work commencement date	0 days	Sep 20 '21	Sep 20 '21	Sep 20 '21	Sep 20 '21	0 days	145	220	
147	**147**	**5.13.9**	**General - Facility Computerized Systems (CMMS & IDMS) 04SC057**	**384 days**	**Sep 1 '20**	**Sep 20 '21**	**Sep 1 '20**	**Sep 20 '21**	**0 days**			
148	148	5.13.9.1	Submission for acceptance of subcontract works package	60 edays	Sep 1 '20	Oct 31 '20	Sep 1 '20	Oct 31 '20	0 edays		149	
149	149	5.13.9.2	Invitation of tender for subcontract works	310 edays	Oct 31 '20	Sep 6 '21	Oct 31 '20	Sep 6 '21	0 edays	148	150	
150	150	5.13.9.3	Acceptance of conforming tender	14 edays	Sep 6 '21	Sep 20 '21	Sep 6 '21	Sep 20 '21	0 edays	149	151	
151	151	5.13.9.4	Sub-contract work commencement date	0 days	Sep 20 '21	Sep 20 '21	Sep 20 '21	Sep 20 '21	0 days	150	220	
152	**152**	**5.13.10**	**General - Building Services Installations**	**130 days**	**Nov 2 '20**	**Mar 12 '21**	**Nov 2 '20**	**Mar 12 '21**	**0 days**			
153	153	5.13.10.1	Submission for acceptance of subcontract works package (Rev. 15)	60 edays	Nov 2 '20	Jan 1 '21	Nov 2 '20	Jan 1 '21	0 edays		154	
154	154	5.13.10.2	Invitation of tender for subcontract works	30 edays	Jan 1 '21	Jan 31 '21	Jan 1 '21	Jan 31 '21	0 edays	153	155	
155	155	5.13.10.3	Acceptance of conforming tender	30 edays	Jan 31 '21	Mar 2 '21	Jan 31 '21	Mar 2 '21	0 edays	154	156FF	
156	156	5.13.10.4	Sub-contract work commencement date	0 days	Mar 12 '21	Mar 12 '21	Mar 12 '21	Mar 12 '21	0 days	155FF	285,466,611,778	
157	**157**	**5.13.11**	**General - Mechanical Ventilation and Air Conditioning Installation (Rev. 13) (04SC020)**	**413 days**	**Nov 2 '20**	**Dec 19 '21**	**Nov 2 '20**	**Dec 19 '21**	**0 days**			
158	158	5.13.11.1	Submission for acceptance of subcontract works package	60 days	Nov 2 '20	Dec 31 '20	Nov 2 '20	Dec 31 '20	0 days		159	
159	159	5.13.11.2	Invitation of tender for subcontract works	30 edays	Dec 31 '20	Jan 30 '21	Dec 31 '20	Jan 30 '21	0 edays	158	160	
160	160	5.13.11.3	Submission for acceptance of revised subcontract works package (Rev. 13)	60 days	Sep 1 '21	Oct 30 '21	Sep 1 '21	Oct 30 '21	0 days	159	161	
161	161	5.13.11.4	Invitation of tender for subcontract works (Rev. 15)	14 days	Nov 15 '21	Nov 28 '21	Nov 15 '21	Nov 28 '21	0 days	160	162	
162	162	5.13.11.5	Acceptance of conforming tender (Rev. 13)	21 days	Nov 29 '21	Dec 19 '21	Nov 29 '21	Dec 19 '21	0 days	161	163FF	
163	163	5.13.11.6	Sub-contract work commencement date	0 days	Dec 19 '21	Dec 19 '21	Dec 19 '21	Dec 19 '21	0 days	162FF	695,382,552	
164	**164**	**5.13.12**	**General - Emergency Power Generator Set (04SC006)**	**146 days**	**Jul 1 '20**	**Nov 23 '20**	**Jul 1 '20**	**Nov 23 '20**	**0 days**			
165	165	5.13.12.1	Submission for acceptance of subcontract works package	60 edays	Jul 1 '20	Aug 30 '20	Jul 1 '20	Aug 30 '20	0 edays		166	
166	166	5.13.12.2	Invitation of tender for subcontract works	30 edays	Aug 30 '20	Sep 29 '20	Aug 30 '20	Sep 29 '20	0 edays	165	167	
167	167	5.13.12.3	Acceptance of conforming tender	30 edays	Sep 29 '20	Oct 29 '20	Sep 29 '20	Oct 29 '20	0 edays	166	168FF	
168	168	5.13.12.4	Sub-contract work commencement date (Completed)	24 days	Oct 31 '20	Nov 23 '20	Oct 31 '20	Nov 23 '20	0 days	167FF	1190	
169	**169**	**5.13.13**	**General - Plumbing Installation (Rev. 5) (04SC021)**	**231 days**	**Jul 1 '20**	**Feb 16 '21**	**Jul 1 '20**	**Feb 16 '21**	**0 days**			
170	170	5.13.13.1	Submission for acceptance of subcontract works package	30 edays	Jul 1 '20	Jul 31 '20	Jul 1 '20	Jul 31 '20	0 edays		171	
171	171	5.13.13.2	Invitation of tender for subcontract works	75 edays	Jul 31 '20	Oct 14 '20	Jul 31 '20	Oct 14 '20	0 edays	170	172	
172	172	5.13.13.3	Retender of subcontract works (Rev. 5)	14 days	Jan 4 '21	Jan 17 '21	Jan 4 '21	Jan 17 '21	0 days	171	173	
173	173	5.13.13.4	Acceptance of conforming tender (Completed)	30 edays	Jan 17 '21	Feb 16 '21	Jan 17 '21	Feb 16 '21	0 edays	172	174FF	
174	174	5.13.13.5	Sub-contract work commencement date (Extended)	0 days	Feb 16 '21	Feb 16 '21	Feb 16 '21	Feb 16 '21	0 days	173FF	1513	
175	**175**	**5.13.14**	**General - Fire Services Installation (Rev. 5) (04SC019)**	**120 days**	**Jan 4 '21**	**May 3 '21**	**Jan 4 '21**	**May 3 '21**	**0 days**			
176	176	5.13.14.1	Submission for acceptance of subcontract works package	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days		177	
177	177	5.13.14.2	Invitation of tender for subcontract works	30 days	Mar 5 '21	Apr 3 '21	Mar 5 '21	Apr 3 '21	0 days	176	178	
178	178	5.13.14.3	Acceptance of conforming tender (Completed)	30 days	Apr 4 '21	May 3 '21	Apr 4 '21	May 3 '21	0 days	177	179FF	
179	179	5.13.14.4	Sub-contract work commencement date	0 days	May 3 '21	May 3 '21	May 3 '21	May 3 '21	0 days	178FF	1464	
180	**180**	**5.13.15**	**General - Lightning Protection System (Rev. 15) (04SC017)**	**100 days**	**Sep 1 '21**	**Dec 10 '21**	**Sep 1 '21**	**Dec 10 '21**	**0 days**			
181	181	5.13.15.1	Submission for acceptance of subcontract works package (Rev. 13)	40 edays	Sep 1 '21	Oct 11 '21	Sep 1 '21	Oct 11 '21	0 edays		182	
182	182	5.13.15.2	Invitation of tender for subcontract works (Rev. 15)	30 edays	Oct 11 '21	Nov 10 '21	Oct 11 '21	Nov 10 '21	0 edays	181	183	
183	183	5.13.15.3	Acceptance of conforming tender (Rev. 15)	30 edays	Nov 10 '21	Dec 10 '21	Nov 10 '21	Dec 10 '21	0 edays	182	184FF	
184	184	5.13.15.4	Sub-contract work commencement date (Rev. 15)	0 days	Dec 10 '21	Dec 10 '21	Dec 10 '21	Dec 10 '21	0 days	183FF	1089,700,558,40	
185	**185**	**5.13.16**	**General - CCTV Installation (Rev. 13) (04SC016)**	**121 days**	**Sep 1 '21**	**Dec 31 '21**	**Sep 1 '21**	**Dec 31 '21**	**0 days**			
186	186	5.13.16.1	Submission for acceptance of subcontract works package	45 edays	Sep 1 '21	Oct 16 '21	Sep 1 '21	Oct 16 '21	0 edays		187	
187	187	5.13.16.2	Invitation of tender for subcontract works	35 edays	Oct 16 '21	Nov 20 '21	Oct 16 '21	Nov 20 '21	0 edays	186	188	
188	188	5.13.16.3	Acceptance of conforming tender	30 edays	Nov 20 '21	Dec 20 '21	Nov 20 '21	Dec 20 '21	0 edays	187	189FF	
189	189	5.13.16.4	Sub-contract work commencement date	0 days	Dec 31 '21	Dec 31 '21	Dec 31 '21	Dec 31 '21	0 days	188FF	221	
190	**190**	**5.13.17**	**General - Civil Construction Work for underground pipework (04SC005)**	**40 days**	**Jul 1 '20**	**Aug 10 '20**	**Jul 1 '20**	**Aug 10 '20**	**0 days**			
191	191	5.13.17.1	Submission for acceptance of subcontract works package	14 days	Jul 1 '20	Jul 14 '20	Jul 1 '20	Jul 14 '20	0 days		192	
192	192	5.13.17.2	Invitation of tender for subcontract works	14 days	Jul 15 '20	Jul 28 '20	Jul 15 '20	Jul 28 '20	0 days	191	193	
193	193	5.13.17.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	192	194FF	
194	194	5.13.17.4	Sub-contract work commencement date (Completed)	0 days	Aug 10 '20	Aug 10 '20	Aug 10 '20	Aug 10 '20	0 days	193FF	1287	
195	**195**	**5.13.18**	**General - Civil Construction Work for Temp. Filtrate Eq. System (04SC005)**	**40 days**	**Jul 1 '20**	**Aug 10 '20**	**Jul 1 '20**	**Aug 10 '20**	**0 days**			
196	196	5.13.18.1	Submission for acceptance of subcontract works package	14 days	Jul 1 '20	Jul 14 '20	Jul 1 '20	Jul 14 '20	0 days		197	
197	197	5.13.18.2	Invitation of tender for subcontract works	14 days	Jul 15 '20	Jul 28 '20	Jul 15 '20	Jul 28 '20	0 days	196	198	
198	198	5.13.18.3	Acceptance of conforming tender	7 days	Jul 29 '20	Aug 4 '20	Jul 29 '20	Aug 4 '20	0 days	197	199FF	



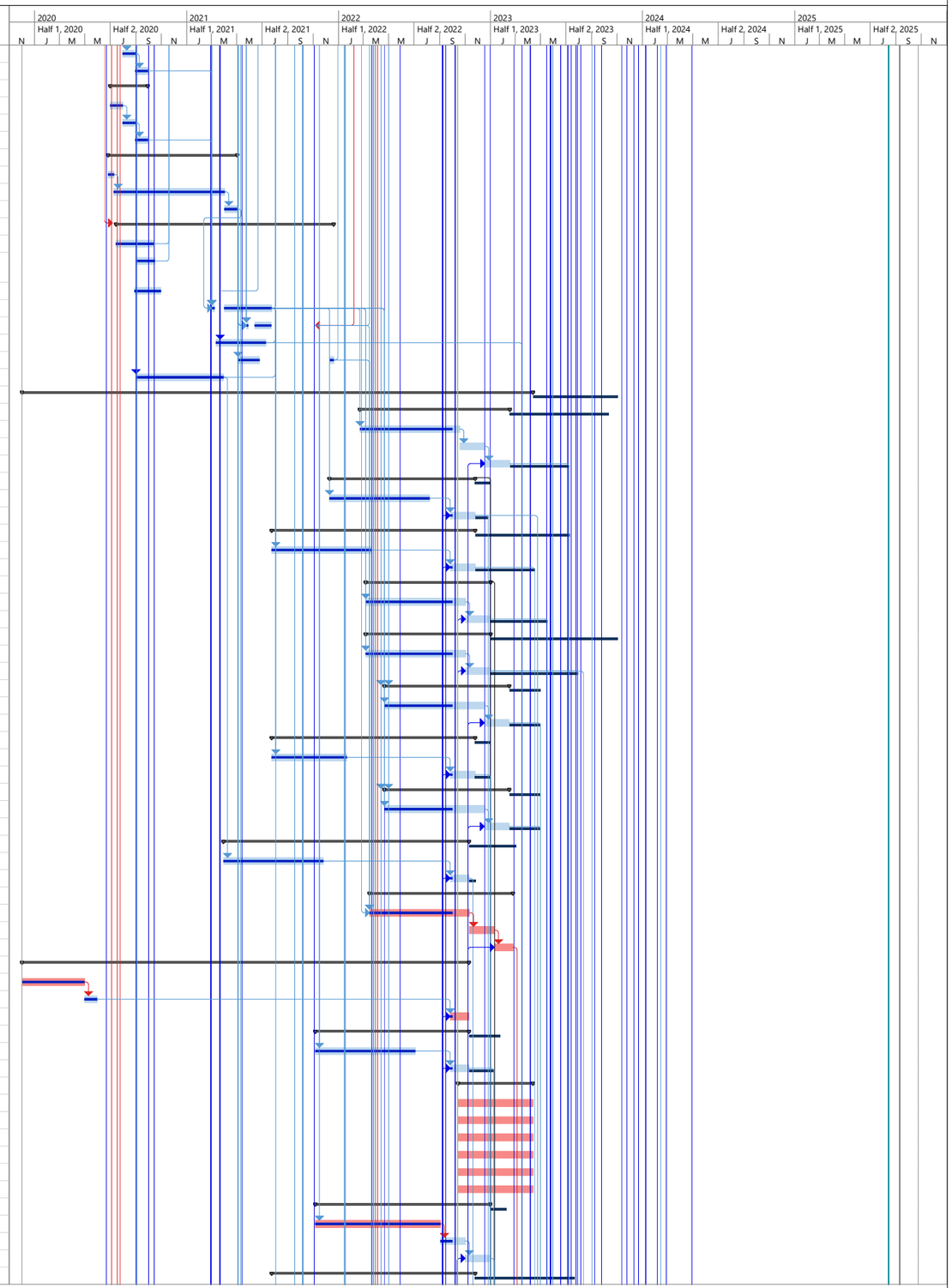
Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

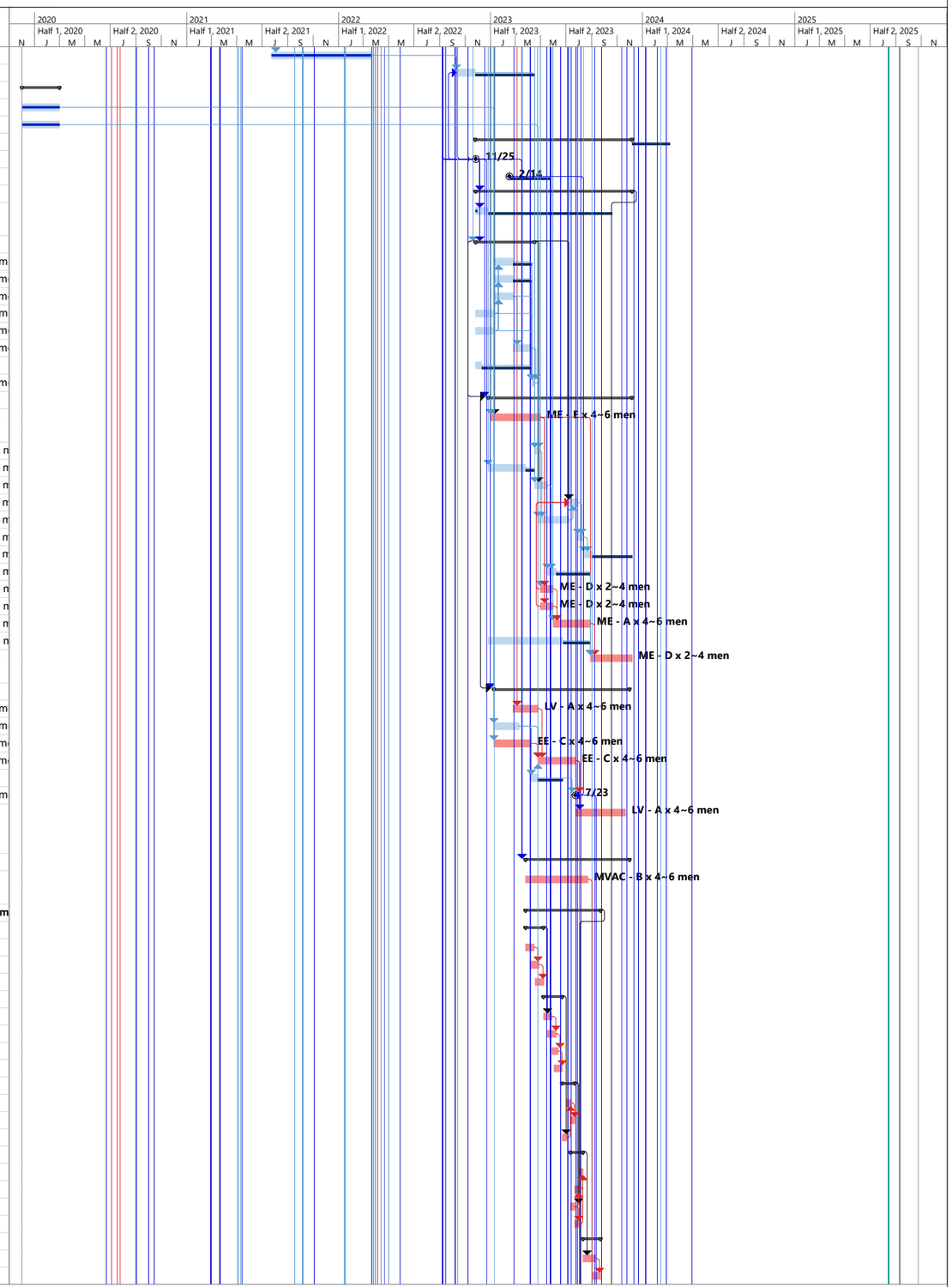
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
199	199	5.13.18.4	Sub-contract work commencement date (Completed)	0 days	Aug 10 '20	Aug 10 '20	Aug 10 '20	Aug 10 '20	0 days	198FF		
200	**200**	**5.13.19**	**General - Lighting and Small Power Distribution System (04SC011)**	**193 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
201	201	5.13.19.1	Submission for acceptance of subcontract works package	45 days	Dec 2 '19	Jan 15 '20	Dec 2 '19	Jan 15 '20	0 days		202	
202	202	5.13.19.2	Invitation of tender for subcontract works	35 days	Jan 16 '20	Feb 19 '20	Jan 16 '20	Feb 19 '20	0 days	201	203	
203	203	5.13.19.3	Acceptance of conforming tender	30 days	Feb 20 '20	Mar 20 '20	Feb 20 '20	Mar 20 '20	0 days	202	204FF	
204	204	5.13.19.4	Sub-contract work commencement date	0 days	Mar 20 '20	Mar 20 '20	Mar 20 '20	Mar 20 '20	0 days	203FF	1493,1506	
205	**205**	**5.13.19.5**	**Mis - Modification works of HV switchboard in MFB no.1 (04SC0xx)**	**109 days**	**Feb 24 '20**	**Jun 12 '20**	**Feb 24 '20**	**Jun 12 '20**	**0 days**			
206	206	5.13.19.5.1	Submission for acceptance of subcontract works package	90 days	Feb 24 '20	May 23 '20	Feb 24 '20	May 23 '20	0 days		207	
207	207	5.13.19.5.2	Invitation of tender for subcontract works	14 days	May 24 '20	Jun 6 '20	May 24 '20	Jun 6 '20	0 days	206	208	
208	208	5.13.19.5.3	Acceptance of conforming tender	1 day	Jun 7 '20	Jun 7 '20	Jun 7 '20	Jun 7 '20	0 days	207	209FF	
209	209	5.13.19.5.4	Sub-contract work commencement date	0 days	Jun 12 '20	Jun 12 '20	Jun 12 '20	Jun 12 '20	0 days	208FF	1007	
210	**210**	**5.13.20**	**Mis - Modification of existing power house (04SC010)**	**109 days**	**Feb 24 '20**	**Jun 12 '20**	**Feb 24 '20**	**Jun 12 '20**	**0 days**			
211	211	5.13.20.1	Submission for acceptance of subcontract works package	90 days	Feb 24 '20	May 23 '20	Feb 24 '20	May 23 '20	0 days		212	
212	212	5.13.20.2	Invitation of tender for subcontract works	14 days	May 24 '20	Jun 6 '20	May 24 '20	Jun 6 '20	0 days	211	213	
213	213	5.13.20.3	Acceptance of conforming tender	1 day	Jun 7 '20	Jun 7 '20	Jun 7 '20	Jun 7 '20	0 days	212	214FF	
214	214	5.13.20.4	Sub-contract work commencement date (Completed)	0 days	Jun 12 '20	Jun 12 '20	Jun 12 '20	Jun 12 '20	0 days	213FF	1435	
215	**215**	**5.14**	**Part C: General Design Submissions**	**796 days**	**Dec 2 '19**	**Feb 5 '22**	**Dec 2 '19**	**Feb 5 '22**	**0 days**			
216	216	5.14.1	Planned Sectional Completion Date - Section 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	217FF,218FF,2		
217	217	5.14.2	CDS001 - General Design Parameters (Rev. 11)	400 edays	Jun 5 '20	Jul 10 '21	Jun 5 '20	Jul 10 '21	0 edays		216FF	
218	218	5.14.3	CDS020 - Electrical Installation Typical Details	355 edays	Jul 20 '20	Jul 10 '21	Jul 20 '20	Jul 10 '21	0 edays		216FF	
219	219	5.14.4	CDS009 - Detailed Design for Plant Service Water System	125 edays	Mar 1 '21	Jul 4 '21	Mar 1 '21	Jul 4 '21	0 edays		216FF	
220	220	5.14.5	CDS012 - Detailed Design for SCADA System	383.4 edays	Jan 9 '21	Jan 27 '22	Jan 9 '21	Jan 27 '22	0 edays	146,151	216FF,284FF,465	
221	221	5.14.6	CDS13-1 - Detailed Design for CCTV System	310 edays	Apr 1 '21	Feb 5 '22	Apr 1 '21	Feb 5 '22	0 edays	189	216FF	
222	222	5.14.7	CDS13-2 - Detailed Design for Gas Detection and Monitoring System	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
223	223	5.14.8	CDS14-1 - Detailed Design for Power monitoring system (PMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
224	224	5.14.9	CDS14-2 - Detailed Design for Computerized maintenance and management (CMMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
225	225	5.14.10	CDS14-3 - Detailed Design for Information and documents management system (IDMS)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
226	226	5.14.11	CDS031 - Detailed Design for MVAC System	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays		216FF	
227	227	5.14.12	CDS042 - Detailed Design for Lightning Protection System	120 edays	Jan 11 '21	May 11 '21	Jan 11 '21	May 11 '21	0 edays		216FF	
228	228	5.14.13	Design submissions for E&M installation works of existing sludge thickening bu	300 edays	Dec 2 '19	Sep 27 '20	Dec 2 '19	Sep 27 '20	0 edays		216FF	
229	229	5.14.14	Design Submission for Earthing and Lightning (Rev. 8)	147.38 edays	Jan 4 '21	May 31 '21	Jan 4 '21	May 31 '21	0 edays		216FF	
230	**230**	**5.15**	**Works Area WA1-C**	**374 days**	**Jan 1 '20**	**Jan 8 '21**	**Jan 1 '20**	**Jan 8 '21**	**0 days**			
231	231	5.15.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days		235	
232	232	5.15.2	Submission for acceptance of subcontract works package (Site Office) (04SC00	60 days	Jan 1 '20	Feb 29 '20	Jan 1 '20	Feb 29 '20	0 days	2SS+30 edays,	233	
233	233	5.15.3	Invitation of quotations for subcontract works (Site Office)	21 days	Mar 1 '20	Mar 21 '20	Mar 1 '20	Mar 21 '20	0 days	232	234	
234	234	5.15.4	Acceptance of conforming quotation (Site Office)	10 days	Mar 22 '20	Mar 31 '20	Mar 22 '20	Mar 31 '20	0 days	233	235	
235	235	5.15.5	Design and Fabrication of the Contractor's Site Accommodations	120 days	Apr 1 '20	Jul 29 '20	Apr 1 '20	Jul 29 '20	0 days	231,234	241	
236	236	5.15.6	Submission for acceptance of subcontract works package (Site Office Foundati	20 days	May 1 '20	May 20 '20	May 1 '20	May 20 '20	0 days		237	
237	237	5.15.7	Invitation of quotations for subcontract works (Site Office Foundation)	18 days	May 21 '20	Jun 7 '20	May 21 '20	Jun 7 '20	0 days	236	238	
238	238	5.15.8	Acceptance of conforming quotation (Site foundation)	7 days	Jun 8 '20	Jun 14 '20	Jun 8 '20	Jun 14 '20	0 days	237	239	
239	239	5.15.9	Design and Construction of the Contractor's Site Office foundation	30 days	Jun 15 '20	Jul 14 '20	Jun 15 '20	Jul 14 '20	0 days	238	240	
240	240	5.15.10	Construction of Contractor's Site Office foundation (Completed)	47 days	Jul 15 '20	Aug 30 '20	Jul 15 '20	Aug 30 '20	0 days	239	241	
241	241	5.15.11	Site Installation of the Contractor's Site Accommodations (MiC) (Rev. 5)	120 days	Aug 31 '20	Dec 28 '20	Aug 31 '20	Dec 28 '20	0 days	235,240	242	
242	242	5.15.12	Anticipated date of working at site (Rev. 5) (Completed)	4 days	Jan 5 '21	Jan 8 '21	Jan 5 '21	Jan 8 '21	0 days	241		
243	**243**	**5.16**	**Works Area WA2-C**	**1 day**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**Feb 21 '20**	**0 days**			
244	244	5.16.1	Actual Access / Handover Date	1 day	Feb 21 '20	Feb 21 '20	Feb 21 '20	Feb 21 '20	0 days			
245	**245**	**5.17**	**Inlet Works No. 1, Portion B-2 (PS 6B.2.1)**	**1582 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
246	246	5.17.1	Planned Key Date Completion Date - KD1A, IW	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days	280FF,281FF		
247	247	5.17.2	Planned Key Date Completion Date - KD1B, IW	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	282FF		
248	248	5.17.3	Planned Sectional Completion Date - Section 1, IW	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	283FF,284FF,2		
249	249	5.17.4	Planned Sectional Completion Date - Section 2, IW	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
250	**250**	**5.17.5**	**Selection of Suppliers for major plant and materials for Inlet Works No. 1**	**335 days**	**Jun 1 '20**	**May 1 '21**	**Jun 1 '20**	**May 1 '21**	**0 days**			
251	**251**	**5.17.5.1**	**Inlet Works - inlet Pumps (Marking Scheme Approach), C11, ref. EQT006**	**120 days**	**Jun 1 '20**	**Sep 28 '20**	**Jun 1 '20**	**Sep 28 '20**	**0 days**			
252	252	5.17.5.1.1	Submission for acceptance of purchasing package including proposed marking sch	60 days	Jun 1 '20	Jul 30 '20	Jun 1 '20	Jul 30 '20	0 days		253	
253	253	5.17.5.1.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	252	254	
254	254	5.17.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	253	283	
255	**255**	**5.17.5.2**	**Inlet Works - mechanical raked bar screens, C11, ref. EQT052**	**58 days**	**Jun 26 '20**	**Aug 22 '20**	**Jun 26 '20**	**Aug 22 '20**	**0 days**			
256	256	5.17.5.2.1	Submission for acceptance of purchasing package	14 days	Jun 26 '20	Jul 9 '20	Jun 26 '20	Jul 9 '20	0 days		257	
257	257	5.17.5.2.2	Invitation of quotations for purchasing package	14 days	Jul 10 '20	Jul 23 '20	Jul 10 '20	Jul 23 '20	0 days	256	258	
258	258	5.17.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Jul 24 '20	Aug 22 '20	Jul 24 '20	Aug 22 '20	0 days	257	283	
259	**259**	**5.17.5.3**	**Inlet Works - screening conveyors and Diverters, C11, ref. EQT053**	**74 days**	**Jul 1 '20**	**Sep 12 '20**	**Jul 1 '20**	**Sep 12 '20**	**0 days**			
260	260	5.17.5.3.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		261	
261	261	5.17.5.3.2	Invitation of quotations for purchasing package	14 days	Jul 31 '20	Aug 13 '20	Jul 31 '20	Aug 13 '20	0 days	260	262	
262	262	5.17.5.3.3	Acceptance of conforming quotation (Completed)	30 days	Aug 14 '20	Sep 12 '20	Aug 14 '20	Sep 12 '20	0 days	261	283	
263	**263**	**5.17.5.4**	**Inlet Works - screening screw type compactors, C11, ref. EQT003**	**105 days**	**Jul 1 '20**	**Oct 13 '20**	**Jul 1 '20**	**Oct 13 '20**	**0 days**			
264	264	5.17.5.4.1	Submission for acceptance of purchasing package	45 days	Jul 1 '20	Aug 14 '20	Jul 1 '20	Aug 14 '20	0 days		265	
265	265	5.17.5.4.2	Invitation of quotations for purchasing package	30 days	Aug 15 '20	Sep 13 '20	Aug 15 '20	Sep 13 '20	0 days	264	266	
266	266	5.17.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Sep 14 '20	Oct 13 '20	Sep 14 '20	Oct 13 '20	0 days	265	283	
267	**267**	**5.17.5.5**	**Inlet Works - grit removal system, C11, ref. EQT004**	**90 days**	**Jul 1 '20**	**Sep 28 '20**	**Jul 1 '20**	**Sep 28 '20**	**0 days**			
268	268	5.17.5.5.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		269	



ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
269	269	5.17.5.5.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	268	270	
270	270	5.17.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	269	283	
271	**271**	**5.17.5.6**	**Inlet Works - grit classifiers, C11, ref. EQT004**	**90 days**	**Jul 1 '20**	**Sep 28 '20**	**Jul 1 '20**	**Sep 28 '20**	**0 days**			
272	272	5.17.5.6.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		273	
273	273	5.17.5.6.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	272	274	
274	274	5.17.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	273	283	
275	**275**	**5.17.5.7**	**Inlet Works - Fixed Bar Screen, C11, ref. EQT046 (Rev. 10)**	**310 days**	**Jun 26 '20**	**May 1 '21**	**Jun 26 '20**	**May 1 '21**	**0 days**			
276	276	5.17.5.7.1	Submission for acceptance of purchasing package	14 days	Jun 26 '20	Jul 9 '20	Jun 26 '20	Jul 9 '20	0 days		277	
277	277	5.17.5.7.2	Invitation of quotations for purchasing package	266 days	Jul 10 '20	Apr 1 '21	Jul 10 '20	Apr 1 '21	0 days	276	278	
278	278	5.17.5.7.3	Acceptance of conforming quotation (Rev. 10)	30 days	Apr 2 '21	May 1 '21	Apr 2 '21	May 1 '21	0 days	277	283	
279	**279**	**5.17.6**	**Design Submissions for IW**	**523 days**	**Jul 15 '20**	**Dec 19 '21**	**Jul 15 '20**	**Dec 19 '21**	**0 days**	**121**		
280	280	5.17.6.1	Electrical schematic drawings for Inlet Works No. 1	90 days	Jul 15 '20	Oct 12 '20	Jul 15 '20	Oct 12 '20	0 days		246FF	
281	281	5.17.6.2	CDS080-1 - Civil and dimensional requirements drawings for Inlet Works No. 1 up to +8.0 mPD	45 days	Sep 1 '20	Oct 15 '20	Sep 1 '20	Oct 15 '20	0 days		246FF	
282	282	5.17.6.3	CDS081-1 - Civil and dimensional requirements drawings for Inlet Works No.	210 days	Aug 28 '20	Mar 25 '21	Aug 28 '20	Mar 25 '21	0 days		247FF	
283	283	5.17.6.4	CDS002 - Detailed Design for Inlet Works No. 1	144 edays	Mar 1 '21	Jul 23 '21	Mar 1 '21	Jul 23 '21	0 edays	258,262,254,2	290,309,297,300	
284	284	5.17.6.5	CDS021 - Detailed Design for Electrical Installations for Inlet Works No. 1	166.63 edays	May 23 '21	Nov 6 '21	May 23 '21	Nov 6 '21	0 edays	82,88,92,96,1(	83,326,318,336,	
285	285	5.17.6.6	CDS034-1 - Detailed Design for Electrical Installations BS at Inlet Works No.	120 edays	Mar 12 '21	Jul 10 '21	Mar 12 '21	Jul 10 '21	0 edays	156	248FF,382	
286	286	5.17.6.7	CDS025-1 - Detailed Design for LV Switchboards for Inlet Works No. 1	230 edays	May 3 '21	Dec 19 '21	May 3 '21	Dec 19 '21	0 edays	78	318,248FF	
287	287	5.17.6.8	CDS050-1 - Detailed Design for Lifting Appliances - Inlet Works No. 1	210 edays	Sep 1 '20	Mar 30 '21	Sep 1 '20	Mar 30 '21	0 edays	131	315,248FF	
288	**288**	**5.17.7**	**Manufacturing and Delivery of Plant & Materials**	**1228 days**	**Dec 2 '19**	**Apr 12 '23**	**Dec 2 '19**	**Nov 1 '23**	**203 days**			
289	**289**	**5.17.7.1**	**Inlet Pumps, EQT006**	**360 days**	**Feb 21 '22**	**Feb 15 '23**	**Feb 21 '22**	**Oct 11 '23**	**238 days**			
290	290	5.17.7.1.1	Manufacturing of Inlet Pumps, EQT006	240 days	Feb 21 '22	Oct 18 '22	Feb 21 '22	Jun 13 '23	0 days	283	291	
291	291	5.17.7.1.2	Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Oct 19 '22	Dec 17 '22	Jun 14 '23	Aug 12 '23	0 days	290	292	
292	292	5.17.7.1.3	Shipping and Delivery of Plant to site	60 days	Dec 18 '22	Feb 15 '23	Aug 13 '23	Oct 11 '23	142 days	291,346SS-60	364	
293	**293**	**5.17.7.2**	**Mechanical Raked Bar Screen, EQT052**	**350 days**	**Dec 10 '21**	**Nov 24 '22**	**Dec 10 '21**	**Apr 9 '23**	**37 days**		**360**	
294	294	5.17.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 10 '21	Aug 6 '22	Dec 10 '21	Aug 6 '22	0 days	283	295	
295	295	5.17.7.2.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Sep 26 '22	Apr 9 '23	31 days	294,346SS-60	362,365	
296	**296**	**5.17.7.3**	**Screening Conveyors and Diverters, EQT053**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Jul 8 '23**	**226 days**			
297	297	5.17.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Jul 24 '21	Mar 20 '22	Jul 24 '21	Mar 20 '22	0 days	283	298	
298	298	5.17.7.3.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Sep 26 '22	Jul 8 '23	143 days	297,346SS-60	363	
299	**299**	**5.17.7.4**	**Screening Screw Type Compactors, EQT003**	**300 days**	**Mar 7 '22**	**Dec 31 '22**	**Mar 7 '22**	**Aug 7 '23**	**0 days**		**360**	
300	300	5.17.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 7 '22	Nov 1 '22	Mar 7 '22	Jun 8 '23	0 days	283	301	
301	301	5.17.7.4.2	Shipping and Delivery of Plant to site	60 days	Nov 2 '22	Dec 31 '22	Jun 9 '23	Aug 7 '23	136 days	300,346SS-60	368	
302	**302**	**5.17.7.5**	**Grit Removal System & Grit Classifiers, EQT004**	**300 days**	**Mar 7 '22**	**Dec 31 '22**	**Mar 7 '22**	**Nov 1 '23**	**305 days**			
303	303	5.17.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 7 '22	Nov 1 '22	Mar 7 '22	Sep 2 '23	0 days	283	304	
304	304	5.17.7.5.2	Shipping and Delivery of Plant to site	60 days	Nov 2 '22	Dec 31 '22	Sep 3 '23	Nov 1 '23	209 days	303,346SS-60	366,367	
305	**305**	**5.17.7.6**	**Pipework, EQT036 (Rev. 11)**	**300 days**	**Apr 21 '22**	**Feb 14 '23**	**Apr 21 '22**	**Apr 30 '23**	**75 days**	**63,66**		
306	306	5.17.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Mar 1 '23	0 days	283	307	
307	307	5.17.7.6.2	Shipping and Delivery of Plant to site	60 days	Dec 17 '22	Feb 14 '23	Mar 2 '23	Apr 30 '23	75 days	306,346SS-60	369	
308	**308**	**5.17.7.7**	**Stoplogs and Penstocks, EQT013**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Dec 31 '22**	**37 days**			
309	309	5.17.7.7.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jul 24 '21	Jan 19 '22	Jul 24 '21	Jan 19 '22	0 days	283	310	
310	310	5.17.7.7.2	Shipping and Delivery of Plant to site	60 days	Sep 26 '22	Nov 24 '22	Sep 26 '22	Dec 31 '22	37 days	309,346SS-60	360	
311	**311**	**5.17.7.8**	**Valves and Actuators, EQT036 (Rev. 11)**	**300 days**	**Apr 21 '22**	**Feb 14 '23**	**Apr 21 '22**	**Apr 30 '23**	**75 days**	**63,70,66**		
312	312	5.17.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Mar 1 '23	0 days	283	313	
313	313	5.17.7.8.2	Shipping and Delivery of Plant to site	60 days	Dec 17 '22	Feb 14 '23	Mar 2 '23	Apr 30 '23	75 days	312,346SS-60	369	
314	**314**	**5.17.7.9**	**Lifting Appliances**	**590 days**	**Mar 30 '21**	**Nov 9 '22**	**Mar 30 '21**	**Mar 1 '23**	**112 days**			
315	315	5.17.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 30 '21	Nov 24 '21	Mar 30 '21	Nov 24 '21	0 days	287	316	
316	316	5.17.7.9.2	Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Sep 26 '22	Mar 1 '23	16 days	315,346SS-60	350	
317	**317**	**5.17.7.10**	**LV Switchboards**	**345 days**	**Mar 16 '22**	**Feb 23 '23**	**Mar 16 '22**	**Jan 23 '23**	**0 days**			
318	318	5.17.7.10.1	IW - Manufacturing of Plant	240 days	Mar 16 '22	Nov 10 '22	Mar 16 '22	Nov 10 '22	0 days	284,286,84SS-	319	
319	319	5.17.7.10.2	IW - Factory Acceptance Test of Plant (to be witnessed by PM)	60 days	Nov 11 '22	Jan 9 '23	Oct 11 '22	Dec 9 '22	0 days	318	320	
320	320	5.17.7.10.3	IW - Shipping and Delivery of Plant to site	45 days	Jan 10 '23	Feb 23 '23	Dec 10 '22	Jan 23 '23	0 days	346SS-60 eday	375	
321	**321**	**5.17.7.11**	**HV Switchboards, 04SC012**	**1074 days**	**Dec 2 '19**	**Nov 9 '22**	**Dec 2 '19**	**Nov 9 '22**	**0 days**			
322	322	5.17.7.11.1	IW - Manufacturing of Plant	150 days	Dec 2 '19	Apr 29 '20	Dec 2 '19	Apr 29 '20	0 days		323	
323	323	5.17.7.11.2	IW - Factory Acceptance Test of Plant (to be witnessed by PM)	30 days	Apr 30 '20	May 29 '20	Apr 30 '20	May 29 '20	0 days	322	324	
324	324	5.17.7.11.3	IW - Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Sep 26 '22	Nov 9 '22	0 days	323,346SS-60		
325	**325**	**5.17.7.12**	**11kV/380V Stepdown Power Transformers, EQT032**	**369 days**	**Nov 6 '21**	**Nov 9 '22**	**Nov 6 '21**	**Jan 23 '23**	**75 days**			
326	326	5.17.7.12.1	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Nov 6 '21	Jul 3 '22	Nov 6 '21	Jul 3 '22	0 days	284	327	
327	327	5.17.7.12.2	IW - Shipping and Delivery of Plant to site	45 days	Sep 26 '22	Nov 9 '22	Sep 26 '22	Jan 23 '23	60 days	326,346SS-60	376	
328	**328**	**5.17.7.13**	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
329	329	5.17.7.13.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning Syste	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
330	330	5.17.7.13.2	Equipment Delivery for Lighting and Power Distribution System	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
331	331	5.17.7.13.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
332	332	5.17.7.13.4	Equipment Delivery for CCTV Installation	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
333	333	5.17.7.13.5	Equipment Delivery for Fire Services Installation	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
334	334	5.17.7.13.6	Equipment Delivery for Earthing and Lightning Protection System	180 days	Oct 15 '22	Apr 12 '23	Oct 15 '22	Apr 12 '23	0 days			
335	**335**	**5.17.7.14**	**PLC System**	**420 days**	**Nov 6 '21**	**Dec 30 '22**	**Nov 6 '21**	**Feb 7 '23**	**39 days**			
336	336	5.17.7.14.1	Manufacturing of Plant, PLC for IW	300 days	Nov 6 '21	Sep 1 '22	Nov 6 '21	Sep 1 '22	0 days	284	337	
337	337	5.17.7.14.2	Factory Acceptance Test of Plant, PLC for IW (To be witnessed by PM)	60 days	Sep 2 '22	Oct 31 '22	Sep 2 '22	Dec 9 '22	0 days	336	338	
338	338	5.17.7.14.3	Shipping and Delivery of Plant to site	60 days	Nov 1 '22	Dec 30 '22	Dec 10 '22	Feb 7 '23	0 days	346SS-60 eday	420	
339	**339**	**5.17.7.15**	**Fixed Bar Screen, EQT046**	**489 days**	**Jul 24 '21**	**Nov 24 '22**	**Jul 24 '21**	**Jul 21 '23**	**239 days**			



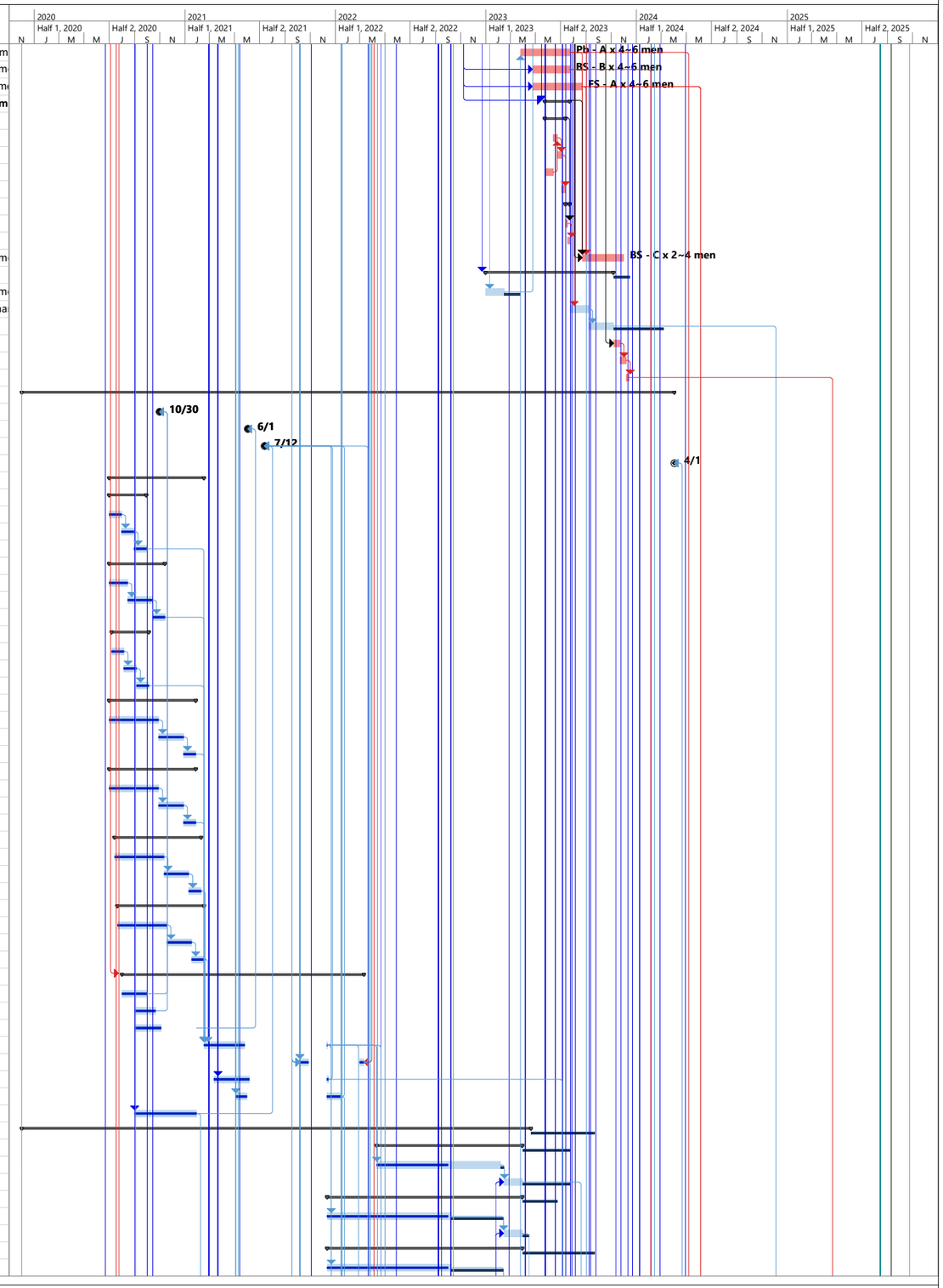
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
340	340	5.17.7.15.1	IW - Manufacturing and Factory Acceptance Test of Plant	240 days	Jul 24 '21	Mar 20 '22	Jul 24 '21	Mar 20 '22	0 days	283	341	
341	341	5.17.7.15.2	IW - Shipping and Delivery of Plant to site	45 days	Oct 11 '22	Nov 24 '22	Jun 7 '23	Jul 21 '23	143 days	340,346SS-45	361	
342	**342**	**5.17.7.16**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
343	343	5.17.7.16.1	Equipment Delivery for Cable Containment	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		377	
344	344	5.17.7.16.2	Equipment Delivery for Cable Provision	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		378	
345	**345**	**5.17.8**	**Site Installation Work**	**377 days**	**Nov 25 '22**	**Dec 6 '23**	**Oct 15 '22**	**Mar 6 '24**	**91 days**			
346	346	5.17.8.1	Tentative Civil Handover Date, Portion B-2, Inlet Works No. 1 (Rev. 5)	1 day	Nov 25 '22	Nov 25 '22	Oct 15 '22	Oct 15 '22	0 days		350,348,349,292	
347	347	5.17.8.2	Tentative Civil Handover Date, HV cables draw pits from MFB2 to IW	1 day	Feb 14 '23	Feb 14 '23	May 23 '23	May 23 '23	98 days		380FF+30 days	
348	**348**	**5.17.8.3**	**Commencement of E&M Installation at Inlet Works No. 1**	**376 days**	**Nov 26 '22**	**Dec 6 '23**	**Nov 26 '22**	**Mar 6 '24**	**0 days**	**346**	**423FS-30 days**	
349	349	5.17.8.3.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., IW	30 days	Nov 26 '22	Dec 25 '22	Nov 26 '22	Oct 20 '23	299 days	346		
350	**350**	**5.17.8.3.2**	**Installation of Lifting Appliances at Inlet Works No. 1**	**142 days**	**Nov 26 '22**	**Apr 16 '23**	**Mar 2 '23**	**Jul 21 '23**	**0 days**	**346,316**	**359SS+30 days,3**	
351	351	5.17.8.3.2.1	1/F EOT Crane LA-01-01 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	May 31 '23	Jul 14 '23	45 days	354,355	358	LA - A x 4~6 m
352	352	5.17.8.3.2.2	1/F EOT Crane LA-01-02 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	May 31 '23	Jul 14 '23	45 days	354,355	358	LA - B x 4~6 m
353	353	5.17.8.3.2.3	1/F EOT Crane LA-01-03 SWL 5t	45 days	Jan 10 '23	Feb 23 '23	Apr 16 '23	May 30 '23	0 days	354,355	356,358	LA - C x 4~6 m
354	354	5.17.8.3.2.4	UG EOT Crane LA-01-04 SWL 10t	45 days	Nov 26 '22	Jan 9 '23	Mar 2 '23	Apr 15 '23	0 days		351,352,353,358	LA - A x 4~6 m
355	355	5.17.8.3.2.5	UG EOT Crane LA-01-05 SWL 10t	45 days	Nov 26 '22	Jan 9 '23	Mar 2 '23	Apr 15 '23	0 days		351,352,353,358	LA - B x 4~6 m
356	356	5.17.8.3.2.6	1/F Retractable Crane LA-01-06 SWL 10t	45 days	Feb 24 '23	Apr 9 '23	May 31 '23	Jul 14 '23	0 days	353	358	LA - C x 4~6 m
357	357	5.17.8.3.2.7	Submission of T&C Plan and Procedures of LA for acceptance	14 days	Nov 26 '22	Dec 9 '22	Jul 1 '23	Jul 14 '23	121 days		358	
358	358	5.17.8.3.2.8	T&C, Loading Test for Lifting Appliances	7 days	Apr 10 '23	Apr 16 '23	Jul 15 '23	Jul 21 '23	0 days	351,352,353,3	361	LA - B x 4~6 m
359	**359**	**5.17.8.3.3**	**Mechanical Installations for Inlet Works No. 1**	**346 days**	**Dec 26 '22**	**Dec 6 '23**	**Jan 1 '23**	**Dec 6 '23**	**0 days**	**350SS+30 day**	**374SS+14 days**	
360	360	5.17.8.3.3.1	Installation of penstocks and stoplogs (Penstock 35nos, Stoplogs 37 nos), EQT013	120 days	Jan 1 '23	Apr 30 '23	Jan 1 '23	Apr 30 '23	0 days	299,293,310	369,370,373	ME - E x 4~6 men
361	361	5.17.8.3.3.2	Installation of fixed bar screen (x1), EQT046	7 days	Apr 17 '23	Apr 23 '23	Jul 22 '23	Jul 28 '23	0 days	358,341	365	ME - D x 2~4 m
362	362	5.17.8.3.3.3	Installation of mechanical raked coarse bar screens (x4), EQT052	90 days	Dec 26 '22	Mar 25 '23	Apr 10 '23	Jul 8 '23	22 days	295	363	ME - A x 4~6 m
363	363	5.17.8.3.3.4	Installation of screening conveyors (x6), EQT053	30 days	Apr 17 '23	May 16 '23	Jul 9 '23	Aug 7 '23	0 days	350,362,298	368	ME - A x 4~6 m
364	364	5.17.8.3.3.5	Installation of inlet pumps (x5), EQT006	21 days	Jul 8 '23	Jul 28 '23	Oct 12 '23	Nov 1 '23	0 days	350,369SS+14	366	ME - B x 4~6 m
365	365	5.17.8.3.3.6	Installation of mechanical raked fine bar screens (x5), EQT052	75 days	Apr 24 '23	Jul 7 '23	Jul 29 '23	Oct 11 '23	0 days	361,295	364	ME - B x 4~6 m
366	366	5.17.8.3.3.7	Installation of grit removal system (x3), EQT004	14 days	Jul 29 '23	Aug 11 '23	Nov 2 '23	Nov 15 '23	0 days	364,304	367	ME - B x 4~6 m
367	367	5.17.8.3.3.8	Installation of grit classifiers (x2), EQT004	21 days	Aug 12 '23	Sep 1 '23	Nov 16 '23	Dec 6 '23	96 days	366,304		ME - B x 4~6 m
368	368	5.17.8.3.3.9	Installation of compactors (x2), EQT003	21 days	May 17 '23	Jun 6 '23	Aug 8 '23	Aug 28 '23	83 days	363,301	373	ME - A x 4~6 m
369	369	5.17.8.3.3.1	Installation of pipework and valves, EQT036	30 days	May 1 '23	May 30 '23	May 1 '23	May 30 '23	0 days	360,307,313	364SS+14 days,3	ME - D x 2~4 m
370	370	5.17.8.3.3.1	Pipework pressure tests	30 days	May 1 '23	May 30 '23	May 1 '23	May 30 '23	0 days	360	364SS+14 days,3	ME - D x 2~4 m
371	371	5.17.8.3.3.1	Installation of instrumentations, EQT035-1	90 days	May 31 '23	Aug 28 '23	May 31 '23	Aug 28 '23	0 days	369,370,59	373	ME - A x 4~6 m
372	372	5.17.8.3.3.1	Installation of Platforms, Covers etc, EQT050	180 days	Dec 26 '22	Jun 23 '23	Mar 2 '23	Aug 28 '23	66 days		373	ME - D x 2~4 m
373	373	5.17.8.3.3.1	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	100 days	Aug 29 '23	Dec 6 '23	Aug 29 '23	Dec 6 '23	0 days	360,368,371,3		ME - D x 2~4 men
374	**374**	**5.17.8.3.4**	**Electrical Installations for Inlet Works No. 1**	**326 days**	**Jan 9 '23**	**Nov 30 '23**	**Dec 25 '22**	**Oct 20 '23**	**0 days**	**359SS+14 day**		
375	375	5.17.8.3.4.1	Installation of LV Switchboards, IW	60 days	Feb 24 '23	Apr 24 '23	Jan 24 '23	Mar 24 '23	0 days	320	378	LV - A x 4~6 m
376	376	5.17.8.3.4.2	Installation of Transformer, IW, EQT032	60 days	Jan 9 '23	Mar 9 '23	Jan 24 '23	Mar 24 '23	0 days	327	378,379FS+30 d	EE - A x 4~6 m
377	377	5.17.8.3.4.3	Installation of cable trays and cable containments	90 days	Jan 9 '23	Apr 8 '23	Dec 25 '22	Mar 24 '23	0 days	343	378	EE - C x 4~6 m
378	378	5.17.8.3.4.4	Cables laying and terminations	90 days	Apr 25 '23	Jul 23 '23	Mar 25 '23	Jun 22 '23	0 days	375,376,377,4	380,421,381	EE - C x 4~6 m
379	379	5.17.8.3.4.5	Energisation of Transformer, IW	14 days	Apr 9 '23	Apr 22 '23	Jun 9 '23	Jun 22 '23	61 days	376FS+30 day	380	
380	380	5.17.8.3.4.6	Energisation of LV Switchboards, IW	0 days	Jul 23 '23	Jul 23 '23	Jun 23 '23	Jun 23 '23	0 days	378,347FF+30	381,550	LV - A x 4~6 m
381	381	5.17.8.3.4.7	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	120 days	Jul 24 '23	Nov 20 '23	Jun 23 '23	Oct 20 '23	0 days	378,380		LV - A x 4~6 men
382	**382**	**5.17.8.3.4.**	**Building Services Installations for Inlet Works No. 1**	**250 days**	**Mar 26 '23**	**Nov 30 '23**	**Feb 13 '23**	**Oct 20 '23**	**0 days**	**346FS+120 da**		
383	383	5.17.8.3.4.8	Mechanical Ventilation and Air Conditioning System, IW	150 days	Mar 26 '23	Aug 22 '23	Feb 13 '23	Jul 12 '23	0 days		418	MVAC - B x 4~6 men
384	**384**	**5.17.8.3.4.**	**Lighting and Power Distribution System, IW**	**180 days**	**Mar 26 '23**	**Sep 21 '23**	**Feb 13 '23**	**Aug 11 '23**	**0 days**		418FS-30 days	**BS - A x 4~6 m**
385	**385**	**5.17.8.3.4.**	**Lighting and Power Distribution Board Installation**	**43 days**	**Mar 26 '23**	**May 7 '23**	**Feb 13 '23**	**Mar 27 '23**	**0 days**		**390**	
386	386	5.17.8.3.4.8	Ground Floor	20 days	Mar 26 '23	Apr 14 '23	Feb 13 '23	Mar 4 '23	0 days		387FS-8 days	
387	387	5.17.8.3.4.8	Upper Ground	20 days	Apr 7 '23	Apr 26 '23	Feb 25 '23	Mar 16 '23	0 days	386FS-8 days	388FS-9 days	
388	388	5.17.8.3.4.8	Frist Floor	20 days	Apr 18 '23	May 7 '23	Mar 8 '23	Mar 27 '23	0 days	387FS-9 days		
389	**389**	**5.17.8.3.4.**	**Cable Containment Installation**	**45 days**	**May 8 '23**	**Jun 21 '23**	**Mar 28 '23**	**May 11 '23**	**0 days**		**397**	
390	390	5.17.8.3.4.8	Ground Floor	20 days	May 8 '23	May 27 '23	Mar 28 '23	Apr 16 '23	0 days	385	391FS-10 days	
391	391	5.17.8.3.4.8	Upper Ground	20 days	May 18 '23	Jun 6 '23	Apr 7 '23	Apr 26 '23	0 days	390FS-10 days	392FS-10 days	
392	392	5.17.8.3.4.8	Frist Floor	15 days	May 28 '23	Jun 11 '23	Apr 17 '23	May 1 '23	0 days	391FS-10 days	393FS-10 days	
393	393	5.17.8.3.4.8	R/F	20 days	Jun 2 '23	Jun 21 '23	Apr 22 '23	May 11 '23	0 days	392FS-10 days		
394	**394**	**5.17.8.3.4.**	**Sub-main Cable Laying**	**30 days**	**Jun 22 '23**	**Jul 21 '23**	**May 12 '23**	**Jun 10 '23**	**0 days**		**401FS-10 days**	
395	395	5.17.8.3.4.8	Ground Floor	10 days	Jul 2 '23	Jul 11 '23	May 22 '23	May 31 '23	0 days	397	396	
396	396	5.17.8.3.4.8	Upper Ground	10 days	Jul 12 '23	Jul 21 '23	Jun 1 '23	Jun 10 '23	0 days	395		
397	397	5.17.8.3.4.8	Frist Floor	10 days	Jun 22 '23	Jul 1 '23	May 12 '23	May 21 '23	0 days	389	395	
398	**398**	**5.17.8.3.4.**	**Final Circuit Cable Laying**	**30 days**	**Jul 12 '23**	**Aug 10 '23**	**Jun 1 '23**	**Jun 30 '23**	**0 days**		**404**	
399	399	5.17.8.3.4.8	Ground Floor	10 days	Aug 1 '23	Aug 10 '23	Jun 21 '23	Jun 30 '23	0 days	400,402		
400	400	5.17.8.3.4.8	Upper Ground	10 days	Jul 22 '23	Jul 31 '23	Jun 11 '23	Jun 20 '23	0 days	401	399	
401	401	5.17.8.3.4.8	Frist Floor	10 days	Jul 12 '23	Jul 21 '23	Jun 1 '23	Jun 10 '23	0 days	394FS-10 days	400,402	
402	402	5.17.8.3.4.8	Roof	10 days	Jul 22 '23	Jul 31 '23	Jun 11 '23	Jun 20 '23	0 days	401	399	
403	**403**	**5.17.8.3.4.**	**Final Fixing**	**42 days**	**Aug 11 '23**	**Sep 21 '23**	**Jul 1 '23**	**Aug 11 '23**	**0 days**			
404	404	5.17.8.3.4.8	Lighting Installation	30 days	Aug 11 '23	Sep 9 '23	Jul 1 '23	Jul 30 '23	0 days	398	405FS-8 days	
405	405	5.17.8.3.4.8	Wiring Accessories Installation	20 days	Sep 2 '23	Sep 21 '23	Jul 23 '23	Aug 11 '23	0 days	404FS-8 days		



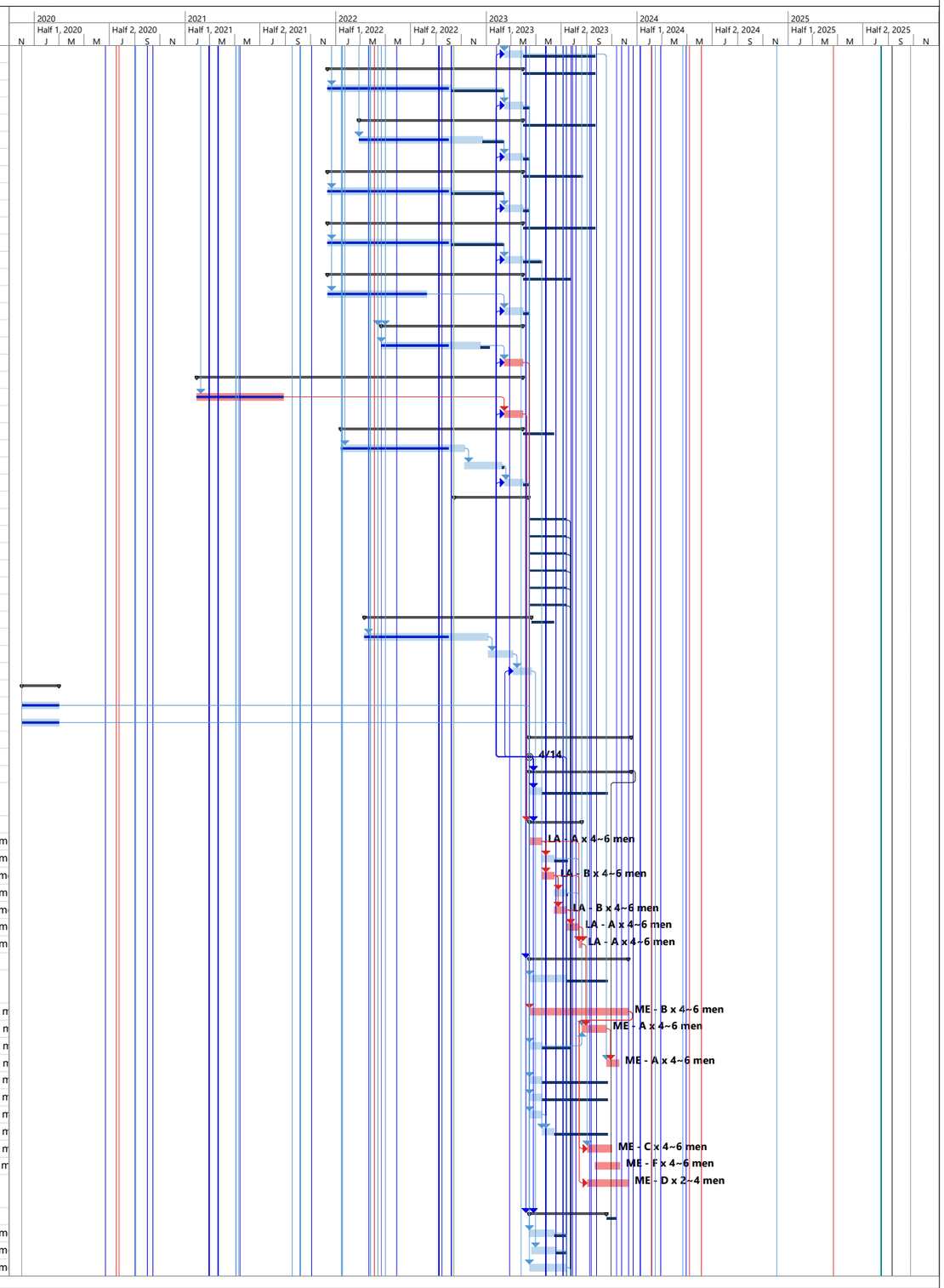
Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

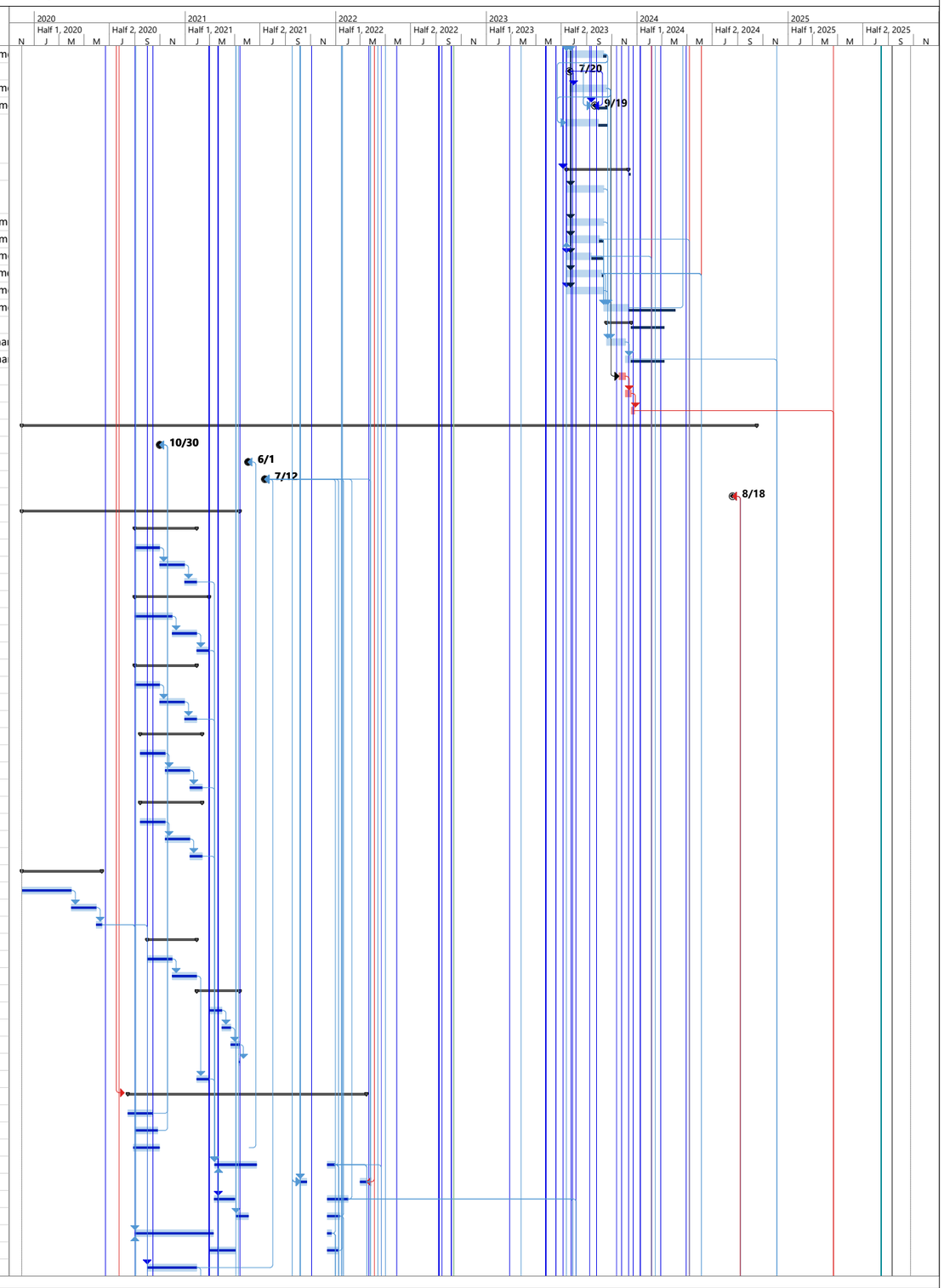
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
406	406	5.17.8.3.4.8	Plumbing Installation, IW	120 days	Mar 26 '23	Jul 23 '23	Mar 15 '23	Jul 12 '23	0 days	1517	1519,418	Pb - A x 4~6 m
407	407	5.17.8.3.4.8	CCTV Installation (5 indoor +5 outdoor Cameras), IW	90 days	Apr 24 '23	Jul 22 '23	Apr 14 '23	Jul 12 '23	0 days	346SS+150 da	418,1529	BS - B x 4~6 m
408	408	5.17.8.3.4.8	Fire Services Installation, IW	120 days	Apr 24 '23	Aug 21 '23	Mar 15 '23	Jul 12 '23	0 days	346SS+150 da	1470,1482,1483,	FS - A x 4~6 m
409	**409**	**5.17.8.3.4.**	**Earthing and Lightning Protection System, IW**	**60 days**	**May 24 '23**	**Jul 22 '23**	**May 14 '23**	**Jul 12 '23**	**0 days**	346SS+180 da	418	**BS - C x 2~4 m**
410	**410**	**5.17.8.3.4.**	**Earthing System**	**50 days**	**May 24 '23**	**Jul 12 '23**	**May 14 '23**	**Jul 2 '23**	**0 days**		**416**	
411	411	5.17.8.3.4.8	G/F	10 days	Jun 13 '23	Jun 22 '23	Jun 3 '23	Jun 12 '23	0 days	413	412	
412	412	5.17.8.3.4.8	Upper G/F	10 days	Jun 23 '23	Jul 2 '23	Jun 13 '23	Jun 22 '23	0 days	411	414	
413	413	5.17.8.3.4.8	1/F	20 days	May 24 '23	Jun 12 '23	May 14 '23	Jun 2 '23	0 days		411	
414	414	5.17.8.3.4.8	R/F	10 days	Jul 3 '23	Jul 12 '23	Jun 23 '23	Jul 2 '23	0 days	412		
415	**415**	**5.17.8.3.4.**	**Lightning Protection System**	**10 days**	**Jul 13 '23**	**Jul 22 '23**	**Jul 3 '23**	**Jul 12 '23**	**0 days**			
416	416	5.17.8.3.4.8	Air Termination Installation	5 days	Jul 13 '23	Jul 17 '23	Jul 3 '23	Jul 7 '23	0 days	410	417	
417	417	5.17.8.3.4.8	Earth Rod Installation	5 days	Jul 18 '23	Jul 22 '23	Jul 8 '23	Jul 12 '23	0 days	416		
418	418	5.17.8.3.4.8	Testing and Commissioning of Building Services Installations, IW	100 days	Aug 23 '23	Nov 30 '23	Jul 13 '23	Oct 20 '23	0 days	383,384FS-30		BS - C x 2~4 m
419	**419**	**5.17.8.3.5**	**SCADA Systems, Inlet Works**	**310 days**	**Dec 31 '22**	**Nov 5 '23**	**Feb 8 '23**	**Mar 6 '24**	**39 days**	**346**		
420	420	5.17.8.3.5.1	Installation of PLC Panels, IW	45 days	Dec 31 '22	Feb 13 '23	Feb 8 '23	Mar 24 '23	39 days	338	378	EE - B x 4~6 m
421	421	5.17.8.3.5.2	Configuration of PLC System, IW	45 days	Jul 24 '23	Sep 6 '23	Nov 23 '23	Jan 6 '24	0 days	378	422	PLC - A x 1 ma
422	422	5.17.8.3.5.3	Site Acceptance Test for PLC System at Inlet Works No. 1	60 days	Sep 7 '23	Nov 5 '23	Jan 7 '24	Mar 6 '24	122 days	421	1530	
423	423	5.17.9	Site Acceptance Test for E&M Equip & Instrumentations calibration, IW	15 days	Nov 7 '23	Nov 21 '23	Sep 21 '23	Oct 5 '23	0 days	348FS-30 days	424	
424	424	5.17.10	System Commissioning for E&M Equip at Inlet Works No. 1	15 edays	Nov 21 '23	Dec 6 '23	Oct 6 '23	Oct 21 '23	0 edays	423	425	
425	425	5.17.11	Risk Allowances for completion of Processing Plant at Inlet Works No. 1	7 edays	Dec 6 '23	Dec 13 '23	Oct 21 '23	Oct 28 '23	0 edays	424	1525	
426	**426**	**5.18**	**Primary Sedimentation Tanks No. 1 ~ 4, Portion B-3 (PS 6B2.2)**	**1583 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
427	427	5.18.1	Planned Key Date Completion Date - KD1A, PST No. 1~4	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days	461FF,462FF		
428	428	5.18.2	Planned Key Date Completion Date - KD1B, PST No. 1~4	1 day	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	463FF		
429	429	5.18.3	Planned Sectional Completion Date - Section 1, PST No. 1~4	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	466FF,465FF,4		
430	430	5.18.4	Planned Sectional Completion Date - Section 2, PST No. 1~4	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days	559FF		
431	**431**	**5.18.5**	**Selection of Suppliers for major plant and materials for PST No. 1~4**	**230 days**	**Jul 1 '20**	**Feb 15 '21**	**Jul 1 '20**	**Feb 15 '21**	**0 days**			
432	**432**	**5.18.5.1**	**PST - lamella plate settlers, C11, ref. EQT014**	**90 days**	**Jul 1 '20**	**Sep 28 '20**	**Jul 1 '20**	**Sep 28 '20**	**0 days**			
433	433	5.18.5.1.1	Submission for acceptance of purchasing package	30 days	Jul 1 '20	Jul 30 '20	Jul 1 '20	Jul 30 '20	0 days		434	
434	434	5.18.5.1.2	Invitation of quotations for purchasing package	30 days	Jul 31 '20	Aug 29 '20	Jul 31 '20	Aug 29 '20	0 days	433	435	
435	435	5.18.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Aug 30 '20	Sep 28 '20	Aug 30 '20	Sep 28 '20	0 days	434	464	
436	**436**	**5.18.5.2**	**PST - reciprocating type bottom scrapers, C11, ref. EQT014**	**135 days**	**Jul 1 '20**	**Nov 12 '20**	**Jul 1 '20**	**Nov 12 '20**	**0 days**			
437	437	5.18.5.2.1	Submission for acceptance of purchasing package	45 days	Jul 1 '20	Aug 14 '20	Jul 1 '20	Aug 14 '20	0 days		438	
438	438	5.18.5.2.2	Invitation of quotations for purchasing package	60 days	Aug 15 '20	Oct 13 '20	Aug 15 '20	Oct 13 '20	0 days	437	439	
439	439	5.18.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Oct 14 '20	Nov 12 '20	Oct 14 '20	Nov 12 '20	0 days	438	464	
440	**440**	**5.18.5.3**	**PST - surface scum skimmers, C11, ref. EQT015**	**90 days**	**Jul 7 '20**	**Oct 4 '20**	**Jul 7 '20**	**Oct 4 '20**	**0 days**			
441	441	5.18.5.3.1	Submission for acceptance of purchasing package	30 days	Jul 7 '20	Aug 5 '20	Jul 7 '20	Aug 5 '20	0 days		442	
442	442	5.18.5.3.2	Invitation of quotations for purchasing package	30 days	Aug 6 '20	Sep 4 '20	Aug 6 '20	Sep 4 '20	0 days	441	443	
443	443	5.18.5.3.3	Acceptance of conforming quotation	30 days	Sep 5 '20	Oct 4 '20	Sep 5 '20	Oct 4 '20	0 days	442	464	
444	**444**	**5.18.5.4**	**PST - scum collector pipes, C11, ref. EQT015**	**210 days**	**Jul 1 '20**	**Jan 26 '21**	**Jul 1 '20**	**Jan 26 '21**	**0 days**			
445	445	5.18.5.4.1	Submission for acceptance of purchasing package	120 days	Jul 1 '20	Oct 28 '20	Jul 1 '20	Oct 28 '20	0 days		446	
446	446	5.18.5.4.2	Invitation of quotations for purchasing package	60 days	Oct 29 '20	Dec 27 '20	Oct 29 '20	Dec 27 '20	0 days	445	447	
447	447	5.18.5.4.3	Acceptance of conforming quotation	30 days	Dec 28 '20	Jan 26 '21	Dec 28 '20	Jan 26 '21	0 days	446	464	
448	**448**	**5.18.5.5**	**PST - piston type primary sludge pumps, C11, ref. EQT016**	**210 days**	**Jul 1 '20**	**Jan 26 '21**	**Jul 1 '20**	**Jan 26 '21**	**0 days**			
449	449	5.18.5.5.1	Submission for acceptance of purchasing package	120 days	Jul 1 '20	Oct 28 '20	Jul 1 '20	Oct 28 '20	0 days		450	
450	450	5.18.5.5.2	Invitation of quotations for purchasing package	60 days	Oct 29 '20	Dec 27 '20	Oct 29 '20	Dec 27 '20	0 days	449	451	
451	451	5.18.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Dec 28 '20	Jan 26 '21	Dec 28 '20	Jan 26 '21	0 days	450	464	
452	**452**	**5.18.5.6**	**PST - drain pumps, C11, ref. EQT007**	**210 days**	**Jul 14 '20**	**Feb 8 '21**	**Jul 14 '20**	**Feb 8 '21**	**0 days**			
453	453	5.18.5.6.1	Submission for acceptance of purchasing package	120 days	Jul 14 '20	Nov 10 '20	Jul 14 '20	Nov 10 '20	0 days		454	
454	454	5.18.5.6.2	Invitation of quotations for purchasing package	60 days	Nov 11 '20	Jan 9 '21	Nov 11 '20	Jan 9 '21	0 days	453	455	
455	455	5.18.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Jan 10 '21	Feb 8 '21	Jan 10 '21	Feb 8 '21	0 days	454	464	
456	**456**	**5.18.5.7**	**PST - air blowers, C11, ref. EQT018**	**210 days**	**Jul 21 '20**	**Feb 15 '21**	**Jul 21 '20**	**Feb 15 '21**	**0 days**			
457	457	5.18.5.7.1	Submission for acceptance of purchasing package	120 days	Jul 21 '20	Nov 17 '20	Jul 21 '20	Nov 17 '20	0 days		458	
458	458	5.18.5.7.2	Invitation of quotations for purchasing package	60 days	Nov 18 '20	Jan 16 '21	Nov 18 '20	Jan 16 '21	0 days	457	459	
459	459	5.18.5.7.3	Acceptance of conforming quotation	30 days	Jan 17 '21	Feb 15 '21	Jan 17 '21	Feb 15 '21	0 days	458	464	
460	**460**	**5.18.6**	**Design Submissions for PST No. 1~ 4**	**587 days**	**Aug 1 '20**	**Mar 11 '22**	**Aug 1 '20**	**Mar 11 '22**	**0 days**	**121**		
461	461	5.18.6.1	Electrical schematic drawings for PST No. 1 ~4	60 days	Aug 1 '20	Sep 29 '20	Aug 1 '20	Sep 29 '20	0 days		427FF	
462	462	5.18.6.2	CDS080-2 - Civil and dimensional requirements drawings for PST No. 1~4 up to +8.0	50 days	Sep 1 '20	Oct 20 '20	Sep 1 '20	Oct 20 '20	0 days		427FF	
463	463	5.18.6.3	CDS081-2 - Civil and dimensional requirements drawings for PST No. 1 ~ 4	150 days	Sep 1 '20	Jan 28 '21	Sep 1 '20	Jan 28 '21	0 days		428FF	
464	464	5.18.6.4	CDS003 - Detailed Design for Primary Sedimentation Tanks No. 1~4	299.2 edays	Feb 15 '21	Dec 11 '21	Feb 15 '21	Dec 11 '21	0 edays	435,439,443,4	471,474,477,480	
465	465	5.18.6.5	CDS022 - Detailed Design for Electrical Installations for PST No. 1~4	154.88 edays	Oct 7 '21	Mar 11 '22	Oct 7 '21	Mar 11 '22	0 edays	82,92,100,220	83,512,429FF	
466	466	5.18.6.6	CDS034-2 - Detailed Design for Electrical Installations BS at PST No. 1~4	277.88 edays	Mar 12 '21	Dec 15 '21	Mar 12 '21	Dec 15 '21	0 edays	156	429FF,552	
467	467	5.18.6.7	CDS025-2 - Detailed Design for LV Switchboards for PST No. 1~4	254 edays	May 3 '21	Jan 12 '22	May 3 '21	Jan 12 '22	0 edays	78	501,429FF	
468	468	5.18.6.8	CDS050-2 - Detailed Design for Lifting Appliances - PST No. 1 ~ 4	150 edays	Sep 1 '20	Jan 29 '21	Sep 1 '20	Jan 29 '21	0 edays	131	498,429FF	
469	**469**	**5.18.7**	**Manufacturing and Delivery of Plant & Materials**	**1235 days**	**Dec 2 '19**	**Apr 19 '23**	**Dec 2 '19**	**Sep 20 '23**	**154 days**			
470	**470**	**5.18.7.1**	**Lamella Plate Settlers, EQT014**	**353 days**	**Apr 11 '22**	**Mar 29 '23**	**Apr 11 '22**	**Jul 22 '23**	**115 days**			
471	471	5.18.7.1.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Apr 11 '22	Feb 4 '23	Apr 11 '22	Jun 7 '23	8 days	464	472	
472	472	5.18.7.1.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jun 8 '23	Jul 22 '23	115 days	471,519SS-60	533	
473	**473**	**5.18.7.2**	**Reciprocating Type Bottom Scrappers, EQT014**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jun 22 '23**	**85 days**			
474	474	5.18.7.2.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	May 8 '23	128 days	464	475	
475	475	5.18.7.2.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	May 9 '23	Jun 22 '23	16 days	474,519SS-60	534	
476	**476**	**5.18.7.3**	**Surface Scum Skimmers, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Sep 20 '23**	**175 days**			
477	477	5.18.7.3.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Aug 6 '23	128 days	464	478	



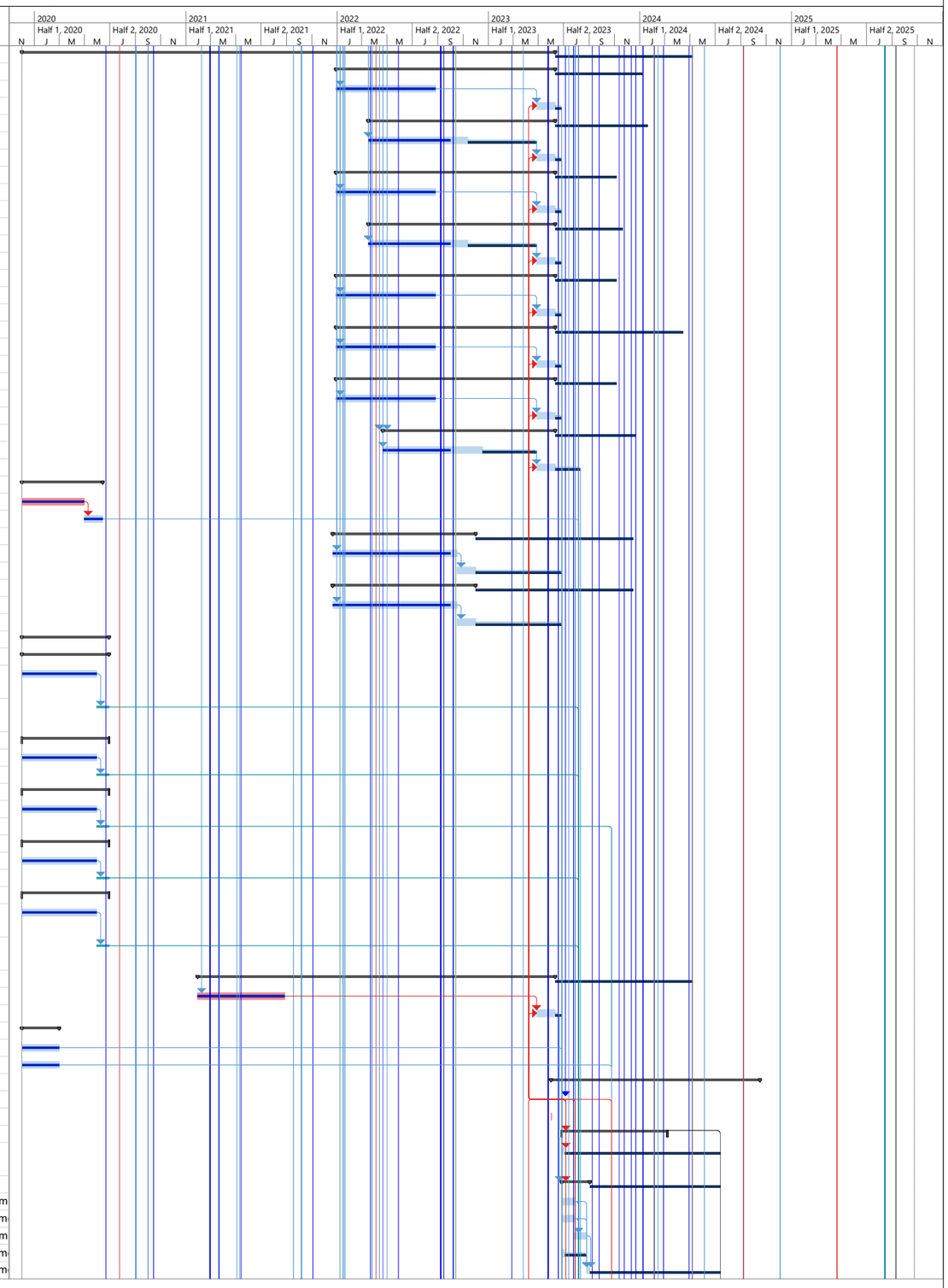
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
478	478	5.18.7.3.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 7 '23	Sep 20 '23	175 days	477,519SS-60	535	
479	**479**	**5.18.7.4**	**Surface Scum Collection Pipes, EQT015**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Sep 20 '23**	**175 days**			
480	480	5.18.7.4.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Aug 6 '23	128 days	464	481	
481	481	5.18.7.4.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 7 '23	Sep 20 '23	16 days	480,519SS-60	536	
482	**482**	**5.18.7.5**	**Piston Type Primary Sludge Pumps, EQT016**	**397 days**	**Feb 26 '22**	**Mar 29 '23**	**Feb 26 '22**	**Sep 20 '23**	**175 days**			
483	483	5.18.7.5.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Feb 26 '22	Dec 22 '22	Feb 26 '22	Aug 6 '23	52 days	464	484	
484	484	5.18.7.5.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 7 '23	Sep 20 '23	16 days	483,519SS-60	537	
485	**485**	**5.18.7.6**	**Drain Pumps, EQT007**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Aug 21 '23**	**145 days**			
486	486	5.18.7.6.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Jul 7 '23	128 days	464	487	
487	487	5.18.7.6.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jul 8 '23	Aug 21 '23	16 days	486,519SS-60	538	
488	**488**	**5.18.7.7**	**Air Blower, EQT018**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Sep 20 '23**	**175 days**			
489	489	5.18.7.7.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 12 '21	Oct 7 '22	Dec 12 '21	Aug 6 '23	128 days	464	490	
490	490	5.18.7.7.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Aug 7 '23	Sep 20 '23	46 days	489,519SS-60	539	
491	**491**	**5.18.7.8**	**Stoplogs and Penstocks, EQT013**	**473 days**	**Dec 12 '21**	**Mar 29 '23**	**Dec 12 '21**	**Jul 22 '23**	**115 days**			
492	492	5.18.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 12 '21	Aug 8 '22	Dec 12 '21	Aug 8 '22	0 days	464	493	
493	493	5.18.7.8.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jun 8 '23	Jul 22 '23	16 days	519SS-60 eda	531	
494	**494**	**5.18.7.9**	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**343 days**	**Apr 21 '22**	**Mar 29 '23**	**Apr 21 '22**	**Feb 22 '23**	**0 days**	**63,70,66**		
495	495	5.18.7.9.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Jan 8 '23	23 days	464	496	
496	496	5.18.7.9.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Jan 9 '23	Feb 22 '23	0 days	495,519SS-60	532	
497	**497**	**5.18.7.10**	**Lifting Appliances**	**790 days**	**Jan 29 '21**	**Mar 29 '23**	**Jan 29 '21**	**Mar 17 '23**	**0 days**			
498	498	5.18.7.10.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Jan 29 '21	Aug 26 '21	Jan 29 '21	Aug 26 '21	0 days	468	499	
499	499	5.18.7.10.2	Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Feb 1 '23	Mar 17 '23	0 days	498,519SS-60	522	
500	**500**	**5.18.7.11**	**LV Switchboards**	**441 days**	**Jan 13 '22**	**Mar 29 '23**	**Jan 13 '22**	**Jun 12 '23**	**75 days**			
501	501	5.18.7.11.1	PST - Manufacturing of Plant	300 days	Jan 13 '22	Nov 8 '22	Jan 13 '22	Jan 28 '23	0 days	467	502	
502	502	5.18.7.11.2	PST - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Nov 9 '22	Feb 6 '23	Jan 29 '23	Apr 28 '23	6 days	501	503	
503	503	5.18.7.11.3	PST - Shipping and Delivery of Plant to site	45 days	Feb 13 '23	Mar 29 '23	Apr 29 '23	Jun 12 '23	16 days	502,519SS-60	544	
504	**504**	**5.18.7.12**	**Building Services**	**180 days**	**Oct 15 '22**	**Apr 12 '23**	**Oct 15 '22**	**Apr 12 '23**	**0 days**			
505	505	5.18.7.12.1	Equipment Delivery for Mechanical Ventilation and Air Conditioning Syste	180 days	Oct 15 '22	Apr 12 '23	May 8 '23	Nov 4 '23	92 days		553	
506	506	5.18.7.12.2	Equipment Delivery for Lighting and Power Distribution System	180 days	Oct 15 '22	Apr 12 '23	May 8 '23	Nov 4 '23	92 days		554	
507	507	5.18.7.12.3	Equipment Delivery for Plumbing Installation	180 days	Oct 15 '22	Apr 12 '23	May 18 '23	Nov 14 '23	92 days		555	
508	508	5.18.7.12.4	Equipment Delivery for CCTV Installation (9 indoor + 2 outdoor Cameras)	180 days	Oct 15 '22	Apr 12 '23	Jun 7 '23	Dec 4 '23	92 days		556	
509	509	5.18.7.12.5	Equipment Delivery for Fire Services Installation	180 days	Oct 15 '22	Apr 12 '23	Jan 19 '23	Jul 18 '23	92 days		557	
510	510	5.18.7.12.6	Equipment Delivery for Earthing and Lightning Protection System	180 days	Oct 15 '22	Apr 12 '23	May 8 '23	Nov 4 '23	92 days		558	
511	**511**	**5.18.7.13**	**PLC System**	**405 days**	**Mar 11 '22**	**Apr 19 '23**	**Mar 11 '22**	**Jun 12 '23**	**54 days**			
512	512	5.18.7.13.1	Manufacturing of Plant, PLC for PST	300 days	Mar 11 '22	Jan 4 '23	Mar 11 '22	Feb 27 '23	0 days	465	513	
513	513	5.18.7.13.2	Factory Acceptance Test of Plant, PLC for PST (To be witnessed by PM)	60 days	Jan 5 '23	Mar 5 '23	Feb 28 '23	Apr 28 '23	0 days	512	514	
514	514	5.18.7.13.3	Shipping and Delivery of Plant to site	45 days	Mar 6 '23	Apr 19 '23	Apr 29 '23	Jun 12 '23	0 days	513,519SS-60	545	
515	**515**	**5.18.7.14**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
516	516	5.18.7.14.1	Equipment Delivery for Cable Containment	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		546	
517	517	5.18.7.14.2	Equipment Delivery for Cable Provision	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		547	
518	**518**	**5.18.8**	**Site Installation Work**	**248 days**	**Apr 14 '23**	**Dec 17 '23**	**Feb 22 '23**	**Apr 1 '24**	**0 days**			
519	519	5.18.8.1	Tentative Civil Handover Date, Portion B-3, PST No. 1~4 (Rev. 5)	1 day	Apr 14 '23	Apr 14 '23	Feb 22 '23	Feb 22 '23	0 days		522,520,543,521	
520	**520**	**5.18.8.2**	**Commencement of E&M Installation at PST No. 1~4**	**247 days**	**Apr 15 '23**	**Dec 17 '23**	**Feb 23 '23**	**Apr 1 '24**	**0 days**	**519**	**563FS-30 days**	**403**
521	521	5.18.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting Welfare facilities etc., PST	30 days	Apr 15 '23	May 14 '23	Sep 21 '23	Oct 20 '23	159 days	519		
522	**522**	**5.18.8.2.2**	**Installation of Lifting Appliances at PST No. 1~4**	**127 days**	**Apr 15 '23**	**Aug 19 '23**	**Mar 18 '23**	**Jul 22 '23**	**0 days**	**519,499**		
523	523	5.18.8.2.2.1	Basement EOT Crane LA-02-01 SWL 10t	30 days	Apr 15 '23	May 14 '23	Mar 18 '23	Apr 16 '23	0 days		524,525,529	LA - A x 4~6 m
524	524	5.18.8.2.2.2	Coping Level EOT Crane LA-02-02 SWL 5t	30 days	May 15 '23	Jun 13 '23	Jun 16 '23	Jul 15 '23	32 days	523	529	LA - A x 4~6 m
525	525	5.18.8.2.2.3	Coping Level EOT Crane LA-02-03 SWL 5t	30 days	May 15 '23	Jun 13 '23	Apr 17 '23	May 16 '23	0 days	523	526,527,529	LA - B x 4~6 m
526	526	5.18.8.2.2.4	Coping Level EOT Crane LA-02-04 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	Jun 16 '23	Jul 15 '23	2 days	525	529	LA - A x 4~6 m
527	527	5.18.8.2.2.5	Coping Level EOT Crane LA-02-05 SWL 5t	30 days	Jun 14 '23	Jul 13 '23	May 17 '23	Jun 15 '23	0 days	525	528,529	LA - B x 4~6 m
528	528	5.18.8.2.2.6	Coping Level EOT Crane LA-02-06 SWL 2t	30 days	Jul 14 '23	Aug 12 '23	Jun 16 '23	Jul 15 '23	0 days	527	529	LA - A x 4~6 m
529	529	5.18.8.2.2.7	T&C, Loading Test for Lifting Appliances at PST No. 1~4	7 days	Aug 13 '23	Aug 19 '23	Jul 16 '23	Jul 22 '23	0 days	523,524,525,5	533	LA - A x 4~6 m
530	**530**	**5.18.8.2.3**	**Mechanical Installations at PST No. 1~4**	**240 days**	**Apr 15 '23**	**Dec 10 '23**	**Feb 23 '23**	**Oct 20 '23**	**0 days**	**136**		
531	531	5.18.8.2.3.1	Installation of penstocks and stoplogs (Penstock 18nos, Stoplogs 14 nos), EQT013	90 days	Apr 15 '23	Jul 13 '23	Jul 23 '23	Oct 20 '23	99 days	493		ME - E x 4~6 men
532	532	5.18.8.2.3.2	Installation of pipework and valves, EQT036	240 days	Apr 15 '23	Dec 10 '23	Feb 23 '23	Oct 20 '23	0 days	496	542FS-100 days,	ME - B x 4~6 m
533	533	5.18.8.2.3.3	Installation of lamella plate settlers (x4), EQT014	60 days	Aug 20 '23	Oct 18 '23	Jul 23 '23	Sep 20 '23	0 days	534,529,472	535	ME - A x 4~6 m
534	534	5.18.8.2.3.4	Installation of reciprocating type bottom scrapers (x4), EQT014	30 days	Apr 15 '23	May 14 '23	Jun 23 '23	Jul 22 '23	69 days	475	533	ME - A x 4~6 m
535	535	5.18.8.2.3.5	Installation of surface scum skimmers (x1), EQT015	30 days	Oct 19 '23	Nov 17 '23	Sep 21 '23	Oct 20 '23	0 days	533,478		ME - A x 4~6 m
536	536	5.18.8.2.3.6	Installation of scum collector pipes (x1), EQT015	30 days	Apr 15 '23	May 14 '23	Sep 21 '23	Oct 20 '23	159 days	481		ME - B x 4~6 m
537	537	5.18.8.2.3.7	Installation of piston type primary sludge pumps (x3), EQT016	30 days	Apr 15 '23	May 14 '23	Sep 21 '23	Oct 20 '23	159 days	484		ME - C x 4~6 m
538	538	5.18.8.2.3.8	Installation of drain pumps (x1), EQT007	30 days	Apr 15 '23	May 14 '23	Aug 22 '23	Sep 20 '23	0 days	487	539	ME - C x 4~6 m
539	539	5.18.8.2.3.9	Installation of air blowers (x2), EQT018	30 days	May 15 '23	Jun 13 '23	Sep 21 '23	Oct 20 '23	129 days	538,490		ME - C x 4~6 m
540	540	5.18.8.2.3.10	Installation of instrumentations, EQT035-1	60 days	Sep 2 '23	Oct 31 '23	Aug 22 '23	Oct 20 '23	0 days	59,532FS-100		ME - C x 4~6 m
541	541	5.18.8.2.3.11	Installation of Platforms, Covers etc., PST, EQT050	60 days	Sep 21 '23	Nov 19 '23	Aug 22 '23	Oct 20 '23	0 days			ME - F x 4~6 m
542	542	5.18.8.2.3.12	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	100 days	Sep 2 '23	Dec 10 '23	Jul 13 '23	Oct 20 '23	0 days	532FS-100 days		ME - D x 2~4 men
543	**543**	**5.18.8.2.4**	**Electrical Installations for PST No. 1~4**	**187 days**	**Apr 15 '23**	**Oct 18 '23**	**May 14 '23**	**Nov 9 '23**	**22 days**	**519,141**		
544	544	5.18.8.2.4.1	Installation of LV Switchboards, PST	60 days	Apr 15 '23	Jun 13 '23	Jun 13 '23	Aug 11 '23	30 days	503	547	LV - A x 4~6 m
545	545	5.18.8.2.4.2	Installation of PLC Panel, PST	60 days	Apr 20 '23	Jun 18 '23	Jun 13 '23	Aug 11 '23	25 days	514	547	EE - A x 4~6 m
546	546	5.18.8.2.4.3	Installation of cable trays and cable containments, PST	90 days	Apr 15 '23	Jul 13 '23	May 14 '23	Aug 11 '23	0 days	516	547	EE - A x 4~6 m



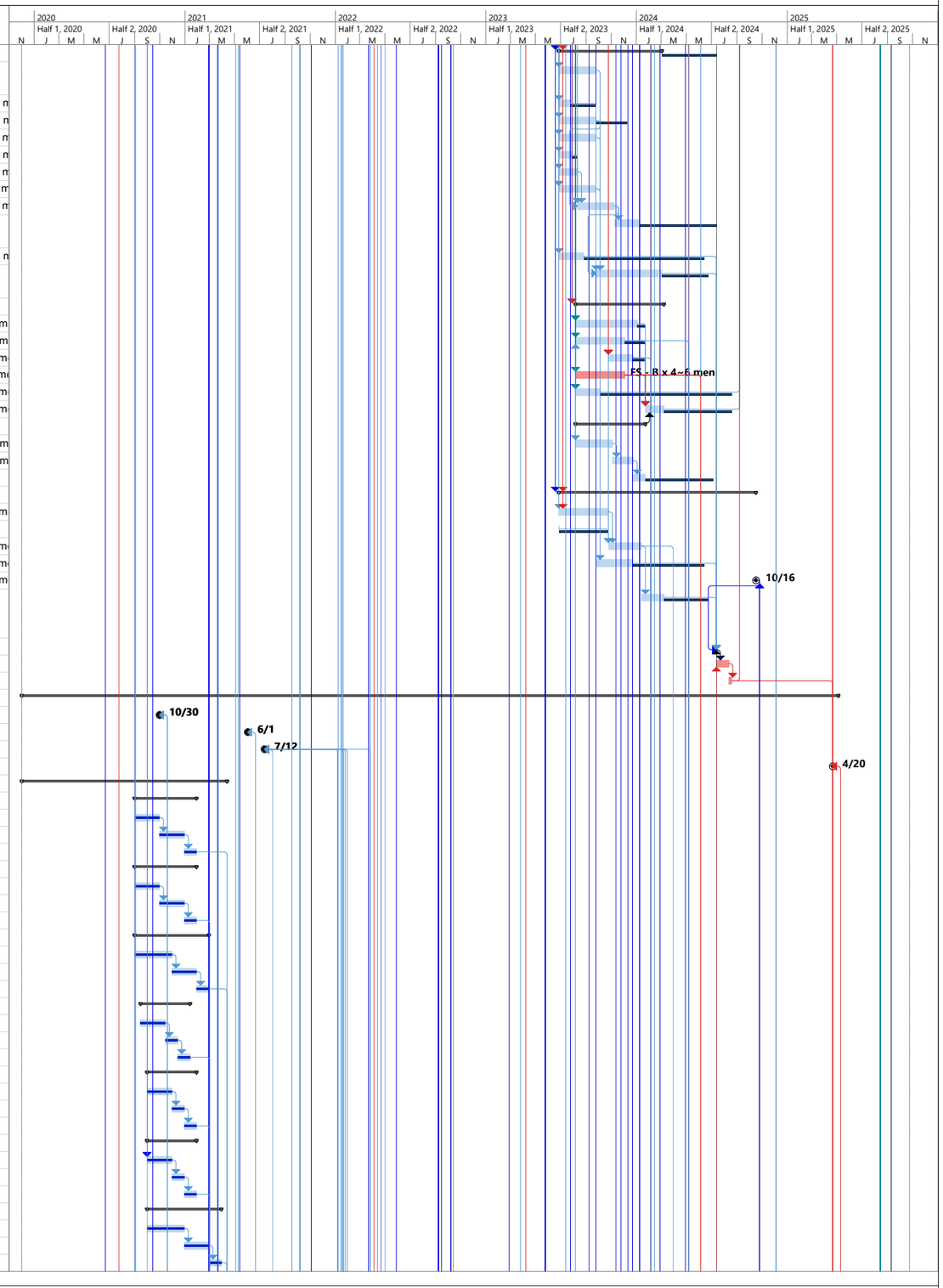
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
547	547	5.18.8.2.4.4	Cables laying and terminations, PST	90 days	Jul 14 '23	Oct 11 '23	Aug 12 '23	Nov 9 '23	7 days	544,545,546,5	550FS-30 days,5	EE - B x 4~6 m
548	548	5.18.8.2.4.5	Tentative Civil Handover Date, LV cables draw pits from IW to PST	1 day	Jul 20 '23	Jul 20 '23	Aug 11 '23	Aug 11 '23	0 days		550FF+30 days,5	
549	549	5.18.8.2.4.6	Cables laying and terminations between buildings	90 days	Jul 21 '23	Oct 18 '23	Aug 12 '23	Nov 9 '23	0 days	548	550FS-30 days,5	EE - B x 4~6 m
550	550	5.18.8.2.4.7	Energisation of LV Switchboards, PST	1 day	Sep 19 '23	Sep 19 '23	Oct 20 '23	Oct 20 '23	31 days	547FS-30 days		LV - A x 4~6 m
551	551	5.18.8.2.4.8	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	80 days	Jul 11 '23	Sep 28 '23	Aug 2 '23	Oct 20 '23	22 days	547FS-100 days,549FS-10 days		LV - A x 4~6 men
552	**552**	**5.18.8.2.5**	**Building Services Installations for PST No. 1~4**	**150 days**	**Jul 14 '23**	**Dec 10 '23**	**Jul 18 '23**	**Apr 1 '24**	**4 days**	**519FS+90 days**		
553	553	5.18.8.2.5.1	Mechanical Ventilation and Air Conditioning System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	505	559	MVAC - B x 4~6 men
554	554	5.18.8.2.5.2	Lighting and Power Distribution System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	506	559	BS - A x 4~6 m
555	555	5.18.8.2.5.3	Plumbing Installation, PST	80 days	Jul 14 '23	Oct 1 '23	Nov 14 '23	Feb 1 '24	10 days	1517,507	1519,559	Pb - B x 4~6 m
556	556	5.18.8.2.5.4	CCTV Installation (9 indoor + 2 outdoor Cameras), PST	60 days	Jul 14 '23	Sep 11 '23	Dec 4 '23	Feb 1 '24	30 days	519FS+60 days	559,1529	BS - B x 4~6 m
557	557	5.18.8.2.5.5	Fire Services Installation, PST	85 days	Jul 14 '23	Oct 6 '23	Jul 18 '23	Oct 10 '23	4 days	509	1470,1482,1483,	FS - A x 4~6 m
558	558	5.18.8.2.5.6	Earthing and Lightning Protection System, PST	90 days	Jul 14 '23	Oct 11 '23	Nov 4 '23	Feb 1 '24	0 days	184,510	559	BS - C x 2~4 m
559	559	5.18.8.2.5.7	Testing and Commissioning of Building Services Installations, PST	60 days	Oct 12 '23	Dec 10 '23	Feb 2 '24	Apr 1 '24	113 days	553,554,555,5	430FF	BS - C x 2~4 m
560	**560**	**5.18.8.2.6**	**SCADA Systems, PST No. 1~4**	**60 days**	**Oct 19 '23**	**Dec 17 '23**	**Jan 7 '24**	**Mar 6 '24**	**80 days**			
561	561	5.18.8.2.6.1	Configuration of PLC System	45 days	Oct 19 '23	Dec 2 '23	Jan 7 '24	Feb 20 '24	0 days	547,549	562	PLC - B x 1 ma
562	562	5.18.8.2.6.2	Site Acceptance Test for PLC System at PST No. 1~4	15 days	Dec 3 '23	Dec 17 '23	Feb 21 '24	Mar 6 '24	80 days	561	1530	PLC - A x 1 ma
563	563	5.18.9	Site Acceptance Test for E&M Equip and Instrumentations calibrations at PST N	15 edays	Nov 18 '23	Dec 3 '23	Sep 21 '23	Oct 6 '23	0 edays	520FS-30 days	564	
564	564	5.18.10	System Commissioning for E&M Equip at PST No, 1~4	15 days	Dec 3 '23	Dec 17 '23	Oct 6 '23	Oct 20 '23	0 days	563	565	
565	565	5.18.11	Risk Allowances for Completion of Processing Plant at PST No. 1~4	7 edays	Dec 17 '23	Dec 24 '23	Oct 21 '23	Oct 28 '23	0 edays	564	1525	
566	**566**	**5.19**	**Bioreactors No. 2A & 2B & DOU2A, Portion B-4 (PS 6B2.4)**	**1781 days?**	**Dec 2 '19**	**Oct 16 '24**	**Dec 2 '19**	**Oct 16 '24**	**0 days?**			
567	567	5.19.1	Planned Key Date Completion Date - KD1A, BR 2A & 2B & DOU2A	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days	606FF,607FF		
568	568	5.19.2	Planned Key Date Completion Date - KD1B, BR 2A & 2B & DOU2A	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	608FF		
569	569	5.19.3	Planned Sectional Completion Date - Section 1, BR 2A & 2B & DOU2A	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	609FF,610FF,6		
570	570	5.19.4	Planned Sectional Completion Date - Section 2, BR 2A & 2B & DOU2A	0 days	Aug 18 '24	Aug 18 '24	Aug 18 '24	Aug 18 '24	0 days	700FF,701FF,7		
571	**571**	**5.19.5**	**Selection of Suppliers for major plant and materials for BR 2A & 2B & DOU2A**	**528 days**	**Dec 2 '19**	**May 12 '21**	**Dec 2 '19**	**May 12 '21**	**0 days**			
572	**572**	**5.19.5.1**	**BR - pre-treatment fine screens (Marking Scheme Approach), EQT019**	**150 days**	**Sep 1 '20**	**Jan 28 '21**	**Sep 1 '20**	**Jan 28 '21**	**0 days**			
573	573	5.19.5.1.1	Submission for acceptance of purchasing package	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		574	
574	574	5.19.5.1.2	Invitation of quotations for purchasing package	60 days	Oct 31 '20	Dec 29 '20	Oct 31 '20	Dec 29 '20	0 days	573	575	
575	575	5.19.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	574	609	
576	**576**	**5.19.5.2**	**BR - air diffusion system (Marking Scheme Approach), EQT017**	**180 days**	**Sep 1 '20**	**Feb 27 '21**	**Sep 1 '20**	**Feb 27 '21**	**0 days**			
577	577	5.19.5.2.1	Submission for acceptance of purchasing package including proposed marking sch	90 days	Sep 1 '20	Nov 29 '20	Sep 1 '20	Nov 29 '20	0 days		578	
578	578	5.19.5.2.2	Invitation of quotations for purchasing package	60 days	Nov 30 '20	Jan 28 '21	Nov 30 '20	Jan 28 '21	0 days	577	579	
579	579	5.19.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Jan 29 '21	Feb 27 '21	Jan 29 '21	Feb 27 '21	0 days	578	609	
580	**580**	**5.19.5.3**	**BR - submersible mixers, C11, EQT020**	**150 days**	**Sep 1 '20**	**Jan 28 '21**	**Sep 1 '20**	**Jan 28 '21**	**0 days**			
581	581	5.19.5.3.1	Submission for acceptance of purchasing package	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		582	
582	582	5.19.5.3.2	Invitation of quotations for purchasing package	60 days	Oct 31 '20	Dec 29 '20	Oct 31 '20	Dec 29 '20	0 days	581	583	
583	583	5.19.5.3.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	582	609	
584	**584**	**5.19.5.4**	**BR - mixed liquor return pumps, C11, EQT008**	**150 days**	**Sep 14 '20**	**Feb 10 '21**	**Sep 14 '20**	**Feb 10 '21**	**0 days**			
585	585	5.19.5.4.1	Submission for acceptance of purchasing package	60 days	Sep 14 '20	Nov 12 '20	Sep 14 '20	Nov 12 '20	0 days		586	
586	586	5.19.5.4.2	Invitation of quotations for purchasing package	60 days	Nov 13 '20	Jan 11 '21	Nov 13 '20	Jan 11 '21	0 days	585	587	
587	587	5.19.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Jan 12 '21	Feb 10 '21	Jan 12 '21	Feb 10 '21	0 days	586	609	
588	**588**	**5.19.5.5**	**BR - scum removal systems, C11, EQT021, EQT022**	**150 days**	**Sep 14 '20**	**Feb 10 '21**	**Sep 14 '20**	**Feb 10 '21**	**0 days**			
589	589	5.19.5.5.1	Submission for acceptance of purchasing package	60 days	Sep 14 '20	Nov 12 '20	Sep 14 '20	Nov 12 '20	0 days		590	
590	590	5.19.5.5.2	Invitation of quotations for purchasing package	60 days	Nov 13 '20	Jan 11 '21	Nov 13 '20	Jan 11 '21	0 days	589	591	
591	591	5.19.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Jan 12 '21	Feb 10 '21	Jan 12 '21	Feb 10 '21	0 days	590	609	
592	**592**	**5.19.5.6**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT0**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
593	593	5.19.5.6.1	Submission for acceptance of purchasing package	120 days	Dec 2 '19	Mar 30 '20	Dec 2 '19	Mar 30 '20	0 days		594	
594	594	5.19.5.6.2	Invitation of quotations for purchasing package	60 days	Mar 31 '20	May 29 '20	Mar 31 '20	May 29 '20	0 days	593	595	
595	595	5.19.5.6.3	Acceptance of conforming quotation (Completed)	14 days	May 30 '20	Jun 12 '20	May 30 '20	Jun 12 '20	0 days	594	613,777	
596	**596**	**5.19.5.7**	**BR - instrumentations, C11, EQT035-2**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
597	597	5.19.5.7.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		598	
598	598	5.19.5.7.2	Invitation of quotations for purchasing package	60 days	Nov 30 '20	Jan 28 '21	Nov 30 '20	Jan 28 '21	0 days	597	604	
599	**599**	**5.19.5.8**	**PV System (EQT041)**	**104 days**	**Jan 29 '21**	**May 12 '21**	**Jan 29 '21**	**May 12 '21**	**0 days**			
600	600	5.19.5.8.1	Submission for acceptance of purchasing package	30 days	Mar 1 '21	Mar 30 '21	Mar 1 '21	Mar 30 '21	0 days		601	
601	601	5.19.5.8.2	Invitation of quotations for purchasing package	21 days	Mar 31 '21	Apr 20 '21	Mar 31 '21	Apr 20 '21	0 days	600	602	
602	602	5.19.5.8.3	Acceptance of conforming quotation	21 days	Apr 21 '21	May 11 '21	Apr 21 '21	May 11 '21	0 days	601	603	
603	603	5.19.5.8.4	Commencement of Design Work	1 day	May 12 '21	May 12 '21	May 12 '21	May 12 '21	0 days	602		
604	604	5.19.5.8.5	Acceptance of conforming quotation	30 days	Jan 29 '21	Feb 27 '21	Jan 29 '21	Feb 27 '21	0 days	598	609	
605	**605**	**5.19.6**	**Design Submissions for BR 2A & 2B**	**578 days**	**Aug 15 '20**	**Mar 15 '22**	**Aug 15 '20**	**Mar 15 '22**	**0 days**	**121**		
606	606	5.19.6.1	Electrical schematic drawings for BR No. 2A & 2B	60 days	Aug 15 '20	Oct 13 '20	Aug 15 '20	Oct 13 '20	0 days		567FF	
607	607	5.19.6.2	CDS080-3 - Civil and dimensional requirements drawings for BR 2A&2B up to +8.0 m	55 days	Sep 1 '20	Oct 25 '20	Sep 1 '20	Oct 25 '20	0 days		567FF	
608	608	5.19.6.3	CDS081-3 - Civil and dimensional requirements drawings for BR 2A & 2B	281 days	Aug 28 '20	Jun 4 '21	Aug 28 '20	Jun 4 '21	0 days		568FF	
609	609	5.19.6.4	CDS004 - Detailed Design for Bioreactor 2A and 2B	291 edays	Mar 12 '21	Dec 28 '21	Mar 12 '21	Dec 28 '21	0 edays	575,579,583,5	618,621,624,627	
610	610	5.19.6.5	CDS023 - Detailed Design for Electrical Installations for BR No. 2A & 2B	159.38 edays	Oct 7 '21	Mar 15 '22	Oct 7 '21	Mar 15 '22	0 edays	82,92,100,220	83,569FF,865	
611	611	5.19.6.6	CDS034-3 - Detailed Design for Electrical Installations BS at BR No. 2A & 2B	323.38 edays	Mar 12 '21	Jan 29 '22	Mar 12 '21	Jan 29 '22	0 edays	156	569FF,695,696	
612	612	5.19.6.7	CDS025-3 - Detailed Design for LV Switchboards for BR 2A and 2B	251 edays	May 3 '21	Jan 9 '22	May 3 '21	Jan 9 '22	0 edays	78	851,569FF	
613	613	5.19.6.8	CDS007-2 - Detailed Design for Deodorisation System, DOU No. 2A	475.38 edays	Sep 1 '20	Dec 20 '21	Sep 1 '20	Dec 20 '21	0 edays	595,761	569FF,645,648	
614	614	5.19.6.9	CDS031 - Detailed Design for MVAC System	311.38 edays	Mar 1 '21	Jan 6 '22	Mar 1 '21	Jan 6 '22	0 edays		216FF	
615	615	5.19.6.10	CDS050-3 - Detailed Design for Lifting Appliances - BR 2A & 2B	120 edays	Oct 1 '20	Jan 29 '21	Oct 1 '20	Jan 29 '21	0 edays	131	667,569FF	



ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
616	**616**	**5.19.7**	**Manufacturing and Delivery of Plant & Materials**	**1287 days**	**Dec 2 '19**	**Jun 10 '23**	**Dec 2 '19**	**May 6 '24**	**331 days**			
617	**617**	**5.19.7.1**	**Pre-treatment Fine Screens, EQT019**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Jan 6 '24**	**210 days**			
618	618	5.19.7.1.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	619	
619	619	5.19.7.1.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Nov 23 '23	Jan 6 '24	16 days	618,673SS-60	685	
620	**620**	**5.19.7.2**	**Air Diffusion System, EQT017**	**451 days**	**Mar 17 '22**	**Jun 10 '23**	**Mar 17 '22**	**Jan 19 '24**	**223 days**			
621	621	5.19.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 17 '22	Nov 11 '22	Mar 17 '22	Dec 5 '23	166 days	609	622	
622	622	5.19.7.2.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Dec 6 '23	Jan 19 '24	16 days	621,673SS-60	686	
623	**623**	**5.19.7.3**	**Submersible Mixer, EQT020**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Nov 5 '23**	**148 days**			
624	624	5.19.7.3.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	625	
625	625	5.19.7.3.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Sep 22 '23	Nov 5 '23	16 days	624,673SS-60	687	
626	**626**	**5.19.7.4**	**Mixed Liquor Return Pumps, EQT008**	**451 days**	**Mar 17 '22**	**Jun 10 '23**	**Mar 17 '22**	**Nov 20 '23**	**163 days**			
627	627	5.19.7.4.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 17 '22	Nov 11 '22	Mar 17 '22	Oct 6 '23	166 days	609	628	
628	628	5.19.7.4.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Oct 7 '23	Nov 20 '23	16 days	627,673SS-60	688	
629	**629**	**5.19.7.5**	**Sum Removal System, EQT021, EQT022**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Nov 5 '23**	**148 days**			
630	630	5.19.7.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	631	
631	631	5.19.7.5.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Sep 22 '23	Nov 5 '23	16 days	630,673SS-60	689	
632	**632**	**5.19.7.6**	**Instrumentations, EQT035-2**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Apr 13 '24**	**308 days**			
633	633	5.19.7.6.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	634	
634	634	5.19.7.6.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Feb 29 '24	Apr 13 '24	16 days	633,673SS-60	693	
635	**635**	**5.19.7.7**	**Stoplogs and Penstocks, EQT013**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Nov 5 '23**	**148 days**			
636	636	5.19.7.7.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	637	
637	637	5.19.7.7.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Sep 22 '23	Nov 5 '23	16 days	636,673SS-60	684	
638	**638**	**5.19.7.8**	**Pipework, Valves and Electric Actuators, EQT036, EQT042 (Rev. 11)**	**416 days**	**Apr 21 '22**	**Jun 10 '23**	**Apr 21 '22**	**Dec 20 '23**	**193 days**	**63,70,66**		
639	639	5.19.7.8.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Nov 5 '23	131 days	609	640	
640	640	5.19.7.8.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Nov 6 '23	Dec 20 '23	61 days	639,673SS-60	691	
641	**641**	**5.19.7.9**	**Photovoltaic Power System**	**195 days**	**Dec 2 '19**	**Jun 13 '20**	**Dec 2 '19**	**Jun 13 '20**	**0 days**			
642	642	5.19.7.9.1	Manufacturing and Factory Acceptance Test of Plant	150 days	Dec 2 '19	Apr 29 '20	Dec 2 '19	Apr 29 '20	0 days		643	
643	643	5.19.7.9.2	Shipping and Delivery of Plant to site	45 days	Apr 30 '20	Jun 13 '20	Apr 30 '20	Jun 13 '20	0 days	642	703	
644	**644**	**5.19.7.10**	**DOU 2A**	**345 days**	**Dec 21 '21**	**Nov 30 '22**	**Dec 21 '21**	**Dec 15 '23**	**380 days**			
645	645	5.19.7.10.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 21 '21	Oct 16 '22	Dec 21 '21	Oct 31 '23	0 days	613	646	
646	646	5.19.7.10.2	Shipping and Delivery of Plant to site	45 days	Oct 17 '22	Nov 30 '22	Nov 1 '23	Dec 15 '23	208 days	645	690	
647	**647**	**5.19.7.11**	**FRP Air Ductwork for DOU2A**	**345 days**	**Dec 21 '21**	**Nov 30 '22**	**Dec 21 '21**	**Dec 15 '23**	**380 days**			
648	648	5.19.7.11.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Dec 21 '21	Oct 16 '22	Dec 21 '21	Oct 31 '23	0 days	613	649	
649	649	5.19.7.11.2	Shipping and Delivery of Plant to site	45 days	Oct 17 '22	Nov 30 '22	Nov 1 '23	Dec 15 '23	208 days	648	690	
650	**650**	**5.19.7.12**	**Building Services**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
651	**651**	**5.19.7.12.1**	**Lighting and Power Distribution System Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
652	652	5.19.7.12.1	Manufacturing and FAT for Lighting and Power Distribution System Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		653	
653	653	5.19.7.12.1	Shipping and Delivery for Lighting and Power Distribution System Equipment	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	652	696	
654	**654**	**5.19.7.12.2**	**Plumbing Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
655	655	5.19.7.12.2	Manufacturing and FAT for Plumbing Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		656	
656	656	5.19.7.12.2	Shipping and Delivery for Plumbing Equipment	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	655	697	
657	**657**	**5.19.7.12.3**	**CCTV Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
658	658	5.19.7.12.3	Manufacturing and FAT for CCTV Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		659	
659	659	5.19.7.12.3	Shipping and Delivery for CCTV Equipment (7 indoor + 2 outdoor Came	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	658	698	
660	**660**	**5.19.7.12.4**	**Fire Services Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
661	661	5.19.7.12.4	Manufacturing and FAT for Fire Services Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		662	
662	662	5.19.7.12.4	Shipping and Delivery for Fire Services Equipment	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	661	699	
663	**663**	**5.19.7.12.5**	**Earthing and Lightning Protection System Equipment**	**210 days**	**Dec 2 '19**	**Jun 28 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
664	664	5.19.7.12.5	Manufacturing and FAT for Earthing and Lightning Protection System Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		665	
665	665	5.19.7.12.5	Shipping and Delivery for Earthing and Lightning Protection System Equipment	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	664	700	
666	**666**	**5.19.7.13**	**Lifting Appliances**	**863 days**	**Jan 29 '21**	**Jun 10 '23**	**Jan 29 '21**	**May 6 '24**	**331 days**			
667	667	5.19.7.13.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Jan 29 '21	Aug 26 '21	Jan 29 '21	Aug 26 '21	0 days	615	668	
668	668	5.19.7.13.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Mar 23 '24	May 6 '24	16 days	667,673SS-60	677	
669	**669**	**5.19.7.14**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
670	670	5.19.7.14.1	Equipment Delivery for Cable Containment	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		707	
671	671	5.19.7.14.2	Equipment Delivery for Cable Provision	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		709	
672	**672**	**5.19.8**	**Site Installation Work**	**504 days?**	**Jun 1 '23**	**Oct 16 '24**	**Jun 1 '23**	**Oct 16 '24**	**0 days?**			
673	673	5.19.8.1	Tentative Civil Handover Date, Portion B-4, BR2A & 2B & DOU2A (Rev. 5)	1 day	Jun 26 '23	Jun 26 '23	Jun 26 '23	Jun 26 '23	0 days	12	677,683,706,707	
674	674	5.19.8.2	Tentative Civil Handover Date, LV cables draw pits from MFB2 to BR2	1 day	Jun 1 '23	Jun 1 '23	Jun 1 '23	Jun 1 '23	0 days			
675	**675**	**5.19.8.3**	**Commencement of E&M Installation at Bioreactor No. 2A & 2B**	**255 days?**	**Jun 26 '23**	**Mar 7 '24**	**Jun 26 '23**	**Aug 18 '24**	**0 days?**	**673**	**713FS-30 days**	
676	676	5.19.8.3.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., BR 2A&2B	7 days	Jun 27 '23	Jul 3 '23	Jul 6 '24	Jul 12 '24	375 days	673		
677	**677**	**5.19.8.3.2**	**Installation of Lifting Appliances at BR 2A & 2B**	**67 days**	**Jun 27 '23**	**Sep 1 '23**	**May 7 '24**	**Jul 12 '24**	**315 days**	**673,668**		
678	678	5.19.8.3.2.1	Coping Level EOT Crane LA-03-01 SWL 5t	30 days	Jun 27 '23	Jul 26 '23	May 7 '24	Jun 5 '24	0 days		680,682	LA - A x 4~6 m
679	679	5.19.8.3.2.2	Coping Level EOT Crane LA-03-02 SWL 5t	30 days	Jun 27 '23	Jul 26 '23	May 7 '24	Jun 5 '24	0 days		680,682	LA - B x 4~6 m
680	680	5.19.8.3.2.3	Coping Level EOT Crane LA-03-03 SWL 5t	30 days	Jul 27 '23	Aug 25 '23	Jun 6 '24	Jul 5 '24	0 days	678,679	682	LA - A x 4~6 m
681	681	5.19.8.3.2.4	Coping Level Mobile A-frame LA-03-04 SWL 4t	7 days	Jun 27 '23	Jul 3 '23	Jun 29 '24	Jul 5 '24	53 days		682	LA - B x 4~6 m
682	682	5.19.8.3.2.5	T&C, Loading Test for Lifting Appliances at Bioreactor No. 2A & 2B	7 days	Aug 26 '23	Sep 1 '23	Jul 6 '24	Jul 12 '24	315 days	678,679,680,6		LA - B x 4~6 m



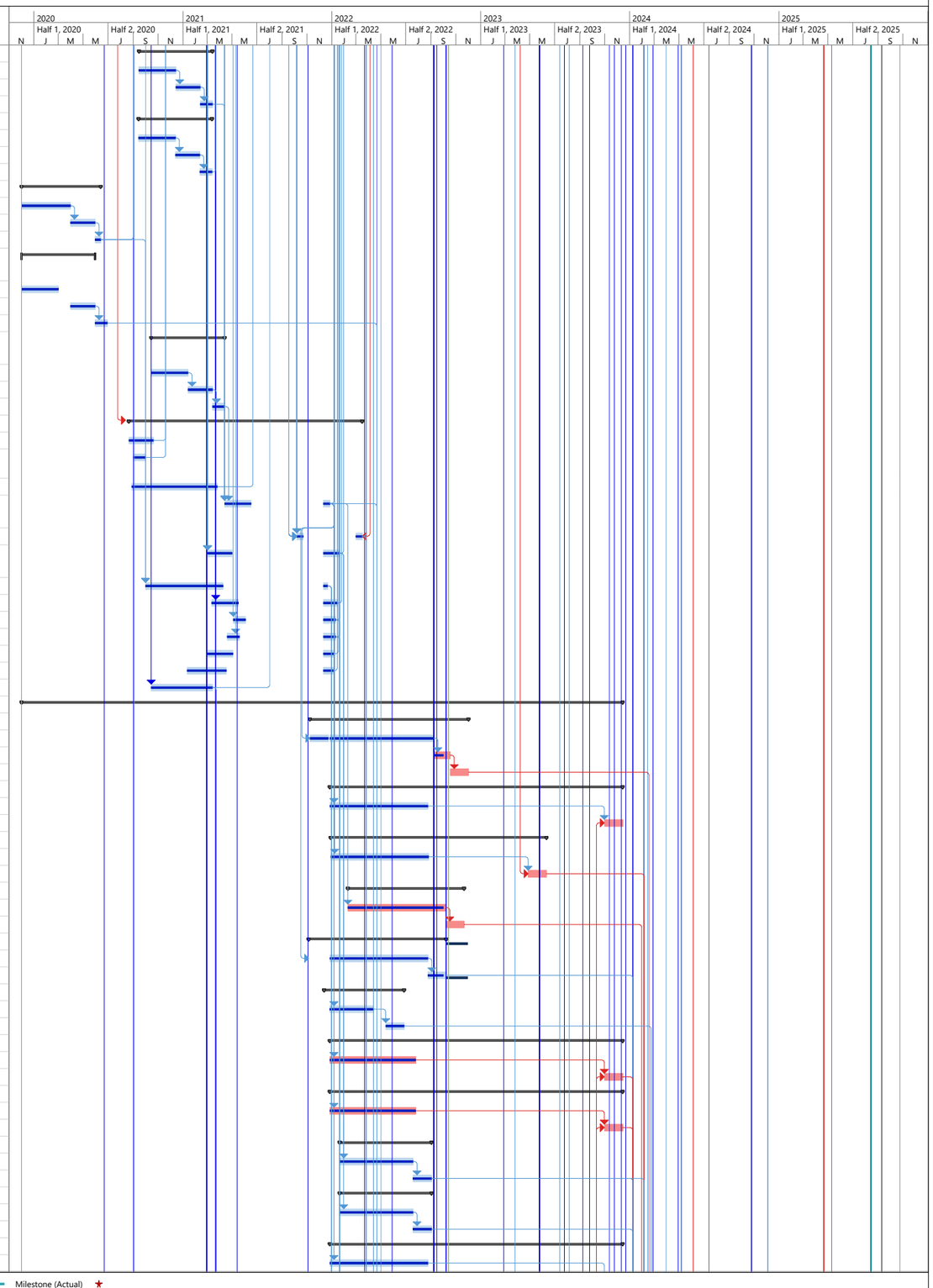
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
683	**683**	**5.19.8.3.3**	**Mechanical Installations for E&M Equip at BR 2A & 2B**	**250 days**	**Jun 26 '23**	**Mar 2 '24**	**Nov 6 '23**	**Jul 12 '24**	**132 days**	**673,136**		
684	684	5.19.8.3.3.1	Installation of penstocks and stoplogs (Penstocks 8nos, Stoplogs 8nos), EQT013	90 days	Jun 27 '23	Sep 24 '23	Nov 6 '23	Feb 3 '24	0 days	637	694	ME - E x 4~6 men
685	685	5.19.8.3.3.2	Installation of pre-treatment fine screens (x4) and wash compactor (x4	28 days	Jun 27 '23	Jul 24 '23	Jan 7 '24	Feb 3 '24	62 days	619	694	ME - A x 4~6 m
686	686	5.19.8.3.3.3	Installation of air diffusion system (x2), EQT017	90 days	Jun 27 '23	Sep 24 '23	Jan 20 '24	Apr 18 '24	75 days	622	691FS-120 days	ME - D x 2~4 n
687	687	5.19.8.3.3.4	Installation of submersible mixers (x16), EQT020	90 days	Jun 27 '23	Sep 24 '23	Nov 6 '23	Feb 3 '24	0 days	625	694	ME - B x 4~6 m
688	688	5.19.8.3.3.5	Installation of mixed liquor return pumps (x6), EQT008	30 days	Jun 27 '23	Jul 26 '23	Nov 21 '23	Dec 20 '23	15 days	628	691	ME - A x 4~6 m
689	689	5.19.8.3.3.6	Installation of scum removal systems (x2), EQT022	45 days	Jun 27 '23	Aug 10 '23	Nov 6 '23	Dec 20 '23	0 days	631	691	ME - B x 4~6 m
690	690	5.19.8.3.3.7	Mechanical Installations for DOU 2A	90 edays	Jun 26 '23	Sep 24 '23	Dec 16 '23	Mar 15 '24	0 edays	646,649	710	ME - F x 4~6 m
691	691	5.19.8.3.3.8	Installation of pipework and valves, EQT036	90 days	Aug 11 '23	Nov 8 '23	Dec 21 '23	Mar 19 '24	0 days	640,686FS-12(	694FS-45 days,6	ME - C x 4~6 m
692	692	5.19.8.3.3.9	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.18)	60 days	Nov 9 '23	Jan 7 '24	May 14 '24	Jul 12 '24	187 days	691		
693	693	5.19.8.3.3.1	Installation of instrumentations, EQT035-2	60 days	Jun 27 '23	Aug 25 '23	Apr 14 '24	Jun 12 '24	292 days	634	713	ME - D x 2~4 n
694	694	5.19.8.3.3.1	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	160 days	Sep 25 '23	Mar 2 '24	Feb 4 '24	Jul 12 '24	112 days	684,685,691FS days,687	713FS-30 days	ME - D x 2~4 men
695	**695**	**5.19.8.3.4**	**Building Services Installations for BR 2A & 2B**	**215 days**	**Aug 6 '23**	**Mar 7 '24**	**Jun 13 '23**	**Aug 18 '24**	**0 days**	**673FS+40 day**		
696	696	5.19.8.3.4.1	Lighting and Power Distribution System, BR2	150 days	Aug 6 '23	Jan 2 '24	Feb 6 '24	Jul 4 '24	20 days	611,653	701	BS - A x 4~6 m
697	697	5.19.8.3.4.2	Plumbing Installation, BR2	120 days	Aug 6 '23	Dec 3 '23	Jan 8 '24	May 6 '24	50 days	1517,656	1519,701	Pb - A x 4~6 m
698	698	5.19.8.3.4.3	CCTV Installation (7 indoor + 2 outdoor Cameras), BR2	60 days	Oct 25 '23	Dec 23 '23	Jan 5 '24	Mar 4 '24	30 days	673FS+120 da	701,1529	BS - B x 4~6 m
699	699	5.19.8.3.4.4	Fire Services Installation, BR2	120 days	Aug 6 '23	Dec 3 '23	Jun 13 '23	Oct 10 '23	0 days	662	1470,1482,1483,	FS - B x 4~6 m
700	700	5.19.8.3.4.5	Lightning Protection System, BR2	60 days	Aug 6 '23	Oct 4 '23	Jun 20 '24	Aug 18 '24	319 days	184,665	570FF	BS - C x 2~4 m
701	701	5.19.8.3.4.6	Testing and Commissioning of Building Services Installations, BR2	45 days	Jan 23 '24	Mar 7 '24	Jul 5 '24	Aug 18 '24	164 days	696,697,698,6	570FF	BS - C x 2~4 m
702	**702**	**5.19.8.3.4.**	**Photovoltaic Power System (PS 6B.6.11)**	**170 days**	**Aug 6 '23**	**Jan 22 '24**	**Jan 17 '24**	**Jul 4 '24**	**0 days**		**701**	
703	703	5.19.8.3.4.1	Commencement of Site Installation Work	90 days	Aug 6 '23	Nov 3 '23	Jan 17 '24	Apr 15 '24	0 days	643	704	PV - A x 4~6 m
704	704	5.19.8.3.4.2	Technical Assessment, System Test and Installation	50 days	Nov 4 '23	Dec 23 '23	Apr 16 '24	Jun 4 '24	0 days	703	705	PV - A x 4~6 m
705	705	5.19.8.3.4.3	CLP's smart meter installation and Final on-grid test with CLP	30 days	Dec 24 '23	Jan 22 '24	Jun 5 '24	Jul 4 '24	164 days	704		
706	**706**	**5.19.8.3.5**	**Electrical Installations for E&M Equip at BR 2A & 2B**	**478 days?**	**Jun 27 '23**	**Oct 16 '24**	**Jun 30 '23**	**Jul 12 '24**	**0 days?**	**673,141**		
707	707	5.19.8.3.5.1	Installation of cable trays and cable containments	120 days	Jun 27 '23	Oct 24 '23	Jun 30 '23	Oct 27 '23	0 days	673,670	709	EE - A x 4~6 m
708	708	5.19.8.3.5.2	Tentative Civil Handover Date LV cable draw pits from MFB No.2 to BR2	1 day?	Jun 27 '23	Jun 27 '23	Oct 27 '23	Oct 27 '23	119 day...		709	
709	709	5.19.8.3.5.3	Cables laying and terminations between buildings	80 days	Oct 25 '23	Jan 12 '24	Oct 28 '23	Jan 15 '24	0 days	707,708,671	712,1027	EE - C x 4~6 m
710	710	5.19.8.3.5.4	Electrical Installations for DOU 2A	90 edays	Sep 24 '23	Dec 23 '23	Mar 15 '24	Jun 13 '24	172 eda...	690	713	EE - C x 4~6 m
711	711	5.19.8.3.5.5	Energisation of LV Switchboards, BR2	1 day	Oct 16 '24	Oct 16 '24	Jun 12 '24	Jun 12 '24	0 days	1022,1023	713	LV - A x 4~6 m
712	712	5.19.8.3.5.6	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	55 days	Jan 13 '24	Mar 7 '24	May 19 '24	Jul 12 '24	107 days	709	713FS-30 days	LV - A x 4~6 men
713	713	5.19.9	Site Acceptance Test for E&M Equip at BR 2A & 2B & DOU2A	30 edays	Jun 12 '24	Jul 12 '24	Jun 13 '24	Jul 13 '24	0.63 ed...	693,694FS-30	714	
714	714	5.19.10	System Commissioning for E&M Equip at BR 2A & 2B & DOU2A	30 days	Jul 13 '24	Aug 11 '24	Jul 13 '24	Aug 11 '24	0 days	1028,713	715	
715	715	5.19.11	Risk Allowances for Completion of Processing Plant at BR 2A & 2B	7 edays	Aug 11 '24	Aug 18 '24	Aug 11 '24	Aug 18 '24	0 edays	714	1525,570FF	
716	**716**	**5.20**	**Membrane Facilities Building & DOU3B, Portion B-5 (PS 6B.2.4)**	**1981 days**	**Dec 2 '19**	**May 4 '25**	**Dec 2 '19**	**May 4 '25**	**0 days**			
717	717	5.20.1	Planned Key Date Completion Date - KD1A, MFB No. 2	0 days	Oct 30 '20	Oct 30 '20	Oct 30 '20	Oct 30 '20	0 days	771FF,772FF		
718	718	5.20.2	Planned Key Date Completion Date - KD1B, MFB No. 2 & DOU3B	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	773FF		
719	719	5.20.3	Planned Sectional Completion Date - Section 1, MFB No. 2 & DOU3B	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	774FF,775FF,7		
720	720	5.20.4	Planned Sectional Completion Date - Section 2, MFB No. 2 & DOU3B	0 days	Apr 20 '25	Apr 20 '25	Apr 20 '25	Apr 20 '25	0 days	1093FF		
721	**721**	**5.20.5**	**Selection of Suppliers for major plant and materials for MFB**	**498 days**	**Dec 2 '19**	**Apr 12 '21**	**Dec 2 '19**	**Apr 12 '21**	**0 days**			
722	**722**	**5.20.5.1**	**MFS - hollow fibre membrane modules (Marking Scheme Approach), ref. EQT023**	**150 days**	**Sep 1 '20**	**Jan 28 '21**	**Sep 1 '20**	**Jan 28 '21**	**0 days**			
723	723	5.20.5.1.1	Submission for acceptance of purchasing package including proposed marking sch	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		724	
724	724	5.20.5.1.2	Invitation of quotations for purchasing package	60 days	Oct 31 '20	Dec 29 '20	Oct 31 '20	Dec 29 '20	0 days	723	725	
725	725	5.20.5.1.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	724	774	
726	**726**	**5.20.5.2**	**MFS - air scour blowers, C11, ref. EQT040**	**150 days**	**Sep 1 '20**	**Jan 28 '21**	**Sep 1 '20**	**Jan 28 '21**	**0 days**			
727	727	5.20.5.2.1	Submission for acceptance of purchasing package	60 days	Sep 1 '20	Oct 30 '20	Sep 1 '20	Oct 30 '20	0 days		728	
728	728	5.20.5.2.2	Invitation of quotations for purchasing package	60 days	Oct 31 '20	Dec 29 '20	Oct 31 '20	Dec 29 '20	0 days	727	729	
729	729	5.20.5.2.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	728	776	
730	**730**	**5.20.5.3**	**MFS - permeate pumps, C11, ref. EQT024**	**180 days**	**Sep 1 '20**	**Feb 27 '21**	**Sep 1 '20**	**Feb 27 '21**	**0 days**			
731	731	5.20.5.3.1	Submission for acceptance of purchasing package	90 days	Sep 1 '20	Nov 29 '20	Sep 1 '20	Nov 29 '20	0 days		732	
732	732	5.20.5.3.2	Invitation of quotations for purchasing package	60 days	Nov 30 '20	Jan 28 '21	Nov 30 '20	Jan 28 '21	0 days	731	733	
733	733	5.20.5.3.3	Acceptance of conforming quotation (Completed)	30 days	Jan 29 '21	Feb 27 '21	Jan 29 '21	Feb 27 '21	0 days	732	774	
734	**734**	**5.20.5.4**	**MFS - compressed air system, C11, ref. EQT029**	**120 days**	**Sep 15 '20**	**Jan 12 '21**	**Sep 15 '20**	**Jan 12 '21**	**0 days**			
735	735	5.20.5.4.1	Submission for acceptance of purchasing package	60 days	Sep 15 '20	Nov 13 '20	Sep 15 '20	Nov 13 '20	0 days		736	
736	736	5.20.5.4.2	Invitation of quotations for purchasing package	30 days	Nov 14 '20	Dec 13 '20	Nov 14 '20	Dec 13 '20	0 days	735	737	
737	737	5.20.5.4.3	Acceptance of conforming quotation (Completed)	30 days	Dec 14 '20	Jan 12 '21	Dec 14 '20	Jan 12 '21	0 days	736	776	
738	**738**	**5.20.5.5**	**MFS - chemical storage tanks, C11, ref. EQT091**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
739	739	5.20.5.5.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		740	
740	740	5.20.5.5.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	739	741	
741	741	5.20.5.5.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	740	776	
742	**742**	**5.20.5.6**	**MFS - chemical dosing & transfer pumps, C11, ref. EQT090**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
743	743	5.20.5.6.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days	2,37	744	
744	744	5.20.5.6.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	743	745	
745	745	5.20.5.6.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	744	776	
746	**746**	**5.20.5.7**	**MFS - return activated sludge pumps (Marking Scheme Approach), ref. EQT010**	**180 days**	**Oct 1 '20**	**Mar 29 '21**	**Oct 1 '20**	**Mar 29 '21**	**0 days**			
747	747	5.20.5.7.1	Submission for acceptance of purchasing package	90 days	Oct 1 '20	Dec 29 '20	Oct 1 '20	Dec 29 '20	0 days		748	
748	748	5.20.5.7.2	Invitation of quotations for purchasing package	60 days	Dec 30 '20	Feb 27 '21	Dec 30 '20	Feb 27 '21	0 days	747	749	
749	749	5.20.5.7.3	Acceptance of conforming quotation (Completed)	30 days	Feb 28 '21	Mar 29 '21	Feb 28 '21	Mar 29 '21	0 days	748	774	



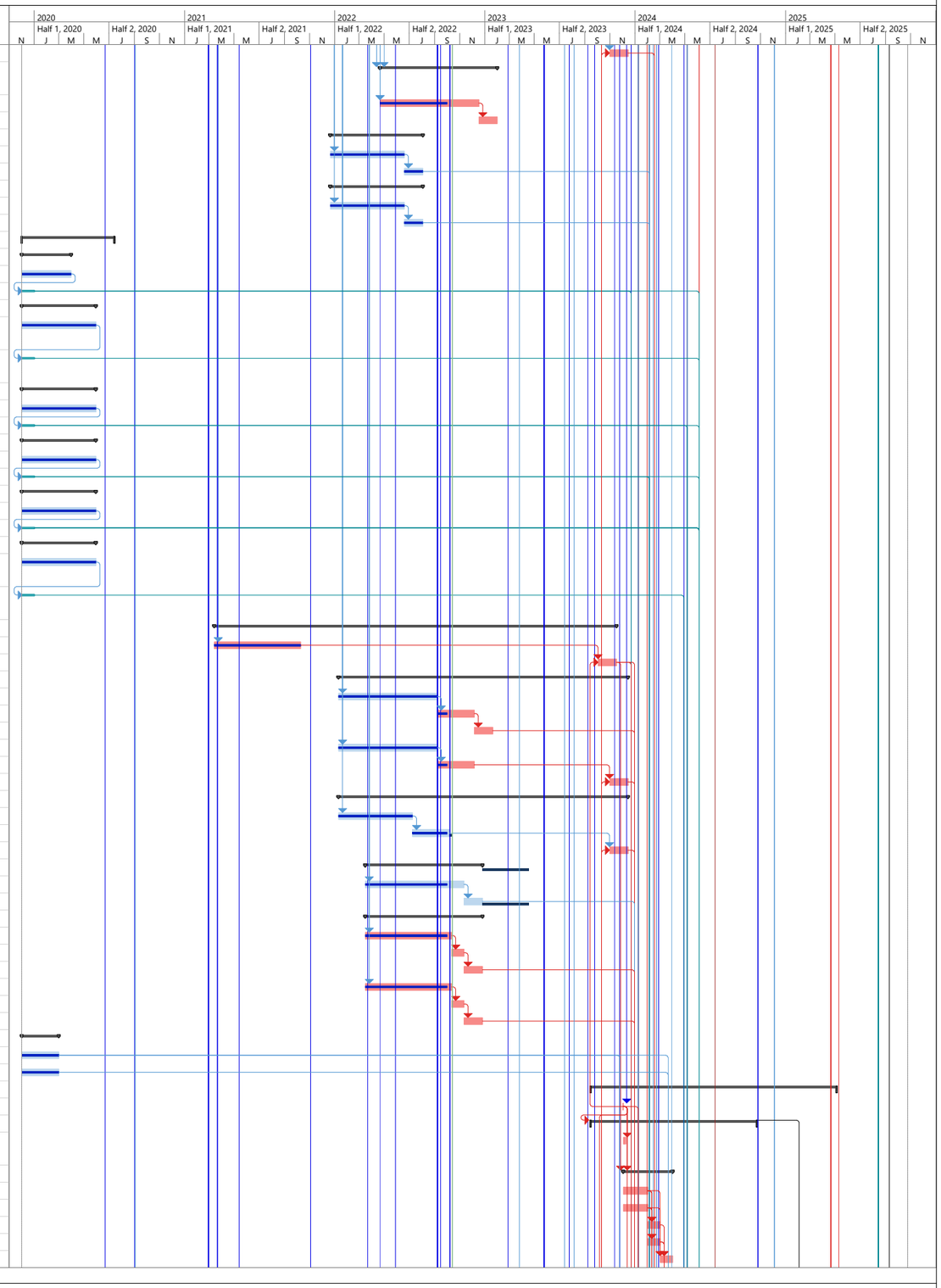
Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

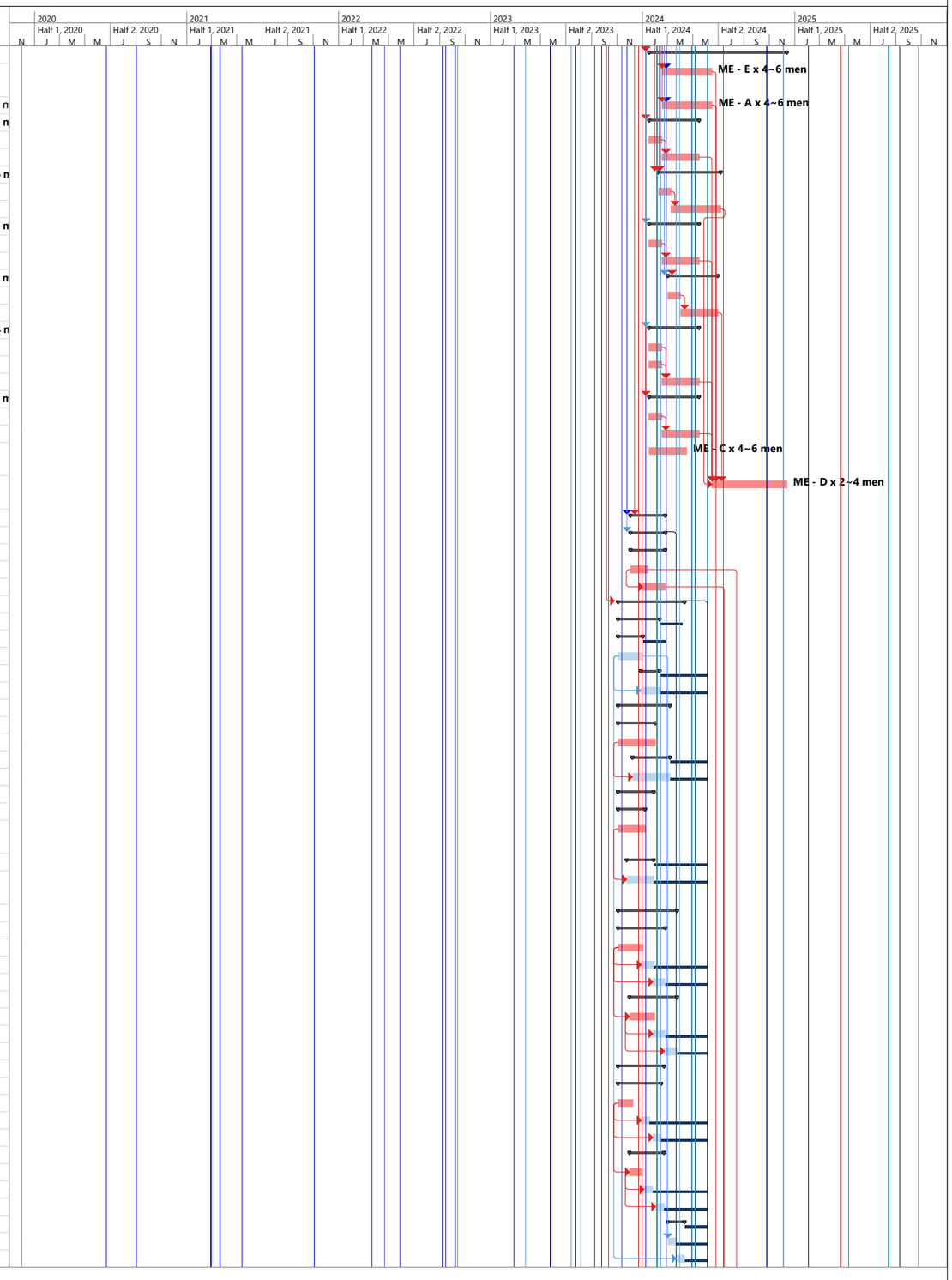
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
750	**750**	**5.20.5.8**	**MFS - membrane tank drain pumps, C11, ref. EQT009**	**180 days**	**Sep 15 '20**	**Mar 13 '21**	**Sep 15 '20**	**Mar 13 '21**	**0 days**			
751	751	5.20.5.8.1	Submission for acceptance of purchasing package	90 days	Sep 15 '20	Dec 13 '20	Sep 15 '20	Dec 13 '20	0 days		752	
752	752	5.20.5.8.2	Invitation of quotations for purchasing package	60 days	Dec 14 '20	Feb 11 '21	Dec 14 '20	Feb 11 '21	0 days	751	753	
753	753	5.20.5.8.3	Acceptance of conforming quotation (Completed)	30 days	Feb 12 '21	Mar 13 '21	Feb 12 '21	Mar 13 '21	0 days	752	774	
754	**754**	**5.20.5.9**	**BR - aeration blowers (Marking Scheme Approach), EQT039**	**180 days**	**Sep 14 '20**	**Mar 12 '21**	**Sep 14 '20**	**Mar 12 '21**	**0 days**			
755	755	5.20.5.9.1	Submission for acceptance of purchasing package including proposed marking sch	90 days	Sep 14 '20	Dec 12 '20	Sep 14 '20	Dec 12 '20	0 days		756	
756	756	5.20.5.9.2	Invitation of quotations for purchasing package	60 days	Dec 13 '20	Feb 10 '21	Dec 13 '20	Feb 10 '21	0 days	755	757	
757	757	5.20.5.9.3	Acceptance of conforming quotation (Completed)	30 days	Feb 11 '21	Mar 12 '21	Feb 11 '21	Mar 12 '21	0 days	756	609	
758	**758**	**5.20.5.10**	**DOU - activated carbon filter (DOU No. 2A, No. 3A, No. 3B), C11, ref. EQT0**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
759	759	5.20.5.10.1	Submission for acceptance of purchasing package	120 days	Dec 2 '19	Mar 30 '20	Dec 2 '19	Mar 30 '20	0 days		760	
760	760	5.20.5.10.2	Invitation of quotations for purchasing package	60 days	Mar 31 '20	May 29 '20	Mar 31 '20	May 29 '20	0 days	759	761	
761	761	5.20.5.10.3	Acceptance of conforming quotation (Completed)	14 days	May 30 '20	Jun 12 '20	May 30 '20	Jun 12 '20	0 days	760	613,777	
762	**762**	**5.20.5.11**	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, C11, ref. EQT036**	**180 days**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**Jun 28 '20**	**0 days**			
763	763	5.20.5.11.1	Submission for acceptance of purchasing package	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days			
764	764	5.20.5.11.2	Invitation of quotations for purchasing package	60 days	Mar 31 '20	May 29 '20	Mar 31 '20	May 29 '20	0 days		765	
765	765	5.20.5.11.3	Acceptance of conforming quotation	30 days	May 30 '20	Jun 28 '20	May 30 '20	Jun 28 '20	0 days	764	820FS-60 days	
766	**766**	**5.20.5.12**	**Plant Service Water System - booster pumps & hydro-pneumatic pressure tanks, C11, ref. EQT030**	**180 days**	**Oct 15 '20**	**Apr 12 '21**	**Oct 15 '20**	**Apr 12 '21**	**0 days**			
767	767	5.20.5.12.1	Submission for acceptance of purchasing package	90 days	Oct 15 '20	Jan 12 '21	Oct 15 '20	Jan 12 '21	0 days		768	
768	768	5.20.5.12.2	Invitation of quotations for purchasing package	60 days	Jan 13 '21	Mar 13 '21	Jan 13 '21	Mar 13 '21	0 days	767	769	
769	769	5.20.5.12.3	Acceptance of conforming quotation (Completed)	30 days	Mar 14 '21	Apr 12 '21	Mar 14 '21	Apr 12 '21	0 days	768	774	
770	**770**	**5.20.6**	**Design Submissions for MFB No. 2**	**572 days**	**Aug 21 '20**	**Mar 15 '22**	**Aug 21 '20**	**Mar 15 '22**	**0 days**	**121**		
771	771	5.20.6.1	Electrical schematic drawings for MFB No. 2	60 days	Aug 21 '20	Oct 19 '20	Aug 21 '20	Oct 19 '20	0 days		717FF	
772	772	5.20.6.2	CDS080-4 - Civil and dimensional requirements drawigns for MFB no. 2 up to +8.0 mPD	30 days	Sep 1 '20	Sep 30 '20	Sep 1 '20	Sep 30 '20	0 days		717FF	
773	773	5.20.6.3	CDS081-4 - Civil and dimensional requirements drawings for MFB No. 2	210 days	Aug 28 '20	Mar 25 '21	Aug 28 '20	Mar 25 '21	0 days		718FF	
774	774	5.20.6.4	CDS005 - Detailed Design for Membrane Filtration System, Pumps and Membrane Modules	258 edays	Apr 12 '21	Dec 26 '21	Apr 12 '21	Dec 26 '21	0 edays	725,733,749,7	786,790,796,808	
775	775	5.20.6.5	CDS024 - Detailed Design for Electrical Installations for MFB No. 2	159.38 edays	Oct 7 '21	Mar 15 '22	Oct 7 '21	Mar 15 '22	0 edays	82,92,88,96,1(	83,862,868,719F	
776	776	5.20.6.6	CDS008 - Detailed Design for Membrane Filtration System, Air Blowers, Dosing Systems etc.	324 edays	Mar 1 '21	Jan 19 '22	Mar 1 '21	Jan 19 '22	0 edays	729,737,741,7	811,814,719FF	
777	777	5.20.6.7	CDS007-3 - Detailed Design for Deodorisation System, DOU No. 3B	445.38 edays	Oct 1 '20	Dec 20 '21	Oct 1 '20	Dec 20 '21	0 edays	595,761	823,826	
778	778	5.20.6.8	CDS034-4 - Detailed Design for Electrical Installations BS at MFB No. 2	308.38 edays	Mar 12 '21	Jan 14 '22	Mar 12 '21	Jan 14 '22	0 edays	156	719FF	
779	779	5.20.6.9	CDS025-4 - Detailed Design for LV Switchboards for Membrane Filtration Sys	251 edays	May 3 '21	Jan 9 '22	May 3 '21	Jan 9 '22	0 edays	78	854,719FF	
780	780	5.20.6.10	CDS026-2 - Detailed Design for HV Switchboards for MFB No. 2	266 edays	Apr 18 '21	Jan 9 '22	Apr 18 '21	Jan 9 '22	0 edays	74	719FF,858	
781	781	5.20.6.11	CDS031 - Detailed Design for MVAC System	311.38 edays	Mar 1 '21	Jan 6 '22	Mar 1 '21	Jan 6 '22	0 edays		216FF	
782	782	5.20.6.12	CDS042 - Detailed Design for Lightning Protection System	357.38 edays	Jan 11 '21	Jan 3 '22	Jan 11 '21	Jan 3 '22	0 edays		216FF	
783	783	5.20.6.13	CDS050-4 - Detailed Design for Lifting Appliances - MFB No. 2	150 edays	Oct 15 '20	Mar 14 '21	Oct 15 '20	Mar 14 '21	0 edays	131	848,719FF	
784	**784**	**5.20.7**	**Manufacturing and Delivery of Plant & Materials**	**1474 days**	**Dec 2 '19**	**Dec 14 '23**	**Dec 2 '19**	**Dec 14 '23**	**0 days**			
785	**785**	**5.20.7.1**	**Hollow Fibre Membrane Modules, EQT023**	**389 days**	**Nov 8 '21**	**Dec 1 '22**	**Nov 8 '21**	**Oct 17 '22**	**0 days**			
786	786	5.20.7.1.1	MFS - Manufacturing of Plant (M.I. issued)	300 days	Nov 8 '21	Sep 7 '22	Nov 8 '21	Sep 7 '22	0 days	774	787	
787	787	5.20.7.1.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	40 days	Sep 8 '22	Oct 17 '22	Sep 8 '22	Oct 17 '22	0 days	786	788	
788	788	5.20.7.1.3	MFS - Shipping and Delivery of Plant to site	45 days	Oct 18 '22	Dec 1 '22	Sep 1 '22	Oct 15 '22	0 days	787	886	
789	**789**	**5.20.7.2**	**Air Scour Blowers, EQT040**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Dec 14 '23**	**0 days**			
790	790	5.20.7.2.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Aug 23 '22	0 days	774	791	
791	791	5.20.7.2.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Oct 31 '23	Dec 14 '23	0 days	790,950SS-60		
792	**792**	**5.20.7.3**	**Aeration Blowers, EQT039**	**529 days**	**Dec 29 '21**	**Jun 10 '23**	**Dec 29 '21**	**Feb 17 '23**	**0 days**			
793	793	5.20.7.3.1	Manufacturing and Factory Acceptance Test of Plant (to be witnessed by	240 days	Dec 29 '21	Aug 25 '22	Dec 29 '21	Aug 25 '22	0 days	609	794	
794	794	5.20.7.3.2	Shipping and Delivery of Plant to site	45 days	Apr 27 '23	Jun 10 '23	Jan 4 '23	Feb 17 '23	0 days	793,673SS-60	971	
795	**795**	**5.20.7.4**	**Permeate Pump, EQT024**	**285 days**	**Feb 9 '22**	**Nov 20 '22**	**Feb 9 '22**	**Oct 30 '22**	**0 days**			
796	796	5.20.7.4.1	Manufacturing and Factory Acceptance Test of Plant (M.I. issued)	240 days	Feb 9 '22	Oct 6 '22	Feb 9 '22	Oct 6 '22	0 days	774	797	
797	797	5.20.7.4.2	Shipping and Delivery of Plant to site	45 days	Oct 7 '22	Nov 20 '22	Sep 16 '22	Oct 30 '22	0 days	796	890	
798	**798**	**5.20.7.5**	**Return Activated Sludge Pump, EQT010**	**337 days**	**Nov 5 '21**	**Oct 7 '22**	**Nov 5 '21**	**Nov 29 '22**	**53 days**			
799	799	5.20.7.5.1	Manufacturing and Factory Acceptance Test of Plant (M.I. issued)	240 days	Nov 5 '21	Aug 23 '22	Nov 5 '21	Aug 23 '22	0 days	774	800	
800	800	5.20.7.5.2	Shipping and Delivery of Plant to site	45 days	Aug 24 '22	Oct 7 '22	Aug 24 '22	Nov 29 '22	53 days	799	893	
801	**801**	**5.20.7.6**	**Membrane Tank Drain Pump, EQT009**	**196 days**	**Dec 13 '21**	**Jun 26 '22**	**Dec 13 '21**	**Jun 26 '22**	**0 days**			
802	802	5.20.7.6.1	Manufacturing and Factory Acceptance Test of Plant (M.I. issued)	107 days	Dec 13 '21	Apr 12 '22	Dec 13 '21	Apr 12 '22	0 days	774	803FS+30 days	
803	803	5.20.7.6.2	Shipping and Delivery of Plant to site	45 days	May 13 '22	Jun 26 '22	May 13 '22	Jun 26 '22	0 days	802FS+30 days	896	
804	**804**	**5.20.7.7**	**Plant Service Water System, EQT030**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Nov 29 '22**	**0 days**			
805	805	5.20.7.7.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Jul 24 '22	0 days	774	806	
806	806	5.20.7.7.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Oct 16 '22	Nov 29 '22	0 days	805,950SS-60	903	
807	**807**	**5.20.7.8**	**Compressed Air System, EQT029**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Nov 29 '22**	**0 days**			
808	808	5.20.7.8.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Dec 27 '21	Jul 24 '22	Dec 27 '21	Jul 24 '22	0 days	774	809	
809	809	5.20.7.8.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Oct 16 '22	Nov 29 '22	0 days	808,950SS-60	887	
810	**810**	**5.20.7.9**	**Chemical Storage Tanks, EQT025**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**Sep 1 '22**	**0 days**			
811	811	5.20.7.9.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Jul 18 '22	0 days	776	812	
812	812	5.20.7.9.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Jul 19 '22	Sep 1 '22	0 days	811	899,964	
813	**813**	**5.20.7.10**	**Chemical Dosing and Transfer Pumps, EQT026**	**225 days**	**Jan 20 '22**	**Sep 1 '22**	**Jan 20 '22**	**Sep 1 '22**	**0 days**			
814	814	5.20.7.10.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 20 '22	Jul 18 '22	Jan 20 '22	Jul 18 '22	0 days	776	815	
815	815	5.20.7.10.2	Shipping and Delivery of Plant to site	45 days	Jul 19 '22	Sep 1 '22	Jul 19 '22	Sep 1 '22	0 days	814	899	
816	**816**	**5.20.7.11**	**Stoplogs and Penstocks, EQT013**	**718 days**	**Dec 27 '21**	**Dec 14 '23**	**Dec 27 '21**	**Oct 15 '22**	**0 days**			
817	817	5.20.7.11.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Dec 27 '21	Aug 23 '22	Dec 27 '21	Aug 23 '22	0 days	774	818	



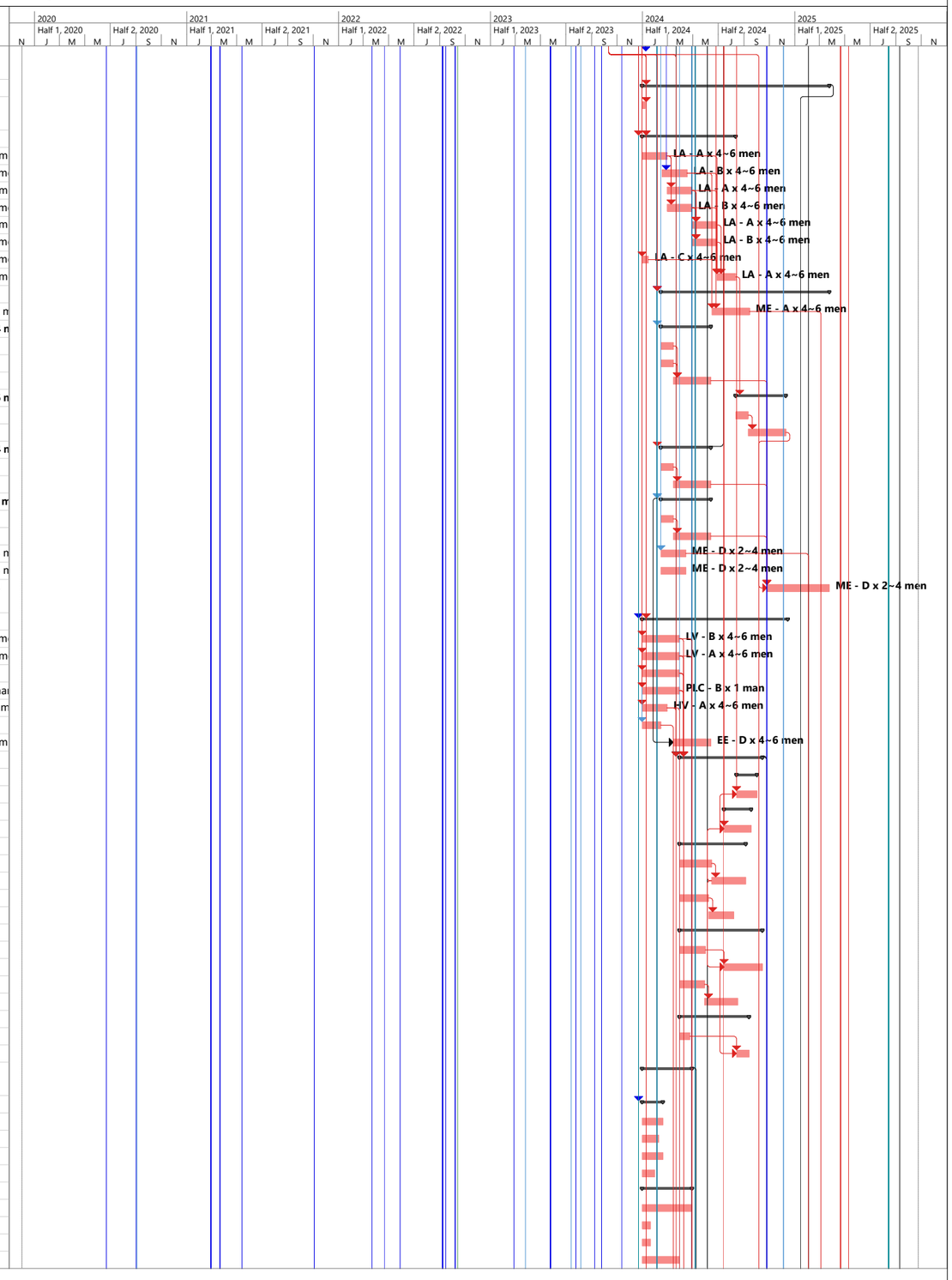
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
818	818	5.20.7.11.2	Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Sep 1 '22	Oct 15 '22	0 days	817,950SS-60	885	
819	**819**	**5.20.7.12**	**Valves for Inlet Works no.1, PST no. 1-4, BR2A2B, MFB2 and Flowmeter and Valve Chamber, EQT036**	**285 days**	**Apr 21 '22**	**Jan 30 '23**	**Apr 21 '22**	**Jan 30 '23**	**0 days**	**63,70,66**		
820	820	5.20.7.12.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Apr 21 '22	Dec 16 '22	Apr 21 '22	Dec 16 '22	0 days	774,765FS-60	821	
821	821	5.20.7.12.2	Shipping and Delivery of Plant to site	45 days	Dec 17 '22	Jan 30 '23	Dec 17 '22	Jan 30 '23	0 days	820		
822	**822**	**5.20.7.13**	**DOU 3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Feb 18 '23**	**0 days**			
823	823	5.20.7.13.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Jun 18 '22	0 edays	777	824	
824	824	5.20.7.13.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Jun 18 '22	Feb 18 '23	0 edays	823	974	
825	**825**	**5.20.7.14**	**FRP Air Ductwork for DOU3B**	**225 days**	**Dec 20 '21**	**Aug 2 '22**	**Dec 20 '21**	**Feb 18 '23**	**0 days**			
826	826	5.20.7.14.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Dec 20 '21	Jun 18 '22	Dec 20 '21	Jun 18 '22	0 edays	777	827	
827	827	5.20.7.14.2	Shipping and Delivery of Plant to Site	45 edays	Jun 18 '22	Aug 2 '22	Jun 18 '22	Feb 18 '23	0 edays	826	974	
828	**828**	**5.20.7.15**	**Building Services**	**225 days**	**Dec 2 '19**	**Jul 13 '20**	**Dec 2 '19**	**Jul 13 '20**	**0 days?**			
829	**829**	**5.20.7.15.1**	**MVAC Equipment**	**120 days?**	**Dec 2 '19**	**Mar 30 '20**	**Dec 2 '19**	**Mar 30 '20**	**0 days?**			
830	830	5.20.7.15.1	Manufacturing and FAT for MVAC Equipment	120 days	Dec 2 '19	Mar 30 '20	Dec 2 '19	Mar 30 '20	0 days		831	
831	831	5.20.7.15.1	Shipping and Delivery for MVAC Equipment	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	830	1090,1033	
832	**832**	**5.20.7.15.2**	**Lighting and Power Distribution System Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
833	833	5.20.7.15.2	Manufacturing and FAT for Lighting and Power Distribution System Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		834	
834	834	5.20.7.15.2	Shipping and Delivery for Lighting and Power Distribution System Equipment	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	833	1090	
835	**835**	**5.20.7.15.3**	**Plumbing Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
836	836	5.20.7.15.3	Manufacturing and FAT for Plumbing Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		837	
837	837	5.20.7.15.3	Shipping and Delivery for Plumbing Equipment	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	836	1519,1090	
838	**838**	**5.20.7.15.4**	**CCTV Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
839	839	5.20.7.15.4	Manufacturing and FAT for CCTV Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		840	
840	840	5.20.7.15.4	Shipping and Delivery for CCTV Equipment (10 indoor + 3 outdoor Cam	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	839	1090,1529	
841	**841**	**5.20.7.15.5**	**Fire Service Equipment**	**180 days?**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days?**			
842	842	5.20.7.15.5	Manufacturing and FAT for Fire Services Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		843	
843	843	5.20.7.15.5	Equipment Delivery for Fire Services Equipment	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	842	1470,1482,1483,	
844	**844**	**5.20.7.15.6**	**Earthing and Lightning Protection System Equipment**	**180 days**	**Dec 2 '19**	**May 29 '20**	**Dec 2 '19**	**May 29 '20**	**0 days**			
845	845	5.20.7.15.6	Manufacturing and FAT for Earthing and Lightning Protection System Equipment	180 days	Dec 2 '19	May 29 '20	Dec 2 '19	May 29 '20	0 days		846	
846	846	5.20.7.15.6	Equipment Delivery for Earthing and Lightning Protection System Equipment	30 days	Dec 3 '19	Jan 1 '20	Dec 3 '19	Jan 1 '20	0 days	845	1089	
847	**847**	**5.20.7.16**	**Lifting Appliances**	**978 days**	**Mar 14 '21**	**Nov 16 '23**	**Mar 14 '21**	**Jul 7 '22**	**0 days**			
848	848	5.20.7.16.1	Manufacturing and Factory Acceptance Test of Plant	210 days	Mar 14 '21	Oct 9 '21	Mar 14 '21	Oct 9 '21	0 days	783	849	
849	849	5.20.7.16.2	Shipping and Delivery of Plant to site	45 days	Oct 3 '23	Nov 16 '23	May 24 '22	Jul 7 '22	0 days	848,875SS-60	878,953,960	
850	**850**	**5.20.7.17**	**LV Switchboards**	**704 days**	**Jan 10 '22**	**Dec 14 '23**	**Jan 10 '22**	**Dec 5 '22**	**0 days**			
851	851	5.20.7.17.1	BR - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Sep 6 '22	0 days	612	852	
852	852	5.20.7.17.2	BR - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Sep 7 '22	Dec 5 '22	Sep 7 '22	Dec 5 '22	0 days	851	853	
853	853	5.20.7.17.3	BR - Shipping and Delivery of Plant to site	45 days	Dec 6 '22	Jan 19 '23	Sep 14 '22	Oct 28 '22	0 days	852	981	
854	854	5.20.7.17.4	MFS - Manufacturing of Plant	240 days	Jan 10 '22	Sep 6 '22	Jan 10 '22	Sep 6 '22	0 days	779	855	
855	855	5.20.7.17.5	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Sep 7 '22	Dec 5 '22	Sep 7 '22	Dec 5 '22	0 days	854	856	
856	856	5.20.7.17.6	MFS - Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Sep 14 '22	Oct 28 '22	0 days	855,950SS-60	982	
857	**857**	**5.20.7.18**	**HV Switchboards, 04SC012**	**704 days**	**Jan 10 '22**	**Dec 14 '23**	**Jan 10 '22**	**Nov 27 '22**	**0 days**			
858	858	5.20.7.18.1	MFS - Manufacturing of Plant	180 days	Jan 10 '22	Jul 8 '22	Jan 10 '22	Jul 8 '22	0 days	780	859	
859	859	5.20.7.18.2	MFS - Factory Acceptance Test of Plant (to be witnessed by PM)	90 days	Jul 9 '22	Oct 6 '22	Jul 9 '22	Oct 13 '22	7 days	858	860	
860	860	5.20.7.18.3	MFS - Shipping and Delivery of Plant to site	45 days	Oct 31 '23	Dec 14 '23	Oct 14 '22	Nov 27 '22	0 days	859,950SS-60	985	
861	**861**	**5.20.7.19**	**11kV/380V Stepdown Power Transformers, EQT032**	**285 days**	**Mar 16 '22**	**Dec 25 '22**	**Mar 16 '22**	**Apr 17 '23**	**113 days**			
862	862	5.20.7.19.1	MFS - Manufacturing and Factory Acceptance Test of Plant	240 days	Mar 16 '22	Nov 10 '22	Mar 16 '22	Mar 3 '23	0 days	775	863	
863	863	5.20.7.19.2	MFS - Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Mar 4 '23	Apr 17 '23	113 days	862	986	
864	**864**	**5.20.7.20**	**PLC System**	**285 days**	**Mar 16 '22**	**Dec 25 '22**	**Mar 16 '22**	**Oct 28 '22**	**0 days**			
865	865	5.20.7.20.1	Manufacturing of Plant, PLC for BR2A &B	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Oct 11 '22	0 days	610	866	
866	866	5.20.7.20.2	Factory Acceptance Test of Plant, PLC for BR2A &B (To be witnessed by PI	30 days	Oct 12 '22	Nov 10 '22	Aug 15 '22	Sep 13 '22	0 days	865	867	
867	867	5.20.7.20.3	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Sep 14 '22	Oct 28 '22	0 days	866	983	
868	868	5.20.7.20.4	Manufacturing of Plant, PLC for MFB2	210 days	Mar 16 '22	Oct 11 '22	Mar 16 '22	Oct 11 '22	0 days	775	869	
869	869	5.20.7.20.5	Factory Acceptance Test of Plant, PLC for MFB2 (To be witnessed by PM)	30 days	Oct 12 '22	Nov 10 '22	Aug 15 '22	Sep 13 '22	0 days	868	870	
870	870	5.20.7.20.6	Shipping and Delivery of Plant to site	45 days	Nov 11 '22	Dec 25 '22	Sep 14 '22	Oct 28 '22	0 days	869	984	
871	**871**	**5.20.7.21**	**Electrical System**	**90 days**	**Dec 2 '19**	**Feb 29 '20**	**Dec 2 '19**	**Feb 29 '20**	**0 days**			
872	872	5.20.7.21.1	Equipment Delivery for Cable Containment	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		909,988	
873	873	5.20.7.21.2	Equipment Delivery for Cable Provision	90 days	Dec 2 '19	Feb 29 '20	Dec 2 '19	Feb 29 '20	0 days		988	
874	**874**	**5.20.8**	**Site Installation Work**	**598 days?**	**Sep 15 '23**	**May 4 '25**	**Sep 15 '23**	**May 4 '25**	**0 days**			
875	875	5.20.8.1	Tentative Civil Handover Date, Portion B-5A, MFB No. 2	1 day	Dec 2 '23	Dec 2 '23	Jul 23 '22	Jul 23 '22	0 days	13	878,884FS+45 ec	
876	**876**	**5.20.8.2**	**Commencement of E&M Installation at MFB No. 2 Lower Part**	**404 days**	**Sep 15 '23**	**Oct 22 '24**	**Sep 15 '23**	**Oct 22 '24**	**0 days**	**875**	**1091**	
877	877	5.20.8.2.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	Dec 3 '23	Dec 9 '23	Aug 5 '23	Aug 11 '23	0 days	875		
878	**878**	**5.20.8.2.2**	**Installation of Lifting Appliances at MFB No. 2**	**120 days**	**Dec 3 '23**	**Mar 31 '24**	**Aug 25 '22**	**Aug 11 '23**	**0 days**	**875,849**		
879	879	5.20.8.2.2.1	B2 EOT Crane LA-04-01 SWL 5t	60 days	Dec 3 '23	Jan 31 '24	Aug 25 '22	Oct 23 '22	0 days		881,882,883,890	
880	880	5.20.8.2.2.2	B2 EOT Crane LA-04-02 SWL 5t	60 days	Dec 3 '23	Jan 31 '24	Aug 25 '22	Oct 23 '22	0 days		881,882,883,890	
881	881	5.20.8.2.2.3	B2 MR LA-04-03 SWL 5t	30 days	Feb 1 '24	Mar 1 '24	Jun 13 '23	Jul 12 '23	0 days	879,880	883	
882	882	5.20.8.2.2.4	B1 MR LA-04-04 SWL 3t	30 days	Feb 1 '24	Mar 1 '24	Oct 31 '22	Nov 29 '22	0 days	879,880	883,896	
883	883	5.20.8.2.2.5	T&C, Loading Test for Lifting Appliances	30 days	Mar 2 '24	Mar 31 '24	Jul 13 '23	Aug 11 '23	0 days	879,880,881,8		



ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
884	**884**	**5.20.8.2.3**	**Mechanical Installations for E&M Equip. at MFB No. 2 Lower Part**	**331 days**	**Jan 17 '24**	**Dec 12 '24**	**Oct 16 '22**	**Aug 11 '23**	**0 days**	**875FS+45 eda**		
885	885	5.20.8.2.3.1	Installation of penstocks and stoplogs (Penstocks 18nos, Stoplogs 11nos), EQT013	120 days	Feb 17 '24	Jun 15 '24	Oct 16 '22	Feb 12 '23	0 days	818,15	907	ME - E x 4~6 men
886	886	5.20.8.2.3.2	Installation of hollow fibre membrane modules rack (x9), EQT023	120 days	Feb 17 '24	Jun 15 '24	Oct 16 '22	Feb 12 '23	0 days	788,15	907,963	ME - A x 4~6 n
887	**887**	**5.20.8.2.3.**	**Installation of compressed air system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**Nov 30 '22**	**Mar 29 '23**	**0 days**	**809**		**ME - B x 4~6 n**
888	888	5.20.8.2.3.3	Installation of compressor, air dryer & air receiver (x2)	30 days	Jan 17 '24	Feb 15 '24	Nov 30 '22	Dec 29 '22	0 days		889	
889	889	5.20.8.2.3.3	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Dec 30 '22	Mar 29 '23	0 days	888	907FS-45 days	
890	**890**	**5.20.8.2.3.**	**Installation of permeate pumping system**	**150 days**	**Feb 8 '24**	**Jul 6 '24**	**Oct 31 '22**	**Mar 29 '23**	**0 days**	**797,879FS+7 d**		**ME - A x 4~6 n**
891	891	5.20.8.2.3.4	Installation of permeate pumps (x10), EQT024	30 days	Feb 8 '24	Mar 8 '24	Oct 31 '22	Nov 29 '22	0 days		892	
892	892	5.20.8.2.3.4	Installation of pipework and valves, EQT036	120 days	Mar 9 '24	Jul 6 '24	Nov 30 '22	Mar 29 '23	0 days	891	907FS-45 days	
893	**893**	**5.20.8.2.3.**	**Installation of return activated sludge pumping system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**Nov 30 '22**	**Mar 29 '23**	**0 days**	**800**		**ME - B x 4~6 n**
894	894	5.20.8.2.3.5	Installation of RAS pump (x5), EQT010	30 days	Jan 17 '24	Feb 15 '24	Nov 30 '22	Dec 29 '22	0 days		895	
895	895	5.20.8.2.3.5	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Dec 30 '22	Mar 29 '23	0 days	894	907FS-45 days	
896	**896**	**5.20.8.2.3.**	**Installation of membrane tank drain pumping system**	**120 days**	**Mar 2 '24**	**Jun 29 '24**	**Nov 30 '22**	**Mar 29 '23**	**0 days**	**882,803**		**ME - C x 4~6 n**
897	897	5.20.8.2.3.6	Installation of drain pump (x2), EQT009	30 days	Mar 2 '24	Mar 31 '24	Nov 30 '22	Dec 29 '22	0 days		898	
898	898	5.20.8.2.3.6	Installation of pipework and valves, EQT036	90 days	Apr 1 '24	Jun 29 '24	Dec 30 '22	Mar 29 '23	0 days	897	907FS-45 days	
899	**899**	**5.20.8.2.3.**	**Installation of chemical system (Citric Acid)**	**120 days**	**Jan 17 '24**	**May 15 '24**	**Nov 30 '22**	**Mar 29 '23**	**0 days**	**812,815**		**ME - D x 2~4 n**
900	900	5.20.8.2.3.7	Installation of storage tank (x2), EQT091	30 days	Jan 17 '24	Feb 15 '24	Nov 30 '22	Dec 29 '22	0 days		902	
901	901	5.20.8.2.3.7	Installation of dosing pump (x2), EQT090	30 days	Jan 17 '24	Feb 15 '24	Nov 30 '22	Dec 29 '22	0 days		902	
902	902	5.20.8.2.3.7	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Dec 30 '22	Mar 29 '23	0 days	900,901	907FS-45 days	
903	**903**	**5.20.8.2.3.**	**Installation of plant service water system**	**120 days**	**Jan 17 '24**	**May 15 '24**	**Nov 30 '22**	**Mar 29 '23**	**0 days**	**806**		**ME - C x 4~6 n**
904	904	5.20.8.2.3.8	Installation of pump (x4), pressure tank (x2), EQT030	30 days	Jan 17 '24	Feb 15 '24	Nov 30 '22	Dec 29 '22	0 days		905	
905	905	5.20.8.2.3.8	Installation of pipework and valves, EQT036	90 days	Feb 16 '24	May 15 '24	Dec 30 '22	Mar 29 '23	0 days	904	907FS-45 days	
906	906	5.20.8.2.3.9	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.18)	90 days	Jan 17 '24	Apr 15 '24	May 14 '23	Aug 11 '23	0 days			ME - C x 4~6 men
907	907	5.20.8.2.3.1	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	180 days	Jun 16 '24	Dec 12 '24	Feb 13 '23	Aug 11 '23	0 days	885,886,889FS days,892FS-45		ME - D x 2~4 men
908	**908**	**5.20.8.2.4**	**Electrical Installations for E&M Equip. at MFB No. 2 Lower Part**	**84 days**	**Dec 3 '23**	**Feb 24 '24**	**Feb 19 '23**	**May 13 '23**	**0 days**	**141,875**		
909	**909**	**5.20.8.2.4.**	**Installation of cable trays and cable containments**	**84 days**	**Dec 3 '23**	**Feb 24 '24**	**Feb 19 '23**	**May 13 '23**	**0 days**	**872**	**988**	
910	**910**	**5.20.8.2.4.**	**LV-Installation of cable trays and cable containments**	**84 days**	**Dec 3 '23**	**Feb 24 '24**	**Feb 19 '23**	**May 13 '23**	**0 days**			
911	911	5.20.8.2.4.1	Basement 2	41 days	Dec 3 '23	Jan 12 '24	Feb 19 '23	Mar 31 '23	0 days		990,912SS+30 da	
912	912	5.20.8.2.4.1	Basement 1	54 days	Jan 2 '24	Feb 24 '24	Mar 21 '23	May 13 '23	0 days	911SS+30 days	992	
913	**913**	**5.20.8.2.5**	**Building Services Installations for MFB No. 2 Lower Part**	**160 days**	**Nov 3 '23**	**Apr 10 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**	**875FS-30 days**	**1090**	
914	**914**	**5.20.8.2.5.**	**Plumbing Installation**	**100 days**	**Nov 3 '23**	**Feb 10 '24**	**Dec 28 '23**	**Jun 4 '24**	**55 days**			
915	**915**	**5.20.8.2.5.**	**Basement 2**	**60 days**	**Nov 3 '23**	**Jan 1 '24**	**Dec 28 '23**	**Feb 25 '24**	**55 days**			
916	916	5.20.8.2.5.1	Plumbing Installation at Basement 2 (Cleansing & Potable System)	60 days	Nov 3 '23	Jan 1 '24	Dec 28 '23	Feb 25 '24	0 days		918SS+55 days,9	
917	**917**	**5.20.8.2.5.**	**Basement 1**	**45 days**	**Dec 28 '23**	**Feb 10 '24**	**Apr 21 '24**	**Jun 4 '24**	**115 days**			
918	918	5.20.8.2.5.1	Plumbing Installation at Basement 1 (Cleansing & Potable System)	45 days	Dec 28 '23	Feb 10 '24	Apr 21 '24	Jun 4 '24	115 days	916SS+55 days		
919	**919**	**5.20.8.2.5.**	**Mechanical Ventilation Installation**	**125 days**	**Nov 3 '23**	**Mar 6 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
920	**920**	**5.20.8.2.5.**	**Basement 2**	**90 days**	**Nov 3 '23**	**Jan 31 '24**	**Nov 3 '23**	**Jan 31 '24**	**0 days**			
921	921	5.20.8.2.5.2	Mechanical Ventilation Installation at Basement 2	90 days	Nov 3 '23	Jan 31 '24	Nov 3 '23	Jan 31 '24	0 days		923SS+35 days	
922	**922**	**5.20.8.2.5.**	**Basement 1**	**90 days**	**Dec 8 '23**	**Mar 6 '24**	**Mar 7 '24**	**Jun 4 '24**	**90 days**			
923	923	5.20.8.2.5.2	Mechanical Ventilation Installation at Basement 1	90 days	Dec 8 '23	Mar 6 '24	Mar 7 '24	Jun 4 '24	90 days	921SS+35 days		
924	**924**	**5.20.8.2.5.**	**Fire Services Installation**	**86 days**	**Nov 3 '23**	**Jan 27 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
925	**925**	**5.20.8.2.5.**	**Basement 2**	**65 days**	**Nov 3 '23**	**Jan 6 '24**	**Nov 3 '23**	**Jan 6 '24**	**0 days**			
926	926	5.20.8.2.5.3	Fire Services Installation at Basement 2 (FH/HR/Sprinkler/AFA/Liner Heat Detector)	65 days	Nov 3 '23	Jan 6 '24	Nov 3 '23	Jan 6 '24	0 days		928SS+21 days	
927	**927**	**5.20.8.2.5.**	**Basement 1**	**65 days**	**Nov 24 '23**	**Jan 27 '24**	**Apr 1 '24**	**Jun 4 '24**	**129 days**			
928	928	5.20.8.2.5.3	Fire Services Installation at Basement 1 (FH/HR/Sprinkler/AFA/Liner Heat Detector)	65 days	Nov 24 '23	Jan 27 '24	Apr 1 '24	Jun 4 '24	129 days	926SS+21 days		
929	**929**	**5.20.8.2.5.4**	**Lighting Installation**	**142 days**	**Nov 3 '23**	**Mar 23 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
930	**930**	**5.20.8.2.5.4**	**Basement 2**	**114 days**	**Nov 3 '23**	**Feb 24 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
931	931	5.20.8.2.5.4	Cable containment for lighting system at B2	60 days	Nov 3 '23	Jan 1 '24	Nov 3 '23	Jan 1 '24	0 days		932SS+56 days,9	
932	932	5.20.8.2.5.4	wiring installation at B2	30 days	Dec 29 '23	Jan 27 '24	May 6 '24	Jun 4 '24	129 days	931SS+56 days		
933	933	5.20.8.2.5.4	Cable termination and lighting fitting installation at B2	30 days	Jan 26 '24	Feb 24 '24	May 6 '24	Jun 4 '24	101 days	931SS+84 days		
934	**934**	**5.20.8.2.5.4**	**Basement 1**	**114 days**	**Dec 1 '23**	**Mar 23 '24**	**Dec 1 '23**	**Jun 4 '24**	**0 days**			
935	935	5.20.8.2.5.4	Cable containment for lighting system at B1	60 days	Dec 1 '23	Jan 29 '24	Dec 1 '23	Jan 29 '24	0 days	931SS+28 days	936SS+56 days,9	
936	936	5.20.8.2.5.4	wiring installation at B1	30 days	Jan 26 '24	Feb 24 '24	May 6 '24	Jun 4 '24	101 days	935SS+56 days		
937	937	5.20.8.2.5.4	Cable termination and lighting fitting installation at B1	30 days	Feb 23 '24	Mar 23 '24	May 6 '24	Jun 4 '24	73 days	935SS+84 days		
938	**938**	**5.20.8.2.5.**	**Power Distribution System**	**111 days**	**Nov 3 '23**	**Feb 21 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
939	**939**	**5.20.8.2.5.**	**Basement 2**	**104 days**	**Nov 3 '23**	**Feb 14 '24**	**Nov 3 '23**	**Jun 4 '24**	**0 days**			
940	940	5.20.8.2.5.5	Cable containment for power system at B2	35 days	Nov 3 '23	Dec 7 '23	Nov 3 '23	Dec 7 '23	0 days		941SS+56 days,9	
941	941	5.20.8.2.5.5	wiring installation at B2	20 days	Dec 29 '23	Jan 17 '24	May 16 '24	Jun 4 '24	139 days	940SS+56 days		
942	942	5.20.8.2.5.5	Cable termination and wirng accessories installation at B2	20 days	Jan 26 '24	Feb 14 '24	May 16 '24	Jun 4 '24	111 days	940SS+84 days		
943	**943**	**5.20.8.2.5.**	**Basement 1**	**83 days**	**Dec 1 '23**	**Feb 21 '24**	**Dec 1 '23**	**Jun 4 '24**	**0 days**			
944	944	5.20.8.2.5.5	Cable containment for power system at B1	30 days	Dec 1 '23	Dec 30 '23	Dec 1 '23	Dec 30 '23	0 days	940SS+28 days	945SS+35 days,9	
945	945	5.20.8.2.5.5	wiring installation at B1	20 days	Jan 5 '24	Jan 24 '24	May 16 '24	Jun 4 '24	132 days	944SS+35 days		
946	946	5.20.8.2.5.5	Cable termination and wirng accessories installation at B1	20 days	Feb 2 '24	Feb 21 '24	May 16 '24	Jun 4 '24	104 days	944SS+63 days		
947	**947**	**5.20.8.2.5.6**	**CCTV Installation**	**40 days**	**Mar 2 '24**	**Apr 10 '24**	**May 16 '24**	**Jun 4 '24**	**55 days**			
948	948	5.20.8.2.5.6	CCTV Installation (3 nos.)	20 days	Mar 2 '24	Mar 21 '24	May 16 '24	Jun 4 '24	75 days	916FS+60 days		
949	949	5.20.8.2.5.6	CCTV Installation (2 nos.)	20 days	Mar 22 '24	Apr 10 '24	May 16 '24	Jun 4 '24	55 days	916SS+140 da		



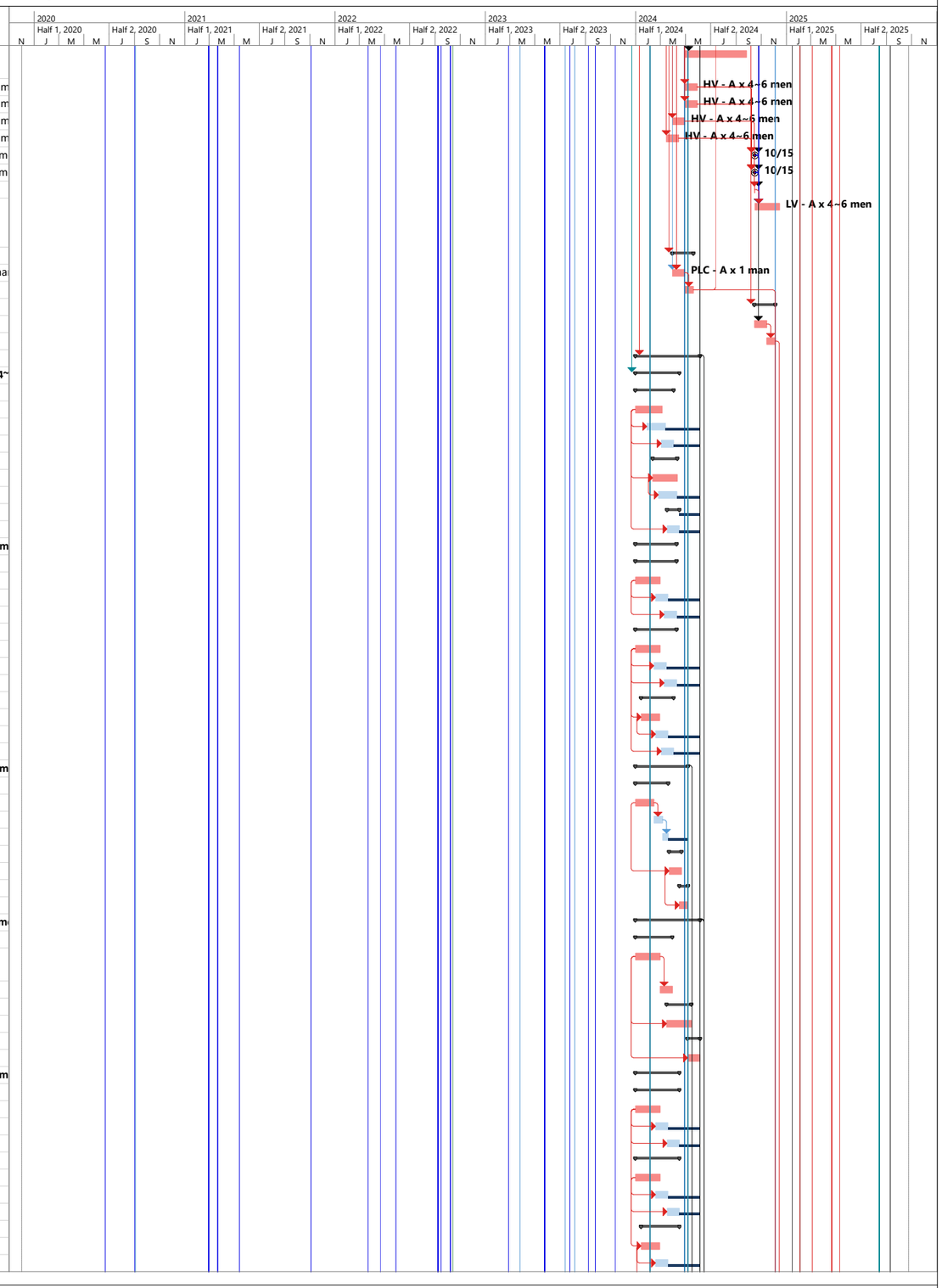
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
950	950	5.20.8.3	Tentative Civil Handover Date, Portion B-5B, MFB No. 2 remaining portion (Rev. 5)	1 day	Dec 30 '23	Dec 30 '23	Jul 7 '22	Jul 7 '22	0 days	14	953,962FS+45 edays,952,951,7	
951	**951**	**5.20.8.4**	**Commencement of E&M Installation at MFB No. 2 Upper Part**	**450 days**	**Dec 31 '23**	**Mar 24 '25**	**Jul 8 '22**	**Jun 4 '24**	**0 days**	**950**	**1091FS-50 days**	
952	952	5.20.8.4.1	Provision of Temporary Water Supply, Electricity Supply, Lighting, Welfare facilities etc., MFB2	7 days	Dec 31 '23	Jan 6 '24	Sep 24 '23	Sep 30 '23	0 days	950		
953	**953**	**5.20.8.4.2**	**Installation of Lifting Appliances at MFB No. 2**	**225 days**	**Dec 31 '23**	**Aug 11 '24**	**Jul 8 '22**	**Feb 17 '23**	**0 days**	**950,849**		
954	954	5.20.8.4.2.1	GF EOT Crane LA-04-05 SWL 5t	60 days	Dec 31 '23	Feb 28 '24	Jul 8 '22	Sep 5 '22	0 days		956,957,961	LA - A x 4~6 m
955	955	5.20.8.4.2.2	GF Gantry Crane LA-04-06 SWL 6t	60 days	Feb 17 '24	Apr 16 '24	Nov 5 '22	Jan 3 '23	0 days	15	961,963	LA - B x 4~6 m
956	956	5.20.8.4.2.3	1F EOT Crane LA-04-07 SWL 15t	60 days	Feb 29 '24	Apr 28 '24	Sep 6 '22	Nov 4 '22	0 days	954	958,959,961	LA - A x 4~6 m
957	957	5.20.8.4.2.4	1F EOT Crane LA-04-08 SWL 15t	60 days	Feb 29 '24	Apr 28 '24	Sep 6 '22	Nov 4 '22	0 days	954	958,959,961	LA - B x 4~6 m
958	958	5.20.8.4.2.5	RF EOT Crane LA-04-09 SWL 2t	60 days	Apr 29 '24	Jun 27 '24	Nov 5 '22	Jan 3 '23	0 days	956,957	961	LA - A x 4~6 m
959	959	5.20.8.4.2.6	RF Retractable MR LA-04-10 SWL 2t	60 days	Apr 29 '24	Jun 27 '24	Nov 5 '22	Jan 3 '23	0 days	956,957	961	LA - B x 4~6 m
960	960	5.20.8.4.2.7	Mobile A-frame LA-04-11 SWL 2t	15 days	Dec 31 '23	Jan 14 '24	Dec 20 '22	Jan 3 '23	0 days	849	961	LA - C x 4~6 m
961	961	5.20.8.4.2.8	T&C, Loading Test for Lifting Appliances	45 days	Jun 28 '24	Aug 11 '24	Jan 4 '23	Feb 17 '23	0 days	954,955,956,9	968	LA - A x 4~6 m
962	**962**	**5.20.8.4.3**	**Mechanical Installations for E&M Equip. at MFB No. 2 Upper Part**	**405 days**	**Feb 14 '24**	**Mar 24 '25**	**Feb 18 '23**	**Oct 10 '23**	**0 days**	**950FS+45 eda**		
963	963	5.20.8.4.3.1	Installation of hollow fibre membrane modules (x9), EQT023	90 days	Jun 16 '24	Sep 13 '24	Jul 13 '23	Oct 10 '23	0 days	886,955	1092FS-30 days	ME - A x 4~6 m
964	**964**	**5.20.8.4.3.**	**Installation of chemical system (Citric Acid + NaOCl)**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Feb 18 '23**	**Jun 17 '23**	**0 days**	**812**		**ME - D x 2~4 n**
965	965	5.20.8.4.3.2	Installation of storage tank, EQT091	30 days	Feb 14 '24	Mar 14 '24	Feb 18 '23	Mar 19 '23	0 days		967	
966	966	5.20.8.4.3.2	Installation of dosing pump (x4) and transfer pump (x4), EQT090	30 days	Feb 14 '24	Mar 14 '24	Feb 18 '23	Mar 19 '23	0 days		967	
967	967	5.20.8.4.3.2	Installation of pipework and valves, EQT036	90 days	Mar 15 '24	Jun 12 '24	Mar 20 '23	Jun 17 '23	0 days	965,966	979FS-45 days	
968	**968**	**5.20.8.4.3.**	**Installation of air scour blower system**	**120 days**	**Aug 12 '24**	**Dec 9 '24**	**Feb 18 '23**	**Jun 17 '23**	**0 days**	**961**		**ME - A x 4~6 n**
969	969	5.20.8.4.3.3	Installation of blowers (x3), EQT040	30 days	Aug 12 '24	Sep 10 '24	Feb 18 '23	Mar 19 '23	0 days		970	
970	970	5.20.8.4.3.3	Installation of pipework and valves, EQT036	90 days	Sep 11 '24	Dec 9 '24	Mar 20 '23	Jun 17 '23	0 days	969	979FS-45 days	
971	**971**	**5.20.8.4.3.**	**Installation of aeration blower system**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Feb 18 '23**	**Jun 17 '23**	**0 days**	**794**	**713**	**ME - D x 2~4 n**
972	972	5.20.8.4.3.4	Installation of blowers (x4), EQT039	30 days	Feb 14 '24	Mar 14 '24	Feb 18 '23	Mar 19 '23	0 days		973	
973	973	5.20.8.4.3.4	Installation of pipework and valves, EQT036	90 days	Mar 15 '24	Jun 12 '24	Mar 20 '23	Jun 17 '23	0 days	972	979FS-45 days	
974	**974**	**5.20.8.4.3.**	**Mechanical Installations for DOU 3B**	**120 days**	**Feb 14 '24**	**Jun 12 '24**	**Feb 18 '23**	**Jun 17 '23**	**0 days**	**824,827**	**987SS+30 edays**	**ME - F x 4~6 m**
975	975	5.20.8.4.3.5	Installation of extraction fan, filter, dehumidifier	30 days	Feb 14 '24	Mar 14 '24	Feb 18 '23	Mar 19 '23	0 days		976	
976	976	5.20.8.4.3.5	Installation of FRP ductwork	90 days	Mar 15 '24	Jun 12 '24	Mar 20 '23	Jun 17 '23	0 days	975	979FS-45 days	
977	977	5.20.8.4.3.6	Installation of instrumentations, EQT035-1	60 days	Feb 14 '24	Apr 13 '24	Aug 12 '23	Oct 10 '23	0 days	59	1091FS-60 days	ME - D x 2~4 n
978	978	5.20.8.4.3.7	Installation of FRP covers, walkways, platforms and ladders , EQT050	60 days	Feb 14 '24	Apr 13 '24	Aug 2 '23	Sep 30 '23	0 days			ME - D x 2~4 n
979	979	5.20.8.4.3.8	Site Acceptance Tests - mechanical aspects including alignment and levels checks, leakage tests, welding tests, installation checks,	150 days	Oct 26 '24	Mar 24 '25	May 4 '23	Sep 30 '23	0 days	967FS-45 days,970FS-45		ME - D x 2~4 men
980	**980**	**5.20.8.4.4**	**Electrical Installations for E&M Equip. at MFB No. 2 Upper Part**	**350 days**	**Dec 31 '23**	**Dec 14 '24**	**Oct 29 '22**	**Sep 30 '23**	**0 days**	**141,950**		
981	981	5.20.8.4.4.1	Installation of LV Switchboards, BR2	90 days	Dec 31 '23	Mar 29 '24	Oct 29 '22	Jan 26 '23	0 days	853	1019FS+30 days,	LV - B x 4~6 m
982	982	5.20.8.4.4.2	Installation of LV Switchboards, MFB No. 2	90 days	Dec 31 '23	Mar 29 '24	Oct 29 '22	Jan 26 '23	0 days	856	1018FS+30 days,	LV - A x 4~6 m
983	983	5.20.8.4.4.3	Installation of PLC Panels, BR2	90 days	Dec 31 '23	Mar 29 '24	Oct 29 '22	Jan 26 '23	0 days	867	1027,988	
984	984	5.20.8.4.4.4	Installation of PLC Panels, MFB No. 2	90 days	Dec 31 '23	Mar 29 '24	Oct 29 '22	Jan 26 '23	0 days	870	1027,988	PLC - B x 1 ma
985	985	5.20.8.4.4.5	Installation of HV Switchboards, MFB No. 2	60 days	Dec 31 '23	Feb 28 '24	Nov 28 '22	Jan 26 '23	0 days	860	1020FS+30 days,	HV - A x 4~6 m
986	986	5.20.8.4.4.6	Installation of transformer, MFB No. 2, EQT032	45 days	Dec 31 '23	Feb 13 '24	Apr 18 '23	Jun 1 '23	0 days	863	1021FS+30 days	
987	987	5.20.8.4.4.7	Electrical Installations for DOU 3B	90 edays	Mar 15 '24	Jun 13 '24	Jul 2 '23	Sep 30 '23	0 edays	974SS+30 eda		EE - D x 4~6 m
988	**988**	**5.20.8.4.4.**	**Installation of cable trays and cable containments**	**199 days**	**Mar 30 '24**	**Oct 14 '24**	**Jan 27 '23**	**Sep 1 '23**	**0 days**	**909,872,981,9**	**1025,1022,1024,**	
989	**989**	**5.20.8.4.4.**	**Basement 2**	**49 days**	**Aug 14 '24**	**Oct 1 '24**	**Jun 13 '23**	**Jul 31 '23**	**0 days**			
990	990	5.20.8.4.4.8	LV-Cables laying and terminations	49 days	Aug 14 '24	Oct 1 '24	Jun 13 '23	Jul 31 '23	0 days	992SS+30 days		
991	**991**	**5.20.8.4.4.**	**Basement 1**	**65 days**	**Jul 15 '24**	**Sep 17 '24**	**May 14 '23**	**Jul 17 '23**	**0 days**			
992	992	5.20.8.4.4.8	LV-Cables laying and terminations	65 days	Jul 15 '24	Sep 17 '24	May 14 '23	Jul 17 '23	0 days	995SS+30 days	990SS+30 days	
993	**993**	**5.20.8.4.4.**	**Ground Floor**	**159 days**	**Mar 30 '24**	**Sep 4 '24**	**Jan 27 '23**	**Jul 31 '23**	**0 days**			
994	994	5.20.8.4.4.8	LV-Installation of cable trays and cable containments	77 days	Mar 30 '24	Jun 14 '24	Jan 27 '23	Apr 13 '23	0 days		995	
995	995	5.20.8.4.4.8	LV-Cables laying and terminations	82 days	Jun 15 '24	Sep 4 '24	Apr 14 '23	Jul 4 '23	0 days	994	992SS+30 days,1	
996	996	5.20.8.4.4.8	HV-Installation of cable trays and cable containments	70 days	Mar 30 '24	Jun 7 '24	Mar 24 '23	Jun 1 '23	0 days		997	
997	997	5.20.8.4.4.8	HV-Cables laying and terminations	60 days	Jun 8 '24	Aug 6 '24	Jun 2 '23	Jul 31 '23	0 days	996		
998	**998**	**5.20.8.4.4.**	**First Floor**	**199 days**	**Mar 30 '24**	**Oct 14 '24**	**Mar 14 '23**	**Sep 1 '23**	**0 days**			
999	999	5.20.8.4.4.8	LV-Installation of cable trays and cable containments	62 days	Mar 30 '24	May 30 '24	Apr 1 '23	Jun 1 '23	0 days		1000	
1000	1000	5.20.8.4.4.8	LV-Cables laying and terminations	92 days	Jul 15 '24	Oct 14 '24	Jun 2 '23	Sep 1 '23	0 days	995SS+30 days	1005SS+30 days	
1001	1001	5.20.8.4.4.8	HV-Installation of cable trays and cable containments	60 days	Mar 30 '24	May 28 '24	Mar 14 '23	May 12 '23	0 days		1002	
1002	1002	5.20.8.4.4.8	HV-Cables laying and terminations	80 days	May 29 '24	Aug 16 '24	May 13 '23	Jul 31 '23	0 days	1001		
1003	**1003**	**5.20.8.4.4.**	**Roof Floor**	**167 days**	**Mar 30 '24**	**Sep 12 '24**	**Jun 7 '23**	**Jul 31 '23**	**0 days**			
1004	1004	5.20.8.4.4.8	LV-Installation of cable trays and cable containments	25 days	Mar 30 '24	Apr 23 '24	Jun 7 '23	Jul 1 '23	0 days		1005	
1005	1005	5.20.8.4.4.8	LV-Cables laying and terminations	30 days	Aug 14 '24	Sep 12 '24	Jul 2 '23	Jul 31 '23	0 days	1000SS+30 da		
1006	**1006**	**5.20.8.4.4.**	**Tentative Civil Handover Date HV cable draw pits from MFB No.2 to DE/2018/03 (Rev. 18)**	**120 days**	**Dec 31 '23**	**Apr 28 '24**	**Jan 4 '23**	**May 3 '23**	**0 days**		**1017**	
1007	**1007**	**5.20.8.4.4.**	**HV Cables laying and terminations**	**50 days**	**Dec 31 '23**	**Feb 18 '24**	**Mar 15 '23**	**May 3 '23**	**0 days**	**209**		
1008	1008	5.20.8.4.4.9	MFB1 to MFB2 (6 nos. HV cables)	50 days	Dec 31 '23	Feb 18 '24	Mar 15 '23	May 3 '23	0 days			
1009	1009	5.20.8.4.4.9	MFB2 to sidestream	40 days	Dec 31 '23	Feb 8 '24	Mar 25 '23	May 3 '23	0 days			
1010	1010	5.20.8.4.4.9	MFB1 to INW (4 nos. HV cables)	50 days	Dec 31 '23	Feb 18 '24	Mar 15 '23	May 3 '23	0 days			
1011	1011	5.20.8.4.4.9	MFB1 to sidestream (temporary)	30 days	Dec 31 '23	Jan 29 '24	Apr 4 '23	May 3 '23	0 days			
1012	**1012**	**5.20.8.4.4.**	**LV and control Cables laying and terminations**	**120 days**	**Dec 31 '23**	**Apr 28 '24**	**Jan 4 '23**	**May 3 '23**	**0 days**			
1013	1013	5.20.8.4.4.9	MFB2 to BR2A2B	120 days	Dec 31 '23	Apr 28 '24	Jan 4 '23	May 3 '23	0 days			
1014	1014	5.20.8.4.4.9	MFB2 to Genset Room	20 days	Dec 31 '23	Jan 19 '24	Apr 14 '23	May 3 '23	0 days			
1015	1015	5.20.8.4.4.9	MFB2 to chemical kiosk	20 days	Dec 31 '23	Jan 19 '24	Apr 14 '23	May 3 '23	0 days			
1016	1016	5.20.8.4.4.9	Chemical kiosk to CS1, DOU3A and TCS	90 days	Dec 31 '23	Mar 29 '24	Feb 3 '23	May 3 '23	0 days			



Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

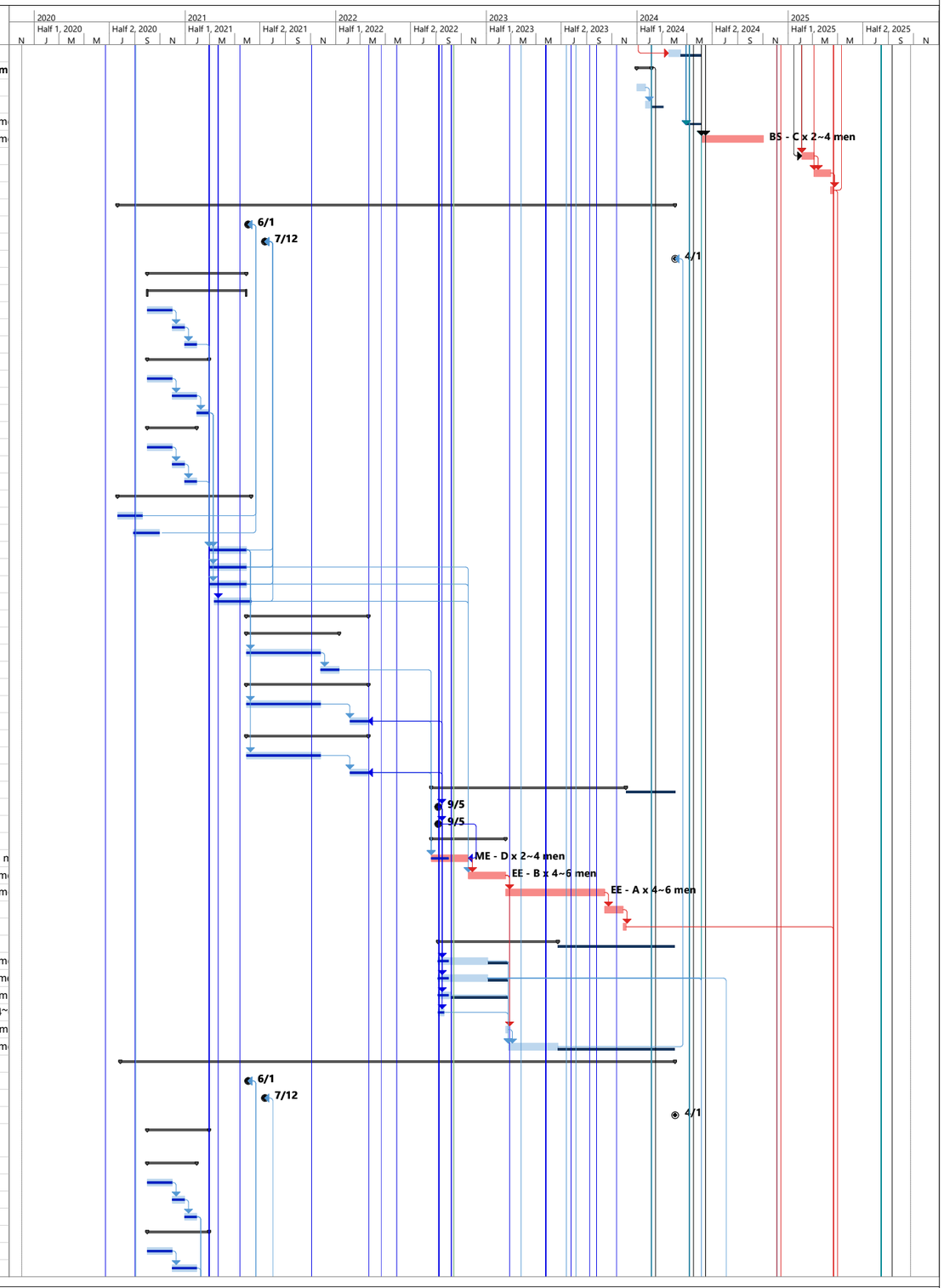
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1017	1017	5.20.8.4.4.1	Cable provision and laying between buildings for DE/2018/03 Sidestream Building Facility (Rev. 17)	150 days	Apr 29 '24	Sep 25 '24	May 4 '23	Sep 30 '23	0 days	1006		
1018	1018	5.20.8.4.4.1	Testing of LV Switchboards, MFB No. 2	30 days	Apr 29 '24	May 28 '24	Jul 2 '23	Jul 31 '23	0 days	982FS+30 days	1022,1023	HV - A x 4~6 m
1019	1019	5.20.8.4.4.1	Testing of LV Switchboards, BR2	30 days	Apr 29 '24	May 28 '24	Jul 2 '23	Jul 31 '23	0 days	981FS+30 days	1022,1023	HV - A x 4~6 m
1020	1020	5.20.8.4.4.1	Testing of HV Switchboards, MFB No. 2	30 days	Mar 30 '24	Apr 28 '24	Jul 2 '23	Jul 31 '23	0 days	985FS+30 days	1024	HV - A x 4~6 m
1021	1021	5.20.8.4.4.1	Testing of Transformers, MFB No. 2	30 days	Mar 15 '24	Apr 13 '24	Jul 2 '23	Jul 31 '23	0 days	986FS+30 days	1022,1023	HV - A x 4~6 m
1022	1022	5.20.8.4.4.1	Energisation of LV Switchboards, MFB No. 2 (Rev. 17)	1 day	Oct 15 '24	Oct 15 '24	Aug 1 '23	Aug 1 '23	0 days	1018,1019,10	1025,711	LA - A x 4~6 m
1023	1023	5.20.8.4.4.1	Energisation of LV Switchboards, BR2A2B	1 day	Oct 15 '24	Oct 15 '24	Aug 1 '23	Aug 1 '23	0 days	1018,1019,10	1025,711	LA - A x 4~6 m
1024	1024	5.20.8.4.4.1	Energisation of HV Switchboards, MFB No.2 (Rev. 17)	1 day	Oct 15 '24	Oct 15 '24	Aug 1 '23	Aug 1 '23	0 days	1020,988	1025	
1025	1025	5.20.8.4.4.1	Site Acceptance Tests - Electrical aspects including voltage and current tests, equipment protection interlock checks, motor rotation direction and electrical tests, control and functional checks etc.	60 days	Oct 16 '24	Dec 14 '24	Aug 2 '23	Sep 30 '23	0 days	1022,1024,10		LV - A x 4~6 men
1026	**1026**	**5.20.8.4.5**	**SCADA Systems, BR No.1 & No.2**	**51 days**	**Mar 30 '24**	**May 19 '24**	**Jan 16 '24**	**Mar 6 '24**	**0 days**	**950**		
1027	1027	5.20.8.4.5.1	Configuration of PLC System for BR No. 2A&B	30 days	Mar 30 '24	Apr 28 '24	Jan 16 '24	Feb 14 '24	0 days	983,709,984	1028	PLC - A x 1 ma
1028	1028	5.20.8.4.5.2	Site Acceptance Test for PLC System at BR 2A&B	21 days	Apr 29 '24	May 19 '24	Feb 15 '24	Mar 6 '24	0 days	1027	714,1530	
1029	**1029**	**5.20.8.4.6**	**SCADA Systems, MFB No. 2**	**51 days**	**Oct 15 '24**	**Dec 4 '24**	**Jan 16 '24**	**Mar 6 '24**	**0 days**	**950**		
1030	1030	5.20.8.4.6.1	Configuration of PLC System for MFB No. 2	30 days	Oct 15 '24	Nov 13 '24	Jan 16 '24	Feb 14 '24	0 days	988	1031	
1031	1031	5.20.8.4.6.2	Site Acceptance Test for PLC System at MFB No. 2	21 days	Nov 14 '24	Dec 4 '24	Feb 15 '24	Mar 6 '24	0 days	1030	1530	
1032	**1032**	**5.20.8.4.7**	**Building Services Installations for MFB No. 2**	**157 days**	**Dec 31 '23**	**Jun 4 '24**	**May 7 '23**	**Jun 4 '24**	**0 days**	**950FS-30 days**	**1090**	
1033	**1033**	**5.20.8.4.7.1**	**MVAC Installation for MFB No. 2**	**107 days**	**Dec 31 '23**	**Apr 15 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**	**831**		**MVAC - A x 4~**
1034	**1034**	**5.20.8.4.7.1**	**MVAC Installation for MFB No. 2 (G/F)**	**93 days**	**Dec 31 '23**	**Apr 1 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			
1035	1035	5.20.8.4.7.1	Mechanical Ventilation Installation at G/F	65 days	Dec 31 '23	Mar 4 '24	Dec 31 '23	Mar 4 '24	0 days		1036SS+28 days,	
1036	1036	5.20.8.4.7.1	VRV Installation at G/F L.V Switch Room	45 days	Jan 28 '24	Mar 12 '24	Apr 21 '24	Jun 4 '24	84 days	1035SS+28 da		
1037	1037	5.20.8.4.7.1	VRV Installation at G/F Sprinkler Valve Control Room	30 days	Mar 3 '24	Apr 1 '24	May 6 '24	Jun 4 '24	64 days	1035SS+63 da		
1038	**1038**	**5.20.8.4.7.1**	**MVAC Installation for MFB No. 2 (1/F)**	**60 days**	**Feb 11 '24**	**Apr 10 '24**	**Feb 11 '24**	**Jun 4 '24**	**0 days**			
1039	1039	5.20.8.4.7.1	Mechanical Ventilation Installation at 1/F	60 days	Feb 11 '24	Apr 10 '24	Feb 11 '24	Apr 10 '24	0 days	1035SS+42 da	1040SS+14 days	
1040	1040	5.20.8.4.7.1	VRV Installation at 1/F L.V Switch Room	45 days	Feb 25 '24	Apr 9 '24	Apr 21 '24	Jun 4 '24	56 days	1039SS+14 da		
1041	**1041**	**5.20.8.4.7.1**	**MVAC Installation for MFB No. 2 (R/F)**	**30 days**	**Mar 17 '24**	**Apr 15 '24**	**May 6 '24**	**Jun 4 '24**	**50 days**			
1042	1042	5.20.8.4.7.1	VRV ODU Installation at R/F	30 days	Mar 17 '24	Apr 15 '24	May 6 '24	Jun 4 '24	50 days	1035SS+77 da		
1043	**1043**	**5.20.8.4.7.2**	**Lighting, MFB No. 2**	**100 days**	**Dec 31 '23**	**Apr 8 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			**BS - A x 4~6 m**
1044	**1044**	**5.20.8.4.7.2**	**Ground Floor**	**100 days**	**Dec 31 '23**	**Apr 8 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			
1045	1045	5.20.8.4.7.2	Cable containment for lighting system at G/F	60 days	Dec 31 '23	Feb 28 '24	Dec 31 '23	Feb 28 '24	0 days		1046SS+49 days,	
1046	1046	5.20.8.4.7.2	wiring installation at G/F	30 days	Feb 18 '24	Mar 18 '24	May 6 '24	Jun 4 '24	78 days	1045SS+49 da		
1047	1047	5.20.8.4.7.2	Cable termination and lighting fitting installation at G/F	30 days	Mar 10 '24	Apr 8 '24	May 6 '24	Jun 4 '24	57 days	1045SS+70 da		
1048	**1048**	**5.20.8.4.7.2**	**First Floor**	**100 days**	**Dec 31 '23**	**Apr 8 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			
1049	1049	5.20.8.4.7.2	Cable containment for lighting system at 1/F	60 days	Dec 31 '23	Feb 28 '24	Dec 31 '23	Feb 28 '24	0 days		1050SS+45 days,	
1050	1050	5.20.8.4.7.2	wiring installation at 1/F	30 days	Feb 14 '24	Mar 14 '24	May 6 '24	Jun 4 '24	82 days	1049SS+45 da		
1051	1051	5.20.8.4.7.2	Cable termination and lighting fitting installation at 1/F	30 days	Mar 10 '24	Apr 8 '24	May 6 '24	Jun 4 '24	57 days	1049SS+70 da		
1052	**1052**	**5.20.8.4.7.2**	**Roof Floor**	**79 days**	**Jan 14 '24**	**Apr 1 '24**	**Jan 14 '24**	**Jun 4 '24**	**0 days**			
1053	1053	5.20.8.4.7.2	Cable containment for lighting system at R/F	45 days	Jan 14 '24	Feb 27 '24	Jan 14 '24	Feb 27 '24	0 days	1049SS+14 da	1054SS+35 days	
1054	1054	5.20.8.4.7.2	wiring installation at R/F	30 days	Feb 18 '24	Mar 18 '24	May 6 '24	Jun 4 '24	78 days	1053SS+35 da		
1055	1055	5.20.8.4.7.2	Cable termination and lighting fitting installation at R/F	30 days	Mar 3 '24	Apr 1 '24	May 6 '24	Jun 4 '24	64 days	1049SS+63 da		
1056	**1056**	**5.20.8.4.7.3**	**Plumbing Installation, MFB No. 2**	**128 days**	**Dec 31 '23**	**May 6 '24**	**Dec 31 '23**	**May 6 '24**	**0 days**		**1519**	**Pb - B x 4~6 m**
1057	**1057**	**5.20.8.4.7.3**	**Ground Floor**	**80 days**	**Dec 31 '23**	**Mar 19 '24**	**Dec 31 '23**	**May 6 '24**	**0 days**			
1058	1058	5.20.8.4.7.3	Plumbing Installation at G/F (Cleansing / Potable / Irrigation Syste	45 days	Dec 31 '23	Feb 13 '24	Dec 31 '23	Feb 13 '24	0 days		1059,1062SS+82	
1059	1059	5.20.8.4.7.3	Plumbing Installation at G/F Outdoor Area (Cleansing System)	21 days	Feb 14 '24	Mar 5 '24	Apr 2 '24	Apr 22 '24	0 days	1058	1060	
1060	1060	5.20.8.4.7.3	Plumbing Installation at G/F (Emergency Shower & Eye Washer)	14 days	Mar 6 '24	Mar 19 '24	Apr 23 '24	May 6 '24	48 days	1059		
1061	**1061**	**5.20.8.4.7.3**	**First Floor**	**30 days**	**Mar 22 '24**	**Apr 20 '24**	**Mar 22 '24**	**Apr 20 '24**	**0 days**			
1062	1062	5.20.8.4.7.3	Plumbing Installation at 1/F (Cleansing / Irrigation System)	30 days	Mar 22 '24	Apr 20 '24	Mar 22 '24	Apr 20 '24	0 days	1058SS+82 da	1064SS+25 days	
1063	**1063**	**5.20.8.4.7.3**	**Roof Floor**	**21 days**	**Apr 16 '24**	**May 6 '24**	**Apr 16 '24**	**May 6 '24**	**0 days**			
1064	1064	5.20.8.4.7.3	Plumbing Installation at R/F (Irrigation System)	21 days	Apr 16 '24	May 6 '24	Apr 16 '24	May 6 '24	0 days	1062SS+25 da		
1065	**1065**	**5.20.8.4.7.4**	**Fire Services Installation, MFB No. 2**	**157 days**	**Dec 31 '23**	**Jun 4 '24**	**May 7 '23**	**Oct 10 '23**	**0 days**		1482,1470,1483	**FS - B x 4~6 m**
1066	**1066**	**5.20.8.4.7.4**	**Ground Floor**	**90 days**	**Dec 31 '23**	**Mar 29 '24**	**May 7 '23**	**Oct 10 '23**	**0 days**			
1067	1067	5.20.8.4.7.4	Fire Services Installation at G/F (FS Inlet/FH/HR/AFA/Liner Heat Detector)	60 days	Dec 31 '23	Feb 28 '24	May 7 '23	Jul 5 '23	0 days		1068,1070SS+76 days,1072SS+12	
1068	1068	5.20.8.4.7.4	Fire Services Installation at G/F Outdoor Area (HR & AFA System)	30 days	Feb 29 '24	Mar 29 '24	Sep 11 '23	Oct 10 '23	0 days	1067		
1069	**1069**	**5.20.8.4.7.4**	**First Floor**	**60 days**	**Mar 16 '24**	**May 14 '24**	**Aug 12 '23**	**Oct 10 '23**	**0 days**			
1070	1070	5.20.8.4.7.4	Fire Services Installation at 1/F (FH/HR/AFA/Linear Heat Detector)	60 days	Mar 16 '24	May 14 '24	Aug 12 '23	Oct 10 '23	0 days	1067SS+76 da		
1071	**1071**	**5.20.8.4.7.4**	**Roof Floor**	**30 days**	**May 6 '24**	**Jun 4 '24**	**Sep 11 '23**	**Oct 10 '23**	**0 days**			
1072	1072	5.20.8.4.7.4	Fire Services Installation at R/F (FH/HR & AFA System)	30 days	May 6 '24	Jun 4 '24	Sep 11 '23	Oct 10 '23	0 days	1067SS+127 d		
1073	**1073**	**5.20.8.4.7.5**	**Power Distribution System, MFB No. 2**	**107 days**	**Dec 31 '23**	**Apr 15 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			**BS - B x 4~6 m**
1074	**1074**	**5.20.8.4.7.5**	**Ground Floor**	**107 days**	**Dec 31 '23**	**Apr 15 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			
1075	1075	5.20.8.4.7.5	Cable containment for power system at G/F	60 days	Dec 31 '23	Feb 28 '24	Dec 31 '23	Feb 28 '24	0 days		1076SS+49 days,	
1076	1076	5.20.8.4.7.5	wiring installation at G/F	30 days	Feb 18 '24	Mar 18 '24	May 6 '24	Jun 4 '24	78 days	1075SS+49 da		
1077	1077	5.20.8.4.7.5	Cable termination and wirng accessories installation at G/F	30 days	Mar 17 '24	Apr 15 '24	May 6 '24	Jun 4 '24	50 days	1075SS+77 da		
1078	**1078**	**5.20.8.4.7.5**	**First Floor**	**107 days**	**Dec 31 '23**	**Apr 15 '24**	**Dec 31 '23**	**Jun 4 '24**	**0 days**			
1079	1079	5.20.8.4.7.5	Cable containment for power system at 1/F	60 days	Dec 31 '23	Feb 28 '24	Dec 31 '23	Feb 28 '24	0 days		1080SS+49 days,	
1080	1080	5.20.8.4.7.5	wiring installation at 1/F	30 days	Feb 18 '24	Mar 18 '24	May 6 '24	Jun 4 '24	78 days	1079SS+49 da		
1081	1081	5.20.8.4.7.5	Cable termination and wirng accessories installation at 1/F	30 days	Mar 17 '24	Apr 15 '24	May 6 '24	Jun 4 '24	50 days	1079SS+77 da		
1082	**1082**	**5.20.8.4.7.5**	**Roof Floor**	**93 days**	**Jan 14 '24**	**Apr 15 '24**	**Jan 14 '24**	**Jun 4 '24**	**0 days**			
1083	1083	5.20.8.4.7.5	Cable containment for power system at R/F	45 days	Jan 14 '24	Feb 27 '24	Jan 14 '24	Feb 27 '24	0 days	1075SS+14 da	1084SS+35 days,	
1084	1084	5.20.8.4.7.5	wiring installation at R/F	30 days	Feb 18 '24	Mar 18 '24	May 6 '24	Jun 4 '24	78 days	1083SS+35 da		



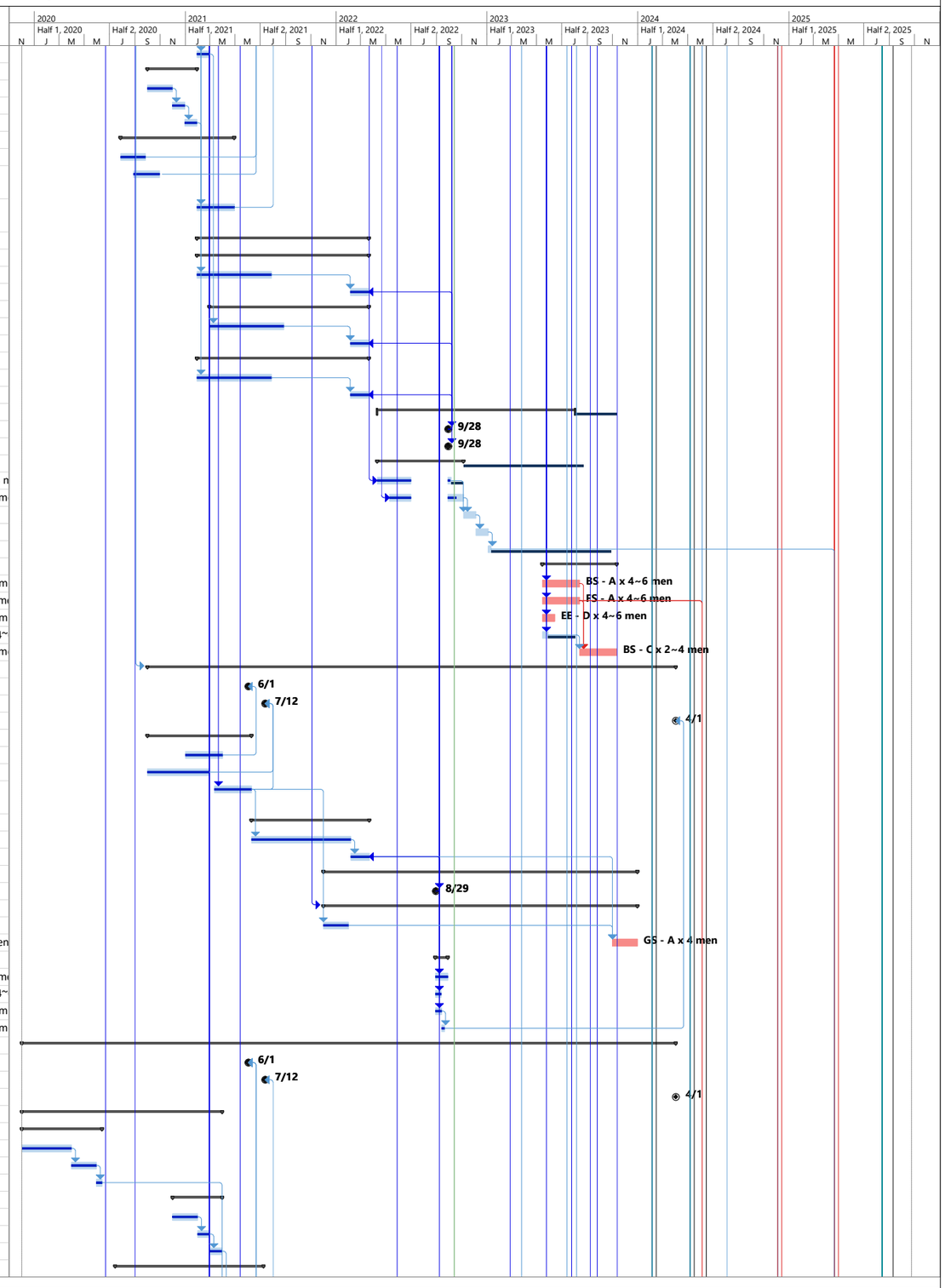
Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

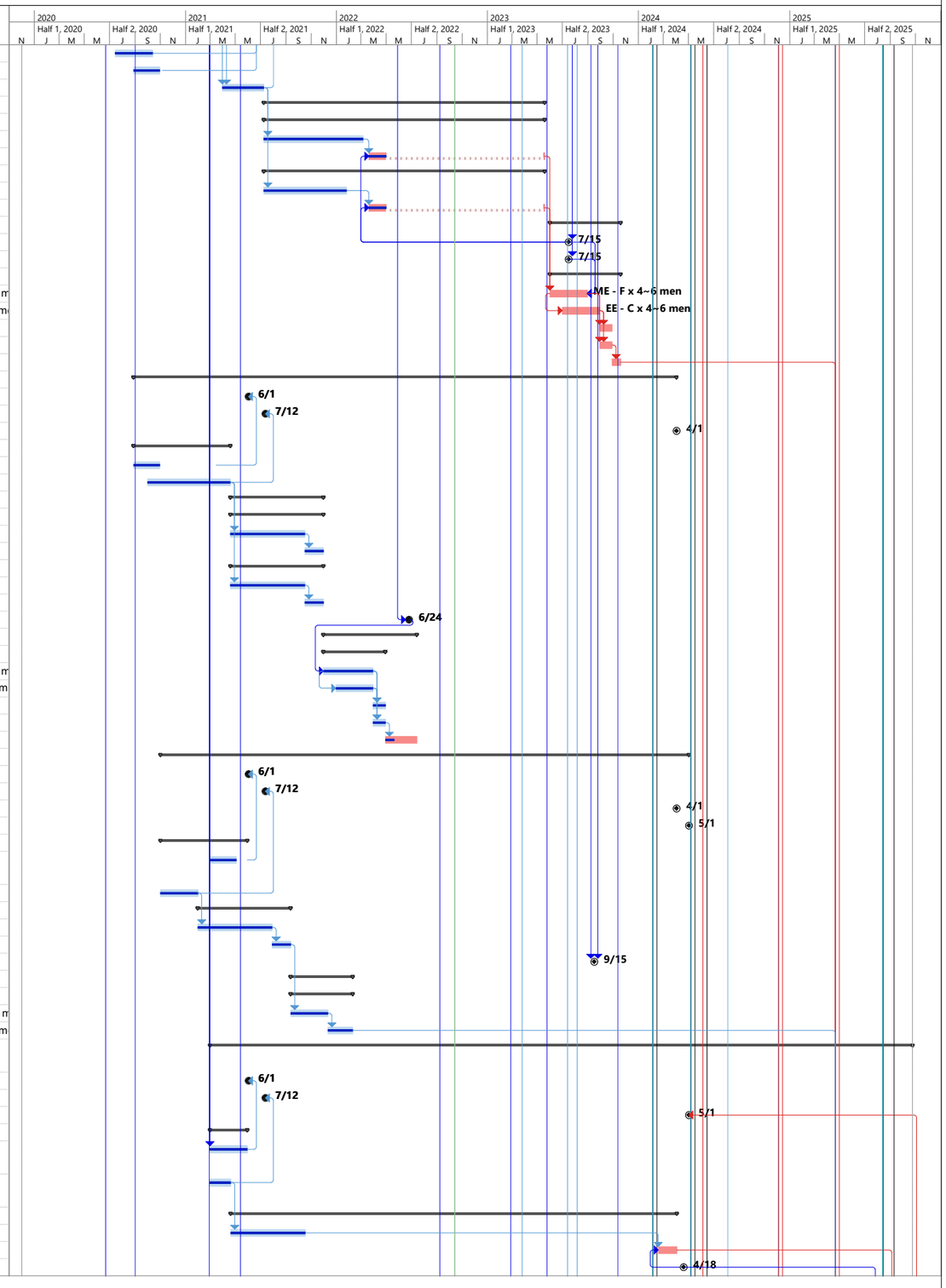
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1085	1085	5.20.8.4.7.5	Cable termination and wirng accessories installation at R/F	30 days	Mar 17 '24	Apr 15 '24	May 6 '24	Jun 4 '24	50 days	1083SS+63 da		
1086	**1086**	**5.20.8.4.7.**	**CCTV Installation (10 indoor + 3 outdoor Cameras), MFB No. 2**	**36 days**	**Dec 31 '23**	**Feb 4 '24**	**Jan 29 '24**	**Mar 4 '24**	**0 days**		**1529**	**BS - C x 2~4 m**
1087	1087	5.20.8.4.7.6	CCTV Installation (3 nos./ Indoor)	21 days	Dec 31 '23	Jan 20 '24	Jan 29 '24	Feb 18 '24	0 days		1088	
1088	1088	5.20.8.4.7.6	CCTV Installation (4 nos./ Outdoor)	15 days	Jan 21 '24	Feb 4 '24	Feb 19 '24	Mar 4 '24	29 days	1087		
1089	1089	5.20.8.4.7.7	Earthing and Lightning Protection System, MFB No. 2	120 days	Dec 31 '23	Apr 28 '24	Feb 6 '24	Jun 5 '24	37 days?	184,846		BS - C x 2~4 m
1090	1090	5.20.9	Testing and Commissioning of Building Services Installations, MFB No. 2	150 days	Jun 5 '24	Nov 1 '24	Jun 5 '24	Nov 1 '24	0 days	831,834,837,8		BS - C x 2~4 m
1091	1091	5.20.10	Site Acceptance Test for E&M Equip at MFB No. 2	30 days	Feb 3 '25	Mar 4 '25	Aug 12 '23	Sep 10 '23	0 days	876,951FS-50	1092	
1092	1092	5.20.11	System Commissioning for E&M Equip at MFB No. 2	40 days	Mar 5 '25	Apr 13 '25	Sep 11 '23	Oct 20 '23	0 days	963FS-30 days	1093	
1093	1093	5.20.12	Risk Allowances for Completion of Processing Plant at MFB No. 2	7 edays	Apr 13 '25	Apr 20 '25	Oct 21 '23	Oct 28 '23	0 edays	1092	1525,720FF	
1094	**1094**	**5.21**	**Chemical System No. 1 and No. 2, Portion B-7 & B-7B (PS 6B.2.3)**	**1351 days**	**Jul 21 '20**	**Apr 1 '24**	**Jul 21 '20**	**Apr 1 '24**	**0 days**			
1095	1095	5.21.1	Planned Key Date Completion Date - KD1B, Chem Sys No. 1 & 2	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1112FF,1113F		
1096	1096	5.21.2	Planned Sectional Completion Date - Section 1, Chem Sys No. 1 & 2	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1114FF,1115F		
1097	1097	5.21.3	Planned Sectional Completion Date - Section 2, Chem Sys No. 1 & 2	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days	1143FF		
1098	**1098**	**5.21.4**	**Selection of Suppliers for major plant and materials for Chemical Systems**	**240 days**	**Oct 1 '20**	**May 28 '21**	**Oct 1 '20**	**May 28 '21**	**0 days**			
1099	**1099**	**5.21.4.1**	**Chemical Storage and Dosing - chemical storage tanks, C11, ref. EQT025**	**240 days**	**Oct 1 '20**	**May 28 '21**	**Oct 1 '20**	**May 28 '21**	**0 days**			
1100	1100	5.21.4.1.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1101	
1101	1101	5.21.4.1.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	1100	1102	
1102	1102	5.21.4.1.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	1101	1114	
1103	**1103**	**5.21.4.2**	**Chemical Storage and Dosing - chemical dosing pumps, C11, ref. EQT027**	**150 days**	**Oct 1 '20**	**Feb 27 '21**	**Oct 1 '20**	**Feb 27 '21**	**0 days**			
1104	1104	5.21.4.2.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1105	
1105	1105	5.21.4.2.2	Invitation of quotations for purchasing package	60 days	Nov 30 '20	Jan 28 '21	Nov 30 '20	Jan 28 '21	0 days	1104	1106	
1106	1106	5.21.4.2.3	Acceptance of conforming quotation (Completed)	30 days	Jan 29 '21	Feb 27 '21	Jan 29 '21	Feb 27 '21	0 days	1105	1114,1115,1116	
1107	**1107**	**5.21.4.3**	**Chemical Storage and Dosing - transfer pumps, C11, ref. EQT026**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
1108	1108	5.21.4.3.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1109	
1109	1109	5.21.4.3.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	1108	1110	
1110	1110	5.21.4.3.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	1109	1114	
1111	**1111**	**5.21.5**	**Design Submissions for Chemical System No. 1 and No. 2**	**324 days**	**Jul 21 '20**	**Jun 10 '21**	**Jul 21 '20**	**Jun 10 '21**	**0 days**			
1112	1112	5.21.5.1	Electrical schematic drawings for Chemical Systems No. 1 and No. 2	60 days	Jul 21 '20	Sep 18 '20	Jul 21 '20	Sep 18 '20	0 days		1095FF	
1113	1113	5.21.5.2	CDS081-5 - Civil and dimensional requirements drawings for Chemical Syste	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		1095FF	
1114	1114	5.21.5.3	CDS006 - Detailed Design for Chemical Dosing System	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	1102,1106,11	1120,1123,1126,	
1115	1115	5.21.5.4	CDS027 - Detailed Design for Electrical Installations for Chemical System No.	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	1106	1133,1096FF	
1116	1116	5.21.5.5	CDS028 - Detailed Design for Electrical Installations for Chemical System No.	90 edays	Feb 27 '21	May 28 '21	Feb 27 '21	May 28 '21	0 edays	1106	1133,1096FF	
1117	1117	5.21.5.6	CDS034-5 - Detailed Design for Electrical Installations BS at Chemical System	90 edays	Mar 12 '21	Jun 10 '21	Mar 12 '21	Jun 10 '21	0 edays	156	1133,1096FF	
1118	**1118**	**5.21.6**	**Manufacturing and Delivery of Plant & Materials**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
1119	**1119**	**5.21.6.1**	**Chemical Storage Tanks, EQT025**	**225 days**	**May 29 '21**	**Jan 8 '22**	**May 29 '21**	**Jan 8 '22**	**0 days**			
1120	1120	5.21.6.1.1	Manufacturing and Factory Acceptance Test of Plant	180 days	May 29 '21	Nov 24 '21	May 29 '21	Nov 24 '21	0 days	1114	1121	
1121	1121	5.21.6.1.2	Shipping and Delivery of Plant to site	45 days	Nov 25 '21	Jan 8 '22	Nov 25 '21	Jan 8 '22	0 days	1120	1132	
1122	**1122**	**5.21.6.2**	**Chemical Dosing Pumps, EQT027**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
1123	1123	5.21.6.2.1	Manufacturing and Factory Acceptance Test of Plant	180 days	May 29 '21	Nov 24 '21	May 29 '21	Nov 24 '21	0 days	1114	1124	
1124	1124	5.21.6.2.2	Shipping and Delivery of Plant to site	45 days	Feb 4 '22	Mar 20 '22	Feb 4 '22	Mar 20 '22	0 days	1123,1129FF-(	1132	
1125	**1125**	**5.21.6.3**	**Chemical Transfer Pumps, EQT026**	**296 days**	**May 29 '21**	**Mar 20 '22**	**May 29 '21**	**Mar 20 '22**	**0 days**			
1126	1126	5.21.6.3.1	Manufacturing and Factory Acceptance Test of Plant	180 days	May 29 '21	Nov 24 '21	May 29 '21	Nov 24 '21	0 days	1114	1127	
1127	1127	5.21.6.3.2	Shipping and Delivery of Plant to site	45 days	Feb 4 '22	Mar 20 '22	Feb 4 '22	Mar 20 '22	0 days	1126,1129FF-(	1132	
1128	**1128**	**5.21.7**	**Site Installation Work**	**472 days**	**Aug 20 '22**	**Dec 4 '23**	**Aug 20 '22**	**Apr 1 '24**	**119 days**			
1129	1129	5.21.7.1	Tentative Civil Handover Date, Portion B-7 & B-7B (Rev. 5)	1 day	Sep 5 '22	Sep 5 '22	Sep 5 '22	Sep 5 '22	0 days	18	1127FF-60 edays	
1130	1130	5.21.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	Sep 5 '22	Sep 5 '22	Sep 5 '22	Sep 5 '22	0 days	18	1132FF+50 days	
1131	**1131**	**5.21.7.3**	**Commencement of E&M Installation at Chemical Dosing System 1 and Syst**	**180 days**	**Aug 20 '22**	**Feb 16 '23**	**Aug 20 '22**	**Jan 9 '23**	**0 days**			
1132	1132	5.21.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System (Rev	90 edays	Aug 20 '22	Nov 18 '22	Aug 20 '22	Nov 18 '22	0 edays	1130FF+50 da	1133	ME - D x 2~4 n
1133	1133	5.21.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	90 edays	Nov 18 '22	Feb 16 '23	Oct 11 '22	Jan 9 '23	0 edays	1132,1115,11	1134,1142	EE - B x 4~6 m
1134	1134	5.21.7.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	240 days	Feb 16 '23	Oct 13 '23	Jan 9 '23	Sep 5 '23	0 days	1133	1135	EE - A x 4~6 m
1135	1135	5.21.7.5	System Commissioning for E&M Equip for Chemical Dosing System	45 days	Oct 14 '23	Nov 27 '23	Sep 6 '23	Oct 20 '23	0 days	1134	1136	
1136	1136	5.21.7.6	Risk Allowances for Completion of Processing Plant at Chemical Dosing Syste	7 edays	Nov 27 '23	Dec 4 '23	Oct 21 '23	Oct 28 '23	0 edays	1135	1525	
1137	**1137**	**5.21.7.7**	**Building Services Installations at Chemical Dosing System areas**	**290 days**	**Sep 6 '22**	**Jun 22 '23**	**Sep 6 '22**	**Apr 1 '24**	**284 days**			
1138	1138	5.21.7.7.1	Lighting and Power Distribution System, Chem 1&2	120 days	Sep 6 '22	Jan 3 '23	Sep 6 '22	Dec 3 '23	50 days	1129	1143	BS - B x 4~6 m
1139	1139	5.21.7.7.2	Fire Services Installation, DG Stores	120 days	Sep 6 '22	Jan 3 '23	Sep 6 '22	Nov 9 '23	50 days	1129	1482,1483,1473,	FS - A x 4~6 m
1140	1140	5.21.7.7.3	Lightning Protection System, Chem 1&2	30 days	Sep 6 '22	Oct 5 '22	Sep 6 '22	Dec 3 '23	140 days	1129	1143	EE - D x 4~6 m
1141	1141	5.21.7.7.4	Mechanical Ventilation System, Chem 2	14 days	Sep 6 '22	Sep 19 '22	Sep 6 '22	Sep 19 '22	0 days	1129	1143	MVAC - A x 4~
1142	1142	5.21.7.7.5	Plumbing Installation, Chem 1	7 days	Feb 16 '23	Feb 22 '23	Nov 27 '23	Dec 3 '23	0 days	1133	1143	Pb - A x 4~6 m
1143	1143	5.21.7.7.6	Testing and Commissioning of Building Services Installations, Chem 1&2	120 days	Feb 23 '23	Jun 22 '23	Dec 4 '23	Apr 1 '24	284 days	1138,1139,11	1097FF	BS - C x 2~4 m
1144	**1144**	**5.22**	**Temporary Chemical Dosing System, Portion B7 & B-7B (PS 6B.2.3)**	**1344 days**	**Jul 28 '20**	**Apr 1 '24**	**Jul 28 '20**	**Apr 1 '24**	**0 days**			
1145	1145	5.22.1	Planned Key Date Completion Date - KD1B, Temp. Chem Dosing Sys	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1162FF,1163F		
1146	1146	5.22.2	Planned Sectional Completion Date - Section 1, Temp. Chem Dosing Sys	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1164FF		
1147	1147	5.22.3	Planned Sectional Completion Date - Section 2, Temp. Chem Dosing Sys	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
1148	**1148**	**5.22.4**	**Selection of Suppliers for major plant and materials for Temp. Chemical Dosing System**	**150 days**	**Oct 1 '20**	**Feb 27 '21**	**Oct 1 '20**	**Feb 27 '21**	**0 days**			
1149	**1149**	**5.22.4.1**	**Chemical Storage and Dosing - chemical storage tanks, C11, ref. EQT025**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
1150	1150	5.22.4.1.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1151	
1151	1151	5.22.4.1.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	1150	1152	
1152	1152	5.22.4.1.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	1151	1164,1167	
1153	**1153**	**5.22.4.2**	**Chemical Storage and Dosing - chemical dosing pumps, C11, ref. EQT027**	**150 days**	**Oct 1 '20**	**Feb 27 '21**	**Oct 1 '20**	**Feb 27 '21**	**0 days**			
1154	1154	5.22.4.2.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1155	
1155	1155	5.22.4.2.2	Invitation of quotations for purchasing package	60 days	Nov 30 '20	Jan 28 '21	Nov 30 '20	Jan 28 '21	0 days	1154	1156	



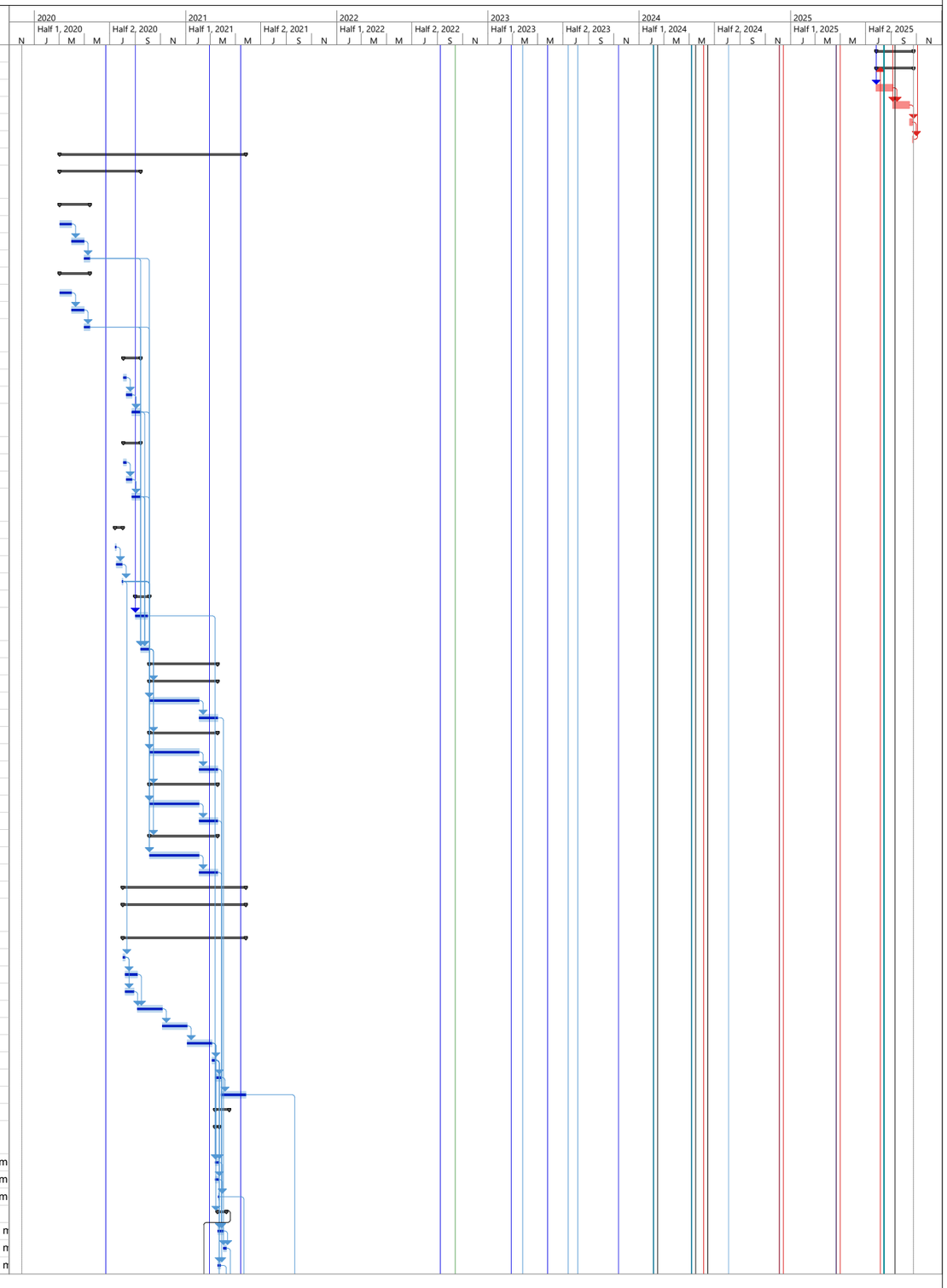
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1156	1156	5.22.4.2.3	Acceptance of conforming quotation (Completed)	30 days	Jan 29 '21	Feb 27 '21	Jan 29 '21	Feb 27 '21	0 days	1155	1170	
1157	**1157**	**5.22.4.3**	**Chemical Storage and Dosing - transfer pumps, C11, ref. EQT026**	**120 days**	**Oct 1 '20**	**Jan 28 '21**	**Oct 1 '20**	**Jan 28 '21**	**0 days**			
1158	1158	5.22.4.3.1	Submission for acceptance of purchasing package	60 days	Oct 1 '20	Nov 29 '20	Oct 1 '20	Nov 29 '20	0 days		1159	
1159	1159	5.22.4.3.2	Invitation of quotations for purchasing package	30 days	Nov 30 '20	Dec 29 '20	Nov 30 '20	Dec 29 '20	0 days	1158	1160	
1160	1160	5.22.4.3.3	Acceptance of conforming quotation (Completed)	30 days	Dec 30 '20	Jan 28 '21	Dec 30 '20	Jan 28 '21	0 days	1159	1173	
1161	**1161**	**5.22.5**	**Design Submissions for Temporary Chemical Dosing System**	**275 days**	**Jul 28 '20**	**Apr 28 '21**	**Jul 28 '20**	**Apr 28 '21**	**0 days**			
1162	1162	5.22.5.1	Electrical schematic drawings for Temporary Chemical Dosing System	60 days	Jul 28 '20	Sep 25 '20	Jul 28 '20	Sep 25 '20	0 days		1145FF	
1163	1163	5.22.5.2	CDS081-6 - Civil and dimensional requirements drawings for Temporary Chemical Dosing System	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		1145FF	
1164	1164	5.22.5.3	CDS029 - Detailed Design for Electrical Installations for Temporary Chemical System	90 edays	Jan 28 '21	Apr 28 '21	Jan 28 '21	Apr 28 '21	0 edays	1152	1146FF	
1165	**1165**	**5.22.6**	**Manufacturing and Delivery of Plant & Materials**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1166	**1166**	**5.22.6.1**	**Chemical Storage Tanks, EQT025**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1167	1167	5.22.6.1.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 29 '21	Jul 27 '21	Jan 29 '21	Jul 27 '21	0 days	1152	1168	
1168	1168	5.22.6.1.2	Shipping and Delivery of Plant to site	45 days	Feb 4 '22	Mar 20 '22	Feb 4 '22	Mar 20 '22	0 days	1167,1176FF-6		
1169	**1169**	**5.22.6.2**	**Chemical Dosing Pumps, EQT027**	**386 days**	**Feb 28 '21**	**Mar 20 '22**	**Feb 28 '21**	**Mar 20 '22**	**0 days**			
1170	1170	5.22.6.2.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Feb 28 '21	Aug 26 '21	Feb 28 '21	Aug 26 '21	0 days	1156	1171	
1171	1171	5.22.6.2.2	Shipping and Delivery of Plant to site	45 days	Feb 4 '22	Mar 20 '22	Feb 4 '22	Mar 20 '22	0 days	1170,1176FF-6		
1172	**1172**	**5.22.6.3**	**Chemical Transfer Pumps, EQT026**	**416 days**	**Jan 29 '21**	**Mar 20 '22**	**Jan 29 '21**	**Mar 20 '22**	**0 days**			
1173	1173	5.22.6.3.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 29 '21	Jul 27 '21	Jan 29 '21	Jul 27 '21	0 days	1160	1174	
1174	1174	5.22.6.3.2	Shipping and Delivery of Plant to site	45 days	Feb 4 '22	Mar 20 '22	Feb 4 '22	Mar 20 '22	0 days	1173,1176FF-6		
1175	**1175**	**5.22.7**	**Site Installation Work**	**479 days**	**Apr 9 '22**	**Aug 1 '23**	**Apr 9 '22**	**Nov 10 '23**	**101 days**			
1176	1176	5.22.7.1	Tentative Civil Handover Date, Temporary Chemical Dosing (Rev. 5)	1 day	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 days	16	1168FF-60 edays	
1177	1177	5.22.7.2	Tentative Civil Handover Date, Chemical Pipe Trench (by others)	1 day	Sep 28 '22	Sep 28 '22	Sep 28 '22	Sep 28 '22	0 days	16		
1178	**1178**	**5.22.7.3**	**Commencement of E&M Installation at Temporary Chemical Dosing Syster**	**209 days**	**Apr 9 '22**	**Nov 5 '22**	**Apr 9 '22**	**Aug 22 '23**	**290 days**			
1179	1179	5.22.7.3.1	Mechanical Installations for E&M Equip. for Chemical Dosing System	179.63 edays	Apr 9 '22	Oct 6 '22	Apr 9 '22	Aug 22 '23	30 edays	16	1181	ME - D x 2~4 n
1180	1180	5.22.7.3.2	Electrical Installations for E&M Equip. for Chemical Dosing System	179.63 edays	May 9 '22	Nov 5 '22	May 9 '22	Aug 22 '23	0 edays	16	1181	EE - A x 4~6 m
1181	1181	5.22.7.4	Site Acceptance Test for E&M Equip for Chemical Dosing System	30 edays	Nov 5 '22	Dec 5 '22	Aug 22 '23	Sep 21 '23	0 edays	1179,1180	1182	
1182	1182	5.22.7.5	System Commissioning for E&M Equip for Chemical Dosing System	30 edays	Dec 5 '22	Jan 4 '23	Sep 21 '23	Oct 21 '23	0 edays	1181	1183	
1183	1183	5.22.7.6	Risk Allowances for Completion of Processing Plant at Chemical Dosing Syste	7 edays	Jan 4 '23	Jan 11 '23	Oct 21 '23	Oct 28 '23	290 eda...	1182	1525	
1184	**1184**	**5.22.7.7**	**Building Services Installations at Temp. Chemical Dosing System areas**	**180 days**	**May 15 '23**	**Nov 10 '23**	**May 4 '23**	**Nov 10 '23**	**0 days**			
1185	1185	5.22.7.7.1	Lighting and Power Distribution System, Temp. Chem	90 days	May 15 '23	Aug 12 '23	May 4 '23	Aug 1 '23	0 days	19	1189	BS - A x 4~6 m
1186	1186	5.22.7.7.2	Fire Services Installation, DG Stores, Temp. Chem	90 days	May 15 '23	Aug 12 '23	May 4 '23	Aug 1 '23	0 days	19	1482,1483,1189	FS - A x 4~6 m
1187	1187	5.22.7.7.3	Lightning Protection System, Temp. Chem	30 days	May 15 '23	Jun 13 '23	May 15 '23	Jun 13 '23	0 days	19		EE - D x 4~6 m
1188	1188	5.22.7.7.4	Mechanical Ventilation System, Temp. Chem	14 days	May 15 '23	May 28 '23	Jul 19 '23	Aug 1 '23	65 days	19	1189	MVAC - A x 4~
1189	1189	5.22.7.7.5	Testing and Commissioning of Building Services Installations, Temp. Chem	90 days	Aug 13 '23	Nov 10 '23	Aug 1 '23	Nov 10 '23	0 days	1185,1186,11		BS - C x 2~4 m
1190	**1190**	**5.23**	**Emergency Generator House, Portion B7 & B-7B (PS 6B.6.6)**	**1279 days**	**Oct 1 '20**	**Apr 1 '24**	**Oct 1 '20**	**Apr 1 '24**	**0 days**	**168**		
1191	1191	5.23.1	Planned Key Date Completion Date - KD1B, Emergency Generator House	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1195FF		
1192	1192	5.23.2	Planned Sectional Completion Date - Section 1, Emergency Generator House	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1196FF,1197F		
1193	1193	5.23.3	Planned Sectional Completion Date - Section 2, Emergency Generator House	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days	1210FF		
1194	**1194**	**5.23.4**	**Design Submissions for Emergency Generator Set**	**252 days**	**Oct 1 '20**	**Jun 10 '21**	**Oct 1 '20**	**Jun 10 '21**	**0 days**			
1195	1195	5.23.4.1	CDS081-10 - Civil and dimensional requirements drawings for Emergency Ge	90 days	Jan 1 '21	Mar 31 '21	Jan 1 '21	Mar 31 '21	0 days		1191FF	
1196	1196	5.23.4.2	CDS061 - Detailed Design for Emergency Generator Set	150 edays	Oct 1 '20	Feb 28 '21	Oct 1 '20	Feb 28 '21	0 edays		1192FF	
1197	1197	5.23.4.3	CDS034-6 - Detailed Design for Electrical Installations BS at Emergency Generator House, FS and Sprinkler Pump Room, Street Fire Hydrant Pump	90 edays	Mar 12 '21	Jun 10 '21	Mar 12 '21	Jun 10 '21	0 edays	156	1199,1204,1192	
1198	**1198**	**5.23.5**	**Manufacturing and Delivery of Plant & Materials**	**285 days**	**Jun 10 '21**	**Mar 21 '22**	**Jun 10 '21**	**Mar 21 '22**	**0 days**			
1199	1199	5.23.5.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Jun 10 '21	Feb 4 '22	Jun 10 '21	Feb 4 '22	0 days	1197	1200	
1200	1200	5.23.5.2	Shipping and Delivery of Plant to Site	45 days	Feb 5 '22	Mar 21 '22	Feb 5 '22	Mar 21 '22	0 days	1199,1202FF-6	1205	
1201	**1201**	**5.23.6**	**Site Installation Work**	**760 days**	**Dec 1 '21**	**Dec 30 '23**	**Dec 1 '21**	**Dec 30 '23**	**0 days**			
1202	1202	5.23.6.1	Tentative Civil Handover Date, Emergency Generator House (Rev. 5)	1 day	Aug 29 '22	Aug 29 '22	Aug 29 '22	Aug 29 '22	0 days	17	1200FF-60 edays	
1203	**1203**	**5.23.6.2**	**Commencement of E&M Installation at Emergency Generator House**	**760 days**	**Dec 1 '21**	**Dec 30 '23**	**Dec 1 '21**	**Dec 30 '23**	**0 days**	**17**		
1204	1204	5.23.6.2.1	Application for EPD's Approval for Installation of Diesel Engine Generator	60 days	Dec 1 '21	Jan 29 '22	Dec 1 '21	Jan 29 '22	0 days	1197	1205	
1205	1205	5.23.6.2.2	Installation and SAT of Emergency Power Generator and associated work,	60 days	Nov 1 '23	Dec 30 '23	Nov 1 '23	Dec 30 '23	0 days	1204,1200		GS - A x 4 men
1206	**1206**	**5.23.6.2.3**	**Building Services Installation at Emergency Generator House**	**30 days**	**Aug 29 '22**	**Sep 27 '22**	**Aug 29 '22**	**Sep 27 '22**	**0 days**			
1207	1207	5.23.6.2.3.1	Fire Services Installation, GH	30 days	Aug 29 '22	Sep 27 '22	Aug 29 '22	Sep 27 '22	0 days	17		FS - A x 4~6 m
1208	1208	5.23.6.2.3.2	Mechanical Ventilation System, GH	14 days	Aug 29 '22	Sep 11 '22	Aug 29 '22	Sep 11 '22	0 days	17		MVAC - A x 4~
1209	1209	5.23.6.2.3.3	Lightning Protection System, GH	15 days	Aug 29 '22	Sep 12 '22	Aug 29 '22	Sep 12 '22	0 days	17	1210	EE - D x 4~6 m
1210	1210	5.23.6.2.4	Testing and Commissioning of Building Services Installation, GH	7 days	Sep 13 '22	Sep 19 '22	Sep 13 '22	Sep 19 '22	0 days	1209	1193FF	BS - A x 4~6 m
1211	**1211**	**5.24**	**Deodorization System, DOU 1, Portion B7 & B-7B (PS 6B.2.6)**	**1583 days**	**Dec 2 '19**	**Apr 1 '24**	**Dec 2 '19**	**Apr 1 '24**	**0 days**			
1212	1212	5.24.1	Planned Key Date Completion Date - KD1B, DOU 1	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1225FF,1226F		
1213	1213	5.24.2	Planned Sectional Completion Date - Section 1, DOU 1	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1227FF		
1214	1214	5.24.3	Planned Sectional Completion Date - Section 2, DOU 1	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
1215	**1215**	**5.24.4**	**Selection of Plant and Materials**	**485 days**	**Dec 2 '19**	**Mar 30 '21**	**Dec 2 '19**	**Mar 30 '21**	**0 days**			
1216	**1216**	**5.24.4.1**	**DOU - biotrickling filter (DOU No. 1), C11, ref. EQT001**	**194 days**	**Dec 2 '19**	**Jun 12 '20**	**Dec 2 '19**	**Jun 12 '20**	**0 days**			
1217	1217	5.24.4.1.1	Submission for acceptance of purchasing package	120 days	Dec 2 '19	Mar 30 '20	Dec 2 '19	Mar 30 '20	0 days		1218	
1218	1218	5.24.4.1.2	Invitation of quotations for purchasing package	60 days	Mar 31 '20	May 29 '20	Mar 31 '20	May 29 '20	0 days	1217	1219	
1219	1219	5.24.4.1.3	Acceptance of conforming quotation (Completed)	14 days	May 30 '20	Jun 12 '20	May 30 '20	Jun 12 '20	0 days	1218	1227	
1220	**1220**	**5.24.4.2**	**DOU - FRP air ductwork, C11, EQT047**	**120 days**	**Dec 1 '20**	**Mar 30 '21**	**Dec 1 '20**	**Mar 30 '21**	**0 days**			
1221	1221	5.24.4.2.1	Submission for acceptance of purchasing package	60 days	Dec 1 '20	Jan 29 '21	Dec 1 '20	Jan 29 '21	0 days		1222	
1222	1222	5.24.4.2.2	Invitation of quotations for purchasing package	30 days	Jan 30 '21	Feb 28 '21	Jan 30 '21	Feb 28 '21	0 days	1221	1223	
1223	1223	5.24.4.2.3	Acceptance of conforming quotation	30 days	Mar 1 '21	Mar 30 '21	Mar 1 '21	Mar 30 '21	0 days	1222	1227	
1224	**1224**	**5.24.5**	**Design Submissions for DOU No. 1**	**359 days**	**Jul 15 '20**	**Jul 8 '21**	**Jul 15 '20**	**Jul 8 '21**	**0 days**			



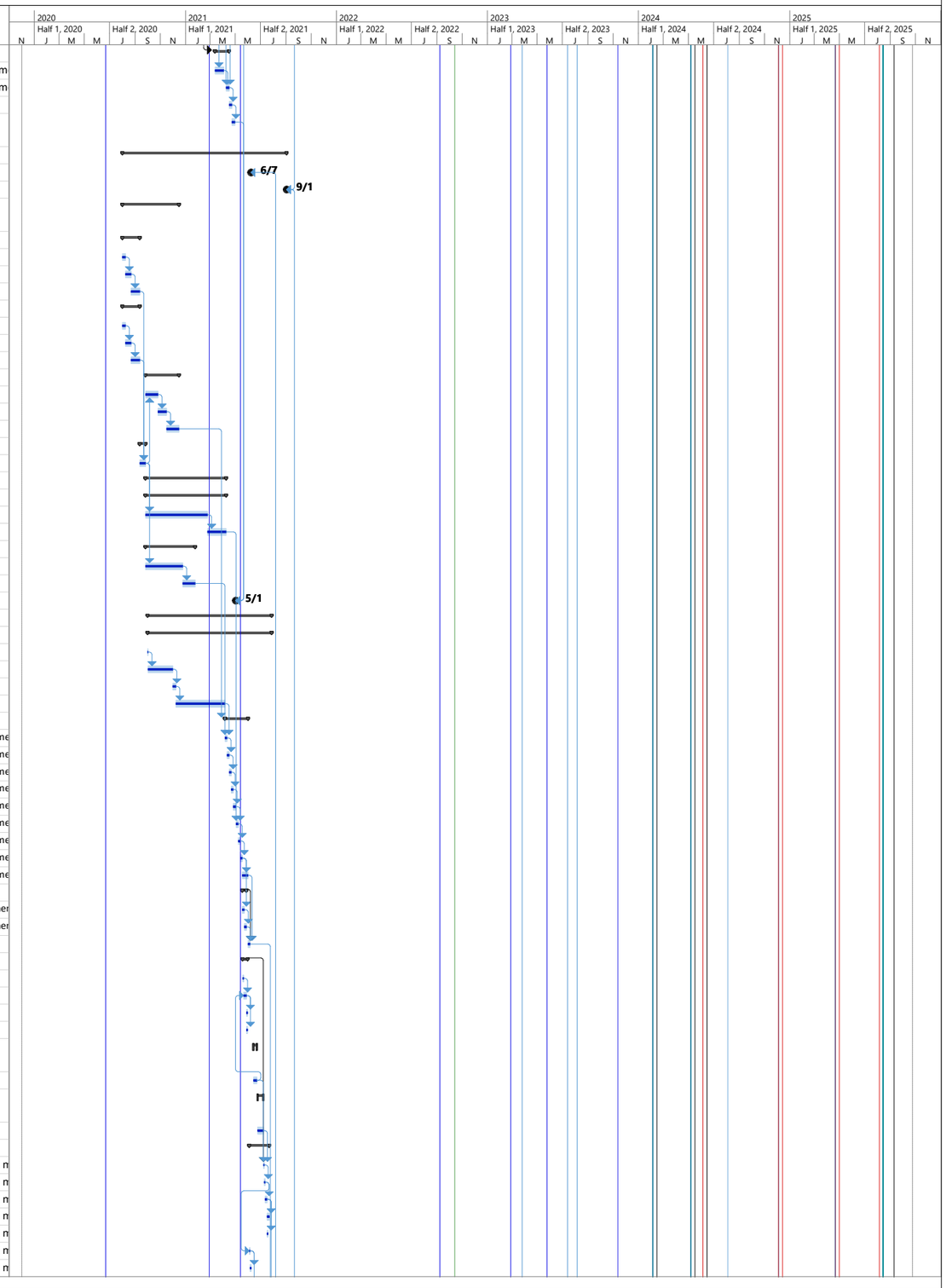
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1225	1225	5.24.5.1	Electrical schematic drawings for Deodorisation Systems	90 days	Jul 15 '20	Oct 12 '20	Jul 15 '20	Oct 12 '20	0 days		1212FF	
1226	1226	5.24.5.2	CDS081-7 - Civil and dimensional requirements drawings for DOU No. 1	70 days	Aug 28 '20	Nov 5 '20	Aug 28 '20	Nov 5 '20	0 days		1212FF	
1227	1227	5.24.5.3	CDS007-1 - Detailed Design for Deodorisation System, DOU No. 1	100 edays	Mar 30 '21	Jul 8 '21	Mar 30 '21	Jul 8 '21	0 edays	1219,1223	1230,1233,1213	
1228	**1228**	**5.24.6**	**Manufacturing and Delivery of Plant & Materials**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1229	**1229**	**5.24.6.1**	**DOU 1**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1230	1230	5.24.6.1.1	Manufacturing and Factory Acceptance Test of Plant	240 days	Jul 9 '21	Mar 5 '22	Jul 9 '21	Mar 5 '22	0 days	1227	1231	
1231	1231	5.24.6.1.2	Shipping and Delivery of Plant to site	45 days	Mar 20 '22	May 18 '23	Mar 20 '22	May 10 '23	0 days	1230,1236SS-(	1239	
1232	**1232**	**5.24.6.2**	**FRP Air Ductwork**	**679 days**	**Jul 9 '21**	**May 18 '23**	**Jul 9 '21**	**May 10 '23**	**0 days**			
1233	1233	5.24.6.2.1	Manufacturing and Factory Acceptance Test of Plant	200 days	Jul 9 '21	Jan 24 '22	Jul 9 '21	Jan 24 '22	0 days	1227	1234	
1234	1234	5.24.6.2.2	Shipping and Delivery of Plant to Site	45 days	Mar 20 '22	May 18 '23	Mar 20 '22	May 10 '23	0 days	1233,1236SS-(	1239	
1235	**1235**	**5.24.7**	**Site Installation Work**	**171 days**	**May 31 '23**	**Nov 18 '23**	**May 10 '23**	**Oct 28 '23**	**0 days**			
1236	1236	5.24.7.1	Tentative Civil Handover, DOU 1 (Rev. 5)	1 day	Jul 15 '23	Jul 15 '23	Jun 23 '23	Jun 23 '23	0 days	20	1239FF+45 days,	
1237	1237	5.24.7.2	Tentative Civil Handover Date, underground air pipework for DOU 1 (by oth	1 day	Jul 15 '23	Jul 15 '23	Jun 23 '23	Jun 23 '23	0 days	20	1239FF+45 days	
1238	**1238**	**5.24.7.3**	**Commencement of E&M Installation at DOU 1**	**171 days**	**May 31 '23**	**Nov 18 '23**	**May 10 '23**	**Oct 28 '23**	**0 days**			
1239	1239	5.24.7.3.1	Mechanical Installations for DOU 1	90 edays	May 31 '23	Aug 29 '23	May 10 '23	Aug 8 '23	0 edays	1237FF+45 da	1240SS+30 eday	ME - F x 4~6 m
1240	1240	5.24.7.3.2	Electrical Installations for DOU 1	90 edays	Jun 30 '23	Sep 28 '23	Jun 9 '23	Sep 7 '23	0 edays	1239SS+30 ed	1242,1241	EE - C x 4~6 m
1241	1241	5.24.7.3.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.	30 days	Sep 29 '23	Oct 28 '23	Sep 29 '23	Oct 28 '23	0 days	1239,1240		
1242	1242	5.24.7.3.4	Site Acceptance Test for DOU1	30 edays	Sep 28 '23	Oct 28 '23	Sep 7 '23	Oct 7 '23	0 edays	1239,1240	1243	
1243	1243	5.24.7.3.5	System Commissioning for DOU 1	21 edays	Oct 28 '23	Nov 18 '23	Oct 7 '23	Oct 28 '23	0 edays	1242	1525	
1244	**1244**	**5.25**	**Deodorization System, DOU 3A, Portion B7 & B-7B (PS 6B.2.6)**	**1313 days**	**Aug 28 '20**	**Apr 1 '24**	**Aug 28 '20**	**Apr 1 '24**	**0 days**			
1245	1245	5.25.1	Planned Key Date Completion Date - KD1B, DOU 3A	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1249FF		
1246	1246	5.25.2	Planned Sectional Completion Date - Section 1, DOU 3A	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1250FF		
1247	1247	5.25.3	Planned Sectional Completion Date - Section 2, DOU 3A	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
1248	**1248**	**5.25.4**	**Design Submissions for DOU No. 3A**	**234 days**	**Aug 28 '20**	**Apr 19 '21**	**Aug 28 '20**	**Apr 19 '21**	**0 days**			
1249	1249	5.25.4.1	CDS081-8 - Civil and dimensional requirements drawings for DOU No. 3A	200 days	Aug 28 '20	Mar 15 '21	Aug 28 '20	Mar 15 '21	0 days		1245FF	
1250	1250	5.25.4.2	CDS007-3 - Detailed Design for Deodorisation System, DOU No. 3A	200 edays	Oct 1 '20	Apr 19 '21	Oct 1 '20	Apr 19 '21	0 edays		1246FF,1253,125	
1251	**1251**	**5.25.5**	**Manufacturing and Delivery of Plant & Materials**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1252	**1252**	**5.25.5.1**	**DOU 3A**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1253	1253	5.25.5.1.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Oct 16 '21	0 edays	1250	1254	
1254	1254	5.25.5.1.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Nov 30 '21	0 edays	1253		
1255	**1255**	**5.25.5.2**	**FRP Air Ductwork**	**225 days**	**Apr 19 '21**	**Nov 30 '21**	**Apr 19 '21**	**Nov 30 '21**	**0 days**			
1256	1256	5.25.5.2.1	Manufacturing and Factory Acceptance Test of Plant	180 edays	Apr 19 '21	Oct 16 '21	Apr 19 '21	Oct 16 '21	0 edays	1250	1257	
1257	1257	5.25.5.2.2	Shipping and Delivery of Plant to Site	45 edays	Oct 16 '21	Nov 30 '21	Oct 16 '21	Nov 30 '21	0 edays	1256		
1258	1258	5.25.6	Tentative Civil Handover, DOU 3A (Rev. 5)	1 day	Jun 24 '22	Jun 24 '22	Jun 24 '22	Jun 24 '22	0 days	16	1261	
1259	**1259**	**5.25.7**	**Site Installation Work**	**226 days**	**Nov 30 '21**	**Jul 14 '22**	**Nov 30 '21**	**Jul 14 '22**	**0 days**			
1260	**1260**	**5.25.7.1**	**Commencement of E&M Installation at DOU 3A**	**150 days**	**Nov 30 '21**	**Apr 28 '22**	**Nov 30 '21**	**Apr 28 '22**	**0 days**			
1261	1261	5.25.7.1.1	Mechanical Installations for DOU 3A	120 edays	Nov 30 '21	Mar 30 '22	Nov 30 '21	Mar 30 '22	0 edays	1258	1262SS+30 eday	ME - F x 4~6 m
1262	1262	5.25.7.1.2	Electrical Installations for DOU 3A	90 edays	Dec 30 '21	Mar 30 '22	Dec 30 '21	Mar 30 '22	0 edays	1261SS+30 ed	1264,1263	EE - D x 4~6 m
1263	1263	5.25.7.1.3	Installation of FRP covers, walkways, platforms and ladders, EQT050 (Rev.	30 days	Mar 30 '22	Apr 28 '22	Mar 30 '22	Apr 28 '22	0 days	1261,1262		
1264	1264	5.25.7.2	Site Acceptance Test for E&M Equip for DOU 3A	30 edays	Mar 30 '22	Apr 29 '22	Mar 30 '22	Apr 29 '22	0 edays	1261,1262	1265	
1265	1265	5.25.7.3	System Commissioning Test for DOU 3A	76 edays	Apr 29 '22	Jul 14 '22	Apr 29 '22	Jul 14 '22	0 edays	1264		
1266	**1266**	**5.26**	**Flowmeter and Valve Chambers, Portion B7 & B-7B (PS 6B.2.13)**	**1278 days**	**Nov 1 '20**	**May 1 '24**	**Nov 1 '20**	**May 1 '24**	**0 days**			
1267	1267	5.26.1	Planned Key Date Completion Date - KD1B, Chambers	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1272FF		
1268	1268	5.26.2	Planned Sectional Completion Date - Section 1, Chambers	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1273FF		
1269	1269	5.26.3	Planned Sectional Completion Date - Section 2, Chambers	0 days	Apr 1 '24	Apr 1 '24	Apr 1 '24	Apr 1 '24	0 days			
1270	1270	5.26.4	Planned Sectional Completion Date - Section 4, Chambers	0 days	May 1 '24	May 1 '24	May 1 '24	May 1 '24	0 days			
1271	**1271**	**5.26.5**	**Design Submissions for Valve and Flowmeter Chambers**	**210 days**	**Nov 1 '20**	**May 29 '21**	**Nov 1 '20**	**May 29 '21**	**0 days**			
1272	1272	5.26.5.1	CDS081-9 - Civil and dimensional requirements drawings for Valve and Flowmeter Chambers	90 days	Mar 1 '21	May 29 '21	Mar 1 '21	May 29 '21	0 days		1267FF	
1273	1273	5.26.5.2	CDS018 - Detailed Design for Flowmeter and Valve Chambers	90 edays	Nov 1 '20	Jan 30 '21	Nov 1 '20	Jan 30 '21	0 edays		1275,1268FF	
1274	**1274**	**5.26.6**	**Manufacturing and Delivery of Plant & Materials**	**225 days**	**Jan 30 '21**	**Sep 11 '21**	**Jan 30 '21**	**Sep 11 '21**	**0 days**			
1275	1275	5.26.6.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Jan 30 '21	Jul 28 '21	Jan 30 '21	Jul 28 '21	0 days	1273	1276	
1276	1276	5.26.6.2	Shipping and Delivery of Plant to Site	45 days	Jul 29 '21	Sep 11 '21	Jul 29 '21	Sep 11 '21	0 days	1275	1280	
1277	1277	5.26.7	Tentative Civil Handover, Chambers (Rev. 5)	1 day	Sep 15 '23	Sep 15 '23	Sep 15 '23	Sep 15 '23	0 days	21,22		
1278	**1278**	**5.26.8**	**Site Installation Work**	**150 days**	**Sep 12 '21**	**Feb 8 '22**	**Sep 12 '21**	**Feb 8 '22**	**0 days**			
1279	**1279**	**5.26.8.1**	**Commencement of Valves and Flowmeters Installation at Chambers**	**150 days**	**Sep 12 '21**	**Feb 8 '22**	**Sep 12 '21**	**Feb 8 '22**	**0 days**			
1280	1280	5.26.8.1.1	Installation of valves and flowmeters	90 days	Sep 12 '21	Dec 10 '21	Sep 12 '21	Dec 10 '21	0 days	1276	1281	ME - C x 4~6 m
1281	1281	5.26.8.1.2	cables laying and terminations	60 days	Dec 11 '21	Feb 8 '22	Dec 11 '21	Feb 8 '22	0 days	1280	1525	EE - A x 4~6 m
1282	**1282**	**5.27**	**Underground Pipework, Modification and Connection Works, Portion B-9B (PS 6B.2.22)**	**1699 days**	**Mar 1 '21**	**Oct 24 '25**	**Mar 1 '21**	**May 1 '24**	**0 days**			
1283	1283	5.27.1	Planned Key Date Completion Date - KD1B, UU	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1287FF		
1284	1284	5.27.2	Planned Sectional Completion Date - Section 1, Underground Pipework	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1288FF		
1285	1285	5.27.3	Planned Sectional Completion Date - Section 4, Underground Pipework	0 days	May 1 '24	May 1 '24	May 1 '24	May 1 '24	0 days	1298FF		
1286	**1286**	**5.27.4**	**Design Submissions**	**90 days**	**Mar 1 '21**	**May 30 '21**	**Mar 1 '21**	**May 30 '21**	**0 days**			
1287	1287	5.27.4.1	CDS015 - Detailed Design for Underground Pipework Modification and Connection with the existing Bioreactor 1, 3 & 4 (Rev. 8)	90 edays	Mar 1 '21	May 30 '21	Mar 1 '21	May 30 '21	0 edays	194	1283FF	
1288	1288	5.27.4.2	CDS016 - Detailed Design for Temporary Pumping System for maintaining the existing bioreactors 1, 3 and 4 operation (Rev. 8)	50 edays	Mar 1 '21	Apr 20 '21	Mar 1 '21	Apr 20 '21	0 edays		1290,1284FF	
1289	**1289**	**5.27.5**	**Manufacturing and Delivery of Plant & Materials**	**1079 days**	**Apr 20 '21**	**Apr 2 '24**	**Apr 20 '21**	**Mar 12 '24**	**0 days**			
1290	1290	5.27.5.1	Manufacturing and Factory Acceptance Test of Plant	180 days	Apr 20 '21	Oct 16 '21	Apr 20 '21	Oct 16 '21	0 days	1288	1291	
1291	1291	5.27.5.2	Shipping and Delivery of Plant to Site	45 days	Feb 18 '24	Apr 2 '24	Jan 28 '24	Mar 12 '24	0 days	1290,1292SS-(	1296	
1292	1292	5.27.6	Tentative Civil Handover, Road (Rev. 5)	1 day	Apr 18 '24	Apr 18 '24	Feb 1 '24	Feb 1 '24	0 days		1291SS-60 edays	



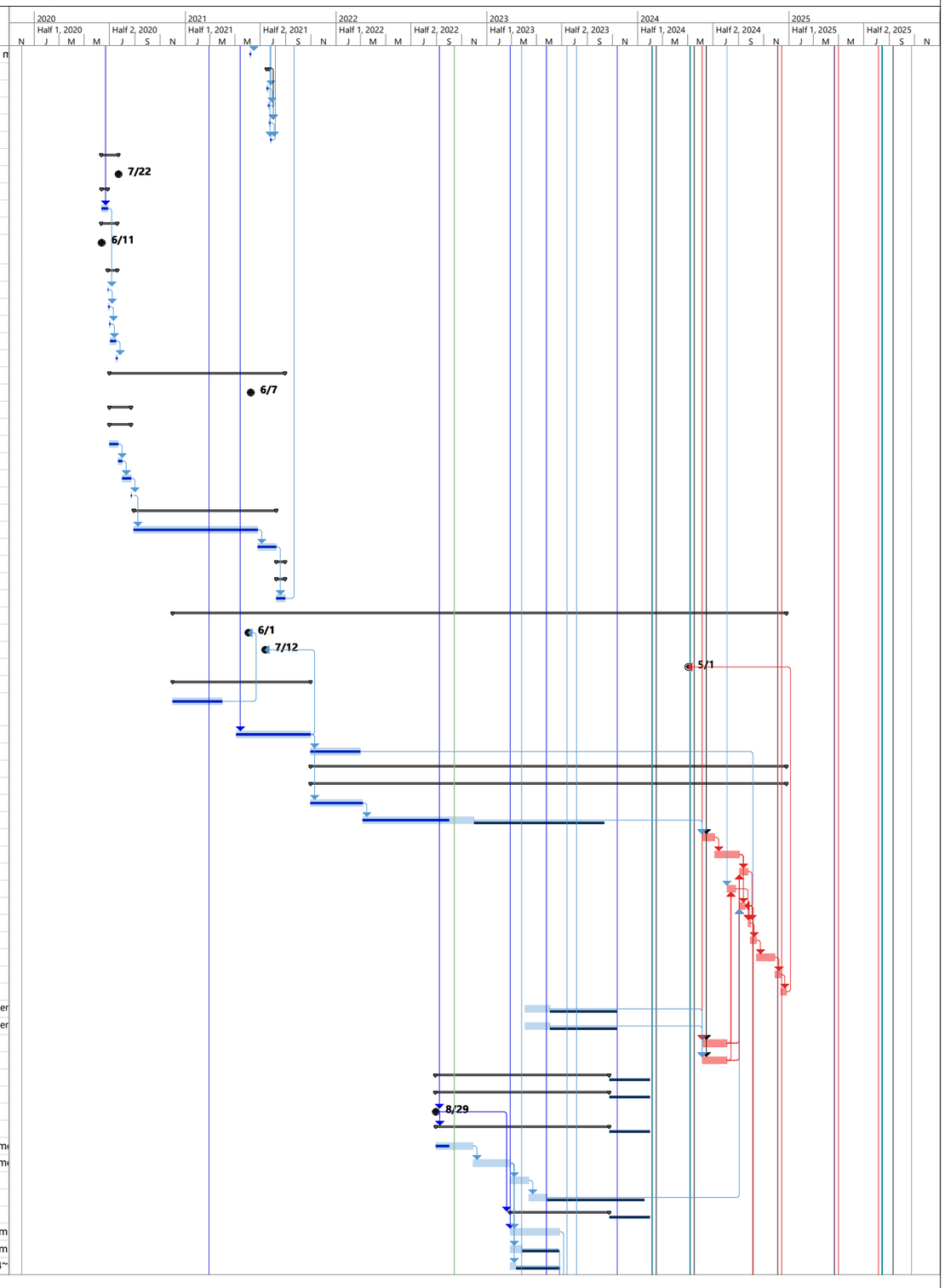
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1293	**1293**	**5.27.7**	**Site Installation**	**90 days**	**Jul 27 '25**	**Oct 24 '25**	**Feb 2 '24**	**May 1 '24**	**0 days**			
1294	**1294**	**5.27.7.1**	**Commencement of underground pipework modification and connection works**	**90 days**	**Jul 27 '25**	**Oct 24 '25**	**Feb 2 '24**	**May 1 '24**	**0 days**	**1527**		
1295	1295	5.27.7.1.1	Temporary Flow Diversion and Road Excavation Work	40 days	Jul 27 '25	Sep 4 '25	Feb 2 '24	Mar 12 '24	0 days	1292	1296	
1296	1296	5.27.7.1.2	Pipe Laying and connection works	40 days	Sep 5 '25	Oct 14 '25	Mar 13 '24	Apr 21 '24	0 days	1295,1291	1297	
1297	1297	5.27.7.1.3	Pressure Tests	7 days	Oct 15 '25	Oct 21 '25	Apr 22 '24	Apr 28 '24	0 days	1296	1298	
1298	1298	5.27.7.1.4	Make Good (Section 2 Completion)	3 days	Oct 22 '25	Oct 24 '25	Apr 29 '24	May 1 '24	0 days	1297	1285FF	
1299	**1299**	**5.28**	**Temporary Filtrate Lifting Well and Eq. Tank, Portion B-3B (PS 6B.2.16)**	**450 days**	**Mar 2 '20**	**May 25 '21**	**Mar 2 '20**	**May 25 '21**	**0 days**			
1300	**1300**	**5.28.1**	**Selection of Suppliers for major plant and materials and Civil Subcontractor for Temporary Filtrate Lifting Well and Eq. Tank**	**196 days**	**Mar 2 '20**	**Sep 13 '20**	**Mar 2 '20**	**Sep 13 '20**	**0 days**			
1301	**1301**	**5.28.1.1**	**Mis - filtrate lift pumps and filtrate transfer pumps, C11, ref. EQT011**	**73 days**	**Mar 2 '20**	**May 13 '20**	**Mar 2 '20**	**May 13 '20**	**0 days**			
1302	1302	5.28.1.1.1	Submission for acceptance of purchasing package	29 days	Mar 2 '20	Mar 30 '20	Mar 2 '20	Mar 30 '20	0 days		1303	
1303	1303	5.28.1.1.2	Invitation of quotations for purchasing package	30 days	Mar 31 '20	Apr 29 '20	Mar 31 '20	Apr 29 '20	0 days	1302	1304	
1304	1304	5.28.1.1.3	Acceptance of conforming quotation and acceptance for Manufacture (Complete	14 days	Apr 30 '20	May 13 '20	Apr 30 '20	May 13 '20	0 days	1303	1323,1326	
1305	**1305**	**5.28.1.2**	**Mis - Instrumentations**	**73 days**	**Mar 2 '20**	**May 13 '20**	**Mar 2 '20**	**May 13 '20**	**0 days**			
1306	1306	5.28.1.2.1	Submission for acceptance of purchasing package	29 days	Mar 2 '20	Mar 30 '20	Mar 2 '20	Mar 30 '20	0 days		1307	
1307	1307	5.28.1.2.2	Invitation of quotations for purchasing package	30 days	Mar 31 '20	Apr 29 '20	Mar 31 '20	Apr 29 '20	0 days	1306	1308	
1308	1308	5.28.1.2.3	Acceptance of conforming quotation and acceptance for Manufacture (Completed)	14 days	Apr 30 '20	May 13 '20	Apr 30 '20	May 13 '20	0 days	1307	1323,1329	
1309	**1309**	**5.28.1.3**	**Mis - Pipework (To be provided by Mechanical Sub-Contactor)**	**42 days**	**Aug 3 '20**	**Sep 13 '20**	**Aug 3 '20**	**Sep 13 '20**	**0 days**			
1310	1310	5.28.1.3.1	Submission for acceptance of purchasing package	7 days	Aug 3 '20	Aug 9 '20	Aug 3 '20	Aug 9 '20	0 days		1311	
1311	1311	5.28.1.3.2	Invitation of quotations for purchasing package	14 days	Aug 10 '20	Aug 23 '20	Aug 10 '20	Aug 23 '20	0 days	1310	1312	
1312	1312	5.28.1.3.3	Acceptance of conforming quotation and acceptance for Manufacture (Completed)	21 days	Aug 24 '20	Sep 13 '20	Aug 24 '20	Sep 13 '20	0 days	1311	1323,1332	
1313	**1313**	**5.28.1.4**	**Mis - Valve (To be provided by Mechanical Sub-Contractor)**	**42 days**	**Aug 3 '20**	**Sep 13 '20**	**Aug 3 '20**	**Sep 13 '20**	**0 days**			
1314	1314	5.28.1.4.1	Submission for acceptance of purchasing package	7 days	Aug 3 '20	Aug 9 '20	Aug 3 '20	Aug 9 '20	0 days		1315	
1315	1315	5.28.1.4.2	Invitation of quotations for purchasing package	14 days	Aug 10 '20	Aug 23 '20	Aug 10 '20	Aug 23 '20	0 days	1314	1316	
1316	1316	5.28.1.4.3	Acceptance of conforming quotation and acceptance for Manufacture (Completed)	21 days	Aug 24 '20	Sep 13 '20	Aug 24 '20	Sep 13 '20	0 days	1315	1323,1335	
1317	**1317**	**5.28.1.5**	**Civil Work Subletting Package (Repeated WBS 5.13.17)**	**19 days**	**Jul 14 '20**	**Aug 1 '20**	**Jul 14 '20**	**Aug 1 '20**	**0 days**			
1318	1318	5.28.1.5.1	Submission for acceptance of subletting package	3 days	Jul 14 '20	Jul 16 '20	Jul 14 '20	Jul 16 '20	0 days		1319	
1319	1319	5.28.1.5.2	Invitation of tender for subletting package	14 days	Jul 17 '20	Jul 30 '20	Jul 17 '20	Jul 30 '20	0 days	1318	1320	
1320	1320	5.28.1.5.3	Acceptance of conforming quotation and acceptance for Manufacture	2 days	Jul 31 '20	Aug 1 '20	Jul 31 '20	Aug 1 '20	0 days	1319	1326,1329,1332,	
1321	**1321**	**5.28.2**	**Design Submissions for Temporary Filtrate Lifting Well and Eq. Tank**	**34 days**	**Sep 1 '20**	**Oct 4 '20**	**Sep 1 '20**	**Oct 4 '20**	**0 days**			
1322	1322	5.28.2.1	CDS050-5 - Detailed Design for Lifting Appliances - Temp. Filtrate Eq. System, Existing Sludge Press House	30 edays	Sep 1 '20	Oct 1 '20	Sep 1 '20	Oct 1 '20	0 edays	131	1351	
1323	1323	5.28.2.2	Design submission for E&M Installation works for temp. filtrate eq. system	21 days	Sep 14 '20	Oct 4 '20	Sep 14 '20	Oct 4 '20	0 days	1304,1308,13	1325,1331,1328,	
1324	**1324**	**5.28.3**	**Manufacturing and Delivery of Plant & Materials**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**			
1325	**1325**	**5.28.3.1**	**Filtrate Lift Pumps and Filtrate Transfer Pump, EQT011**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1323**		
1326	1326	5.28.3.1.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Oct 5 '20	Feb 1 '21	Oct 5 '20	Feb 1 '21	0 days	1320,1304	1327	
1327	1327	5.28.3.1.2	Shipping and Delivery of Plant to site (Delivered)	45 days	Feb 2 '21	Mar 18 '21	Feb 2 '21	Mar 18 '21	0 days	1326	1356	
1328	**1328**	**5.28.3.2**	**Instrumentations**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1323**		
1329	1329	5.28.3.2.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Oct 5 '20	Feb 1 '21	Oct 5 '20	Feb 1 '21	0 days	1320,1308	1330	
1330	1330	5.28.3.2.2	Shipping and Delivery of Plant to site	45 days	Feb 2 '21	Mar 18 '21	Feb 2 '21	Mar 18 '21	0 days	1329	1357	
1331	**1331**	**5.28.3.3**	**Pipework**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1323**		
1332	1332	5.28.3.3.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Oct 5 '20	Feb 1 '21	Oct 5 '20	Feb 1 '21	0 days	1320,1312	1333	
1333	1333	5.28.3.3.2	Shipping and Delivery of Plant to site	45 days	Feb 2 '21	Mar 18 '21	Feb 2 '21	Mar 18 '21	0 days	1332	1355	
1334	**1334**	**5.28.3.4**	**Valve**	**165 days**	**Oct 5 '20**	**Mar 18 '21**	**Oct 5 '20**	**Mar 18 '21**	**0 days**	**1323**		
1335	1335	5.28.3.4.1	Manufacturing and Factory Acceptance Test of Plant	120 days	Oct 5 '20	Feb 1 '21	Oct 5 '20	Feb 1 '21	0 days	1320,1316	1336	
1336	1336	5.28.3.4.2	Shipping and Delivery of Plant to site	45 days	Feb 2 '21	Mar 18 '21	Feb 2 '21	Mar 18 '21	0 days	1335	1355	
1337	**1337**	**5.28.4**	**Site Installation Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1338	**1338**	**5.28.4.1**	**Commencement of Civil Construction and E&M Installation at Temp. Filtrate Lifting Well and Eq. Tank**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1339	**1339**	**5.28.4.1.1**	**Civil Construction Work**	**297 days**	**Aug 1 '20**	**May 25 '21**	**Aug 1 '20**	**May 25 '21**	**0 days**			
1340	1340	5.28.4.1.1.1	Civil on-site survey and report submission for acceptance	5 edays	Aug 1 '20	Aug 6 '20	Aug 1 '20	Aug 6 '20	0 edays	1320	1341,1342	
1341	1341	5.28.4.1.1.2	Civil structural design and drawing submission for acceptance	30 days	Aug 7 '20	Sep 5 '20	Aug 7 '20	Sep 5 '20	0 days	1340	1343	
1342	1342	5.28.4.1.1.3	Site Clearance, UU diversion and construction of U-channel	21 days	Aug 7 '20	Aug 27 '20	Aug 7 '20	Aug 27 '20	0 days	1340	1343	
1343	1343	5.28.4.1.1.4	ELS (Sheeting and Excavation)	60 days	Sep 6 '20	Nov 4 '20	Sep 6 '20	Nov 4 '20	0 days	1342,1341	1344	
1344	1344	5.28.4.1.1.5	Grouting Works	60 days	Nov 5 '20	Jan 3 '21	Nov 5 '20	Jan 3 '21	0 days	1343	1345	
1345	1345	5.28.4.1.1.6	RC structure works including cast-in items	60 days	Jan 4 '21	Mar 4 '21	Jan 4 '21	Mar 4 '21	0 days	1344	1354,1351,1346	
1346	1346	5.28.4.1.1.7	Removal Formwork and Flasework	8 days	Mar 5 '21	Mar 12 '21	Mar 5 '21	Mar 12 '21	0 days	1345	1351,1352,1355,	
1347	1347	5.28.4.1.1.8	Waterproofing	14 days	Mar 13 '21	Mar 26 '21	Mar 13 '21	Mar 26 '21	0 days	1346	1348	
1348	1348	5.28.4.1.1.9	Other architectual works and finishing works	60 days	Mar 27 '21	May 25 '21	Mar 27 '21	May 25 '21	0 days	1347	1365FF	
1349	**1349**	**5.28.4.1.2**	**E&M Installation Work**	**34 days**	**Mar 13 '21**	**Apr 15 '21**	**Mar 13 '21**	**Apr 15 '21**	**0 days**			
1350	**1350**	**5.28.4.1.2.**	**Installation of Lifting Appliances at Temporary Filtrate Lifting Well and Eq. Tank**	**10 days**	**Mar 13 '21**	**Mar 22 '21**	**Mar 13 '21**	**Mar 22 '21**	**0 days**			
1351	1351	5.28.4.1.2.1	GF MR LA-09-01 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1345,1322,13	1353	LA - A x 4~6 m
1352	1352	5.28.4.1.2.2	GF MR LA-09-02 SWL 1t	7 days	Mar 13 '21	Mar 19 '21	Mar 13 '21	Mar 19 '21	0 days	1346	1353	LA - A x 4~6 m
1353	1353	5.28.4.1.2.3	Site Acceptance test and loading test of LA	3 days	Mar 20 '21	Mar 22 '21	Mar 20 '21	Mar 22 '21	0 days	1351,1352	1388FF	LA - A x 4~6 m
1354	**1354**	**5.28.4.1.2.**	**Mechanical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**21 days**	**Mar 19 '21**	**Apr 8 '21**	**Mar 19 '21**	**Apr 8 '21**	**0 days**	**1345**	**1358FS-30 days**	
1355	1355	5.28.4.1.2.2	Installation of pipework, chemical pipework and valves, EQT036	14 days	Mar 19 '21	Apr 1 '21	Mar 19 '21	Apr 1 '21	0 days	1346,1333,13	1356	ME - A x 4~6 m
1356	1356	5.28.4.1.2.2	Installation of pumps	7 days	Apr 2 '21	Apr 8 '21	Apr 2 '21	Apr 8 '21	0 days	1355,1327	1360	ME - A x 4~6 m
1357	1357	5.28.4.1.2.2	Installation of instrumentations, EQT035-3	7 days	Mar 19 '21	Mar 25 '21	Mar 19 '21	Mar 25 '21	0 days	1346,1330	1360	ME - A x 4~6 m



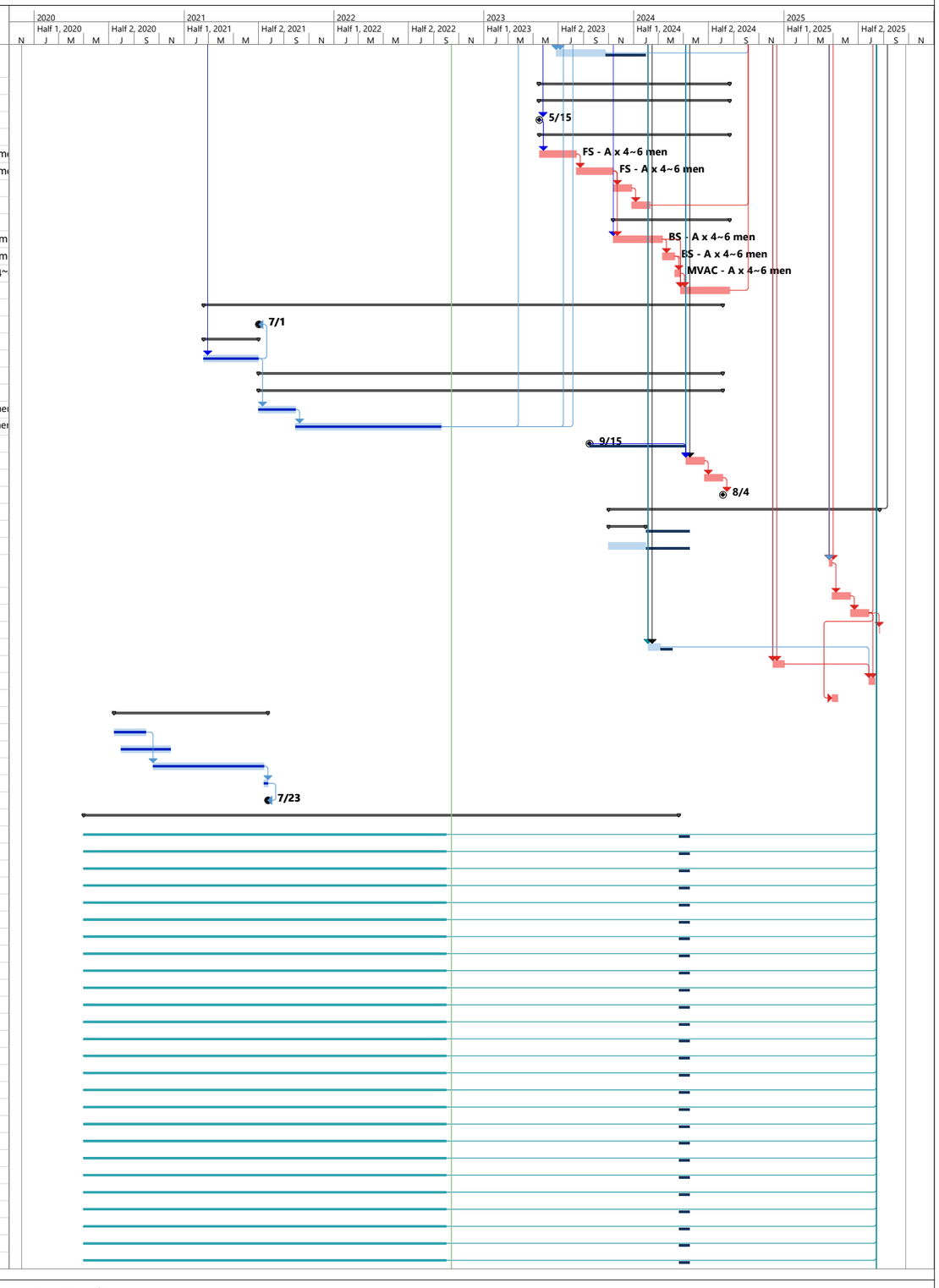
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1358	**1358**	**5.28.4.1.2.**	**Electrical Installations for Temp. Filtrate Lifting Well and Eq. Tank**	**34 days**	**Mar 13 '21**	**Apr 15 '21**	**Mar 13 '21**	**Apr 15 '21**	**0 days**	**1354FS-30 day**		
1359	1359	5.28.4.1.2.3	Installation of cable trays and cable containments	21 days	Mar 13 '21	Apr 2 '21	Mar 13 '21	Apr 2 '21	0 days	1346	1360	EE - A x 4~6 m
1360	1360	5.28.4.1.2.3	Cables laying and terminations	7 days	Apr 9 '21	Apr 15 '21	Apr 9 '21	Apr 15 '21	0 days	1359,1356,135	1361	EE - A x 4~6 m
1361	1361	5.28.4.1.3	Site Acceptance Test for E&M Equip at Filtrate Lifting Well and Eq. Tank	7 days	Apr 16 '21	Apr 22 '21	Apr 16 '21	Apr 22 '21	0 days	1360	1362	
1362	1362	5.28.4.1.4	System Commissioning for E&M Equip at Temp. Filtrate Lifting Well and Eq. Tank	7 days	Apr 23 '21	Apr 29 '21	Apr 23 '21	Apr 29 '21	0 days	1361	1388FF	
1363	**1363**	**5.29**	**Existing PST No. 4 and No. 6, Portion B-3A (PS 6B.2.15)**	**397 days**	**Aug 1 '20**	**Sep 1 '21**	**Aug 1 '20**	**Sep 1 '21**	**0 days**			
1364	1364	5.29.1	Planned Key Date Completion Date - KD3B	0 days	Jun 7 '21	Jun 7 '21	Jun 7 '21	Jun 7 '21	0 days	1431FF		
1365	1365	5.29.2	Planned Sectional Completion Date - Section 3, PST No. 4 and No. 6	0 days	Sep 1 '21	Sep 1 '21	Sep 1 '21	Sep 1 '21	0 days	1348FF,1457F		
1366	**1366**	**5.29.3**	**Selection of Suppliers for major plant and materials and Subcontractor for PST No. 4 and No. 6**	**137 days**	**Aug 1 '20**	**Dec 15 '20**	**Aug 1 '20**	**Dec 15 '20**	**0 days**			
1367	**1367**	**5.29.3.1**	**Mis - Rotating Bridge Scrapers and associated materials, C11, ref. EQT037-1**	**42 days**	**Aug 1 '20**	**Sep 11 '20**	**Aug 1 '20**	**Sep 11 '20**	**0 days**			
1368	1368	5.29.3.1.1	Submission for acceptance of purchasing package	7 days	Aug 1 '20	Aug 7 '20	Aug 1 '20	Aug 7 '20	0 days		1369	
1369	1369	5.29.3.1.2	Invitation of quotations for purchasing package	14 days	Aug 8 '20	Aug 21 '20	Aug 8 '20	Aug 21 '20	0 days	1368	1370	
1370	1370	5.29.3.1.3	Acceptance of conforming quotation (Completed)	21 days	Aug 22 '20	Sep 11 '20	Aug 22 '20	Sep 11 '20	0 days	1369	1380	
1371	**1371**	**5.29.3.2**	**Mis - Pipework, C11, ref. EQT037-2**	**42 days**	**Aug 1 '20**	**Sep 11 '20**	**Aug 1 '20**	**Sep 11 '20**	**0 days**			
1372	1372	5.29.3.2.1	Submission for acceptance of purchasing package	7 days	Aug 1 '20	Aug 7 '20	Aug 1 '20	Aug 7 '20	0 days		1373	
1373	1373	5.29.3.2.2	Invitation of quotations for purchasing package	14 days	Aug 8 '20	Aug 21 '20	Aug 8 '20	Aug 21 '20	0 days	1372	1374	
1374	1374	5.29.3.2.3	Acceptance of conforming quotation (Completed)	21 days	Aug 22 '20	Sep 11 '20	Aug 22 '20	Sep 11 '20	0 days	1373	1380	
1375	**1375**	**5.29.3.3**	**Subletting of Electrical and Mechanical Installation Work w/ supply of LCP**	**81 days**	**Sep 26 '20**	**Dec 15 '20**	**Sep 26 '20**	**Dec 15 '20**	**0 days**			
1376	1376	5.29.3.3.1	Submission for Subletting Package	30 days	Sep 26 '20	Oct 25 '20	Sep 26 '20	Oct 25 '20	0 days	1380	1377	
1377	1377	5.29.3.3.2	Invitation to tender	21 days	Oct 26 '20	Nov 15 '20	Oct 26 '20	Nov 15 '20	0 days	1376	1378	
1378	1378	5.29.3.3.3	Acceptance of conforming tender (Completed)	30 days	Nov 16 '20	Dec 15 '20	Nov 16 '20	Dec 15 '20	0 days	1377	1395	
1379	**1379**	**5.29.4**	**Design Submissions**	**14 days**	**Sep 12 '20**	**Sep 25 '20**	**Sep 12 '20**	**Sep 25 '20**	**0 days**			
1380	1380	5.29.4.1	Design submissions for retrofitting the existing PST No. 4 and No. 6	14 days	Sep 12 '20	Sep 25 '20	Sep 12 '20	Sep 25 '20	0 days	1370,1374	1383,1386,1376	
1381	**1381**	**5.29.5**	**Manufacturing and Delivery of Plant & Materials**	**195 days**	**Sep 26 '20**	**Apr 8 '21**	**Sep 26 '20**	**Apr 8 '21**	**0 days**			
1382	**1382**	**5.29.5.1**	**Rotating Bridge Scrapers and associated materials**	**195 days**	**Sep 26 '20**	**Apr 8 '21**	**Sep 26 '20**	**Apr 8 '21**	**0 days**			
1383	1383	5.29.5.1.1	Manufacturing and Factory Acceptance Test of Plant	150 days	Sep 26 '20	Feb 22 '21	Sep 26 '20	Feb 22 '21	0 days	1380	1384	
1384	1384	5.29.5.1.2	Shipping and Delivery of Plant to site (Rev. 8)	45 days	Feb 23 '21	Apr 8 '21	Feb 23 '21	Apr 8 '21	0 days	1383	1401	
1385	**1385**	**5.29.5.2**	**Pipework**	**120 days**	**Sep 26 '20**	**Jan 23 '21**	**Sep 26 '20**	**Jan 23 '21**	**0 days**			
1386	1386	5.29.5.2.1	Manufacturing and Factory Acceptance Test of Plant	90 days	Sep 26 '20	Dec 24 '20	Sep 26 '20	Dec 24 '20	0 days	1380	1387	
1387	1387	5.29.5.2.2	Shipping and Delivery of Plant to site	30 days	Dec 25 '20	Jan 23 '21	Dec 25 '20	Jan 23 '21	0 days	1386	1396	
1388	1388	5.29.6	Tentative Civil Handover, Filtrate Lifting Well and Eq. Tank (Completion of worl	1 day	May 1 '21	May 1 '21	May 1 '21	May 1 '21	0 days	1362FF,1353F		
1389	**1389**	**5.29.7**	**Site Installation Work**	**300 days**	**Oct 1 '20**	**Jul 27 '21**	**Oct 1 '20**	**Jul 27 '21**	**0 days**			
1390	**1390**	**5.29.7.1**	**Commencement of retrofitting the existing PST No. 4 and No. 6**	**300 days**	**Oct 1 '20**	**Jul 27 '21**	**Oct 1 '20**	**Jul 27 '21**	**0 days**			
1391	1391	5.29.7.1.1	Temporary flow diversion of Filtrate from PST No. 4,	1 day	Oct 1 '20	Oct 1 '20	Oct 1 '20	Oct 1 '20	0 days		1392	
1392	1392	5.29.7.1.2	Dismantle and Removal of E&M Equipment at PST No. 6	60 days	Oct 2 '20	Nov 30 '20	Oct 2 '20	Nov 30 '20	0 days	1391	1393	
1393	1393	5.29.7.1.3	Temporary flow diversion of Filtrate from PST No. 6	7 days	Dec 1 '20	Dec 7 '20	Dec 1 '20	Dec 7 '20	0 days	1392	1394	
1394	1394	5.29.7.1.4	Dismantle and Removal of E&M Equipment at PST No. 4	119 days	Dec 8 '20	Apr 5 '21	Dec 8 '20	Apr 5 '21	0 days	1393	1396	
1395	**1395**	**5.29.7.1.5**	**Mechanical Installations of existing PSTs No. 4 (Completed)**	**56 days**	**Apr 6 '21**	**May 31 '21**	**Apr 6 '21**	**May 31 '21**	**0 days**	**1378**		
1396	1396	5.29.7.1.5.1	Installation of PST influent feed pipe	5 days	Apr 6 '21	Apr 10 '21	Apr 6 '21	Apr 10 '21	0 days	1394,1387	1397	ME - A x 4~6 me
1397	1397	5.29.7.1.5.2	Installation of circular baffle diffuser box	5 days	Apr 11 '21	Apr 15 '21	Apr 11 '21	Apr 15 '21	0 days	1396	1398	ME - A x 4~6 me
1398	1398	5.29.7.1.5.3	Installation of scum baffle plates	5 days	Apr 16 '21	Apr 20 '21	Apr 16 '21	Apr 20 '21	0 days	1397	1399	ME - A x 4~6 me
1399	1399	5.29.7.1.5.4	Installation of scum box with collection valve and pipework	5 days	Apr 21 '21	Apr 25 '21	Apr 21 '21	Apr 25 '21	0 days	1398	1400	ME - A x 4~6 me
1400	1400	5.29.7.1.5.5	Installation of v-notched weir plate	7 days	Apr 26 '21	May 2 '21	Apr 26 '21	May 2 '21	0 days	1399	1401	ME - A x 4~6 me
1401	1401	5.29.7.1.5.6	Installation of center bearing and slip ring assembly for rotating bridge	5 days	May 3 '21	May 7 '21	May 3 '21	May 7 '21	0 days	1400,1384	1402	ME - A x 4~6 me
1402	1402	5.29.7.1.5.7	Installation of motor and gearbox assembly for rotating bridge	5 days	May 8 '21	May 12 '21	May 8 '21	May 12 '21	0 days	1401	1403	ME - A x 4~6 me
1403	1403	5.29.7.1.5.8	Installation of rotating bridge sludge and scum scraper assembly	5 days	May 13 '21	May 17 '21	May 13 '21	May 17 '21	0 days	1402	1404,1406	ME - A x 4~6 me
1404	1404	5.29.7.1.5.9	installation of removable FRP covers for effluent channel	14 days	May 18 '21	May 31 '21	May 18 '21	May 31 '21	0 days	1403	1408	ME - A x 4~6 me
1405	**1405**	**5.29.7.1.6**	**Electrical Installations of existing PST No. 4**	**10 days**	**May 18 '21**	**May 27 '21**	**May 18 '21**	**May 27 '21**	**0 days**		**1408**	
1406	1406	5.29.7.1.6.1	Installation of local control panels	5 days	May 18 '21	May 22 '21	May 18 '21	May 22 '21	0 days	1403	1407	EE - A x 4~6 mer
1407	1407	5.29.7.1.6.2	cable laying and terminations	5 days	May 23 '21	May 27 '21	May 23 '21	May 27 '21	0 days	1406	1408	EE - A x 4~6 mer
1408	1408	5.29.7.1.7	Site Acceptance Test for E&M Equip at existing PST No. 4	5 days	Jun 1 '21	Jun 5 '21	Jun 1 '21	Jun 5 '21	0 days	1405,1404,1407	1431	
1409	**1409**	**5.29.7.1.8**	**CNE-0229 - Removal of accumulated sludge inside PST No. 6**	**12 days**	**May 19 '21**	**May 30 '21**	**May 19 '21**	**May 30 '21**	**0 days**		**1419**	
1410	1410	5.29.7.1.8.1	Filtrate divserion to Temporary Filtrate Equalisation Tank	2 days	May 19 '21	May 20 '21	May 19 '21	May 20 '21	0 days		1411	
1411	1411	5.29.7.1.8.2	Removal of floating scum / sludge inside PST No. 6	7 days	May 21 '21	May 27 '21	May 21 '21	May 27 '21	0 days	1410,1415	1412,1413	
1412	1412	5.29.7.1.8.3	Clearance of blockage of PST No. 6 drain pipe	3 days	May 28 '21	May 30 '21	May 28 '21	May 30 '21	0 days	1411		
1413	1413	5.29.7.1.8.4	Retrofiting Concrete Structure of PST No. 6	3 days	May 28 '21	May 30 '21	May 28 '21	May 30 '21	0 days	1411		
1414	**1414**	**5.29.7.1.9**	**NCE-007 - Additional Contract Requirements for provision ICE's Certificates (RSE) on re-use of existing materials**	**8 days**	**Jun 14 '21**	**Jun 21 '21**	**Jun 14 '21**	**Jun 21 '21**	**0 days**			
1415	1415	5.29.7.1.9.1	Provision of ICE's Certificate	8 days	Jun 14 '21	Jun 21 '21	Jun 14 '21	Jun 21 '21	0 days		1411,1419	
1416	**1416**	**5.29.7.1.10**	**NCE-008 - Additional Contract Requirements for provision ICE's Certificates on product design of E&M plant and materials.**	**14 days**	**Jun 24 '21**	**Jul 7 '21**	**Jun 24 '21**	**Jul 7 '21**	**0 days**			
1417	1417	5.29.7.1.10	Provision of ICE's Certificate	14 days	Jun 24 '21	Jul 7 '21	Jun 24 '21	Jul 7 '21	0 days		1419	
1418	**1418**	**5.29.7.1.11**	**Mechanical Installations of existing PST No. 6**	**48 days**	**Jun 4 '21**	**Jul 21 '21**	**Jun 4 '21**	**Jul 21 '21**	**0 days**			
1419	1419	5.29.7.1.11	Installation of PST influent feed pipe	2 days	Jul 8 '21	Jul 9 '21	Jul 8 '21	Jul 9 '21	0 days	1409,1415,14	1420	ME - A x 4~6 m
1420	1420	5.29.7.1.11	Installation of center bearing and slip ring assembly for rotating bridge	2 days	Jul 10 '21	Jul 11 '21	Jul 10 '21	Jul 11 '21	0 days	1419	1421,1424	ME - A x 4~6 m
1421	1421	5.29.7.1.11	Installation of motor and gearbox assembly for rotating bridge	5 days	Jul 12 '21	Jul 16 '21	Jul 12 '21	Jul 16 '21	0 days	1420	1428,1422,1423	ME - A x 4~6 m
1422	1422	5.29.7.1.11	Installation of rotating bridge sludge and scum scraper assembly	5 days	Jul 17 '21	Jul 21 '21	Jul 17 '21	Jul 21 '21	0 days	1421		ME - A x 4~6 m
1423	1423	5.29.7.1.11	Installation of circular baffle diffuser box	2 days	Jul 17 '21	Jul 18 '21	Jul 17 '21	Jul 18 '21	0 days	1421		ME - A x 4~6 m
1424	1424	5.29.7.1.11	Installation of v-notched weir plate	2 days	Jun 4 '21	Jun 5 '21	Jun 4 '21	Jun 5 '21	0 days	1420	1425,1426	ME - A x 4~6 m
1425	1425	5.29.7.1.11	Installation of scum baffle plates	2 days	Jun 6 '21	Jun 7 '21	Jun 6 '21	Jun 7 '21	0 days	1424		ME - A x 4~6 m



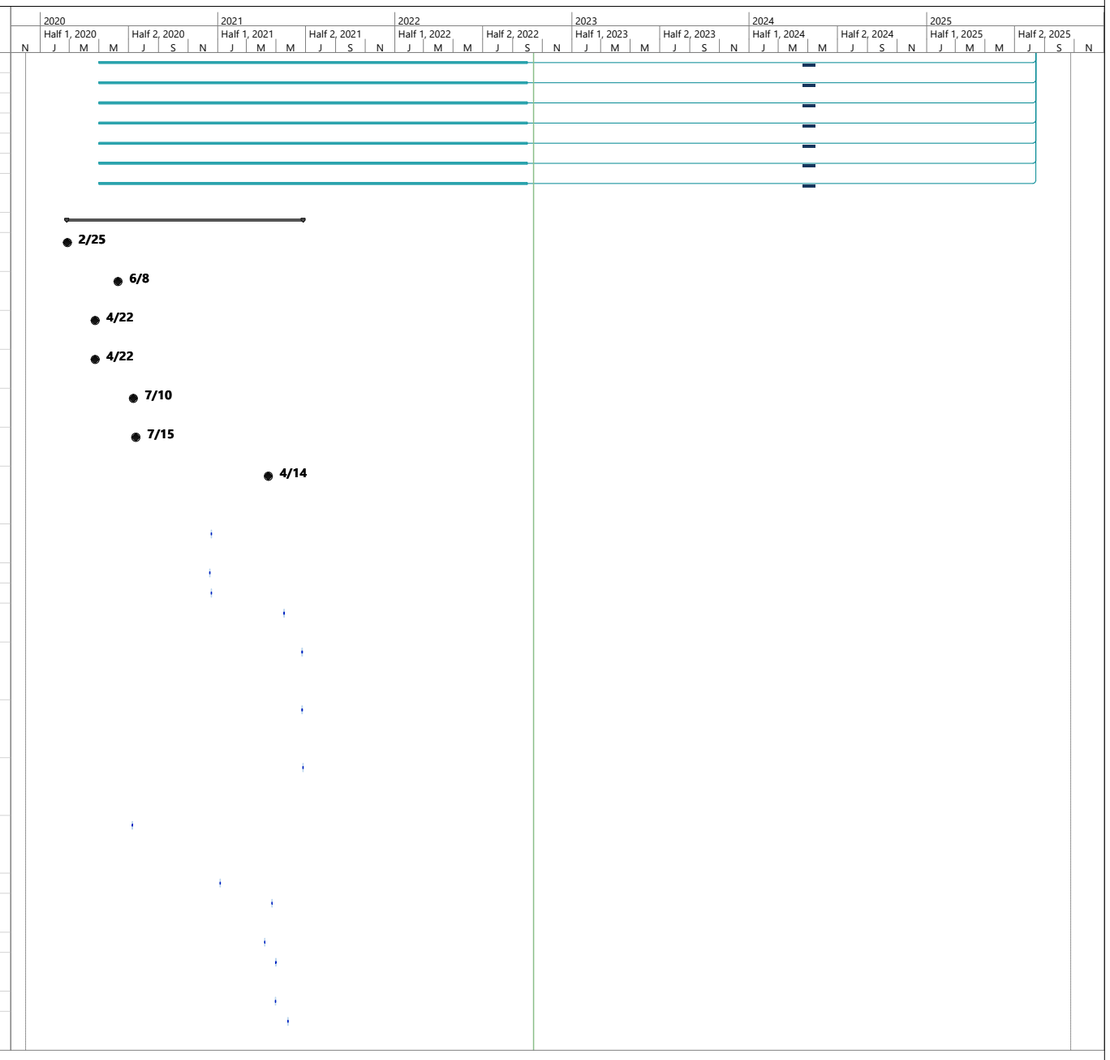
ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1426	1426	5.29.7.1.11	Installation of scum collection box	2 days	Jun 6 '21	Jun 7 '21	Jun 6 '21	Jun 7 '21	0 days	1424		ME - A x 4~6 m
1427	**1427**	**5.29.7.1.12**	**Electrical Installations of existing PSTs No. 6**	**6 days**	**Jul 17 '21**	**Jul 22 '21**	**Jul 17 '21**	**Jul 22 '21**	**0 days**		**1430**	
1428	1428	5.29.7.1.12	Installation of local control panels	3 days	Jul 17 '21	Jul 19 '21	Jul 17 '21	Jul 19 '21	0 days	1421	1429	
1429	1429	5.29.7.1.12	cable laying and terminations	3 days	Jul 20 '21	Jul 22 '21	Jul 20 '21	Jul 22 '21	0 days	1428	1430	
1430	1430	5.29.7.1.13	Site Acceptance Test for E&M Equip at existing PST No. 6	2 days	Jul 23 '21	Jul 24 '21	Jul 23 '21	Jul 24 '21	0 days	1427,1429	1431	
1431	1431	5.29.7.1.14	System Commissioning for E&M Equip at existing PST No. 4 and No. 6	3 days	Jul 25 '21	Jul 27 '21	Jul 25 '21	Jul 27 '21	0 days	1408,1430	1364FF	
1432	**1432**	**5.30**	**Existing Main Power House Electrical, Portion B-7A and B-7B (PS 6B.3.17)**	**42 days**	**Jun 11 '20**	**Jul 22 '20**	**Jun 11 '20**	**Jul 22 '20**	**0 days**			
1433	1433	5.30.1	Planned Key Date Completion Date - KD3A	0 days	Jul 22 '20	Jul 22 '20	Jul 22 '20	Jul 22 '20	0 days			
1434	**1434**	**5.30.2**	**Design Submissions for Existing Emergency Generator House**	**15 days**	**Jun 12 '20**	**Jun 26 '20**	**Jun 12 '20**	**Jun 26 '20**	**0 days**			
1435	1435	5.30.2.1	Design submissions for E&M installation works of existing power house	15 days	Jun 12 '20	Jun 26 '20	Jun 12 '20	Jun 26 '20	0 days	214	1439	
1436	**1436**	**5.30.3**	**Site Installation Work**	**39 days**	**Jun 11 '20**	**Jul 19 '20**	**Jun 11 '20**	**Jul 19 '20**	**0 days**			
1437	1437	5.30.3.1	Tentative Civil Handover Date, Portion B-7A & 7B area for modification of existing emergency generator electrical works	1 day	Jun 11 '20	Jun 11 '20	Jun 11 '20	Jun 11 '20	0 days			
1438	**1438**	**5.30.3.2**	**Commencement of Modification of existing emergency generator Electrical Works**	**23 days**	**Jun 27 '20**	**Jul 19 '20**	**Jun 27 '20**	**Jul 19 '20**	**0 days**			
1439	1439	5.30.3.2.1	Site survey and preparation work	1 day	Jun 27 '20	Jun 27 '20	Jun 27 '20	Jun 27 '20	0 days	1435	1440	
1440	1440	5.30.3.2.2	Modification of existing emergency generator electrical works	3 days	Jun 28 '20	Jun 30 '20	Jun 28 '20	Jun 30 '20	0 days	1439	1441	
1441	1441	5.30.3.2.3	Test the new switchboard for on-site mobile generator	2 days	Jul 1 '20	Jul 2 '20	Jul 1 '20	Jul 2 '20	0 days	1440	1442	
1442	1442	5.30.3.2.4	Dismantling and removal the existing power & control cables	14 days	Jul 3 '20	Jul 16 '20	Jul 3 '20	Jul 16 '20	0 days	1441	1443	
1443	1443	5.30.3.2.5	Take down existing generator to DSD (Completed)	3 days	Jul 17 '20	Jul 19 '20	Jul 17 '20	Jul 19 '20	0 days	1442		
1444	**1444**	**5.31**	**Existing Sludge Press House, Portion B-10 (PS 6B.2.11)**	**425 days**	**Jul 1 '20**	**Aug 29 '21**	**Jul 1 '20**	**Aug 29 '21**	**0 days**			
1445	1445	5.31.1	Planned Key Date Completion Date - KD3B	0 days	Jun 7 '21	Jun 7 '21	Jun 7 '21	Jun 7 '21	0 days			
1446	**1446**	**5.31.2**	**Selection of Suppliers for major plant and materials for Filter Presses**	**52 days**	**Jul 1 '20**	**Aug 21 '20**	**Jul 1 '20**	**Aug 21 '20**	**0 days**			
1447	**1447**	**5.31.2.1**	**Mis - new replacement filter plates and provision of filter cloths, C11, ref. EQT038**	**52 days**	**Jul 1 '20**	**Aug 21 '20**	**Jul 1 '20**	**Aug 21 '20**	**0 days**			
1448	1448	5.31.2.1.1	Submission for acceptance of purchasing package	21 days	Jul 1 '20	Jul 21 '20	Jul 1 '20	Jul 21 '20	0 days		1449	
1449	1449	5.31.2.1.2	Invitation of quotations for purchasing package	10 days	Jul 22 '20	Jul 31 '20	Jul 22 '20	Jul 31 '20	0 days	1448	1450	
1450	1450	5.31.2.1.3	Acceptance of conforming quotation (Completed)	21 days	Aug 1 '20	Aug 21 '20	Aug 1 '20	Aug 21 '20	0 days	1449	1451	
1451	1451	5.31.3	Design submission for replacement of filter plates	7 edays	Aug 21 '20	Aug 28 '20	Aug 21 '20	Aug 28 '20	0 edays	1450	1453	
1452	**1452**	**5.31.4**	**Manufacturing and Delivery of Plant & Materials**	**345 days**	**Aug 29 '20**	**Aug 8 '21**	**Aug 29 '20**	**Aug 8 '21**	**0 days**			
1453	1453	5.31.4.1	Manufacturing and Factory Acceptance Test of Plant	300 days	Aug 29 '20	Jun 24 '21	Aug 29 '20	Jun 24 '21	0 days	1451	1454	
1454	1454	5.31.4.2	Shipping and Delivery of Plant to site	45 days	Jun 25 '21	Aug 8 '21	Jun 25 '21	Aug 8 '21	0 days	1453	1457	
1455	**1455**	**5.31.5**	**Site Installation Work**	**21 days**	**Aug 9 '21**	**Aug 29 '21**	**Aug 9 '21**	**Aug 29 '21**	**0 days**			
1456	**1456**	**5.31.5.1**	**Commencement of replacement of filter plates**	**21 days**	**Aug 9 '21**	**Aug 29 '21**	**Aug 9 '21**	**Aug 29 '21**	**0 days**			
1457	1457	5.31.5.1.1	Replacement of filter plates (On Hold)	21 days	Aug 9 '21	Aug 29 '21	Aug 9 '21	Aug 29 '21	0 days	1454	1365FF	
1458	**1458**	**5.32**	**Fire Services Installation (PS 6B.6.9)**	**1486 days**	**Dec 1 '20**	**Dec 25 '24**	**Dec 1 '20**	**May 1 '24**	**0 days**			
1459	1459	5.32.1	Planned Key Date Completion Date - KD1B, Fire	0 days	Jun 1 '21	Jun 1 '21	Jun 1 '21	Jun 1 '21	0 days	1463FF		
1460	1460	5.32.2	Planned Sectional Completion Date - Section 1, FSI	0 days	Jul 12 '21	Jul 12 '21	Jul 12 '21	Jul 12 '21	0 days	1464FF		
1461	1461	5.32.3	Planned Sectional Completion Date - Section 4, FSI	0 days	May 1 '24	May 1 '24	May 1 '24	May 1 '24	0 days	1479FF		
1462	**1462**	**5.32.4**	**Design Submissions for FSI**	**334 days**	**Dec 1 '20**	**Oct 30 '21**	**Dec 1 '20**	**Oct 30 '21**	**0 days**			
1463	1463	5.32.4.1	CDS081-11 - Civil and dimensional requirements drawings for Fire Services Sprinkler Pumping Room and Fire Hydrant and Booster Pumping Room	120 days	Dec 1 '20	Mar 30 '21	Dec 1 '20	Mar 30 '21	0 days		1459FF	
1464	1464	5.32.4.2	CDS049 - Detailed Design for Fire Services include AFA, FS, FH, Sprinkler etc.	180 edays	May 3 '21	Oct 30 '21	May 3 '21	Oct 30 '21	0 edays	179	1468,1465,1460	
1465	1465	5.32.5	DG Stores Submissions to FSD for approval	120 days	Oct 31 '21	Feb 27 '22	Oct 31 '21	Feb 27 '22	0 days	1464	1474FF	
1466	**1466**	**5.32.6**	**Site Installation Work**	**1152 days**	**Oct 31 '21**	**Dec 25 '24**	**Oct 31 '21**	**May 1 '24**	**0 days**			
1467	**1467**	**5.32.6.1**	**Commencement of Fire Services Installation**	**1152 days**	**Oct 31 '21**	**Dec 25 '24**	**Oct 31 '21**	**May 1 '24**	**0 days**			
1468	1468	5.32.6.1.1	Design Review of Approved General Building Plan	126 days	Oct 31 '21	Mar 5 '22	Oct 31 '21	Mar 5 '22	0 days	1464	1469	
1469	1469	5.32.6.1.2	Submission of WWO542 for WSD's approval	270 days	Mar 6 '22	Nov 30 '22	Mar 6 '22	Oct 10 '23	314 days	1468	1470	
1470	1470	5.32.6.1.3	Submission of WWO46 for WSD's Inspection	30 days	Jun 5 '24	Jul 4 '24	Oct 11 '23	Nov 9 '23	0 days	1469,699,557,8	1471	
1471	1471	5.32.6.1.4	Obtain WWO46 Part V	60 days	Jul 5 '24	Sep 2 '24	Nov 10 '23	Jan 8 '24	0 days	1470	1474,1472	
1472	1472	5.32.6.1.5	FSD Inspection and Approval for MVAC	21 days	Sep 3 '24	Sep 23 '24	Jan 9 '24	Jan 29 '24	0 days	1482,1483,1471	1475	
1473	1473	5.32.6.1.6	FSD Inspection and Approval for DG Stores	21 days	Aug 4 '24	Aug 24 '24	Jan 9 '24	Jan 29 '24	0 days	1482,1483,1135	1475	
1474	1474	5.32.6.1.7	Submission of (FSI/314 & FSI/501) to FSD	14 days	Sep 3 '24	Sep 16 '24	Jan 16 '24	Jan 29 '24	0 days	1482,1483,1471	1475	
1475	1475	5.32.6.1.8	Pre-inspection meeting with FSD	5 days	Sep 24 '24	Sep 28 '24	Jan 30 '24	Feb 3 '24	0 days	1474,1472,1473	1476	
1476	1476	5.32.6.1.9	Initial Inspection with FSD	15 days	Sep 29 '24	Oct 13 '24	Feb 4 '24	Feb 18 '24	0 days	1475	1477	
1477	1477	5.32.6.1.10	Document Checking	45 days	Oct 14 '24	Nov 27 '24	Feb 19 '24	Apr 3 '24	0 days	1476	1478	
1478	1478	5.32.6.1.11	Re-inspections with FSD	14 days	Nov 28 '24	Dec 11 '24	Apr 4 '24	Apr 17 '24	0 days	1477	1479	
1479	1479	5.32.6.1.12	Issue of acceptance memo by FSD	14 days	Dec 12 '24	Dec 25 '24	Apr 18 '24	May 1 '24	0 days	1478	1461FF	
1480	1480	5.32.6.1.13	Installation of FS Pumps and Sprinkler Pumps	60 days	Apr 3 '23	Jun 1 '23	Sep 11 '23	Nov 9 '23	161 days		1483	FS - A x 4~6 mer
1481	1481	5.32.6.1.14	Installation of Fire Hydrant and Booster Pumps	60 days	Apr 3 '23	Jun 1 '23	Sep 11 '23	Nov 9 '23	161 days		1483	FS - A x 4~6 mer
1482	1482	5.32.6.1.15	SAT for Manual and automatic fire detection and alarm system	60 days	Jun 5 '24	Aug 3 '24	Nov 10 '23	Jan 8 '24	0 days	1186,1139,699,	1474,1472,1473	
1483	1483	5.32.6.1.16	SAT for Fire hydrants, hose reels and street fire hydrant system	60 days	Jun 5 '24	Aug 3 '24	Nov 10 '23	Jan 8 '24	0 days	1480,1481,1186	1474,1472,1473	
1484	**1484**	**5.33**	**Fire Services Sprinkler Pumping Room, Portion B-7 & B-7B (PS 6B.6.9)**	**421 days**	**Aug 29 '22**	**Oct 23 '23**	**Aug 29 '22**	**Jan 29 '24**	**98 days**			
1485	**1485**	**5.33.1**	**Site Installation Work**	**421 days**	**Aug 29 '22**	**Oct 23 '23**	**Aug 29 '22**	**Jan 29 '24**	**98 days**			
1486	1486	5.33.1.1	Tentative Civil Handover Date, FS Sprinkler Pump Room (Rev. 5)	1 day	Aug 29 '22	Aug 29 '22	Aug 29 '22	Aug 29 '22	0 days	17	1487,1492	
1487	**1487**	**5.33.1.2**	**Commencement of E&M Installation at FS & Sprinkler Pump Room**	**420 days**	**Aug 29 '22**	**Oct 23 '23**	**Aug 29 '22**	**Jan 29 '24**	**98 days**	**1486**		
1488	1488	5.33.1.2.1	Mechanical Installations for FS & Sprinkler Pumps	90 edays	Aug 29 '22	Nov 27 '22	Aug 29 '22	Mar 6 '23	0 edays		1489	FS - A x 4~6 m
1489	1489	5.33.1.2.2	Electrical Installations for FS & Sprinkler Pumps	90 edays	Nov 27 '22	Feb 25 '23	Mar 6 '23	Jun 4 '23	0.63 ed...	1488	1490,1493,1494,	FS - A x 4~6 m
1490	1490	5.33.1.2.3	Site Acceptance Test for FS & Sprinkler Pumps	45 days	Feb 26 '23	Apr 11 '23	Oct 18 '23	Dec 1 '23	0 days	1489	1491	
1491	1491	5.33.1.2.4	System Commissioning for FS & Sprinkler Pumps	45 days	Apr 12 '23	May 26 '23	Dec 2 '23	Jan 15 '24	234 days	1490	1474	
1492	**1492**	**5.33.1.2.5**	**Building Services Installations at FS & Sprinkler Pump Room**	**240 days**	**Feb 26 '23**	**Oct 23 '23**	**Jun 4 '23**	**Jan 29 '24**	**98 days**	**1486**		
1493	1493	5.33.1.2.5.1	Lighting and Power Distribution System, Chem 1&2	120 days	Feb 26 '23	Jun 25 '23	Jun 4 '23	Oct 1 '23	0 days	1489,204	1496	BS - A x 4~6 m
1494	1494	5.33.1.2.5.2	Lightning Protection System, FS & Sprinkler Pump Room	30 days	Feb 26 '23	Mar 27 '23	Sep 2 '23	Oct 1 '23	90 days	1489	1496	BS - A x 4~6 m
1495	1495	5.33.1.2.5.3	Mechanical Ventilation System, FS & Sprinkler PR	14 days	Feb 26 '23	Mar 11 '23	Sep 18 '23	Oct 1 '23	106 days	1489	1496	MVAC - A x 4~



ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1496	1496	5.33.1.2.5.4	Testing and Commissioning of Building Services Installations, FS & Sprinkler PR	120 days	Jun 26 '23	Oct 23 '23	Oct 2 '23	Jan 29 '24	98 days	1493,1494,149	1474FF	
1497	**1497**	**5.34**	**Fire Hydrant and Booster Pumping Room, Portion B7 & B-7B (PS 6B.6.9)**	**465 days**	**May 15 '23**	**Aug 21 '24**	**Oct 22 '22**	**Jan 29 '24**	**0 days**			
1498	**1498**	**5.34.1**	**Site Installation Work**	**465 days**	**May 15 '23**	**Aug 21 '24**	**Oct 22 '22**	**Jan 29 '24**	**0 days**			
1499	1499	5.34.1.1	Tentative Civil Handover Date, Fire Hydrant and Booster Pumping Room (Re	1 day	May 15 '23	May 15 '23	Oct 22 '22	Oct 22 '22	0 days	19	1501	
1500	**1500**	**5.34.1.2**	**Commencement of E&M Installation at Street FH Pump Room**	**464 days**	**May 15 '23**	**Aug 21 '24**	**Oct 23 '22**	**Jan 29 '24**	**0 days**			
1501	1501	5.34.1.2.1	Mechanical Installations for Street FH Pumps	90 edays	May 15 '23	Aug 13 '23	Oct 23 '22	Jan 21 '23	0 edays	1499	1502	FS - A x 4~6 m
1502	1502	5.34.1.2.2	Electrical Installations for Street FH Pump	90 edays	Aug 13 '23	Nov 11 '23	Jan 21 '23	Apr 21 '23	0 edays	1501	1503,1506	FS - A x 4~6 m
1503	1503	5.34.1.2.3	Site Acceptance Test for Street FH Pump	45 days	Nov 12 '23	Dec 26 '23	Nov 1 '23	Dec 15 '23	0 days	1502	1504	
1504	1504	5.34.1.2.4	System Commissioning for Street FH Pumps	45 days	Dec 27 '23	Feb 9 '24	Dec 16 '23	Jan 29 '24	0 days	1503	1474FF	
1505	**1505**	**5.34.1.2.5**	**Building Services Installations at Street FH Pump Room**	**284 days**	**Nov 12 '23**	**Aug 21 '24**	**Apr 21 '23**	**Jan 29 '24**	**0 days**			
1506	1506	5.34.1.2.5.1	Lighting and Power Distribution System, Street FH PR	120 days	Nov 12 '23	Mar 10 '24	Apr 21 '23	Aug 18 '23	0 days	1502,204	1509,1507	BS - A x 4~6 m
1507	1507	5.34.1.2.5.2	Lightning Protection System, Street FH PR	30 days	Mar 11 '24	Apr 9 '24	Aug 19 '23	Sep 17 '23	0 days	1506	1508,1509	BS - A x 4~6 m
1508	1508	5.34.1.2.5.3	Mechanical Ventilation System, Street FH PR	14 days	Apr 10 '24	Apr 23 '24	Sep 18 '23	Oct 1 '23	0 days	1507	1509	MVAC - A x 4~
1509	1509	5.34.1.2.5.4	Testing and Commissioning of Building Services Installations, FH PR	120 days	Apr 24 '24	Aug 21 '24	Oct 2 '23	Jan 29 '24	0 days	1506,1507,150	1474FF	
1510	**1510**	**5.35**	**Plumbing Installation (PS 6B.6.8)**	**1265 days**	**Feb 16 '21**	**Aug 4 '24**	**Feb 16 '21**	**Aug 4 '24**	**0 days**			
1511	1511	5.35.1	Planned Sectional Completion Date - Section 1, Plumbing	0 days	Jul 1 '21	Jul 1 '21	Jul 1 '21	Jul 1 '21	0 days	1513FF		
1512	**1512**	**5.35.2**	**Design Submissions for Plumbing**	**134 days**	**Feb 16 '21**	**Jun 30 '21**	**Feb 16 '21**	**Jun 30 '21**	**0 days**			
1513	1513	5.35.2.1	CDS033 - Detailed Design for Plumbing System	134 edays	Feb 16 '21	Jun 30 '21	Feb 16 '21	Jun 30 '21	0 edays	174	1516,1511FF	
1514	**1514**	**5.35.3**	**Site Installation Work**	**1131 days**	**Jul 1 '21**	**Aug 4 '24**	**Jul 1 '21**	**Aug 4 '24**	**0 days**			
1515	**1515**	**5.35.3.1**	**Commencement of Plumbing Installation**	**1131 days**	**Jul 1 '21**	**Aug 4 '24**	**Jul 1 '21**	**Aug 4 '24**	**0 days**			
1516	1516	5.35.3.1.1	Submission of detail design for acceptance	90 days	Jul 1 '21	Sep 28 '21	Jul 1 '21	Sep 28 '21	0 days	1513	1517	Pb - A x 4~6 me
1517	1517	5.35.3.1.2	Submission of WWO542 for WSD's approval	355 days	Sep 29 '21	Sep 18 '22	Sep 29 '21	Sep 18 '22	0 days	1516	697,555,406	Pb - B x 4~6 me
1518	1518	5.35.3.1.3	Connection of External Pumping System (By others)	0 days	Sep 15 '23	Sep 15 '23	May 7 '24	May 7 '24	235 days		1519	
1519	1519	5.35.3.1.4	Submission of WWO46 for WSD's Inspection	45 days	May 7 '24	Jun 20 '24	May 7 '24	Jun 20 '24	0 days	1518,697,555,8	1520	
1520	1520	5.35.3.1.5	Obtain WWO46 Part V	45 days	Jun 21 '24	Aug 4 '24	Jun 21 '24	Aug 4 '24	0 days	1519	1521	
1521	1521	5.35.3.1.6	Tentative Date for connection of external water pipework (by others)	0 days	Aug 4 '24	Aug 4 '24	Aug 4 '24	Aug 4 '24	0 days	1520		
1522	**1522**	**5.36**	**Plant Commissioning**	**660 days**	**Nov 1 '23**	**Aug 21 '25**	**Oct 28 '23**	**May 14 '24**	**0 days**		**46FF**	
1523	**1523**	**5.36.1**	**Design Submission for Treatment Process Plant Testing & Commissioning**	**90 days**	**Nov 1 '23**	**Jan 29 '24**	**Feb 15 '24**	**May 14 '24**	**106 days**			
1524	1524	5.36.1.1	Document Submission and Resubmission for T&C procedures	90 days	Nov 1 '23	Jan 29 '24	Feb 15 '24	May 14 '24	106 days			
1525	1525	5.36.2	System Commissioning Tests of the E&M systems at IW, PST, BR 2A&2B, MFB No. 2, Chemical Dosing Systems, DOUs	7 days	Apr 21 '25	Apr 27 '25	Oct 28 '23	Nov 3 '23	0 days	1243,425,715,	1526	
1526	1526	5.36.3	MBR System Process Startup	45 days	Apr 28 '25	Jun 11 '25	Nov 4 '23	Dec 18 '23	0 days	1525	1527	
1527	1527	5.36.4	Plant Commissioning (Section 2)	45 days	Jun 12 '25	Jul 26 '25	Dec 19 '23	Feb 1 '24	0 days	1526	1531,1532FS-90	
1528	1528	5.36.5	Planned Sectional Completion Date - Section 4, Plant Commissioning	1 day	Aug 21 '25	Aug 21 '25	May 14 '24	May 14 '24	0 days	1527FS+25 da		
1529	1529	5.36.6	Overall commissioning of CCTV system	30 days	Feb 5 '24	Mar 5 '24	Mar 5 '24	Apr 3 '24	29 days	698,556,840,40	1531	
1530	1530	5.36.7	Overall commissioning of Facility Computerized Systems (SCADA, CMMS, PMS, IDMS)	28 days	Dec 5 '24	Jan 1 '25	Mar 7 '24	Apr 3 '24	0 days	422,562,1028,1	1531	
1531	1531	5.36.8	Overall Plant Commissioning and DSD pre-handover inspections	14 days	Jul 27 '25	Aug 9 '25	Apr 4 '24	Apr 17 '24	0 days	1527,1529,153		
1532	1532	5.36.9	O&M manual for overall system	14 days	Apr 28 '25	May 11 '25	May 1 '24	May 14 '24	0 days	1527FS-90 day		
1533	**1533**	**5.37**	**CE No. 009 - Provision of an Additional Primary Sludge Thickening System**	**375 days**	**Jul 14 '20**	**Jul 23 '21**	**Jul 14 '20**	**Jul 23 '21**	**0 days**			
1534	1534	5.37.1	Detail Design Submission and Approval	77 days	Jul 14 '20	Sep 28 '20	Jul 14 '20	Sep 28 '20	0 days		1536	
1535	1535	5.37.2	Subletting, Procurement, Manufacturing and Delivery	120 days	Jul 31 '20	Nov 27 '20	Jul 31 '20	Nov 27 '20	0 days			
1536	1536	5.37.3	Site Installation	270 days	Oct 17 '20	Jul 13 '21	Oct 17 '20	Jul 13 '21	0 days	1534	1537	
1537	1537	5.37.4	Testing and Commissioning (Rev. 15)	10 days	Jul 14 '21	Jul 23 '21	Jul 14 '21	Jul 23 '21	0 days	1536	1538FF	
1538	1538	5.37.5	Planned Completion Date	1 day	Jul 23 '21	Jul 23 '21	Jul 23 '21	Jul 23 '21	0 days	1537FF		
1539	**1539**	**6**	**Beam Plus Submissions**	**1450 days**	**May 1 '20**	**Apr 19 '24**	**May 1 '20**	**Apr 19 '24**	**0 days**			
1540	1540	6.1	SA10 - Environmental Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1541	1541	6.2	SA11 - Air Pollution During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1542	1542	6.3	SA12 - Noise During Construction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1543	1543	6.4	SA14 - Noise from Building Equipment	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1544	1544	6.5	SA15 - Light Pollution	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1545	1545	6.6	MAP1 - Timber used for Temporary Works	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1546	1546	6.7	MAP2 - Use of Non-CFC Based Refrigerants	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1547	1547	6.8	MAP3 - Waste Management Plan	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1548	1548	6.9	MA2 - Modular and Standardized Design	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1549	1549	6.10	MA8 - Ozone Depleting Substances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1550	1550	6.11	MA11 - Construction Waste Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1551	1551	6.12	EUP1 - Minimum Energy Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1552	1552	6.13	EU1 - Reduction of CO2 Emissions	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1553	1553	6.14	EU2 - Peak Electricity Demand Reduction	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1554	1554	6.15	EU6 - Renewable Energy Systems	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1555	1555	6.16	EU9 - Energy Efficient Appliances	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1556	1556	6.17	EU10 - Testing and Commissioning	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1557	1557	6.18	EU11 - Operation and Maintenance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1558	1558	6.19	EU12 - Meter and Monitoring	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1559	1559	6.20	WUP1 - Water Quality Survey	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1560	1560	6.21	WUP2 - Minimum Water Saving Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1561	1561	6.22	WU1 / WU6 - Annual Water Use / Effluent Discharge to Foul Sewers	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1562	1562	6.23	IEQP1 - Minimum Ventilation Performance	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1563	1563	6.24	IEQ1 - Security	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1564	1564	6.25	IEQ2 - Plumbing and Drainage	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1565	1565	6.26	IEQ3 - Biological Contamination	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	



Bestwise
Project: DE/2018/04
Date: 30/09/22

Task | Milestone | Project Summary | Late | Critical Split | Manual Progress | Milestone (Actual)
Milestone, Tentative | Summary | Manual Summary | Critical | Progress | Slack (Float) | Slack

ID	ID	WBS	Task Name	Duration between Task Start and Finish	Early Start	Early Finish	Late Start	Late Finish	Free Slack	Predecessors	Successors	Resource Names
1566	1566	6.27	IEQ5 - Construction IAQ Management	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1567	1567	6.28	IEQ6 / IEQ7 - IAQ	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1568	1568	6.29	IEQ9 - Increased Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1569	1569	6.30	IEQ11 - Localised Ventilation	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1570	1570	6.31	IEQ12 - Ventilation in Common Areas	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1571	1571	6.32	IEQ13 - Thermal Comfort in Air - Conditioned Premises	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1572	1572	6.33	IEQ16 / IEQ17 - Interior Lighting in Normally Occupied Area / Interior Lighting in Areas not Normally Occupied	1450 days	May 1 '20	Apr 19 '24	May 26 '20	May 14 '24	25 days		46	
1573	**1573**	**7**	**Summary of compensation events notified**	**487 days**	**Feb 25 '20**	**Jun 25 '21**	**Feb 25 '20**	**Jun 25 '21**	**0 days**			
1574	1574	7.1	Compensation Event (CE) No. 001, Special Arrangement in Reducing the Risk of the Spread of Novel Coronavirus	1 day	Feb 25 '20	Feb 25 '20	Feb 25 '20	Feb 25 '20	0 days			
1575	1575	7.2	Compensation Event (CE) No. 002, the Contractor's Site Accommodation by Modular Integrated Construction (MiC) Method	1 day	Jun 8 '20	Jun 8 '20	Jun 8 '20	Jun 8 '20	0 days			
1576	1576	7.3	Compensation Event (CE) No. 003, Designated Area for the Contractor's Site Accommodation in Works Area WA1	1 day	Apr 22 '20	Apr 22 '20	Apr 22 '20	Apr 22 '20	0 days			
1577	1577	7.4	Compensation Event (CE) No. 005, Designated Area for the Contractor's Storage Area in Works Area WA2-C	1 day	Apr 22 '20	Apr 22 '20	Apr 22 '20	Apr 22 '20	0 days			
1578	1578	7.5	Compensation Event (CE) No. 007, Employment of Temporary Staff under Anti-Epidemic Fund	1 day	Jul 10 '20	Jul 10 '20	Jul 10 '20	Jul 10 '20	0 days			
1579	1579	7.6	Compensation Event (CE) No. 009, Provision of an Additional Primary Sludge Thickening System and Deletion of Provision of a Membrane Filter Press System	1 day	Jul 15 '20	Jul 15 '20	Jul 15 '20	Jul 15 '20	0 days			
1580	1580	7.7	Compensation Event (CE) No. 011, Dismantling, relocating, disconnecting and re-installing of the existing building services (BS) equipment, supervisory control and data acquisition (SCADA) panel at existing main power house	1 day	Apr 14 '21	Apr 14 '21	Apr 14 '21	Apr 14 '21	0 days			
1581	1581	7.8	NCE-PPMI-0202 (CE) Revised GA for F.S. & Sprinkler Pumping Room and Emergency Generator Room	1 day	Dec 18 '20	Dec 18 '20	Dec 18 '20	Dec 18 '20	0 days			
1582	1582	7.9	NCE-PPMI-0203 (CE) Revised General Arrangement for Temp. Chemical System	1 day	Dec 15 '20	Dec 15 '20	Dec 15 '20	Dec 15 '20	0 days			
1583	1583	7.10	NCE-PPMI-0204 (CE) Revised GA Layout Plan for DO Sys. No. 3A	1 day	Dec 18 '20	Dec 18 '20	Dec 18 '20	Dec 18 '20	0 days			
1584	1584	7.11	NCE-PPMI-0205 (CE) Provision of Louvre Panel for Outdoor AC Units at Contractor's Site Accommodation	1 day	May 17 '21	May 17 '21	May 17 '21	May 17 '21	0 days			
1585	1585	7.12	NCE-PPMI-0206 (CE) Modification of Feeders of the existing switchboards at Inlet Work and Provision of MCB Distribution Boards and Cables for Sidewide Submersible Pumps	1 day	Jun 23 '21	Jun 23 '21	Jun 23 '21	Jun 23 '21	0 days			
1586	1586	7.13	NCE-PPMI-0207 (CE) Modification of Feeders of the existing switchboards at Inlet Consolidation House and Provision of MCB Distribution Boards and Cables for Sidewide Submersible Pumps	1 day	Jun 23 '21	Jun 23 '21	Jun 23 '21	Jun 23 '21	0 days			
1587	1587	7.14	NCE-PPMI-0208 (CE) Modification of Feeders of the existing switchboards at Membrane Facilities Building and Provision of MCB Distribution Boards and Cables for Sidewide Submersible Pumps	1 day	Jun 25 '21	Jun 25 '21	Jun 25 '21	Jun 25 '21	0 days			
1588	1588	7.15	NCE-PPMI-0211 (CE) Provision of a New Chemical Storage and Dosing System fo the Application of Glycerin to Replace Methanol as an Alternative External Carbon Source for the Denitrification Process at BR2A and BR2B	1 day	Jul 8 '20	Jul 8 '20	Jul 8 '20	Jul 8 '20	0 days			
1589	1589	7.16	NCE-PPMI-0213 (CE) Revised General Arrangement for Chemical System No. 1	1 day	Jan 5 '21	Jan 5 '21	Jan 5 '21	Jan 5 '21	0 days			
1590	1590	7.17	NCE-PMI-0219 (CE) Provision and Removal of the Blank Flange to Blank Off Drain Valve and Temporary Submersible Pumps in PST No. 6	1 day	Apr 22 '21	Apr 22 '21	Apr 22 '21	Apr 22 '21	0 days			
1591	1591	7.18	NCE-PMI-0223 (CE) Revised GA for Chemical Pipe Trench	1 day	Apr 7 '21	Apr 7 '21	Apr 7 '21	Apr 7 '21	0 days			
1592	1592	7.19	NCE-PMI-0226 (CE) Modification Works of Manhole Cover for MHD13 for Filtrate Intake Pipe of Primary Sludge Thickening System	1 day	Apr 30 '21	Apr 30 '21	Apr 30 '21	Apr 30 '21	0 days			
1593	1593	7.20	NCE-PMI-0227 (CE) Provision of Project Jackets with Fleece Vests	1 day	Apr 29 '21	Apr 29 '21	Apr 29 '21	Apr 29 '21	0 days			
1594	1594	7.21	NCE-PMI-0234 (CE) Provision of removal of the blank flange to blank off drain valve of PST No. 4	1 day	May 25 '21	May 25 '21	May 25 '21	May 25 '21	0 days